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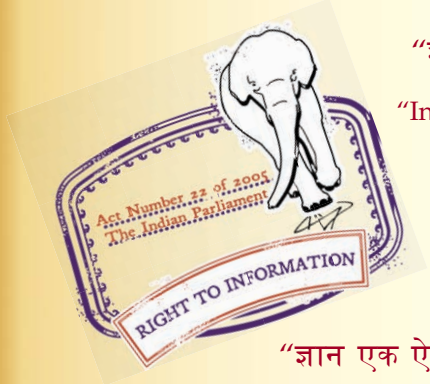

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Indian Standard

GLOSSARY OF CONVEYOR TERMS AND DEFINITIONS

(First Revision)

UDC 621'867 : 001'4

INDIAN STANDARDS INSTITUTION
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
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Indian Standard

GLOSSARY OF CONVEYOR TERMS AND DEFINITIONS

(First Revision)

1. Scope — Lays down the definitions of terms commonly used in conveyor manufacture, trade, installation and usage.

2. Terminology

2.0 For the purpose of this standard, the following definitions shall apply.

2.1 *Adjustable Speed Motor* — A motor whose speed may be varied gradually over a considerable range, but when once adjusted will remain practically unaffected by load.

2.2 *Air Lock*

a) *When applied to gates or valves*, indicates tightness of closure such as to prevent movement of air as well as of bulk materials.

b) *When applied to feeders*, indicates ability to transfer bulk materials from inlet to outlet without ever presenting an open passage that would allow free flow of air.

2.3 *Allowable Stress* — The permissible operating stress determined by the application of a suitable safety factor to the ultimate strength. Allowable stress will be reduced for shock loads and other adverse operating conditions.

2.4 *Amplifier* — A device which produces a relatively large power output signal proportional to a small input signal.

2.5 *Amplitude* — The distance from the mean position to the point of maximum displacement. In the case of a vibrating screen or vibrating conveyor with circular motion, amplitude would be the radius of the circle. In the case of straight-line or elliptical motion, it would be one-half of the major axis of the ellipse, or one-half of the stroke.

2.6 *Anchors Bolts* — Bolts used for anchoring the conveyor to the floor, pit and roof or other foundation.

2.7 *Angle of Inclination* — *See* **2.398**.

2.8 *Angle of Repose* — That angle to the horizontal which a material will assume naturally when in a pile.

2.9 *Angle of Slide* — That angle at which material will slide on an inclined surface as determined by the nature of the material and the kind of surface on which it is supported.

2.10 *Angle of Wrap* — The angular wrap in degrees of a belt around a pulley. The term is used in calculating the power requirement of driving pulleys (*see* Fig. 1).

2.11 *Antibackup* — *See* **2.26.**

2.12 *Antirunaway* — A safety device to stop a declining conveyor and prevent its running away in the event of a mechanical or electrical failure.

2.13 *Antislip Surface* — A surface especially treated or prepared to give greater than normal traction.

2.14 *Apron* — A series of apron pans which, when attached to chain or pivotally attached one to another, forms the conveying medium for an apron conveyor.

2.14.1 *Apron Flight* — *See* **2.14.2.**

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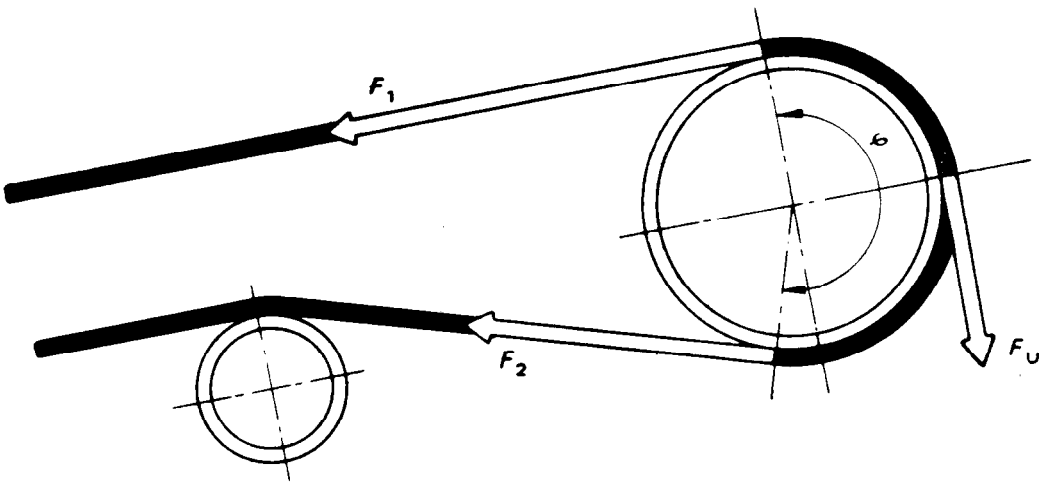


FIG. 1 ANGLE OF WRAP (ψ)

2.14.2 *Apron Pan* — One of the series of overlapping or interlocking plates or shapes which, together with others, form the conveyor bed (*see* **2.14.2.4**).

2.14.2.1 *Beaded and curved apron pan* — An apron pan having a segment of a cylindrical bead along one edge with a formed curve at the other edge which overlaps the bead along the edge of the adjacent pan.

2.14.2.2 *Double beaded apron pan* — An apron pan having a bead along each edge, one being of larger redius than the other so that adjacent pans are interlocked by the larger bead overlapping the smaller.

2.14.2.3 *Apron pan end* — A plate which is attached or formed at each end of the apron pan normal to the carrying surface to prevent spillage.

2.14.2.4 *Hinged apron pan* — An apron pan which is made with a hinge construction along each edge so that it may be joined to companion pans by a hinge pin or through rod.

2.14.2.5 *Single beaded apron pan* — An apron pan having a bead along one edge which overlaps the plain edge of the adjacent pan.

2.14.2.6 *Wood-filled apron pan* — An apron pan with a wooden filter block bolted in to absorb the shock of loading heavy materials.

2.14.3 *Armoured apron* — An apron in which each pan is provided with a separate wearing plate.

2.14.4 *Hinged Apron* — *See* **2.163.2.**

2.15 *Arching* — The bridging of material between the sides of a bin, chute, hopper or bunker under certain conditions whereby flow from the containing unit ceases.

2.16 *Assembly Table* — *See* **2.163.6**

2.17 *Attachment — On a trolley conveyor*, a part assembled to trolley or chain for the purpose of supporting or moving the objects being conveyed.

2.17.1 *Bolt attachment* — A trolley attachment having a threaded rod projection for attaching a load bar or various objects.

2.17.2 *Chain attachment* — That adjunct of the chain that is used to connect it to the load-carrying medium or to that component which is propelled.

2.17.3 *Clevis attachment* — A forged chain pin with a clevis on one end used for supporting light loads from a trolley conveyor chain between trolleys.

2.17.4 *Dummy attachment* — *See* **2.17.6.**

2.17.5 *Flight attachments* — The parts assembled to the flights that are used to connect them to the conveyor chain or chains.

2.17.6 *Idler attachment* — An attachment used to complete assembly of a non-load-carrying trolley.

2.17.7 *Intermediate attachment* — *See* **2.17.2.**

2.17.8 *Pendant attachment* — A single bar trolley attachment projecting down through the chain (as opposed to the double or clevis type) having a single hole for supporting various objects.

2.17.9 *Swivel attachment* — Of various designs which are used for rotating objects carried on a trolley conveyor. They may be indexed at 90° or 180° and are usually suspended from a clevis attachment (*see also* **2.687.10**).

2.18 *Attrition* — The act of wearing or grinding by abrasion, mechanical shock, temperature changes, change of moisture content, or by other influences.

2.19 *Auger* — *See* **2.525.1.**

2.20 Automatic lubricator — A device used to automatically lubricate the chain, trolley wheels or other conveyor components as they pass.

2.21 *Automatic Order Packing* — A system of feeding conveyors, live-storage metering units and collecting conveyors which may be punch card or computer controlled.

2.22 *Automatic Power Shovel* — Usually an electric driven mechanism to provide power to a manually handled shovel or scoop, automatically disengaging when shovel reaches car door and engages when operator gives slack to the shovel rope. Principally used to unload grain or other free flowing material from box car.

2.23 *Automation* — A system or method in which many or all of the operations of production, movement and inspection of parts and materials are automatically controlled or performed by self-operating machinery, electronic devices, etc.

2.24 *Axle* — A shaft, either rotating or nonrotating, on which are mounted the driving or supported wheels of a car or carriage.

2.25 *Backing*

a) *In pillow blocks, motors, speed reducers, and other similar objects,* the distance from the centre of the shaft to the mounting surface.

b) *In miter or bevel gears,* the distance from the pitch circle plane to the face of the hub on the side opposite the teeth.

c) *In bolt idlers,* the distance from the horizontal roll to the mounting surface.

2.26 *Backstop* — A mechanical device to prevent reversal of loaded conveyor or elevator under action of gravity when forward travel is interrupted.

2.26.1 *Band brake backstop* — A type of backstop consisting of a wheel and a brake band. The two ends of the band are attached to a cam linkage in such a way that the friction between the brake wheel and the band actuates the linkage to increase the perimeter of the band when operating in the forward direction and to decrease the perimeter in reverse direction. The brake band grips the wheel to prevent reverse rotation (*see* Fig. 2).

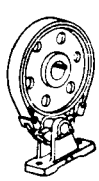


FIG. 2 BAND BRAKE

2.27 *Backup Bar* — A metal bar used to backup the chain of a caterpillar drive to hold the drive chain dogs in proper contact with the conveyor chain.

2.28 *Baffle* — *See* **2.201.**

2.29 *Bagging Scale* — Any scale especially designed or adapted for weighing materials during a bagging operation.

2.30 *Bail* — A yoke or pivoted frame designed to span a conveyor frame or skip bucket and provide a single point of support.

2.31 *Bale*

a) Compressible articles or materials assembled in a shaped unit and bound with cord or metal ties under tension (A bundle is formed without compression);

b) A fibre container, securely bound by metal straps, rope or wire; and

c) For some products or materials, such as, cotton, 'bale' represents a specific quantity.

2.32 *Ball Table* — A group of ball transfers over which flat surfaced objects may be moved in any direction.

2.33 *Ball Transfer* — A device in which a larger ball is mounted and retained on a hemispherical face of smaller balls.

2.34 *Balustrade* — A wall or structure, approximately waist-high, along each side of a moving walk or stairway for safety of passengers.

2.35 *Barn Cleaner* — *See* **2.163.9.**

2.36 *Base Plate* — A plate attached to a structure or machine to provide bearing on its foundation.

2.37 *Basket Carrier* — *See* **2.118.**

2.38 *Batching Plant* — A combination of material handling apparatus for storing, withdrawing and proportioning various materials in predetermined lots.

2.39 *Batching Scale* — A scale fitted with a hopper for the accumulation of selective amounts of one or more materials, in total making up a batch.

2.40 *Bead* — A cylindrical segment along the edge of an apron pan concentric with the pivot point.

2.41 *Beam Clamp* — A device for gripping the flange of supporting beams or trusses for the purpose of suspending from same a structure such as a conveyor frame or track.

2.42 *Bearing* — A machine part in or on which a journal, shaft end, axle, pin or other part rotates, oscillates or slides.

2.42.1 *Antifriction bearing* — A bearing using rolling elements such as balls, rollers, or needles.

2.42.2 *Babitted bearing* — A bearing composed of babbitt metal.

2.42.3 *Babitted flanged bearing* — *See* **2.43.1.**

2.42.4 *Journal bearing* — *See* **2.42.**

2.42.5 *Sleeve bearing* — A bearing of tubular construction (*See also* **2.42.2** and **2.442.7).**

2.42.6 *Solid journal bearing* — A bearing having a one-piece bearing block.

2.42.7 *Split journal bearing* — A bearing having a block or housing consisting of two main parts parted or split at the centreline of the shaft.

2.42.8 *Step bearing* — A bearing mounted at the lower end of a vertical shaft and used to support that shaft and any components mounted upon it. Radial support for the end of the shaft may be incorporated in the design.

2.43 *Bearing Block* — The block or housing which contains or supports a bearing.

2.43.1 *Babbitted flanged bearing block* — A flanged bearing block having a babbitted bearing (*see* Fig. 3).

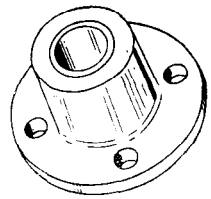


FIG. 3 BABBITTED FLANGED BEARING BLOCK

2.43.2 *Flanged bearing block* — A bearing block having a mounting surface in a plane normal to the axis of the shaft.

2.43.3 *Takeup bearing block* — A bearing with a housing having provision for movement in the takeup frame (*see also* **2.609**).

2.44 *Bearing Box* — *See* **2.43.**

2.45 *Bearing Stop* — A member fastened to the bearing supporting framework to prevent shifting or to fix the position of a bearing.

2.46 *Bed*

a) That part of a conveyor upon which the load or carrying medium rests or slides while being conveyed.

b) *In bulk material conveyors,* the mass of a material being conveyed.

2.47 *Bed Plate* — A supporting structure or plate for mounting machinery.

2.48 *Bell Mouth* — *See* **2.348.**

2.49 *Belt* — *See* **2.49.1** to **2.49.16.**

2.49.1 *Armoured belt* — A conveyor belt which has been protected by metal strips to prevent gouging or tearing of the cover by sharp objects being handled.

2.49.2 *Base belt* — In a closed belt conveyor it is that portion of a type of closed belt which remains flat and provides the necessary tensile strength.

2.49.3 *Bucket elevator belt* — A belt fabricated for bucket elevator use to which elevator buckets are attached.

2.49.4 *Cable-selvage belt* — A belt in which the carrying section is composed of rubber and fabric with attached intermittent transverse metal supports having both ends supported by cables. The cables transmit the driving force and the centre portion functions as the load-supporting medium.

2.49.5 *Carrying belt* — That portion of the belt which carries the load between the loading and discharge point (*See also* **2.509.1**).

2.49.6 *Chain selvage belt* — A belt in which the carrying section may be made up of rubber or fabric, woven metal, or other material and along each edge of which is fastened an endless chain with a suitable attachment. The chains carry the driving tension. The centre part functions only as a load supporting medium.

2.49.7 *Cleated belt* — A belt having raised sections spaced uniformly to stabilize flow of material on belts operating on inclines. Cleats may be a part of the belt or fastened on.

2.49.8 *Conveyor belt* — A belt to carry materials and transmit the power required to move the load being conveyed (*See* **2.49.8.1** to **2.49.8.8**).

For terms applying to conveyor belts, *See* Bottom Cover; Breaker; Carcass; Compound; Cover; Cover Quality; Duck; Friction; Maximum Belt Plies; Pitch; Ply Adhesion; Ply Arrangement; Ply Tensile; Bag Belt Tension; Skim Coat; Slack Side Belt Tension; Slip; Starting Belt Tension; Step Pad; Step Ply; Takeup Belt Tension; Tight Side Belt Tension; Top Cover; and Transcord Breaker.

2.49.8.1 *Cord conveyor belt* — A rubber conveyor belt in which the carcass is composed of single ply, or multiple plies of cotton or synthetic cords acting as longitudinal tension-carrying members in combination with plies of fabric to provide transverse strength and hold the cords together.

2.49.8.2 *Flat wire conveyor belt* — A belt composed of flat metal strips formed in a series of lateral, rectangular loops held together by lateral wires passing through holes in the flat strips to provide articulation similar to a conveyor chain and arranged to be driven by sprockets.

2.49.8.3 *Interwoven conveyor belt* — A construction of conveyor belt similar to **2.49.8.5** and having the plies interwoven to the extent that it is impossible to separate the plies.

2.49.8.4 *Rubber conveyor belt* — A conveyor belt consisting of a central stress-bearing carcass for transmitting power enclosed in rubber covers to protect the carcass from abrasion and atmospheric changes. The carcass usually consists of plies of cotton duck fabric, but other constructions used are cotton cords, steel cables, woven fabrics of synthetic fibres such as rayon, nylon, orlon, dacron, glass and asbestos. The rubber covers are furnished in various thickness and qualities of rubber compounds.

2.49.8.5 *Solid woven conveyor belt* — A construction of conveyor belt consisting of multiple plies of fabrics woven into one piece, which is done on looms designed for this purpose. Stripes are woven into the belt to show the numbers of plies, which range from two to ten. Impregnating and coating treatments are frequently employed.

2.49.8.6 *Steel cable conveyor belt* — A conveyor belt in which the carcass is composed of a single place of steel cables which acts as a longitudinal tension-carrying member and includes two or more plies of fabric to provide transverse strength and hold the cables together.

2.49.8.7 *Stitched canvas conveyor belt* — A construction of conveyor belt made up of plies of cotton fabric stitched together. Stitched canvas belts may be untreated, impregnated or coated.

2.49.8.8 *Wire mesh conveyor belt* — A woven wire conveyor belt composed of various combinations of flattened-helical coils of wire which may or may not be joined by straight or crimped members.

2.49.8.9 *Woven wire conveyor belt* — A flexible belt composed of a series of formed wires laterally connected, or of longitudinally articulated wires laterally connected for operation over straight face pulleys. Sometimes chain are attached to the edges of the wire mesh and, by means of sprockets attached to the pulley shafts, provide positive belt motion.

2.49.9 *Drive belt* — A belt which is used to transmit power or motion from one part to another.

2.49.10 *Flat belt* — A belt of approximately rectangular cross-section the width of which is considerably greater than its thickness.

2.49.11 *Hinged belt* — *See* **2.14**.

2.49.12 *Link-plate belt* — A grizzly type of belt consisting of two strands of endless chain connected by through rods at each articulation on which are carried a series of plates or bars mounted in a vertical plane for the purpose of rough screening while conveying.

2.49.13 *Return belt* — The belt on the strand or run returning to the loading point.

2.49.14 *Steel band belt* — A belt of relatively thin carbon or stainless strip steel alloyed and heat treated to withstand continued flexing over pulleys.

2.49.15 *Thrower belt* — **2.385.2.1** *and* **2.622.1**.

2.49.16 *V-belt* — A belt having a trapezoidal cross-section for operation in grooved sheaves permitting wedging contact between belt sides and groove sides for power transmission.

2.50 *Belt carcass* — The tension carrying portion of the conveyor belt. May comprise of single or multiple plies of fabric, cord, or steel cable bonded together with rubber or other material.

2.51 *Belt Cleaner* — Auxiliary equipment the purpose of which is to clean or remove material which clings to the conveyor belt (*See also* **2.51.1, 2.90** *and* **2.552**).

2.51.1 *Rotary belt cleaner* — A series of straight or spiral blades symmetrically spaced about the axis of rotation and caused to scrap or beat against the belt for the purpose of cleaning (*see* Fig. 4) (*See also* **2.90**).

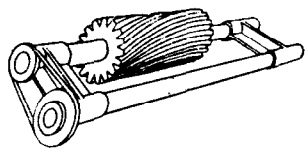


FIG. 4 ROTARY BELT CLEANER

2.52 *Belt Cleat — See* **2.146.**

2.53 *Belt Friction — See* **2.287.**

2.54 *Belt Grade* — Physical properties of rubber compound used in manufacture of conveyor belt.

2.55 *Belt Housing — See* **2.200.**

2.56 *Belt Idler Frame — See* **2.283.2** *and* **2.591.**

2.57 *Belt Link Plate — See* **2.49.12.**

2.58 *Belt Misalignment* — The lateral movement of a conveyor belt to either side of its intended path.

2.59 *Belt Pitch Line — See* **2.445.**

2.60 *Belt Ply — See* **2.449.**

2.61 *Belt Retainer* — A strip, rod, bar or similar item mounted above and around the conveyor belt to prevent the belt from being blown off by high winds.

2.62 *Belt Scraper — See* **2.522.**

2.63 *Belt Slip — See* **2.566.**

2.64 *Belt Table* — A table incorporating a belt conveyor so arranged as to provide working space on one or both sides of the belt.

2.65 *Belt Turnover* — A system of bend pulleys arranged to turn the belt over. Frequently used to prevent build up on return idlers by turning the dirty side (carrying side) up.

2.66 *Belt Wiper — See* **2.522.**

2.67 *Bend Shaft* — A shaft which supports a bend wheel or pulley.

2.68 *Bent* — A transverse frame used to support a gallery or conveyor frame at a fixed elevation. (*See also* **2.283.1**).

2.69 *Bin* — A container for storing material.

2.70 *Bin Gate* (*Also known as Bin Valve*) — A device for complete shut-off or control of gravity impelled flow of materials from a bin, bunker, hopper or other container. May be hand or power-operated and if powered can be arranged for automatic operation (*See also* **2.70.4, 2.70.5, 2.290.12, 2.292.6, 2.292.11, 2.292.14, 2.292.14.1, 2.292.15, 2.292.15.2,** *and* **2.292.21**).

2.70.1 *Air lock bin valve* — A type of valve used to control free-flowing materials which may have become aerated. The flow of material is interrupted at two points and provides an air chamber between the two seals when closed.

2.70.2 *Cut off bin gate — See* **2.292.12.**

2.70.3 *Flexible tube bin valve* — Valve consisting of a flexible, non-metallic tube secured at the upper end in a fixed position at the bottom of the bin and secured at the lower end to a rotating ring which twists the tube until complete closure is obtained.

2.70.4 *Multiple bin gate* — A series of bin gates connected to single operating device so that all may be opened and closed simultaneously.

2.70.5 *Rolling apron bin gate* — A gate in which the flow controlling medium consists of an endless belt supported on closely spaced rollers which substitutes rolling effort for sliding effort while being opened or closed. In principle, it operates similarly to an inverted crawler tread.

2.70.6 *Rotary vane bin valve* — A type of valve or gate in which radially spaced vanes form pockets or containers for a measured amount of material in each pocket which can be discharged as a batch or a series of batches. Usually power-operated but can be operated manually (*See also* **2.260.48**).

2.70.7 *Segmental bin gate* — *See* **2.292.14.**

2.70.8 *Undercut bin valve* — *See* **2.292.21.**

2.71 *Bin Level Indicator* — A mechanical, electrical or electronic device used to indicate the presence or absence of bulk materials at a predetermined location or elevation. Indication may take the form of audible or visible signals or a sequence of events may be initiated such as starting and stopping conveyors or feeders.

2.72 *Blanking Plate* — An adjustable detachable plate used for restricting the loading of a conveyor.

2.73 *Blending System* — A coordinated system of conveyors and allied equipment for the purpose of blending bulk materials to obtain a product which will be uniform and homogeneous in predetermined proportions.

2.73.1 *Blending system reclaimer* — *See* **2.483.**

2.73.2 *Blending system reclaiming conveyor* — *See* **2.163.110.**

2.73.3 *Blending system stacker* — *See* **2.590.**

2.73.4 *Blending system stocking conveyor* — *See* **2.163.134.**

2.74 *Blinding* — In screen terminology, a condition where undersize particles coat or cement over the apertures of the screening surface. Also known as plugging.

2.75 *Bolster* — A pad or support plate used to anchor the tail end of a conveyor and usually incorporating pivet and/or hinge features to permit vertical and/or horizontal rotation of the conveyor.

2.76 *Boom* — A cantilevered or overhanging member or structure that support or contains the component parts of a conveyor. May be fixed, hinged or pivoted.

2.77 *Boot* — The casing for the loading terminal of a bucket elevator.

2.78 *Boot Plate* — The curved plate forming the bottom of an elevator boot (*See also* **2.82**).

2.79 *Boot Shaft* — *See* **2.281.**

2.80 *Bottle Lowering Unit* — A gravity device in which units are lowered at a controlled speed within spiral guides.

2.81 *Bottom Cover* — The elastomeric layer over the carcass on the non-carrying side of the belt, usually of the same material as the top cover (*See* **2.49.8.4**).

2.82 *Bottom Plate* — A flat plate closing the bottom of a bucket elevator casing boot section (*See also* **2.78**).

2.83 *Box End* — *See* **2.657.**

2.84 *Bracing* — Diagonal or horizontal members used to stabilize conveyor supporting structures.

2.85 *Brake* — A friction device for slowing down conveyor components for bringing conveying equipment to a controlled stop; for holding travelling or transversing equipment in a selected location; for preventing reverse travel; and for controlling overspeed due to action of gravity.

2.85.1 *Band brake* — *See* **2.26** *and* **2.26.1.**

2.85.2 *Magnetic brake* — A brake usually mounted on a motor shaft with means to engage automatically when the electric current is cut off or fails.

2.86 *Breakaway* — *See* **2.592.**

2.87 *Breaker* — A layer of open mesh or cord fabric placed between the elastomeric cover and the outer ply or embedded in the elastomeric cover. The breaker may be provided at the edges also. Types of breakers are open weaves of cotton, rayon and nylon (*See also* **2.49.8.4** *and* **2.87.1**).

2.87.1 *Transcord breaker* — A breaker comprised of cord fabric or individual cords usually running laterally across the conveyor belt between top cover and carcass. This may also be more than one ply and also set on the diagonal.

2.88 *Breaker Strip* — *See* **2.87.**

2.89 *Brush, Belt Conveyor* — *See* **2.51.1** *and* **2.90.**

2.90 *Brush Cleaner* — A device consisting of bristles set in suitable backing used for cleaning a conveyor belt. It is usually of the rotary type (*See also* **2.51.1**).

2.91 *Bucket* — *See* **2.91.1** to **2.91.13.**

2.91.1 *Bottom discharge conveyor bucket* — A vessel generally rectangular or square in plan and having a bottom consisting of an undercut gate.

2.91.2 *Centrifugal discharge elevator bucket* — A bucket designed to scoop material from the boot of an elevator and discharge by reason of the combined effect of centrifugal force and gravity.

2.91.3 *Continuous elevator bucket* — A bucket designed for complete discharge when used in a continuous bucket elevator. High front, medium front, and low front are terms used to designate continuous buckets having a relatively large or small included angle between the front and back plates (*see* Fig. 5).

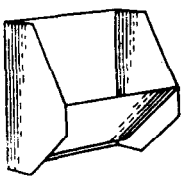


FIG. 5 CONTINUOUS ELEVATOR BUCKET

2.91.3.1 *Continuous elevator bucket, overlapping* — A continuous bucket the depth of which is greater than the spacing of the buckets on chain or belt, thus providing an overlap on the straight runs. The back of the bucket at the discharge end fits between the flanges on the front of the preceding bucket.

2.91.4 *Elevator bucket* — A bucket generally rectangular in plan and having a back suitably shaped for attachment to a chain or belt and a bottom or front designed to permit discharge of material as the bucket passes over the head wheel of a bucket elevator. (*See also* **2.91.2, 2.91.3, 2.91.5, 2.91.9, 2.91.11, 2.91.12** and **2.91.13**).

2.91.5 *Gravity discharge conveyor/elevator bucket* — An elevator bucket designed to contain material on vertical lifts and scrap material along a trough on horizontal runs. Discharge is effected by gravity.

2.91.6 *High front elevator bucket* — *See* **2.91.3.**

2.91.7 *Low front elevator bucket* — *See* **2.91.3.**

2.91.8 *Medium front elevator bucket* — *See* **2.91.3.**

2.91.9 *Pivoted bucket* — A conveyor bucket carried on, and free to pivot about trunnions or crossrods carried by chains.

2.91.10 *Skip bucket* — The tube or bucket used for containing the material conveyed by a skip hoist.

2.91.11 *Super-capacity elevator bucket* — A type of continuous elevator bucket used with a pair of chains in which the back of the bucket at the bottom extends backwards into space between the up and down runs to provide additional capacity without increase in length or projection.

2.91.12 — *V-elevator bucket* — A form of gravity discharge conveyor-elevator bucket in which the front and back make the same angle with the vertical centre line.

2.91.13 *Vented elevator bucket* — An elevator bucket with holes or slots to permit the escape of trapped air.

2.92 *Bucket Dumper* — *See* **2.651.4.**

2.93 *Bucket Elevator Boot* — *See* **2.77** *and* **2.120.**

2.94 *Bucket Elevator Boot Plate* — *See* **2.78** *and* **2.82.**

2.95 *Bucket Elevator Boot* — *See* **2.77** *and* **2.120.**

2.96 *Bucket Elevator Head* — *See* **2.121** *and* **2.318.**

2.97 *Bucket Elevator, Pivoted* — *See* **2.163.15.2.**

2.98 *Bucket Guides* — *See* **2.307.**

2.99 *Bucket Leveler* — *See* **2.650.1.**

2.100 *Bucket Righter* — A device for restoring the buckets of a pivoted bucket conveyor to the carrying position.

2.101 *Bucket Wing* — Clips or brackets on an elevator bucket for attaching to double strands of parallel chains.

2.102 *Build Up* — That material which clings to the conveying medium or accumulates on various components of the conveying system. Also known as 'encrustation'.

2.103 *Bumper* — A guard or pad attached to conveyors cars or carriers to prevent damage on contact with one another ; a guard or pad attached to a fixed conveyor structure or to a car to prevent damage when the moving car contacts the structure.

2.103.1 *Accumulating bumper* — A bumper on a power-and-free conveyor carrier or in-floor tow conveyor cart which incorporates a control mechanism to disengage the carrier or cart from the powering means. Disengagement occurs when the bumper contacts a fixed object. The powering means is automatically reengaged when the object is removed.

2.103.2 *Truck safety bumper* — A device on a tow conveyor truck, dolly, or cart which disconnects the tow pin from the propelling chain in the event of collusion with another truck, trolley, cart or other obstruction.

2.104 *Bunker* — A large bin or compartment for the storage of bulk materials (*See also* **2.69**).

2.105 *Bushing*

a) *In machinery,* a removable liner fixed in a bore to improve the bearing surface.

b) *In chain,* renewable liner fixed in the barrel of a link, or centre link, to provide an improved bearing surface.

c) *In chain,* a hollow cylinder used to space the side bars and provide a bearing surface for the chain pin, and on which rollers may or may not be mounted.

2.106 *By-Pass* — A device, usually a gate, for the purpose of changing the usual direction of travel of material.

2.107 *Cable Reel* — A metal drum with rim equipped with springs or electric motor, slip rings, cable entry fitting and electric cable wound about the drum face in one or more layers. This device is used to supply power or control current from a fixed supply to a moving machine. The cable reel springs or motor are used to maintain tension on the cable during the pay-out or reel-in cycle.

2.108 *Cableway* — A cable or rope supported system in which the carriers are not detached from the operating mechanism. The travel of the carriers is wholly within the span.

2.108.1 *Slack line cableway* — A cable or rope-supported system in which the supporting cable is adjusted in length to provide the lifting function of the unit.

2.109 *Cam* — A rotating disc or sliding piece having varying radii or projection so as to impart to a contacting member, variable velocity or variable motion as required. The disc, piece or projection may rotate, progress or reciprocate as desired at any predetermined rate.

2.110 *Cam Shaft* — A shaft on which a cam is mounted or of which a cam is an integral part.

2.111 *Capacity* — The number of pieces, volume or mass of material that can be handled by a conveyor in a unit of time when operating at a given speed (*See also* **2.478**).

2.112 *Capstan* — A concave cylinder for rope or cable snubbing purposes. May be an idler or powered.

2.113 *Car* — A wheeled carrier that receives and supports the load to be conveyed. Generally attached to Cabin, belt, cable linkage or other propelling medium (*See also* **2.646**).

2.113.1 *Transfer car* — Any wheeled device used for transferring loads from one conveyor line to another. May be manually or automatically operated (*see* Fig. 6).

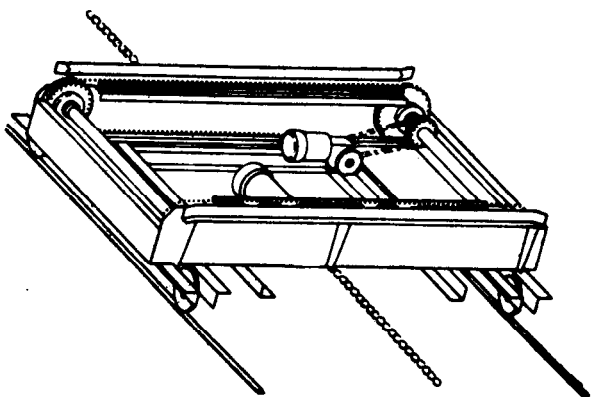


FIG. 6 TRANSFER CAR

2.114 *Car haul* — A pusher chain conveyor used for moving small cars, such as mine cars, along a track. A form of tow conveyor (*see* **2.163.23.8**).

2.114.1 *Car haul pushing dog* — *See* **2.471.**

2.114.2 *Car haul safety dog* — *See* **2.329.**

2.114.3 *Car haul spur* — *See* **2.471.**

2.114.4 *Car haul tilting dog* — *See* **2.624.**

2.115 *Carcass* — The tension bearing portion of the conveyor belt. It may be comprised of single or multiple plies of fabric or cord of solid wooven type or single layer of steel cords elastomeric material (*See also* **2.49.8.4**).

2.116 *Carpet* — *See* **2.164.**

2.117 *Carriage* — *See* **2.661.**

2.118 *Carrier*

a) A device of various types attached to or hung from trolleys to support the load.

b) The receptacle in which objects are placed for transmittal through a pneumatic tube system.

2.119 *Casing* — A structure of wood, metal or other material which completely encloses the elevating or conveying machinery elements to support them, to afford safety protection, to protect from the weather, or to confine dust, gases or fumes arising from the material being conveyed; or to form a part of the conveyor in the same manner as a trough (*See also* **2.119.2**).

2.119.1 *Boot elevator casing* — *See* **2.120.**

2.119.2 *Chain casing* — An enclosure usually fitted with sealing washers or glands to keep out foreign material and prevent the escape of lubricant.

2.119.3 *Gear casing* — An enclosure around a gear train, generally constructed so as to retain lubricant.

2.119.4 *Self-supporting casing* — A casing designed as a continuous hollow column supporting the weight of the complete elevator and requiring only lateral ties to adjacent structures.

2.120 *Casing Boot Section* — The casing or housing for the loading terminal of a bucket elevator.

2.121 *Casing Head Section* — The section of casing at the head end of a bucket elevator or conveyor.

2.122 *Casing Hood* — That portion of the casing head end that encloses the head terminal.

2.123 *Casing Intermediate Section* — The casing between the terminal or the corner sections or both.

2.124 *Caster Bed (Caster Table)* — A group of inverted swivel casters providing easy movement of flat surfaced objects.

2.125 *Caster Track — See* **2.629.**

2.126 *Caterpillar Chain Dog* — A dog or tooth attached to a caterpillar drive chain to provide the driving contact with the conveyor chain.

2.127 *Cellar Hoist — See* **2.163.4.**

2.128 *Central Desk* — The main group of terminals in pneumatic tube systems where carriers are manually relayed from one line to another or where material in the carriers is processed or where both these actions take place.

2.129 *Centre Column* — A column to which the spiral chute bed is attached and supported or in the case of an open centre chute, the column to which brackets are attached to support the bed.

2.130 *Centring Table — See* **2.552.**

2.131 *Centres* — The distance measured along the carrying run of a conveyor from the centre of one terminal wheel or pulley to the centre of the opposite terminal wheel or pulley; also, horizontal centres or vertical centres, the distance from the centre of one terminal or bend wheel to the centre of another one as projected on a horizontal or vertical plane.

2.132 *Chain* — A series of links pivotally joined together to form a medium for conveying or transmitting motion or power. General classes of chains common to the conveyor art are covered in **2.132.1** to **2.132.47.**

2.132.1 *Bar link chain* — A straight side bar chain having a barrel-less centre link. In some forms the entre link is made from two side bars, with or without a spacer washer, and in others the centre link is solid (*See* Fig. 7).

FIG. 7 BAR LINK CHAIN

2.132.2 *Block chain — See* **2.132.1** *and* **2.132.9.**

2.132.3 *Bushed chain — See* **2.132.37.**

2.132.4 *Bushed pintle chain* — A type of pintle chain having a bushing in the barrel of the link (*see* Fig. 8).

2.132.5 *Bushed roller chain — See* **2.132.38.**

2.132.6 *Cast roller chain* — A cast chain with cast rollers. Used chiefly for apron, pan, scraper flight, and slat conveyors.

2.132.7 *Caterpillar chain* — A short endless chain on which dogs or teeth are spaced to mesh with and move or be moved by a conveyor chain.

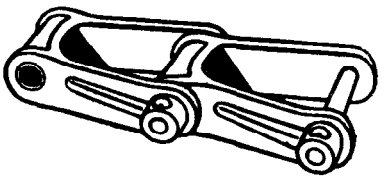


FIG. 8 BUSHED PINTEL CHAIN

2.132.8 *Coil chain* — A chain having links of round or flat bar steel formed into loops and made interlocking as the chain is manufactured.

2.132.9 *Combination chain* — A straight side bar chain consisting of alternately spaced cast centre links and flat steel side bars connected by means of chain pins (*see* Fig. 9).

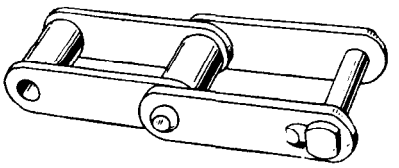


FIG. 9 COMBINATION CHAIN

2.132.10 *Conveyor chain* — A chain used in the conveying medium of conveyors.

2.132.11 *Cottered chain* — Any chain in which one or both ends of the pins are provided with holes normal to their axis for the insertion of cotters or pins to hold the parts of a chain together.

2.132.12 *Detachable chain* — A chain in which each link is of single piece construction, having the pin, side bars and barrel of book shape construction cast or formal integral (*see* Fig. 10). The links of this type chain may be coupled or uncoupled after rotation out of normal operating position.

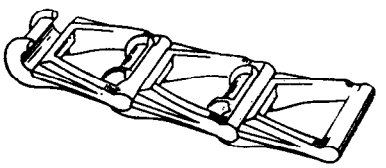


FIG. 10 DETACHABLE TYPE CHAIN

2.132.13 *Detachable type chain* — Any chain in which the links may be separated or joined without damage to the parts.

2.132.14 *Double pitch chain* — A roller chain using the same joint members as standard pitch chain and having the same dimensions except for the pitch which is twice standard.

2.132.15 *Drive chain* — A chain used in a chain drive for transmitting power.

2.132.16 *Finished roller chain* — *See* **2.132.47.**

2.132.17 *Flat top chain* — *See* **2.132.18.**

2.132.18 *Hinge joint type chain* — A chain made up of links having a hinge type joint and having a flat top surface in a plane parallel to the plane of the axis of the pins (*see* Fig. 11).

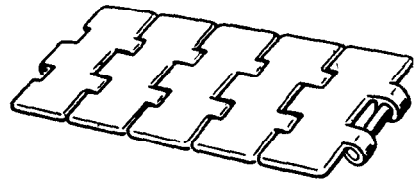


FIG. 11 HINGE JOINT TYPE CHAIN

2.132.19 *Hog scraper chain* — An old term for a type of bar link chain.

2.132.20 *Ice chain* — A type of bar link chain.

2.132.21 *Intermediate carrier chain* — A form of pintle chain having cylindrical bosses extending outwardly from the side bars at the open end of the link and encircling the pin to provide driving lugs for double or twin sprocket wheels.

2.132.22 *Inverted tooth chain* — A drive chain having series of toothed links alternately assembled either with pins and/or other joint components to provide a pivot between adjoining pitches (*see* Fig. 12) (*also known* as 'Silent Chain').

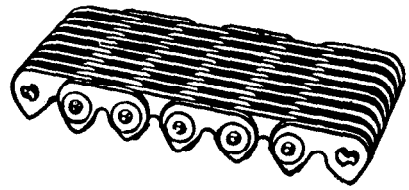


FIG. 12 INVERTED TOOTH CHAIN

2.132.23 *Knuckle joint chain* — A form of rivetless chain with a special link, usually at a trolley that provides a pivot so that the chain can be flexed at greater angles vertically allowing it to transverse shorter radius vertical curves.

2.132.24 *Leaf chain* — *See* **2.132.1.**

2.132.25 *Long pitch engineering chain* — *See* **2.132.38.**

2.132.26 *Matched chains* — Two or more strands of the same chain of practically the same length and attachment spacing.

2.132.27 *Multiple width chain* — A chain having more than one row of links laterally connected by a common pin.

2.132.28 *Offset side bar chain* — A chain made up of consecutive offset links.

2.132.29 *Pintle chain* — A type of offset chain in which the barrel is cast integral at one end between a pair of offset side bars (*see* Fig. 13).

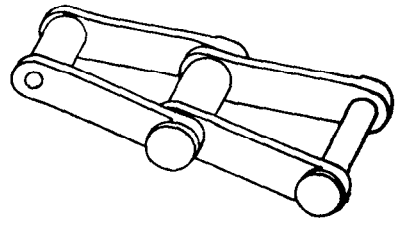


FIG. 13 PINTLE CHAIN

2.132.30 *Pocket chain — See* **2.132.8.**

2.132.31 *Precision roller chain — See* **2.132.47.**

2.132.32 *Riveted chain* — A chain in which the ends of the pins are headed and/or swaged or riveted so that chain cannot be disassembled without cutting off the pin.

2.132.33 *Rivetless chain* — A straight side-bar chain having a double headed pin locked in the outside side bars and which engages the live bearing seats inside the ends of a loop-shaped centre link (*see* Fig. **14**).

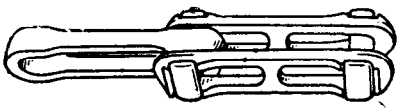


FIG. 14 RIVETLESS CHAIN

2.132.34 *Roller chain* — A chain having a roller encircling the barrel or bushing of each link joint (*see also* **2.132.38** and **2.132.47**).

2.132.35 *Silent chain — See* **2.132.22.**

2.132.36 *Single width chain* — A chain having one row of links.

2.132.37 *Steel side bar bushed chain* — A fabricated all steel chain made up of either successive offset links with bushing barrels or alternate centre links with bushing barrels and outside links connected by means of chain pins (*see* Fig. 15).

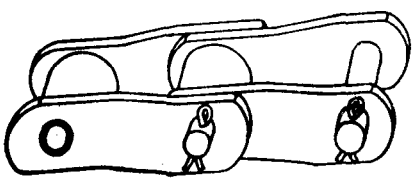


FIG. 15 STEEL SIDE BAR BUSHED CHAIN

2.132.38 *Steel side bar bushed roller chain* — A fabricated all steel roller chain of the bushed type provided with rollers which revolve on the bushing.

2.132.39 *Steel thimble roller chain — See* **2.132.38.**

2.132.40 *Straight link chain — See* **2.132.41.**

2.132.41 *Straight side bar chain* — A chain made of alternating centre and outside links.

2.132.42 *Stud chain — See* **2.132.37.**

2.132.43 *Switch chain* — An endless chain confined to a path within a switch to power load carrier through a switch. The chain may be driven from an independent source or slave driven by the main conveyor.

2.132.44 *Swivel chain* — A special pintle chain having joints which permit flexure of the chain in any (more than one) plane.

2.132.45 *Test chain* — A chain expressly designed for calibrating conveyor scales.

2.132.46 *Transfer chain*

a) A type of pintle chain, the upper surface of which is variously shaped to suitably support objects;

b) A chain which moves carriers through a switch from one power line to another in a power-and-free conveyor; and

c) A chain for advancing trucks from one loop into another in a tow conveyor.

2.132.47 *Transmission roller chain* — Type of steel roller chain manufactured to relatively close clearances and tolerances and with highly finished surfaces (*see* Fig. 16).

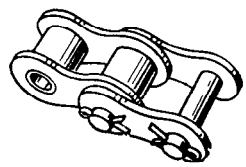


FIG. 16 TRANSMISSION ROLLER CHAIN

2.132.48 *Twin rail chain or cable conveyor, power and free* — Overhead chain conveyor with pusher dogs attached to an endless chain or cable driving load-carrying trolleys running on a separate track. Propelling medium and trolleys are not connected. The trolleys can be diverted away from the driving chain by means of switches. The conveyors may be designed for three-dimensional travel. (*See* Fig. 17).

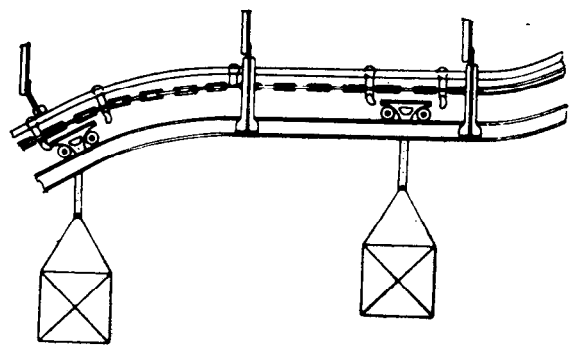


FIG. 17 TWIN RAIL CHAIN OR CABLE CONVEYOR, POWER AND FREE

2.133 *Chain Barrel* — That portion of a cast chain link that joins and is between the side bars at the pivot point, the inside of which forms the live bearing seat for the pin and the outside of which provides the contact surface for or with the wheel.

2.134 *Chain Guides* — *See* **2.307.**

2.135 *Chain Joint* — The parts that form the pivoting portion of the chain (pins, bushings, barrels and rollers).

2.136 *Chain Pitch* — *See* **2.445.**

2.137 *Chain Pull, Effective* — *See* **2.336.**

2.138 *Chassis* — *See* **2.661.**

2.139 *Choke Food* — A feeding arrangement in which the potential rate of supplying material at the feed point exceeds the rate at which the conveyor will remove material.

2.140 *Chute* — A trough through which bulk materials or objects are directed and lowered by gravity. The trough may be straight or curved, open or enclosed.

2.140.1 *Bifurcated chute* — A chute which separates into two branches. It is usually fitted with a deflector plate to control the delivery of material to either or both branches.

2.140.2 *Core type spiral chute* — A spiral chute having a centre core or column about which it is fabricated, with the core serving as the inside guard.

2.140.3 *Discharge chute* — A chute used to receive and direct material or objects from a conveyor.

2.140.4 *Double chute* — A chute having a longitudinal divider member resulting in two chutes in one. The divider member can be arranged so that the chutes are side by side or one above the other.

2.140.5 *Enclosed spiral chute* — A spiral chute with an integrally fabricated outer enclosure.

2.140.6 *Gravity chute* — *See* **2.140.17**.

2.140.7 *Grizzly chute* — A chute with a bar grizzly which separates the fine from the coarse material as it passes through the chute.

2.140.8 *Loading chute* — Used to direct material to a conveyor.

2.140.9 *Multideck spiral chute* — Any spiral chute having two or more super-imposed troughs or beds fabricated into one assembly.

2.140.10 *Nonsegregating chute* — A chute, usually used to charge stoker hoppers, so designed as to deliver the coal in a mixed state rather than having the large lumps tending to separate from the fine.

2.140.11 *One-way chute* — A chute causing one fixed direction of discharge or trajectory of material

2.140.12 *Open centre core spiral chute* — A spiral chute without a centre core or column. Side guards are used on both sides of the trough or bed.

2.140.13 *Open spiral chute* — A spiral chute which is not fabricated with an outer enclosure.

2.140.14 *Pneumatic chute or spout* — A chute or spout in which air is introduced through the bottom to facilitate movement of bulk materials down a slight decline.

2.140.15 *Screen chute* — A discharge chute equipped with a screen section, either stationary or vibrating, to remove the finer portions of the material being handled from the major line of flow.

2.140.16 *Screen loading chute* — A type of chute with a bar screen or grizzly bottom which permits fines to fall onto the conveyor belt first, providing a cushion for the larger material which passes over the screen.

2.140.17 *Spiral chute* — A continuous straight, curved or spiral smooth trough over which bulk material or unit load are guided while being lowered by gravity in substantially helical patch (*see* Fig. 18).

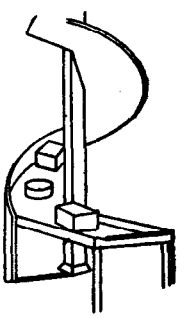


FIG. 13 SPIRAL CHUTE

2.140.18 *Straight chute* — A sloped chute designed to transfer bulk materials, packages, or objects in a straight line from points of entry to points of discharge.

2.140.19 *Swivel chute* — A chute so mounted that it may be rotated.

2.141 *Circular Bin Discharger* — A revolving cone with feeder fingers around the base periphery connected at the apex through a universal joint to a revolving arch breaker arm.

2.142 *Circulating Load* — Material, packages or objects that remain in or on a conveyor by virtue of not being discharged or removed from it.

2.143 *Classification* — The process of approximately grouping materials by density or size through the mechanical use of a fluid medium.

2.144 *Cleanout Box* — A receptacle in a floor conveyor for the purpose of gathering and removal of debris.

2.145 *Cleanout Door* — A name used to describe or indicate a cover and opening in a conveyor or elevator housing.

2.146 *Cleat* — An attachment fastened to the conveying medium to act as a pusher, support, check or trip, etc, to help propel material, parts or packages along the normal path of conveyor travel. May be of various sizes and shapes to suit the application.

2.147 *Closed Circuit* — An arrangement of a conveyor or conveyors capable of moving material through all portions of the circuit and returning the undistributed portion to the starting point.

2.148 *Clutch* — A device to permit engagement or disengagement of equipment while in motion or at test. Operation can be manual or automatic. A clutch connecting two shafts end-to-end is called a cut-off coupling. A clutch with an extended sleeve on which a pulley, sprocket, gear or other power transmission device is mounted and which runs freely on the supporting shaft when disengaged is called a sleeve clutch. (*See also* **2.148.1** and **2.148.2**).

2.148.1 *Friction clutch* — Any clutch in which driving effort is developed by contact between pressure elements through friction alone. General use is for the purpose of engaging or disengaging revolving parts. Also as a safety appliance to permit slip when overload is encountered.

2.148.2 *Jaw clutch* — A clutch in which driving effort is transmitted through jaws or teeth which may be square or spiral in form.

2.148.3 *Positive clutch* — *See* **2.148.2.**

2.149 *Coal Pocket* — An arrangement of bins to load trucks by gravity.

2.150 *Coefficient of Friction* — A numerical expression of the ratio between the force of contact existing between two surfaces and the resistant force tending to oppose the motion of one with respect to the other.

The coefficient of friction is used in determining the power necessary to drive a machine; to determine the slope angles used in hoppers, bins, chutes, and bunkers; or to determine the maximum angle of inclination for a conveyor.

2.151 *Coil Buggy* — A roller or wheel-mounted transfer unit for removal of coiled steel from the tension reel and transfer to a coil conveyor.

2.152 *Coil Tilter* — *See* **2.550** and **2.671.**

2.153 *Collar* — A device used for positioning shafts or other machine parts. (*See also* **2.170**).

2.154 *Compound* — The term applied by manufacturers to the mix containing polymer (rubber or plastic) and other ingredients which are compounded and used in conveyor belt production.

2.155 *Conical Sorting Table* — A rotating circular table, generally powered and used for sorting unit loads, such as parcels and baggage. Incoming loads are delivered at the peak of the cone so as to work their way to the outside circumference as loads are removed from the low point along the outer edge. (*See* **2.163.21**).

2.156 *Constant Flow Weigh System* — A system in which the flow of material is maintained at a constant rate by weight.

2.157 *Continuous Checking Scale* — A device which automatically weighs a continuous moving length or stream of material, or an intermittent series of individual items passing over the scale.

2.158 *Control* — A device for starting, stopping or selecting variable speeds for conveyors or for actuating conveyor components. Can be manual, electric, hydraulic or pneumatic operation.

2.158.1 *Adjustable voltage control* — A form of armature voltage control of D.C. motors obtained by impressing on the motor armature a voltage which may be changed in very small increments, but when once adjusted, it and consequently the speed of the motor are practically unaffected by a change in the load.

2.158.2 *Amplitude control* — A means of controlling or varying the normal stroke of a vibrating or oscillating machines such as a conveyor or screen.

2.158.3 *Armature voltage control* — A method of controlling the speed of a D.C. motor by means of a change in the magnitude of the voltage impressed on its armature winding.

2.158.4 *Automatic despatch control* — A system used to direct a unit load and/or conveyor carrier to a predetermined destination without operator attention.

2.158.5 *Converging control* — *See* **2.158.10.**

2.158.6 *Feed back control system* — A control system in which the controlled quantity is measured and compared with a standard representing the desired performance. Any deviation from standard is fed back into the control system in such a sense that it will reduce the deviation of the controlled quantity from standard.

2.158.7 *Interlocking controls* — A system of electrical controls for a system of conveyors which maintains a controlled relationship between the units of the system. Sometime applied to sequence starting controls.

2.158.8 *Starting sequence controls* — *See* **2.158.7** and **2.534.**

2.158.9 *Torque limit control* — A motor control assembly incorporating a torque sensing device which transmits a signal to the associated control components which are arranged to correct and maintain a present torque value. When sensing current, this device is also known as a current limit control.

2.158.10 *Traffic control* — A mechanical or electrical mechanism to prevent collusion of objects as they merge from two lines into a single line.

2.159 *Controller* — An electro-mechanical device or assembly of device for starting, stopping, accelerating, decelerating a conveyor drive, or which serves to govern in some predetermined manner the electric power delivered to the drive.

2.160 *Converging Section* — A section of roller or wheel conveyor where two conveyors meet and merge into one conveyor.

2.161 *Conveying Element* — *See* **2.162.**

2.162 *Conveying Medium* — That portion of a conveyor that moves or carries materials, packages or objects.

2.163 *Conveyor* — A horizontal, inclined, or vertical device for moving or transporting bulk materials, packages, or objects in a path predetermined by the design of the device and having points of loading and discharge fixed, or selective; included are skip hoists and vertical reciprocating conveyors; industrial trucks, tractors and trailers, tiering machines (truck type), cranes, hoists, monorails, power and hand shovels, power scoops, bucket drag lines, platform elevators designed to carry passengers or the elevator operator, and highway or rail vehicles are not included.

2.163.1 *Accumulator conveyor* — Conveyor having double strands of chains connected by spindles supporting freely rotating load carrying rollers and designed to permit accumulation of packages or objects. Usually roller, live roller conveyor, roller slat conveyor or belt conveyors (*see* Fig. 19).

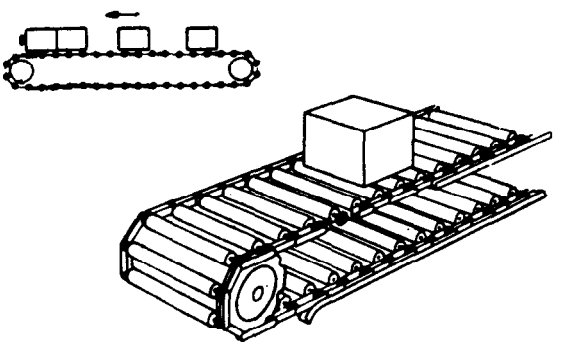
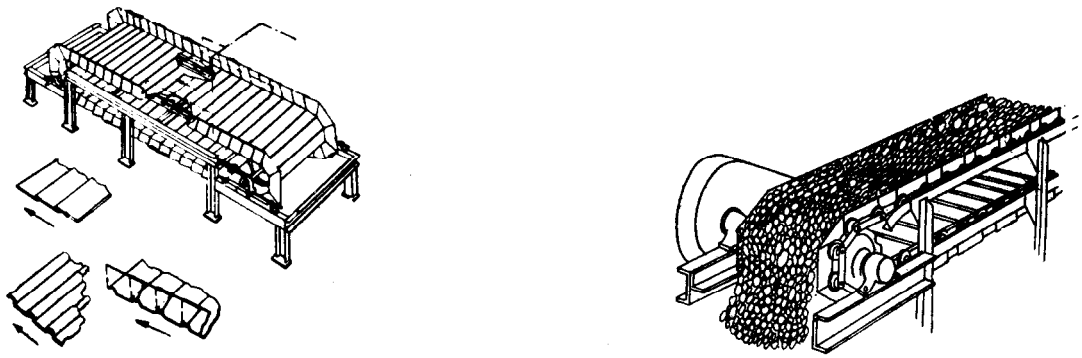


FIG. 19 ACCUMULATOR CONVEYOR

2.163.2 *Apron conveyor*

a) *General* — Conveyor having chains as the driving medium supported by rollers or sliding tracks and having attached plates or pans forming the carrying surface [*see* Fig. 20 (a)].

b) A conveyor in which an apron composed of shaped or flat overlapping plates forms the moving bed [*see* Fig. 20 (b)].



(a) (b)

FIG. 20 APRON CONVEYOR

2.163.2.1 *Apron conveyor with deep pans* — Apron conveyor in which the sides and ends of the plates are turned upwards to form open pans (*see* Fig. 21).

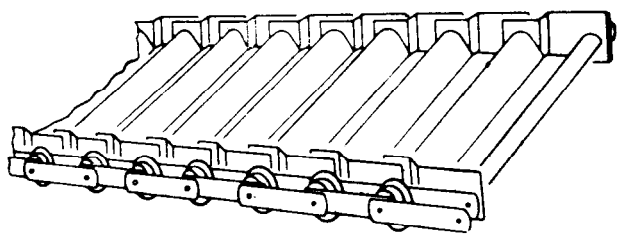


FIG. 21 APRON CONVEYOR WITH DEEP PANS

2.163.2.2 *Roller apron conveyor* — *See* **2.163.114.9.**

2.163.3 *Archimedes conveyor* — *See* **2.163.113.1.**

2.163.4 *Arm conveyor* — A conveyor consisting of an endless belt, or one or more chains, to which are attached projecting arms or shelves, for handling packages or objects in a vertical or inclined path (*see* Fig. 22).

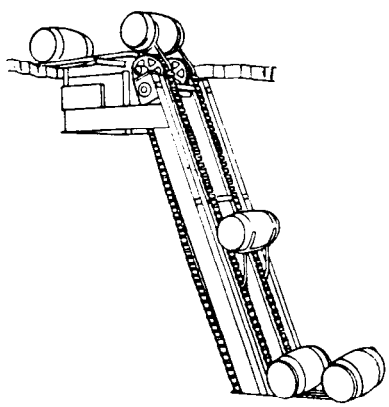


FIG. 22 ARM CONVEYOR

2.163.5 *Ash conveyor* — *See* **2.163.63** and **2.163.99.**

2.163.6 *Assembly conveyor* — Any type of conveyor adapted to convey assemblies or parts through a series of progressive assembly operations (*see* Fig. 23).

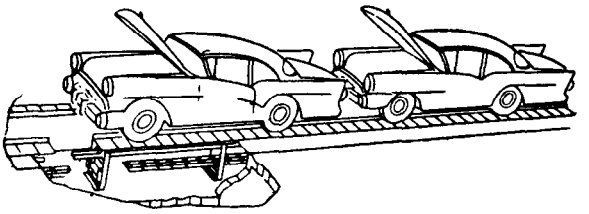


FIG. 23 ASSEMBLY CONVEYOR

2.163.7 *Banana conveyor* — *See* **2.173.5.**

2.163.8 *Band conveyor* — *See* **2.163.11.16.**

2.163.9 *Barn conveyor* — Any type of conveyor usually installed in trenches along the rear of stalls in barns for the purpose of removing manure and delivering it to storage pile or farm vehicle.

2.163.10 *Beam conveyor* — *See* **2.163.108** and **2.678.**

2.163.11 *Belt conveyor*

a) An endless fabric, rubber, plastic, leather, or metal belt operating over suitable drive, tail end and bend terminals and over belt idlers or slider bed for handling bulk materials, packages, or objects, placed directly upon it (*see* Fig. 24).

b) Conveyor using an endless moving belt for the carrying and tension medium. The belt is usually driven by a pulley at one end acting on the upper portion of the belt passing over a free-running pulley at the other end. The belt may also be driven by a pulley acting on the return side of the belt or by several pulleys. The carrying portion of the belt may be supported by free-running idlers or suitable flat surfaces. This type of conveyor may be arranged for horizontal inclined or declined travel, the slope depending on the character of the goods conveyed and the type of belt surface.

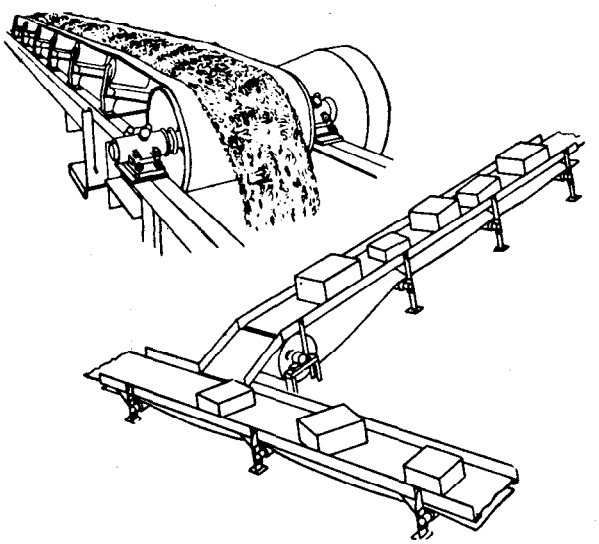


FIG. 24 BELT CONVEYOR

2.163.11.1 *Blanket belt conveyor* — A conveyor composed of two moving belts working in unison, the carrying faces being in or near contact. The load is carried between the two belts (*see* Fig. 25). This conveyor can be used up and down steep inclines.

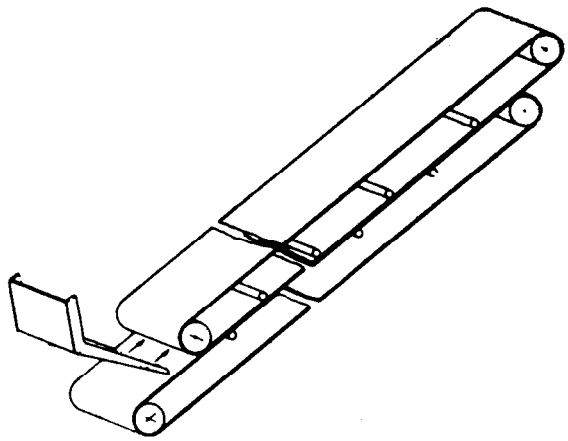


FIG. 25 BLANKET BELT CONVEYOR

2.163.11.2 *Cable belt conveyor* — A belt in which the carrying section is composed of rubber and/or other polymer and fabric with specially shaped moulded rubber/polymer edges. The edges rest on and are supported by metal cables which transmit the driving force, the belt merely functioning as a load supporting medium.

2.163.11.3 *Chain or wire rope belt conveyor* — A conveyor composed of a belt secured to transverse supports and carried by moving chains or wire ropes. The chains or wire ropes transmit the driving force with the belt forming the load-carrying medium (*see* Fig. 26).

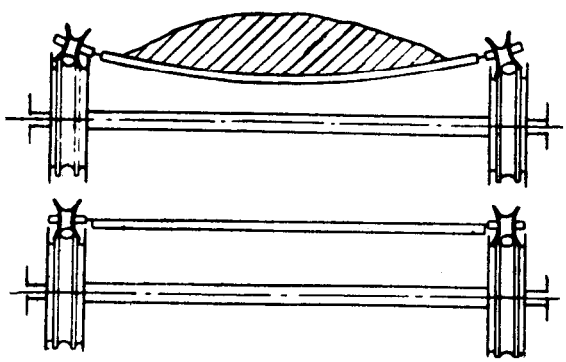


FIG. 26 CHAIN OR WIRE ROPE BELT CONVEYOR

2.163.11.4 *Closed belt conveyor* — Conveyor composed of a moving, endless, flexible belt, or belts, capable of being formed into a closed tubular shape. While in motion the belt opens to receive load, closes to convey or elevate, and open to discharge (*see* Fig. 27).

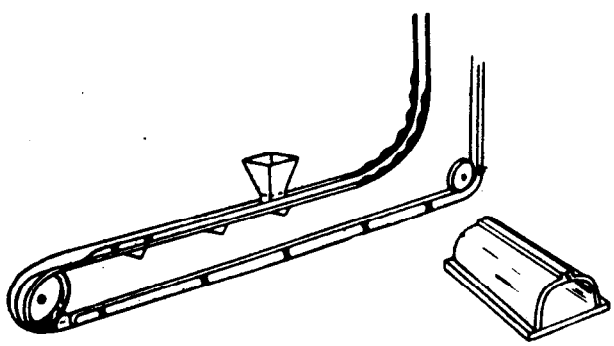


FIG. 27 CLOSED BELT CONVEYOR

2.163.11.5 *Curved belt conveyor* — A unit load belt conveyor usually operating horizontally through 90° or 180° turns. (*See also* **2.49.6**).

2.163.11.6 *Flat belt conveyor* — A type of belt conveyor in which the carrying run of the conveyor belt is supported by flat belt idlers. (*See also* **2.163.11.15**).

2.163.11.7 *Hugger belt conveyor* — Two belt conveyors whose conveying surface combine to convey loads up steep inclines or vertically.

2.163.11.8 *Magnetic belt conveyor* — An inclined belt conveyor operating over a slider bed containing permanent magnets for handling ferrous metal parts.

2.163.11.9 *Multiple cord belt conveyor* — A belt conveyor composed of two or more spaced strands of vee, double vee or round belts.

2.163.11.10 *Multiple ribbon belt conveyor* — A belt conveyor having a conveying surface of two or more spaced strands of narrow conveyor belts.

2.163.11.11 *Pocket belt conveyor* — *See* **2.132.8.**

2.163.11.12 *Portable belt conveyor* — A portable conveyor upon which a belt is used as the conveying medium. (*See also* **2.163.11**).

2.163.11.13 *Portable, flat, belt conveyor* — *See* **2.163.11.6** and **2.163.100.**

2.163.11.14 *Ribbon belt conveyor* — *See* **2.163.11.10.**

2.163.11.15 *Sliding belt conveyor* — Conveyor composed of a moving belt sliding on a smooth surface.

2.163.11.16 *Steel belt conveyor* — A flat belt conveyor in which the carrying medium is a thin, flexible steel band.

2.163.11.17 *Troughed belt conveyor* — A belt conveyor with the conveyor belt edges elevated on the carrying run to form a trough by conforming to the shape of the troughed carrying idlers or other supporting surface.

2.163.11.18 *Vertical belt conveyor* — A longshoreman's term applied to a pocket conveyor.

2.163.11.19 *Walled belt conveyor* — A conveyor composed of a moving belt having a flat or troughed carrying face extended to form side walls of limited heights (*see* Fig. 28).

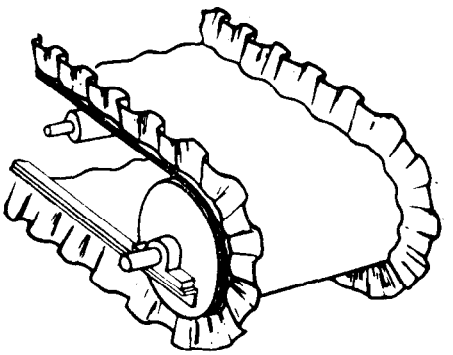


FIG. 28 WALLED BELT CONVEYOR

2.163.11.20 *Wire rope belt conveyor* — *See* **2.163.11.3.**

2.163.12 *Blending conveyor* — *See* **2.163.119.4** and **2.163.76.1.**

2.163.13 *Boom conveyor* — Any type of conveyor mounted on a boom.

2.163.14 *Booster conveyor* — Any type of powered conveyor used to regain elevation lost in gravity roller or wheel conveyor lines (*see* Fig. 29).

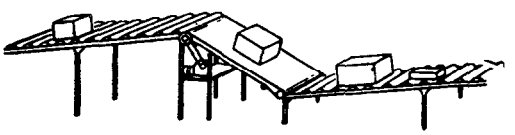


FIG. 29 BOOSTER CONVEYOR

2.163.15 *Bucket conveyor* — Any type of conveyor in which the material is carried in a series of buckets (*see* **2.241.4**, **2.91.5**, **2.91.9**, **2.91.11**, **2.91.12** and **2.91.13**).

2.163.15.1 *Bottom discharge bucket conveyor* — A conveyor for carrying bulk materials in a horizontal path consisting of an endless chain to which roller-supported cam-operated bottom discharge conveyor buckets are attached continuously (*see* Fig. 30).

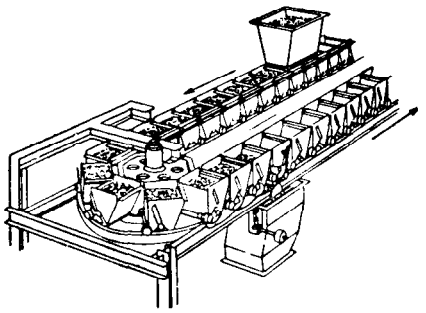


FIG. 30 BOTTOM DISCHARGE BUCKET CONVEYOR

2.163.15.2 *Pivoted bucket conveyor* — A type of conveyor using pivoted buckets attached between two endless chains which operate in suitable guides or casing in horizontal, vertical, inclined or a combination of these paths over drive, corner and takeup terminals (*see* Fig. 31). The buckets remain in the carrying position until they are tipped or inverted to discharge.

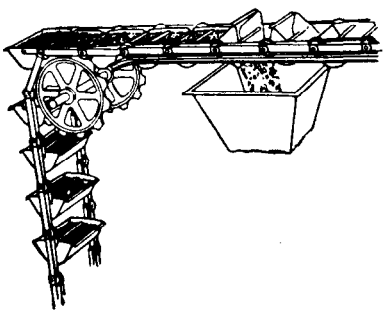


FIG. 31 PIVOTED BUCKET CONVEYOR

2.163.16 *Button rope conveyor* — *See* **2.163.34**.

2.163.17 *Cable-can conveyor* — A type of conveyor used in can manufacturing in which the can is supported on a moving endless cable or cables operating between can guides.

2.163.18 *Capacity-flow conveyor* — *See* **2.163.40**.

2.163.19 *Car type conveyor* — A series of cars attached to and propelled by an endless chain or other linkage running on a horizontal or slight incline (*see* Fig. 32).

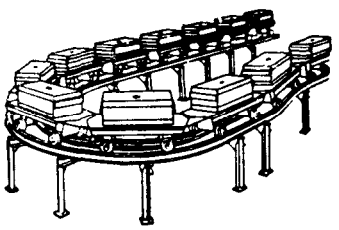


FIG. 32 CAR TYPE CONVEYOR

2.163.20 *Car wash conveyor* — *See* **2.163.50** and **2.163.137**.

2.163.21 *Carrousel conveyor* — A continuous platform or series of spaced platforms which move in a circular horizontal path (*see* Fig. 33). (*See also* **2.163.25**).

Note — The term 'carrousel' has been applied to other forms of conveyors, such as car and pellet types.

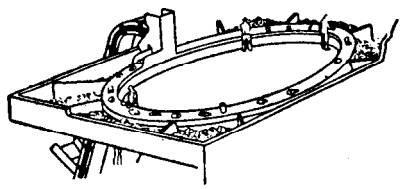


FIG. 33 CARROUSEL CONVEYOR

2.163.22 *Case conveyor* — A conveyor for handling cases, cartons, packages, large cans and similar objects.

2.163.23 *Chain Conveyor* — Any type of conveyor in which one or more chains act as the conveying element. (*See* **2.163.23.3, 2.163.23.10** and **2.163.23.11**). Sometimes synonymous with **2.163.140**.

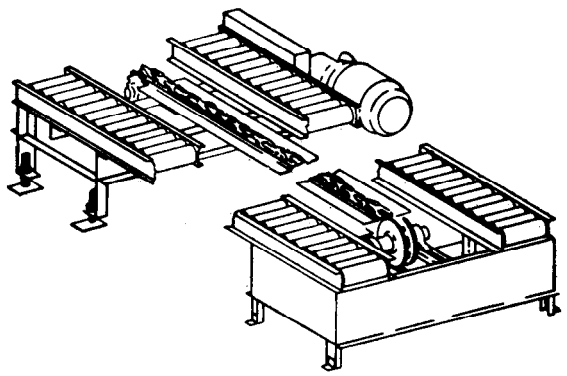


FIG. 34 AIR-FLOAT CHAIN CONVEYOR

2.163.23.1 *Air-float chain conveyor* — A chain and roller conveyor in which the chain is supported by an inflatable air hose to control and minimize line pressure (*see* Fig. 34).

2.163.23.2 *Chain conveyor with driving dogs* — Chain conveyor with pusher dogs driving the unit load supported by independent slide or roller tracks directly or by means of a palette, or truck (*see* Fig. 35).

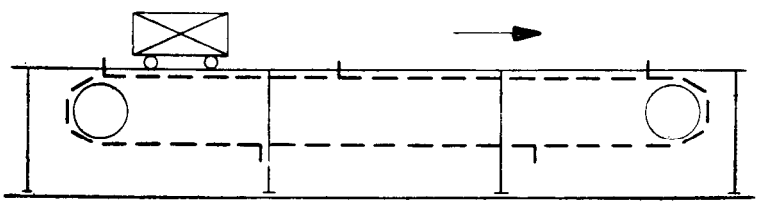


FIG. 35 CHAIN CONVEYOR WITH DRIVING DOGS

2.163.23.3 *Drag chain conveyor* — A type of conveyor having one or more endless chains which drag bulk materials in a trough (*see* Fig. 36).

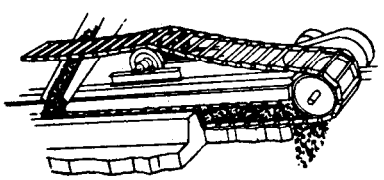


FIG. 36 DRAG CHAIN CONVEYOR

2.163.23.4 *Monorail chain or cable conveyor — See* **2.163.140.**

2.163.23.5 *Monorail chain conveyor, enclosed track* — Chain conveyor using bi-planer articulated chain which serves to transmit the driving force and carries the weight of the load. It has rollers disposed in the vertical and horizontal planes running in an enclosed track (*see* Fig. 37).

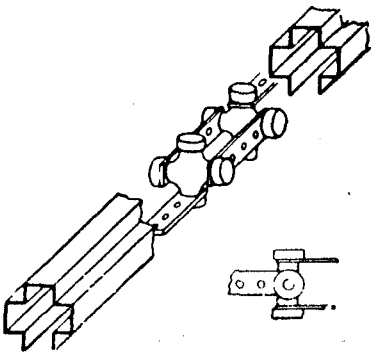


FIG. 37 MONORAIL CHAIN CONVEYOR, ENCLOSED TRACK

2.163.23.6 *Offset roller chain conveyor — See* **2.163.23.9.**

2.163.23.7 *Plain chain conveyor — See* **2.163.23.11.**

2.163.23.8 *Pusher chain conveyor* — One or more endless chains with attachments which move or retard the movement of packages, objects, trucks, dollies, or cars along stationary wood, metal or roller beds, troughs, rails or tracks.

2.163.23.9 *Raise link or offset roller chain conveyor* — Conveyor consisting of two or more strands of chain running in parallel trucks with the loads carried directly on the chains (*see* Fig. 38).

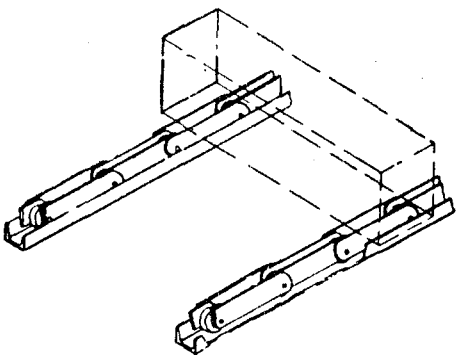


FIG. 38 RAISE LINK OR OFFSET ROLLER CHAIN CONVEYOR

2.163.23.10 *Rolling chain conveyor* — A conveyor consisting of one or more endless roller chains on which packages or objects, are carried (*see* Fig. 39). The speed of transportation is double that of the chain speed.

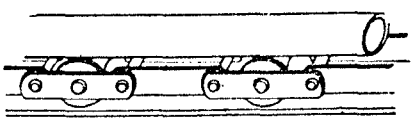


FIG. 39 ROLLING CHAIN CONVEYOR

2.163.23.11 *Sliding chain conveyor* — One or more endless chains sliding on tracks on which packages or objects are carried (*see* Fig. 40).

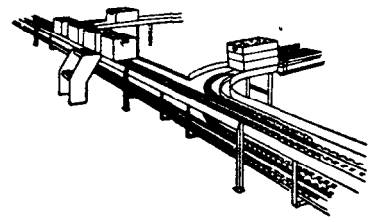


FIG. 40 SLIDING CHAIN CONVEYOR

2.163.23.12 *Vertical chain conveyor — opposed shelf type* — Two or more vertical elevating conveying units opposed to each other (*see* Fig. 41). Each unit consists of one or more endless chains whose adjacent facing runs operate in parallel paths. Thus, each pair of opposing shelves or brackets receive objects (usually dish trays) and deliver them to any number of elevations.

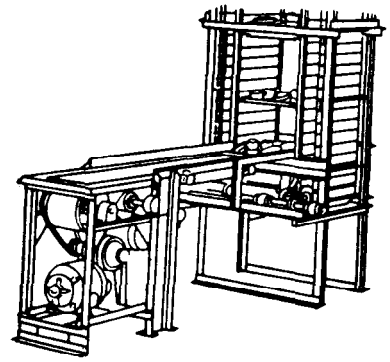


FIG. 41 VERTICAL CHAIN CONVEYOR

2.163.24 *Chassis assembly conveyor* — *See* **2.163.6.**

2.163.25 *Circulating Plate/Tray Conveyor Horizontal* — Floor-mounted circulating single chain conveyor having horizontal plates or trays carrying the loads (*see* Fig. 42).

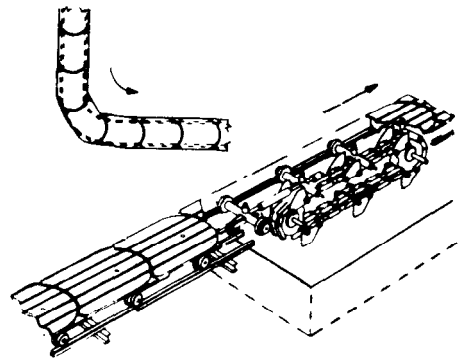


FIG. 42 CIRCULATING PLATE/TRAY CONVEYOR HORIZONTAL

2.163.26 *Coil conveyor* — Any of several types of conveyors adapted to carrying coils of metal strip or other annular objects (*see* Fig. 43).

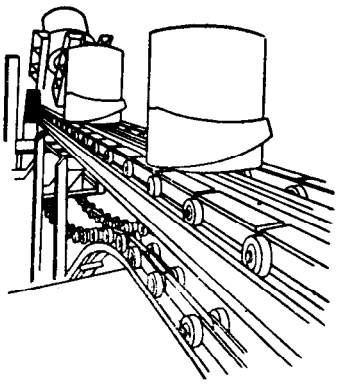


FIG. 43 COIL CONVEYOR

2.163.27 *Continuous stream conveyor — See* **2.163.40.**

2.163.28 *Cooling conveyor* — A conveyor adapted for continuously cooling material or objects while conveying through a gaseous or liquid cooling agent.

2.163.29 *Corner conveyor* — Conveyor having either a rubber or wire mesh belt specially performed to turn corners in the horizontal plane (*see* Fig. 44).

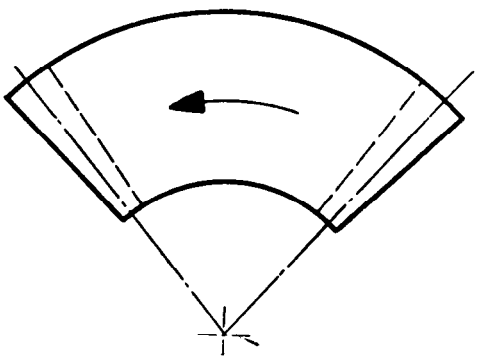


FIG. 44 CORNER CONVEYOR

2.163.30 *Corner-fastened tray conveyor* — Suspended tray conveyor with chains so arranged as to attach to diagonal corners for the purpose of keeping the tray surface level throughout the path of travel.

2.163.31 *Corner-hung tray conveyor — See* **2.163.30.**

2.163.32 *Declining conveyor* — A conveyor transporting down a slope. (*See also* **2.163.113**).

2.163.33 *Dipping conveyor* — A conveyor adapted for dipping materials or objects for continuous processing while being conveyed.

2.163.34 *Disc or button conveyor* — Conveyor composed of an endless wire rope or chain carrying discs or buttons and operating in a V-shape trough (*see* Fig. 45) for the purpose of conveying or regarding the movement of bulk materials or objects.

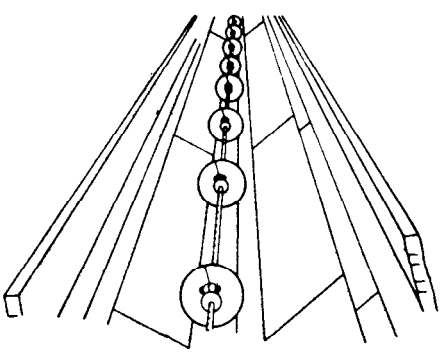


FIG. 45 DISC OR BUTTON CONVEYOR

2.163.35 *Distributing conveyor* — A conveyor with two or more individually selective discharge points along the length of the conveyor.

2.163.36 *Double helical beg conveyor* — Closely spaced parallel tubes with right and left hand rounded helical threads rotating in opposite directions on which bags or other objects are carried while being conveyed (*see* Fig. 46).

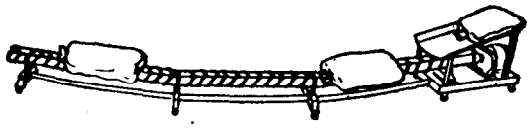


FIG. 46 DOUBLE HELICAL BAG CONVEYOR

2.163.37 *Drag bar or drag link (scraper) conveyor* — A conveyor having one or more chains equipped with scraper bars pushing the material in a trough shaped casing (*see* Fig. 47).

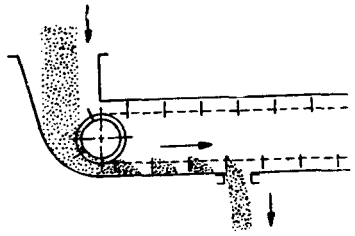


FIG. 47 DRAG BAR OR DRAG LINK (SCRAPER) CONVEYOR

2.163.38 *El conveyor* — A trough type roller or wheel conveyor consisting of two parallel rows of rolls or wheels set at a 90° included angle, with one row providing a sloped carrying surface and the other acting as a guard. (*See also* **2.163.114** *and* **2.163.151**).

2.163.39 *Elevating conveyor* — Any conveyor used to discharge material at point higher than that at which it was received. Term is specifically applied to certain underground mine conveyors.

2.163.40 *En masse conveyor* — A conveyor comprising a series of skeleton or solid flights on an endless chain or other linkage which operates in horizontal, inclined, or vertical paths within a closely fitted casing for the carrying run (*see* Fig. 48). The bulk material is conveyed and elevated. *'en masse'* in a substantially continuous stream with a full cross-section of casing.

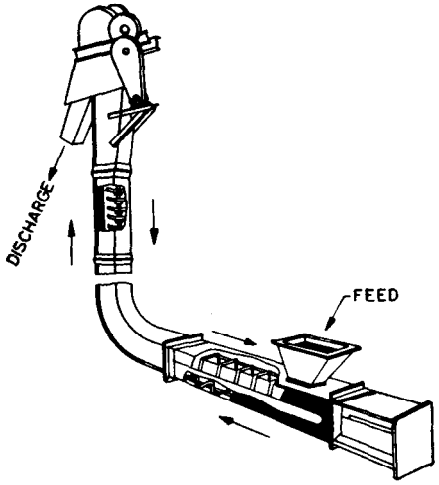


FIG. 48 EN MASSE CONVEYOR

2.163.40.1 *Double leg en masse conveyor* — An *en masse* conveyor or elevator in which the carrying and return runs are operated in separated parallel and adjacent casings.

2.163.40.2 *Side pull en masse conveyor* — An arrangement of horizontal closed circuit conveyor in which the tension element is at one side and above the moving stream of material.

2.163.41 *Entry conveyor* — *See* **2.163.143** and **2.248.**

2.163.42 *Extendable conveyor*

a) *For bulb materials,* usually of troughed design and may be lengthened or shortened while in operation. Commonly used in underground mine conveyor work.

b) *For packaged materials, objects, or units,* one of several types including roller, wheel, and belt conveyors. Construction is such that conveyor may be lengthened or shortened within limits to suit operating needs.

2.163.43 *Face conveyor* — *See* **2.163.145.**

2.163.44 *Festoon conveyor* — *See* **2.173.1.**

2.163.45 *Fixed conveyor* — Permanently sited conveyor.

2.163.46 *Fixture conveyor* — Usually a slat or apron conveyor on which are mounted 'pedestals' or fixtures for mounting loads such as engine btocks.

2.163.47 *Flat top conveyor* — Special slat conveyors which form a continuous top and are supported with large chain rollers. These conveyors are usually erected in two parallel lines straddling an inspection pit for automobile final assembly (*see* Fig. 49). (*See also* **2.163.6** *and* **2.163.89**).

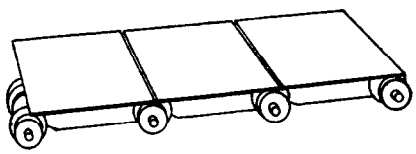


FIG. 49 FLAT TOP CONVEYOR

2.163.48 *Flight conveyor* — A type of conveyor comprising one or more endless propelling media, such as chain, to which flights are attached and a trough through which material is pushed by the flights (*see* Fig. 50).

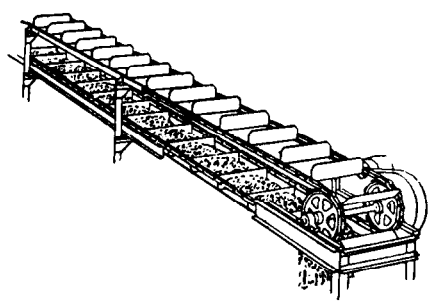


FIG. 50 FLIGHT CONVEYOR

2.163.48.1 *Bar flight conveyor* — *See* **2.163.23.3** and **2.163.48.**

2.163.48.2 *Reciprocating flight conveyor* — A reciprocating beam or beams with hinged flights arranged to advance bulk material along a conveyor trough (*see* Fig. 51).

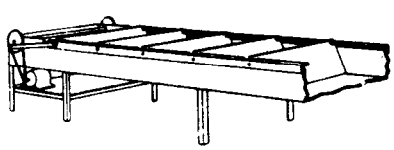


FIG. 51 RECIPROCATING FLIGHT CONVEYOR

2.163.48.3 *Roller flight conveyor* — *See* **2.163.114.9.**

2.163.48.4 *Sectional flight conveyor* — *See* **2.163.119.**

2.163.49 *Floating conveyor* — Conveyor floating on pontoon.

2.163.50 *Floor conveyor* — Any of several types of conveyors using chain, cable or other linkage mounted near or flush with the floor for the purpose of assembling, or finishing built-up products and subassemblies (*see* Fig. 52). (*See also* **2.163.19, 2.163.89** and **2.173.7**).

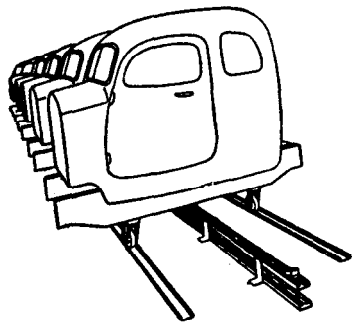


FIG. 52 FLOOR CONVEYOR

2.163.51 *Floor truck conveyor, single treck* — *See* **2.163.137.**

2.163.52 *Flume conveyor* — A channel through which a liquid flows and conveys materials.

2.163.53 *Foundry mould conveyor* — *See* **2.163.78.**

2.163.54 *Furnace conveyor* — The conveyor which moves material through a furnace.

2.163.55 *Gathering conveyor* — *See* **2.163.143.**

2.163.56 *Grasshopper conveyor* — *See* **2.163.84.**

2.163.57 *Gravity conveyor* — A form of roller or wheel conveyor set at an angle to the horizontal to cause the load to move under the force of gravity.

2.163.57.1 *Controlled gravity conveyor* — *See* **2.163.114.3.**

2.163.58 *Guided pallet conveyor* — A pallet conveyor equipped with a guide which engages a wheel, roller or other device mounted on the pallet being conveyed.

2.163.59 *Hatch conveyor* — Any of several types of conveyors adapted to loading or unloading bulk materials, packages or objects to or from ships or barges. (*See also* **2.163.11, 2.163.7** and **2.163.99**).

2.163.60 *Haulage conveyor* — *See* **2.163.143.**

2.163.61 *Helical bag conveyor* — *See* **2.163.36.**

2.163.62 *Horizontal closed circuit conveyor* — A run-around conveyor or conveyors in a horizontal plane.

2.163.63 *Hydraulic conveyor* — A type of conveyor in which water jets form the conveying medium for bulk materials through pipes or troughs (*see* Fig. 53). This is often a specialized form of conveyor for the handling of ashes.

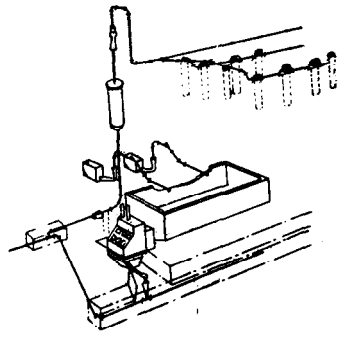


FIG. 53 HYDRAULIC CONVEYOR

2.163.64 *Inclined Reciprocating conveyor* — A reciprocating power or gravity actuated unit which receives only inanimate objects on a track, roller conveyor or other form of carrying surface not designed to carry passengers or the operator. These units operate on inclines of less than 90° to the horizontal and usually at less than 45°. This type of conveyor is never designed to carry an operator or passengers and no person may be permitted to ride on it. No controls for movement of the carrier may be located on the carrier nor within reach of any person who might be standing on the carrier. For carriers operating on steeper than stairway slopes further safeguards are necessary and the construction should follow the provisions given for vertical reciprocating conveyors. (*See also* **2.163.144**.)

2.163.65 *Ingot casting conveyor* — A type of pan conveyor on which the pans serve as moulds for casting ingots or pigs (*see* Fig. 54). (*See also* **2.163.90**.)

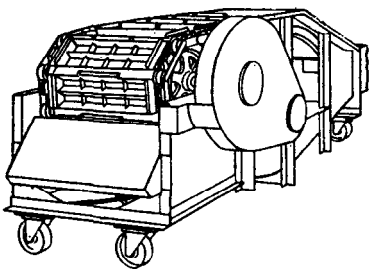


FIG. 54 INGOT CASTING CONVEYOR

2.163.66 *Inventory conveyor* — *See* **2.163.1**.

2.163.67 *Lazy tong conveyor* — *See* **2.163.114.1**.

2.163.68 *Loading conveyor* — Any of several types of conveyors adapted for loading bulk materials, packages, or objects into cars, trucks, or other conveyors.

2.163.69 *Lowering conveyor* — Any type of vertical conveyor for lowering of objects at a controlled speed. (*See also* **2.163.4, 2.163.135** *and* **2.163.147**.)

2.163.70 *Main conveyor* — *See* **2.163.143**.

2.163.71 *Merry-go-round conveyor* — *See* **2.163.21**.

2.163.72 *Metering conveyor* — In package handling, a powered conveyor whose speed and motion are controlled to release units at a pre-determined rate.

2.163.73 *Milking conveyor* — One used for the movement of cows through milking operations. (*See also* **2.163.2, 2.163.21** and **2.173.7**.)

2.163.74 *Mine conveyor* — *See* **2.163.144**.

2.163.75 *Minimum pressure accumulating conveyor* — A type of conveyor designed to minimize build-up of pressure between adjacent packages or cartons (*see* Fig. 55). (*See also* **2.163.1**.)

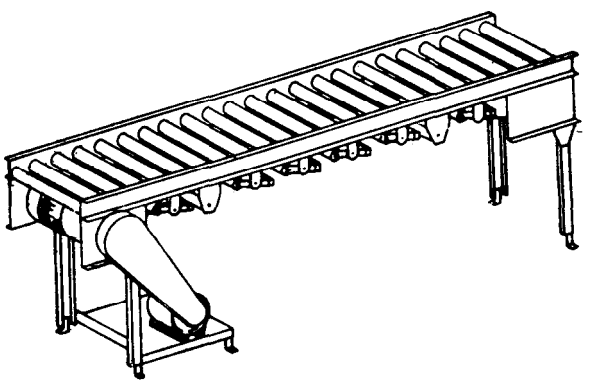


FIG. 55 MINIMUM PRESSURE ACCUMULATING CONVEYOR

2.163.76 *Mixing conveyor* — *See* **2.163.119.4** and **2.163.76.1**.

2.163.76.1 *Screw type mixing conveyor* — A type of screw conveyor consisting of one or more conveyor screws, ribbon flight or cut flight conveyor screws with or without auxiliary paddles (*see* Fig. 56). (*See also* **2.163.119**.)

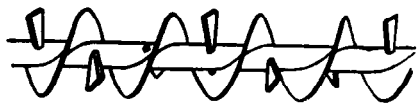


FIG. 56 SCREW TYPE MIXING CONVEYOR

2.163.77 *Mobile conveyor*

a) Conveyor used in different places as a unit.

b) Conveyor on wheels or crawlers.

2.163.78 *Mould conveyor* — A conveyor used for handling moulds from moulding stations, through pouring and cooling operations and delivering moulds to shade-out. (*See also* **2.163.19, 2.163.21, 2.163.89, 2.163.114** and **2.163.114.7.**)

2.163.79 *Monorail towing conveyor overhead* — *See* **2.163.137.**

2.163.80 *Mother conveyor* — *See* **2.163.143.**

2.163.81 *Moveable conveyor* — Any of several types of conveyors on sledges or skids designed to be moved laterally over short distances. (*See also* **2.163.99** *and* **2.163.125.**)

2.163.82 *Multiple strand conveyor*

a) Any conveyor which employs two or more spaced strands of chain, belts, or cords as the load-supporting medium.

b) Any conveyor in which two or more strands are used as the propelling medium connecting pans, etc.

2.163.83 *Normalizing conveyor* — A conveyor which moves material through a normalizing furnace under heat.

2.163.84 *Oscillating conveyor* — Conveyor of the slow speed type, using an eccentric or crank-shaft to move the trough or tube; the movement having high amplitude and low frequency (*see* Fig. 57). (*See also* **2.163.148.**)

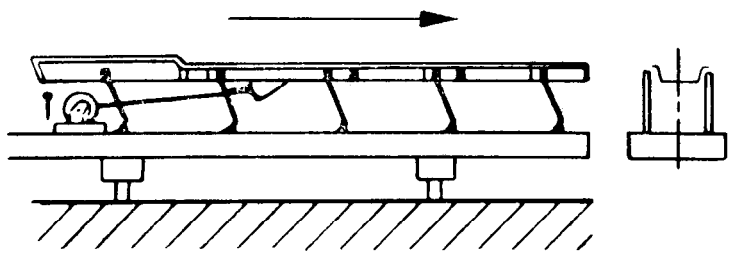


FIG. 57 OSCILLATING CONVEYOR

2.163.85 *Over-and-under conveyor* — Two endless chains or other linkage between which carriers are mounted and controlled so that the carriers remain in an upright and horizontal position throughout the complete cycle of the conveyor (*see* Fig. 58).

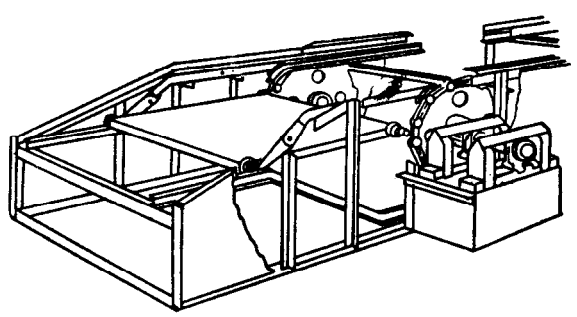


FIG. 58 OVER-AND-UNDER CONVEYOR

2.163.86 *Overhead conveyor* — *See* **2.163.140.**

2.163.87 *Paddle conveyor* — *See* **2.163.119.4.**

2.163.88 *Paddle washer conveyor* — A type of conveyor consisting of one or two inclined parallel paddle conveyor screws in a conveyor trough having a receiving tank and an overflow weir at the lower end and a discharge opening at the upper end (*see* Fig. 59).

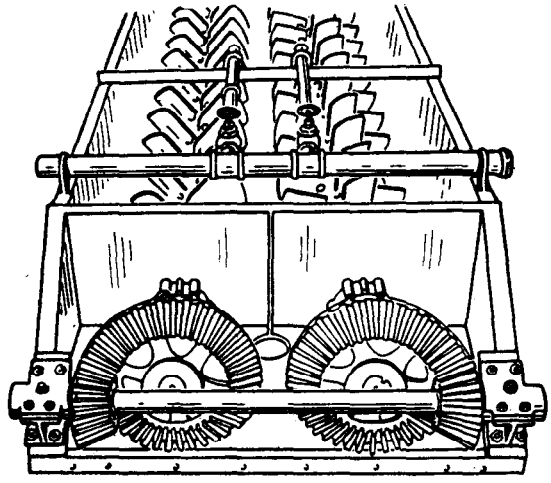


FIG. 59 PADDLE WASHER CONVEYOR

2.163.89 *Pallet type conveyor* — A series of flat or shaped wheelless carriers propelled by and attached to one or more endless chains or other linkage (*see* Fig. 60).

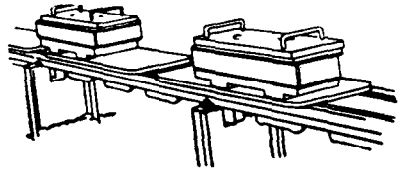


FIG. 60 PALLET TYPE CONVEYOR

2.163.90 *Pan conveyor* — A conveyor comprising one or more endless chains or other linkage to which usually over-lapping or interlocking pans are attached to form a series of shallow, open-topped containers. Some pan conveyors have been known also as apron conveyors (*see* Fig. 61).

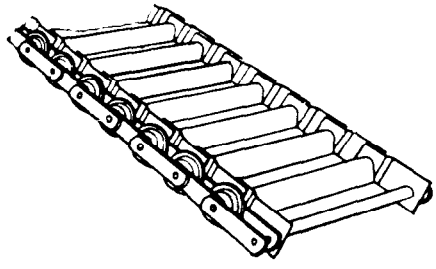


FIG. 61 PAN CONVEYOR

2.163.91 *Passenger conveyor* — A conveyor for transporting people who enter and leave the conveyor by walking or stopping and who either stand, sit, or walk on the conveyor while being transported (*see* Fig. 62).

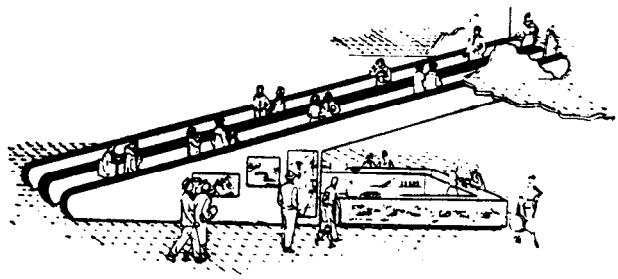


FIG. 62 PASSENGER CONVEYOR

2.163.92 *Piano-hinged conveyor* — *See* **2.14**, **2.163.2** and **2.14.2.4**.

2.163.93 *Picking conveyor* — A belt or apron conveyor used to carry a relatively thin bed of material past pickers who hand sort, or pick the material being conveyed.

2.163.94 *Pig conveyor* — *See* **2.163.65**.

2.163.95 *Pig mould conveyor* — *See* **2.163.65**.

2.163.96 *Pin type slat conveyor* — Two or more endless chains to which cross bars are attached at spaced intervals, each having affixed to it a series of pointed rods extending in a vertical plane on which work is carried, used principally in spraying or washing operations where the least amount of area of the product is contacted.

2.163.97 *Platform conveyor* — *See* **2.415** and **2.173.7**.

2.163.98 *Pneumatic conveyor* — An arrangement of tubes or ducts through which bulk material or objects are conveyed in a pressure and/or vacuum system.

2.163.99 *Portable conveyor* — Conveyor designed to be lifted and moved manually or mechanically as a unit from one position to another (*see* Fig. 63). (*See also* **2.163.11.12**, **2.163.68**, **2.163.100**, **2.163.139**, **2.163.144**, **2.163.151**, **2.385.1**, **2.385.2.1** and **2.670.1**).

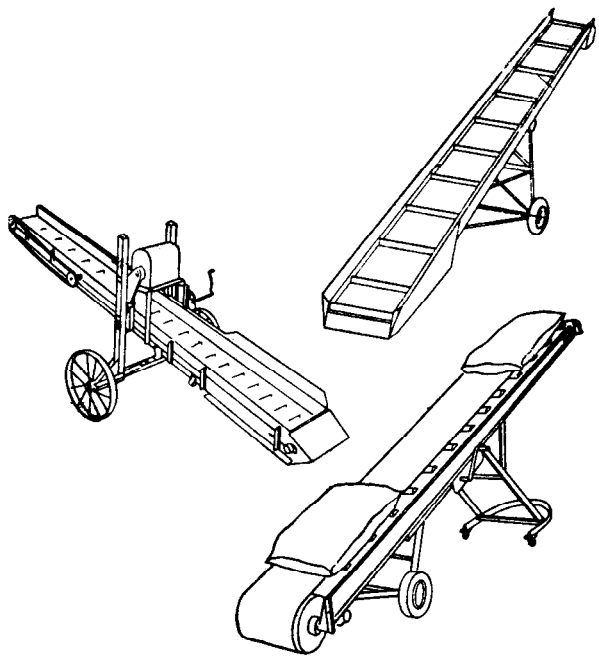


FIG. 63 PORTABLE CONVEYOR

2.163.100 *Portable drag conveyor* — A portable conveyor upon which endless drag chains are used as the conveying medium. Also a term sometimes applied to a portable flight conveyor. (*See also* **2.163.23.3**).

2.163.101 *Power-and-free conveyor* — A conveying system wherein the load is carried on individual trolleys which are conveyor-propelled through part of the system and may be gravity or manually-propelled through another part (*see* Fig. 64). This arrangement provides a means of switching the free trolleys into and out of other adjacent lines.

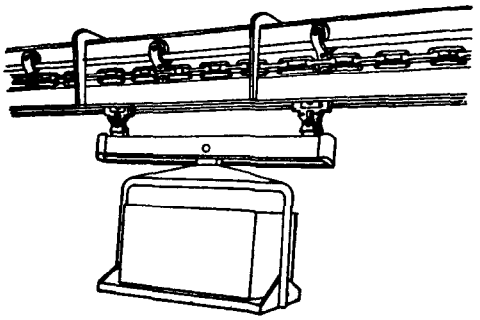


FIG. 64 POWER-AND-FREE CONVEYOR

2.163.102 *Power-propelled truck conveyor* — A portable conveyor mounting equipped with wheels or crawler mounted power driven truck prcviding self-mobility.

2.163.103 *Pull-through conveyor* — A packing house term applied to a type of tow conveyor for pulling hogs through a scalding tank.

2.163.104 *Push bar conveyor* — Conveyor normally having two strands of chains connected together by fixed bars arranged for pushing unit loads along a separate smooth track or trough (*see* Fig. 65).

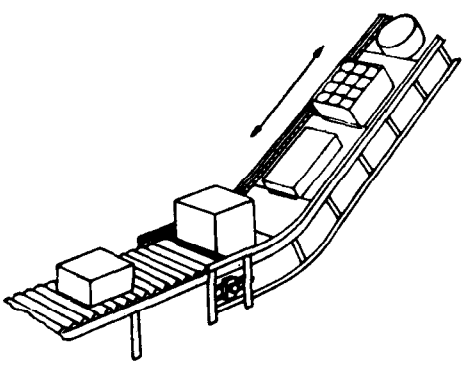


FIG. 65 PUSH BAR CONVEYOR

2.163.105 *Quench tank conveyor* — *See* **2.163.28** and **2.163.33**.

2.163.106 *Rack bar conveyor* — *See* **2.163.109**.

2.163.107 *Ramp conveyor* — *See* **2.163.23.8**, **2.173.7** and **2.411**.

2.163.108 *Reciprocating beam conveyor* — One or more parallel reciprocating beams with tilting dogs or pushers, arranged to progressively advance objects (*see* Fig. 66).

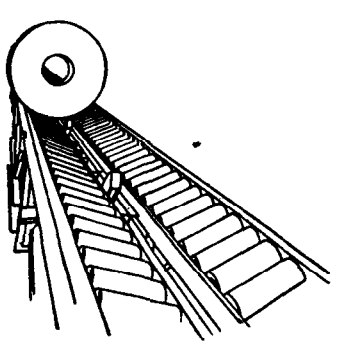


FIG. 66 RECIPROCATING BEAM CONVEYOR

2.163.109 *Reciprocating car conveyor* — *See* **2.163.147**.

2.163.110 *Reclaiming conveyor*

a) Any of several types of conveyors used to reclaim bulk materials from storage.

b) The conveyor which receives material from the reclaimer in a blending system.

2 163.111 *Refuse conveyor* — Any conveyor handling waste or refuse.

2.163.112 *Retarding conveyor* — Any type of conveyor used to retard the rate of movement of bulk materials, packages or objects where the slope is such that the conveyed material tends to propel the coveying medium.

2.163.113 *Ribbon conveyor* — *See* **2.163.119.5.**

2.163.113.1 *Internal ribbon conveyor* — A trunnion-supported revolving cylinder the inner surface of which is fitted with continuous or interrupted ribbon flighting (*see* Fig. 67).

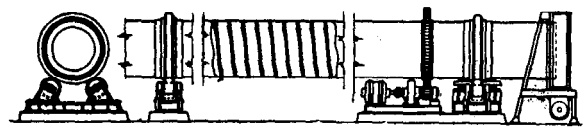


FIG. 67 INTERNAL RIBBON CONVEYOR

2.163.114 *Roller conveyor* — Conveyor consisting of a framework having carrying idlers over which objects are advanced manually, by gravity or by power (*see* Fig. 68).

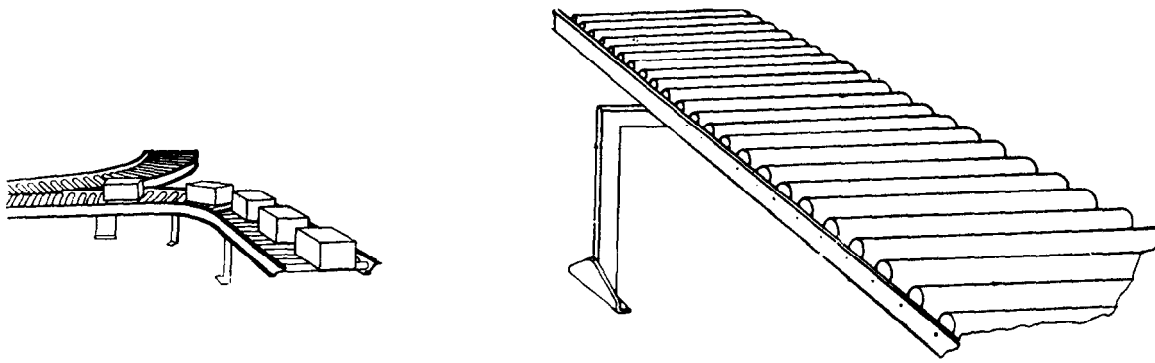


FIG. 68 ROLLER CONVEYOR

2.163.114.1 *Accordion roller conveyor* — A roller conveyor with a flexible latticed frame which permits variation in length (*see* Fig. 69). (*See also* **2.163.114**).

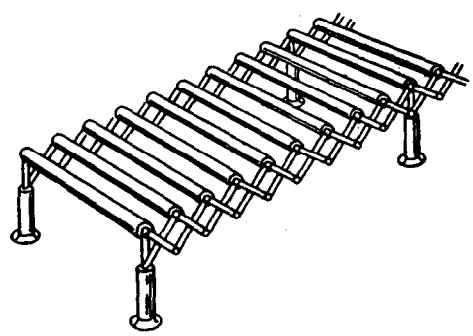


FIG. 69 ACCORDION ROLLER CONVEYOR

2.163.114.2 *Braked roller conveyor* — Roller conveyor equipped with braking devices which limit the speed of the load.

2.163.114.3 *Controlled velocity roller conveyor* — A roller conveyor having means to control the velocity of the objects being conveyed (*see* **2.163.114**).

2.163.114.4 *Gravity roller conveyor* — *See* **2.163.114.**

2.163.114.5 *Herringbone roller conveyor* — A roller conveyor consisting of two parallel series of rolls having one or both series skewed (*see* Fig. 70). (*See also* **2.163.114.**)

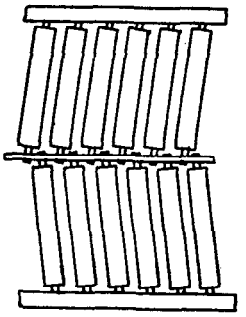


FIG. 70 HERRINGBONE ROLLER CONVEYOR

2.163.114.6 *Hydrostatic roller conveyor* — A section of roller conveyor having rolls suitably weighted with liquid to control the velocity of the moving objects. (*See also* **2.163.114.**)

2.163.114.7 *Live roller conveyor* — A series of rolls over which objects are moved by the application of power to all or some of the rolls. The power transmitting medium usually is belting or chain (*see* Fig. 71).

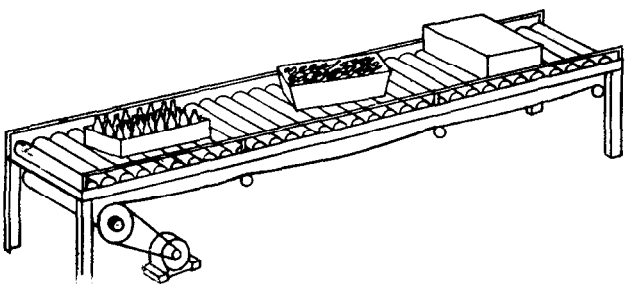


FIG. 71 LIVE ROLLER CONVEYOR

2.163.114.8 *Power driven roller conveyor* — *See* **2.163.114.7.**

2.163.114.9 *Roller slat conveyor* — A slat conveyor employing rollers for slats (*see* Fig. 72).

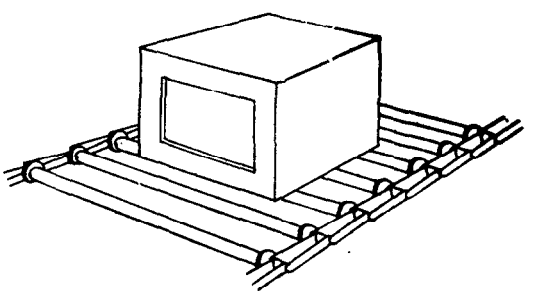


FIG. 72 ROLLER SLAT CONVEYOR

2.163.114.10 *Rolling conveyor* — *See* **2.163.114.9.**

2.163.114.11 *Shock absorbing, roller conveyor* — *See* **2.163.114.15.**

2.163.114.12 *Skewed roller conveyor* — A roller conveyor having a series of rolls skewed to direct objects laterally against a guide member. It may have a fixed or adjustable guide member. (*see* Fig. 73).

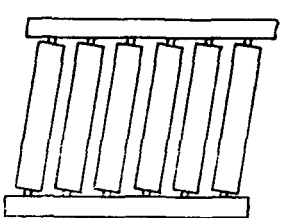


FIG. 73 SKEWED ROLLER CONVEYOR

2.163.114.13 *Speedup roller conveyor* — A powered roller conveyor operating at a higher speed than its feeder to create space between unit loads.

2.163.114.14 *Spool type roller conveyor* — A type of roller conveyor in which the rolls are of conical or tapered shape with diameter at ends of roll larger than at the centre.

2.163.114.15 *Spring mounted roller conveyor*

a) A type of roller conveyor where the ends of each roll is supported on a spring.

b) A section of roller conveyor supported on springs.

2.163.114.16 *Transfer roller conveyor, right angle type* — Equipment for transferring a load from one roller conveyor to another running at right angles, by means of small, manually or power-operated lifting rollers (*see* Fig. 74).

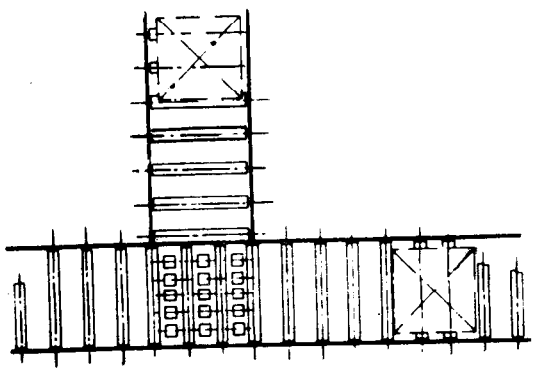


FIG. 74 TRANSFER ROLLER CONVEYOR, RIGHT ANGLE TYPE

2.163.114.17 *Transfer roller conveyor, straight through type* — Equipment for transferring a load from one roller conveyor to another by means of a roller topped traversing section (*see* Fig. 75).

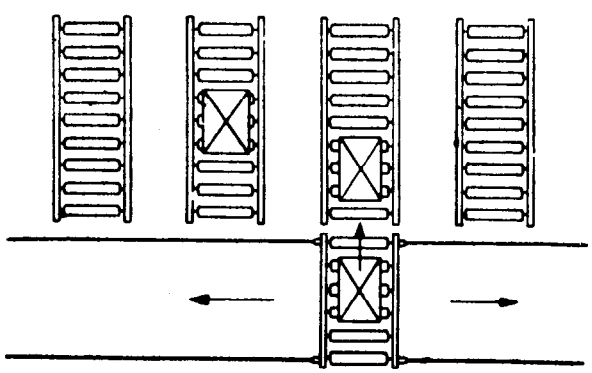


FIG. 75 TRANSFER ROLLER CONVEYOR, STRAIGHT THROUGH TYPE

2.163.114.18 *Troughed roller conveyor* — A roller conveyor having two rows of rolls set at an angle to form a trough over which objects are conveyed (*see* Fig. 76). (*See also* **2.163.38.**)

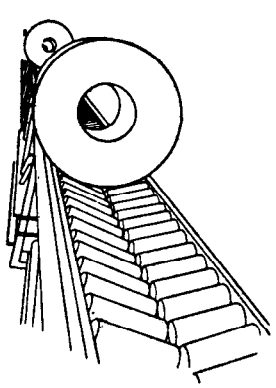


FIG. 76 TROUGHED ROLLER CONVEYOR

2.163.114.19 *V-Type roller conveyor* — *See* **2.163.115.18.**

2.163.115 *Room conveyor* — *See* **2.163.144.**

2.163.116 *Rope and button conveyor* — *See* **2.163.34.**

2.163.117 *Scraper conveyor* — *See* **2.163.37** and **2.163.48.**

2.163.118 *Screw auger conveyor* — Conveyor equipped with a solid helix working in a horizontal or inclined position. The helix is longer than trough at the feed end and pushes the product through the tube (*see* Fig. 77). The shaft normally rotates at a relatively high speed. The conveyor is generally used for intermittent light duties and for free flowing non-abrasive material.

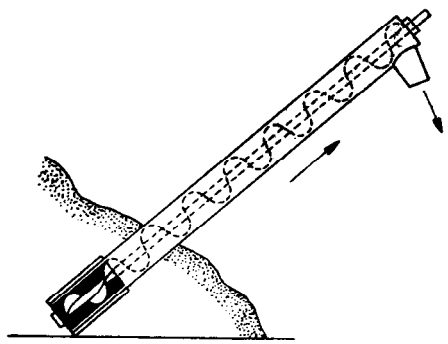


FIG. 77 SCREW AUGER CONVEYOR

2.163.119 *Screw conveyor* — Conveyor with a stationary trough or tube as the carrying medium, the material being moved by the action of a rotating helix.

2.163.119.1 *Cable-screw conveyor* — A one-way or closed circuit conveyor of which the propelling medium is a flexible, torque transmitting cable of which helical (screw) threads are an integral part.

Loads or load carriers engage the thread and advance a distance equal to one pitch on each revolution of the cable-screw.

2.163.119.2 *Full bladed type, screw conveyor* — A conveyor in which the conveying element is in the form of a solid helix with either constant or varying pitch shaft and helix fill the whole conveying cross-section of the tube or trough attached to a central rotating shaft working within a trough (*see* Fig. 78).

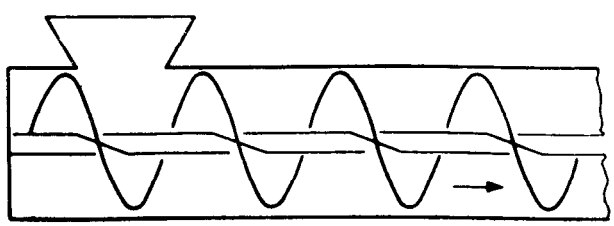


FIG. 78 FULL BLADED TYPE, SCREW CONVEYOR

2.163.119.3 *Internal screw conveyor* — *See* **2.163.113.1.**

2.163.119.4 *Paddle type screw conveyor* — Conveyor with conveying elements in the form of separate paddles of various shapes attached to the central shaft in a helical pattern, allowing mixing of the materials during conveying (*see* Fig. 79).

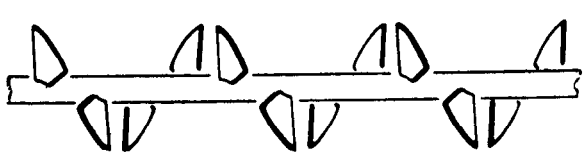


FIG. 79 PADDLE TYPE SCREW CONVEYOR

2.163.119.5 *Ribbon flight screw conveyor* — A screw conveyor having a ribbon flight conveyor screw (*see* Fig. 80). (*See* also **2.163.120.**)

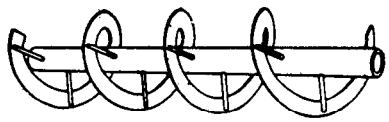


FIG. 80 RIBBON FLIGHT SCREW CONVEYOR

2.163.119.6 *Rotating casing screw conveyor* — A screw conveyor in which the tubular casing rotates at a different speed or in an opposite direction to the conveyor screw. (*See also* **2.163.119.**)

2.163.119.7 *Screw tube conveyor* — A conveyor in which the conveyor element is in the form of a ribbon helix attached to the inside of a revolving tube (*see* Fig. 81).

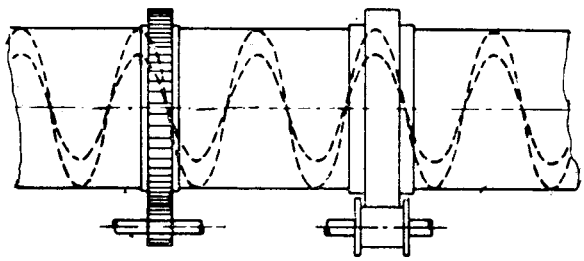


FIG. 81 SCREW TUBE FEEDER

2.163.119.8 *Tubular screw conveyor* — *See* **2.163.119.**

2.163.120 *Scroll conveyor* — *See* **2.163.119** and **2.163.119.5.**

2.163.121 *Self-feeding conveyor* — Any type of conveyor so arranged as to feed itself automatically without the necessity of using a separate feeder.

2.163.121.1 *Self-feeding portable conveyor* — Any type of power-propelled conveyor designed to advance into a pile of bulk material, thereby automatically feeding itself.

2.163.122 *Shaker conveyor* — A type of oscillating conveyor.

2.163.123 *Sheet drying conveyor* — A disc type of live roller conveyor equipped with air outlets from a blower to remove dampness from processed sheet metal while being conveyed.

2.163.124 *Sheet processing conveyor* — A system of conveyors designed to handle metal strip or sheets through slitting, shearing, piling, and stack removing operations.

2.163.125 *Shuttle conveyor* — Any conveyor, such as belt, chain, pan, apron and screw in a self-contained structure movable in a defined path parallel to the flow of the material (*see* Fig. 82).

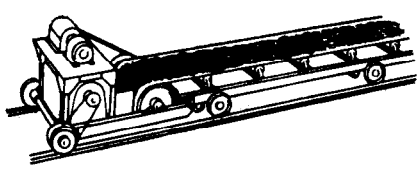


FIG. 82 SHUTTLE CONVEYOR

2.163.126 *Side pusher conveyor* — A trolley conveyor with arms cantilevered to the side to push free trolleys on parallel track, or with pushers to engage the cantilevered arms of free trolleys.

2.163.127 *Slope conveyor* — Usually a troughed belt conveyor used for transporting coal or ore through an inclined passage to the surface from an underground mine. (*See also* **2.163.2, 2.163.11** and **2.163.48.**)

2.163.128 *Sorting conveyor* — A conveyor which receives mixed unit loads and discharges them to segregated spaces or conveyors in response to an automatic dispatch control. Operator attention is usually required to introduce the despatch signal into a memory system.

2.163.129 *Spindle conveyor* — A chain-on-end conveyor in which the chain pins are extended in a vertical plane, usually of enlarged diameter in that portion above the chain, on which special revolvable fixtures can be rotated, for the purpose of spraying or drying. Outboard rollers or sliding shoes support the chain and product.

2.163.130 *Spiral conveyor* — *See* **2.499**, **2.163.119** and **2.690**.

2.163.131 *Stabilized tray conveyor* — *See* **2.163.85**.

2.163.132 *Stacker conveyor* — *See* **2.590**.

2.163.133 *Stick conveyor* — *See* **2.173.1**.

2.163.134 *Stocking conveyor* — A belt conveyor in a blending system which received bulk materials for delivery to the stacker conveyor.

2.163.135 *Suspended Tray conveyor* — A vertical conveyor having one or more endless chains with suitable pendant trays, cars or carriers which receive objects at one elevation(s) and deliver them to another elevation(s) (*see* Fig. 83).

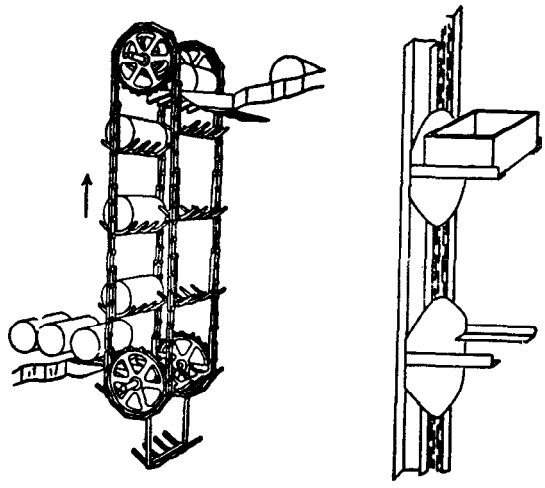


FIG. 83 SUSPENDED TRAY CONVEYOR

2.163.136 *Telescoping Conveyor* — A type of conveyor, the length of which may be varied by telescoping frame members (*see* Fig. 84). (*See also* **2.163.42**).

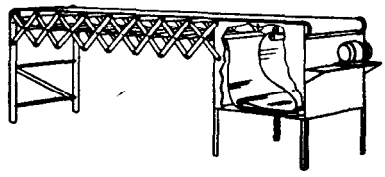


FIG. 84 TELESCOPING CONVEYOR

2.163.137 *Tow conveyor* — An endless chain supported by trolleys from an overhead track or running in a track at (above, flush with or under) the floor with means for towing trucks, dollies or cars (*see* Fig. 85). The towed trucks can follow a predetermined path, sometimes having minor inclines.

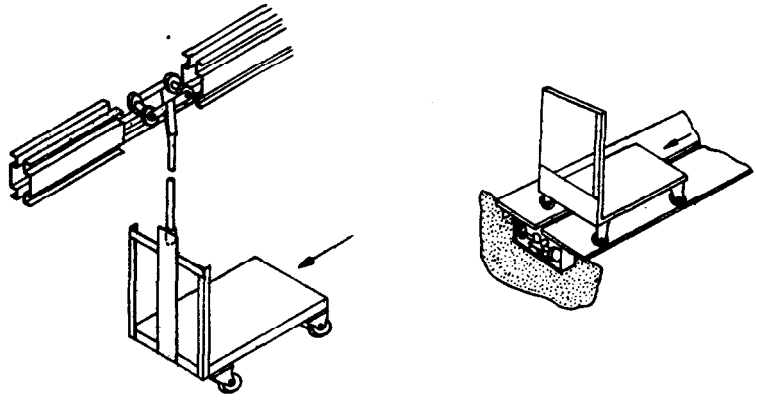


FIG. 85 TOW CONVEYOR

2.163.138 *Transfer conveyor* — A short length of conveyor used to transfer material from one main unit to another.

2.163.139 *Trimmer conveyor* — A self-contained, light-weight portable conveyor, usually of the belt type, for use in unloading and delivering bulk materials from trucks to domestic storage, and for trimming bulk materials in bins or piles (*see* Fig. 86).

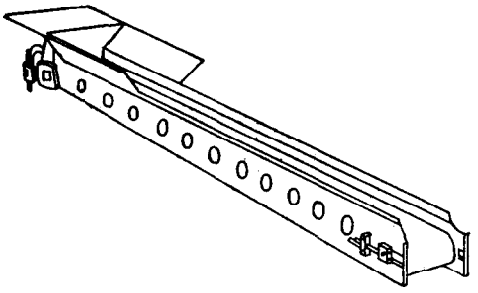


FIG. 86 TRIMMER CONVEYOR

2.163.140 *Trolley conveyor* — A series of trolleys supported from or within an overhead track and connected by an endless propelling medium such as chain, wire rope or other linkage, with leads usually suspended from the trolley (*see* Fig. 87). Trolley conveyors may be designed for single or multiple plane operation. (*See also* **2.132.48.**)

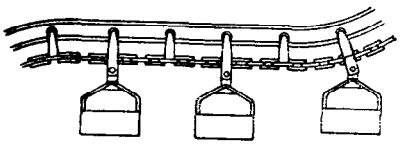


FIG. 87 TROLLEY CONVEYOR

2.163.140.1 *Enclosed track trolley conveyor* — A trolley conveyor where the propelling medium such as chain, cable or other linkage and the trolleys or load carrying wheels are supported and completely enclosed by a tubular type track. (*See also* **2.163.140.**)

2.163.140.2 *Overhead trolley conveyor* — *See* **2.163.140.**

2.163.141 *Truck unloading conveyor* — *See* **2.163.139.**

2.163.142 *Twist conveyor* — An El conveyor in which the carrying surface and guard gradually exchange their functional duties.

2.163.143 *Underground mine conveyors* — They are sectional conveyors, usually of the troughed belt type, capable of being lengthened or shortened as mining operations advance or retreat, all as contrasted to above ground conveyors having fixed lengths for reasonably permanent installations. According to location in the mine or usage, they may be known as face, room, gathering, main haulage or intermediate haulage conveyors. (*See also* **2.163.11**, **2.163.23.3** and **2.163.48**.)

2.163.144 *Unloading conveyor* — Any of several types of portable conveyors adapted for unloading bulk materials, packages or objects from conveyances.

2.163.145 *Vertical articulated platform conveyors* — A type of vertical conveyor in which sections of articulated slat conveyor apron form rigid platforms for vertical movement in continuous flow. The platforms are flexible in all but one direction and they assume a vertical position on the non-carrying run to minimize space requirements (*see* Fig. 88.)

2.163.146 *Vertical conveyor* — Any conveyor that carries loads vertically from one elevation(s) to another elevation)s).

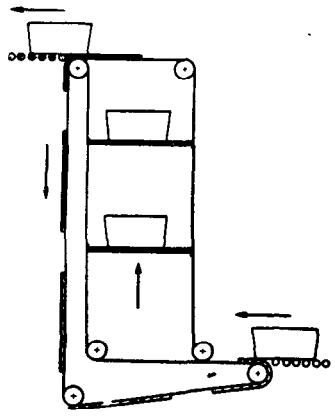


FIG. 88 VERTICAL ARTICULATED PLATFORM CONVEYORS

2.163.147 *Vertical reciprocating conveyor* — A reciprocating power or gravity actuated unit which receives only inanimate objects on a track, roller conveyor or power conveyor forming the bed of the carrier and transmits these inanimate objects vertically from one elevation to another. This type of conveyor is never designed to carry an operator or passengers and no persons may ever be permitted to ride upon it. The carrier must never be furnished with flooring of any type which might provide safe footing for any person. The conveyor shaft must be enclosed and where manual loading and unloading is employed, doors at each operating level must be installed and so interlocked with the carrier that doors at any level can be opened only when the carrier cannot be moved until such open doors are closed. No controls for movement of carriers may be located on carrier, or within the enclosure or within reach of any person standing on the carrier (*see* Fig. 89).

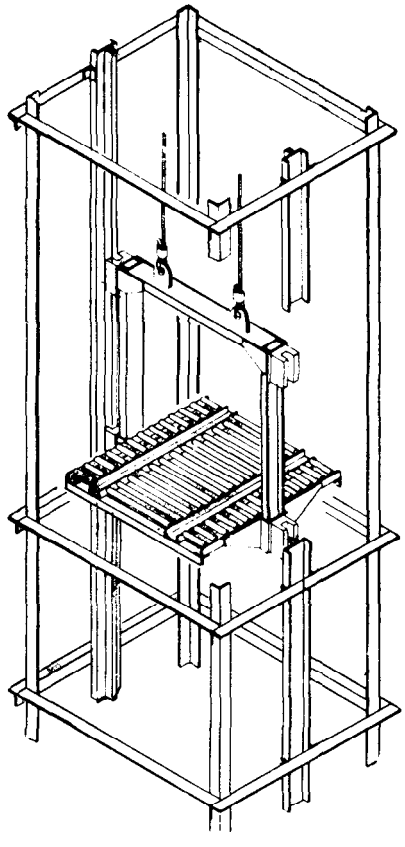


FIG. 89 VERTICAL RECIPROCATING CONVEYOR

2.163.148 *Vibrating Conveyor* — conveyor to which the high speed trough or tube movement is generated either electromagnetically or through unbalanced pulleys; the movement having low amplitude and high frequency (*see* Fig. 90). (*See also* **2.163.84.**)

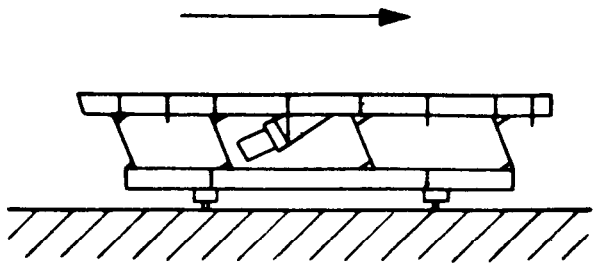


FIG. 90 VIBRATING CONVEYOR

2.163.148.1 *Balanced vibrating conveyor* — A vibrating conveyor having a secondary mass operating in a direction opposite to the movement of the troughed pan for the purpose of minimising the dynamic force normally directed into the support.

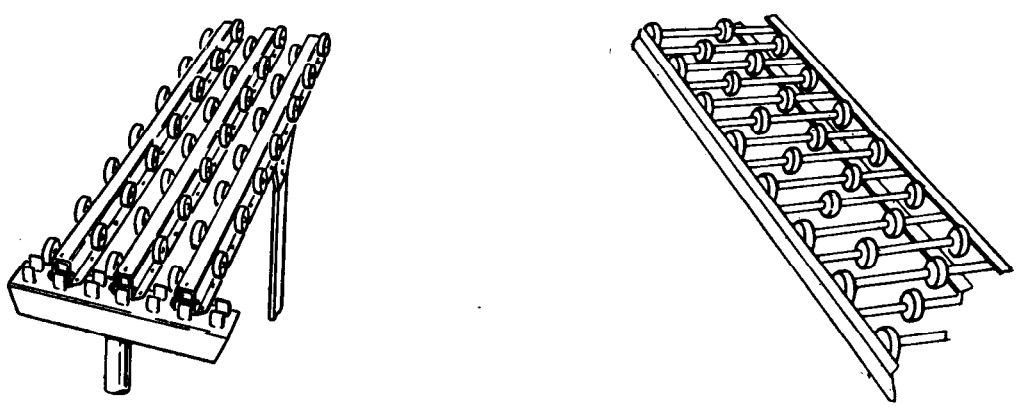
2.163.148.2 *Helicoidal vibrating conveyor* — Vibrating conveyor with an helicoidal trough through which the product is conveyed upwards.

2.163.148.3 *Natural frequency vibrating conveyor* — A vibrating conveyor in which the rate of free vibration of the trough on its resilient support is approximately the same as the rate of vibration induced by the driving mechanism.

2.163.149 *Vibratory conveyor* — Conveyor, which consists of a flexibly mounted metallic or plastic trough or tube, in which the material, under the effect of vibrations, moves; the amplitude and frequency being variable.

2.163.150 *Walking beam conveyor* — A conveyor employing a multiple arrangement of walking beams with associated rails and/or rollers.

2.163.151 *Wheel conveyor* — A series of free running wheels on spindles supported in a frame over which loads having suitable bases are moved manually or flow by gravity (*see* Fig. 91).



(a) (b)

FIG. 91 WHEEL CONVEYOR

2.163.151.1 *Gravity wheel conveyor* — *See* **2.163.151.**

2.163.151.2 *Skate-wheel conveyor* — A type of wheel conveyor making use of a series of skate-wheels mounted on common shafts or axles or mounted on parallel spaced bars on individual axles (*see* Fig. 92).

2.163.152 *Wheeled truck conveyor* — A portable conveyor carriage, chassis or truck mounted on wheel.

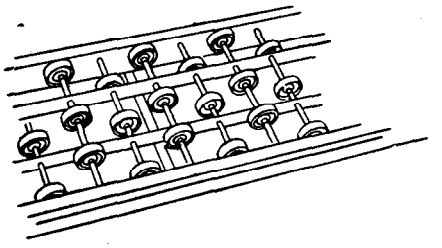


FIG. 92 SKATE-WHEEL CONVEYOR

2.163.153 *Wicket conveyor* — A conveyor comprising two or more endless chains connected by cross bar and to which vertical rods are attached at spaced intervals. The cross bars are also provided with spaced projections at the level of same to form in effect a continuous carrying surface through which product cannot fall. (Used for handling such products as painted steel sheets, wall or composition board, etc on edge through dryers or bake ovens).

2.163.154 *Wire mesh conveyor* — A conveyor in which the carrying medium is of wire mesh construction, either flat or shaped. The conveyor may be straight or curved. (*See also* **2.49.8.8** *and* **2.163.29.**)

2.164. *Conveyor Carpet* — A flexible resilient surface of a moving walk on which passengers ride, which does not transmit any pulling force but which is attached to the pulling medium.

2.165 *Conveyor Cover* — Any enclosure attached to a conveyor and designed to protect the conveying medium with its load.

2.166 *Conveyor Housing* — An independent enclosure designed to protect the complete conveyor.

2.167 *Conveyor Jack* — *See* **2.351**.

2.168 *Conveyor Scale* — *See* **2.168.1, 2.157** and **2.260.10**.

2.168.1 *Automatic conveyor scale* — A device that continuously weighs the material carried by a conveyor.

2.168.2 *Totalizing conveyor scale* — *See* **2.168.1.**

2.169 *Conveyor Screw Bushing* — *See* **2.170.**

2.170 *Conveyor Screw Collar* — A short piece of pipe or tubing fitted to the outside or inside of each end of a conveyor screw pipe.

2.171 *Flight Pitch*

2.172 *Conveyor Screw Lug* — A small formed, forged or cast piece used to support secure conveyor screw flights to the shaft or pipe.

2.173 *Conveyor-Elevator* — A conveyor which follows a path part of which is substantially horizontal or on a slope less than the angle of slide of the material and part of which is substantially vertical or on a slope steeper than the angle of slide.

2.173.1 *Cross bar conveyor/elevator* — A type of conveyor/elevator normally having endless chains supporting spaced cross members from which unit loads are suspended (*see* Fig. 93).

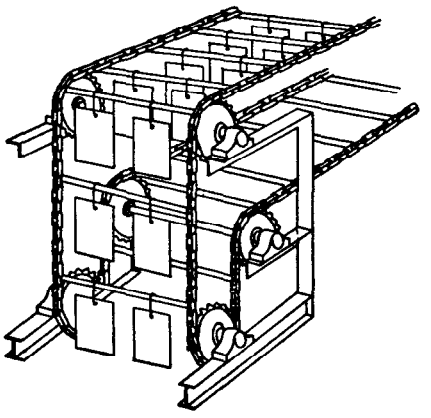


FIG. 93 CROSS BAR CONVEYOR/ELEVATOR

2.173.2 *Fixed tray (corner hung) elevator/conveyor* — Elevator/conveyor in which the carrying trays are pivoted at diagonally-opposite corners between two parallel strands of chain in such a manner as to maintain a horizontal position, irrespective of changes in the direction of travel. (*see* Fig. 94).

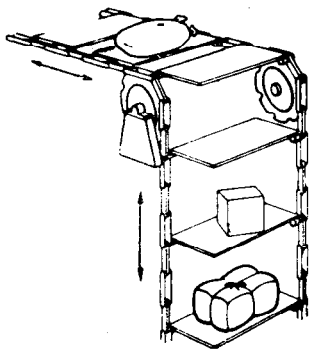


FIG. 94 FIXED TRAY (CORNER HUNG) ELEVATOR/CONVEYOR

2.173.3 *Gravity discharge conveyor/elevator* — Conveyor consisting of freely swinging buckets carried between parallel endless chains, the buckets being tipped to discharge contents. The centre of gravity of the bucket is below the centre-line of the chain pivot and thus the chain may follow any path from horizontal to vertical with the buckets continuing to hang vertically. Feeding of the buckets may be either or by means of a suitable rotary feeder. (*see* Fig. 95).

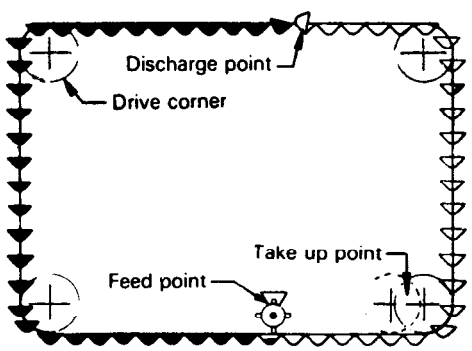


FIG. 95 GRAVITY DISCHARGE CONVEYOR/ELEVATOR

2.173.4 *Magnetic elevator/conveyor* — An elevator/conveyor having a flexible rubber or canvas belt moving adjacent to a static magnetic field which imparts a retaining influence or pull to any magnetisable article and so allows the belt to move the article through vertical or horizontal planes (*see* Fig. 96).

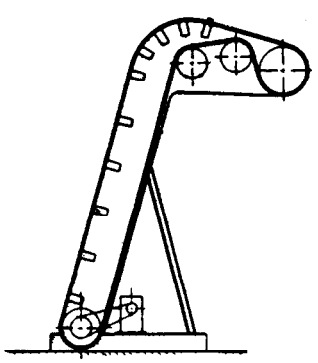
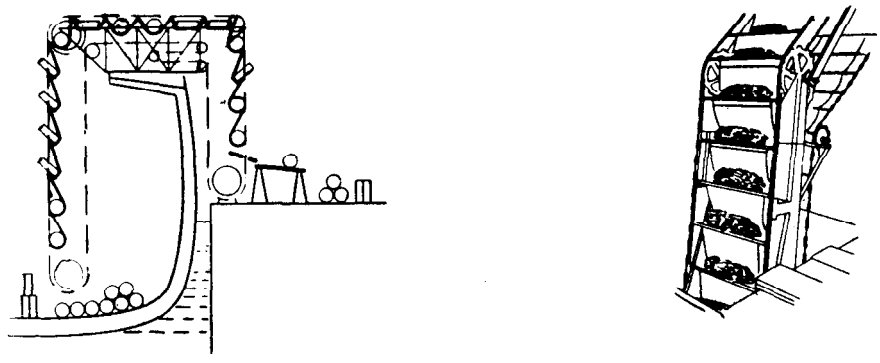


FIG. 96 MAGNETIC ELEVATOR/CONVEYOR

2.173.5 *Pocket conveyor/elevator* — A continuous series of pockets formed of a flexible material festooned between cross-rods carried by two endless chains or other linkage which operate in horizontal, vertical and inclined paths (*see* Fig. 97).



(a) (b)

FIG. 97 POCKET CONVEYOR/ELEVATOR

2.173.6 *Ship's conveyor/elevator* — A dock mounted pocket or suspended tray conveyor arranged to be lowered into a ship's hold to varying depths for the purpose of loading or unloading packages and objects. Not to be confused with a marine leg.

2.173.7 *Slat conveyor/elevator* — A conveyor or elevator consisting of a belt or one or more endless chains to which non-overlapping, non-interlocking spaced slats are attached for carrying loads (*see* Fig. 98).

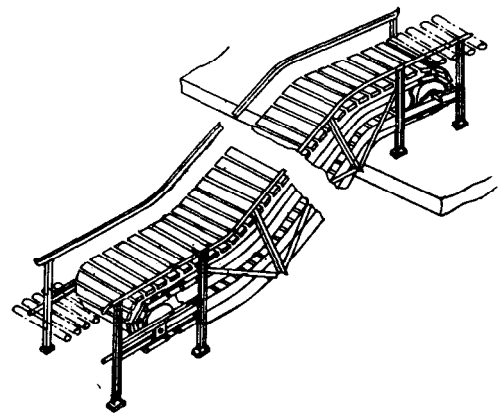


FIG. 98 SLAT CONVEYOR/ELEVATOR

2.173.8 *Sling conveyor elevator* — *See* **2.173.5.**

2.173.9 *Swing tray elevator/conveyor* — Elevator consisting of freely swinging finger-type trays carried between parallel endless chains which are loaded as they travel vertically upwards and unloaded as they continue downwards. Loading or unloading can be made automatic and can occur at any intermediate floor level. Horizontal travel is possible in the system (*see* Fig. 99).

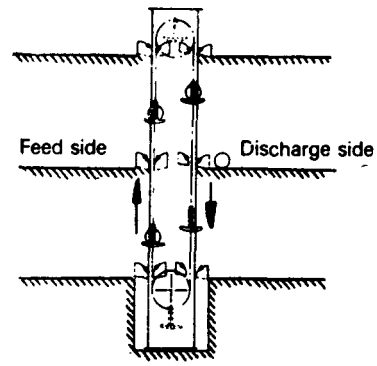


FIG. 99 SWING TRAY ELEVAOTR/CONVEYOR

2.173.10 *V-Bucket conveyor-elevator* — *See* **2.173.3**.

2.174 *Conveyor Width*

a) In unit load handling, the dimension inside to inside of frame rails;

b) In belt conveyors for bulk materials, the width of the belt.

2.175 *Core (Spiral Chute)* — *See* **2.129.**

2.176 *Corner Shaft* — The shaft used at the point where a change of direction of less than 180° occurs in a conveyor.

2.177 *Countershaft* — An intermediate or secondary shaft between the drive shaft of a conveyor and the source of power.

2.178 *Countershaft Box End* — *See* **2.179.**

2.179 *Countershaft Trough End* — A trough end of a screw conveyor fitted with a right angle drive consisting of a pair of gears, either bevel or miter (*see* Fig. 100). Gears may be open or enclosed.

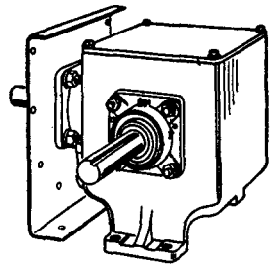


FIG. 100 COUNTERSHAFT TROUGH END

2.180 *Counterweight* — Any weight used to balance or impose a load.

2.181 *Coupling* — *See* **2.181.1** to **2.181.9.**

2.181.1 *Conveyor screw coupling* — A short piece of round shaft provided with a journal and bolt holes for connecting adjoining sections of conveyor screw.

2.181.2 *Dry fluid coupling* — A device similar in function and operation to a fluid coupling. A quantity of metallic shot provides the variable resistance as the driven machine comes up to speed.

2.181.3 *Electric coupling* — An electromagnetic coupling usually consisting of a rotor, stator and coil whereby the input and output halves are electrically connected by excitation of the coil. May be used for speed control or acceleration.

2.181.4 *Flexible coupling* — A mechanical connector to transmit torque without slip and to accommodate misalignment between axially oriented driven machine members.

2.181.5 *Fluid coupling* — A device used to transmit power from one shaft to another by means of the kinetic energy of a fluid.

2.181.6 *Rigid coupling* — A device for permanently and rigidly connecting two shafts. Commonly called ' flanged couplings '. Rigid couplings do not provide for any misalignment of the shafting.

2.181.7 *Split flight coupling* — A rigid type shaft coupling split parallel to the shaft and having one-half of a conveyor screw flight integral with each coupling half.

2.181.8 *Torque limiting coupling* — A type of overload release coupling which slips when the torque transmitted exceeds a predetermined value.

2.181.9 *Universal coupling* — A device connecting two shafts, rotations of which are not parallel to each other.

2.182 *Cover* — The material applied to the top and bottom surfaces of the carcass of a conveyor belt for abrasion resistance or protection for the carcass.

2.183 *Cover Adhesion* — *See* **2.54.**

2.184 *Cover Gauge* — The thickness of the rubber cover over the carcass of a conveyor belt.

2.185 *Cover Quality* — *See* **2.54.**

2.186 *Cover Tensile* — *See* **2.54.**

2.187 *Cradle Type Tilter* — *See* **2.550.**

2.188 *Crank* — An arm attached at right angles to a shaft by which rotary motion is converted to reciprocating motion or vice versa.

2.189 *Crankshaft* — A shaft which supports a crank or is itself shaped to embody a crank.

2.190 *Creep* — The action of a belt in alternately losing speed on the driving pulley because of contraction in length due to lowered tension when leaving, and gaining speed on the driven pulley because of stretching caused by the tight side tension.

2.191 *Cross Bar* — A transverse or lateral member, with respect to the line of travel of chain, or various shapes or sections used to space or tie together spaced parallel strands of chain.

2.192 *Cross Rod* — A cross bar of cylindrical shape.

2.193 *Cross-Section of Load* — The cross-sectional area of the theoretical load of bulk material on a conveyor.

2.194 *Crown* — The difference in diameter between the centre and ends of a pulley face.

2.195 *Crusher* — A device to break up large pieces into smaller pieces.

2.196 *Cut-Off Device* — A means for initiating control to stop the flow of material to a weigh scale or other piece of equipment.

2.197 *Cutter Throat* — The inlet provided in the sample cutter for proper receipt of the sample. Also known as cutter opening.

2.198 *Dead Shaft* — A non-rotating shaft supporting a rotating member such as a pulley or idler.

2.199 *Dead Storage* — That storage of bulk material in a silo, bunker, bin or stockpile which is maintained for future use.

2.200 *Decking* — A protective covering over the return run of a belt conveyor.

2.201 *Deflector*

a) A device across the path of a conveyor placed at the correct angle to deflect object or discharge bulk material.

b) A plate inserted in the trajectory of a bulk material discharge to change direction.

2.202 *Delivery Table*

a) A conveyor which transports material from the discharge of a machine.

b) A table to which a chute discharges.

2.203 *Depalletizer* — *See* **2.670.3.**

2.204 *De-watering* — The process in which solid material either submerged or containing liquid is conveyed or elevated in a manner which allows the liquid to drain off while the solid material is in transit.

2.205 *Differential Curve* — A curved section of roller conveyor having a conveying surface of two or more concentric row of rollers.

2.206 *Digital Indicator* — An indicating device in which the information is displayed in numerical form similar to an odometer.

2.207 *Digger Edges* — The formed serrated edges of the buckets used for digging purposes on a bucket loader.

2.208 *Digger Tools* — The formed tools, interspaced with the buckets of a bucket loader to aid in digging action.

2.209 *Discharge Plate* — A plate onto which loads are deposited by a conveyor prior to removal. (*See also* **2.669**).

2.210 *Discharge Trough End* — The plate end of a screw conveyor trough having an open area below the bearing for discharge.

2.211 *Diverging Section* — A section of roller or wheel conveyor which makes a connection for diverting articles from a main line to a branch.

2.212 *Diverter* — *See* **2.201.**

2.213 *Dock Leg* — *See* **2.396.**

2.214 *Dolly* — *See* **2.113.**

2.215 *Down-Ender* — A device used to rotate an object from a position on its end to a position on its side. (*See* also **2.671**).

2.216 *Dribble* — Material which adheres to the conveying medium and, being carried beyond the discharge point, drops off along the return run.

2.217 *Drive* — An assembly of the necessary structural, mechanical, and electrical parts which provides motive power to a conveyor.

2.217.1 *Adjustable speed drive* — A drive or power transmission mechanism that includes a speed changing device that permits stepless control of the rotational speed within the design limits of the device. Some transmit power through cone shaped wheels and chains or V-belts; other transmit power through friction or metallic traction, hydraulic, or electrical devices.

2.217.2 *Balanced drive* — A drive so designed that two or more such drives on a single conveyor may be synchronized to pull predetermined shares of the load.

2.217.3 *Booster drive* — An auxiliary drive at an intermediate point along a conveyor.

2.217.4 *Caterpillar drive* — A drive equipped with a caterpillar chain which engages and propells the conveyor chain.

2.217.5 *Centre drive* — *See* **2.217.15.**

2.217.6 *Chain drive* — A power transmission device employing a drive chain and sprocket wheels.

2.217.7 *Constant speed drive* — A drive with no provision for variable speed or a drive with the characteristics necessary to maintain a constant speed.

2.217.8 *Corner sprocket drive* — A driving unit located at a corner turn of 90° or more.

2.217.9 *Creep drive* — An auxiliary drive, usually consisting of a small motor and speed reducer, used to keep a belt conveyor in motion at a very low speed during non-operating periods in extremely cold weather. This will prevent freeze up of belt and other components.

2.217.10 *Dual drive* — A single pulley driven by two power trains to propel a conveyor belt.

2.217.11 *Dual pulley drive* — A double drive where two sets of driving terminals and power sources are used to propel the conveyor belt.

2.217.12 *Fixed speed drive* — A drive with a speed sensing control system which regulates the speed to a preset value.

2.217.13 *Floating drive* — A conveyor drive having springs or other means to resist and to compensate for variations in chain pull caused by starting or other load peaks and usually having provisions for stopping in case of an overload.

2.217.14 *Hugger drive* — A drive employing an auxiliary belt which bears against the surface of the conveying belt as it passes around the drive pulley to increase the pressure between the conveyor belt and the drive pulley.

2.217.15 *Intermediate drive* — A drive which transmits motion to a conveyor at a point other than the terminals.

2.217.16 *Pinch roll drive* — A double roll drive which transmits motion to an endless conveyor belt by means of pressure exerted on the belt as it passes between the two rolls.

2.217.17 *Regenerative drive* — A drive is regenerative when the operation of the conveyor results in power being produced and absorbed by the prime mover.

2.217.18 *Slave drive* — A conveyor drive powered from another conveyor instead of having its own prime power source.

2.217.19 *Snub drive* — A drive where the arc of contact with the drive wheel or pulley has been increased by the use of a snub wheel or pulley.

2.217.20 *Sprocket drive* — *See* **2.217.6** and **2.217.8.**

2.217.21 *Squeeze roll drive* — *See* **2.217.16.**

2.217.22 *Tandem drive* — A double drive where two sets of driving terminals mechanically tied together and driven from a single power source are used to propel the conveyor belt.

2.217.23 *Torque arm drive* — A type of drive incorporating a shaft-mounted speed reducer in which the developed torque is resisted by a pivoted connecting link between the reducer and a fixed anchor point.

2.217.24 *Variable speed drive*

a) A type of drive designed with speed changing device by which the speed of conveyor can be changed.

b) A power transmission mechanism by means of which stepless rotational speed control can be obtained. Within the limits of design, an infinite number of speeds are possible. Some transmit power through a chain and cone-shaped wheels; others drive through friction cones or hydraulic pressure or electrical energy.

2.217.25 *Wrap drive* — A form of drive mechanism that transmits motion of the conveying medium, usually located at an intermediate point on the return run, and utilizing a snub wheel to increase the arc of contact.

2.218 *Drive Loss* — The power used to overcome friction in transmission machinery between the prime mover and the conveyor drive shaft.

2.219 *Drive Pit* — A pit in which the conveyor drive is located.

2.220 *Driverless Tractor Train* — A self-powered tractor and train of cars, carts, or other non-powered carriers designed to follow a predetermined path consisting of a painted line, tape, electromagnetic field of a conductor or other guidance system without requiring the attention of a driver. The trains may be remote controlled or automatic in operation.

2.221 *Drive Shaft*

a) Main driving shaft on which the drive and conveyor sprocket wheels or pulleys are mounted. This shaft is connected to the drive unit through a coupling, sprocket wheel, gear or other form of mechanical power transmission.

b) A shaft used to support the end of a conveyor screw in a trough end and as a driving connection between a conveyor screw and the power transmitting medium.

2.222 *Drive Sheave* — That sheave to which the motive power is connected.

2.223 *Drop*

a) The distance from the top of a bearing hanger to the centre of the shaft.

b) In a trolley conveyor, the vertical distance from the bottom of the track to centre line of the chain.

c) *See* **2.445.**

2.224 *Drop Hanger* — A cast iron, malleable iron or steel support fastened from an overhead framework to position and bear loads. The term is usually used for belt conveyor return idler supports.

2.225 *Drop Leaf Tilter* — *See* **2.550.**

2.226 *Drum* — A cylindrical or polygonal rim type of wheel around which cable, chain, belt, or other linkage may be wrapped. A drum may be driven or driving. The face may be smooth, grooved, fluted, or flanged.

2.227 *Drum Bend Corner (of an en masse conveyor)* — A section of casing to change direction of conveying in which the moving element is carried on the rim of a revolving drum.

2.228 *Duck* — A fabric material of woven cotton used in a conveyor belt carcass as the tension bearing medium. Duck is manufactured in several grades and types expressed in terms of weight per unit area. Generally higher longitudinal strength in the duck is provided by having heavier yarns and greater counts in the longitudinal warp threads than the transverse filler threads.

2.229 *Dutchman* — A short section of belt, provided with a mechanical splice, in a conveyor belt which can be removed when take-up provision has been exceeded.

2.230 *Duct* — *See* **2.664**.

2.231 *Dust Seal Gland* — *See* **2.529**.

2.232 *Easel Stand* — A foldable support.

2.233 *Eccentric* — A disc mounted out of centre on a shaft and used to convert rotary motion into reciprocating motion.

2.234 *Eccentric Shaft* — A shaft upon which an eccentric is mounted.

2.235 *Edge Margin* — A narrow strip along each edge of the conveyor belt that is left clear and not used for load carrying. This clear margin prevents spillage by providing an area to contain any load displacement resulting from passing over bend pulleys, trippers, head pulleys and from belt sag between idlers.

2.236 *Effective Chain Pull* — *See* **2.336**. Not to be confused with **2.615.2**.

2.237 *Ejector* — *See* **2.253**.

2.238 *Elastic Stretch* — *See* **2.598**.

2.239 *Electric Braking* — A form of retardation accomplished by electric means. Typical examples are:

a) *Regenerative braking* — A form of braking resulting when an induction motor is driven beyond its synchronous speed and consequently acts as a generator. In this condition, it will exert braking torque.

b) *Dynamic braking* —

i) In a DC motor a form of braking resulting from the motor acting as a generator loading itself through a resistance loop;

ii) In AC motors this type of braking is accomplished by disconnecting the power supply and applying DC excitation to one phase;

c) *Eddy current braking* — A form of electric coupling used as a brake through excitation of its coil.

2.240 *Electric Counter* — An electrical device or combination of devices which will count pulses.

2.241 *Elevator* — Elevating conveyor with buckets as the carrying medium attached to a moving belt or chains. (*See also* **2.241.4** and **2.163.147.**)

2.241.1 *Bag elevator* — Elevator set at a slight inclination to the vertical and composed of two parallel endless chains connected together by flight bars set at suitable intervals. The sacks are lifted by the flight bars and slide up a smooth surface discharging when they fall forward after leaving the top (*see* Fig. 101).

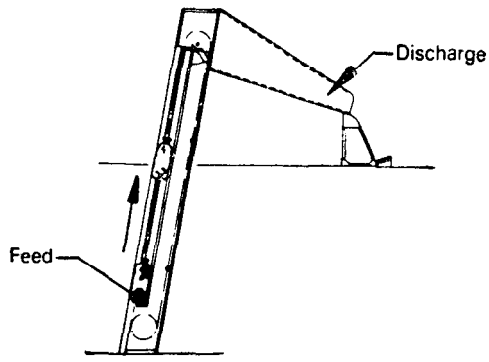


FIG. 101 BAG ELEVATOR

2.241.2 *Barrel or drum elevator* — Elevator with arms fixed to the chains and set at a moderate angle to the vertical. Loading can occur at any intermediate floor but unloading can only occur as the arms pass over the top of the chain sprockets (*see* Fig. 102). (*See also* **2.163.4, 2.163.136** and **2.173.9.**)

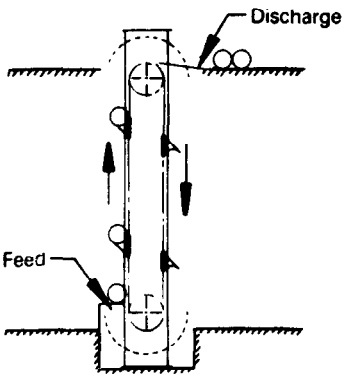


FIG. 102 BARREL OR DRUM ELEVATOR

2.241.3 *Belt elevator* — *See* **2.241.4.**

2.241.4 *Bucket elevator* — A conveyor for carrying bulk materials in a vertical or inclinded path and consisting of an endless belt, chain or chains, to which elevator buckets are attached, the necessary head and boot terminal machinery and supporting frame or casing (*see* Fig. 103). (*See also* **2.241.4.1** to **2.241.4.10.**)

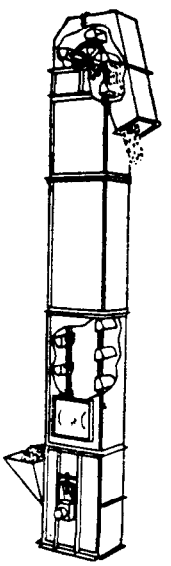


FIG. 103 BUCKET ELEVATOR

2.241.4.1 *Centrifugal discharge belt and bucket elevator* — Elevator, generally totally enclosed, for powder or granular material, consisting of suitably shaped buckets mounted at predetermined pitches on an endless belt. Material is picked up either by buckets in the bottom of the elevator or by feeding the material into the passing buckets and then discharging by centrifugal action whilst passing over the head (*see* Fig. 104). It may be either vertical or inclined (*see* **2.241.4** and **2.91.2.**)

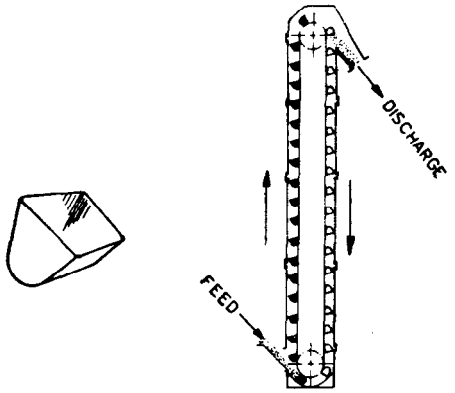


FIG. 104 CENTRIFUGAL DISCHARGE BELT AND BUCKET ELEVATOR

2.241.4.2 *Continuous bucket elevator* — A type of bucket elevator where the buckets are set at close pitch (*see* Fig. 105). The sides of the buckets are made to overlap thus forming a continuous trough. It may be of belt and bucket or chain and bucket type.

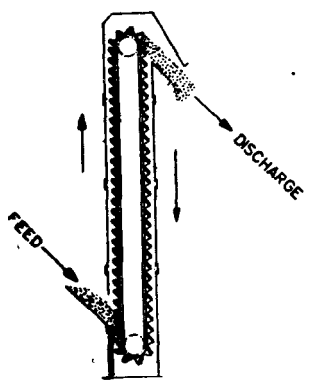


FIG. 105 CONTINUOUS BUCKET ELEVATOR

2.241.4.3 *Double leg bucket elevator* — A type of bucket elevator having the carrying and return runs enclosed in separate casings between the head and boot. (*See also* **2.241.4.**)

2.241.4.4 *Head bucket elevator* — *See* **2.318** and **2.121.**

2.241.4.5 *Internal discharge bucket elevator* — A type of bucket elevator having totally enclosed continuous buckets abutting, hinged or overlapping and designed for loading and discharging along the inner boundary of the closed path of the buckets (*see* Fig. 106). The buckets are normally carried between two chains. The material is fed in at the foot of the elevator and discharge occurs when the buckets are inverted whilst passing over the head sprockets the material being delivered by means of a chute passing through the elevator casing. (*See also* **2.241.4.**)

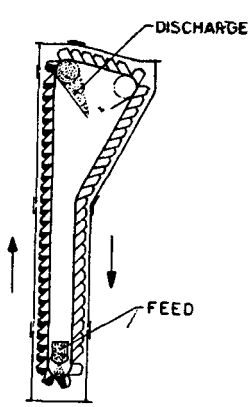


FIG. 106 INTERNAL DISCHARGE BUCKET ELEVATOR

2.241.4.6 *Perfect discharge bucket elevator — See* **2.241.4.7.**

2.241.4.7 *Positive discharge chain and bucket elevator* — A spaced bucket type elevator in which the buckets are maintained over the discharge chute for a sufficient time to permit free gravity discharge of bulk materials. It normally operates at slow speeds. Arrangement of buckets is such that bucket up end when approaching the discharge point by means of deflecting sprockets (*see* Fig. 107). (*See also* **2.241.4.**)

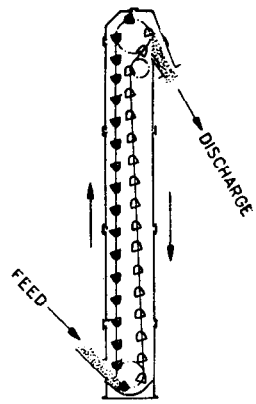


FIG. 107 POSITIVE DISCHARGE CHAIN AND BUCKET ELEVATOR

2.241.4.8 *Single leg bucket elevator* — A bucket elevator having both runs enclosed in a single common casing.

2.241.4.9 *Spaced bucket elevator* — A bucket elevator in which the buckets are not spaced continuously.

2.241.4.10 *Super-capacity bucket elevator* — A type of continuous bucket elevator employing super-capacity elevator buckets (*see* Fig. 108). (*See also* **2.91.11.**)

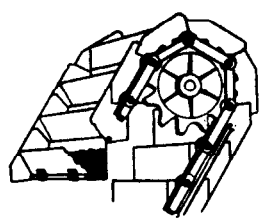


FIG. 108 SUPER-CAPACITY BUCKET ELEVATOR

2.241.5 *Can elevator* — A vertical conveyor used to elevate a line of cans by rolling them upward between guides and an endless pressure belt.

2.241.6 *Chain and bucket elevator* — Similar to **2.241.4.1** but having buckets carried in one or more chains. The speed is generally lower than belt and bucket elevators.

2.241.7 *Chain elevator — See* **2.241.6** and **2.241.4.**

2.241.8 *Farm elevator* — A term applied to any of several types of inclined, portable or fixed conveyors adopted for use on forms to store and move grains, corn, ensilage and other materials (*See* **2.163.11, 2.163.23.3, 2.163.48**, and **2.163.119.**)

2.241.9 *Finger elevator — See* **2.163.4.**

2.241.10 *Internal elevator — See* **2.241.4.5.**

2.241.11 *Loop boot elevator* — An *en masse* elevator in which the lower end of the casing is in the form of loop. (*See also* **2.392** and **2.163.40.**)

2.241.12 *Sack elevator — See* **2.241.1.**

2.241.13 *Suspended tray elevator — See* **2.163.135.**

2.241.14 *Tray elevator — See* **2.163.4, 2.163.85** and **2.163.136.**

2.241.15 *Vertical screw elevator* — Conveyor in which the elevating element is in the form of a solid helix attached to a central rotating shaft working within the confines of a vertical tube, the

material being elevated through the rotation of the helix normally turning at a relatively slow speed (*See* Fig. 109). (*See also* **2.163.119.**)

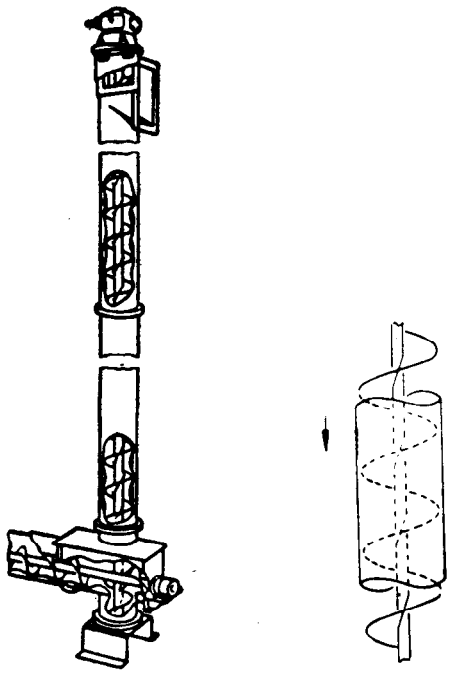


FIG. 109 VERTICAL SCREW ELEVATOR

2.242 *Elevator Boot — See* **2.77** and **2.120.**

2.243 *Elevator Cup — See* **2.91.4.**

2.244 *Emergency Stop Button*

a) An electrical push button located in the vicinity of a passenger conveyor, especially at each entrance or exit point, to allow the general public to stop the unit in case of emergency.

b) An emergency stop device which may be applied to any type of power driven conveyor.

2.245 *Empty Space Indicator* — A mechanical and/or electrical device associated with an entrance switch used to detect a vacant pusher dog on the main power chain of a power-and-free or in-floor tow conveyor.

2.246 *End Shaft* — A shaft used to support the nondrive end of a conveyor screw in a trough end.

2.247 *End Thrust — See* **2.247.1, 2.247.3** and **2.247.4.**

2.247.1 *Ball bearing end thrust* — A screw conveyor end bearing unit incorporating a ball, roller or bronze bearing thrust bearing. May be equipped with a drive or end shaft.

2.247.2 *Bearing end thrust — See* **2.247.1.**

2.247.3 *Bronze bearing end thrust* — A screw conveyor thrust bearing consisting of a bronze washer and split steel collar.

2.247.4 *Roller bearing end thrust* — A screw conveyor end bearing unit incorporating a roller thrust bearing. May be equipped with a drive or end shaft.

2.248 *Entry Table* — A conveyor which transports material to the feeding position of a machine.

2.249 *Equalizing Gear* — A gear with a varying pitch diameter designed to compensate for the varying pitch line velocity of a long pitch conveyor chain as it passes around a sprocket.

2.250 *Escalator — See* **2.413.**

2.250.1 *Pouring escalator — See* **2.415** and **2.173.7.**

2.251 *Escapement* — In a gravity or power operated package conveyor, a device to permit the release of packages one at a time on demand.

2.252 *Escort Memory* — A mechanical and/or electrical device attached to or moving with a conveyed unit load to furnish automatic dispatch signals.

2.253 *Exhauster* — A vacuum producing assembly consisting of venturi tube with water, air or steam nozzles; also mechanical air handling unit.

2.254 *Exit Table* — *See* **512.**

2.255 *Expansion Joint* — In conveyors, a joint construction arranged to permit sliding of jointing members, yet providing continuity of support for the conveying medium. Its purpose is to accommodate change in length caused by expansion or contraction, chain slack or take-up movement.

2.256 *Face*

a) The principal frontal surface presenting the greatest area such as the face of a pile, of material, the point at which material is being mined, etc.

b) The outer surface of a pulley in contact with a belt; the outer surface of a gear, roll or drum usually expressed in terms of length dimensions.

2.257 *Face Cover* — *See* **2.626.**

2.258 *Fall* — *See* **2.445.**

2.259 *Feed Table* — *See* **2.248.**

2.260 *Feeder* — An apparatus designed to extract or feed and control the rate of flow of bulk material, packages or objects or a device or mechanism which controls, separates or assembles objects. Types of feeders are defined in **2.260.1** to **2.260.63.**

2.260.1 *Apron feeder* — Shortened form of apron conveyor normally used for heavy duty applications (*see* Fig. 110). (*See also* **2.260.11** and **2.163.2**).

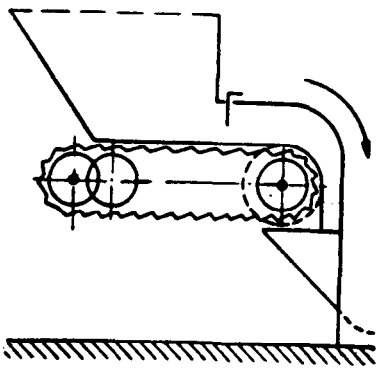


FIG. 110 APRON FEEDER

2.260.2 *Automatic feeder*

a) Any feeder which operates selectively or synchronously with associated equipment or devices to effect separation or delivery of objects or packages.

b) Any feeder which operates automatically to maintain a predetermined rate of flow of bulk materials.

2.260.3 *Bag feeder* — Any device or conveyor used to separate and feed bags, sacks or pouches.

2.260.4 *Belt feeder* — Shortened form of belt conveyor normally running at slow speed (*see* Fig. 111).

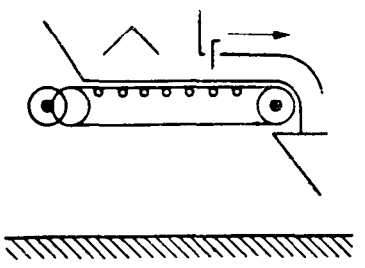


FIG. 111 BELT FEEDER

2.260.5 *Bifurcating feeder* — One which separates objects moving in a single lane and delivers them to two lanes of movement.

2.260.6 *Brake and stop feeder* — One which utilizes a brake and stop mechanism to effect separation and delivery of objects.

2.260.7 *Chain curtain feeder* — Feeder composed of a series of individual, endless, heavy duty steel chains hanging from a slowly rotating drum or shaft, their weight controlling the discharge of heavy and large material from a sloping outlet (*see* Fig. 112).

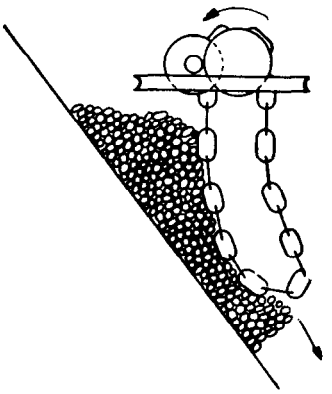


FIG. 112 CHAIN CURTAIN FEEDER

2.260.8 *Chain feeder* — *See* **2.260.11**.

2.260.9 *Chop feeder* — A feeder in which a power-operated, swinging quadrant gate delivers material at a predetermined rate. The action is similar to the reciprocating plate feeder.

2.260.10 *Continuous weigh feeder* — A device which automatically controls (on a weight basis) the rate of feed of a continuous stream of material.

2.260.11 *Conveyor type feeder* — Any conveyor such as apron, belt, chain, flight, pan, oscillating, screw or vibrating, adapted for feeder service. (*See also* **2.260.**)

2.260.12 *Cycle feeder* — One which receives and separates groups of objects from two or more storage lines and delivers them in fixed cycles of time or number.

2.260.13 *Disc feeder* — *See* **2.260.47.**

2.260.14 *Double acting feeder* — Two reciprocating plate feeders connected to operate in unison and operated through one power source.

2.260.15 *Drag bar feeder* — A shortened form of scraper conveyor used for extracting and controlling material from hoppers (*see* Fig. 113).

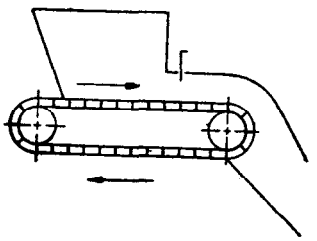


FIG. 113 DRAG BAR FEEDER

2.260.16 *Drum feeder* — *See* **2.260.41.**

2.260.17 *Electronic feeder* — An electronically-controlled feeder which functions to separate and deliver objects in response to variations in colour, light, temperature, sound or matching image.

2.260.18 *En masse feeder* — Shortened form of 'en masse' conveyor used for extracting and controlling material (*see* **2.260.11**).

2.260.19 *Escapement feeder* — A stop-feeder device for indexing, spacing or controlling packages.

2.260.20 *Flight feeder* — A flight conveyor used to control the rate of delivery of the material handled. (*See also* **2.260.11**).

2.260.21 *Hinged feeder* — One which vertically reciprocates one end of an adjoining hinged horizontal conveyor to provide synchronization with the movement of a vertical conveyor during the period required to permit transfer of objects from the vertical to the horizontal conveyor; or from the horizontal to the vertical conveyor. (*See also* **2.260.11**.)

2.260.22 *Jaw feeder* — One which separates and delivers round objects utilizing, holding and releasing arms to engage the periphery of such objects.

2.260.23 *Kick-off feeder* — One which separates and delivers objects by use of a kick-off mechanism.

2.260.24 *Lifting feeder* — One of several types which employ a lifting device to separate and deliver objects.

2.260.25 *Magnetic feeder* — Any feeder which uses magnetism to pick up, hold separate and deliver objects.

2.260.26 *Magnetic roll feeder* — One which utilizes magnetized, power-operated rolls for separating and delivering objects.

2.260.27 *Manganese feeder* — A type of apron or pan feeder in which the plates or pans are of manganese steel and often cast integral with chain linkage (*see* **2.163.2**, **2.260** and **2.163.90**).

2.260.28 *Matte feeder* — An extremely heavy duty type of apron feeder consisting of thick steel flights attached to a solid mat of chain links supported, in turn, by closely spaced rollers.

2.260.29 *Merging feeder* — One which consolidates the movement of objects from two or more lanes into a single lane.

2.260.30 *Multiple screw feeder* — A series of conveyor screws installed side by side, usually in a flat bottom bin. (*See also* **2.163.119**.)

2.260.31 *Oscillating feeder* — *See* **2.260.11**.

2.260.32 *Paddle wheel feeder* — Feeder designed to extract material from a hopper having a longitudinal side slot and a bottom in the form of a shelf. The feeder which travels along the hopper is provided with one or more power driven rotary paddles arranged to extract material from the bottom shelf of the hopper (*see* Fig. 114).

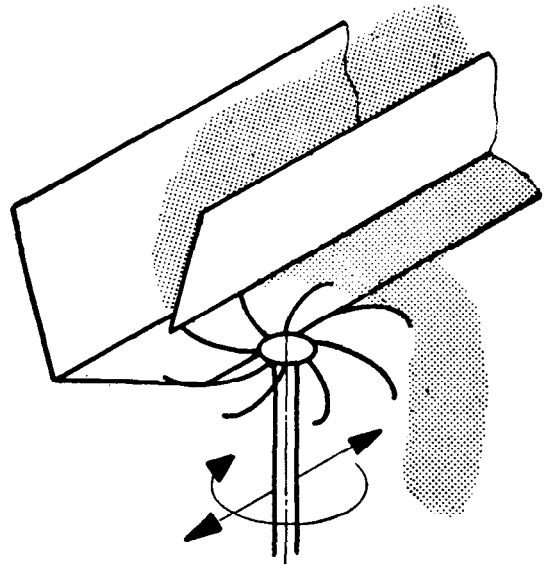


FIG. 114 PADDLE WHEEL FEEDER

2.260.33 *Pan feeder* — *See* **2.260.11**.

2.260.34 *Pool-off feeder* — One used to feed one object at a time from an accumulation by taking the top or the bottom object from a vertical pile, or the front object for a horizontal stack.

2.260.35 *Plate feeder* — *See* **2.260.39** and **2.260.47**.

2.260.36 *Proportioning feeder* — A feeder in which bulk materials are received from multiple inlets at set rates, not necessarily the same for each inlet, and/or discharge at multiple outlets at set rates, not necessarily the same for each outlet.

2.260.37 *Reaction type vibrating feeder* — An arrangement in which the spring-supported pan is vibrated by motion imparted to the pan and to the counter-balanced reaction mass simultaneously.

2.260.38 *Reciprocating beam feeder* — One which separates and delivers objects by means of pushing dogs or flights attached to one or more reciprocating beams.

2.260.39 *Reciprocating feeder* — Feeder composed of a horizontal or declined tray or trough to which low speed oscillations are imparted, usually by crank shaft or eccentric (*see* Fig. 115).

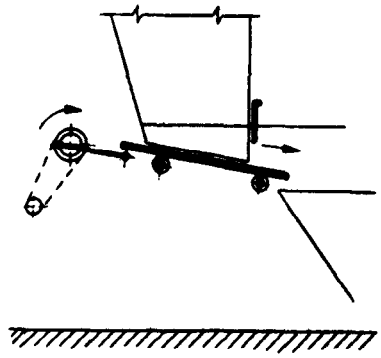


FIG. 115 RECIPROCATING FEEDER

2.260.40 *Rocking feeder* — One which employs a rocking motion to effect separation and delivery of objects.

2.260.41 *Roll feeder* — A smooth, fluted or cleated roll or drum which rotates to deliver packages, objects or bulk materials (*see* Fig. 116).

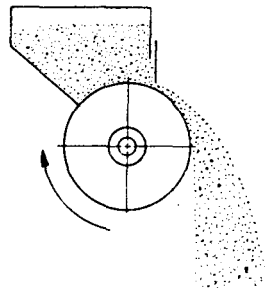


FIG. 116 ROLL FEEDER

2.260.42 *Roll-over feeder* — One which up ends or positions object during the separation and delivery operations.

2.260.43 *Rotary drum feeder* — Feeder composed of a low speed horizontal drum, the rotation of which allows a controlled discharge of material (*see* Fig. 117). (*See also* **2.260.41.**)

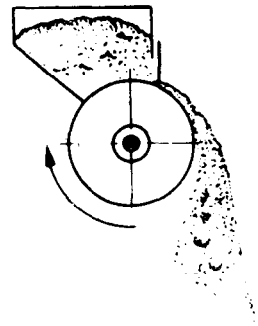


FIG. 117 ROTARY DRUM FEEDER

2.260.44 *Rotary feeder* — A rotating device used to place an object onto or remove an object from a conveyor. (*See also* **2.260.41**.)

2.260.45 *Rotary plate feeder* — *See* **2.260.47**.

2.260.46 *Rotary plow feeder* — A self-propelled carriage travelling parallel to and above a conveyor, and on which is mounted power-operated rotating arms that plow material from a continuous shelf onto the conveyor below.

2.260.47 *Rotary table feeder* — Feeder composed of a slow speed horizontal circular revolving plate on to which material flows by gravity. A stationary adjustable plough or blade is provided to discharge material from the plate (*see* Fig. 118).

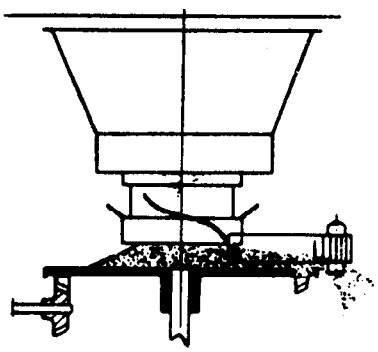


FIG. 118 ROTARY TABLE FEEDER

2.260.48 *Rotary vane feeder* — A feeder composed of a horizontal rotor provided with radial vanes forming pockets giving positive extraction and discharge of free flowing material (*see* Fig. 119).

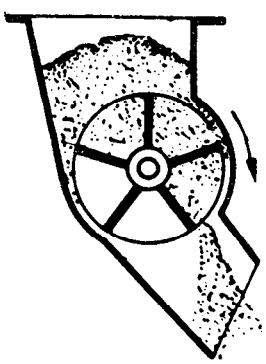


FIG. 119 ROTARY VANE FEEDER

2.260.49 *Sack feeder* — *See* **2.260.3**.

2.260.50 *Screw feeder* — Feeder composed of one or more screw conveyors. The extracting element can be of the full-bladed ribbon or paddle type, or a combination of them (*see* Fig. 120). (*See also* **2.260.11**.)

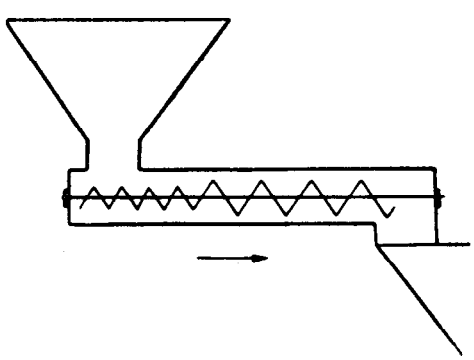


FIG. 120 SCREW FEEDER

2.260.51 *Scroll feeder* — *See* **2.260.11, 2.163.119** and **2.163.119.5.**

2.260.52 *Selective feeder* — *See* **2.260.2** (a).

2.260.53 *Spider feeder* — One which consists of a rotable horizontal shaft supporting spaced arms which separate and deliver long and/or flat objects.

2.260.54 *Star-feeder* — *See* **2.260.48.**

2.260.55 *Star wheel feeder* — One which utilizes a power-operated horizontal star wheel or spider to effect separation and delivery of circular objects.

2.260.56 *Swing arm feeder* — One which utilizes a movable or swinging arm to effect separation and delivery of objects.

2.260.57 *Switch feeder* — One utilizing a switch mechanism to separate and deliver objects in groups or as single units.

2.260.58 *Table feeder* — *See* **2.260.47.**

2.260.59 *Turn-over sheet feeder* — One which utilizes pick-up arms to remove sheets from one conveyor, turn them over and deliver them to another parallel conveyor.

2.260.60 *Vacuum cup and roller slat feeder* — A device using vacuum cups to lift one end of a sheet to permit rollers on a moving conveyor to pick up, separate and deliver to suit.

2.260.61 *Vacuum cup feeder* — Any type of feeder using vacuum cups to pick up sheet-like material, to hold, support and deliver it.

2.260.62 *Vane feeder* — *See* **2.260.48.**

2.260.63 *Vibrating feeder* — Feeder composed of a horizontal or declined tray or trough to which high-frequency vibrations are imparted either electromagnetically or through unbalanced pulleys (*see* Fig. 121). (*See also* **2.260.11.**)

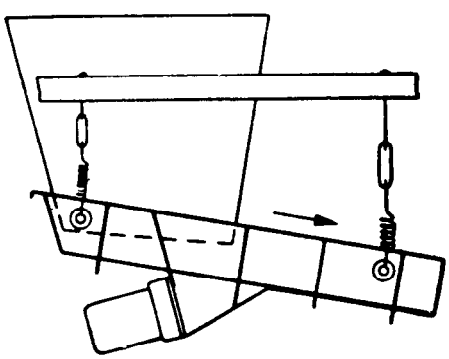


FIG. 121 VIBRATING FEEDER

2.261 *Feeder and Catcher Table* — A pair of reversible conveyors, entry and exit, which provide for repeat feeding of metal being processed through a rolling mill.

2.262 *Feeder Trap* — A trap containing a feeder which discharges material onto a conveyor, bucket elevator or other materials handling device.

2.263 *Fill-in Plates* — Closely fitted plates positioned between the rollers of non-powered or powered roller conveyors.

2.264 *Fixture* — A device or attachment fastened to or propelled by the conveying medium, used for supporting or securing objects being processed as they are conveyed.

2.265 *Flame Cutting Table* — Any conveyor which supports and conveys metal plates or shapes at a controlled speed past a flame cutting head. The table or conveyor usually takes the form of a carrousel or disc.

2.266 *Fleeting Sheave* — A sheave that floats axially with the rope to provide a fair lead into a winding drum.

2.267 *Flexible Curve* — A flexible section of roller or wheel conveyor which can be conveniently adapted to varying degrees of curvature.

2.268 *Flexing* — The bending of the conveyor belt which takes place as it wraps around the pulleys. The ply nearest the face of the pulley is under the minimum stress and the ply farthest from the face is under the maximum stress. Flexing stresses increase with a decrease in pulley diameters.

2.269 *Flight*

a) Plain or shaped plates suitably made for attachment to the propelling medium of a flight conveyor. (*See also* **2.269.2, 2.269.3** and **2.269.5.**)

b) A term sometimes applied to one conveyor in a tandem series.

2.269.1 *Cleanout flight* (of an *en masse* conveyor) — A special flight incorporated in a series of standard flights to assist in emptying the casing of material after feeding stops.

2.269.2 *Conveyor screw flight* — The material propelling media of a conveyor screw in the form of angular helix suitable for mounting on a pipe or shaft.

2.269.3 *Helicoid flight* — A continuous one-piece conveyor screw flight.

2.269.4 *Ribbon flight* — A conveyor screw flight proportioned to provide a space between it and the internal supporting pipe or shaft when mounted thereon.

2.269.5 *Sectional flight* — A short piece of conveyor screw flight, formed from a circular plate, the axial length of which is slightly greater than one pitch.

2.269.6 *U-type flight* — A skeleton flight in the shape of a flat bottom 'U' used in an *en masse* conveyor.

2.269.7 *Web flight* — A flight containing diaphragm surfaces for cleaning cut casing or forming a barrier against flow of materials in an *en masse* conveyor.

2.270 *Floor Conveyor Car* — *See* **2.113.**

2.271 *Floor Conveyor Caster Track* — *See* **2.629.**

2.272 *Floor Conveyor Rider Plate* — *See* **2.492.**

2.273 *Floor Conveyor Wishbone* — *See* **2.695.**

2.274 *Floor Plates* — Plates used as platfrom or walkway floors or as coverings for pits and trenches over which traffic can pass. Usually equipped with irregular (checkered) or abrasive to material surface to resist slippage. They are generally removable to permit access to conveying equipment for servicing.

2.275 *Flow Rack* — A tiered structure with multiple storage compartments with conveyors as the load supporting members.

2.276 *Fluid Bed Cooler* — A device with a perforated deck through which air is forced or drawn, to fluidize and cool the material being conveyed or processed.

2.277 *Fluid Motor*

a) An electric motor and fluid coupling combination where the fluid coupling is housed within the motor enclosure;

b) A hydraulic motor.

2.278 *Folded Edge* — A belt construction where the outer plies are folded around the centre plies at the edges.

2.279 *Foot* — *See* **2.77.**

2.280 *Foot End* — *See* **2.604.**

2.281 *Foot Shaft* — The terminal shaft in the boot of an elevator or *en masse* conveyor.

2.282 *Foundation Bolt* — A fastener for connecting a structure or machine to a permanent base. (*See also* **2.6.**)

2.283 *Frame* — The structure which supports the machinery components of a conveyor.

2.283.1 *A-frame* — A support frame, or bent, with main member set on slopes suggesting the letter 'A'.

2.283.2 *Bend frame* — The structure supporting the assembly of pulley(s) or sprocket(s) designed to change the direction of travel of belting or chain, usually a change of less than 180°.

2.283.3 *Conveyor frame — See* **2.283.**

2.283.4 *Drive frame* — The structure which supports the drive shaft assembly and which contains or supports the motive power, or supports the assembly to which the motive power is connected. (*See also* **2.283.**)

2.283.5 *Head frame* — The structure that supports the terminal machinery at the head end of a conveyor or elevator. (*See also* **2.283.**)

2.283.6 *Snub frame — See* **2.283.2.**

2.283.7 *Tail frame* — The structure which supports the machinery components at the tail end of a conveyor.

2.284 *Frame Rails* — Members which support the rollers in non-powered or powered rollers conveyors.

2.285 *Free Rails* — The structural or formed member or members which provide the wheel running surface and support for the load carrying trolleys in a power and free conveyor.

2.286 *Friable* — Easily crumbled or pulverised.

2.287 *Friction* — The process of applying rubber and/or elastomeric compound used to impregnate and bond together the plies of fabric in a belt carcass. The bond strength is expressed in terms of force necessary to separate the plies of a test piece. (*See also* **2.150.**)

2.288 *Friction, Surface — See* **2.13.**

2.289 *Frog* — The angular junction section of two or more roller or wheel conveyors (*see* Fig. 122).

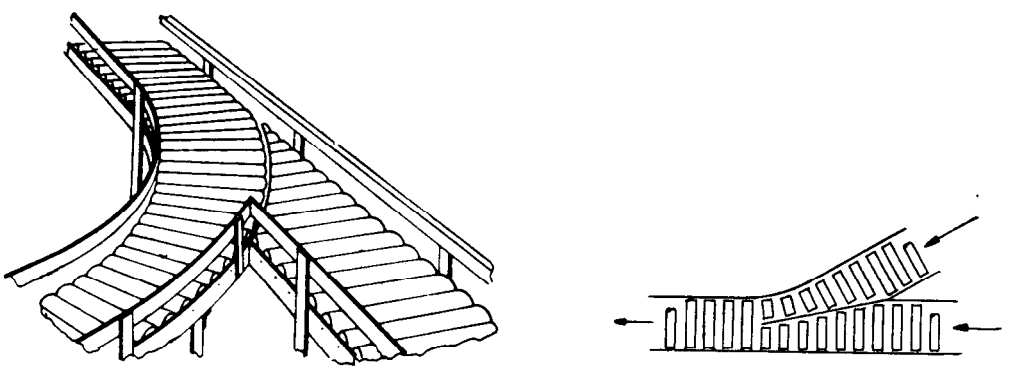


FIG. 122 FROG

2.290 *Furnace Run-out Table — See* **2.512.**

2.291 *Gallery* — A long, narrow, enclosed passageway above the normal grade. Usually paralleling, enclosing and supporting a conveyor and used as a means of access for servicing.

2.292 *Gate* — A device or structure by means of which the flow of material may be stopped or regulated. Synonymous with 'valve' (*see* **2.70**).

2.292.1 *Blast gate* — A sliding valve or a butterfly valve used to control the air flow in a pneumatic conveyor.

2.292.2 *Bucket gate — See* **2.70.**

2.292.3 *Bunker gate — See* **2.70.**

2.292.4 *Clam shell gate — See* **2.70** and **2.292.14.1.**

2.292.5 *Curved slide gate* — A slide gate having a gate plate shaped to fit the lower contour of a screw conveyor trough. (*See also* **2.292.15.**)

2.292.6 *Dump gate* — A quick acting gate usually used to charge measured batches of materials.

2.292.7 *Duplex gate — See* **2.292.14.1.**

2.292.8 *Flat slide gate* — A gate having a sliding gate plate that is flat.

2.292.9 *Flop gate* — A hinged or pivoted plate used for selectively directing material handled. Usually used with double or bifurcated chutes.

2.292.10 *Hand slide gate* — A slide gate actuated by hand without mechanical advantage.

2.292.11 *Loading gate* — A gate or measuring chute for loading a skip bucket that is controlled by the weight or movement of the skip bucket.

2.292.12 *Overcut gate* — A type of gate in which a straight slide or segment cuts through the stream of material from the top when closing.

2.292.13 *Pneumatic conveyor rotary gate* — *See* **2.507.**

2.292.14 *Quadrant gate* — A type of gate in which a cylindrical segment operating through the arc of a circle forms the mechanism by which the flow of material may be controlled or shut off completely.

2.292.14.1 *Double quadrant gate* — A type of quadrant gate in which parallel cylindrical segments rotating in opposite directions through the arcs of circles form the mechanism by which the flow of material may be controlled or shut off entirely (*see* Fig. 123). The two segments are connected by means of gear segments or linkage so that both may be actuated simultaneously by a single operating lever, handwheel or other mechanism.

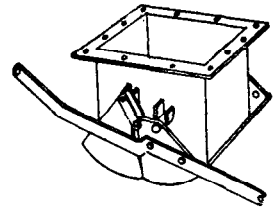


FIG. 123 DOUBLE QUADRANT GATE

2.292.15 *Rack and pinion gate* — A gate in which the gate plate is operated by means of a rack and pinion gear set (*see* Fig. 124).

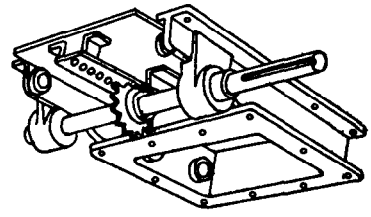


FIG. 124 RACK AND PINION GATE

2.292.15.1 *Rack and pinion curved slide gate* — A rack and pinion gate having a curved gate plate.

2.292.15.2 *Rack and pinion flat slide gate* — A rack and pinion gate having a flat gate plate.

2.292.16 *Regulating gate* — A gate used to vary size of opening so as to control the flow of material through the opening. (*See also* **2.70.**)

2.292.17 *Skip hoist loading gate* — *See* **2.292.11.**

2.292.18 *Slide gate* — A type of gate in which the gate plate slides in guides.

2.292.19 *Swinging cut-off gate* — *See* **2.292.12.**

2.292.20 *Tunnel gate* — A bin gate or bin valve usually arranged in a series in a tunnel beneath a storage bin, bunker, or pile and used for the purpose of loading a belt or other type of conveyor.

2.292.21 *Undercut gate* — A type of gate in which a straight slide or a cylindrical segment cuts through the stream of material from the underside when the gate is closing.

2.292.22 *Vertical slide gate* — A gate usually of the overcut type in which the flow controlling member is a straight slide actuated by a lever, a rack and pinion or other mechanism.

2.293 *Gate plate* — The plate used for opening, restricting or closing the passageway in a Valve or Gate.

2.294 *Gate Section* — *See* **23.26.**

2.295 *Gauger Table* — The combination of a conveyor and any mechanism to stop and gauge the cutting length at a shear in a metal processing line.

2.296 *Goose Neck Hook* — A 'C' hook for trolley conveyors which provides clearance for drip pan or heat shield protection.

2.297 *Grade* — The rate of incline or decline in terms of degrees from the horizontal; percent of rise to the horizontal distance; or in millimetres of vertical projection per metre of horizontal projection. Also refers to the grade of cover used in conveyor belt. (*See also* **2.298.**)

2.298 *Grade Line* — The base line from which elevations are measured.

2.299 *Gradient* — *See* **2.297.**

2.300 *Grating*

a) A coarse screen made of parallel or crossed bars to prevent passing of oversized material.

b) A series of parallel and crossed bars used as platform or walkway floors or as coverings for pits and trenches over which traffic can pass. Generally are removable to permit access to conveying equipment for servicing.

c) A series of parallel and/or crossed bar units fastened to or propelled by the conveying medium, used for carrying large lump-size bulk material or objects. Usually used to permit passage of air for cooling or heat to maintain temperature.

2.301 *Gravity fall tube* — Tube in which loose bulk material is lowered vertically by gravity.

2.301.1 *Gravity fall tube equipped with retarding devices* — Gravity type tube for loose bulk material equipped with braking stops or baffels used when the reduction of velocity is important to prevent breakage.

2.302 *Gravity Feed Trap* — A trap over the tail end of a belt conveyor which utilizes the conveyor belt as a live bottom under the opening in its top.

2.303 *Grit Collector* — An adaptation of any of several types of conveyors used for removing heavy solids from settling tanks or basins (*see* Fig. 125). (*See also* **2.241.4, 2.163.48, 2.163.48.2, 2.163.110** and **2.173.10.**)

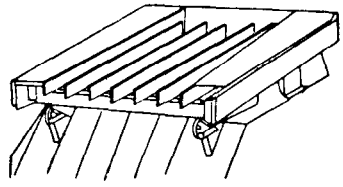


FIG. 125 GRIT COLLECTOR

2.304 *Grizzly* — A device for the coarse screening or scalping of bulk materials (*see* **2.304.1, 2.140.7** and **2.304.2**).

2.304.1 *Bar grizzly* — A series of spaced bars, rails, pipes, or other members used for rough sizing of bulk material passed across it to allow smaller pieces to drop through the spaces (*see* Fig. 126).

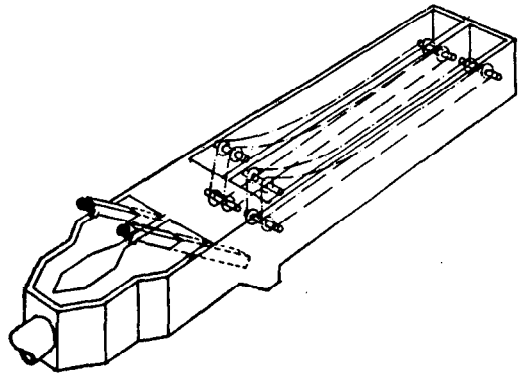


FIG. 126 BAR GRIZZLY

2.304.2 *Live roll grizzly* — A device for screening and scalping which consists of a series of spaced rotating, parallel rolls so constructed as to provide openings of a fixed size (*see* Fig. 127).

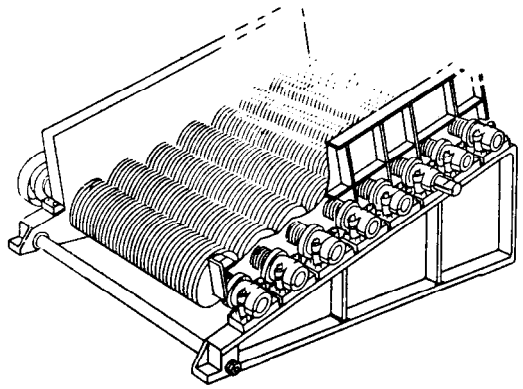


FIG. 127 LIVE ROLL GRIZZLY

2.305 *Grout* — A mixture of mortar consisting of water, sand and cement sufficiently thin to flow through a restricted opening.

2.306 *Guard*

a) A covering or barricade for safety purposes such as gear guard, and chain guard.

b) In connection with a trolley conveyor, a structure usually of steel mesh, mounted below the conveyor path on high conveyors to protect personnel below.

c) Frame member of any conveyor which confines or guides the load being conveyed.

2.306.1 *Backing guard* — An auxiliary guard attached along the inside of the shell of an enclosed spiral chute.

2.306.2 *Chain guard* — A covering or barricade for drive or conveyor chains for safety purposes. May enclose fully or only guard at the points of danger.

2.306.2.1 *Lubricating chain guard — See* **2.119.2.**

2.306.3 *Gear guard* — A covering or barricade for a gear train for safety purposes. May enclose fully or only guard at the points of danger.

2.306.3.1 *Lubricating Gear guard — See* **2.119.2.**

2.307 *Guide*

a) The tracks that support and determine the path of a skip bucket and skip bucket bail.

b) The tracks that guide the chain or buckets of a bucket elevator.

c) The runway or members paralleling the path of the conveyor which limits the conveyor or parts of a conveyor to movement in a defined path.

2.308 *Guide Angle* — Guides made of angle iron.

2.309 *Guide Rails — See* **2.307.**

2.310 *Gummer Table* — A rotary table or belt conveyor on which a feeder places glued labels for hand application. Used in packaging lines.

2.311 *Guy* — A rope, chain, cable, rod or shape applied as a tension member used for steadying.

2.312 *Hand*

a) The right hand or left hand of a conveyor is determined by facing the direction in which the material is flowing. In the case of a reversible conveyor, the hand is determined when the material is flowing toward the drive end.

b) In a screw conveyor a right hand screw when rotated clockwise will move material toward the observer, a left hand screw when rotated clockwise will move material away from the observer.

2.313 *Hand Pushed Monorail* — A trolley type conveyor without a propelling medium where the trolleys and loads are pushed by hand.

2.314 *Handrail*

a) As used with moving walks either a stationary rigid handrailing or a moving flexible handrailing travelling at the same speed as passenger conveyor surface, either type being used for passenger hand support.

b) Any safety railing for the protection of personnel around platforms, pits, stairways, etc.

2.315 *Hanger* — A type of bearing housing or frame which supports the shaft below the point at which the hanger is attached to the conveyor frame, trough or other structure.

2.316 *Hanger Steel* — Angle iron or rods by which a conveyor is hung from supports above.

2.317 *Head* — *See* **2.318.**

2.318 *Head End* — Usually the ultimate delivery end of a conveyor.

2.319 *Head Section* — The frame or structure at the ultimate delivery end of a conveyor. (*See also* **2.121.**)

2.320 *Head Shaft* — The conveyor terminal shaft at the head end of a conveyor. Not always the drive shaft.

2.321 *Head Sheave*

a) A sheave mounted on the head shaft of a conveyor.

b) In a skip hoist, the sheave at the discharge end over which the hoisting rope passes.

2.322 *Headroom* — The vertical distance needed to make possible a workable arrangement of some specified piece of equipment or portion thereof.

2.323 *Helical Runway* — *See* **2.140.17.**

2.324 *Herringbone Table* — *See* **2.163.114.5.**

2.325 *Hinge Track* — A portion of over-and-under conveyor track designed to pivot, allowing truck wheels to pass under or over.

2.326 *Hinged Section* — Hinged section, inserted in a roller conveyor, to produce a clear way through the conveyor track. The hinged section is normally counterbalanced to facilitate the upward tilting (*see* Fig. 128).

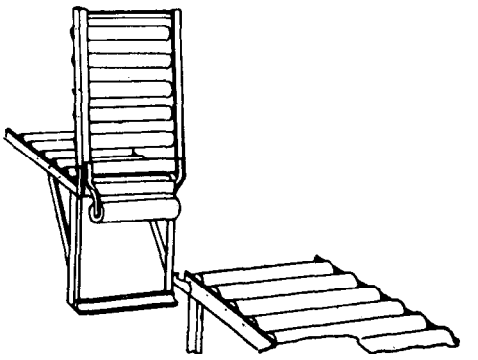


FIG. 128 HINGED SECTION

2.327 *Hitch* — The attachments on a portable conveyor truck or carriage by which connection is made for towing the conveyor by external motive power.

2.328 *Holdback* — *See* **2.26** and **2.490.**

2.329 *Holdback Dog* — Counter-balanced tilting attachment on chain to prevent object being towed from running away on down grades.

2.330 *Holddown* — Member located above and parallel to runway to prevent conveying medium from picking up off the runway due to tension. Usually located so as to allow normal working clearance for conveying medium.

2.331 *Hood* — *See* **2.122.**

2.332 *Hopper* — A box having a funnel-shaped bottom, or a bottom, reduced in size, narrowed or nacked to receive material and direct it to a conveyor, feeder, or chute.

2.332.1 *Feed hopper* — *See* **2.332.**

2.332.2 *Gravity hopper* — A surge bin attached to the tail end of a portable conveyor which utilizes the conveyor belt as a live bottom.

2.332.3 *Loading hopper* — A hopper used to receive and direct material to a conveyor.

2.332.4 *Receiving hopper* — A hopper used to receive and direct material to a conveyor.

2.332.5 *Surge hopper* — A form of storage container used as a part of a conveyor system at any point where there is necessity to substantially vary the rate of flow of the material such as a change from intermittent flow to continuous flow and *vice versa*. A surge hopper will receive and hold any material discharged from another conveyor or from a process machine while delivering it at a different rate to another conveyor or to another machine. Some form of feeder is often necessary to discharge a surge hopper.

2.332.6 *Track hopper* — A hopper located below the level or railroad tracks to receive material from railroad cars; the material in turn is taken from the hopper by a conveyor or feeder (*see* Fig. 129).

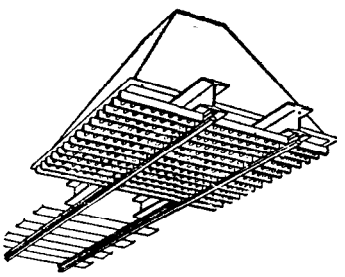


FIG. 129 TRACK HOPPER

2.333 *Hopper Scale* — A scale designed for the weighing of granular materials in bulk, whose load receiving element is a self-cleaning hopper with an outlet gate. (*See also* **2.333.1.**)

2.333.1 *Automatic hopper scale* — A hopper scale which automatically discharges and counts drafts of predetermined weight value.

2.334 *Horizontal Belt Curve* — A curved belt conveyor section equipped with a curved belt to change the direction of travel.

2.335 *Horizontal Projection* — The apparent area, shape or line cast on a horizontal plane by a structure or other unit actually supported at an angle to the horizontal.

2.336 *Horsepower Pull* — The effort necessary to maintain the normal operating speed of a conveyor under a rated capacity load. To this should be added the effort of acceleration, drive losses, etc, to arrive at a final driving effort. Horsepower pull may be referred to in terms such as effective tension, chain, pull, turning effort, gear tooth pressure, etc. (*See also* **2.615.3.**)

2.337 *Humper* — *See* **2.163.14.**

2.338 *Idler*

a) Pulley, sheave, sprocket, or wheel around which a belt, cable or chain passes in changing direction of travel. (*See also* **2.468.16.**)

b) A belt supporting roll or rolls.

2.338.1 *Belt idler* — A roll or series of rolls which support the belt of the conveyor or direct (guide) its path to prevent it from coming in contact with a stationary part.

2.338.2 *Belt training idler* — A belt idler which by means of a belt actuated swivel mechanism controls the side runout of the belt within limits (*see* Fig. 130).

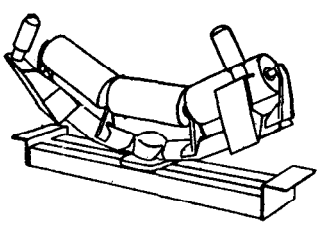


FIG. 130 BELT TRAINING IDLER

2.338.3 *Carrying idler*

a) *In belt conveyors*, the belt idlers upon which the load-carrying portion of belting is supported.

b) *In live roller conveyors*, the rolls upon which the load is supported while being conveyed.

2.338.4 *Catenary idler* — *See* **2.338.10.**

2.338.5 *Cushion idler* — *See* **2.338.11.**

2.338.6 *Disc idler* — A type of return belt idler incorporating a series of spaced discs in place of a continuous roller to prevent material build-up on the idler.

2.338.7 *Dishpan idler* — *See* **2.338.20.**

2.338.8 *Flat belt idler* — An idler consisting of one or more rolls supporting the belt in a flat position.

2.338.9 *Guide idler* — A pulley, roll or wheel free to rotate and used to limit, guide, direct or confine the conveying or power transmission medium within the limits of a defined path.

2.338.10 *Hammock belt idler* — A type of flexible belt-carrying idler with ends supported in pivoted stands. The tube or rollers sags under the weight of the load to form a trough.

2.338.11 *Impact belt idler* — A belt idler incorporating resillient roll coverings, rubber tyres, pneumatic tyres springs or other means of absorbing large amounts of shock in order to prevent belt and idler damage at a loading point.

2.338.12 *Offset idler* — A troughing belt idler in which the concentrator roller shafts are in a vertical plane other than the vertical plane through the shaft of the centre roller or rollers.

2.338.13 *Picking conveyor idler* — A troughed belt idler with short concentrator rolls and a long centre roll, used to spread and expose material for picking.

2.338.14 *Return belt training idler* — *See* **2.338.2.**

2.338.15 *Return idler* — A flat idler supporting the return run of the belt.

2.338.16 *Self-aligning idler* — *See* **2.338.2.**

2.338.17 *Self-training idler* — *See* **2.338.2.**

2.338.18 *Single plane idler* — A troughed belt idler in which concentrator roll and centre roll shafts are in the same vertical plane.

2.338.19 *Spiral idler* — A type of return belt idler utilizing a spiral roller to support the belt. It is used when material is expected to adhere to the return run.

2.338.20 *Spool idler*

a) A belt idler made up of a series of spaced tires.
b) A belt idler with loosely-mounted tapered concentrator rolls mounted on a common shaft with flat centre idlers.

2.338.21 *Training Idler* — *See* **2.338.2.**

2.338.22 *Transition idler* — A troughed belt idler having a lesser degree of trough than the carrying idlers of the conveyor and used to support the belt as the trough changes as the belt moves to and from the terminal pulleys.

2.338.23 *Troughing belt training idler* — *See* **2.338.2.**

2.338.24 *Troughing idler* — A belt idler consisting of two or more pulleys arranged to turn up the edges of the belt so as to form the belt into a moving trough (*see* Fig. 131).

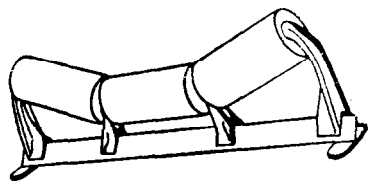


FIG. 131 TROUGHING IDLER

2.338.25 *Two plane idler* — A troughing belt idler in which the concentrator roll shafts are in a vertical plane separate from but parallel to a vertical plane through the shaft of the centre roll or rolls. This permits the concentrator rolls to overlap the centre roll.

2.338.26 *Weight idler* — The conveyor idler mounted on the carriage of a belt conveyor scale.

2.339 *Idler Disc* — A device used for holding the belt in proper position on certain types of box car loaders. (*See also* **2.385.2.1.**)

2.340 *Idler Gear* — A gear which transmits power from one gear to another.

2.341 *Idler, Pulley* — *See* **2.338, 2.468** and **2.468.16.**

2.342 *Idler Shaft* — A draft which supports an idler wheel, pulley, etc.

2.343 *Idler, Sheave* — *See* **2.338.**

2.344 *Idler Wheel* — *See* **2.338.**

2.345 *Inching* — *See* **2.356.**

2.346 *Indexing* — Controlled spacing or feeding. (*See also* **2.260.19.**)

2.347 *Indicator* — A device to show the position or condition of a remote component or material.

2.348 *Inlet* — A device to permit insertion of carriers into the system of tubes in a pneumatic conveyor.

2.349 *Inside Trough End* — A trough end designed for attachment inside a screw conveyor trough.

2.350 *Intermediate Carrier* — An apron conveyor for transferring sugarcane between grinding rolls. (*See also* **2.163.2.**)

2.351 *Jack* — An adjustable support with levelling features.

2.352 *Jacketed Conveyor Trough* — A conveyor trough fitted with an additional casing to form a hollow wall.

2.353 *Jackladder* — A type of chain conveyor to take logs from a flume.

2.354 *Jackscrew* — A horizontally or vertically-mounted screw used for the purpose of adjusting and maintaining adjustments for alignment of a machine part. Also used in place of a take-up screw.

2.355 *Jackshaft* — *See* **2.177.**

2.356 *Jogging* — The quickly repeated closure of an electric circuit to start a motor from rest for the purpose of accomplishing small movements of the driven machine.

2.357 *Journals* — That portion of rotating shaft or axle which turns within a bearing and which supports the load imposed by weight, chain or belt pulls, gear tooth pressure, etc.

2.358 *Journal Box* — *See* **2.43.**

2.359 *Kicker*

a) A unit that automatically discharges a package or object from the conveyor. The packages may be dislodged selectively or continuously.

b) A mechanical or electro-mechanical device that propels a power-and-free trolley and carrier from a stop into the main line to engage a pusher dog.

2.360 *Knee Brace* — A structural brace at an angular position to another structural component for the purpose of providing vertical support.

2.361 *Knockover Dog* — *See* **2.624.**

2.362 *Knuckle Joint* — *See* **2.379.12.**

2.363 *Knuckle Shaft* — A bend shaft usually equipped with an idler wheel of a type related to the conveying medium for abruptly changing the normal path of the conveying medium to effect a more complete inversion for discharge or to accomplish a clearance.

2.364 *Labyrinth Seal* — A type of seal incorporating intricate passage to prevent foreign matter from entering ball or roller bearings and to retain lubricant.

2.365 *Landing* — The stationary platform at each entrance or exit point of a moving walk or stairway, consisting of a take-off lip and a threshold plate.

2.366 *Lane* — The width of a passenger conveyor or its stationary approaches, needed for a line of passengers in single file.

2.367 *Lap Changer* — A device for reversing the lap on pivoted buckets.

2.368 *Larry* — *See* **2.368.1**.

2.368.1 *Weigh larry* — A travelling hopper for receiving, weighing or measuring and distributing bulk materials (*see* Fig. 132). Usually fitted with a scale, either manually-operated or of the automatic recording type. Weigh larries may be suspended between overhead tracks, or carried on rails mounted below them. They may be hand-pushed or power-propelled, and some design provide a riding platform or cab for the operator. A remote control device for operating the bunker or bin gates is usually mounted on the larry chassis.

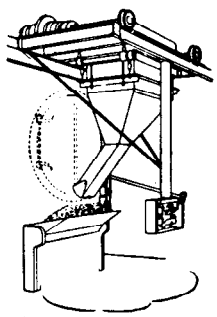


FIG. 132 WEIGH LARRY

2.369 *Leg* — A term sometimes applied to a centrifugal discharge bucket elevator. Usually a double leg bucket elevator.

2.370 *Legging* — The casing between the head end and boot of a bucket elevator enclosing the carrying or return runs or both.

2.371 *Leveler* — *See* **2.650.1**.

2.372 *Lift* — The net vertical distance through which material is moved against gravity by a conveyor or bucket elevator.

2.372.1 *Finger lift* — *See* **2.163.4**.

2.372.2 *Fixed tray lift* — *See* **2.163. 4**.

2.372.3 *Man lift* — A type of passenger conveyor consisting of a vertical endless belt with projecting steps and handles on its outer surface for transporting passengers between different elevations.

2.372.4 *Reciprocating lift* — *See* **2.163.147**.

2.372.5 *Screw lift* — *See* **2.241.15**.

2.372.6 *Suspended tray lift* — *See* **2.163.135**.

2.373 *Lift-and-Turn Unit* — A type of transfer device for metal coil which lifts, turns and lowers.

2.374 *Lifting Blade* — *See* **2.146**.

2.375 *Limit Device* — A device so constructed and located as to effect control for limit of travel, degree or to cause actuation, reversal or stoppage of equipment in operation or to be operated.

2.376 *Liner* — A replaceable member used for purpose of absorbing wear.

2.377 *Liner Plates* — *See* **2.682**.

2.378 *Lining* — *See* **2.659** and **2.526**.

2.379 *Link* — A chain unit of one pitch length.

2.379.1 *Block link* — *See* **2.379.2**.

2.379.2 *Centre link*

a) The inner link of a straight side bar chain containing the two barrels or bushings or pin holes.

b) The loop-shaped links of rivetless chain which provides the bearing surfaces for the pins.

2.379.3 *Coupler link* — A link designed for more readily connecting sections of chain.

2.379.4 *Inside link* — *See* **2.379.2.**

2.379.5 *Offset coupler link* — A coupler link made in the form of an offset link.

2.379.6 *Offset link* — A link, the side bars of which are offset to provide a centre link construction at one end and outside link construction at the other.

2.379.7 *Outside link* — A link, consisting of two straight side bars and two pins, the side bars of which are the outermost side bars when assembled into the chain.

2.379.8 *Pin link* — An outside link of a straight side bar chain.

2.379.9 *Pink link* — An outside link.

2.379.10 *Roller link* — A chain link having rollers mounted on the two bushings.

2.379.11 *Side links* — *See* **2.548.**

2.379.12 *Swivel link* — A chain link provided with a pivot between the pitch points permit flexing at a right angle to the normal chain joint.

2.380 *Live Bearing Area* — The projected surface of contact between two members in motion relative to each other.

2.381 *Live Bearing Pressure* — The load divided by the live bearing area.

2.382 *Live Storage* —

a) Storage on a suitable designed power operated conveyor, power and free conveyor, roller conveyor or other combinations upon which accumulated packages or objects can advance as other loads are removed from the discharge end.

b) That storage of bulk material in the upper portion of a silo, bunker, or bin which is available for immediate current use.

2.383 *Load Bar* — A device to distribute a load over two or more trolleys.

2.384 *Load Cell* — A device which produces an output signal proportional to the applied weight or load. The load cell may utilize any physical principle included in the field of, but not limited to, electricity, electronics, hydraulics, magnetics, mechanics and pneumatics, or combinations thereof.

2.385 *Loader*

2.385.1 *Bucket loader* — A form of portable, self-feeding, inclined bucket elevator for loading bulk materials into cars, trucks, or other conveyors (*see* Fig. 133). (*See also* **2.241.4** and **2.163.99.**)

FIG. 133 BUCKET LOADER

2.385.2 *Car loader* — *See* **2.385.2.1** and **2.163.68.**

2.385.2.1 *Box car loader* — Any of several types of conveyors adapted by portable or hinged mounting for use in loading bulk materials or packaged materials into box cars. Some types operate at high speeds and throw the materials to the ends of the car (*see* **2.163.99**).

2.385.3 *Coil loader* — A mechanical device for loading coils of metal strip and other annular objects into an adjacent conveyor.

2.385.4 *Pallet loader* — An automatic or semiautomatic machine, consisting of synchronized conveyors and mechanisms to receive objects from conveyor(s) and place them on to pallets according to a prearranged pattern (*see* Fig. 134).

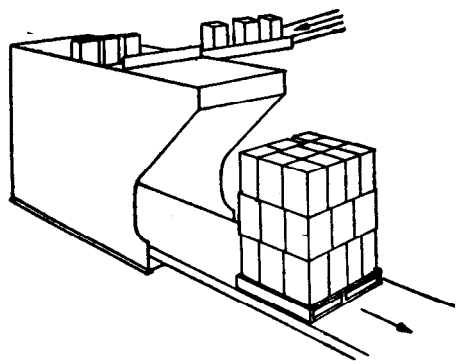


FIG. 134 PALLET LOADER

2.385.5 *Palletless Loader* — An automatic machine, consisting of synchronized conveyors and mechanisms to receive objects and arrange them automatically into a unit load in accordance with a predetermined pattern.

2.385.6 *Snow loader — See* **2.385.1** and **2.163.100.**

2.385.7 *Top loader* — A movable, inclined belt conveyor equipped with a tail end trap and used for loading hauling equipment. It is normally fed by bull dozers pushing material over the trap.

2.386 *Load Indicator* — A device mounted on a floating drive to indicate amount of load the drive is pulling.

2.387 *Loading cycle* — The number of times per given unit of time that a given point on the conveying medium passes the loading station. It is usually expressed in terms of minutes required by a given point to make a complete circuit of the conveyor.

2.388 *Loading Leg* — A chute enclosing the front and/or sides of an elevator bucket line and used to guide material into continuous elevator buckets.

2.389 *Loading Plate* — In vertical conveyors of the opposed shelf type, a plate on which the load is deposited and from which it is removed by a pair of shelves (*see* **2.209**).

2.390 *Loading Skirt — See* **2.561.**

2.391 *Log Washer — See* **2.163.88** and **2.527.**

2.392 *Loop Boot* — The lower portion of a loop-boot *en masse* elevator comprising a loop of casing with a feed inlet.

2.393 *Looping Table* — A roller, wheel or other suitable type of conveyor located between two metal strip processing units over which the strip can loop when the forward machine slows down.

2.394 *Lug — See* **2.172.**

2.395 *Magnetic Detector* — An electrical device for indicating the entry of magnetic material into a definite area.

2.396 *Marine Leg* — A self-feeding bucket elevator with means for lowering it into the hold of a vessel (*see* Fig. 135). (*See also* **2.241.4.**)

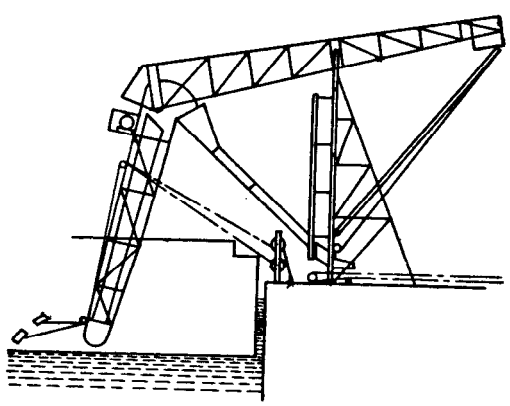


FIG. 135 MARINE LEG

2.397 *Materials Handling*

a) The art and science involving movement, packaging and storage of substances in any form.

b) The movement of everything within an establishment; the handling of raw materials and tools; the movement of components between operations and in stores, of finished products and of the scrap, cutting oils and process machinery, the movements of work people in relation to the handling of material.

2.398 *Maximum Angle of Inclination* — The maximum angle at which a conveyor may be inclined and still deliver a predetermined quantity of bulk material within a given time. As the maximum angle is approached the rate of handling of bulk material is usually decreased. For package conveyors the maximum angle of inclination is that at which packages or objects may be conveyed without a slippage. (*See also* **2.150.**)

2.399 *Memory System* — Signal carrying media positioned to operate a sensing device for use in the automatic routing of unit loads to predetermined destinations.

2.400 *Mildew Resistance* — The ability of a conveyor belt carcass to withstand mildew deterioration. This is accomplished by application of a chemical treatment to the fabric or cords, which inhibits the mildew growth.

2.401 *Mill Table* — Any type of conveyor used to connect two machines in a metal rolling mill.

2.402 *Mingler* — *See* **2.163.119.4** and **2.163.76.1**.

2.403 *Minimum Accelerating Time* — The minimum time allowed to accelerate a conveyor from rest to normal speed without exceeding the permissible starting tension established by the belt manufacturer for the particular belt used.

2.404 *Minimum Braking Time* — The minimum time allowed to decelerate a conveyor belt from normal speed to rest without exceeding the permissible braking tension of the belt or causing festooning of the belt.

2.405 *Mixer, Screw* — *See* **2.163.76.1**.

2.406 *Mixing Paddle* — *See* **2.427**.

2.407 *Monitor* — The main group of terminals where carriers are automatically relayed from one line to another in a pneumatic conveyor system.

2.408 *Motion Weighing* — The weighing of loads without bringing them to a stop on the loads receiving element of a scale such as the weighing of freight cars on a grade track scale.

2.409 *Moulded Edge* — In belt construction when belt edge is sealed with elastomeric material, it is known as moulded edge construction.

2.410 *Moving Pan Inspection Table* — A packing house term for a pan conveyor.

2.411 *Moving Ramp* — A moving walk set on a substantial slope for transporting passengers between different elevations.

2.412 *Moving Sidewalk* — *See* **2.415**.

2.413 *Moving Stairway* — A type of passenger conveyor in which the passenger carrying surfaces form stairs where the travel is on a slope.

2.414 *Moving Top Table* — A packing house term applied to pan, slat, apron and belt conveyors.

2.415 *Moving Walk* — A type of passenger conveyor on which passengers stand or walk and in which the passenger-carrying surface remains parallel to its direction of motion (*see* Fig. 136).

2.416 *Muller* — *See* **2.163.119.4**.

2.417 *Newel* — That portion of the balustrade of a moving walk which extends beyond the moving belt surface.

2.418 *Nip Point* — Points in a conveyor where body limits are clothes of the persons in the vicinity of conveyor may be trapped causing injury to the person(s).

2.419 *Norway Bolts* — Bolts with special heads used to secure buckets or flights to belts.

2.420 *Nozzle* — A fitting applied to the intake end of a pneumatic conveyor tube to permit suction of material into the air stream.

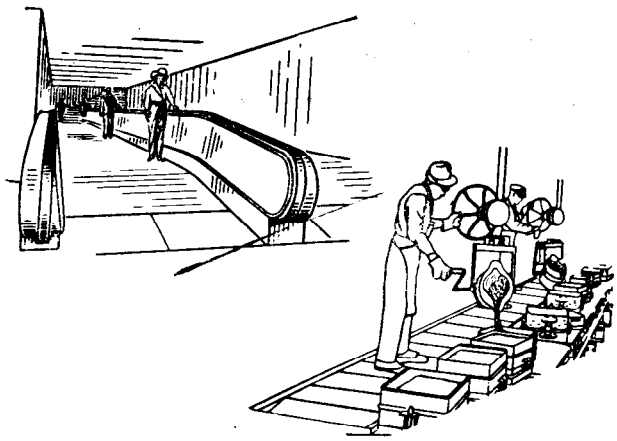


FIG. 136 MOVING WALK

2.421 *Offset Side Bar* — A side bar of an offset link.

2.422 *Oiler* — A device supplying controlled lubrication.

2.423 *Outside Trough End* — A trough end designed for attachment to a screw conveyor trough flange.

2.424 *Overload Release* — A mechanism or electrical equipment designed to disconnect the driven equipment from the motive power in the event of overload on conveyor.

2.425 *Packing Scale* — A scale which automatically cuts off the feed after a definite amount of material has been weighed.

2.426 *Pack Tilter* — The mechanism on a conveyor for inclining a pack of sheets for manual or mechanical removal of the pack or individual sheets.

2.427 *Paddle* — A flat, contoured or shaped blade having suitable means for mounting on or attachment to a pipe or shaft in a fixed or adjustable position with respect to the shaft axis.

2.428 *Paddle Mixer* — *See* **2.163.119.4.**

2.429 *Pallet*

a) A flat or shaped wheelless load carrier of a pallet conveyor.

b) A portable platform on which packages or objects are placed. It is usually designed so that it can be picked up with a fork-lift truck.

2.430 *Pallet Dispenser* — A device for feeding empty pallets as required by a pallet loader or other machine or operation.

2.431 *Pallet Load Detierer* — A device for separating tiered pallet loads.

2.432 *Pallet Load Tierer* — A device for stacking full pallet loads for storage.

2.433 *Palletizer* — *See* **2.385.4.**

2.434 *Pan* — *See* **2.14.2.**

2.435 *Pan Mixer* — A horizontal, circular pan in which mixing paddles or blades revolve about a central axis to mix batch ingredients.

2.436 *Pan Side* — *See* **2.14.2.3.**

2.437 *Partition Plate* — The common wall between the carrying and return portions of a combined run of an *en masse* conveyor.

2.438 *Picking Table* — *See* **2.163.93.**

2.439 *Pier* — In a foundation for a conveyor structure, it is that part raised above the surrounding surface level in which anchor bolts may be imbedded.

2.440 *Piler* — *See* **2.590.**

2.441 *Piler Table* — A conveyor for stacking sheets in a rolling mill.

2.442 *Pillow Block* — A bearing block or housing having a flat mounting surface offset from but parallel to the shaft. (*See also* **2.442.1** to **2.442.8.**)

2.442.1 *Angle pillow block* — A split sleeve bearing pillow block in which the plane of the split between the cap and base is at an angle to the plane of the base (*see* Fig. 137).

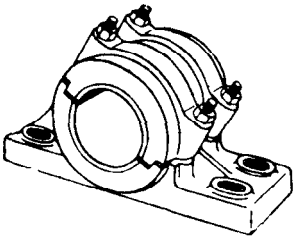


FIG. 137 ANGLE PILLOW BLOCK

2.442.2 *Antifriction pillow block* — A pillow block in which the bearing consists of an anti-friction bearing such as ball, roller or needle bearings (*see* **2.442**).

2.442.3 *Babbitted pillow block* — A pillow block having a babbitted bearing (*see* Fig. 138).

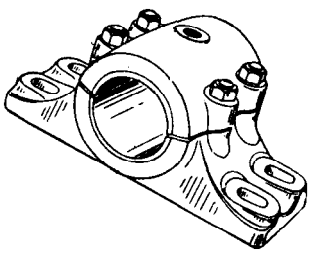


FIG. 138 BABBITTED PILLOW BLOCK

2.442.4 *Ball bearing pillow block* — A pillow block utilizing balls as a bearing element.

2.442.5 *Bronze bearing pillow block* — A pillow block having a bronze bearing.

2.442.6 *Gibbed pillow block* — A split sleeve bearing pillow block in which the plane of split is parallel to the base and whose cap is lipped to fit snugly into the base thereby eliminating side strain on the cap bolts as well as effecting a more nearly perfect alignment of cap to base.

2.442.7 *Plain bearing pillow block* — A one piece pillow block in which a bored hole forms the bearing.

2.442.8 *Roller bearing pillow block* — A pillow block using rollers as a bearing element.

2.443 *Pin* — *See* **2.443.1.**

2.443.1 *Chain pin* — The pintle that is used to connect succeeding links and upon which or about which the links pivot.

2.443.2 *Extended pin* — A pin which extends beyond the chain on one or both sides.

2.443.3 *Master pin* — A type of coupler pin used for joining rivetless chain.

2.443.4 *Ring pin* — A forged chain pin having a ring arrangement on one end. Usually placed adjacent to a trolley for towing floor trucks by means of a chain hitch.

2.443.5 *Tow pin* — A movable or fixed member on a truck, dolly, or cart used to engage a pushing or pulling dog on a floor mounted tow conveyor.

2.444 *Pit* — A hole, recess, or well below the normal grade or base floor.

2.445 *Pitch*

a) The amount of vertical drop in one turn (360°) of a spiral. Also the amount of vertical drop in a given unit of length of roller or wheel conveyor.

b) *In chain*, the distance between the centres of two successive chain pins.

c) *In a conveyor screw flight*, the distance between identical points on adjacent flight surfaces measured axially. Normally this pitch is approximately equal to the outside diameter of the flight.

d) The conveyor belt pitch line is a horizontal plane located centrally in the carcass, at which, for computation purposes all belt tension is theoretically carried.

e) In sprockets and gears it is the distance measured on the pitch circle between the centre of adjacent teeth.

2.446 *Plate Hub Box — See* **2.43.2.**

2.447 *Plough* — A blade, either fixed or mounted on a movable carriage placed obliquely across the run of the loaded belt to discharge the material by deflecting it from the belt at points other than the head of the conveyor.

2.448 *Plow* — A device positioned across the path of a conveyor at the correct angle to discharge bulk material (*see* **2.201**).

2.448.1 *Belt plow* — A bladed device for discharging material from a flat belt to one or both sides at some intermediate point.

2.449 *Ply* — A layer of duck or cords used in constructing the carcass of a conveyor belt.

2.449.1 *Maximum plies* — The greatest number of plies in the carcass of a rubber conveyor belt which can be used without seriously reducing the transverse flexibility of the belt thereby limiting its ability to conform to the troughed contour of the idler, and resulting contact against all of the supporting rolls. (*See also* **2.660.**)

2.449.2 *Minimum plies* — The least number of plies in a carcass of a rubber conveyor belt for a given width and weight of duck to provide sufficient support strength in the belt, both laterally and longitudinally to limit excessive sag between idlers and to resist impact splitting.

2.449.3 *Reverse step ply* — A construction of rubber conveyor belt of uniform thickness which has a thicker top cover at the edges. This is accomplished by stepping down the top plies from the centre to each side, and filling in the extra spaces at the edges with cover stock.

2.449.4 *Step ply* — A construction of rubber conveyor belt of uniform thickness which has a thicker rubber cover at the centre. This is accomplished by arranging more plies at the sides of the belt than in the centre. Usual constructions are 5 by 4 ply or 6 by 4 ply and in each case filling in this extra space with cover stock.

2.450 *Ply Adhesion* — The permanancy and strength of the bonding together of the plies of the carcass of a rubber conveyor belt resulting from proper correlation of the compounding of the friction and skim coats, the impregnation of the fabric and the curing of the conveyor belt. It is expressed in terms of the mean force per unit width of ply required to strip one ply from the next. (*See also* **2.287** and **2.556.**)

2.451 *Ply Arrangement* — The construction of the laminated pattern of the plies in the carcass of a conveyor belt. Usual arrangements are folded edge construction, straight edge and step ply.

2.452 *Ply Rating* — The maximum recommended working tension for various types of fabrics expressed in force per unit width per ply.

2.453 *Ply Tensile* — Measurement of the ultimate breaking strength of a ply used in the carcass of a conveyor belt expressed in force per unit width of ply. Permissible working tension in the ply of a specific belt is determined taking into account factors of safety and service conditions, such as, type of takeup, joints and starting loads.

2.454 *Pneumatic Conveyor Sending Box — See* **2.517.**

2.455 *Pneumatic Conveyor Windgate — See* **2.292.1.**

2.456 *Pony Support* — A single, quickly adjusted support.

2.457 *Portable Screening Plant* — A self-contained unit consisting of equipment to screen and size aggregates, mounted on a portable chassis capable of being towed over-the-road.

2.458 *Pouring Walk — See* **2.415** and **2.173.7.**

2.459 *Power Plant* — A blower, exhauster, pump or compressor which supplies air at above or below atmospheric pressure to a pneumatic conveyor.

2.460 *Power Rail* — The structural or formed member which provides the track and support for the trolleys which guide and carry the powering chain in a power-and-free conveyor.

2.461 *Power-and-Free Conveyor Escapement* — A device to stop trolleys on a free rail and to release single trolley upon signal.

2.462 *Power-and-Free Conveyor Free Rail* — A non-powered section of track supporting the free trolleys.

2.463 *Power-and-Free Conveyor Free Trolley Stop* — A device on the free rail for stopping the trolley.

2.464 *Power-and-Free Conveyor Hoist Unit* — A section of free trolley track equipped with a hoisting or lowering unit for transferring a loaded trolley from one elevation to another.

2.465 *Power-and-Free Conveyor Stop and Feeder* — A device on a free rail for stopping the trolley and then providing a positive pushing force for moving the trolley forward at a given signal.

2.466 *Printing Device* — A device for imprinting weight information on a ticket or chart.

2.467 *Pug Mill* — *See* **2.163.119.4**.

2.468 *Pulley* — A wheel usually cylindrical but sometimes polygonal in cross section and having its centre bored for mounting on a shaft.

2.468.1 *Bare pulley* — A pulley which does not have the surface of its face covered (or lagged).

2.468.2 *Bend pulley* — Any pulley used to change the direction of the travel of the belt.

2.468.3 *Crown face pulley* — A pulley which tapers equally from both ends toward the centre, the diameter being greatest at the centre.

2.468.4 *Dead shaft pulley* — A pulley with a bearing in the hub and rotating on a stationary shaft. (*See also* **2.198**.)

2.468.5 *Double arm pulley* — A pulley with two sets of spokes on one or two hubs.

2.468.6 *Drive pulley* — A pulley mounted on the drive shaft that transmits power to the belt with which it is in contact.

2.468.7 *Electromagnetic pulley* — *See* **2.468.11**.

2.468.8 *Guide pulley* — *See* **2.338.9**.

2.468.9 *Head pulley* — A pulley mounted on the head shaft of a conveyor.

2.468.10 *Lagged pulley* — A pulley having the surface of its face covered with a material to provide for greater friction with the belt or to provide a resilient surface for cleaning purposes.

2.468.11 *Magnetic pulley* — A pulley equipped with a permanent electromagnet used to remove tramp iron from the bed of material as it is discharged from the conveyor.

2.468.12 *Permanent magnet pulley* — *See* **2.468.11**.

2.468.13 *Pressure pulley* — A pulley with a resilient or pneumatic face used at the drive pulley of a belt conveyor to increase the traction between the drive pulley and the belt.

2.468.14 *Single arm pulley* — A pulley with a single set of spokes and hub.

2.468.15 *Slatted pulley* — A pulley having a face made up of a series of axial slats.

2.468.16 *Snub pulley* — Any pulley used to increase the arc of contact between a belt and the drive pulley. (*See also* **2.468.2**.)

2.468.17 *Straight face pulley* — A pulley on which the face is a straight cylindrical drum.

2.468.18 *Tail pulley* — A pulley mounted at the tail end of a conveyor.

2.468.19 *Takeup pulley* — A pulley mounted on the takeup shaft.

2.468.20 *Triple arm pulley* — A conveyor pulley with three sets of spokes mounted on one or three hubs.

2.468.21 *Winged pulley* — A type of pulley in which the face consists of circumferentially spaced surfaces supported on radial vanes which intersect two cones set base-to-base whose apexes coincide with the centre of the supporting shaft. Used to prevent trapping material on the face of the pulley which might damage the belt, or where material may tend to build up on the face of the pulley.

2.469 *Pulley Face — See* **2.256.**

2.470 *Punch Table* — Any conveyor which supports and controls movement of metal plates or shapes at a punching machine. The table or conveyor usually takes the form of a carrouse or disc.

2.471 *Pusher Dog* — A projecting lug type of chain attachment which contacts the object being towed or pushed.

2.472 *Push-Out Plate — of an* en masse *conveyor* — A stationary sloping plate opposite the discharge outlet to push the conveyed material out so as to obtain a more positive discharge.

2.473 *Rail*

a) One of the longitudinal members in a conveyor frame.

b) The supporting surface under the wheels or rollers of a chain conveyor.

c) The supporting track for a belt tripper.

2.474 *Rail Chair* — A pedestal used to support the track rails of a conveyor or tripper.

2.475 *Rail Clamp* — An attachment or device for clamping a movable conveyor or belt conveyor tripper to the rail to hold it in a fixed location.

2.476 *Rail Stop* — A stop mounted at the ends of tripper or shuttle conveyor rails to limit the travel.

2.477 *Rapping Device* — A pendant operating in the path of the conveying medium such as buckets or pans for the purpose of cleaning by repeated blows after discharge.

2.478 *Rated Capacity* — An established capacity value.

2.479 *Receiving Plate* — A flat surface for receiving bulk material or objects prior to advancing the load to a conveyor. (*See also* **2.389.**)

2.480 *Reciprocating Hoist — See* **2.163.147.**

2.481 *Reciprocating Tray — See* **2.163.147.**

2.482 *Recirculating Load — See* **2.142.**

2.483 *Reclaimer* — A travelling machine used in connection with a blending system equipped with an oscillating harrow and a reversible flight conveyor. The reclaimer advances against the end of the pile and the oscillating harrow disturbs the material, causing it to flow downward to the flight conveyor which conveys the material to the reclaiming conveyor.

2.484 *Reducer — See* **2.575.**

2.485 *Regulating Plate* — A plate which is adjustable or movable to permit varying the size of the opening through which material passes.

2.486 *Reinforced Cover — See* **2.594.**

2.487 *Reject Table* — A conveyor for stacking reject sheets in a rolling mill.

2.488 *Reserve Storage* — That storage of bulk material in the lower portion of a silo, bunker, or bin which is maintained for future use.

2.489 *Resquaring Unit* — A combination of conveyor and mechanisms used for cutting and slitting strip or sheets in a metal processing operation.

2.490 *Retarder* — Any device used to slow the rate of travel of bulk material or objects on a conveyor.

2.491 *Return Track* — The strips or track supporting the conveying medium on the return run.

2.492 *Rider Plate* — A flat plate attached to chain and supporting it from the track.

2.493 *Roll* — A part generally of circular cross section designed to revolve about a fixed axis. The face may be corrugated, ribbed or fluted and straight, tapered, concave or otherwise contoured.

2.493.1 *Carrying roll — In a live roller conveyor,* the roll upon which the load is supported while being conveyed.

2.493.2 *Hydrostatic roll* — A roll containing liquid (*see* **2.163.114.6**).

2.493.3 *Idler roll* — Any carrying roll of a live roller conveyor not driven. Also the rolls of a belt idler.

2.493.4 *Planar action roll* — A double tapered roll which acts to centre automatically any load when used as a component of live-roll conveyor.

2.493.5 *Snub roll* — *See* **2.468.2** and **2.468.16**.

2.494 *Roller*

a) A round part free to revolve about its centre and roll on its outer surface. The face may be straight, tapered, crowned, concave or flanged.

b) A component part of a roller chain in which it may serve only to reduce frictional loss occurring as the chain negotiates sprockets. Rollers may also serve as the rolling support for the chain and the load being conveyed.

2.494.1 *Backup rollers* — A series of rollers so mounted as to backup the conveyor chain to hold it in proper relation to the caterpillar chain dogs.

2.494.2 *Carrying roller* — The conveyor roller upon which the conveyor belt or the object being transported is supported.

2.494.3 *Concentrator roller* — The inclined roll of a troughing belt idler.

2.494.4 *Driven roller* — Any carrying roller driven by belting, chain or other propelling medium.

2.494.5 *Outboard roller* — A roller cantilever supported.

2.494.6 *Pressure lubricated rollers* — Rollers with integral bearings provided with a means for lubrication, usually by drilling axial and cross-holes in both ends of the shaft.

2.494.7 *Pressure roller* — A roller used for holding the driving belt in contact with the load carrying rollers in a belt driven live roller conveyor.

2.494.8 *Return roller — See* **2.338.15**.

2.494.9 *Squirrel cage return roller* — A return roller for a conveyor belt which incorporates a series of spaced rods, rather than a cylindrical tube, as the rotating element. Normally used to prevent material build up on the roller, or to permit the use of a cleated belt.

2.494.10 *Tapered roller* — A conical conveyor roller for use in a curve with end and intermediate diameters proportional to their distance from the centre of the curve.

2.494.11 *Weighted roller* — A roller containing balls, shot, mercury or other weights.

2.495 *Roller Bed* — A series of rollers used to support the conveying medium.

2.496 *Roller Conveyor Curve* — A arcuate or circular section of roller conveyor.

2.497 *Roller Conveyor Turntable* — Equipment for transferring a load from a roller conveyor to another running at an angle to it by means of a roller-topped turntable (*see* Fig. 139).

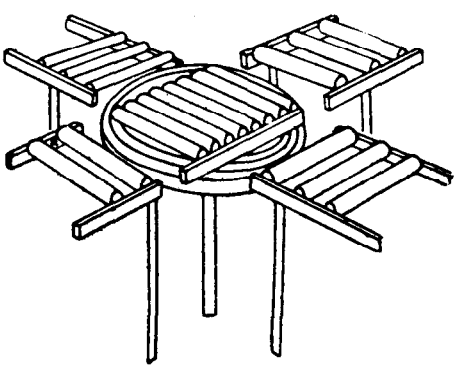


FIG. 139 ROLLER CONVEYOR TURNTABLE

2.498 *Roller Rack* — A storage rack having tiered load-supporting surface of rolls.

2.499 *Roller Spiral* — An assembly of curved sections of roller conveyor arranged helically and over which objects are lowered by gravity (*see* Fig. 140). It is normally used for storage.

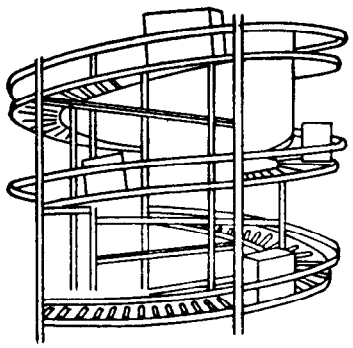


FIG. 140 ROLLER SPIRAL

2.500 *Roller Table* — *See* **2.163.114.9** and **2.163.114.7**.

2.501 *Roller Track* — *See* **2.495**.

2.502 *Roller Turn* — A series of vertical rolls mounted in a frame to guide a conveyor chain around a horizontal curve.

2.503 *Roller Working Bearing Pressure* — The working load of the chain divided by the roller bore times the length of roller bearing surface in engagement.

2.504 *Rolling Roll Inspection Table* — *See* **2.163.114.9**.

2.505 *Roll Over* — A device used to rotate an object around its axis of travel for repositioning or inspection.

2.506 *Roll-Way Skid* — A roller conveyor having brakes to prevent the rolls from turning except in one direction.

2.507 *Rotary Discharge* — A device which permits discharge of material, usually in a controlled amount, from a pneumatic conveyor tube system without interrupting air flow.

2.508 *Rotator* — A device for revolving cylindrical objects on the side, usually for the purpose of painting or cleaning. Used commonly in steel drum manufacture.

2.509 *Run* — The distance or route covered by a conveyor.

2.509.1 *Carrying run* — That portion of the conveyor which carries the load between the loading and discharge points.

2.509.2 *Combined run* — A portion of conveyor in which the carrying and return runs are adjacent in a casing having a common partition plate.

2.509.3 *Return run* — That portion of the conveying medium that returns from the discharge to the loading end of a conveyor.

2.510 *Run-Around* — A conveyor in the form of a circuit as distinguished from a shape in which the carrying and return runs travel substantially the same path. (*See also* **2.147.**)

2.511 *Run-in-Table* — *See* **2.248.**

2.512 *Run-out Table* — Any conveyor carrying material from the discharge end of a processing machine, such as metal from a rolling mill.

2.513 *Saddle* — A screw conveyor trough support.

2.514 *Safety Cage* — A guard built about a ladder to prevent a climber from falling backwards.

2.515 *Safety Dog* — *See* **2.329.**

2.516 *Safety Factor* — A numerical factor by which ultimate strength is divided to arrive at a safe allowable or working stress in a machine or structural part. The value of the safety factor is increased where shock loads and other adverse operating conditions are encountered.

2.517 *Safety Ladder* — A ladder with a safety cage.

2.518 *Sag* — The maximum distance between the path a conveyor belt actually takes due to the imposed load of material and its own weight, and the plane tangent to the top of the supporting idler rolls. This sag is limited by proper correlation of idler spacing and belt tensioning.

2.518.1 *Belt sag* — *See* **2.518**.

2.518.1.1 *Belt sag factor* — A constant used to determine the amount of tension required to limit the sag of the belt between the idlers to a prescribed limit.

2.519 *Sampler* — A device for periodically selecting a portion of the material being handled.

2.519.1 *Automatic sampler* — A mechanical device consisting of a sample cutter, the mechanical means for operating the cutter and the means for isolation and recovery of the sample. The automatic sampler moves the sample cutter completely through the falling stream of material at a preset uniform speed and at preset time intervals.

2.519.2 *Primary sampler* — One that samples the material transported on a conveyor.

2.519.3 *Wet sampler* — A sampler that operates through a stream of combined liquid and solids.

2.520 *Sanitary Hook* — *See* **2.296**.

2.521 *Scalping* — The process of removing oversize lumps on a continuous basis from a stream of bulk material.

2.522 *Scraper* — A blade or blades caused to bear against the moving conveyor belt for the purpose of removing material sticking to the conveyor belt.

2.522.1 *Pulley Scraper* — A flat blade, the edge of which bears against the face of the pulley, used to scrape off any foreign material which may cling to the pulley face.

2.523 *Screen* — A perforated, slotted or meshed plane surface used to separate coarser from finer parts.

2.524 *Screen Box* — A screened compartment to remove foreign matter from the air stream of a pneumatic conveyor.

2.525 *Screw* — *See* **2.525.1**.

2.525.1 *Conveyor screw* — The material propelling medium of a screw conveyor consisting of an assembly of helical flights mounted on a pipe or shaft. (*see* **2.525.1.1** to **2.525.1.12**).

2.525.1.1 *Cast continuous flight conveyor screw* — A conveyor screw having the conveyor screw flight and pipe or shaft cast integrally.

2.525.1.2 *Cast sectional flight conveyor screw* — A conveyor screw having short sections of conveyor screw flight cast integrally with a hub and mounted on a shaft.

2.525.1.3 *Cut-flight conveyor screw* — A type of conveyor screw with a section or sections notched from each pitch (*see* Fig. 141).

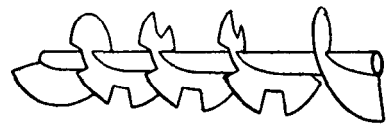


FIG. 141 CUT-FLIGHT CONVEYOR SCREW

2.525.1.4 *Cut-and-folded flight conveyor screw* — A type of conveyor screw with a section or sections of each pitch cut and folded back (*see* Fig. 142).

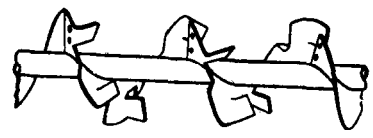


FIG. 142 CUT-AND-FOLDED FLIGHT CONVEYOR SCREW

2.525.1.5 *Double flight conveyor screw* — A type of conveyor screw having two conveyor screw flights mounted 180° apart on the pipe or shaft. The axial distance between adjacent flights is equal to one-half the pitch of the conveyor screw flight.

2.525.1.6 *Helicoid flight conveyor screw* — A conveyor screw with a helicoid flight.

2.525.1.7 *Long pitch conveyor screw* — A conveyor screw in which the pitch of the conveyor screw flight is more than normal. (*See also* **2.445.**)

2.525.1.8 *Multiple flight conveyor screw* — A conveyor screw having two or more conveyor screw flights mounted at equal intervals around the pipe or shaft. The axial distance between adjacent flights is equal to the pitch of the conveyor screw flight divided by the number of flights.

2.525.1.9 *Paddle conveyor screw* — A conveyor screw in which paddles are pitched and positioned to form the material propelling means.

2.525.1.10 *Ribbon flight conveyor screw* — A conveyor screw in which the conveyor screw flight is of the ribbon flight type.

2.525.1.11 *Sectional flight conveyor screw* — A conveyor screw having the conveyor screw flight made up of a series of sectional flights.

2.525.1.12 *Short pitch conveyor screw* — A conveyor screw in which the pitch of the conveyor screw flight is less than normal. (*See also* **2.445.**)

2.526 *Screw Conveyor Trough Lining* — A curved U-shaped plate used to form a bottom in a square wood trough or as a wearing plate in a steel trough.

2.527 *Screw Washer* — A type of conveyor consisting of one or two inlined parallel conveyor screws in a trough having a receiving tank and an overflow weir at the lower end and a discharge opening at the upper end. (*See also* **2.163.119.**)

2.528 *Scroll* — *See* **2.525.1.**

2.529 *Seal Gland* — A device containing a packing material around a shaft.

2.530 *Self-Cleaning* — A conveyor is self-cleaning if, by operating for a time after the feed is shut off, it will deliver substantially all material contained in it to the discharge point.

2.531 *Self-Unloading Boat, Ship or Barge* — A ship equipped with a continuous conveyor handling system forming a self-contained unit which can unload a cargo of bulk materials without the aid of shore or dock facilities.

2.532 *Sending Box* — *See* **2.617.**

2.533 *Separator* — A unit used to separate material from the air stream of a pneumatic conveyor by use of centrifugal action or by filters.

2.534 *Sequence Starting* — An arrangement of interlocking controls for a series of conveyors by means of which the conveyor at the final discharge end of the system is started first to be followed in sequence until the last conveyor at the loading end is set in motion. The order of stopping the units of such a series is directly opposite to the sequence for starting. The conveyor under the loading end is stopped first and the conveyor at the final discharge end is stopped last. This arrangement prevents any pile up of material in the transfer chutes between the various units of the system.

2.535 *Service Factor* — The amount by which the normal rating of a unit is reduced to compensate for increased service requirements.

2.536 *Shakeout*

a) A device for separating sand and casting from poured moulds in a foundry.

b) The process by which agglomerated material is agitated so that particles are shaken apart. Especially applied to foundry conveyors where sand is to be separated from cast metal.

2.537 *Shear Pin Device* — A safety device assembly designed with a free driven component such as a wheel, sheave or sprocket connected by a pin to a driving component, such as a hub. Pin must be of a diameter necessary to drive the conveyor within safety limits and must shear when the safety limit is exceeded. When the pin shears, the driving component disconnects from the driven component.

2.538 *Shear Pin Hub* — *See* **2.537.**

2.539 *Shear Table* — A conveyor with shock absorbing features, for supporting and feeding metal plates and shapes to a shear.

2.540 *Sheet Classifier* — A combination of conveyors and associated mechanisms used to facilitate the inspection, sorting and piling of sheet metal into the different categories.

2.541 *Sheet Drying Table — See* **2.163.123.**

2.542 *Sheet Floater — See* **2.545.**

2.543 *Sheet Metal Spiral — See* **2.140.17.**

2.544 *Sheet Piler* — The combination of associated mechanism with conveying equipment for the piling of metal sheets and for removal of stacks.

2.545 *Sheet Separator* — A mechanism which parts the ends of piled sheets so that they may be picked up, singly or in groups, either manually or mechanically.

2.546 *Shift Register Memory* — An electro-mechanical system in which unit loads on a conveyor advance the dispatch signal in steps.

2.547 *Shoe* — An attachment or component for purposes of absorbing thrust or wear or for providing support.

2.547.1 *Foot shoes* — The formed terminal at foot end of a portable conveyor boom upon which the conveyor rests.

2.547.2 *Wearing shoe* — Conveniently shaped parts placed at rubbing points to take the wear and protect main members from damage.

2.548 *Side Bar* — That portion of a chain link that longitudinally connects the joint portions at each end of the link.

2.549 *Side Ender* — A device to position an object on its end by rotation at a right angle to its direction of travel.

2.550 *Side Tilter* — A device which causes an object, usually round to be discharged sideways by tilting a portion of the conveyor bed or trough.

2.551 *Silo* — A structure, usually round, for storage of material.

2.551.1 *Band silo* — A British term for a self-discharging storage bin or tank in which a flat belt or series of belt conveyors constitute a moving bottom.

2.552 *Skew Table* — A live roller conveyor having its rolls skewed for the purpose of moving objects laterally against a guide member. It may have a fixed or adjustable guide member. (*See also* **2.163.114.12.**)

2.553 *Ski Hoist* — A type of conveyor adapted for carrying or assisting skiers to the top of a slope. It is also used for carrying or assisting workmen up or down a slope.

2.554 *Ski Tow — See* **2.553**

2.555 *Skid*

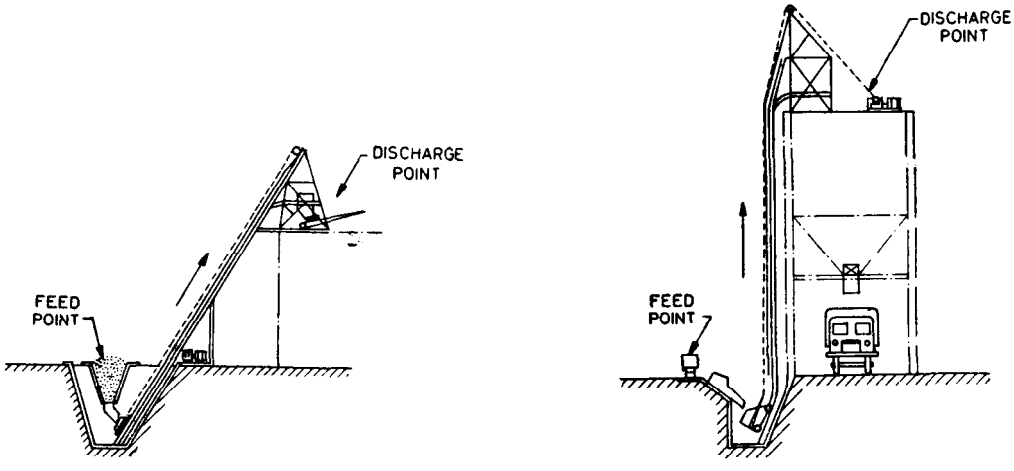
a) A support mounting for a portable conveyor consisting of skids or runners.

b) A runway consisting of two or more runners for moving cylindrical objects by hand or by gravity.

2.556 *Skim Coat* — A thin layer or coat of special rubber compound placed between the plies of the carcass of the conveyor belt to improve flex life and impact resistance.

2.557 *Skip Bucket Bail — See* **2.30.**

2.558 *Skip Hoist Inclined/Vertical* — Multi-wheeled bucket or car operating up and down a defined path, through wire rope receiving, elevating, and discharging bulk material on an inclined/vertical track curved at the top to tip and empty the skip automatically (see Fig. 143). (*See also* **2.558.1.**)



a) Inclined Skip Hoist

b) Vertical Skip Hoist

FIG. 143 SKIP HOIST

2.558.1 *Stockpilling skip hoist* — Trunnion-mounted self-tipping skip on a multiwheeled trolley running on a stockpile and hauled by a wire rope.

2.559 *Skip hoist winding machine* — The hoisting mechanism of a skip hoist.

2.560 *Skirt Board* — *See* **2.561.**

2.561 *Skirt Plate* — Vertical or inclined plates located longitudinally above the carrying medium to confine the material and prevent spillage. Usually used at point of entry of material onto a conveyor where turbulence is encountered and when depth of material load is such that spillage would occur if not confined.

2.562 *Slat* — A member supported between chains in a slat conveyor. The series of slats form the conveying bed.

2.563 *Slide* — A sloped surface to permit free flow of bulk materials, packages or objects without particular confinement or restraint at point of discharge. Similar to a straight chute but without restraining sides or top. (*See also* **2.140.**)

2.564 *Slider Bed* — A stationary surface on which the carrying run of a belt conveyor slides.

2.565 *Sliding Base* — A support providing controlled movement.

2.566 *Slip* — The action of a belt which takes place when the pull exceeds the friction grip on the pulley, imposing a speed differential between the pulley surface and the belt.

2.567 *Slope* — *See* **2.297.**

2.568 *Sludge Collector* — *See* **2.163.48.**

2.569 *Snub Shaft* — A shaft which supports a snub wheel or pulley.

2.570 *Snub Sheave* — Any sheave used to change the direction of travel of a rope, cable or coil chain conveyor, etc.

2.571 *Solenoid* — An electromagnetic control.

2.572 *Sorting Table* — Any horizontal conveyor where operators, along its side, sort bulk material, packages or objects from the conveyor.

2.573 *Speed* — The length of belt, chain, cable, or other linkage which passes a fixed point within a given time. It is usually expressed in length per unit time. In the case of the rolling chain conveyor, the load is moved at a rate double the chain speed. In screw conveyors, the speed is expressed in terms of 'revolutions per minute' and the speed at which the material is conveyed is dependent upon speed, pitch of the screw, type of flight, angle of inclination, nature of material, etc.

2.573.1 *Belt speed* — *See* **2.573.**

2.573.2 *Conveyor speed* — *See* **2.573.**

2 573.3 *Cutter speed* — The speed at which a sample cutter passes through the main stream of material.

2.574 *Speed Indicator* — An instrument for visually registering speed.

2.575 *Speed Reducer* — A power transmission mechanism designed to provide a speed for the driven equipment less than that of the prime mover. Can be either constant or variable speed. Most generally totally enclosed for lubrication and prevention of entry of foreign materials.

2.576 *Spinner Unit* — A power-driven belt or chain operating in a horizontal plane used for revolving rotatable fixtures attached to a spindle conveyor or a trolley conveyor for purposes of spraying or drying.

2.577 *Spiral Enclosure* — *See* **2.579.**

2.578 *Spiral Runway* — A roller spiral, spiral chute or wheel spiral.

2.579 *Spiral Shell* — The outer enclosure of an enclosed spiral chute.

2.580 *Spiral Slide* — *See* **2.140.17.**

2.581 *Spiral Tread Plate* — One of the formed plates used in making up the tread (trough or bed) of a spiral chute.

2.582 *Spiral Trough* — The conveying area of a spiral chute bed or tread and guards.

2.583 *Spout* — A closed chute for bulk materials or objects. (*See also* **2.583.3.**)

2.583.1 *Dock spout* — A spout used for loading marine vessels.

2.583.2 *Swivel spout* — A spout or chute arranged to turn or rotate so that direction of discharge of material can be varied.

2.583.3 *Telescoping spout* — A type of spout the length of which may be varied by means of telescoping the body members.

2.583.4 *Turnhead spout* — A vertically pivoted spout used to discharge bulk materials to various points on an arc of which the pivot is the centre.

2.583.5 *Twist spout* — A roller-conveyor trough that twists through a 90° arc and occasionally a 180° arc.

2.584 *Spray Cleaner* — An arrangement of spray nozzles for the purpose of cleaning hydraulically.

2.585 *Sprocket* — *See* **2.687.9.**

2.585.1 *Double duty sprocket* — A sprocket having two teeth for each chain pitch.

2.585.2 *Drive sprocket* — Either sprocket of a chain drive or of a corner sprocket drive.

2.585.3 *Driven sprocket* — A sprocket which is propelled by the chain.

2.585.4 *Head sprocket* — That sprocket mounted on the head shaft.

2.585.5 *Idler sprocket* — *See* **2.338.**

2.585.6 *Snub sprocket* — *See* **2.687.8.**

2.585.7 *Tail sprocket* — A sprocket mounted on the tail shaft.

2.585.8 *Takeup sprocket* — A sprocket mounted on the takeup shaft.

2.586 *Sprocket Ratio* — The ratio between the number of teeth of driven and driving sprockets respectively and indicating the change of speed existing through a chain drive.

2.587 *Sprocket Turn* — A horizontally placed idler sprocket used to direct a conveyor chain around a horizontal curve.

2.588 *Spur* — *See* **2.329** and **2.471.**

2.588.1 *Non-powered spur.*

a) A turnout for an in-the-floor conveyor in which the trucks are switched from a main line to a non-powered line; and

b) A gravity conveyor section to switch unit loads to and from the main line.

2.589 *Squaring Table* — A conveyor on which plates or sheets are squared prior to cutting or slitting. (*See also* **2.552.**)

2.590 *Stacker*

a) A conveyor adapted to piling or stacking bulk materials, packages or objects (*see* **2.163.2, 2.163.11, 2.163.48, 2.163.99** and **2.173.7**).

b) A fixed or pivotally mounted boom conveyor.

c) With a blending system the stacker operates over the stocking conveyor in a manner similar to a wing tripper to build layered piles or beds of material parallel to the stocking conveyor. (*See also* **2.163.13** *and* **2.651.2.10.**)

2.590.1 *Air stacker* — A sheet piler which provides a cushion of air under each sheet as it is being stacked to control contact between the sheets (*see* Fig. 144).

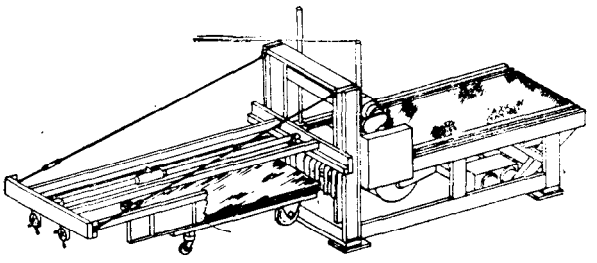


FIG. 144 AIR STACKER

2.590.2 *Empty pallet stacker* — A device for receiving empty pallets and automatically stacking them for re-use or shipment.

2.591 *Stand* — The centre and end supports of rolls of a troughing idler. (*See also* **2.351** and **2.456**.)

2.592 *Starting Effort* — The force required to put a conveying medium in motion when power is applied.

2.593 *Station* — The location on a conveyor or conveyor system where bulk material or objects are received or loaded onto conveyor or are discharged from conveyor. (*See also* **2.617**.)

2.593.1 *Discharge station* — A location at which bulk materials or objects are removed from a conveyor.

2.593.2 *Dwell station* — An unpowered portion in an intermediate length of a live roller conveyor or belt conveyor upon which objects may be held for processing or other purposes.

2.593.3 *Intermediate station* — The additional receiving or discharge station(s) which are included intermediate between the first receiving position and the discharge end of the conveyor.

2.593.4 *Receiving station* — The location or device on a conveyor or conveyor systems where bulk material or objects are loaded or otherwise received onto the conveyor.

2.594 *Step Pad* — A construction of rubber conveyor belt having a defined area of greater thickness down the centre. This is accomplished by moulding the rubber cover thicker in the centre area.

2.595 *Stone Box* — A rigid shelf at a conveyor discharge or in a chute to permit build-up of material which absorbs impact and eliminates abrasion of material on metal.

2.596 *Storage Bin* — *See* **2.69**.

2.597 *Straightening Table* — *See* **2.552**.

2.598 *Stretch* — The increase in length which takes place when tension is imposed. This elongation is of two types, elastic and permanent. Elastic stretch is the temporary change in length which varies directly with the pull. Permanent stretch is the residual change in length after tensioning has been removed, which generally accumulates slowly over a period of time.

2.599 *Stringers* — The longitudinal supporting members between the head and foot terminal supports.

2.600 *Stub Shaft* — A pin or short shaft cantilevered from its mounting for supporting a bearing, wheel or other rotating member.

2.601 *Superstructure* — Members to which the hanger steel is connected and which transfer the load to the building members.

2.602 *Sweep* — *See* **2.201**.

2.603 *Switch*

a) Any device for connecting two or more contiguous package conveyor lines.

b) An electrical control device.

c) In a power-and-free conveyor, that mechanism which accomplishes the transfer of a free line trolley from one track to another track at converging or diverging sections of track. (Commonly called 'entrance and exit switches').

2.603.1 *Belt Penetration switch* — A combination of cams, levers and a limit switch located beneath the carrying surface of a belt conveyor designed to be actuated by any object which penetrates the belt.

2.603.2 *Belt tracking switch* — A limit switch with a suitable actuator operated by the edge of a conveyor belt when the belt moves abnormally to either side of its centred path.

2.603.3 *Chute plugging safety switch* — A level, indicating device usually located in a transfer chute to detect an abnormal build up of material.

2.603.4 *Entrance switch* — The switch which transfers the load carrier from a spur line to the main conveyor line in power-and-free and in-floor tow conveyor.

2.603.5 *Exit switch* — The switch which transfers the load carrier from the main conveyor line to a spur or subsidiary line in power-and-free and in-floor tow conveyors.

2.603.6 *Fire door switch* — A hinged hatchway type door for spiral chutes which also serves as an intermediate discharge plate when closed to a horizontal position.

2.603.7 *Limit switch* — An electrical device by which the movement of a conveyor and allied equipment may be controlled within predetermined limits. (*See also* **2.375.**)

2.603.8 *Proximity switch* — A special limit switch actuated by the magnetic effect of a ferrous object moving near its operating head.

2.603.9 *Pull cord switch* — A switch (or switches in a long conveyor) mounted along the conveyor stringer and manually actuated by a cord running the full length of the conveyor. The switch (or switches) may be actuated from any point along the conveyor length as an emergency stop.

2.603.10 *Slack cable switch* — A device installed on skip hoists to automatically shut off power supply when the hoisting cable becomes loose or has slack due to accident or jamming.

2.603.11 *Starvation switch* — A limit switch or other sensing device arranged to sound an alarm or otherwise react when material flow on a conveyor falls below a predetermined minimum.

2.603.12 *Tongue switch* — A pivoted track switch which is used on " free " line of a power-and-free trolley conveyor.

2.603.13 *Wheel conveyor switch* — A wheel surfaced conveyor mechanism for switching from one conveyor line to another.

2.604 *Tail End* — Usually the end nearest to the loading point. (*See also* **2.246.**)

2.605 *Tail Section* — The frame or structure at the tail or loading end of a conveyor.

2.606 *Tail Shaft* — The shaft supporting the tail end pulley, sprockets, sheaves or other components at the tail end of a conveyor. (*See also* **2.246.**)

2.607 *Tail Sheave* — A sheave mounted on the tail shaft.

2.608 *Take-Off Lip* — That piece immediately adjacent to the moving surface of a moving walk, with a close clearance with respect to the carrying surface, where passengers make the transition between moving and stationary surfaces.

2.609 *Takeup* — The assembly of the necessary structural and mechanical parts which provide the means to adjust the length of belts, cables, chains, etc, to compensate for stretch or shrink and to maintain the proper tension. (*See also* **2.609.1** to **2.609.6.**)

2.609.1 *Automatic takeup* — A take up having provisions which permit it to automatically compensate for stretch, shrink or wear of belts, cables, chains, etc, and to maintain the proper tension.

2.609.2 *Counterweighted takeup* — A take up mechanism where the adjustment is made automatically by the potential energy in weights.

2.609.3 *Gravity takeup* — A take up mechanism where adjustment is performed automatically by the potential energy of the weight of the takeup mechanism and/or auxiliary weights.

2.609.4 *Loop takeup* — A horizontal automatic takeup system where belt is looped.

2.609.5 *Screw takeup* — *See* Fig. 145.

a) A takeup in which movement of the bearing block is accomplished by means of a screw.

b) A takeup assembly having provision for manual adjustment by one or more screws to compensate for stretch, shrink or wear of conveying or power transmission medium.

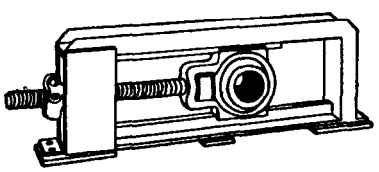


FIG. 145 SCREW TAKEUP

2.609.6 *Spring takeup* — A takeup mechanism where adjustments are made automatically by the potential energy of springs.

2.610 *Takeup shaft* — The conveyor shaft which is moved along with the takeup as it is actuated.

2.611 *Takeup Sheave* — The sheave which is mounted on the takeup shaft.

2.612 *Tangent Inlet* — An inlet into a spiral chute at any intermediate point.

2.613 *Tangent Outlet* — An outlet from a spiral chute at any intermediate point.

2.614 *Tapered Roller Curve* — A curved section with tapered rolls. The taper on the roll and the radii of the curve — all radiate from a common point.

2.615 *Tension* — *See* **2.615.1** to **2.615.9**.

2.615.1 *Belt slope tension* — The belt tension generated by the weight of the belt.

2.615.2 *Chain tension* — The actual force existing at any point in a conveyor chain.

2.615.3 *Effective belt tension* — That portion of the total tension in a conveyor belt effective in actually moving the loaded belt. It is often referred to as 'Horsepower Pull'. Effective tension is the difference between 'Tight Side Belt Tension' and 'Slack Side Belt Tension'. The components which become 'effective tension' when added together include the effort to move the load, the effort to rotate the idlers, any snub or bend pulleys, and the takeup assembly, to overcome the resistance created by any sag of the belt between idlers or the internal resistance of the material as it is displaced slightly when passing over the idlers, to operate a tripper if the conveyor is discharged by such means and to lift the material if the conveyor is inclined upward from the loading point.

2.615.4 *Maximum belt tension* — The total of the starting and operating tensions. In the average conveyor this is considered to be the same as the tight side tension.

2.615.4.1 *Maximum operating belt tension* — The tension in the carrying run necessary to maintain the normal operating speed of a loaded belt.

2.615.5 *Sag belt tension* — The minimum tension in any portion of the carrying run of belt necessary to prevent excessive sags of the belt between belt Idlers.

2.615.6 *Slack side belt tension* — The tension at the point where the belt leaves the driving pulley in the case of a single pulley drive or where it leaves the second pulley in a tandem or dual pulley drive. 'Slack side tension' is the amount necessary to prevent slippage between the belt and the driving pulley or pulleys. When added to the 'effective tension', the sum is equal to the 'tight side tension'.

2.615.7 *Starting belt tension* — The tension necessary to accelerate a loaded belt from rest to normal operating speed and is in addition to 'operating tension'.

2.615.8 *Takeup belt tension* — The amount of tension in the two runs of belt approaching and leaving the takeup pulley which will maintain proper 'effective tension' at the driving pulley.

2.615.9 *Tight side belt tension* — The tension at the point where the belt approaches the driving pulley; 'effective tension' plus the additional tension necessary to prevent slippage between the belt and the driving pulley.

2.616 *Tension Plane* — *See* **2.445**.

2.617 *Terminal*

a) That portion of a conveyor in which the direction of the conveying medium is substantially reversed or changed.

b) Any device designed to permit entrance of bulk material, objects or carriers or exit from the air stream within a pneumatic conveyor.

2.617.1 *Discharge terminal* — *See* **2.673.1**.

2.617.2 *Drive terminal* — The terminal at which the drive is located.

2.618 *Test Chain Reel* — A reel for storing a conveyor scale test chain.

2.619 *Thimble* — *See* **2.105**.

2.620 *Threshold Plate* — A stationary plate on which pedestrians step when entering or leaving a passenger conveyor.

2.621 *Through Rod* — A lateral tie member passing through spaced parallel strands of chain.

2.622 *Throwing Machine* — Machine capable of throwing loose bulk material.

2.622.1 *Belt type throwing machine* — Short high-speed belt conveyor, capable of throwing loose bulk material into otherwise inaccessible areas (*see* Fig. 146.)

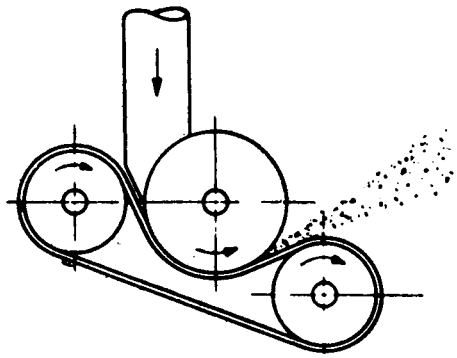


FIG. 146 BELT TYPE THROWING MACHINE

2.622.2 *Plate type throwing machine* — *See* **2.622.2.1.**

2.622.2.1 *Rotating circular plate type throwing machine* — Horizontal circular high speed plate rotating equipped with radial ribs. The material is discharged by centrifugal force.

2.622.3 *Vane type throwing machine* — High-speed rotating drum with vanes or paddles capable of throwing loose bulk material into otherwise inaccessible area.

2.623 *Throw-Off Carriage* — *See* **2.651.2.**

2.624 *Tilting Dog* — A hinged or pivoted pusher or safety dog.

2.625 *Timer* — A device to control on and off cycles.

2.626 *Top Cover* — The rubber and/or other polymer cover over the carcass on the carrying side of the conveyor belt comprising rubber/plastic compound of suitable grade and thickness. (*See also* **2.257.**)

2.627 *Totalizer* — A device for counting, indicating or printing the algebraic sum of successive inputs made on a serial entry basis. Inputs may represent counts, shaft rotations, pulses, etc.

2.628 *Tow Mast* — A movable or fixed, rigid member on a wheeled transport device used to engage pulling or pushing dogs on an overhead propelling conveyor.

2.629 *Track* — The beams, shapes or formed sections on which trolleys, rollers shoes, etc, rolls or slide while being propelled.

2.630 *Track Angles* — The structural shapes employed to support the chains on many types of conveyors.

2.631 *Track Beam* — A girder spanning a track hopper to support the rail road rail.

2.632 *Track Lock* — *See* **2.475.**

2.633 *Track Stop* — *See* **2.476.**

2.634 *Traction Wheel Turn* — *See* **2.691.**

2.635 *Traffic Inlet Regulator* — *See* **2.158.10.**

2.636 *Trajectory* — The curve described by material freely discharged from a conveyor unit.

2.637 *Tramway* — A system in which carriers are supported by cable and in which the movement is continuous over one or more spans.

2.638 *Transducer* — A device for converting energy from one form to another for information or control purposes.

2.639 *Transfer* — The combination of suitable mechanisms to move objects to or from a conveyor.

2.640 *Transfer Hood* — An enclosure, usually of metal or wood, surrounding the discharge end of a conveyor and used to direct the material flow onto another conveyor or device without spilling.

2.641 *Transfer Mechanism* — Any mechanism that transfers objects onto or off a conveyor line or from one conveyor line to another.

2.642 *Transfer Tower* — A structure used to support the junction of two conveyors.

2.643 *Transient* — A momentary, non-persisting condition that disturbs a system.

2.644 *Transverse Breaker* — *See* **2.87.1.**

2.645 *Trap* — An enclosure over a feeder or the tail end of a belt conveyor over which bulk material is piled. An opening in its top allows material to flow onto the feeder or the belt conveyor.

2.646 *Tray* — A car, a carrier or a pallet usually suspended from the moving element of the conveyor.

2.647 *Tray Carrier* — *See* **2.646.**

2.648 *Trench* — A long narrow ditch below the normal grade or base floor.

2.649 *Trestle Support* — A multiple stand or belt support with connecting members and bracing.

2.650 *Trimmer* — A conveyor or other means to level or shape a bulk load in a bin, railroad car or ship's hold.

2.650.1 *Bucket trimmer* — A device for levelling the material in a bucket of a pivoted bucket conveyor.

2.650.2 *Ship trimmer* — A thrower belt unit mounted on the end of a vertical chute used to load bulk materials into a ship's hold.

2.651 *Tripper* — *See* **2.651.2** and **2.651.4.**

2.651.1 *Airlane tripper* — *See* **2.651.2.10.**

2.651.2 *Belt tripper* — A device incorporating a system of pulleys which cause the conveyor belt to discharge material at one or more points along the length of the conveyor (*see* Fig. 147). (*See also* **2.651.2.1** to **2651.2.10.**)

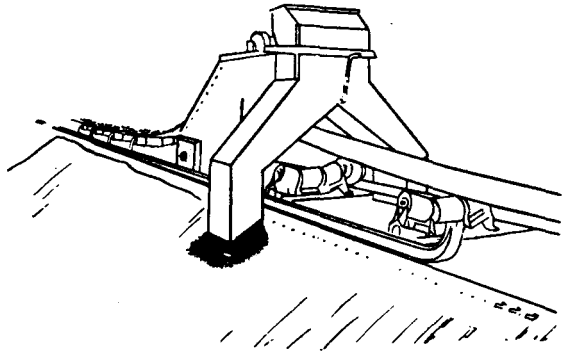


FIG. 147 BELT TRIPPER

2.651.2.1 *Automatic belt tripper* — A belt-propelled or motor-driven tripper having automatically controlled forward and reverse traversing movement between established limiting points for diverting material or objects from the conveyor.

2.651.2.2 *Cable-propelled belt tripper* — A power-propelled belt tripper which receives its traversing power from a winch operated cable.

2.651.2.3 *Four-pulley belt tripper* — A type of belt tripper designed for reversible belt conveyors which may deliver the material to the tripper from either direction.

2.651.2.4 *Hand-propelled belt tripper* — A belt tripper which is moved manually from one location to another.

2.651.2.5 *Manually-controlled belt tripper* — A self-propelled belt tripper, the movement of which is controlled by hand.

2.651.2.6 *Motor-propelled belt tripper* — A belt tripper which receives power to traverse from place to place by means of its own motor.

2.651.2.7 *Self-propelled belt tripper* — A belt conveyor tripper which is moved either by power imparted from a moving belt or from its own motor. (*See also* **2.651.2.2**, **2.651.2.6** and **2.651.3.**)

2.651.2.8 *Travelling belt tripper* — A belt tripper which may be moved to different locations. (*See also* **2.651.2**, **2.651.2.1**, **2.651.2.4**, **2.651.2.5**, **2.651.2.6**, **2.651.2.7** and **2.651.2.10.**)

2.651.2.9 *Winch-propelled belt tripper* — *See* **2.651.2.2.**

2.651.2.10 *Wing belt tripper* — A belt conveyor tripper having auxiliary conveyors extending laterally to one or both sides to provide wider distribution of bulk material being discharged (*see* Fig. 148).

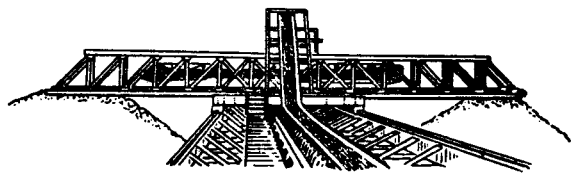


FIG. 148 WING BELT TRIPPER

2.651.3 *Belt-propelled tripper* — A belt conveyor tripper which utilizes the power from an operating conveyor belt to move itself from one location to another.

2.651.4 *Bucket tripper* — A device that tilts or turns the buckets of a pivoted bucket conveyor causing them to discharge. May be fixed or movable.

2.651.5 *Fixed tripper* — A tripper which is permanently established in location rather than traversible.

2.651.6 *Power-propelled tripper* — *See* **2.651.2.7.**

2.652 *Tripping Cam* — A cam on a pivoted bucket for engaging a bucket tripper to effect discharge.

2.653 *Trolley* — An assembly of wheels, bearings and brackets used for supporting and moving suspended loads or for carrying load connecting and conveying elements, such as chain, cable or other linkage (*see* Fig. 149).

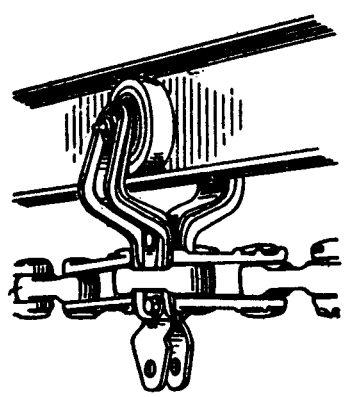


FIG. 149 TROLLEY

2.654 *Trolley Bracket* — Drop forged, cast or pressed steel members to which the trolley wheels are bolted, riveted or swedged and to which chain and attachments are connected.

2.655 *Trolley Scale* — A scale of which the load receiving element is part of a trolley conveyor system.

2.656 *Trough* — A channel much longer than its width, open at the top or fitted with a cover, which contains the material being conveyed. The shape of the cross-section depends on the type of conveyor involved.

2.657 *Trough End* — A plate that contains or supports the bearings in which the drive and end shafts rotate, and arranged for attachment to the end of a screw conveyor trough in a manner to preserve proper alignment between the conveyor screw and trough. (*See also* **2.179**, **2.210**, **2.349** and **2.423.**)

2.658 *Trough Jacketed* — *See* **2.352.**

2.659 *Trough Lining* — Wearing plates affixed to the inside of a conveyor trough at points of maximum wear. (*See also* **2.526** and **2.682.**)

2.660 *Troughability* — The relative transverse flexibility of a belt as indicated by its ability to trough and come into contact with the supporting idler roller. It is determined by measuring the deflection of a full width test piece under its own weight midway between the end supports and is expressed as the ratio of the deflection to the flat length of the test piece (that is, width of the belting).

2.661 *Truck*

a) An assembly which supports another unit in either a fixed or variable position and which provides mobility to the unit.

b) A wheeled vehicle which may be detached from conveying medium, usually chain, and pushed by hand.

2.661.1 *Crawler truck* — A conveyor mobile mounting consisting of a track-laying type truck.

2.661.2 *Radial wheel truck* — A portable conveyor truck on which wheels are so mounted as to permit radial movement about a fixed point.

2.661.3 *Rigid wheel truck* — A portable conveyor truck with a fixed axle.

2.661.4 *Swivel wheel truck* — A conveyor truck on which the wheels can be positioned for longitudinal, lateral or radial movement.

2.661.5 *Tractor truck* — A tractor mounting for a portable conveyor consisting of a commercial motor tractor.

2.661.6 *V-Type truck* — The main support or a portable conveyor which extend from the axle to the underside of the conveyor truss in a characteristic 'V' configuration.

2.661.7 *Wheel truck* — A portable conveyor carriage, chassis, or truck mounted on wheels.

2.662 *Truck Stop* — A device in a spur track to stop positively trucks, dollies or carts.

2.663 *Truss* — A framework usually with parallel top and bottom chords and usually used in pairs to carry a conveyor across a span greater than could be spanned with simple beam construction.

2.664 *Tube*

a) A hollow member of any shape or material in a pneumatic conveyor through which the conveying air is directed.

b) The carrying medium of a closed belt conveyor.

2.665 *Tunnel* — A long, narrow subterranean passageway.

2.666 *Turnhead* — A free-turning connecting device between a spout and the bottom of a bin, bunker, tank, silo or hopper for the purpose of delivering free-flowing materials radially to points on an arc of the circle whose centre coincides with the centre of rotation of the turnhead.

2.667 *Turn-Over* — A device used to rotate an object through approximately 180° so that its carrying surface is changed to an opposite side.

2.668 *Turntable* — A horizontal rotatable conveyor mechanism used for connecting conveyors which are in angular relations to one another.

2.669 *Unload Plate* — *In vertical conveyors of the opposed shelf type*, a plate onto which the shelves deposit the load. The load is then removed manually from the path of travel. (*See also* **2.209** and **2.593.1.**)

2.670 *Unloader*

2.670.1 *Car unloader* — A type of feeder characterized by a shallow, horizontal loading section, enabling it to receive and unload material from hopper bottom rail-road cars without requiring a pit or other excavation (*see* Fig. 150).

2.670.1.1 *Hopper car unloader* — *See* **2.670.1.**

2.670.1.2 *Over-the-track car unloader* — *See* **2.670.1.**

2.670.2 *Coil unloader* — A mechanical device for removing coils of metal strip and other annular objects from an adjacent conveyor.

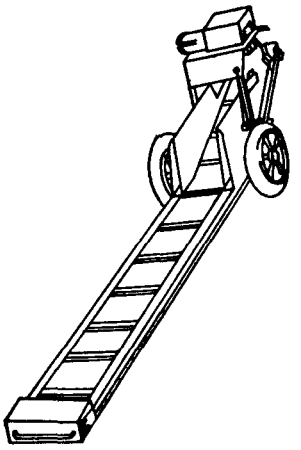


FIG. 150 CAR UNLOADER

2.670.3 *Pallet unloader* — An automatic machine, consisting of synchronized conveyor and mechanism to disassemble a pallet load and discharge the objects singly.

2.670.4 *Rotary unloader* — *See* **2.260.44.**

2.670.5 *Truck unloader* — A portable, low head room receiving hopper and feeder used to unload trucks. It is used in conjunction with a ramp to bring trucks over the hopper.

2.671 *Up-Ender* — A device to rotate an object from a position on its side to a position on its end (*see* Fig. 151). (*See also* **2.215.**)

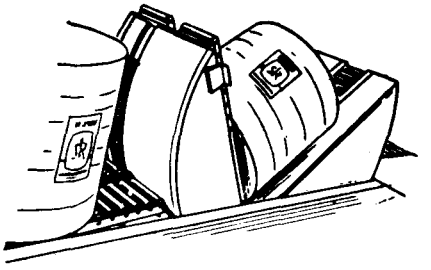


FIG. 151 UP-ENDER

2.672 *Valley Angle* — That angle to the horizontal formed by the line of inter-section of two inclined planes such as the angle formed by the joint between the two sides of a hopper.

2.673 *Valve* — A device or structure through which material is permitted to pass. The flow may be stopped or regulated by means of a gate. (*See also* **2.70** and **2.673.6.**)

2.673.1 *Discharge valve* — A device to permit automatic ejection of carriers from a system of pneumatic conveyor tubes.

2.673.2 *Pneumatic conveyor rotary valve* — *See* **2.507.**

2.673.3 *Rack and pinion valve* — *See* **2.292.15.**

2.673.4 *Regulating valve* — *See* **2.292.16.**

2.673.5 *Rotary bin check valve* — A rotary valve, manual or power-operated, designed to deliver a constant flow of fine material. May be used as 'volumetric feeders' and may be equipped with totalizers calibrated in volume or weight.

2.673.6 *Rotary cut-off valve* — A gate or valve having a close fitting slotted cylindrical rotor operating in the slotted bore of the gate body.

2.673.7 *Rotary valve* — *See* **2.673.6.**

2.674 *Valve Plate* — *See* **2.293.**

2.675 *Vertical Curve*

a) That portion of a conveyor partly horizontal and partly inclined or at two different angles of inclination connected by a radius.

b) A section of track bent in a desired curve to change the direction of a conveyor in the vertical plane.

2.676 *Vibrating Screen* — A single or multiple deck screen, usually inclined to the horizontal. The screen decks are vibrated by mechanical, pneumatic or electrical means.

2.677 *Vibrator* — A device for attachment to bins or chutes to produce a quivering action and thus assist in gravity flow of contained material.

2.678 *Walking Beam* — A horizontal beam driven by eccentric action so that it moves a load forward on fixed rails a given amount in each stroke.

2.679 *Walkway* — A platform usually with railing to provide access to conveyors.

2.680 *Wearing Bar* — A bar attached to a runway which may be replaced when worn thus protecting the main members from damage due to wear.

2.681 *Wearing Block* — A block added to a moving part to concentrate rubbing to the block itself.

2.682 *Wearing Plate* — Plates which are placed at points of wear to protect the main members from damage. They are replaceable.

2.683 *Weather-Cover* — A removable cover placed over the carrying run of a conveying medium to protect from the weather and to reduce dusting of the materials.

2.684 *Weighing Device* — A mechanical hydraulic, pneumatic or electrical registering and/or controlling the amount of material being handled. Can be designed for batch or continuous weighing and can be equipped with either visual indicators or automatic-registering equipment or both. Can also be arranged to control conveyor speed to compensate for lag in processing or non-uniform material load on conveyor.

2.685 *Weighing System* — Systems comprising an organized arrangement of apparatus for determining, indicating or printing weight values.

2.686 *Weight Control System* — A weighing system in which the weight measurements are used to control the flow of material.

2.687 *Wheel*

a) A disc or circular frame which may be solid, built-up or formed and which is capable of turning on, or with a central axis.

b) One of the wheels in a wheel conveyor usually of formed metal parts and containing an integral ball bearing.

2.687.1 *Bend wheel (Also known as Bend sheave or Bend sprocket)* — A wheel used to interrupt and change the normal path of travel of the conveying or driving medium. Most generally used to effect a change in direction of a conveyor travel from inclined to horizontal or a similar change.

2.687.2 *Flanged wheel* — A wheel equipped with a flange on one or both sides of its face.

2.687.3 *Hand wheel* — Usually a cast iron wheel having a perimeter cylindrically shaped to permit easy grasp for manual turning. Used on gates, valves, etc.

2.687.4 *Pocket wheel* — A wheel whose circumference is contoured to mate with the shapes of the chain links so that chain pull is transmitted positively to the wheel shaft.

2.687.5 *Ratchet wheel* — A wheel with teeth arranged to engage a pawl and prevent rotation in a reverse direction but which permits unobstructed rotation in a normal direction.

2.687.6 *Renewable rim wheel (sprockets, traction, etc)* — A wheel having a removable rim that can be changed without disturbing the hub portion.

2.687.7 *Shear pin sprocket wheel* — A keyless sprocket wheel designed to match and be connected to a keyed hub by means of a shear pin.

2.687.8 *Snub wheel* — A wheel so located as to increase the arc of contact of a conveyor or drive chain on another wheel.

2.687.9 *Sprocket wheel* — A wheel with suitably shaped and spaced cogs or teeth to engage with the links of a chain.

2.687.10 *Star-wheel* — A horizontal star arrangement attached to a swivel hook by which the object carried may be automatically revolved by contact with a projecting arm.

2.687.11 *Traction wheel*

a) A smooth cylindrical wheel with or without external flanges which carries and propels a conveyor chain by friction alone;

b) A wheel used in a wheel turn to guide the conveyor chain at any angle differing from direction of approach.

2.688 *Wheel Conveyor Curve* — An arcuate or circular section of wheel conveyor.

2.689 *Wheel Rack* — A storage rack having tiered load supporting surfaces of wheels.

2.690 *Wheel Spiral* — Helically wound curved sections of wheel conveyor which wind helically and over which objects are lowered by gravity (*see* Fig. 152).

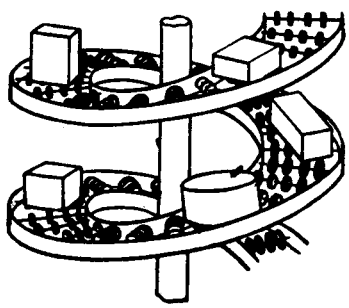


FIG. 152 WHEEL SPIRAL

2.691 *Wheel Turn* — An arrangement incorporating a traction wheel which guides a conveyor chain around a horizontal turn.

2.692 *Windgate* — *See* **2.292.1**.

2.693 *Winding Machine* — *See* **2.559**.

2.694 *Wiper* — *See* **2.522**.

2.695 *Wishbone* — Guide angles fastened to floor to direct truck casters onto conveyor track.

2.696 *Working Load* — A safe rating in pounds beyond which a conveying medium should not be stressed in service.

2.697 *Yoke* — A member that joins rails of power-and-free conveyors to make a track assembly.

2.698 *Y-Section* — *See* **2.289**.

EXPLANATORY NOTE

This glossary of terms has been prepared for guidance of manufacturers and users of conveyor equipment to assist them in the correct interpretation of the term used in conveyor trade and usage. It is hoped that this standard will help in establishing a generally recognized usage of terms and eliminate ambiguity and confusion arising out of their interpretation.

In this standard, technical and engineering terms commonly used by conveyor trade have been included to make the glossary as much self-contained as possible. Many of the terms defined in this glossary may not necessarily have the same definitions in a context not related to conveyors.

This standard first published in 1976, has been revised to bring it in line with the Draft International Standard ISO/DIS 5027 'Continuously mechanical handling equipment, terms and definitions'. This standard is also an indication of the advancement achieved in recent years in the field of conveyors. Further, in this revision the terms have been arranged in groups having similar application in the conveyor trade. In addition, an alphabetical index has also been added for the guidance of the user of the standard.

In the preparation of this standard considerable assistance has been derived from the following:

USA MH4.1 - 1968 'Conveyor terms and definitions' issued by American Standards Association.

BS 3810 : Part 2:1965 Glossary of terms used in materials handling — Terms used in connection with conveyor and elevators (excluding pneumatic and hydraulic handling)' issued by the British Standards Institution, London.

ISO/DIS 5027 'Continuous mechanical handling equipment — Terms and definitions', issued by the International Organization for Standardization (ISO).

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Note — This index has been prepared in accordance with IS : 1275-1958*. Index numbers are clause numbers.

*Rules for making alphabetical indexes.

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