cutting edge, and a reciprocating cutter arranged to engage therewith and sever the cord. 27th. The combination, with a main cam gear, a lever actuated thereby, and a bracket connected to a sliding rod pivotted to the cam actuated lever, of the knot tyer and cutting device mounted at one end on said bracket and reciprocated thereby. 28th. The combination, with the reciprocating bracket having an open slot formed in its upper end, and flanges at the side of said slot, of the reciprocating cutter constructed with a screw threaded shank supported in said slot, and adjusting nuts on said shank, and arranged on opposite sides of the bracket and prevented from turning by said flanges. 29th. The combination, with the rotary head V provided with the hook V1, of the reciprocating cylinder V2, sliding shaft V3 and hook X2, the latter being inserted in a groove in the cylinder V2 and attached to the shaft V3, and a spring encircling the shaft. 30th. In a rotary knot tyer, the combination, with the rotary shaft, a sliding cylinder mounted thereon, and a spring encircling the shaft and bearing against the rear end of the sliding cylinder, of a knotting hook provided with a hooked shank for securing the shaft and cylinder together. 31st. The combination, with the cylinder provided with a deep slot, of the tying hook having a spring attached thereto and provided with bearing flanges for supporting the shank of the hook, in the outer portion of the groove or slot. 32nd. The combination, with the cylinder provided with a recessed end, of the tying hook made semi-circular in form and adapted to fit in said recess. 33rd. A clutch consisting of a drum or barrel loosely mounted on the shaft, in combination with a sleeve secured to the shaft, a disk loosely mounted on said sleeve and a pawl pivotted to an arm on the sleeve, the free end of the pawl being provided with a pin or stud that engages the inclined sides of an opening in the disk. 34th. The combination, with a clutch drum or barrel loosely mounted on the shaft and provided with internal V shaped notches, of a sleeve secured to the shaft, said sleeve having an arm provided with a circular groove, a pawl constructed with a circular bearing that fits in said groove, a disk loosely mounted on the sleeve, a spring for imparting a part rotary movement to the disk, and a stud on the pawl that extends through an irregular shaped opening in the disk. 35th. The combination, with the drum or barrel sleeve, pawl, disk and spring, of the projection on the disk and the clutch lever. 36th. The combination, with the sleeve, pawl and disk, the latter provided with a series of holes, of a spiral spring encircling the sleeve and secured at one end in one of said holes, and at the other to the sleeve or pin connecting the sleeve and shaft. 37th. A clutch consisting essentially of a loosely revolving barrel or drum, a sleeve secured to the shaft, a disk loosely mounted on the sleeve, a pawl arranged to lock the sleeve to the drum, a spring for imparting a part rotary movement to the disk, and a clutch lever for engaging the disk and arresting its movements.

No. 16,126. Improvements on Stone Dressing Hammers. (*Perfectionnements aux marteaux pour rhabiller les meules.*)

Alexander McDonald, Belmont, Mass., U. S., 16th January, 1883; (Extension of Patent No. 8330.)

No. 16,127. Improvements in Scythe Fasteners. (*Perfectionnements aux manches des faulx.*)

The Vermont Snath Company, (assignee of Miles Smith,) Springfield, Vt., U.S., 16th January, 1883; (Extension of Patent No. 8355.)

No. 16,128 Improvements on Bricks. (*Perfectionnements aux briques.*)

Pierre Lefebvre and Honoré Binette, Montréal, Que., 16th January, 1883; for 5 years.

Résumé.—Une brique composée des parties principales A B C, dont la partie centrale forme saillie sur les deux autres.

No. 16,129. Improvement on Paper Boxes and Machines for the Manufacture of the same. (*Perfectionnements aux boites en papier et aux machines pour les fabriquer.*)

William H. H. Rogers, Brooklyn, N.Y., (assignee of Herbert Ludlow, Brooklyn, N.Y., and Albert E. Elmer, Springfield, Mass.,) U. S., 16th January, 1883; for 5 years.

Claim.—1st. The combination, with the compressing-head D, of the cam wheels A A having the gutters *a a* with successively increasing swells *f f*, and the bars E E having end studs or rollers *d d* fitting said gutters, whereby the compression is made to give successively harder blows. 2nd. The combination, with the guttered cam-wheels A having successively increasing swells, and the bars E having end studs, of an intermittent compressor D having elastic-facing strip G in a recess *e*, with a cross-piece F having rib *f*, whereby the material is scored by two successive blows upon the rib without cut or injury. 3rd. The combination, with the compressor and strip F having rib *f*, of the table H having the hinged leaf K supported on springs to give a yielding support to the material while it is being scored. 4th. A folding box blank formed with the flaps P and O, the flap P being cut to form the locking heads *r r* and the flap O being formed with the slot *s*. 5th. A blank for a folding box bent to form the folds *m m n n t t* and *u u* and cut to form the flaps M N O and P, the flap P being centrally slotted and formed with the locking heads *r r*, and the flap O cut to form the slot *s*.

No. 16,130. Improvements in Railway Station Indicators. (*Perfectionnements aux indicateurs des stations de chemins de fer.*)

Oliver H. Green, Somerville, Mass., (assignee of Silas J. Morse, Shelburne, N.H.,) U.S., 16th January, 1882; for 5 years.

Claim.—In connection with band I, the pair of rollers G H which are provided with springs that force them apart, and gears that enable them to revolve in unison in either direction.

No. 16,131. Improvements on Compounds for Preserving Eggs. (*Perfectionnements aux composés pour conserver les œufs.*)

Grovenor A. Curtice, Hopkinton, N.H., U. S., 17th January, 1883; for 5 years.

Claim.—The described composition of matter to be used for preserving eggs composed of lime, chloride of sodium, nitrate of potash, carbonate of magnesia, glycerine and water.

No. 16,132. Improvements in Tackle Blocks. (*Perfectionnements aux moufles des palans.*)

Joseph W. Noroross, Lockport, N. Y., U. S., 17th January, 1883; for 5 years.

Claim.—1st. The combination of the inner metallic straps, the outer metallic frames or straps, the tubular projections extending from the outer frames or straps through openings in the end of the inner straps, and the keys which extend through the tubular projections. 2nd. The combination of the inner metallic straps, the outer metallic frames or straps, the tubular projections extending from the outer metallic frames or straps through openings in the ends of the inner straps, the H-shaped distance piece and the keys which extend through the tubular projections and through the H-shaped distance piece. 3rd. The combination, with the inner and outer straps, of the lubricating cup cast or otherwise attached to the inner surface of the inner strap and covered at its open end by the fixed outer strap, the latter having a perforation communicating with the cup which is closed by a removable plug. 4th. The cup *f* connected with the inner surface of the inner strap E and projecting through the wooden check-piece F, in combination with the fixed outer strap D forming a cover to the cup and confining the wooden cheek-piece in place. 5th. The combination of the metallic rim *h*, the wooden disks fitting the interior of said rim, the pins *m m* projecting from the rim, the straps *k* extending diametrically across the disks and provided with holes to engage with the pins *m m*, the hub *n* extending from the first strap, through the wooden disks, and provided with a shoulder, which bears the second strap, the pins *o o* projecting from the hub, and the holes in the second strap to engage with said pins.

No. 16,133. Improvement in Flour Bolts. (*Perfectionnements aux bluteaux.*)

Charles Schacht, Marine, Ill., U. S., 17th January, 1883; for 5 years.

Claim.—The combination, with a reel bolt, of one or more rods suspended within the bolting chest, and a series of flexible loops suspended from said rod or rods, to adapt them on the rotation of the reel bolt, to drag upon or against the bolting cloth.

No. 16,134. Improvements on Journal and other Bearings. (*Perfectionnements aux coussinets des tourillons et autres.*)

Ferdinand E. Canda, New York, N. Y., U. S., 17th January, 1883; for 5 years.

Claim.—1st. A journal or other bearing composed of mercury and other suitable metals amalgamated therewith. 2nd. A journal or other bearing composed of mercury and other suitable metals amalgamated therewith, and a lubricating substance mechanically combined with the amalgam.

No. 16,135. Improvements in Lubricators. (*Perfectionnements aux boîtes à graisse.*)

Ross J. Hoffman, Binghampton, N. Y., U. S., 17th January, 1883; for 5 years.

Claim.—1st. In connection with the boiler and steam cylinder of the class described, an automatic lubricator cup connected to a valve chamber above the valve thereof, a pipe connecting said valve chamber above the valve with the interior of the boiler, a valve having ports constantly open for the passage of a small escape of the steam, means for giving a constant pressure underneath the said valve, and a steam pipe connecting the valve chamber below the valve to the interior of the cylinder. 2nd. The combination of the lubricator cup E, valve mechanism D having valve end ports *h h* constantly open to some extent, variable mechanism for pressing said valve upward, pipe *c* leading to the interior of the dome or boiler, and pipe *a* leading to connection with the cylinder. 3rd. In connection with a boiler and cylinders of a locomotive, a steam supply pipe leading from the dome and connected with the cylinders, a suitable automatic lubricator, valve chamber and valve between the lubricator and cylinders, ports to the cylinders, and means whereby the back pressure of the steam in the cylinders may lift the valve and increase the flow of steam. In combination with the boiler and cylinder of a locomotive, a lubricator cup E and a valve mechanism D consisting of a chamber having pipe connections 1 2 3, and valve *f* having telescoping stems *l* and *m*, collars 4 and 5, spring K and ports *h h*, the said valve mechanisms and lubricator being connected to each other to the steam cylinder and to the boiler by pipe connections, whereby the steam from the boiler is constantly supplied in limited quantity to the cylinder and the supply of steam varied.

No. 16,136. Improvement on Nut Locks. (*Perfectionnement des arrête-écrous.*)

Charles E. Bell, Greenfield, Ohio, U. S., 17th January, 1883; for 5 years.

Claim.—The combination of a bolt having a central bore entirely through it and reverse threads on the inside and outside of its lower end, the nut *d* having the reversed threads *e f*, and the locking screw *h* having a thread *g* corresponding to the internal thread of the screw bolt and the nut thread *f*, whereby the nut is prevented from turning in either direction until the locking bolt is withdrawn.