

through the machine, and each provided with pulleys at both ends of the reel, as and for the purpose described. 11th. In a flour dressing machine, the combination of the reel, the beaters, the pulley on the beater shaft, the pulley on the conveyor shaft, the two pulleys upon the respective shafts of the reel, driving and supporting rolls and a single chain or belt K, engaging with the four pulleys, as and for the purpose described. 12th. In a flour dressing machine, the combination of the horizontal reel, the beater shaft, the rolls sustaining the said reel, and gearing, substantially as described, connecting said rolls with the beater shaft. 13th. The combination of the beater shaft, the bolting reel or cylinder, the two shafts provided with pulleys sustaining said reel, and a single driving chain extending from a pulley on the beater shaft to pulleys upon the two roller shafts, as described, whereby motion is communicated from the beater shaft through a single connection to all the supporting rolls of the reel. 14th. In combination with the bolting reel and the rotary spiral beaters therein, the enclosing case or body A provided with the end opening for the admission of air, and with the top A opening to permit the escape of the same, whereby a continuous outward draft is produced through the bolting surface during the action of the machine. 15th. In a bolting reel, the combination of two end hoops or rings, a series of longitudinal ribbed portions of T-form having flat ends extended beyond the ribbed portions, said ends being applied and bolted to the inner surface of the rings with the ribs extending outwardly, as described and shown. 16th. In a bolting reel, the two end hoops, the longitudinal ribbed bars having their ends flattened and bolted to the inner surface of the hoops, and the ribs presented outward, in combination with the segmental cloth covered frames applied externally to the ribs and hoops and secured thereto, as described and shown. 17th. In a flour dressing machine, the combination, with the beater shaft, of the boxes of spheroidal form mounted loosely in bearings, substantially as described and shown. 18th. In combination with the cylindrical bolting cloth, the cloth sustaining hoop, the series of movable inclines arranged to move the hoop outward, and a suitable support for said rings, substantially as described and shown. 19th. In combination with the reel head, the ring mounted thereon and provided with inclines, the hoop supported by said inclines, and the bolting cloth attached to the hoop. 20th. In combination with the cloth supporting hoop and the head of the reel, the adjustable ring provided with the inclines and the rack, and the adjusting pinion mounted upon the head of the reel and engaging with said rack. 21st. In a bolting reel, the combination of the adjustable ring G, constructed and operating as described, the adjusting pinion and the locking dog K engaging with the rack, as shown.

#### No. 18,827. Combined Gridiron and Toaster. (*Gril et Fourchette à Rotie Combines.*)

Julie R. Loemans, Hamilton, Ont., 8th March, 1884; 5 years.

*Claim.*—A combined gridiron and toaster, consisting of three sections hinged together by loops, rings, or their equivalent, the central section wires *a a a*, and the end wires *b* hinged thereto at one end, and the wires *b* to the other end of the central section *a a a*, so as to be capable of being placed in various positions, one end section being provided with a hook *d*, all constructed substantially as and for the purpose specified.

#### No. 18,828. Thill-Coupling. (*Armon de Limonière.*)

Gaylord W. Beebe, Swanton, Vt., U.S., 10th March, 1884; 5 years.

*Claim.*—1st. In a thill-coupling, the cap A provided with the front arm C, in combination with the pin D having a flat lug E at each end, and a thill fork F having enlargements H, with apertures K in the recesses J, as shown and described. 2nd. In a thill-coupling, the combination, with the axle B and the thill G, of the axle clip A provided with an arm C having a transverse pin D with flattened ends E secured thereon, the fork F having its ends provided with cylindrical recesses J terminating in cavities K, and the spring L attached to the thill and having its ends bent up between the shanks of the fork F, substantially as herein shown and described and for the purposes set forth.

#### No. 18,829. Friction Clutch.

(*Embrayage à Friction.*)

James H. Blessing, Albany, N.Y., U.S., 10th March, 1884; 5 years.

*Claim.*—1st. In a friction clutch, a collar adjustable longitudinally upon the shaft, the same being connected with a rock shaft hinged upon the spur wheel, a second rock shaft engaging with the friction belt, and a rod or bar connecting the two, these parts being combined for operation substantially as shown and described. 2nd. In a friction clutch mechanism, a steam cylinder and piston, arranged as described to move the clutch by steam power, the cylinder being located as explained, so that the cross-head carrying the connecting bars or rods shall be upon the side furthest from the bed plate or frame, for the purposes and objects named. 3rd. In a friction clutch mechanism, the steam actuated piston and the cushion piston or pistons located in their respective cylinders, said pistons being united through the medium of cross-head and arranged for joint operation, substantially in the manner and for the purposes set forth. 4th. In a friction clutch mechanism, the combination of the steam actuated piston and a cushion piston connected therewith, the cylinder containing the cushion piston being provided with a water-way or run around connecting the spaces upon opposite sides of said piston, substantially as and for the purposes set forth. 5th. In a friction clutch mechanism provided with a cushion cylinder and cushion piston, the combination, with the water-way or run around connecting the spaces on opposite sides of the cushion piston, of a valve arranged to regulate the size of said water-way, substantially as shown and described herein for the objects named. 6th. In an apparatus of the character united for the purposes explained, the steam cylinder and cushion cylinder arranged in the same line and connected by an open bridge, substantially as and for the purposes set forth. 7th. In a friction clutch, the combination of the movable collar mounted upon the shaft, having the rock shaft connected therewith, and the connecting pin or bolt for the purpose set forth.

#### No. 18,830. Securing Barrel Heads.

(*Ajustage des Fonds de Barils.*)

Frank L. Tetamore and Sidney E. Fordham, Brooklyn, N. Y., U. S., 10th March, 1884; 5 years.

*Claim.*—1st. The mode of securing heads and ends in barrels by means of plates fastened to the inner sides of the staves and bent over the heads, substantially as described. 2nd. A device for fastening barrel heads in place, consisting of a metal plate or strip having a notch X, and an arm *g* adapted to be bent down over the head, as specified. 3rd. A barrel and fastening device, consisting of a strip having a notch X, an arm *g* and a projection F, substantially as described. 4th. The mode of securing fasteners to barrels, consisting in applying the same to the inner sides of the staves and embedding them by pressure therein, substantially as described. 5th. An implement for securing fasteners to barrels, consisting of a frame supporting a fixed jaw and a movable jaw, one of them conforming to the fastening device, and means for bringing the jaws together with a powerful pressure, substantially as described. 6th. The combination of the frame A, fixed jaw A, movable jaw D and lever connected to operate the movable jaw, substantially as described. 7th. The combination of the frame, jaws and operating devices, and gauge M, substantially as described. 8th. The combination of the frame jaws, operating devices and gauge P, substantially as described.

#### No. 18,831. Fastener for Gloves, &c.

(*Fermoir pour Gants, &c.*)

Edward F. Rate, Chicago, Ill., U.S., 10th March, 1884; 5 years.

*Claim.*—The improved glove fastening herein described, consisting of the lever-plate A pivotally attached by a stud *c*, on which it can turn on one side of the wrist-opening, and constructed with the curved slot, as described, and a pin fixed on the opposite side of the wrist-opening and arranged to slide in the curved slot, whereby the turning of the lever-plate on its pivot will cause the curved slot and the fixed pin to co-act and draw the edges of the wrist-opening together, as set forth.

#### No. 18,832. Automatic Fire-Extinguisher.

(*Extincteur d'Incendie Automatique.*)

Caleb C. Walworth, Boston, and Osborn B. Hall, Malden, Mass., U.S., 10th March, 1884; 5 years.

*Claim.*—1st. In automatic fire-extinguishers, the combination, with a supporting frame, of a rock-shaft or pivotal support arranged at one side of the vertical axis of the valve, a short arm or projection arranged on said shaft to support the valve when closed, and a longer supporting arm connected with said shaft and arranged at the side of said frame, and to be thereto secured by fusible metal, substantially as specified. 2nd. In automatic fire-extinguishers, a rock-shaft or pivotal support arranged in bearings at the lower part of the supporting frame, at one side of the axis of the valve, an arm or projection arranged on said shaft beneath the valve, to support the same, and a longer arm arranged on said shaft and to be secured to the frame by fusible metal above the valve, substantially as specified. 3rd. In an automatic fire-extinguisher, the combination, with the valve and supporting frame, of a rock-shaft or pivotal support arranged at one side of the vertical axis of the valve, an arm or projection of said shaft arranged beneath, and to support the valve, a longer arm arranged upon, and to hold said shaft from rotation, and a projection or stud on the frame arranged to receive a fusible link in common with said longer arm, whereby said arm is held vertical and the valve supported in position, substantially as specified. 4th. In automatic fire-extinguishers, a rock shaft or pivotal support arranged at right angles to the axis of the valve and at one side thereof, a short arm or projection of said shaft arranged to support the valve, and a longer arm supported on said shaft and arranged to secure the same from rotation and so arranged relatively to said frame as to be thereto secured by fusible metal at varying distances above the axis of said shaft, whereby the sensitiveness of the device may be varied as desired, substantially as specified. 5th. In an automatic fire-extinguisher, the combination, with the valve, of a rock shaft or pivotal support arranged at one side of the vertical axis of the valve, a short arm or projection arranged on said shaft to support the valve when closed, and a longer arm arranged on said shaft at one side of the valve, and to be secured by fusible metal, substantially as specified. 6th. In an automatic fire-extinguisher, the combination of nipple *a*, valve *f*, a supporting frame, the rock shaft or pivot *k*, its valve supporting arm *l* and retaining arm *n* arranged to be secured to the frame by fusible metal, substantially as specified. 7th. In an automatic fire-extinguishing apparatus, the combination of a water supply pipe with distributing branches connected therewith, and provided with extinguishers adapted to be opened and rendered operative by heat at the danger point thereof, a water excluding valve arranged in said supply pipe, a tank supported by compressed air or gas with connections by which the air also communicates with, and fills the water distributing pipes so as to be liberated by the opening of an extinguisher, and devices connecting said tank and water excluding valve and adapted to open the valve and admit the water by the falling of the tank, at the liberation and escape of the air therein, by the opening of an extinguisher, substantially as specified. 8th. In an automatic fire-extinguishing apparatus, the combination of supply pipe C, its branches B and automatic extinguishers W thereon arranged, a water excluding valve E arranged in said supply pipe, an air tank L arranged to be supported by compressed air and with devices for compressing and confining the air therein, a pipe M communicating with said air supply devices and with the water distributing pipes, a cord K supported by sheave P and attached to said tank, a weight L' suspended by said cord, and a valve weighting lever G arranged to be actuated by said cord and its weight, and to thereby open the valves and liberate the water, when the tank falls by reason of the escape of the air or gas therein, at the liberation of an extinguisher by heat, substantially as specified. 9th. In combination with valve E and lever G, the latter pivotally connected with the valve stem, and means to actuate said lever, the fulcrum H arranged at different distances from the valve stem, to vary the relative lengths of the arms of the lever *at*, and after the commencement of the rising movement of the valve, substantially as specified.