

rod or pitman extending from the eccentric to the hub, whereby the rotation of the eccentric produces a vibration of the screen. 3rd. The combination of the casing A communicating with an exhaust chamber, a series of screens mounted in said casing travelling discharge beds located below the screens, and air tight diaphragms independent of the discharge beds located between the respective screens, whereby a separate chamber for each screen is provided.

**No. 14,329. Improvements on Horse Shoes.**  
(*Perfectionnements aux fers à cheval*)

John D. Billings, New York, N. Y., U. S., 6th March, 1882; for 5 years.

*Claim.*—1st. A horse shoe having a continuous calk of varying width in different parts. 2nd. A continuous tapered calk diminishing in width from near the toe to the heels. 3rd. A continuous tapered calk diminishing in width from near the toe to the heels, and bevelled on its inner edge from the upper face of the shoe, to the lower face of the calk. 4th. A horse shoe having a flat upper face and a continuous bevelled and tapered calk.

**No. 14,330. Improvements on Machines for Breaking Pig Iron.** (*Perfectionnements aux machines à concasser le fer en gueusés.*)

Theodore A. Blake, New Haven, Ct., U. S., 6th March, 1882; for 5 years.

*Claim.*—1st. The combination of the bed with a single rib or breaking point over which the pig is placed and the reciprocating slide above, provided with two ribs or breaking points to bear upon the pig, one in front of and the other in rear of the rib or breaking point below. 2nd. The combination of the bed with a single rib, or breaking point over which the pig is placed and the reciprocating slide above provided with two ribs or breaking points to bear upon the pig, one in front of, and the other in rear of the rib, or breaking point below with a feeding bench, the surface of which is above or flush with the upper surface of the lower bearing point, and upon which the pig is placed to be fed to the machine. 3rd. The combination of the bed with a single rib or breaking point over which the pig is placed, and the reciprocating slide above provided with two ribs, or breaking points, to bear upon the pig, one in front and the other in rear of the rib or breaking point below, with a feeding bench the surface of which is above, or flush with the upper surface of the lower bearing point and upon which the pig is placed to be fed to the machine, and a stop to govern the length of the piece to be broken. 4th. The combination of the bed with a single rib or breaking point over which the pig is placed, and the reciprocating slide above provided with two ribs, or breaking points to bear upon the pig, one in front and the other in rear of the rib or breaking point below, and a feeding bench constructed to yield against the breaking pressure. 5th. The combination of the bed with a single rib, or breaking point over which the pig is placed, and the reciprocating slide above provided with two ribs or breaking points to bear upon the pig one in front and the other in rear of the rib or breaking point below, and a feeding bench constructed to yield against the breaking pressure, and a stop to govern the length of the piece to be broken. 6th. The combination, of the anvil forming a single breaking point in which the pig rests a stationary holder above the pig in rear of the anvil, and a reciprocating breaker in front of the anvil. 7th. The breaking block or blocks provided with a rubber spring to receive the transverse strain produced in breaking the pig.

**No. 14,331. Improvements on Electric Telegraphs.** (*Perfectionnements aux télégraphes électriques.*)

Sir James Anderson and Benjamin Smith, London, Eng., 6th March, 1882; for 15 years.

*Claim.*—1st. The combination, with two telegraph circuits, of one set of instruments, a recorder or other receiver instrument, a transmitting key and a switch, the whole being so arranged that messages, arriving by either cable may be received on the same recorder, or receiving instrument, and forwarded by the key along the other cable. 2nd. The improved switch, figs. 3 & 4. 3rd. The method of combining two telegraph circuits by a wheat-stone bridge, or differential arrangement with a transmitting key and recorder, or other receiving instrument interposed so that the recorder registers signals arriving by either cable and is unaffected by the operation of the key. 4th. The improved switch, fig. 5. 5th. The combination of apparatus for the conjoint working of two duplexed cables fig. 9.

**No. 14,332 Improvements on Door Fastenings.** (*Perfectionnements aux fermetures à s portes.*)

Charles A. Crongeyer, Detroit, Mich., U. S., and George W. Busch, Walkerville, Ont., 6th March, 1882; for 5 years.

*Claim.*—1st. A door fastener made and consisting of a metal strip having a hook at one end combined with a latch mounted on this strip. 2nd. The combination, with a strip provided with a hook end, of a rod pivoted to this strip, and a latch mounted on this pivoted rod. 3rd. The combination, with the strip A provided with a hook end B, of the rod C, pivoted to the strip A, and of a U-shaped piece, or latch D mounted loosely on the rod C. 4th. The combination, with the strip A, provided with a hook end B, of the rod C, the U-shaped piece D and of devices for locking this piece D on the rod C. 5th. The combination, with the strip A provided with a hook end B of the pivoted threaded rod C, the U-shaped piece D and the locking nut E. 6th. The combination, with the strip A provided with a hook end B of the pivoted rod C, the U-shaped D and the arm L of the same. 7th. The combination, with the strip A provided with a hook end B, of the pivoted rod C, the U-shaped piece D and the pivoted arm L provided with a groove N.

**No. 14,333. Improvements on Machines for Thrashing and Cleaning Grain.**  
(*Perfectionnements aux machines à battre et nettoyer les grains.*)

Jacob Miller, Canton, Ohio, U. S., 6th March, 1882; for 5 years.

*Claim.*—1st. In a thrashing and separating machine, the combination of the thrashing cylinder B with the carrier D, and overhanging beater E located at the rear end of, and above the carrier D, whereby the loose grain is prevented from flying or hopping out of the machine or over the lower beaters. 2nd. In combination with the carrier D, the overhanging beater E and beaters b b b, whereby the straw and grain is deflected downward after it leaves the carrier, and upward and onward by the beaters b b b. 3rd. The combination of the short carrier D and floor E, with the overhanging beater E, beaters b b b, vibrating table F, open straw carrier L, and the extension M. 4th. In combination with the shaking table or carrier L supported at its rear end by the inclined links d, the upwardly inclined slotted extension M supported at its front end by the links d and at its rear end, by the links inclined at a greater angle than the links d, whereby the straw is given an upward toss in discharging it from the machine, and the grain thrown forward on to the riddles. 5th. The combination, with the cylinder and carrier, of the trough or spout n located immediately behind the cylinder post and extending nearly down to the carrier D, whereby an upward draft from the cylinder is prevented from passing up through said trough. 6th. The castings or bell crank levers n provided with enlarged portions n', and in combination with a shaker or shakers, to balance the upper carrier. 7th. The bell crank levers or castings n provided with enlarged portions n', in combination with the shoes O and riddle N, rods r, arm r', rods r'', whereby the weight of the carrier or shaker L, and table F is counterbalanced, and the vibrating parts of separator nicely adjusted. 8th. The combination of the shaft h provided with the crank arm m', with the weighted rods m'', table F, carrier L, bell crank lever n', rods r, shoes O, N, and riddle N', whereby the parts, viz.: the table F, carrier L, shoes O, N and riddle N', have a simultaneous and uniform reciprocating motion imparted to them.

**No. 14,334. Improvements on Machines for Embroidering and Ornamenting Rugs.** (*Perfectionnements aux machines à broder et orner les nattes.*)

Ebenezer Ross, Wanson, Ohio, U. S., 6th March, 1882; for 5 years.

*Claim.*—1st. The blocks A and B adapted to slide against each other and provided respectively with the needle G and spring L. 2nd. The needle G having a flattened shank to engage the flat spring L. 3rd. As an improvement in embroidering machines, the block A having needle G, spool bracket H and slotted flanges D, in combination with the sliding block B having spring L.

**No. 14,335. Improvements on Rotatory Engines.** (*Perfectionnements aux machines rotatoires.*)

George W. Dudley, Waynesborough, Va., U. S., 6th March, 1882; for 5 years.

*Claim.*—1st. The segmental exhaust valves having segmental lips at their ends, in combination with the valve chambers having recesses at the sides of the valves, and a reversing valve located in the valve seat. 2nd. The segmental exhaust valves having their journals projecting through the walls of the valve chambers, in combination with levers secured to the outer ends of said journals, and adapted to be operated by a cam which rotates with the piston. 3rd. The segmental piston, in combination with a disk having tangential solid projections formed on its periphery, between which the piston is secured, and radial ports issuing through said projections to the steam chamber. 4th. The reverse-valve located within a hollow shaft and provided with a pin which moves in a slot in said shaft, in combination with a sliding clutch collar having a spiral groove into which the said pin projects, and the disk having two radial ports. 5th. The combination, with the segmental piston, of angular metal packing plates adapted to be arranged in rectangular form in suitable recesses made about the ends of the piston.

**No. 14,336. Improvements on Milk Coolers.**  
(*Perfectionnements aux garde-lait.*)

David M. Macpherson, Lancaster, Ont., 6th March, 1882; for 5 years.

*Claim.*—1st. The combination of the receiving pan A, truncated cooler B and distributor C, for deodorizing, cooling and aerating the milk. 2nd. The receiving pan A provided with a tubular opening H, in combination with the cooler B, having a cone bottom I, and distributor C. 3rd. The truncated cooler B having near its base a trough K, in combination with pan A having lip or outlet E, and tubular outlet G, whereby the milk can be diverted to a point diametrically opposite to the lip, to cause it to circulate under the bottom of the cooler. 4th. The distributor C having an annular perforated bottom and provided with a strainer O, in combination with a truncated cone cooler B, whereby the milk is strained and distributed in a thin film over the cooler, and aerated, deodorized and cooled.

**No. 14,337. Improvements on Watch Regulators.** (*Perfectionnements aux régulateurs des montres.*)

John A. Awalt, Anderson, Ind., U. S., 6th March, 1882; for 5 years.

*Claim.*—1st. As a new article of manufacture, and adapted to be applied to any watch now in use, the perforated and bifurcated frame C, combined with the perforated and threaded rod D and threaded nut E. 2nd. The combination of the perforated and bifurcated frame C, the perforated and threaded rod D and the threaded nut E, with the bridge A and regulator arm B.