

operating the feed slide. 2nd. The inverted flanges on the tongue, for the purpose of closing the lower end of the same when the plunger is raised up.

### No. 19,508. Press for Baling Goods.

(*Presse d'Emballage.*)

Abraham Fitts, Herbert M. Rice and Alonso E. Blanchard, Worcester, Mass., U.S., 7th June, 1884; 5 years.

*Claim.*—1st. In a knuckle-joint press, the combination, substantially as described, with the operating arms, of two cylinders arranged in connection with the knuckle-joints and respectively provided with pistons that are connected one with the other, as specified, and means for producing pressure within said cylinders, for effecting the operation of the arms and press-follower by the movement of said cylinders, in the manner set forth. 2nd. The combination, substantially as described, of the operating arms, the cylinders arranged in connection with the knuckle-joints of said arms and moveable therewith, and the pistons supported at stationary position in relation to the press, for the purposes set forth. 3rd. The combination, substantially as described, of the operating arms, the cylinders arranged on the knuckle-joints of said arms, the pistons attached to rods passing through the respective cylinders, and rigidly connecting said pistons to a ring or slide-piece supported on a central guide, and means for producing pressure within said cylinders, for effecting movement of the parts, as set forth. 4th. The combination, substantially as described, of the press-follower, the operating-arms, the cylinders supported on the knuckle-joint plates, the pistons in the respective cylinders joined to each other by a rigid connecting-rod, the flexible pipes communicating with the interior of said cylinders and a valve for directing the flow to or from said cylinders, as set forth. 5th. The combination, substantially as described, with the operating-arms of the knuckle-joint plates provided with joints or seats *d* for the arms, stuffing-boxes *e* and connecting-flanges for attaching cylinders thereto, the cylinders *D* and pistons *G*, as and for the purpose set forth. 6th. In a knuckle-joint press having operating-arms that fold together, in the manner set forth, the combination, with the press-follower, the knuckle-jointed operating-arms and an actuating mechanism for effecting pressure through said arms, of a hydraulic elevating-cylinder and piston-column arranged between the press-bed and follower, and means for producing pressure within said cylinder, substantially as and for the purpose set forth. 7th. The combination, substantially as described, of the press-follower, the hydraulic elevating-cylinder and column arranged beneath said follower, the operating-arms, the hydraulic cylinders arranged upon the knuckle-joints of said arms, the pistons of said cylinders rigidly interconnected by the coupled rods guided by a ring upon the elevating column, the pipes for delivering water to the respective cylinders, and a directing-valve for regulating the flow thereto, as set forth. 8th. The combination, substantially as described, with the operating-arms in a knuckle-joint press of the joint-plates or cylinder-heads having screw-threaded flanges, stuffing-boxes and ports, as shown, and the cylinder-shell externally screw-threaded and screwed into the flanges of said joint-plates. 9th. A press, the follower in which is operated by knuckle-jointed arms, in combination with hydrostatic presses mounted upon, or acting directly in connection with the knuckle-joints of said arms, and means for connecting together said hydrostatic presses, whereby they are adapted for exerting their resistant forces one against the other, as set forth.

### No. 19,509. Flour Dressing Machine.

(*Blutoir.*)

John E. Wilson, Galt, Ont., 7th June, 1884; 5 years.

*Claim.*—1st. In a flour bolt reel having longitudinal slats *B*<sub>2</sub> supported on two heads *B*<sub>1</sub>, *B*<sub>1</sub> provided with perforated rims, and metallic hoops *B*<sub>3</sub> for the tension of the cloth *B*<sub>4</sub>, a series of bands or rings *B*<sub>3</sub> supported upon the exterior of said slats *B*<sub>2</sub>, upon which said cloth is stretched, for the purpose set forth. 2nd. In a flour bolt or purifier, a hopper *C* having in converging sides a series of openings *C*<sub>1</sub> at the bottom, provided with angle-pivoted or hinged valves *G* supported on the conveyor casing *J*, and arranged to be moved to cut off at any point to either conveyor *D*, as set forth. 3rd. In combination with the two conveyors *D*, *D* and the hopper *C*, the pintled or hinged valves *G* supported on the conveyor casing intermediate of the conveyors, and adapted to be moved inwardly to either side of the hopper, as set forth, for the purpose described. 4th. The combination, with the conveyors *D*, *D*, the hopper *C* having angle-pintled or hinged valves *G*, and the conveyor casing having pivoted or hinged doors *J* to permit inspection of the bolted material and adjustment of the valves *G*, as set forth. 5th. The conveyors *D*, *D*, hopper *C* arranged above the conveyors *D*, *D*, and valves *G* pintled intermediately of the conveyors and hopper bottom, the guides or partitions *C*<sub>2</sub> and stop *J*<sub>1</sub> arranged to engage with the ends and side of the valves, as set forth. 6th. In a flour dressing machine, the combination of the reel or bolt *B* having a series of bands or rings *B*<sub>3</sub>, supported on longitudinal slots *B*<sub>2</sub> connecting the heads *B*<sub>1</sub>, the internal reel *E* provided with a series of longitudinal and tangential beaters *F* supported by reel arms *E*<sub>1</sub>, the hopper *C* having converging sides provided at the bottom with partitions *C*<sub>2</sub>, and inwardly opening pintled or hinged valves *G* and the conveyor casing *J* provided with doors *J*<sub>1</sub>, as set forth for the purposes described.

### No. 19,510. Electrical Haulage System and Apparatus Connected Therewith.

(*Système Electrique de Haulage et Appareil pour cet objet.*)

William E. Ayerton and John Perry, London, Eng., 7th June, 1884; 15 years.

*Claim.*—1st. The use of a carriage, which is propelled by wheels gripping "the rail," worked by an electro-motor or motors, the gripping wheels being odd in number or in pairs, substantially as described. 2nd. The use of a carriage for hauling purposes, which is

propelled by wheels gripping the rail, worked by an electro-motor or motors, the grip being dependent on the amount of pull in the hauling line, substantially as described. 3rd. The use of an electro-magnetic or other arrangement, which, when a motor is receiving no electricity, reverses automatically the connections between the armature and field magnets if the motor is a "series" or single circuit motor, does not reverse the connection if it is a "shunt motor," and which, in both cases produces the change in the lead of the brushes necessary to be made when the machine used as a motor is to act efficiently as a generator. 4th. When shunt motors are used in parallel circuit with other motors or lamps, the use of an arrangement by which, when the motor is going too fast or when it is desired to stop the motion, the speed of the armature is automatically or at will increased or diminished. 5th. The use of a system of two or more motor carriages in which one motor carriage, after running a certain distance along the rail, fixes itself firmly to the rail and winds up the hauling line in the meantime its fellow runs on ahead, then fixes itself and hauls, while the former, having loosened its grip, is running along the rail. 6th. When there is motive power on the boat or wagon, whether this is furnished by steam engine, or manual power, or by an electric motor on the boat which can be used for winding purposes, the use of motor carriage without winding arrangements which, by alternately running forward and then fixing themselves to the rail, afford a succession of fastenings for one end of the hauling line. 7th. The method of automatically making electrical connection and disconnection at the junction of sections of rubbed conductors, whether on the parallel or series systems by electrical means, herein described and shown in Figs. 8, 9, 10 and 11.

### No. 19,511. Electric Regulator and Alarm for Incubators.

(*Régulateur et Sonnerie Electriques pour Incubateurs.*)

Frank Rosebrook, Elmira, N. Y., U.S., 7th June, 1884; 5 years.

*Claim.*—1st. The combination, with a clock-work, of the rotating rod *L*<sub>2</sub>, the notched wheel *L*, the spring *L*<sub>1</sub> resting thereon, the armature *L*<sub>2</sub> attached to the spring *L*<sub>1</sub>, the electro-magnet *L*<sub>3</sub> and for the spring *M*<sub>1</sub>, substantially as herein shown and described and for the purpose set forth. 2nd. The combination, with the hard rubber rod *b*, of the spring *d*, the standards *g*<sub>1</sub>, *g*<sub>2</sub> and the lever *e* pivoted thereto and acted upon by the rod *b*, substantially as herein shown and described and for the purpose set forth. 3rd. The combination, with the valve-operating mechanism, of the hard rubber ball *b*, bracket *c*, spring *d*, vibrating lever *e*, standards *g*<sub>1</sub>, *g*<sub>2</sub> and adjusting contact screws *f*<sub>1</sub>, *f*<sub>2</sub>, the circuit extending through *f*<sub>1</sub>, binding post *P*<sub>4</sub>, brush-wire *P*<sub>2</sub>, disk *N*, binding post *Y*, battery *W* and lever *e*, and the circuit extending through *f*<sub>2</sub>, binding-post *P*<sub>3</sub>, brush-wire *P*<sub>1</sub>, disk *N*, binding-post *Y*, battery *W* and lever *e*, whereby the two separate circuits are closed respectively at maximum and minimum temperatures, substantially as specified. 4th. In an incubator, the combination, with the valve-operating mechanism, of the rotating rod *J*<sub>1</sub>, carrying the valve or damper *J*, the disk *K* provided with pins *K*<sub>1</sub> and the rod *K*<sub>2</sub> provided with regulator *K*<sub>3</sub>, whereby the effective heat of lamp *G* or its equivalent is diminished and restored, substantially as shown and described. 5th. In a valve regulator, the combination, with a series of parts of contact studs, projecting from a disk mounted on the rotating valve-rod, of a series of pairs of brush-wires connected with the battery and an electro-magnet by suitable devices, an electro-magnet mechanism for rotating said rod *J*<sub>1</sub>, substantially as herein shown and described and for the purpose set forth. 7th. In a valve regulator, the combination, with the clock-work casing *J*<sub>3</sub>, of the arm *O*, the insulating bracket *P*, the binding screws *P*<sub>3</sub>, *P*<sub>4</sub>, the brushes *P*<sub>1</sub>, *P*<sub>2</sub>, *O*<sub>1</sub>, *O*<sub>2</sub>, the valve rod *J*<sub>2</sub>, the disk *N* provided with studs *N*<sub>1</sub>, *N*<sub>2</sub>, *N*<sub>3</sub>, *N*<sub>4</sub>, the electro-magnet *L*<sub>3</sub> and for the mechanism, substantially as herein shown and described and for the purpose set forth. 8th. The combination, with the base *Q*<sub>1</sub> of the insulated block *S*, sliding in a groove, in the end of the base of the standards *F*<sub>1</sub>, *F*<sub>2</sub>, the thermostat-plate *R* and the wires *V*<sub>1</sub>, *V*<sub>2</sub> connecting the lower ends of the standards with the binding screws *U*<sub>1</sub>, *U*<sub>2</sub>, substantially as herein shown and described and for the purpose set forth. 9th. The combination, with a clock-work, a device motor, of the rod *J*<sub>2</sub>, the notched disk *L*, the electro-magnet, a device for connecting the electro-magnet with the disk, the damper or door and the circuit-closer, substantially as shown and described. 10th. The combination, with two separate electric circuits and a thermostat, of a damper or door secured to an oscillatory rod *J*<sub>1</sub>, and mechanism for oscillating said rod, substantially as shown and described. 11th. The combination, with two separate electric circuits and an automatic circuit-closer, of a damper door or valve adapted to be operated by an electro-magnet, either directly or through mechanism, which electro-magnet is connected with the two independent circuits, substantially as herein shown and described. 12th. The combination, with an incubator, of an electric heat regulating device, a bell, gong or other alarm, and means for sounding the said bell, gong or other alarm, both when the minimum of heat desired in the incubator are reached, substantially as herein shown and described.

### No. 19,512. Shingle and Heading Sawing Machine.

(*Machine à Scier le Bardeau et les Fonds de Barils.*)

William F. Dake and James H. Seek, Grand Haven, Mich., U.S., 7th June, 1884; 5 years.

*Claim.*—1st. In a shingle or heading sawing machine, the combination, with the saw mandrel and its saw, of the shaft having a pulley, belted to a pulley on the saw mandrel, said shaft having also a worm, the vertical shafts having the sprocket wheels carrying the endless belt of bars, one of said shafts also having a toothed wheel, and the said belt of bars being provided with a dog, and the frame having set flanged guard plate *S* *U*, substantially as and for the purpose set forth. 2nd. In a shingle or heading machine, the endless belt with the vertical right cross-bars provided with dogs, in combination with the vertical guard plate *S* having a narrow horizontal flange at its front edge, the table *A* and the spring adapted to hold the table inward toward the saw, substantially as and for the purpose set forth. 3rd. In a shingle