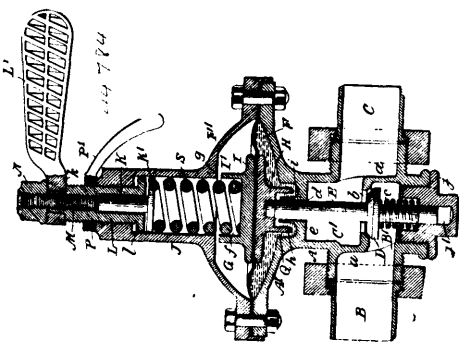


connect the exhaust port or passage of the valve casing with the passage which receives the train or line pipe, substantially as specified. 2nd. In an engineer's valve, for brake systems, the combination with a valve casing constructed as described, and having a conical bore, of a plug or valve arranged in said bore and carrying an operating handle, said valve having a main supply passage extending diametrically through it, and a smaller passage extending diametrically and relatively at right angles to the main passage and free from communication therewith, and also having a port or passage leading from the main supply passage, substantially as specified.

No. 44,784. Pressure Regulator.

(*Régulateur de pression.*)



Edward Ethel Gold, New York City, New York, U.S.A., 27th November, 1893; 6 years.

Claim.—1st. In a pressure regulator, wherein the pressure is determined by a diaphragm acting upon the valve, said diaphragm arranged above the valve and receiving on one side a regulating tension and having on the other side a chamber communicating with the eduction side of the valve, the combination therewith as a means for preventing chattering, of a liquid seal beneath the diaphragm chamber and between it and the chamber or passage on the eduction side of the valve. 2nd. In a pressure regulator, wherein the pressure is determined by a diaphragm acting upon the valve, said diaphragm arranged above the valve and receiving on one side a regulating tension and having on the other side a chamber communicating with the eduction side of the valve, the combination therewith, as a means for preventing chattering, of a liquid seal *Q*, beneath the diaphragm chamber and between it and the chamber or passage on the eduction side of the valve, consisting of two parts, the one stationary and the other movable with the diaphragm, the one part being a downwardly projecting annular flange and the other part formed with the annular channel entered by said flange and adapted to hold liquid. 3rd. The combination to form a pressure regulator, of a shell *A*, divided by a partition *a*, having a valve seat *b*, into eduction and induction chambers, and formed with a portion *A*¹, for inclosing the diaphragm chamber *F*, and with an intervening partition *c*, having an opening *d*, through it for the passage of a valve stem, and an annular channel *e*, around said opening, a valve *D*, and its stem *E*, the latter passing up through said opening into said diaphragm chamber, a diaphragm *G*, having an annular flange *h*, projecting downwardly into said channel *e*, to form the liquid seal *Q*, and a spring *S*, pressing on the opposite side and tending to open the valve. 4th. A pressure regulator, comprising a casing and valve seat, a regulating valve, a diaphragm in communication with the eduction side thereof connected to the valve, a spring pressing against the diaphragm in direction tending to open the valve, a screw spindle for adjusting at will the tension of said spring to vary the pressure determined by the regulator, an interposed adjusting screw for varying the initial tension of the spring relatively to said spindle, and a stop for limiting the screwing down of the spindle, whereby the maximum pressure of fluid to which the regulator is adjustable may be determined in setting the regulator. 5th. A pressure regulator, comprising a casing and valve seat, a regulating valve, a diaphragm in communication with the eduction side thereof connected to the valve, a spring pressing against the diaphragm in direction tending to open the valve, a screw spindle for adjusting at will the tension of said spring to vary the pressure determined by the regulator, and an adjusting screw within the spindle, engaging threads therein and receiving the tension of the spring, and a lock for fixing

said adjusting screw. 7th. A pressure regulator, comprising a casing *A*, and valve seat, a regulating valve *D*, a diaphragm *G*, in communication with the eduction side thereof connected to the valve, a spring *S*, pressing against the diaphragm in direction tending to open the valve, a screw spindle *L*, having a handle by which to turn it and constructed for adjusting at will the tension of the spring to vary the pressure determined by the regulator, an interposed adjusting screw *M*, engaging threads within the spindle, and receiving the tension of the spring and transmitting said tension to the spindle, whereby the connection between the spring and spindle may be adjusted to vary the initial tension of the spring, and a fastener for fixing said adjusting screw to the spindle, whereby to maintain the adjustment of said initial tension. 8th. In a pressure regulator, wherein the pressure is determined by the tension of a spring *S*, pressing against a diaphragm *G*, for controlling the opening of a valve, and the tension of said spring is varied at will by turning a screw spindle *L*, the combination therewith of an adjusting screw *M*, which receives the pressure of said spring and communicates it to said spindle, the said screw screwing into said spindle and projecting above the top thereof, and a nut *N* screwing on said screw *M*, and tightening against the top of said spindle for locking said screw to the spindle to prevent its turning therein and impairing the adjustment. 9th. In a pressure regulator wherein the pressure is determined by the tension of a spring *S* pressing against a diaphragm *G*, for controlling the opening of a valve, and the tension of said spring is varied at will by turning a screw spindle *L*, having a handle *L*¹, fitted on its upper end, the combination therewith of an adjusting screw *M*, which receives the pressure of said spring and communicates it to said spindle, the said screw screwing into said spindle and projecting above the top thereof, and a nut *N* screwing on the projecting portion of said screw, and bearing down against said handle *L*¹, whereby it locks the screw *M* fast in the spindle, and locks the handle *L*¹ fast to the spindle. 10th. A pressure regulator comprising a casing and valve-seat, a regulating valve *D*, its stem *E*, the diaphragm *G*, the spring *S*, pressing against the diaphragm and tending to open the valve, a plunger *K*, receiving the opposite reaction of the spring, an adjusting screw spindle *L*, and an adjusting screw *M* screwing in said spindle, and receiving the thrust of said plunger, whereby the thrust of the spring is transmitted to the spindle *L*, through the plunger *K*, and screw *M*. 11th. In a pressure regulator having an imperforate diaphragm, the combination of valve casing *A*, *A*¹, and spring chamber *J*, the latter formed with a stop shoulder *g*, imperforate diaphragm *G*, a regulating valve with its stem bearing against one side of said diaphragm, a regulating spring *S* inclosed in and guided by said spring chamber, and disc *I* resting loosely against the opposite side of the diaphragm, and having a tubular portion *I*¹, arranged to abut against said shoulder *g*, after the seating of the valve to limit the further distortion of the diaphragm, and formed with a chamber *f*, receiving and fitting the lower portion of said spring, whereby the spring holds the disc *I* centrally in place against the diaphragm and its portion *I*¹ in position to engage said shoulder. 12th. In a pressure regulator, the combination with the valve casing, the imperforate diaphragm *G*, and the valve *D*, having its stem bearing against one side thereof, of a disc *I* resting loosely against the other side thereof, the helical spring *S* pressing against the diaphragm through said disc, and a cylindrical spring chamber for said spring formed partially in the casing at *J*, and partially in said disc at *f*, so that the spring by being inclosed within and engaging the walls of said chamber serves to hold the loose disc in place centrally against the diaphragm.

No. 44,785. Wire Braiding Machine.

(*Machine pour tresser le fil métallique.*)

John B. Cleveland, Indianapolis, Indiana, U.S.A., 27th November, 1893; 6 years.

Claim.—1st. In a wire braiding machine, the combination of the following instrumentalities, namely, a table, a pair of wire carriers mounted on said table and arranged to rotate thereon in a horizontal plane, a pair of wire carriers also mounted on said table and arranged to oscillate thereon in vertical planes which intersect the plane of rotation of the horizontal wire carriers, means for imparting a continuous rotary motion to said rotating wire carriers, and means for imparting an intermittent oscillating movement to said oscillating wire carriers, all substantially as and for the purposes set forth. 2nd. In a wire braiding machine, the combination of the table, the circular way mounted thereon and having in its upper surface a pair of diametrically opposed radial grooves, the centrally perforated hub secured to said table concentric with said way, the pair of wire carriers arranged to traverse said way, the wheel mounted upon said hub and arranged to rotate beneath said way, the dogs pivoted to said wheel and arranged to engage said wire carriers, and the guide arranged to disengage said dogs from said carriers while the carriers are passing the radial grooves in the way, substantially as and for the purpose set forth. 3rd. In a wire braiding machine, the combination of the table, the pair of wire carriers arranged to rotate in a horizontal plane thereto, the pair of rock shafts mounted on said table at opposite sides of the plane of rotation of said wire carriers, the plane of rotation of said rock shafts being at right angles to the plane of rotation of the wire carriers, the pair of wire carrying arms