

ing the position of the reaper table. 7th. The combination of the segment arm E, stud pin D, lever D₁, bracket D₂, cam C₂ and shear bar F₂, for the purpose of retaining the same stroke of cut to the shears when the shear bar is raised or lowered.

No. 15,243. Improvements in Corsets.

(*Perfectionnements dans les corsets.*)

Byron Baldwin, New York, N.Y., U.S., 7th August, 1882; for 5 years.

Claim.—1st. A corset fabric, or foundation fitted to the form of the wearer combined with stiffeners of close-coiled wire B, inserted in pockets in said foundation, whereby they are restrained from lateral movements with respect to said foundation. 2nd. The combination, with a corset, of the series of tubular stiffeners B, of close-coiled wire. 3rd. As a new article of manufacture, a corset having a series of close-coiled wire stiffeners inserted in pockets, so as to be confined and restrained from lateral movement.

No. 15,244. Improvements on Machines for Making Bolts, Spikes, Rivets, etc.

(*Perfectionnements aux machines à faire les boulons, clous borbés, rivets, etc.*)

George H. Waring and Charles Miller, Indiantown, N.B., 7th August, 1882; for 15 years.

Claim.—1st. In a spike machine, the intermittently revolving wheel G, adapted to carry several dies, in combination with the reciprocating tool carrying head E. 2nd. The intermittently revolving die wheel G provided with the claw plates S, in combination with reciprocating wedge-shaped head K₁. 3rd. The wheel G formed with recesses, in combination with removable dies H. 4th. The dies H formed of the chambered block h and the jaw h₁ hinged therein. 5th. The combination, with the die wheel G and the dies H having the hinged jaws h₁, of the head block K. 6th. The intermittently revolving die wheel G provided with the claw plates S and carrying the dies H, having the hinged jaws h₁, the reciprocating wedge-shaped head K₁ and the reciprocating bevelled head block K. 7th. The combination, with the revolving die wheel G, of the water trough Q, for cooling the wheel and dies. 8th. The blank cutting knives J and J₁ adapted to be adjustable for cutting the blanks square or diagonally, off from the rod as desired. 9th. The gear wheel C formed, or provided with the cam I, in combination with the shaft L formed with the cranks k and k₁, in combination with the rod J₁ and the knives J and J₁. 10th. The combination with the shaft D provided with the cam N, of the yoke L₁ and rod L₂ formed with the loop l for imparting to the head block K, a straight reciprocating motion. 11th. The combination, with the shaft D provided with the cam N of the yoke P and rod a formed with the loop w, for imparting a straight reciprocating motion to the wedge-shaped head K₁. 12th. As an article of manufacture, the blanks n, for railroad spikes, made pointed at both ends so that they may be shaped and headed with a small amount of power. 13th. The die wheel formed with recesses, in combination with the removable dies H and the keys p and screw p¹ for holding the dies in the recesses of the die wheel. 14th. The eccentric shaft D provided with the cams N and N¹, in combination with the sliding head E, reciprocating head block K, reciprocating wedge-shaped head K₁ and intermittently revolving die wheel G₁ provided with the plates S and adapted to carry the dies H formed with the hinged jaw h₁. 15th. The combination, with the dies having the hinged jaws h₁ formed with the lugs b, of the cam plate M for opening the jaws, for discharging the spike.

No. 15,245. Improvements on Hydraulic Air Compressing Apparatus.

(*Perfectionnements aux appareils hydrauliques pour comprimer l'air.*)

James M. Bois, Rochester, N.Y., U.S., 7th August, 1882; for 5 years.

Claim.—1st. In an hydraulic air compressing apparatus, the combination, with two cylinders, of gates located between the cylinders and a water supply connection between said gates, floats located within the cylinders and arranged to actuate a system of levers to release the discharge valves, and systems of levers actuated by the discharge valves and arranged to close the gate of one cylinder, and open the gate and close the discharge valve of the other cylinder. 2nd. In an hydraulic air compressing apparatus, the combination, with two cylinders, of gates located between said gates, floats located within the cylinders and arranged to actuate a system of catch levers, discharge valves provided with stems adapted to engage with said catch levers, and systems of levers actuated by the discharge valves and arranged to close the gate of one cylinder, and open the gate and close the discharge valves of the other cylinder. 3rd. In an hydraulic air compressing apparatus, the combination, with the two cylinders, of gates located between the cylinders, and a water supply connection between said gates, floats located within the cylinders and arranged to actuate a system of levers to release the discharge valves, a system of levers pivoted to the stems of the said discharge valves, and arranged to close the gate of one cylinder, and open the gate and close the discharge valves of the other cylinder. 4th. In an hydraulic air compressing apparatus, the combination, with the two cylinders, of gates located between the cylinders and a water supply, gate levers to which the gates are attached, connection between said gate levers, floats arranged to actuate a system of levers to release the discharge valves, and a system of levers connecting the stems of the discharge valves with the free ends of the gate levers. 5th. In an hydraulic air compressing apparatus, the combination, with the two cylinders, of gates located between the cylinders and a water supply discharge valves provided with valve stems, and connections between the stems of the corresponding valves of the two cylinders. 6th. In an hydraulic air compressing apparatus, the combination, with a primary reservoir and a secondary reservoir located below it, of two cylinders, gates located between them and the secondary reservoir, connections between said gates, of floats located within the cylinders and arranged to actuate a system of levers to release the discharge valves, and systems of levers actuated by the discharge valves and arranged to close in one

impulse the gate of one cylinder, and to open the gate and close the discharge valves of the other cylinder.

No. 15,246. Improvements on Upright Pianos.

(*Perfectionnements aux pianos droits.*)

Gerhard Heintzman, Toronto, Ont., 7th August, 1882; for 5 years.

Claim.—1st. The hinge E composed of the links e, c, e, A. 2nd. In combination with the hinge E, the centre panel A, upper cross bar B, uprights e, cross bar D and spring G. 3rd. In combination with the panel A, the fall board F, latch f, keeper g, lever h, bracket i and spring j.

No. 15,247. Improvements on Feeders for Carding Engines.

(*Perfectionnements aux cylindres nourrisseurs des cardes en fin.*)

William C. Bramwell, Hyde Park, Mass., U.S., 7th August, 1882; for 5 years.

Claim.—The combination, with the bar J provided with fingers J₁, and the rotary or oscillating shaft B having movable bearings, of a system of levers and connections, intermediate of said bar J and shaft B, whereby the position of the latter will be changed by the movement of said fingers.

No. 15,248. Improvements on Machines for Dressing Journals of Car Axles and Treads of Wheels.

(*Perfectionnements aux machines à dégrossir les fusées des essieux et les jantes à rebord des roues.*)

Joseph N. Smith, Brooklyn, N.Y., U.S., 7th August, 1882; for 5 years.

Claim.—1st. In a machine for dressing cylindrical surfaces, the combination of the following elements, namely: a shaft mounted rotatively and a pulley fixed thereon, a sleeve mounted rotatively on said shaft and provided with a cutter bearing arm, and a cutter moving arm, a cutter or dressing wheel mounted rotatively on the cutter bearing arm, and a pulley fixed on the cutter arbor, a belt arranged to couple the driving pulley with that on the cutter arbor, mechanism for moving the cutter to and from the surface to be dressed, and mechanism for moving the cutter across the face of the work to be dressed. 2nd. A machine adapted for simultaneously dressing the two journals of a car axle, and the treads of the two wheels thereon comprising bearings in which the axle is rotatively mounted, two diamond dressing wheels for the wheel treads mounted on radial arms, and driven from a shaft upon which said arms are mounted, two dressing wheels for the axle journals mounted on radial arms, and driven from a shaft upon which said arms are mounted, the shaft which bears and drives the axle dressing mechanism being driven from the shaft which bears and drives the wheel tread dressing mechanism, and mechanism for feeding the cutters up to and across the face of the work. 3rd. A machine for dressing cylindrical surfaces comprising two centres in which to rotatively mount the object to be dressed, a shaft H rotatively mounted, sheave K fixed on the shaft H, a sleeve L mounted loosely on the said shaft, and provided with means for adjusting it longitudinally, an arm L₁ on the sleeve bearing the cutter shaft, a cutter and sheave K₁ on the shaft arranged to be driven from the shaft H, an arm L₂ on the sleeve L and a rod adjustable as to length, arranged to couple the arm L₂ with a fixed part of the machine. 4th. In a machine for dressing car axle journals and the treads of the wheels fixed thereon, the combination, with the bed plate and centres for rotatively mounting the axle, of a split pulley adapted to be fixed and adjusted on the axle, the driving shaft H, driving pulley J, gear wheels O, sheaves G and K₁, c, f, shaft H₁, gear wheel O, sleeve L₃, arm L₄ bearing the cutter, the milling wheel g₁, sheaves K₂ K₃, belt f₁, adjusting nut N₁, arm L₅ and a rod adjustable as to length, arranged to couple the end of the arm L₅ with some fixed part of the machine. 5th. The combination, with the shaft H and a sheave K fixed thereon, of the sleeve L, nut N, dog l, bearing arm L, arm L₁, cutter g, sheave K₁, arm L₂, nut i, section h and section h₁, provided with a hook to engage a fixed part of the machine. 6th. The combination, in a machine for dressing cylindrical surfaces, of a rotatively mounted shaft H on which is fixed a sheave K, a sleeve L bearing a radial arm L₁ said arm having a bearing in its free end for the cutting wheel, the said cutting wheel, the sheave K₁, the belt f, the nut N and the dog l mounted on the sleeve bearing and arranged to engage a groove in the nut. 7th. The combination, with the bed plate and a bearing for the live centre D made movable along said bed plate, of the arm I fixed on said bearing, the sleeve L, screw-threaded at its end and rotatively mounted in said arm, the nut N and the dog l, the shaft H extending through the sleeve L and the cutting mechanism mounted on an arm projecting from said sleeve, and arranged to be driven from the shaft H, whereby the movement of the bearing of the centre D imparts equal movement to the cutting mechanism.

No. 15,249. Improvements on Telephones.

(*Perfectionnements aux téléphones.*)

John B. Bennett, Indianapolis, Ind., U.S., 7th August, 1882; for 5 years.

Claim.—1st. In acoustic or mechanical telephones, a curved speaking tube arranged so that its mouth is at right angles with the diaphragm with which the inner end of the tube has open communications. 2nd. The combination of a curved speaking tube, a disk or plate having a concentrating chamber in open relation to the speaking tube and the diaphragm. 3rd. In acoustic or mechanical telephones, a cubical case having on one face the circular aperture L, in combination with the curved speaking tube within, and the plate or disk having a concentrating chamber in open relation with the speaking tube and the diaphragm. 4th. In acoustic telephones, a hammer and arm connected with suitable clock alarm or gearing, located and arranged so that the travel of its vibration will be on a plane with and slightly above the diaphragm, whereby the hammer operates against the eye, or wire, attached to the diaphragm. 5th. In acoustic telephones, a compound