

T. MAGSON.
BUNDLE WIRING MACHINE.
APPLICATION FILED OCT. 23, 1909.

956,387.

Patented Apr. 26, 1910.

Fig. 6.

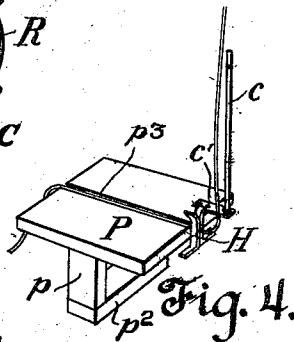
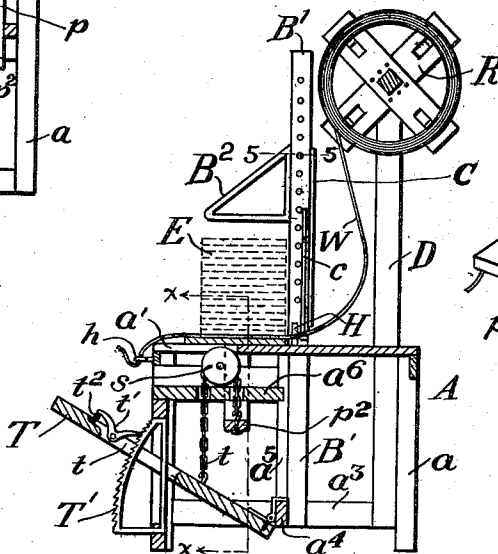
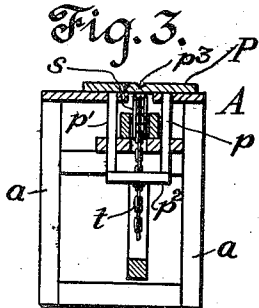
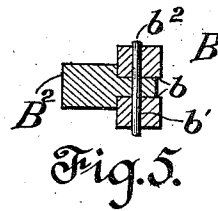
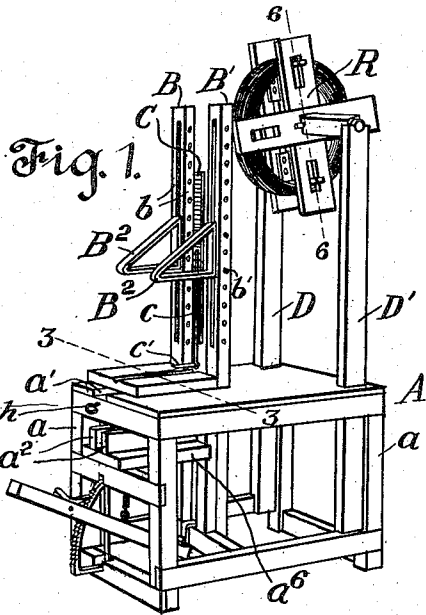
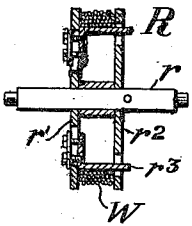


Fig. 2.

Witnesses
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UNITED STATES PATENT OFFICE.

THOMAS MAGSON, OF ANOKA, MINNESOTA.

BUNDLE-WIRING MACHINE.

956,387.

Specification of Letters Patent.

Patented Apr. 26, 1910.

Application filed October 23, 1909. Serial No. 524,273.

To all whom it may concern:

Be it known that I, THOMAS MAGSON, a citizen of the United States, residing at Anoka, in the county of Anoka and State of Minnesota, have invented certain new and useful Improvements in Bundle-Wiring Machines, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to machines for wiring box shoos or bundles, and has for its object the production of a machine of this class which shall be simple and efficient in construction and operation, and which will enable shoos to be assembled and wired with practically the same number of pieces under all conditions.

Briefly stated, the invention comprises a table provided with posts carrying adjustable brackets, beneath which a pressure head is arranged to reciprocate vertically, being raised and lowered by means of a chain and foot lever controlled by a latch working into an arc beneath the front of the table. The pressure head is scored across its top from front to back to receive the wire used in bundling, which is fed from a reel journaled in supports located to the rear of the bracket posts, and held down by spring clips in the back and a hook in front of the pressure head.

My invention is illustrated in the accompanying drawings in which—

Figure 1 is a perspective view of the complete machine. Fig. 2 is a central longitudinal section thereof. Fig. 3 is a transverse section on the line 3—3 of Fig. 1. Fig. 4 is a perspective view of the pressure head removed. Fig. 5 is a detail showing the method of securing the brackets on the posts. Fig. 6 is a sectional view of the wire reel, showing adjustable brackets and removable end.

Referring to the drawings, A is a table with legs a , which may be and preferably are cross braced. The top of this table is cut away in front at a' , to afford access to the chain sheave. Beneath the opening a frame is constructed having fore and aft members a^2 , which carry journal bearings for the transverse spindle of the sheave s . Above this sheave and overlying the opening a' , a pressure head or plate P is mounted, having a drop frame p , p' and p^2 , the side members of which, p and p' , extend down through openings in the table top on

opposite sides of the sheave frame, and the bottom member lies transversely beneath the frame, in working alinement with the grooved periphery of the sheave s .

Behind the pressure head rise a pair of posts B, B', each slotted at b , to receive perforated lugs on the brackets B². Each post has a plurality of transverse perforations b' , adapted to receive pins b^2 , whereby the brackets may be adjusted vertically to any desired height on the post, thus determining the size of the shoos and number of pieces to be included therein. Mounted on the post B is a scale C, with which coöperates a vertical rod c secured by a foot plate c' to the pressure head P. This rod rises and falls with the pressure head and enables the operator to determine with reasonable accuracy the number of pieces in a shoo in a manner presently to be explained.

The lower ends of the posts B, B' are carried through the table top and framed up with foot braces a^3 connected by the transverse brace a^4 . The sheave frame is supported by struts a^5 , but may be mortised into the posts themselves. On the cross brace a^4 I hinge a foot lever or treadle T which extends forwardly between the legs of the table and substantially in line with the opening a' in the top. This lever is slotted at t to permit play over the arc T', which also serves as a vertical guide. In the forward end of the slot a detent dog t' is pivoted, having a pawl nose engaging ratchet teeth on the arc and a curved tail extending outwardly over the top of the treadle, where it is provided with a spring t^2 tending to throw the pawl against the arc. By this arrangement it will be noted that the operation of the device is effected without lateral shifting, producing pressure on the treadle naturally by means of the ball of the foot, which need not be prolonged during wiring, as the ratchet locks the lever down; and finally releasing the lever by simply bringing down the toe on the tail of the dog t' .

Motion is transmitted from the lever T to the pressure head P by means of the chain t , which is secured to one end of the lever behind the arc, passes up over the sheave s , and down again to the transverse member p^2 of the drop frame, to which its other end is secured. To permit the passage of the chain in this way openings are made in the frame member a^6 , the forward opening being

large enough to accommodate the lateral component of the chain movement due to the arc of travel of the end secured to the lever T. The wire W is fed from the reel R journaled in posts D, D', and is carried down behind the posts B, B' and then forwardly across the pressure head P, the latter being scored at p^3 to receive it. This scoring is of some importance as it relieves the wire of pressure and permits its adjustment after the head P has been raised.

The operation of my machine is as follows: With all the parts in position shown in Figs. 1 and 2, a shook or bundle of boards E is placed upon the pressure head P, and the treadle T is forced down. The brackets B² having been previously adjusted, it is unnecessary to count the boards as a glance at the scale when the shook is fully compressed will determine whether the rod c is above or below the proper mark. Assuming the number to be correct, the end of the wire is drawn forward beneath the shook, the upper part is looped upward between the posts B and B', the two parts twisted together tightly and cut with suitable pliers, and the bundle thus wired is then released by pressing the toe down upon the tail of the dog t'. The shook being thrown off, the wire W is again drawn forward and laid in the score p^3 , another shook placed in position, pressure again applied, and so on.

In connection with the scale and index rod c, I contemplate the use of a meter or register for the number of shooks which is applied as follows: A simple form of register, preferably of the well known "Veeder cyclometer" type, is secured to the post B, with its radial pawl-operating lever extending into the path of travel of the foot plate c' or a finger secured to the rod c. Each time the head P rises and falls, the unit disk of the register will be moved forward one step, and by means of the internal gearing of the register, each ten steps will move the succeeding disk forward one step, and so on. Thus at the end of a day's work, the number of bundles wired on each machine can be accurately determined.

In Fig. 6 I have shown the reel R with its spindle r and one fixed head r' carrying the adjustable brackets r², and a removable head r² having radial openings in its arms to receive the ends of the brackets and permit radial adjustment thereof, this adjustment being desirable to keep the wire always at the same, or approximately the same distance from the center. The wire is fed down and when placed in position in the score across the pressure head is initially held by a pair of spring clips H at the rear of the head, and a hook h in front thereof, from which it is disengaged when tied around a bundle.

Having thus described my invention what

I claim and desire to secure by Letters Patent is—

1. In a bundle wiring machine, a table with a quadrangular supporting frame, a pair of slotted posts secured in the frame and projecting vertically above the table, a pair of angle brackets having lugs on one edge and means for securing them in the slots of the vertical posts, with their lower edges in a plane parallel to the table top, a pressure head having a drop frame passing down through the table top in front of the posts, a sheave supported in the frame below the table top, a slotted treadle lever hinged to the lower part of the frame and projecting forwardly therefrom, a ratchet arc secured upon the frame and lying in the slot of said treadle lever so as to limit the same to motion in a vertical plane, a foot controlled dog on the treadle engaging the ratchet on the arc, and flexible connecting means passing from the treadle over the sheave and down to the drop frame of the pressure head, all substantially as described.

2. In a bundle wiring machine, a flat top table with a supporting frame work, a pair of parallel slotted pressure posts secured in the frame and extending vertically above the table, a pair of angle brackets provided with perforated lugs on one edge of each, pins adapted to pass transversely through said posts at different points, into engagement with the lugs, so as to permit vertical adjustment of the brackets, a pressure head lying parallel to the table top and scored from front to back to receive a tie wire, a treadle hinged in the lower part of the frame, means for communicating motion from the treadle to the pressure head so as to raise the latter beneath the brackets for compression purposes, and means located to the rear of the pressure posts for supporting a wire reel, substantially as described.

3. In a bundle wiring machine, a supporting frame work, a pair of vertical pressure posts carried thereon, a pressure head adapted to rise and fall in front of said posts, means for applying power to said pressure head in its travel, and indicating means comprising coöperating elements associated with the pressure posts and the pressure head respectively, whereby the number of pieces in a bundle may be determined while under pressure, all substantially as described.

4. In a bundle wiring machine, a frame work, supporting posts thereon carrying adjustable brackets, a pressure head adapted for vertical motion beneath the brackets, said head having a groove extending across its upper surface from back to front, and means located at the ends of the groove for detachably holding a wire therein, means for applying power to said pressure head, and means for supporting a wire reel be-

hind the posts, whereby the wire may be fed forward between said posts and normally held in the groove in the pressure head, to permit adjustment and ready tying during compression, all substantially as described.

5. In a bundle wiring machine, a frame work, a vertical post carrying a bracket, a pressure head and means for supplying power thereto in a vertical direction, a graduated scale mounted upon the post, a foot plate carried on the head, and an indicating rod extending vertically from said foot plate in juxtaposition to the scale, whereby the number of pieces in a bundle will be indicated upon the scale during compression, all substantially as described.

6. In a bundle wiring machine, a frame work, a fixed compression member supported above said frame work, a movable compression member working on the frame work, means for applying power to the movable member, and a number registering device carried on the fixed compression member, and adapted to be actuated in the travel of the movable compression member, all substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

THOMAS MAGSON.

Witnesses:

ALBERT F. PRATT,
WM. E. THIEROFF.