

(No Model.)

A. D. LAWS.

MACHINE FOR PUNCHING METALLIC STRAP BANDS.

No. 330,337.

Patented Nov. 10, 1885.

Fig 1

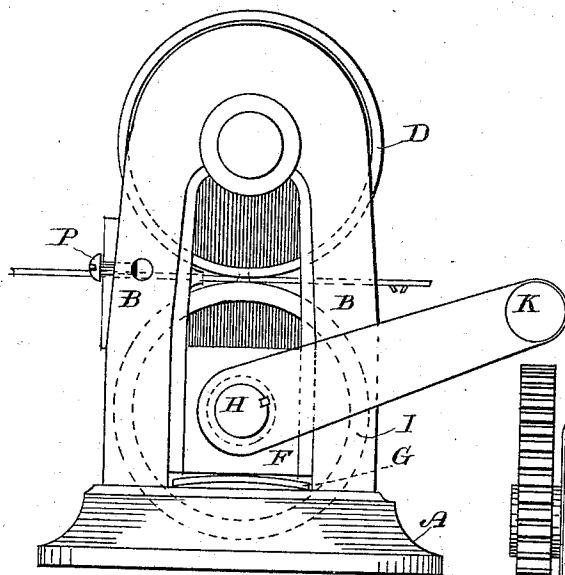


Fig 3



Fig 2

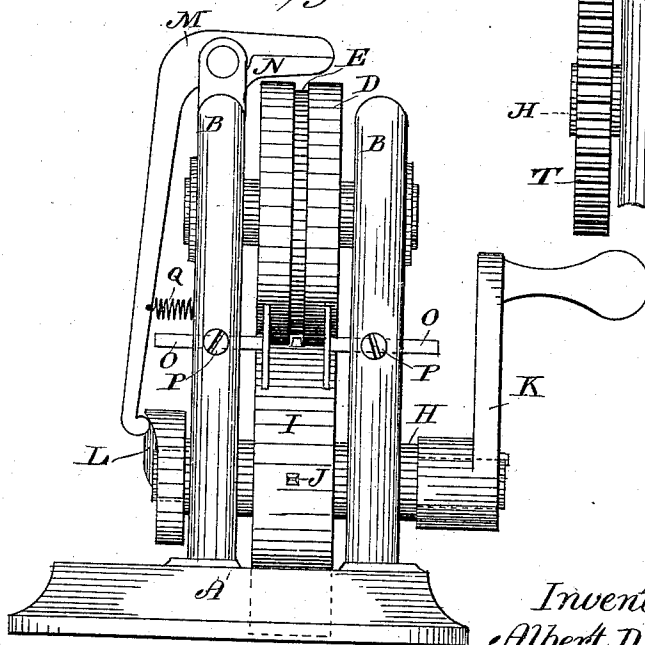
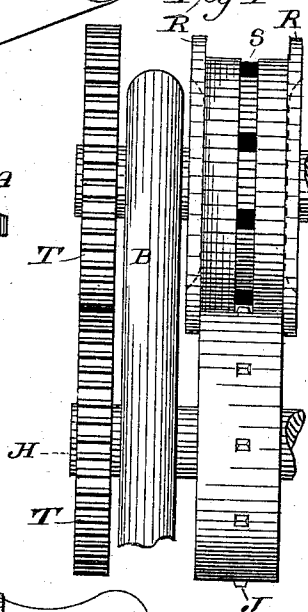


Fig 4



Witnesses

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UNITED STATES PATENT OFFICE.

ALBERT D. LAWS, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR OF ONE-HALF
TO GEORGE DOOLITTLE, OF SAME PLACE.

MACHINE FOR PUNCHING METALLIC STRAP-BANDS.

SPECIFICATION forming part of Letters Patent No. 330,337, dated November 10, 1885.

Application filed February 6, 1885. Serial No. 155,077. (No model.)

To all whom it may concern:

Be it known that I, ALBERT D. LAWS, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Machines for Piercing Metallic Strap-Bands; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain novel and useful improvements in the process of breaking or forming apertures or holes in metal strap-bands for the reception of the fastening-nails, and also in machines for accomplishing this purpose, and has for its object to prepare strap-bands for immediate use, so that the workman will not be obliged to punch the apertures as fast as he drives the nails, and, furthermore, to accomplish this result speedily and economically; and with these ends in view my invention consists in the details of construction and combination of elements hereinafter fully explained, and then specifically designated by the claims.

In order that those skilled in the art to which my invention appertains may more fully understand its construction, I will proceed to describe the same in detail, referring by letter to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation of a machine constructed to effect the desired object; Fig. 2, a front elevation of the same with means for cutting the bands attached thereto; Fig. 3, a plan view of a strap-band after it has been run through the machine, and Fig. 4 a front elevation of a modification of the machine.

Similar letters denote like parts in the several figures of the drawings.

A is any base or bed adapted to support the working parts of the machine, and B are uprights or standards, of metal, which are bolted securely to bed A. The inner edges of each of the uprights are made V-shaped in cross-section, for the purpose hereinafter set forth. In the upper portion of the standards is journaled a flat-faced wheel, D, having in the center of the face thereof a circumferential

groove, E. Fitting within the standards are blocks F, having V-shaped grooves in their lateral edges to accommodate the angular edges of the standards, and between the bottoms of these blocks and the base are placed plate bow-springs G, supporting said blocks. Journaled in blocks F is a shaft, H, having rigidly secured thereon between the standards a flat-faced wheel, I, having upon its face at regular intervals wedge-shaped spurs J, in the same vertical plane with groove E. Upon one end of the shaft H is secured a crank-lever, K, and upon the other is a face-cam, L.

M is a bell-crank lever pivoted to the upper extremity of one of the standards, and with the lower edge of its upper portion made with a shear-edge.

N is a stationary shear-jaw, cast with or secured to the standard. The jaws are operated by the action of the face-cam L against the lower extremity of the lever M.

O are guides adjustably secured within the standards by means of screws P.

Q is a spiral spring extending between the standards and the lever M, and its function is to open the shears after the face-cam L has ceased to operate against the lever.

The operation of my improvement is as follows: The strips to be operated upon are fed in between the guides O to the meeting edges of the wheels, whose revolution, by means of the crank, draws the metal in between them. As the spurs successively come in contact with the strip, they force themselves into it, breaking the fiber, thus forming a depression with a small orifice at the bottom, through which an ordinary nail may readily be driven. The shears mounted upon the standard are merely for convenience in cutting off the strips when desired. The jaws continually operate as the machine is revolved. The function of the plate-springs beneath the blocks is to enable metals of slightly-variable thickness to be readily worked.

In Fig. 4 I have shown a modification of the machine shown in Figs. 1 and 2, in which the upper wheel is made wider than the lower and provided with peripheral flanges R, which embrace the edges of said lower wheel. Said upper wheel is furnished, in lieu of the central circumferential groove, with a series

of indentations, S, corresponding in position to the spurs, and with which the latter will mesh. To insure this meshing, the outer ends of the shafts are furnished with engaging-gears T, of equal size, whose purpose is simply to control and secure a steady and uniform rotation of the wheels.

I do not wish to confine myself to any particular operating mechanism, the gist of my invention resting in the broad idea of adapting strap-bands for nailing by means of the action of dies.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In combination with the wheels, journaled as described, the adjustable guides se-

cured to the uprights and controlled by means of screws P, substantially as described.

2. The combination of the upper wheel, D, journaled in the standards and having groove E, lower wheel, I, mounted on axle H, and having spurs J, blocks F, supported by springs G, and in which axle H is journaled, and guides O, adjustably secured in the standards, substantially as described.

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

ALBERT D. LAWS.

Witnesses:

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