R. BROWNSON.

Leather-Punching Machine.

No. 197,326. Patented Nov. 20, 1877.

Fig 1

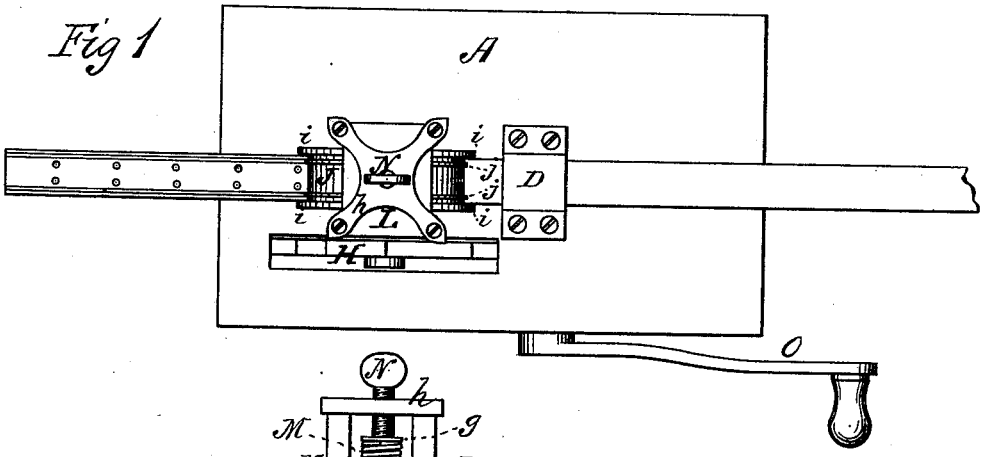


Fig 2

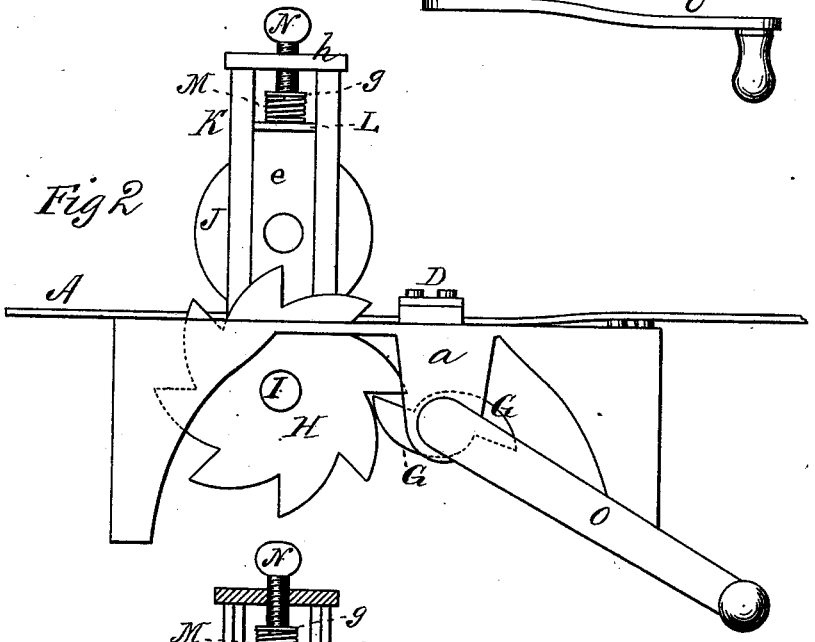
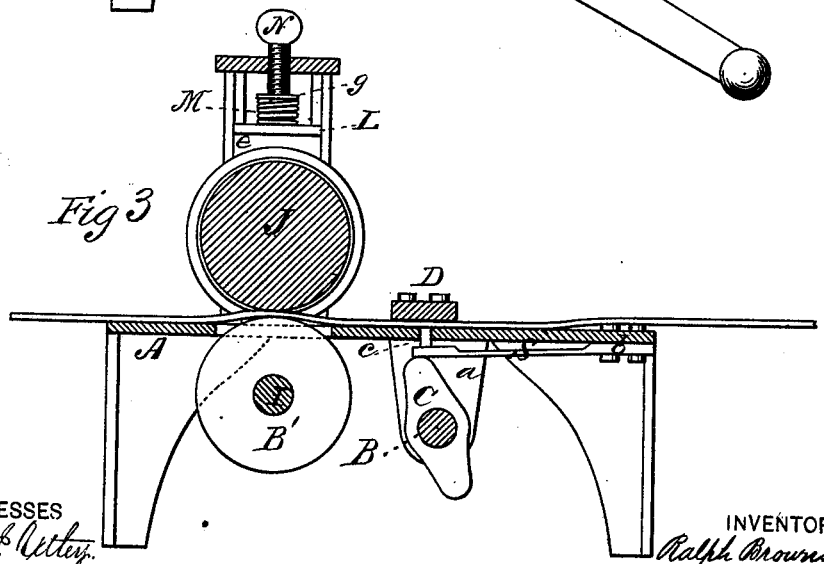


Fig 3



WITNESSES

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RALPH BROWNSON, OF ST. PAUL, MINNESOTA.

IMPROVEMENT IN LEATHER-PUNCHING MACHINES.

Specification forming part of Letters Patent No. **197,326**, dated November 20, 1877; application filed October 6, 1877.

To all whom it may concern:

Be it known that I, RALPH BROWNSON, of St. Paul, in the county of Ramsey and State of Minnesota, have invented a new and valuable Improvement in Leather-Punching Machines; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a top view of my improved machine. Fig. 2 is a side view thereof, and Fig. 3 is a longitudinal central section of the same.

This invention has for its object to devise a machine for creasing and perforating straps for leather fly-nets and other purposes; and it consists in the construction and novel arrangement, in connection with a punch, a mechanism for operating the same, and a feed-wheel, of an adjustable pressure-wheel having edge flanges and creasing-ribs, whereby the strap is fed to the punch automatically, and creased after passing the punch, as will be hereinafter more fully set forth.

In the annexed drawings, the letter A designates a strong bed or table, upon which the operating devices of my machine are mounted. B represents a shaft extending across the table, and having its bearings in rigid hangers *a*, depending from the bottom thereof. Upon this shaft, at or near the middle of its length, is secured, in any suitable manner, a double tappet, C, the ends of which project equally beyond said shaft, and during the rotation thereof come alternately in contact with a metallic spring, S, rigidly secured at one end to the under side of the table, near its front end. This spring has an angular seat, *b*, which causes its free end to stand free of the under side of the said table. The free end of this spring is provided with upright tubular punches *c*, that work through perforations in the bottom of the table against a raised metallic head-block, D, secured to the upper side thereof. Upon the shaft B is secured a double cam-tappet, G, that engages a metallic ratchet-wheel, H, upon the end of a second shaft, I, arranged in suitable bearings upon the under side of the table, in rear of shaft B. Upon this shaft is keyed a feed-wheel, B′, that is made of metal, or of wood shod with metal, and preferably roughened upon its perimeter. This wheel extends upward through a slot in the table, on a level with or slightly above the top thereof, immediately below a second metallic wheel, J. This wheel J has its bearings in metallic plates *e*, arranged after the manner of sashes in the upright standards K, and having free vertical movement relative thereto. Upon these plates, and between the said standards, a metallic follower, L, is placed, having a central stud, around which is coiled a strong helical spring, M, the upper end of which bears against a metallic collar, *g*, upon the lower end of a thumb-screw, N. This screw works through a metallic plate-brace, *h*, connecting the ends of the standards K, and, when set up, causes the wheel J to approach nearer the feed-wheel B′, and when reversed to separate farther therefrom, thereby lessening or increasing the distance between the said wheel, according to the thickness of the strap.

The yielding of the spring serves a purpose which will be hereinafter explained.

The wheel J has edge guide-flanges *i*, between which the strap is received, and near said flanges is provided with annular creasing-ribs *j*.

The shaft B receives motion through the medium of a crank-arm, O, or other equivalent device.

The operation is as follows: The strap is passed under the head-blocks, and thrust to the rear between the feed and creasing rollers, and motion imparted to the shaft B. At each semi-rotation of this shaft one of the ends of the tappet comes in forcible contact with the spring punch-holder, and thrusts it upward, thereby driving the punches through the strap. The rotation of the shaft being continued, the spring is relieved from the tappet, and reacts, thereby drawing the punches out of the strap. The cam-tappet then takes hold upon the ratchet-wheel, thereby causing the feed-wheel to revolve and draw the strap a certain distance through the head-block, thereby bringing a new portion of the strap over the punches. This operation being continued, the said strap will be perforated at regular intervals through-

out its entire length. and, in passing between the feed and creasing wheels, will not only be smoothed out, but will be provided upon its margins with an ornamental crease, formed by the annular ribs aforesaid.

What I claim as new, and desire to secure by Letters Patent, is—

The combination of the creasing-wheel J, the feed-wheel B′, ratchet H, spring S, punch or punches *c*, table A, head-block D, and shaft B, having tappets C G, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

RALPH BROWNSON.

Witnesses:
MARTIN BURKLEY,
GEO. H. HOPPER.