F. B. MATTSON.

MACHINE FOR CUTTING ESCUTCHEONS AND OTHER ORNAMENTS UPON FURNITURE.

No. 194,451. Patented Aug. 21, 1877.

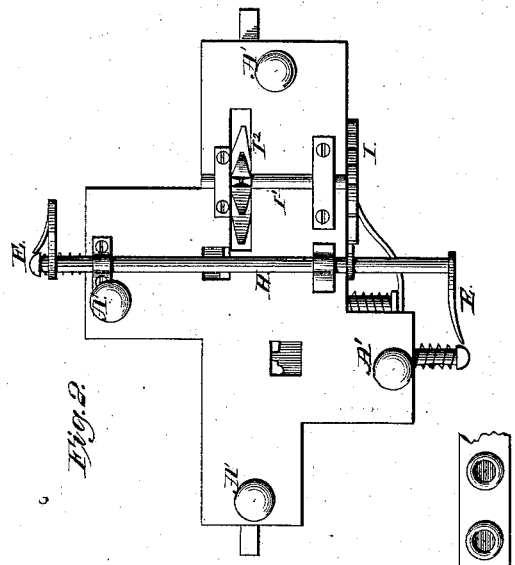

Fig. 2.

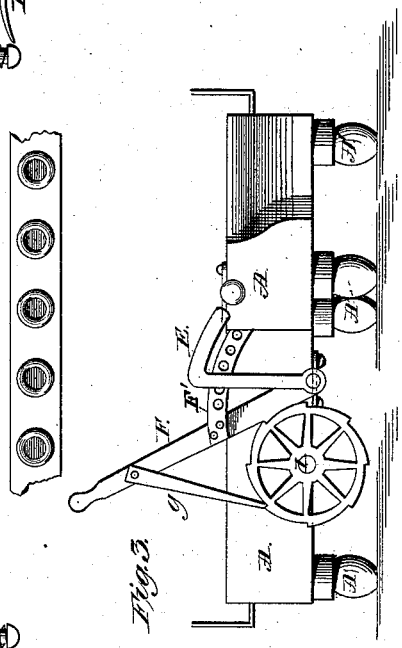

Fig. 3.

Fig. 4.

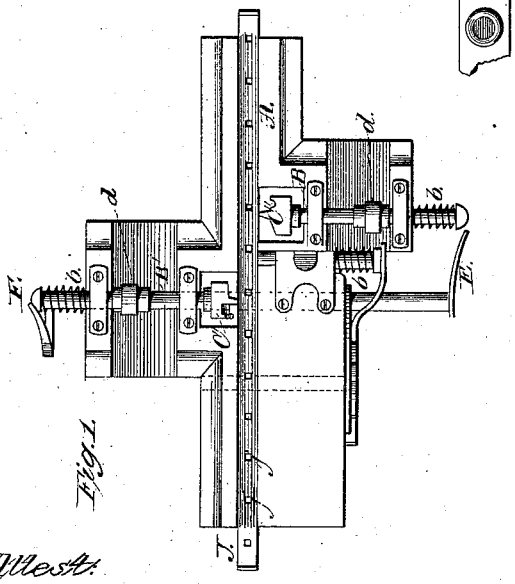

Fig. 1.

Attest:

G. W. Fyfield
E. A. Hale.

Inventor:

Francis B. Mattson.

UNITED STATES PATENT OFFICE.

FRANCIS B. MATTSON, OF ROCKFORD, ILLINOIS, ASSIGNOR OF ONE-HALF HIS RIGHT TO MARTIN P. WHITESIDE, OF SAME PLACE.

IMPROVEMENT IN MACHINES FOR CUTTING ESCUTCHEONS AND OTHER ORNAMENTS UPON FURNITURE.

Specification forming part of Letters Patent No. **194,451**, dated August 21, 1877; application filed March 19, 1877.

To all whom it may concern:

Be it known that I, FRANCIS B. MATTSON, of Rockford, in the county of Winnebago and State of Illinois, have invented a new and useful Improvement in Machines for Making Escutcheons; and I do hereby declare that following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Figure 1 is a top or plan view of the machine with the manufacturing material removed from the carriage. Fig. 2 is a bottom view of the machine. Fig. 3 is a view of the side of the machine, upon which is located the operating-lever. Fig. 4 is a face view of the partially-completed escutcheons while yet in the continuous strip.

Similar letters of reference denote corresponding parts in all the figures.

The object of the invention is to automatically produce, in an expeditious manner, upon a single machine, furniture-escutcheons, rosettes, and equivalent ornaments, from a continuous strip of material; and consists of a series of revolving cutters which are brought in contact with, and form the face of, the ornaments, with another series of revolving cutters for forming the reverse side of the ornaments, and, when escutcheons are made, a reciprocating chisel or chisels; also, a traveling carriage, upon which the strips of wood or other material for the formation of the articles of manufacture are carried, and the same fed to the cutters automatically and in a simultaneous manner, all of which will be hereinafter described.

In the drawing, A represents the bed of the machine, and A′ the legs which support the same. B is a revolving shaft, upon which is formed the cutter C for shaping the face of the ornaments; and B′ is the revolving shaft carrying the cutter C′, which forms the back or reverse side of the ornament, and by which a tenon may be cut, if desired. *b* are springs coiled around the shafts of the cutting-tools, and by the recoil of which when released the cutting-tool is withdrawn from contact with the work, after the cutting is done. *d* are the fixed pulleys upon the shafts B B′, and to which belts run from the main driving-shafts. (Not shown.) These cutter-shafts are mounted upon bearings in the usual manner.

E are curved reciprocating levers operating against the ends of the cutter-shafts, and by means of which the said shafts are brought laterally to the work. F is the lever which operates the levers E as well as the carriage. F′ is a curved lever attached to the lever F, and by which the hollow key-hole-cutting chisel is operated. *g* is still another lever, attached to, and operated by the reciprocating movement of, the lever F. H is a transverse shaft fixed in bearings upon the under side of the bed, and having the levers E and F mounted upon the same in a fixed manner, so that as the said shaft is rolled all the levers reciprocate by the movement. I is a ratchet-wheel, into the depressions of which the free end of the lever *g* enters, and by the reciprocating movement before mentioned the wheel is made to revolve. I′ is a transverse shaft, having mounted upon one of its ends the ratchet-wheel I, and upon the other end a toothed wheel, designated I^2. J is the work-carrier provided with perforations *j* at regular intervals, into which the teeth of the wheel I^2 enter and by means of which the work is fed to the cutters. Any other style of feed, however, may be used.

If desired, the carriage may be flexibly made with the ends united and run over sprocket-wheels, or the same may be made to run back by any of the well-known devices.

It will be observed that any kind of circular ornaments or articles of manufacture can, by this process, be made from continuous strips of wood or other suitable material.

Any required number of cutters can be used in one frame and operated by a system of levers in a simultaneous manner. If desired, a boring-tool may be placed between the first cutter and the chisel, and operated simultaneously with the other tools.

The chisel is made hollow for the removal of chips, and the chisel-operating lever is perforated for the same purpose—that is, for the ready removal of the chips which are forced

through by the cuttings from the escutcheons or equivalent articles.

The lever F may be operated by hand or by machinery.

The operation is as follows: After the strips of material have been prepared they are placed upon the carrier, one at a time, the cutters are made to revolve, the working lever is brought forward, the cutter-shaft is forced endwise, bringing the cutter against the materia, the first of which forms the molding or face of the escutcheon, (if that is to be made,) at the same time boring a hole to help the chisel in forming the key-hole. The motion of the lever is then reversed, the cutting-tools are disengaged, and, by this reverse movement of the lever, the carriage carrying the work is moved far enough to bring this first molded piece to the chisel, and also presenting a new surface to the cutters. The chisel cuts the key-hole. The cutter on the opposite side forms the tenon, finishes the back side, and cuts the finished piece out of the strip, and drops the same into the receiving-receptacle, all of which will be understood without further description.

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

1. In a machine for cutting circular disks from a continuous strip of material, the combination of the revolving cutters, the operating levers or mechanism, and the carriage, all operated in proper sequence, substantially as described and set forth.

2. In a machine for cutting circular disks from a continuous strip, the combination of the revolving cutters, the traveling carriage, the ratchet-wheel mounted upon one end of a bearing-shaft, the toothed feed-wheel mounted upon the other end of said shaft, all operated in proper succession, by levers or other mechanism, substantially as described and set forth.

3. In a machine for making escutcheons from continuous strips of material, the hollow chisel of the required shape for forming the key-hole, in combination with the revolving cutters and traveling carriage, all arranged and operating substantially as described and set forth.

4. The herein-described method of making escutcheons, rosettes, &c., from continuous strips of material moved endwise in regular succession to one revolving cutter, which forms one side, and to another revolving cutter, which forms the other side, and also cuts the completed disk from the strip, substantially as described and set forth.

This specification signed and witnessed this 22d day of February, 1877.

FRANCIS B. MATTSON.

Witnesses:
G. W. FORD,
E. A. HALE.