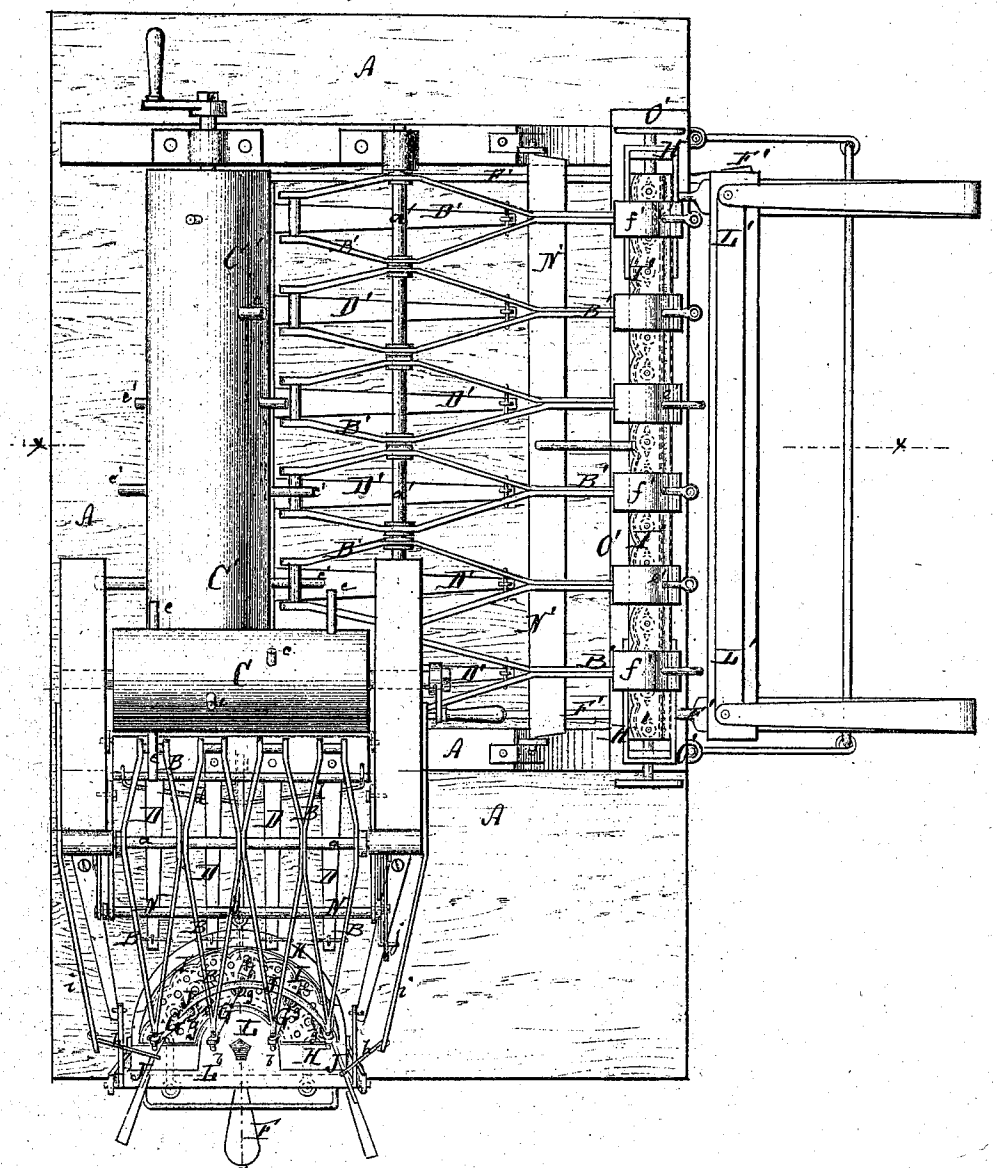
2 Sheets, Sheet 1

A. Giraudet,

Stamping Lace Paper.

No. 100749. Patented Mar. 15. 1870.

Fig: 1.



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2 Sheets. Sheet 2.

A. Giraudet,

Stamping Lace Paper.

No. 100,729. Patented. Mar. 15. 1870.

Fig: 1

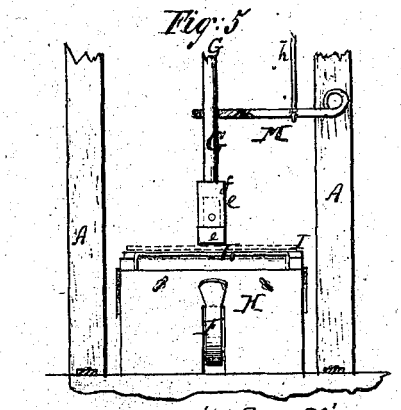

Fig: 2.

Fig: 3.

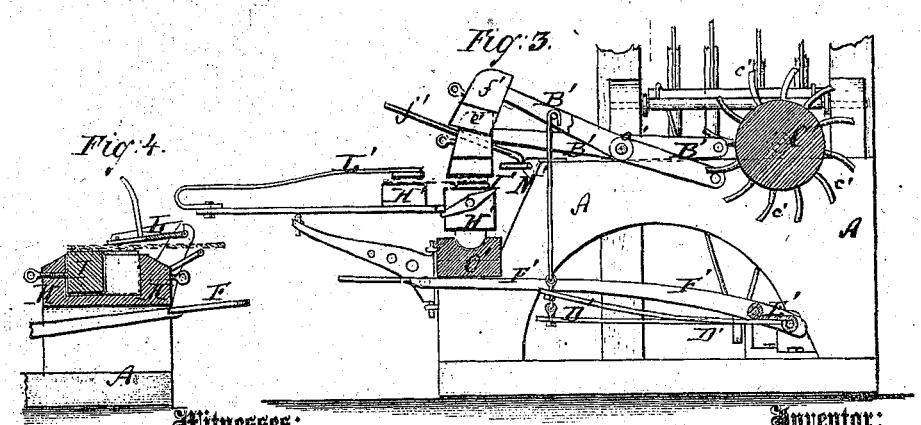

Fig: 4.

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AMBROSE GIRAUDAT, OF NEW YORK, N. Y.

Letters Patent No. 100,749, *dated March* 15, 1870.

MACHINE FOR STAMPING LACE-PAPER.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, AMBROSE GIRAUDAT, of the city, county, and State of NewYork, have invented a new and improved Machine for Stamping Lace Paper; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings forming part of this specification.

Figure 1 represents a plan or top view of my machine for stamping lace paper.

Figure 2 is a side elevation, partly in section, of the same.

Figure 3 is a vertical transverse section of the same, taken on the plane of the line *x x*, fig. 1.

Figure 4 is a detail vertical section of the same, taken on the plane of the line *y y*, fig. 1.

Figure 5 is a detail front view of part of the same.

Similar letters of reference indicate corresponding parts.

This invention relates to a new machine for stamping lace-paper, either in long strips or circular pieces, and has for its object to do away with the ordinary tedious manual process and to permit the employment upon the same piece of a number of hammers. Thereby the process of stamping will be greatly facilitated, and less labor will be required for the purpose.

The invention consists—

First, in such a general arrangement of dies, holders, and hammers in one machine, that the process of stamping can be rapidly carried on.

The invention consists also in the application to the hammers of a series of adjustable springs, by means of which the power of the hammer may be regulated at will.

The invention consists further in providing a suspended guide-spring by which the hammers are held in any desired position, which is a very important item in circular work.

Finally, the invention consists in suspending the hammers from pivoted levers, so that the said hammers can be swung on the levers into any desired position.

A, in the drawings, represent the frame of my improved stamping-machine. It is represented as supporting two independent machines, one for straight, the other for circular work. Both these machines are necessary for a perfect understanding of my invention. Still they can be used separately.

The machine for stamping circular paper contains various devices which are not necessary for the other. I shall, therefore, first describe the circular machine.

The frame A carries a horizontal shaft or rod, *a*, which serves for four, more or less levers, B B, which have hooks *b b* at their front ends, while their rear ends extend close to a drum or shaft, C, which is hung in the frame.

The drum C has a series of projecting arms, *c c*, which, when the drum is revolved strike the rear ends of the levers B and oscillate the same.

The arms are set upon the drum in spiral rows, to move the levers in alternate succession.

To the frame A are secured springs D, which are connected with the levers B to counteract the arms *c*. Thus, as the arms by their action elevate the front ends of the levers, the springs will tend to draw the said ends down immediately after the levers are liberated from the arms.

The springs are fastened to or connected with a pivoted plate, E, which is by means of a rod, *d*, connected with a treadle, F.

By depressing the treadle the plate E will be swung down upon the springs to strain the same. Thus by means of the treadle the power of the springs can be regulated at will.

From the hooks *b b* are suspended a series of rods, G G, to the lower ends of which the (lead) hammers *e e* are secured.

For this purpose sockets *f* are formed at the lower ends of the rods G, so that the shanks of the hammers may be fitted into and locked in them by means of set screws, keys, or other devices.

The front ends of the levers B are all in a straight line, or may, at least, be so in all cases.

Under the hammers is supported on a fixed bed, H, the die I, which is of semicircular or semi-annular or other suitable form, containing in form of projections the ornamental design to be cut through the paper.

The rods G of the hammers pass through eyes or loops *g g* that project from the face of a flat spring, J. This spring has handles at its ends so that it can be bent into any suitable form, to thereby hold the hammers in the desired position.

Rods *h h*, which are suspended from arms *i* of the frame, hold the spring J at the proper height.

The paper to be stamped is placed upon the die and is held in place by a spring lever, L, which presses it upon an elevated part of the bed H.

After the paper has been placed upon the die the drum C is rotated by hand or machinery to oscillate the levers B and move the hammers up and down.

The force of the hammers is determined by the power of the springs D, which is regulated by the treadle F.

The hammers are guided over the proper places by means of the spring J, which can be bent or moved in either direction for the said purpose.

If but one single hammer is to be used the spring can be taken off and a plate, M, used in its place, in the manner indicated in fig. 5.

A plate, N, can be pivoted to the frame and connected with a handle to hold the levers up out of action when not used.

The machine for stamping straight strips of paper is constructed substantially on the same principle. It consists of a drum, C', having arms c', and acting upon levers B', which are connected with springs D'.

The tension of the latter can be regulated by means of a plate, E', and treadle F, in the manner above described.

The hammers e' are, however, not secured to separate rods, but may be fastened directly to the ends of the levers B', as shown.

The die I' rests upon a bed, H', which has a suitble clamp, L', for retaining the paper upon the die.

The bed H' is not stationary as on the circular machine, but is placed upon a supporting block, O', on which it can slide. Thus, as the hammers are merely worked up and down by the rotation of the drum C', the paper with the dies is moved backward and forward under the same, to bring its surface under their action.

On the circular machine the die is stationary while the hammers are adjustable.

A lever, N', with handle j' is also employed for holding the hammers off the dies.

Having thus described my invention,

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

1. The combination of the stationary or movable dies with the paper holders L or L', and hammers e or e', the hammers being operated to stamp the paper on the dies, substantially in the manner herein shown and described.

2. The springs D connected with the levers B or B', that operate the hammers, the said springs being connected with a lever to have their tension regulated as set forth.

3. The spring J suspended from the frame A and provided with the loops g to serve as guides for the hammer shanks or rods G, as set forth.

4. The hammers e suspended from the pivoted levers B in such manner that they can be swung above the fixed dies, as set forth.

5. The die I' made adjustable with its supporting-bed H' to guide the paper under the hammer, as set forth.

AMBROSE GIRAUDAT.

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