

(No Model.)

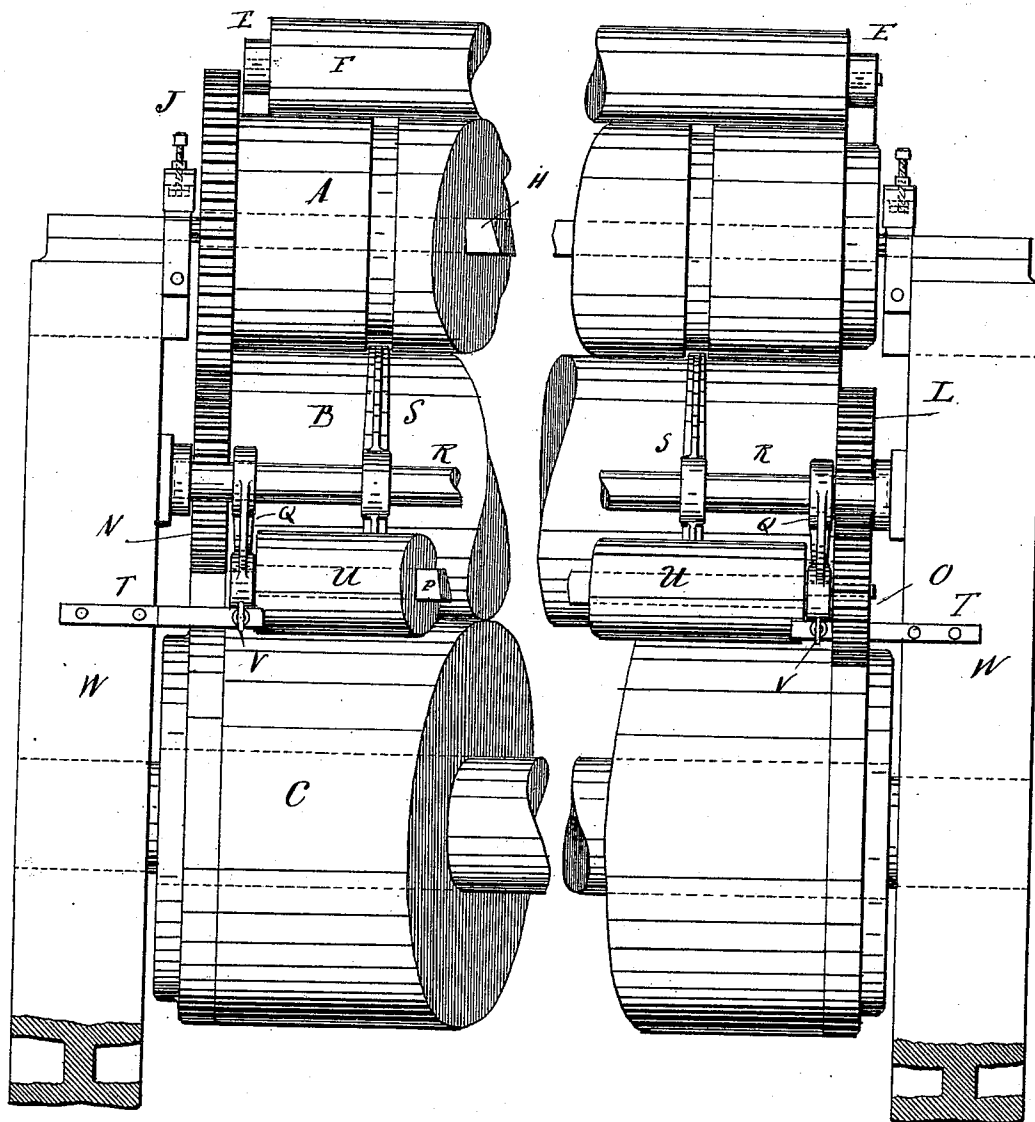
2 Sheets—Sheet 1.

E. JAECK.
EMBOSSING MACHINE.

No. 467,175.

Patented Jan. 19, 1892.

Fig. I.



WITNESSES:

A. Werner
Marion Hall

INVENTOR

E. Jaeck
BY *Guoel Rueger*

ATTORNEYS

(No Model.)

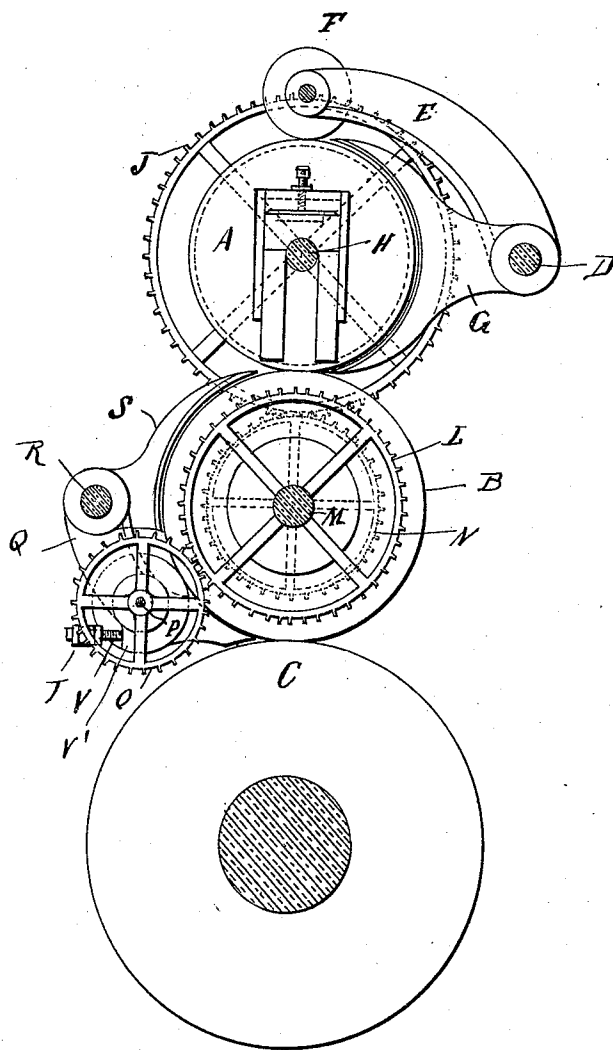
2 Sheets—Sheet 2.

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EMBOSSING MACHINE.

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Patented Jan. 19, 1892.

Fig. II



WITNESSES:

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UNITED STATES PATENT OFFICE.

EMILE JAECK, OF BROOKLYN, NEW YORK.

EMBOSSING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 467,175, dated January 19, 1892.

Application filed April 22, 1891. Serial No. 389,896. (No model.)

To all whom it may concern:

Be it known that I, EMILE JAECK, a citizen of the United States, and a resident of Brooklyn, in the county of Kings, State of New York, have invented certain new and useful Improvements in Embossing-Machines, of which the following is a specification.

This invention relates to improvements in embossing-machines, and especially to devices for feeding the paper to the embossing-rollers in such a manner that the paper is not wrinkled while being embossed.

The invention consists in the combination, with a feed-roller, an embossing-roller, and an impression-roller, of gearing for rotating the embossing-roller more rapidly than the feed-roller, a friction-wheel in contact with the impression-roller, and gearing for rotating said friction-roller from the shaft of the embossing-roller at a greater speed than that of the embossing-roller.

The invention also consists in the construction and combination of parts and details which will be fully described hereinafter, and finally pointed out in the claims.

In the accompanying drawings, Figure 1 is a front elevation of my improved embossing-machine, parts being broken out and others shown in section; and Fig. 2 is an end view of the same.

Similar letters of reference indicate corresponding parts.

In the drawings, A represents the feed-roller, B the embossing-roller, and C the impression-roller, which latter is usually made of more or less yielding material. The shaft D is arranged parallel with and at the side of the embossing-roller, and on the same arms E are hinged, which carry at their upper ends a roller F, arranged parallel with and at the top of the feed-roller A and resting loosely thereon, between which roller F and the surface of the feed-roller A the paper to be embossed is inserted. The shaft D also carries segmental guide-arms G, the concave edges of which are close to the surface of the feed-roller and act as guides for the purpose of holding the paper against the feed-roller. On the end of the shaft H of said feed-roller a cog-wheel J is fixed, that engages a cog-wheel N, mounted on the shaft M of the embossing-roller B. On the opposite end of the shaft M

is mounted, that engages a cog-wheel O, mounted on one end of a shaft P, journaled in the lower ends of swinging arms Q, mounted on a shaft R, arranged at the side of and parallel with the embossing-roller B, said shaft R also carrying curved guides S, the edges of which are close to the periphery of the embossing-roller B. Arms T project from the main frame W, and in the same set-screws V are mounted, which rest against shoulders V' of the arms Q, by means of which set-screws V the arms Q can be adjusted to hold the shaft P a greater or less distance from the embossing-roller B and to produce more or less friction. On said shaft P a roller U, of rubber or of wood covered with leather or any other suitable frictional material, is mounted. As the wheel J has a greater diameter than the feed-roller A and the wheel N a smaller diameter than the embossing-roller B, it follows that the embossing-roller is rotated more rapidly than the feed-roller A, and thus the paper is drawn from the feed-roller upon the embossing-roller, and while being so drawn on the surface of the feed-roller it is stretched and smoothed. The wheel L rotates the wheel O and shaft P at a comparatively high speed, and as the roller U is in contact with the paper resting on the embossing-roller it serves, by frictional contact with said paper, to draw the paper firmly and smoothly against the surface of the embossing-roller, thereby preventing all wrinkles when the paper passes through the embossing-roller upon the impression-roller C. The best results are obtained when the proportion of the diameter of the wheel J is to the diameter of the wheel N as four is to three, and the diameter of the wheel L is to the diameter of the wheel O as one is to two. If the roller U is adjusted so as to exert great pressure on the embossing-roller, it stretches the paper more than when the roller is so adjusted that it can slip more or less upon the embossing-roller.

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

1. In an embossing-machine, the combination, with a feed-roller, an embossing-roller, and an impression-roller, of gear-wheels on the shafts of the feed-roller and embossing-

roller, the gear-wheel on the shaft of the feed-roller having greater diameter than the gear-wheel on the shaft of the embossing-roller, substantially as set forth.

- 5 2. In an embossing-machine, the combination, with a feed-roller, an embossing-roller, and an impression-roller, of a gear-wheel on one end of the shaft of the feed-roller, a smaller
10 bossing-roller, a larger gear-wheel on the opposite end of the shaft of the embossing-roller, and a swinging shaft having a gear-wheel engaging with the larger gear-wheel on one end
15 of the embossing-roller, said shaft carrying a friction-roller adapted to be brought in contact with the embossing-roller, substantially as set forth.

3. In an embossing-machine, the combination, with a feed-roller, an embossing-roller,
20 and an impression-roller, of engaged cog-wheels on the shafts of the feed and embossing rollers, an additional cog-wheel on the shaft of the embossing-roller, a fixed shaft at the side of the embossing-roller, swinging
25 arms on said shaft, a rotary shaft on said

swinging arms, a friction-roller mounted on said shaft on the swinging arms, set-screws for adjusting the swinging arms, and a cog-wheel on the end of the shaft in the swinging arms, which cog-wheel is engaged by one of 30 the cog-wheels on the shaft of the embossing-roller, substantially as set forth.

4. In an embossing-machine, the combination, with a feed-roller, an embossing-roller, and an impression-roller, of gearing on the 35 shafts of the feed and embossing rollers for rotating the embossing-roller more rapidly than the feed-roller, a friction-roller in contact with the impression-roller, and gearing for rotating said friction-roller from the shaft 40 of the embossing-roller at a greater speed than that of the embossing-roller, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in pres- 45
ence of two subscribing witnesses.

EMILE JAECK.

Witnesses:

OSCAR F. GUNZ,
A. M. BAKER.