

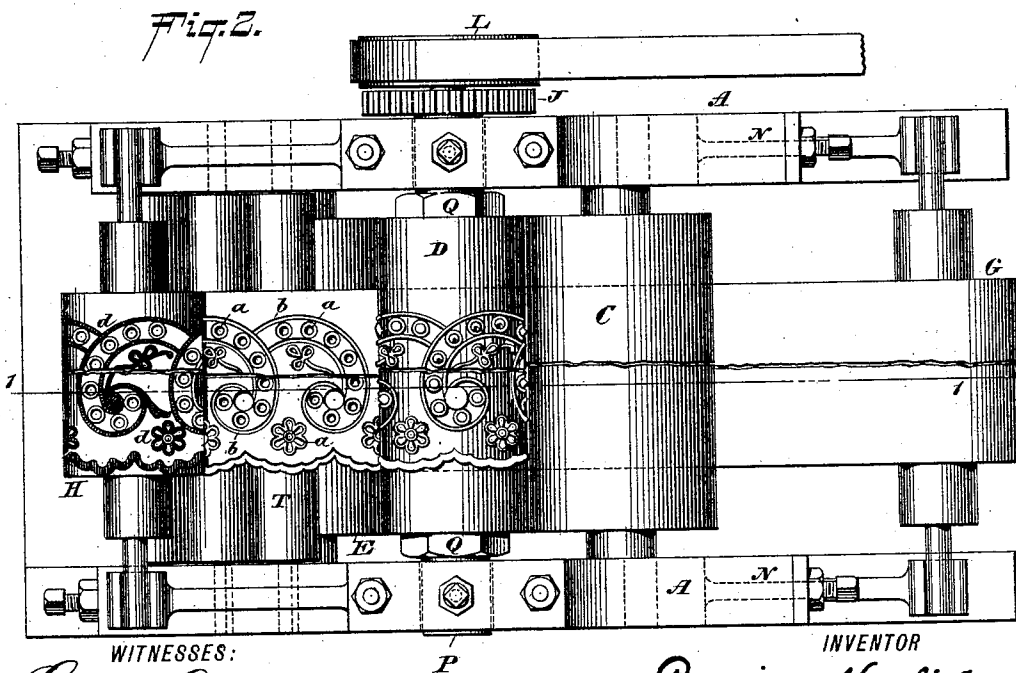
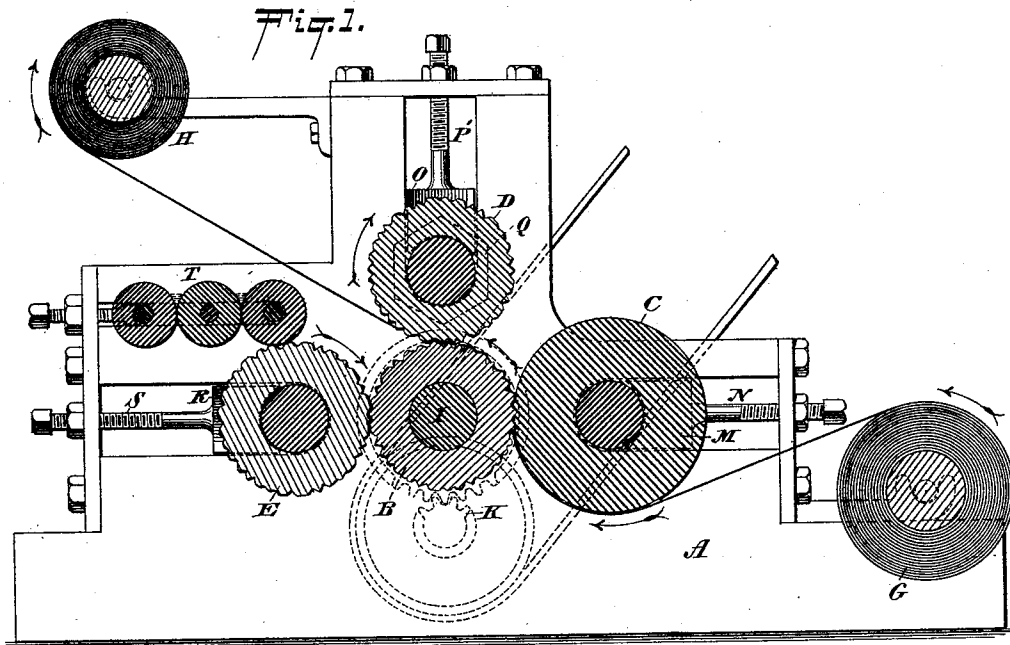
(No Model.)

B. KARFIOL.

MACHINE FOR THE MANUFACTURE OF LACE PAPER.

No. 484,966.

Patented Oct. 25, 1892.



WITNESSES:

Gustave Dietrich
William Goebel

INVENTOR

Benzion Karfiol

BY

Chas. B. Hill
ATTORNEY.

UNITED STATES PATENT OFFICE.

BENZION KARFIOL, OF NEW YORK, N. Y., ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE KARFIOL LACE PAPER COMPANY, OF SAME PLACE.

MACHINE FOR THE MANUFACTURE OF LACE-PAPER.

SPECIFICATION forming part of Letters Patent No. 484,966, dated October 25, 1892.

Application filed August 27, 1890. Renewed April 12, 1892. Serial No. 428,781. (No model.)

To all whom it may concern:

Be it known that I, BENZION KARFIOL, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Machines for the Manufacture of Lace-Paper, of which the following is a specification.

The invention relates to improvements in machines for the manufacture of lace-papers, borders for shelf-papers, and analogous goods; and it consists in the elements hereinafter described, and particularly pointed out in the claim.

Referring to the accompanying drawings, forming a part of this specification, Figure 1 is a central vertical longitudinal section of a machine constructed in accordance with the invention; and Fig. 2 is a top view of same, the dotted line *z z* indicating the section on which Fig. 1 is taken.

In the drawings, A A designate the side frames of the machine, between which frames are mounted the pattern-roller B, the cutting-roller C, the embossing-roller D, the inking-roller E, and ink-rollers T. The pattern-roller B has engraved upon it the design it is desired shall be cut and embossed in the paper, which will preferably unwind from the roll G and pass thence between the rollers B C D and to the roll H, which represents the paper after it has been finished and is ready for use. The roller B will be of steel and its shaft I has upon its end the gear-wheel J, which engages the pinion K, connected with the band-wheel L, to which power may be applied for driving said roller B. The rollers C D E are in frictional contact with the roller B, and hence the movement of the latter will during the operation of the machine be communicated to the former. The roller C will, by preference, be made of hard rubber and against it the pattern-roller B will cut through such portions of the paper as it may be desired to entirely remove. The roller C is mounted upon a shaft whose ends are journaled in slots formed in the sides A A of the machine, said slots containing followers M, connected with set-screws N, by which the followers may be adjusted toward the shaft of the roller C, the purpose being to enable the operator to adjust the said

roller C against the roller B for effecting the cutting away of such portions of the paper as it may be necessary, according to the pattern it is desired shall appear upon the paper after having passed through the machine. As will be observed by reference to Fig. 1, the roller C is at one side of the roller B and that above said roller B is journaled between the sides A A the roller D, against which the embossing is performed. The roller D is by means of the followers O and set-screws P' capable of adjustment close against the said roller B, and said roller D is preferably made by cutting disks of card-board or pasteboard and placing them in face-to-face contact upon the axle or shaft P, where they are pressed together and held in place by means of the nuts Q. The roller D, when made of the disks of card-board or pasteboard and pressed together upon the shaft P, is very durable, and against it the embossing of the paper may be neatly and successfully accomplished. The cutting of the holes—such, for instance, as those lettered *a* in Fig. 2—is accomplished between the roller B and the roller C, and the embossing of the paper at the points, for instance, lettered *b* is accomplished between the rollers B and D. The engraving on the roller B is so made that the apertures *a* in the paper will be cut entirely through in the desired outlines between the rollers B C and that the embossing will be accomplished against the roller D.

At the left-hand side of the roller B, as shown in Fig. 1, is mounted the inking-roller E, whose shaft is journaled in the sides of the machine and is capable of being pressed toward the roller B by means of the followers R and set-screws S. Above the inking-roller E are arranged the ink-rollers T in contact with each other and one of which is in contact with the roller E. The ink used in the manufacture of the lace-paper is placed upon the rollers T, which are soft and of the customary consistency used in ink-rollers for printing-presses, and the ink from the rollers T is conveyed to the surface of the roller E during the rotation of the latter toward the roller B, with which, also, it is in close contact.

I prefer to construct the roller E of cork or some analogous substance which will receive the ink from the rollers T and communicate

it to the engraving on the roller B, whence it is transferred to the paper while in transit from the roll G to the roll H. By means of the roller E and rollers T very beautiful effects
5 may produced. For instance, the portions lettered *b* of the pattern passing through the machine may by means of the roller E and rollers T be colored, and thereby given a very ornamental appearance.

10 In Fig. 2 at *d* I indicate the colored portions of the lace-paper after having passed beyond the rollers B D. It will be observed by reference to Fig. 2 that the scalloped outlines and interior conventionalized leaves and ro-
15 settes have been colored, and also that the edge of the paper has been given a scalloped outline properly colored to present an ornamental appearance.

I do not of course limit the invention to the
20 formation or engraving of any particular pattern upon the roller B, since this must neces-

sarily vary according to the taste of the manufacturer and the demands of the trade. Neither do I confine the invention to the use to which the paper after having passed through
25 the machine is to be applied.

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

The engraved roller B, combined with the cutting-roller C, the embossing-roller D, and
30 the ink-roller E, the said rollers being arranged to first cut and then emboss and ink the paper passing over the roller B, substantially as and for the purposes set forth.

Signed at New York, in the county of New
35 York and State of New York, this 26th day of August, A. D. 1890.

BENZION KARFIOL.

Witnesses:

GEO. H. DAVIS,
CHAS. C. GILL.