(No Model.) 2 Sheets—Sheet 1.

A. GENET.

DAMPING APPARATUS FOR LITHOGRAPHIC AND ZINCOGRAPHIC PRESSES.

No. 401,025. Patented Apr. 9, 1889.

FIG. 1

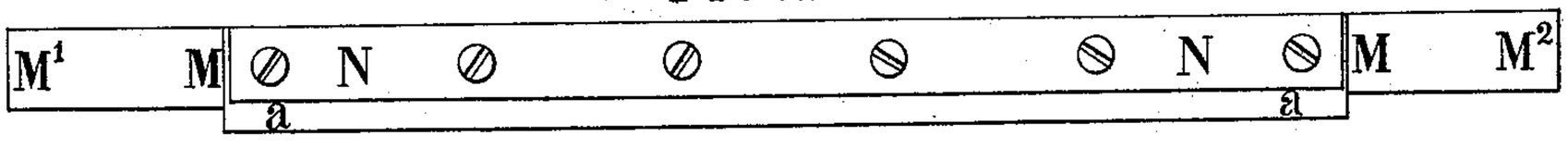


FIG. 2

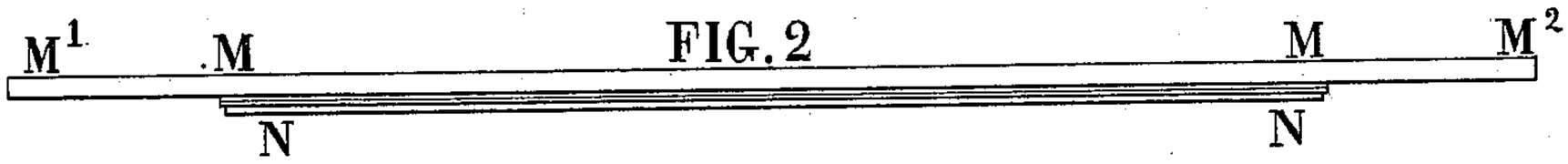


FIG. 3

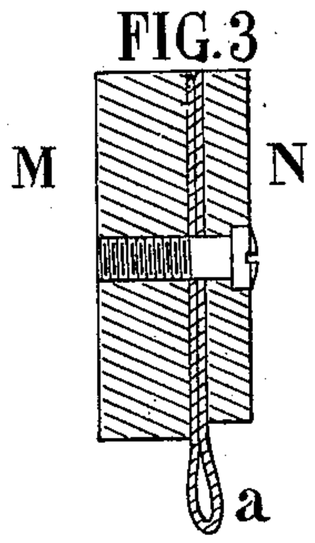
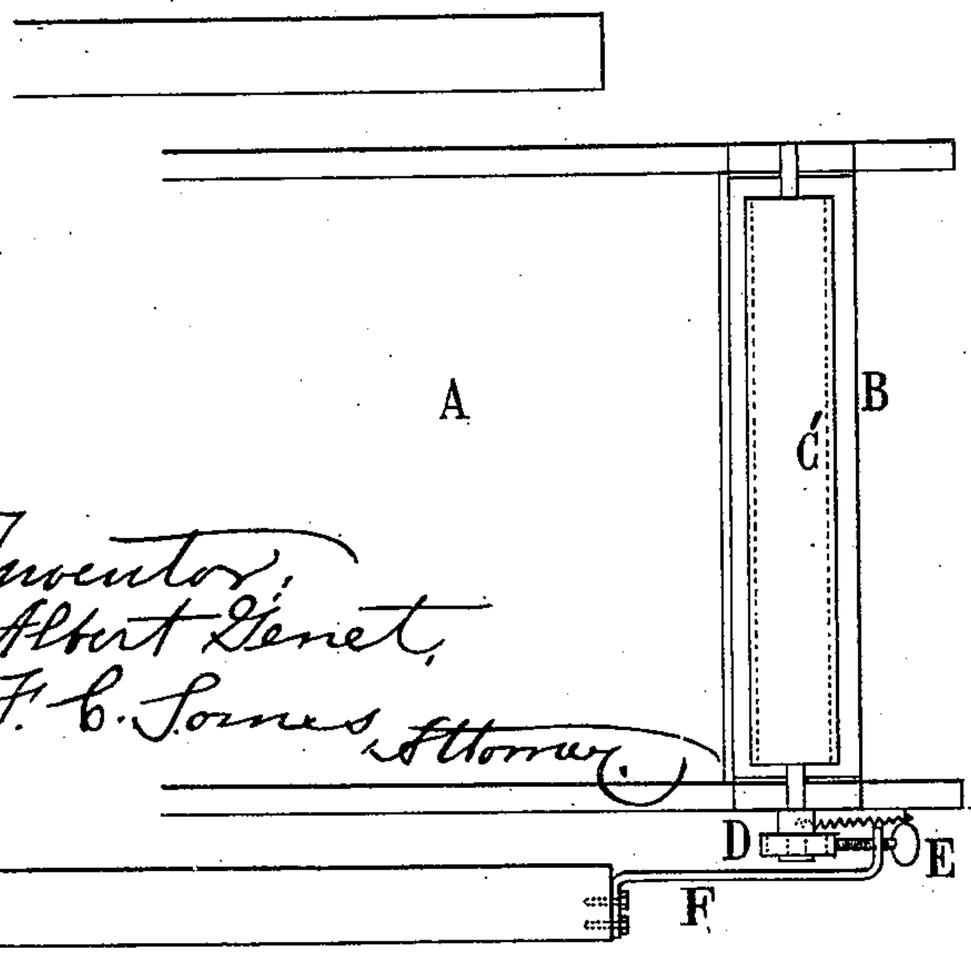


FIG. 4

FIG. 4ª



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(No Model.) 2 Sheets—Sheet 2.

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FIG. 5

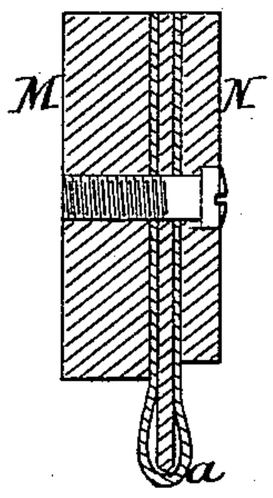


FIG. 6

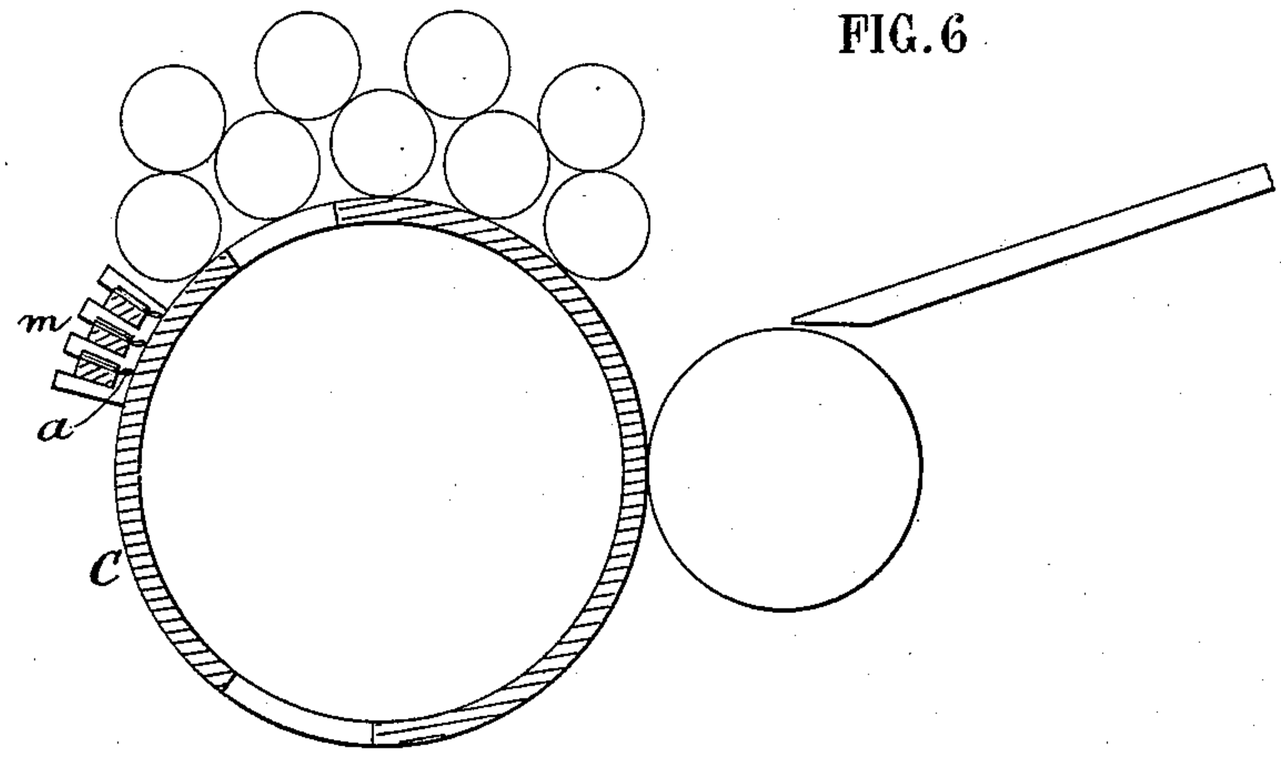


FIG. 7

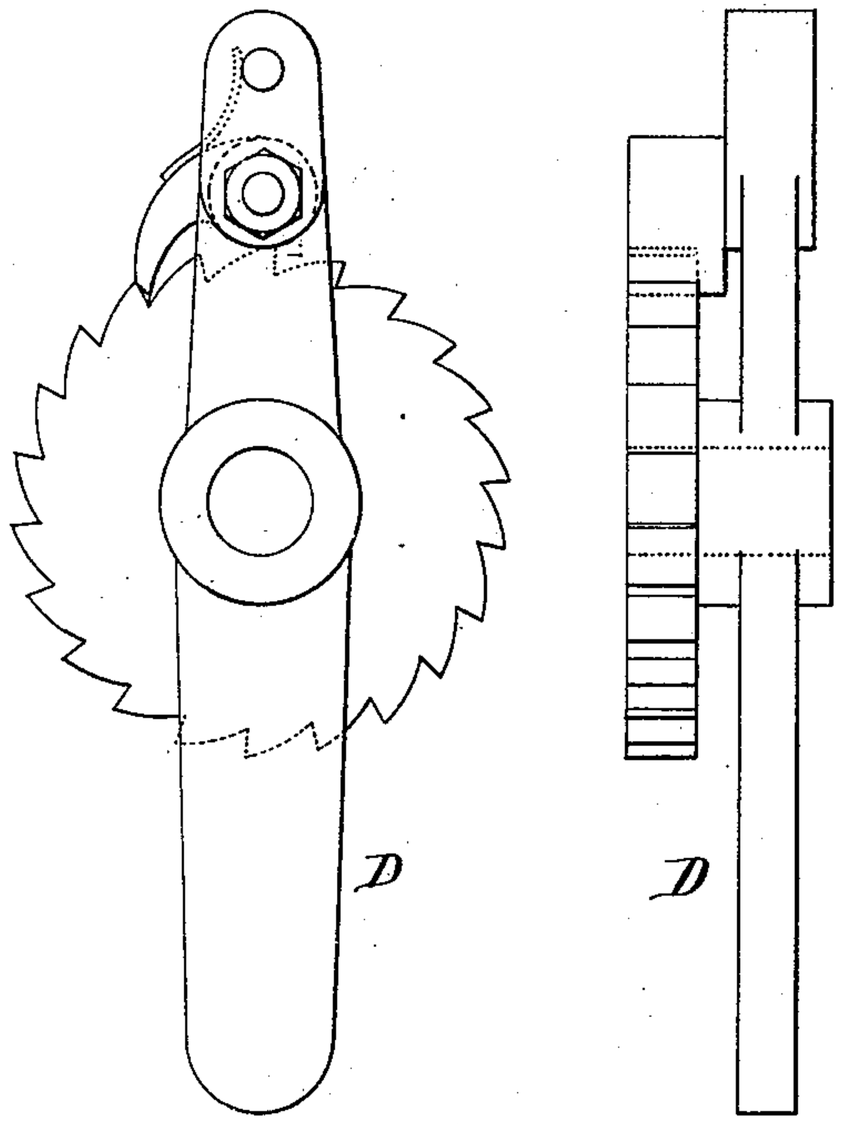
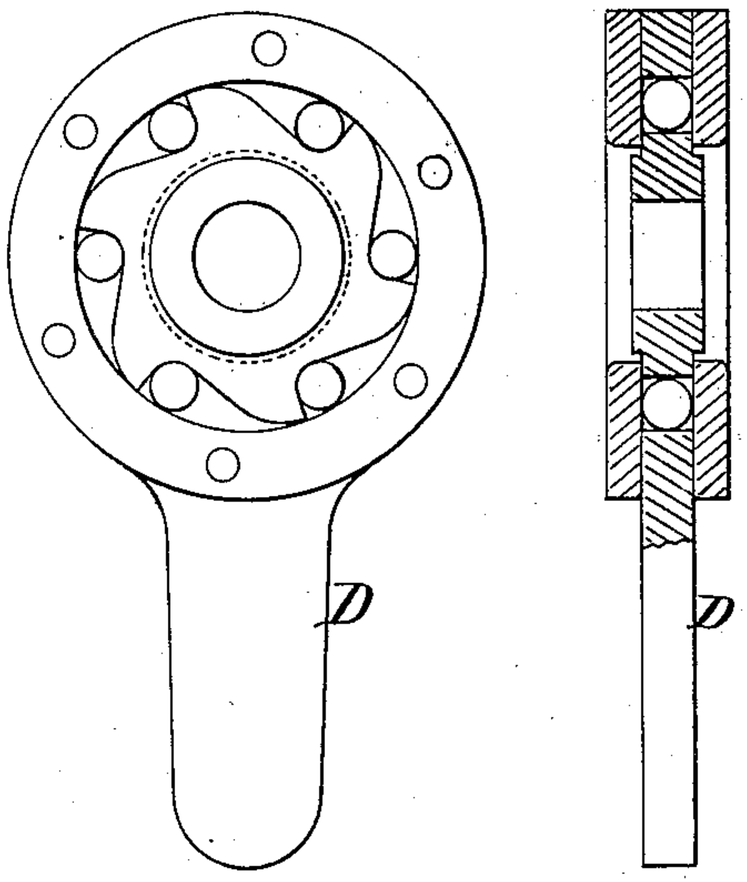


FIG. 8



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UNITED STATES PATENT OFFICE.

ALBERT GENET, OF PARIS, FRANCE, ASSIGNOR TO JULES MICHAUD, OF SAME PLACE.

DAMPING APPARATUS FOR LITHOGRAPHIC AND ZINCOGRAPHIC PRESSES.

SPECIFICATION forming part of Letters Patent No. 401,025, dated April 9, 1889.

Application filed May 26, 1888. Serial No. 275,245. (No model.) Patented in France April 4, 1887, No. 182,620; in Germany April 19, 1888, No. 44,859; in England May 7, 1888, No. 6,781, and in Belgium July 11, 1888, No. 82,527.

To all whom it may concern:

Be it known that I, ALBERT GENET, a citizen of the Republic of France, residing at Paris, in the Republic of France, have invented a new and useful Improved Damping Apparatus for Lithographic and Zincographic Presses, (for which I have Letters Patent in the following countries: France, No. 182,620, dated April 4, 1887, and certificate of addition dated March 14, 1888; Germany, No. 44,859, dated April 19, 1888; Belgium, No. 82,527, dated July 11, 1888, and Great Britain, No. 6,781, dated May 7, 1888,) of which the following is a specification.

In the accompanying drawings, Figure 1 is a side elevation of the damper used in connection with this improved damping apparatus; Fig. 2, a plan view, and Fig. 3 a cross-section of same. Fig. 4 is a vertical section of a flat press, showing three of the dampers applied thereto, as well as the apparatus for automatically supplying water to the dampers. Fig. 4ª is a plan view of such automatic feeding apparatus. Fig. 5 is a cross-section of one of the dampers, composed of an outer strip and an inner strip of more elastic material. Fig. 6 is a vertical section of a cylindrical machine with three of the dampers applied thereto. Fig. 7 shows in side and end elevation a ratchet-and-pawl arrangement for rotating the roller of the automatic apparatus for supplying water to the dampers. Fig. 8 shows in side elevation and transverse section a cam and ball arrangement for actuating such roller.

The damper shown in Figs. 1, 2, and 3 consists of a strip, *a*, of flexible material, folded and held between two flat metallic plates, M and N. The fabric is of such width that the fold rests upon the whole width of the stone, which passes beneath it in traveling to and fro. The metallic plate M is longer than the other plate, and its ends M′ M² are engaged, Fig. 4, in the holders *m*, secured to the frame of the press behind the cylinder C. One or more dampers are thus mounted freely on the machine and take up moisture from the damping-table arranged on the stone-carrying bed at the opposite end to the inking-table.

The dampers can be readily placed in position or removed for repairs or other purpose with the greatest ease.

I do not limit myself to the particular construction, form, or shape of the dampers above described, nor to the employment of any particular flexible and supple material for same; and, further, any suitable number of such dampers may be employed, such number necessarily depending upon the kind and size of machine to which they are to be applied.

In Fig. 5 I have shown a damper composed of two materials, the inner one being more elastic than the outer one, so as to insure the return of the damper to its normal position after the passage of the stone or plate. Fig. 6 shows a cylindrical machine with three of the dampers applied thereto.

I will now describe the apparatus for automatically supplying water to the dampers.

In order to effect this I arrange upon the stone-carrying bed, Fig. 4, beyond the damping-table A, a trough, B, in which a damping-roller, C′, closed with taffeta, velvet, or other suitable material, can turn freely, and which dips a certain distance into the water contained in the trough. The axis of roller C′ revolves in suitable bearings, and on one end is mounted a suitable arrangement, D, which on each return movement of the bed comes in contact with tappet E, serving to actuate same, and thus cause roller C′ to revolve. According to the position of this tappet the extent of the rotary movement of the roller can be regulated. For this purpose the tappet consists of a screw working through an angle-piece, F, secured to the frame of the machine. By turning the screw in one direction or the other the roller C′, when actuated thereby, is caused to turn more or less, and consequently a smaller or greater quantity of water is supplied to the straight dampers *a*, which absorb same and spread it over the damping-table A. This table might be dispensed with, if desired. In either case it will be seen that it is easy to regulate at will the supply of moisture for damping the stone, according to its size, the temperature, the nature of the paper to be printed upon, &c. When the ratchet arrangement for actuating roller C′ has been

acted upon by the tappet E, a spring causes it to return to its normal position against a fixed stop.

It will be understood that the trough B, roller C′, and the arrangement for actuating the latter may be of any suitable construction, and also the regulating-tappet E, described, which, in place of a screw, may be in the form of a cam; or any other suitable arrangement may be employed.

Fig. 7 shows a ratchet-and-pawl mechanism for actuating roller C′, and Fig. 8 an arrangement of cam and balls for the same purpose, the action of both of which will be apparent, and which are only shown as examples of the manner in which such roller may be actuated.

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

1. The combination, with the reciprocating bed of a lithographic or zincographic press, of a rectilinear damper fixed to the frame of the press and composed of flexible material, a damping-table attached to said bed, and a water-supply roller, also attached to said bed, whereby as the bed reciprocates the roller and table will be passed in contact with the fixed damper, substantially as described.

2. The combination, with the reciprocating bed of a lithographic or zincographic press, of a fixed damper composed of flexible material and a water-supply roller attached to said bed, whereby as the bed reciprocates the roller is caused to travel under and come into contact with the damper, substantially as set forth.

3. The combination, with the damper or dampers *a*, of the roller C′, which is caused to rotate in a trough, B, containing water, and is carried by the traveling bed of the machine, so as to automatically supply the dampers *a* with the necessary amount of water for damping the stones or plates of lithographic or zincographic printing-presses, the amount of water being capable of being regulated at will by varying the extent of rotation of such roller, substantially as specified.

ALBERT GENET.

Witnesses:
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C. N. JAMES.