No. 778,449. PATENTED DEC. 27, 1904.

A. B. DICK.

STENCIL PRINTING MACHINE.

APPLICATION FILED JAN. 5, 1904.

2 SHEETS—SHEET 1.

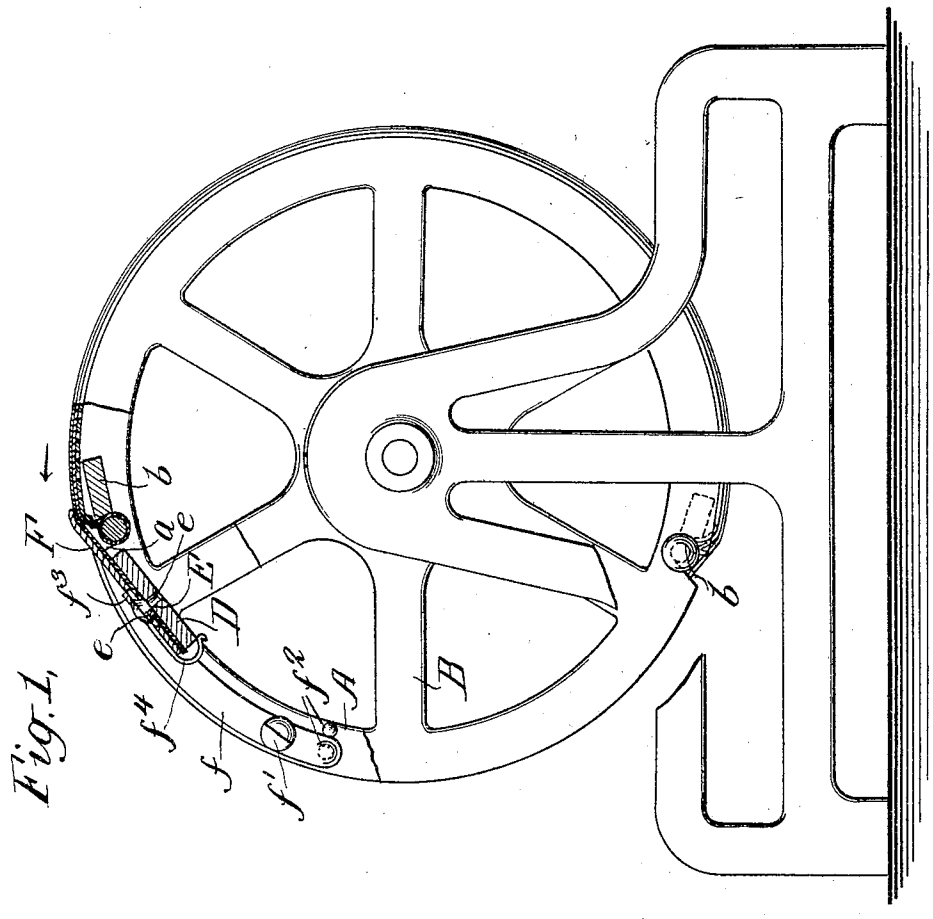

Fig. 1.

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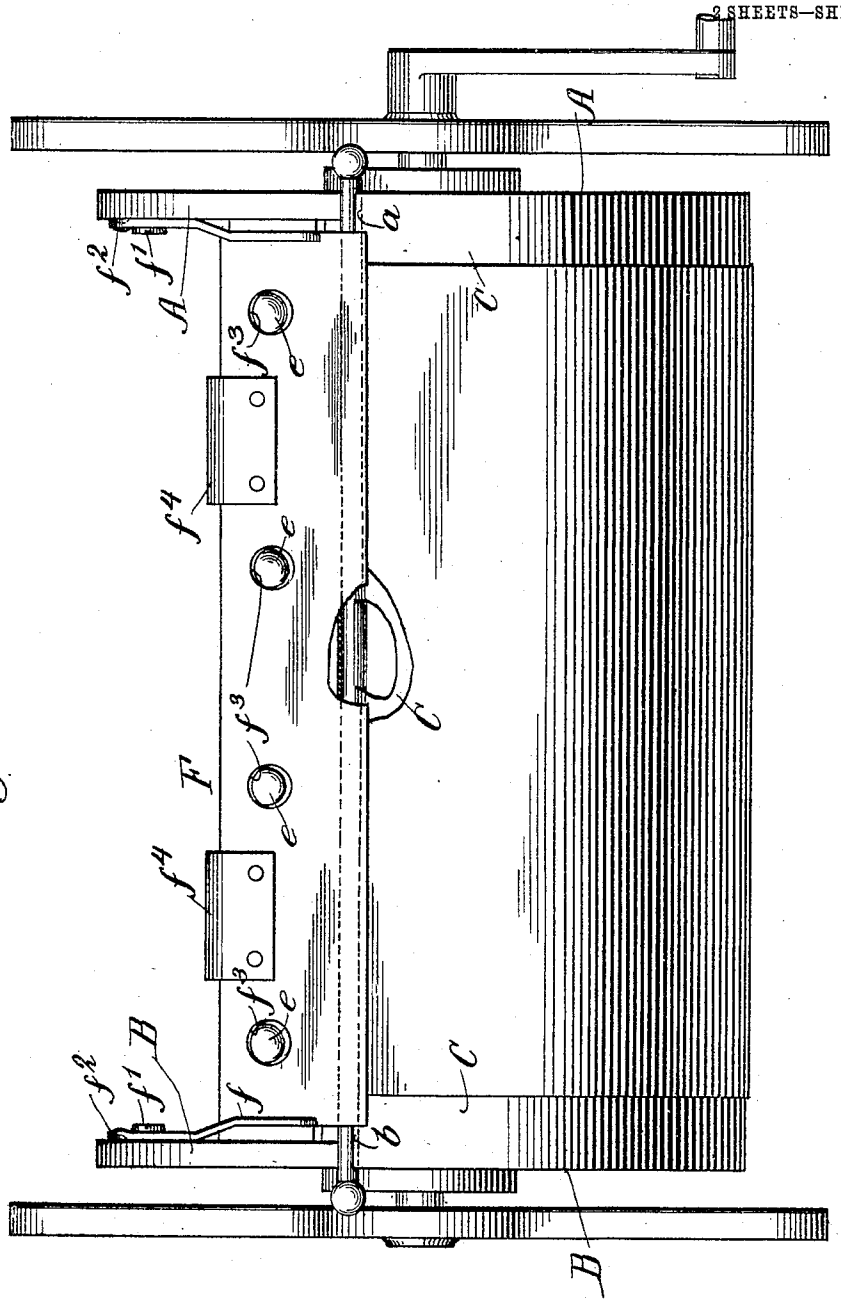

Fig. 2.

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No. 778,449. Patented December 27, 1904.

UNITED STATES PATENT OFFICE.

ALBERT B. DICK, OF CHICAGO, ILLINOIS, ASSIGNOR TO A. B. DICK COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

STENCIL-PRINTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 778,449, dated December 27, 1904.

Application filed January 5, 1904. Serial No. 187,834.

To all whom it may concern:

Be it known that I, ALBERT B. DICK, a citizen of the United States, residing at Chicago, Cook county, State of Illinois, have invented a certain new and useful Improvement in Stencil-Printing Machines, of which the following is a specification.

The invention relates particularly to that type of stencil-duplicating machines in which is employed a drum suitably supported and provided with driving mechanism whereby rotary or oscillating movement is transmitted to such drum in order to bring the operative surface thereof into coaction with impression-paper upon which prints are to be made. Such drums commonly consist of heads pivotally mounted upon the framework and supporting a stencil-carrier of foraminated material, upon which the stencil is laid, in some cases there being a pad of absorbent material between such stencil-carrier and such stencil. The invention concerns particularly means for securing the forward end of the stencil in position upon such a drum.

In carrying out the invention in an approved form I employ, in addition to the foraminated stencil-carrier, a bar extending between the heads of the drum and bearing projections. Coacting with this I employ a pivoted clamp, together with means for retaining the same in any operative position to which it may be moved, said clamp being adapted to swing bodily toward and from said bar-carrying projections. The forward end of the stencil, which in the operation of the drum receives practically all of the strain to which such a stencil is subjected, is laid over the bar extending between the heads and the clamp pressed down upon it, so as to bind the same firmly in position and at the same time receive a considerable portion of the wear to which the advancing edge of a wax stencil is subjected. It may not be absolutely essential to provide the bar with projections, as if the pressure of the clamp be sufficient it may be relied upon to hold the stencil against the strain referred to. I prefer, however, to use such projections and in addition may form depressions in the under side of the clamp to coact with such projections, or, if desired, said clamp may be perforated at points registering with such projections in order that when the clamp is moved to the stencil-holding position said projections may extend through such clamp, thereby securely locking the stencil in position.

An embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a portion of a stencil-duplicating machine with my improvement applied thereto, and Fig. 2 is a plan view of the same.

Referring to the drawings, in which similar letters denote corresponding parts, it will be seen that the drum comprises the two heads A B, the latter of which in Fig. 1 is broken away for clearness. These heads are revolubly supported in the frame of the machine, which, forming no part of the present invention, need not be described in detail. Said heads are connected by the stencil-carrier C, of foraminated material, and, if desired, over this may be placed a pad carrying at its ends a rod, which may be dropped into and retained in the recesses *a b*, adjacent to which is the bar *b'*, extending between the drumheads.

D designates a bar extending between and connecting the heads A B. In the present illustration of the invention this bar is provided with upwardly-projecting pins E, which may, if desired, have enlarged heads *e* and supported on shanks *e'* of smaller diameter. The particular form of these projections is, however, not of importance.

F designates the stencil-clamp. This is here shown as comprising the body portion extending parallel with and overlying the bar D, said body portion being provided with the rearwardly-projecting arms *f*, by means whereof said clamp may be pivoted to the inner faces of the heads A B—as, for instance, by means of the pivot-pins or rivets *f'*. Preferably said arms *f* will be prolonged beyond the point of attachment to said heads, and the inner surfaces of said heads will be provided with bosses f^2, so arranged as that in the operation of the clamp the extremities of said arms must be forced thereover, so as to hold

said clamp in either its operative position (as when holding the stencil in position) or its inoperative position, (as when raised to release such stencil.) As here shown, the body portion of said clamp F is provided with perforations f^3, registering with the projections E, formed upon the bar D, so that when said clamp is in its operative or stencil-holding position said projections will extend through said perforations. If desired, said clamp may also be provided with means, in addition to the bosses f^2, for locking said clamp in operative position. In the present instance I have shown the under side of said clamp as provided with two springs f^4, which when the clamp is in operative position coact with the bar D, thus requiring some pressure from the hand of the operator to raise the clamp, and thereby release the stencil.

Where projections are used upon the bar D, and whether, if used, such projections be of the form herein illustrated or not, the stencil may be perforated to receive those projections or not, as desired. If the projections be used and such stencil be correspondingly perforated, the forward edge of such stencil may be laid upon the bar D in such manner that the projections will extend through such perforations. If such stencil be imperforate, the forward edge thereof is merely laid over the bar D, whether the same be provided with projections or not, and the clamp F pressed down upon such forward edge, the locking means—as, for instance, those heretofore described—retaining said clamp in its holding position. If the bar D be provided with projections and the clamp F with perforations or depressions registering therewith and the forward edge of the stencil be imperforate, the coaction of said clamp and bar will cause the imperforate forward edge of the stencil to be firmly secured upon such projections against the tendency to strain such stencil from its securing device due to the rotation of the drum, the direction whereof is indicated by the arrow on Fig. 1.

Although I have referred to the member of the drum mechanism with which the clamp F coacts as a "bar," it will be obvious that this may apply to any part of the drum structure which moves with such drum—as, for instance, a part of the foraminated stencil carrier with which a portion of the periphery of said drum is covered.

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

1. In a stencil-printing machine, the combination with a drum, of means for detachably securing the forward edge of a stencil thereon, and a hinged clamp carried by said drum and adapted in operative position to overlie said stencil near the point of attachment of said forward edge to said drum, substantially as set forth.

2. In a stencil-printing machine, the combination with a drum, of a bar adapted to receive the forward edge of a stencil, and a clamp carried by said drum and coacting with said bar and said stencil outside the exposed portion of the latter to secure the stencil in position upon said bar and to protect the same from excessive wear, substantially as set forth.

3. In a stencil-printing machine, the combination with a drum, of a bar having projections thereon arranged radially of said drum and adapted to receive the forward edge of a stencil, and a hinged clamp carried by said drum and coacting with said bar and projections to secure said stencil thereon, substantially as set forth.

4. In a stencil-printing machine, the combination with a drum, of a bar having projections thereon arranged radially of said drum and adapted to receive the forward edge of a stencil, and a hinged clamp carried by said drum and having portions registering with said projections and coacting therewith to secure said stencil in position, substantially as set forth.

5. In a stencil-printing machine, the combination with a drum, of a bar having projections arranged thereon radially of said drum and adapted to receive the forward edge of a stencil, and a hinged clamping device having perforations coacting with said projections, substantially as set forth.

6. In a stencil-printing machine, the combination with a drum, of a bar adapted to receive one end of a stencil, a hinged clamping device carried by said drum and coacting with said bar, and means for locking said device in operative position, substantially as set forth.

7. In a stencil-printing machine, the combination with a drum having heads, of a member extending between said heads and adapted to receive one end of a stencil, a clamp coacting with said member to secure said sheet in position thereon and protect the attached end thereof, said clamp having rearwardly-projecting arms pivoted to the inner surfaces of said heads, and means for locking said clamp in operative position, substantially as set forth.

This specification signed and witnessed this 11th day of December, 1903.

ALBERT B. DICK.

Witnesses:
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L. NORK.