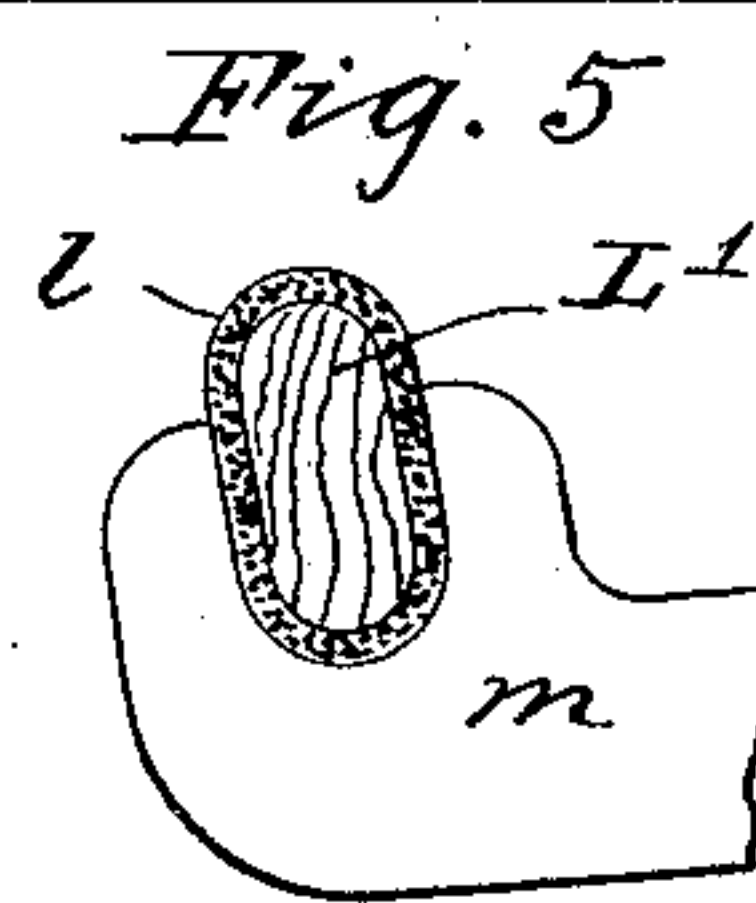
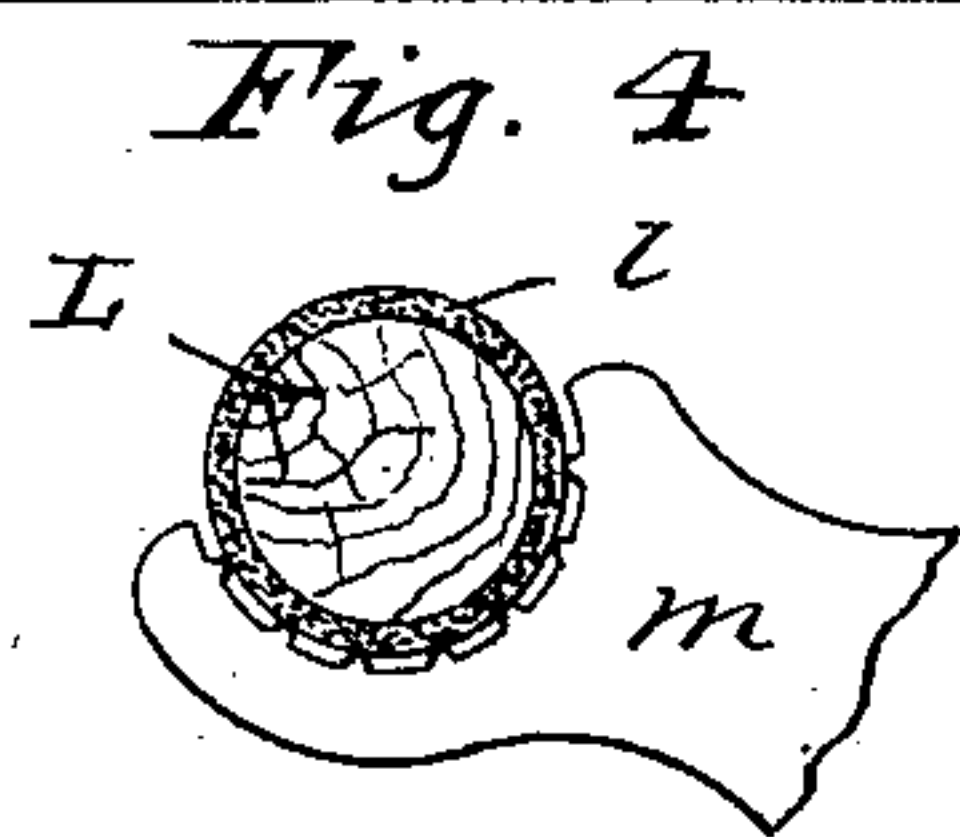
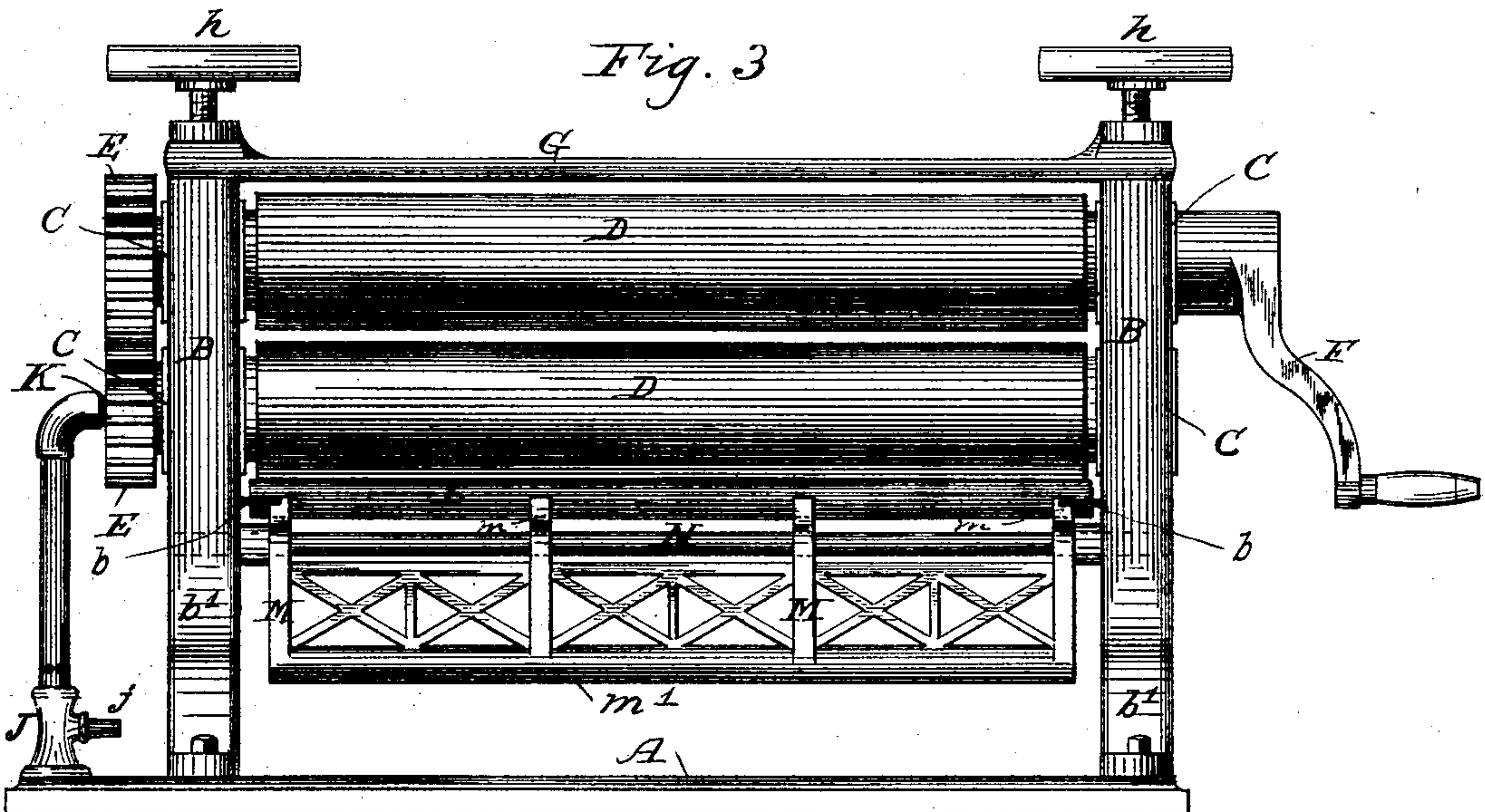
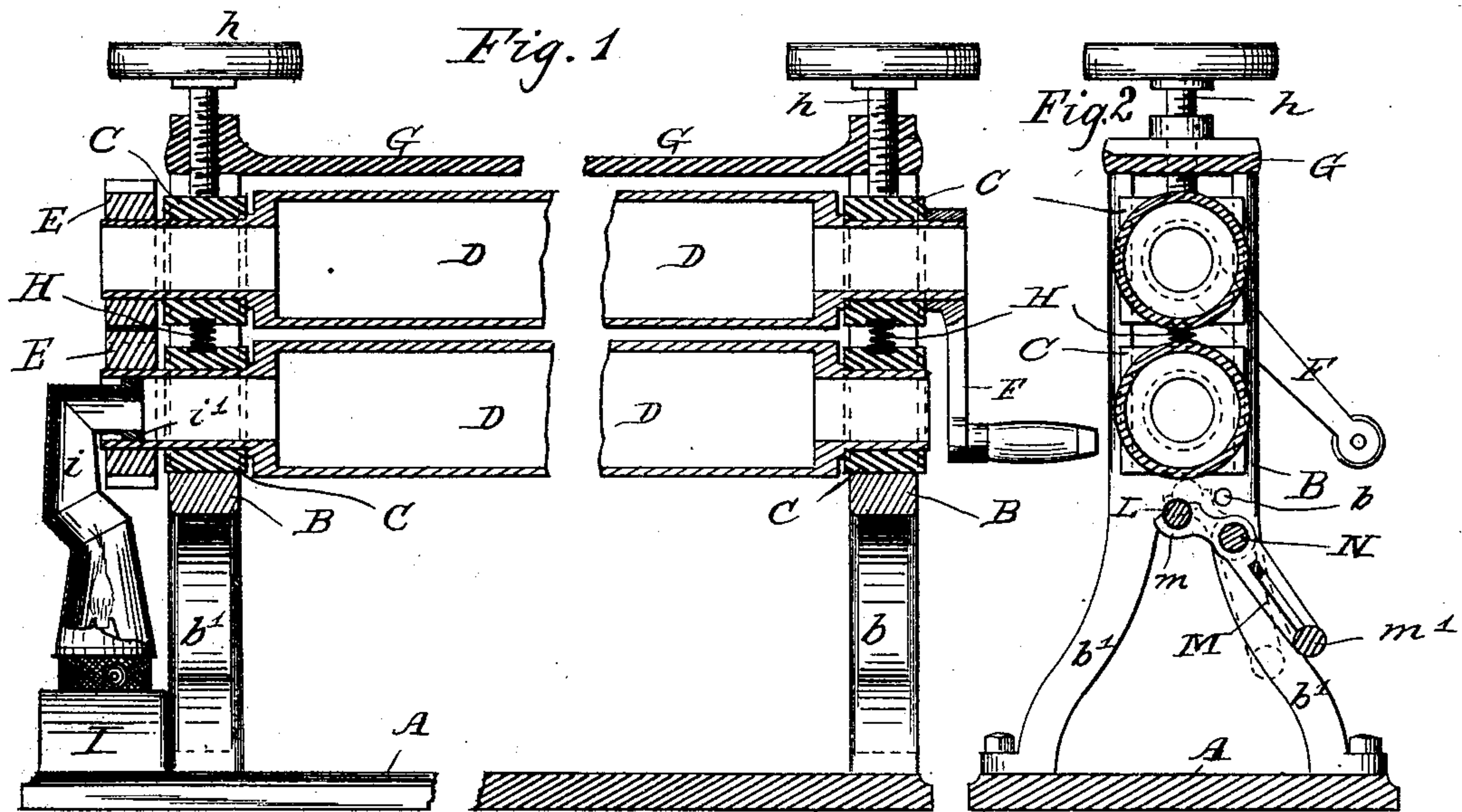


(No Model.)

W. G. C. KIMBALL.
PHOTOGRAPH BURNISHER.

No. 374,412.

Patented Dec. 6, 1887.



Witnesses.
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UNITED STATES PATENT OFFICE.

WILLIS G. C. KIMBALL, OF CONCORD, NEW HAMPSHIRE.

PHOTOGRAPH-BURNISHER.

SPECIFICATION forming part of Letters Patent No. 374,412, dated December 6, 1887.

Application filed April 18, 1887. Serial No. 235,283. (No model.)

To all whom it may concern:

Be it known that I, WILLIS G. C. KIMBALL, a citizen of the United States, residing at Concord, in the county of Merrimac and State of New Hampshire, have invented certain new and useful Improvements in Photograph-Burnishers, of which the following is a specification.

This invention relates especially to machines for burnishing photographs. Heretofore in machines of this character one or more solid rolls have been used, the lower of which is heated by means of a flame from a lamp or gas directed upon an apron placed as close as possible to the under side of said roll. This necessarily diminishes the power of the heat and increases the time required to heat the roll ready for work; and, again, the fact of the rolls being solid causes them to sweat or accumulate moisture during the process of heating, which must be constantly wiped off in order to prevent the rolls from rusting.

The object of the present invention is to overcome all the foregoing annoyances in a photograph-burnisher.

To this end my invention consists in forming one or both rolls hollow and open at both ends. My invention further consists in the introduction of heat from an oil-lamp or gas to the interior of either or both said rolls.

My invention further consists in an improved cleaning roll or slab adapted for application to the polished burnishing-roll; and my invention finally consists of the improved frame with which to support the cleaner and by which it may be applied with great force to the polished burnishing-rolls, all of which will be hereinafter fully described, and clearly pointed out in the claims, reference being had to the accompanying drawings, forming part of this specification, of which—

Figure 1 represents a sectional elevation of my improved burnisher in which the chimney of an oil-lamp is directed into one end of one of the burnishing-rolls, Fig. 2 being a cross-section. Fig. 3 is a side elevation of one of my machines, having in position the cleaning-roll mounted in its supporting-frame and a Bunsen burner within the roll to be heated. Fig. 4 is an enlarged detached section of the frame and one form of cleaner. Fig. 5 is a like view showing a different form of cleaner.

Similar letters indicate corresponding parts.

A is a base-board.

B B are the end standards, carrying the journal-boxes C C C C, in which are mounted the hollow rolls D D, the journals of which project at one end far enough to carry spur-gears E E. The opposite journal of one of said rolls (preferably the upper one) also extends outside of its journal-box to receive a hand-crank, F.

G is a bar connecting and serving to brace the tops of the standards.

The journal-boxes C must be vertically adjustable—i. e., the upper from the lower. A convenient method of doing this is to place springs H between said boxes C, and to provide set-screws h, threaded to the bar G, with which to set down the upper of the said journal-boxes at either end of the machine.

The chamber in the rolls D D may be larger between bearings, as seen in Fig. 1, or of equal diameter throughout, and heat may be supplied internally to either by means of oil-lamps or gas-burners—to wit, the chimney i of an oil-lamp, I, may be bent so as to enter one end of a roll, D, and provided with a suitable collar, i', turned to a movable fit for the interior of said roll to insure the passage of the heat through the same; or a stand, J, having a nipple, j, for connecting a rubber tube, may be provided, from which air and gas tubes may connect with a Bunsen burner, K, which may extend the entire length of said roll interiorly between bearings.

The advantage in forming the non-heated roll hollow is that by allowing a free circulation of air through its sweating is thereby prevented.

A cleaning-roll which shall bear evenly the entire length of the burnishing-rolls may be formed of a cylindrical stick, L, or a flat one, L', having its edges rounded, and either of these may be covered with cloth, felt, or any suitable material, as at l, and allowed to rest within grooves in the upper portions, m, of a supporting or operating frame, M, pivoted by rod N to the standards B B.

The parts m may be made to project at nearly a right angle from the parts M, and thus permit the latter to hang nearly vertical normally and keep the cleaner clear from contact with the burnishing-roll, or they may be

formed as shown in Fig. 2, and stop-pins *b* placed in the standards *B* at the proper point to prevent the parts *m* from hitting the burnishing-roll after the cleaner shall have been removed. The said cleaners are easily removed or turned over, so as to present a fresh face, by raising the hand-rest *m'*, which carries the cleaner down, when it may be slipped out, if desired, between the feet or legs *b'* of the standards.

The cylindrical cleaner *L* is probably preferable to the flat one *L'*, inasmuch as its entire surface is available for use, while with the latter but two edges are available.

To prevent any liability of the cylindrical cleaner slipping within the supports *m*, serrations *m*² may be formed therein, as seen in Fig. 4.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a photo-burnisher, the combination of two hollow rolls open from end to end, gears connecting their journals, standards upon which they are mounted, a crank for turning the same, and means for introducing heat internally at one end of either roll, substantially in the manner and for the purpose set forth. 25

2. In a photo-burnisher, the combination of a cleaning-roll, a cloth, felt, or other suitable covering for same, a pivotal frame upon which said roll is carried, the burnishing-rolls, their operating mechanism, and the standards supporting said rolls, substantially as and for the purpose set forth. 30

In testimony whereof I affix my signature in presence of two witnesses. 35

WILLIS G. C. KIMBALL.

Witnesses:

J. B. THURSTON,
FRANK S. STREETER.