2 Sheets--Sheet 1.

A. M. DOLPH.

Starching-Machines.

No. 144,071. Patented Oct. 28, 1873.

Fig. 1.

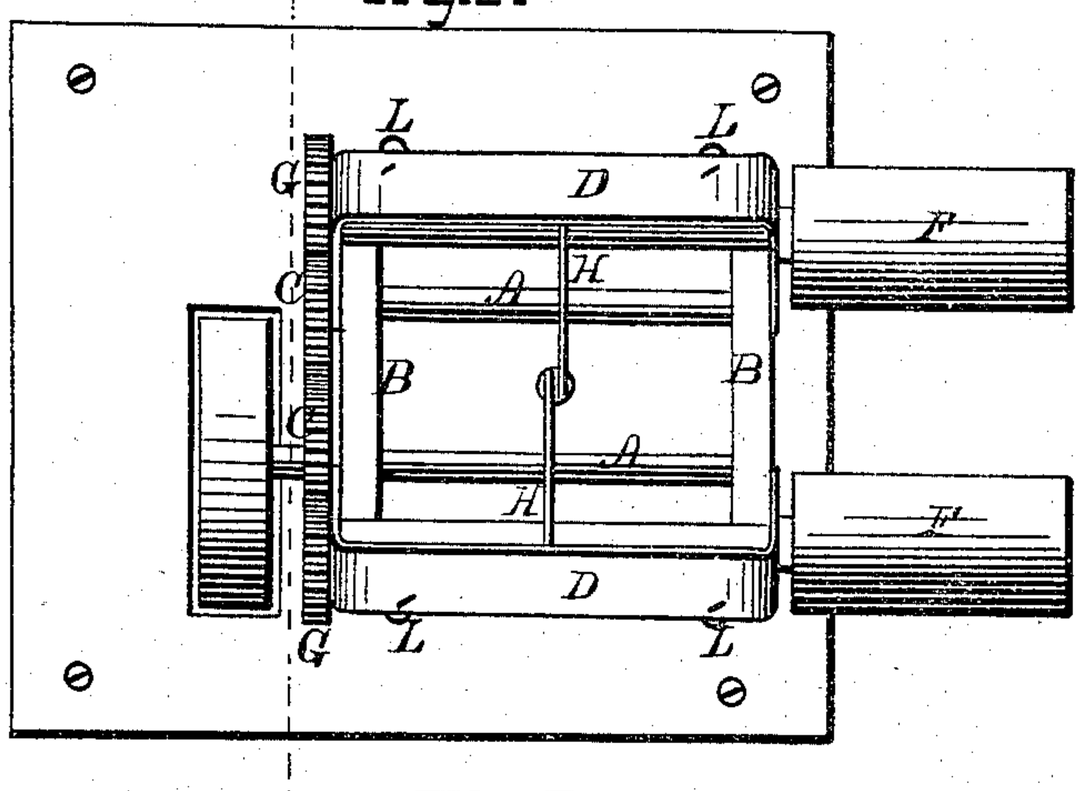
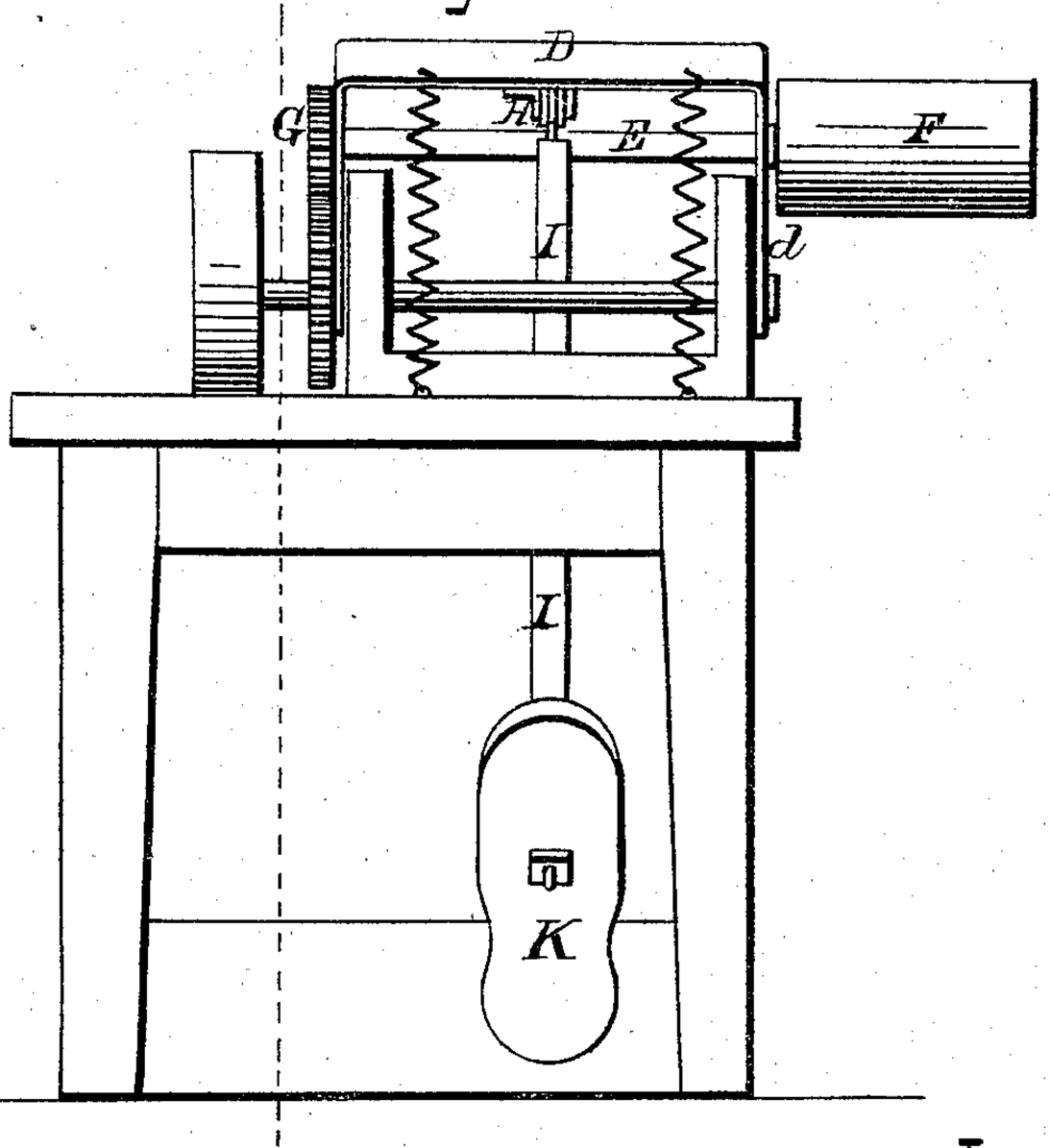


Fig. 2.



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2 Sheets--Sheet 2.

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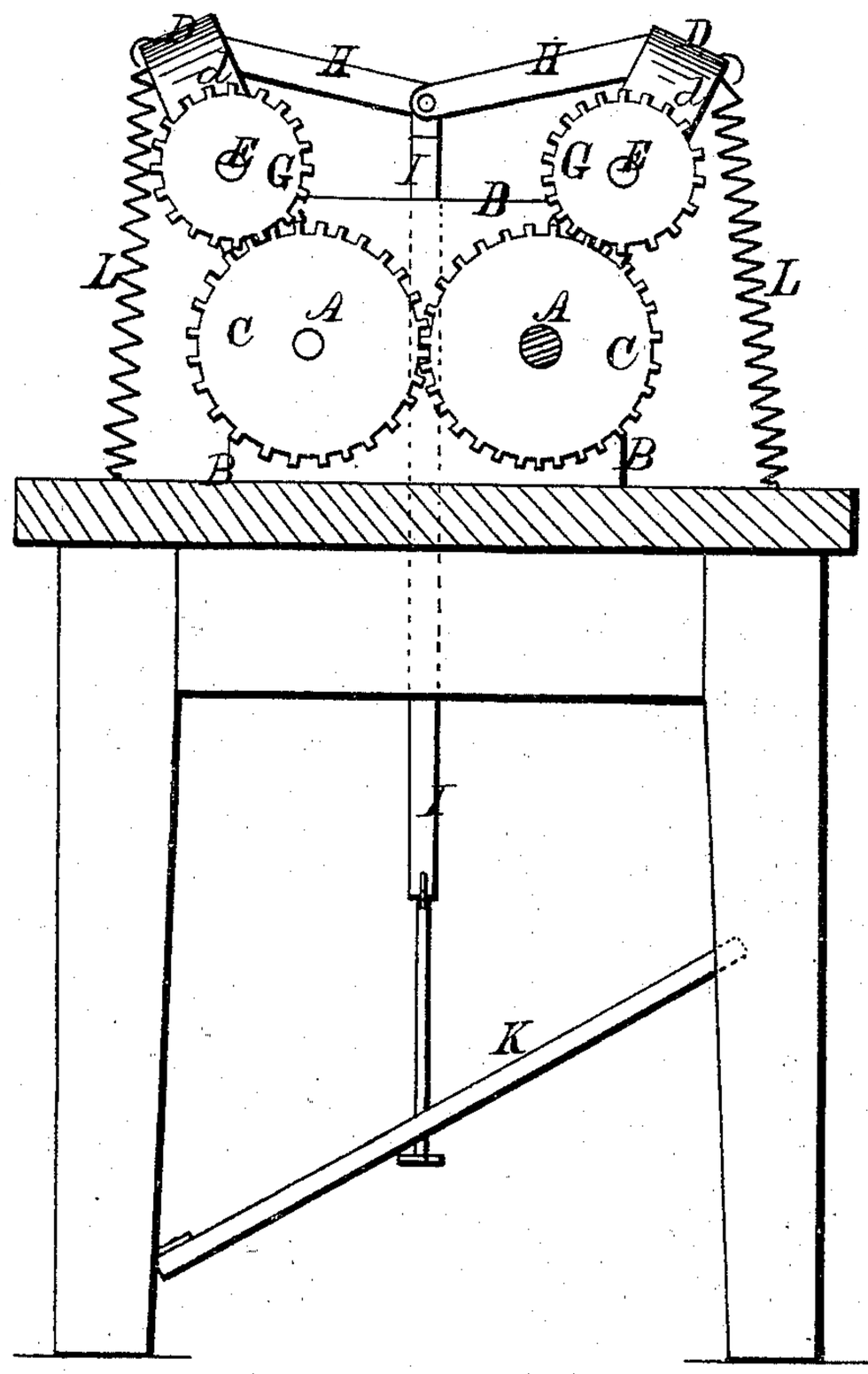
Fig. 3.



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UNITED STATES PATENT OFFICE.

ALEXANDER M. DOLPH, OF CINCINNATI, OHIO.

IMPROVEMENT IN STARCHING-MACHINES.

Specification forming part of Letters Patent No. **144,071**, dated October 28, 1873; application filed October 6, 1873.

To all whom it may concern:

Be it known that I, A. M. DOLPH, of Cincinnati, in the county of Hamilton, and in the State of Ohio, have invented certain new and useful Improvements in Starch-Expressing Machines; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a plan view of the upper side of my improved apparatus. Fig. 2 is a front elevation of the same, and Fig. 3 is a section upon line *x x* of Figs. 1 and 2.

Letters of like name and kind refer to like parts in each of the figures.

The design of my invention is to enable operatives in laundries to express the surplus hot starch from fabrics with uniformity and ease, and without direct application of the hands; and it consists, principally, in the means employed for rendering the pressure-rollers adjustable toward or from each other without derangement of the operating-gears, substantially as and for the purpose hereinafter specified. It consists, further, in the means employed for relatively adjusting said rollers so as to cause them to compress the fabrics being operated upon, substantially as is hereinafter shown.

In the annexed drawings, A and A′ represent two shafts, suitably journaled upon or within a frame, B, and provided upon corresponding ends with gear-wheels C and C, which mesh together, as shown. Upon the ends of each shaft, outside of its bearings, are pivoted the parallel arms *d* of a frame-bar, D, which extends upward and across, as seen in Fig. 2, and furnishes bearings for a shaft, E, that upon one of its ends is provided with an elastic roller, F, and upon its opposite end with a pinion, G, which meshes with and receives motion from the gear C of the shaft upon which said frame-bar is pivoted.

As thus arranged, it will be seen that the compression-rollers F, with their frames, can be moved toward or from each other without changing the relative positions of their pinions and driving-gear, the pinion of each roller-shaft having a line of motion around the center of its driving-shaft.

Upon each of the frame-bars D, near the longitudinal center of its horizontal portion, is pivoted one end of a bar, H, the opposite end of which is pivoted to or upon the corresponding end of the opposite bar H, and at such pivotal center is attached one end of a rod, I, that from thence extends downward, and is attached to or upon a treadle, K, the arrangement described enabling said frame-bars and the compression-rollers to be moved toward each other by depressing the outer end of said treadle. One or more springs, L, attached to the outer edge of each frame-bar D, and from thence extending outward and downward to some suitable portion of the frame, draws said frame-bar and its roller outward to the position shown in Figs. 1 and 3, while at the same time it permits said parts to be moved inward by the action of the treadle.

The apparatus is now complete, and operates as follows: The operator takes position within convenient reach of the compression-rollers and the treadle, and, placing some of the starched fabric between the said rollers, which are revolved by power, bears downward upon said treadle until the required degree of pressure is given by said rollers to said fabric, which pressure, while as forcible as may be required, is yielding, so as to permit a greater or less thickness to pass through, and uniform in that it subjects thick or thin portions of a garment to the same degree of pressure.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

1. The shafts A, A′, E, and E, gear-wheels C and C, pinions G and G, pivoted frame-bars D and D, and compression-rollers F and F, when constructed and combined to operate in the manner and for the purpose substantially as specified.

2. In combination with the pivoted frame-bars D and D, and the shafts and rollers E and F, respectively, the bars H and H, rod I, treadle K, and springs L, substantially as and for the purpose shown.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 4th day of October, 1873.

ALEXANDER M. DOLPH. [L. S.]

Witnesses:

M. L. BUCHWALTER,

GEO. W. MCCAMMON.