

(No Model.)

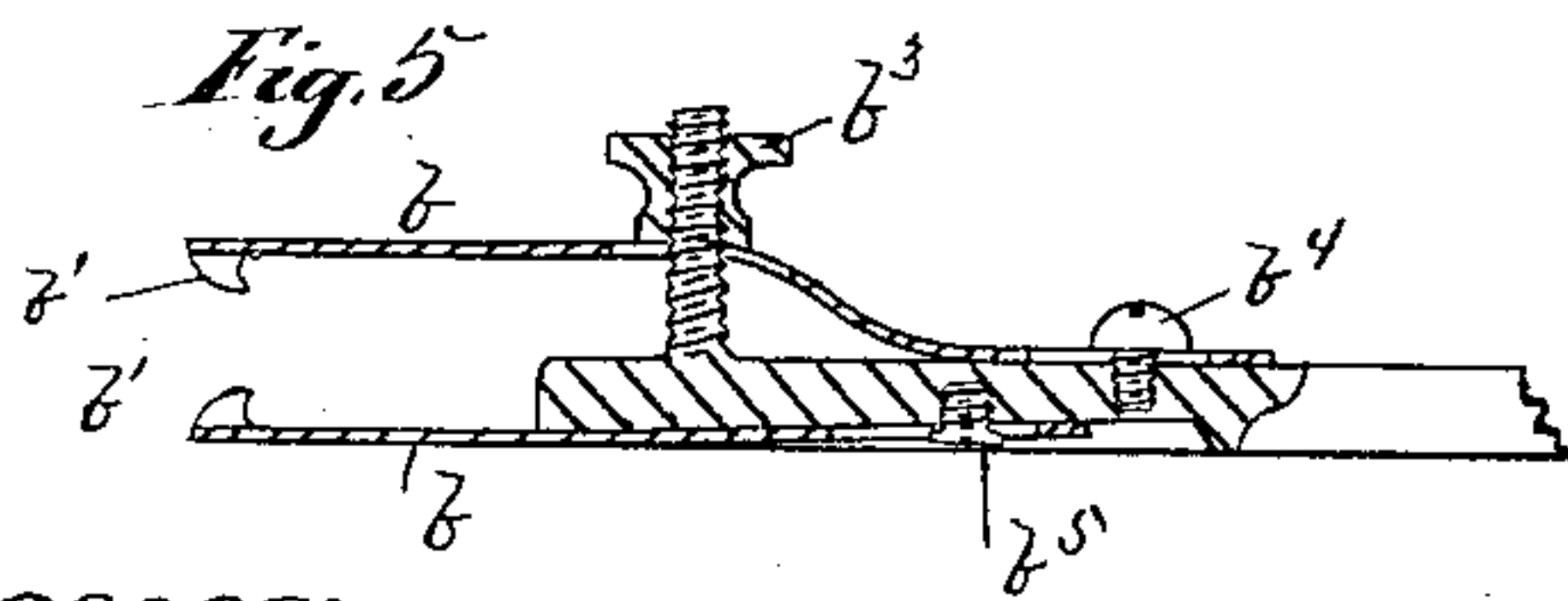
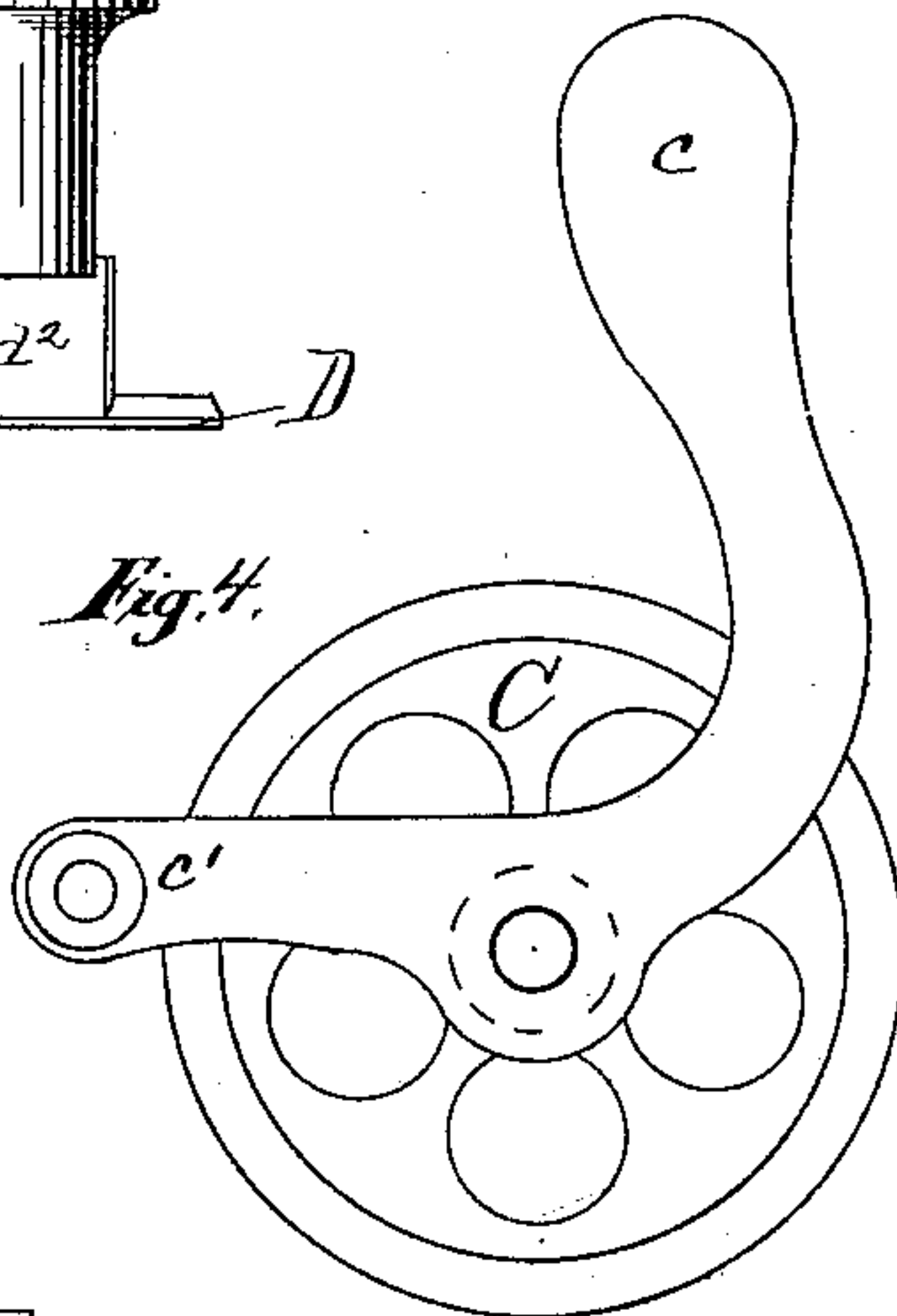
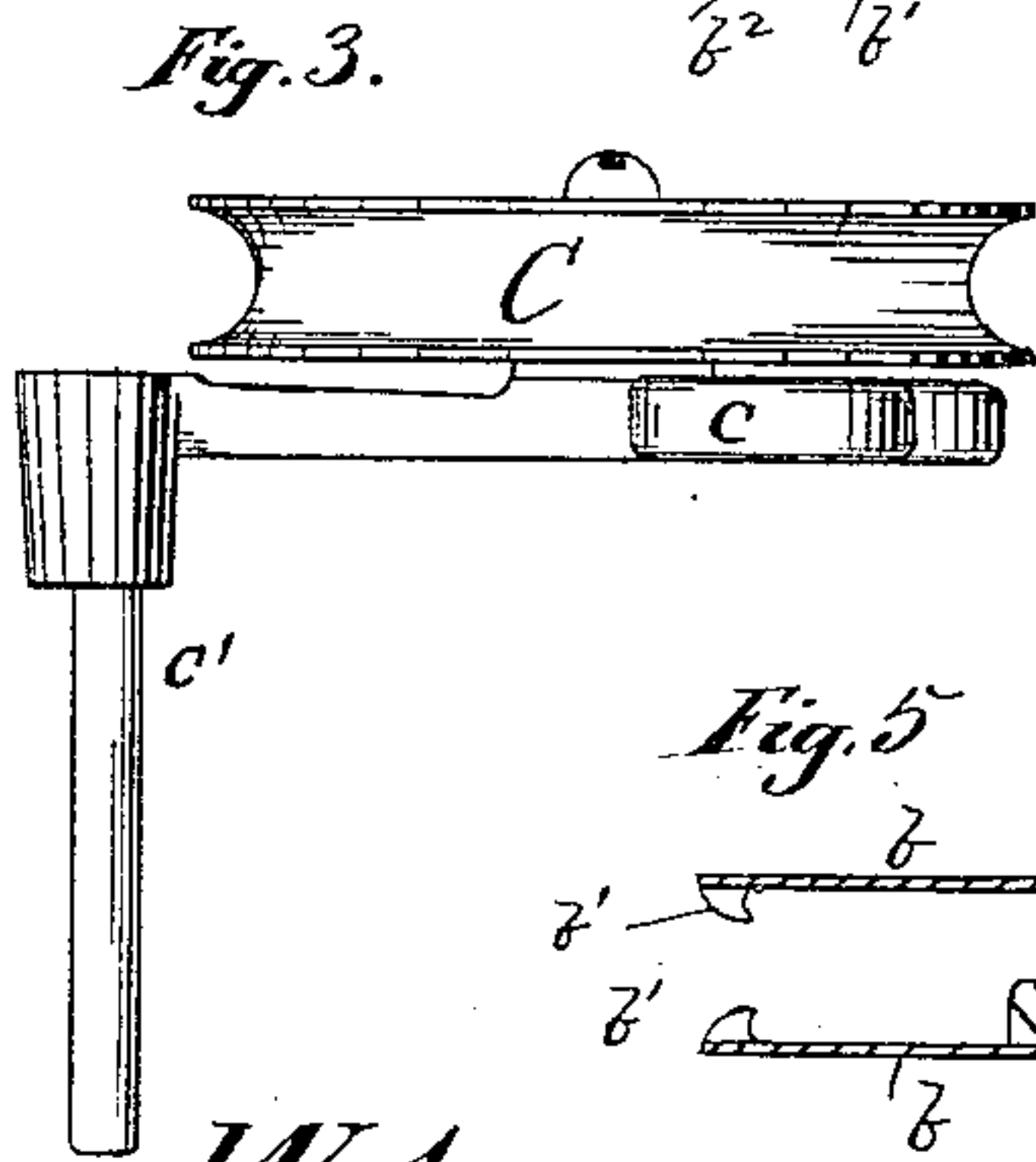
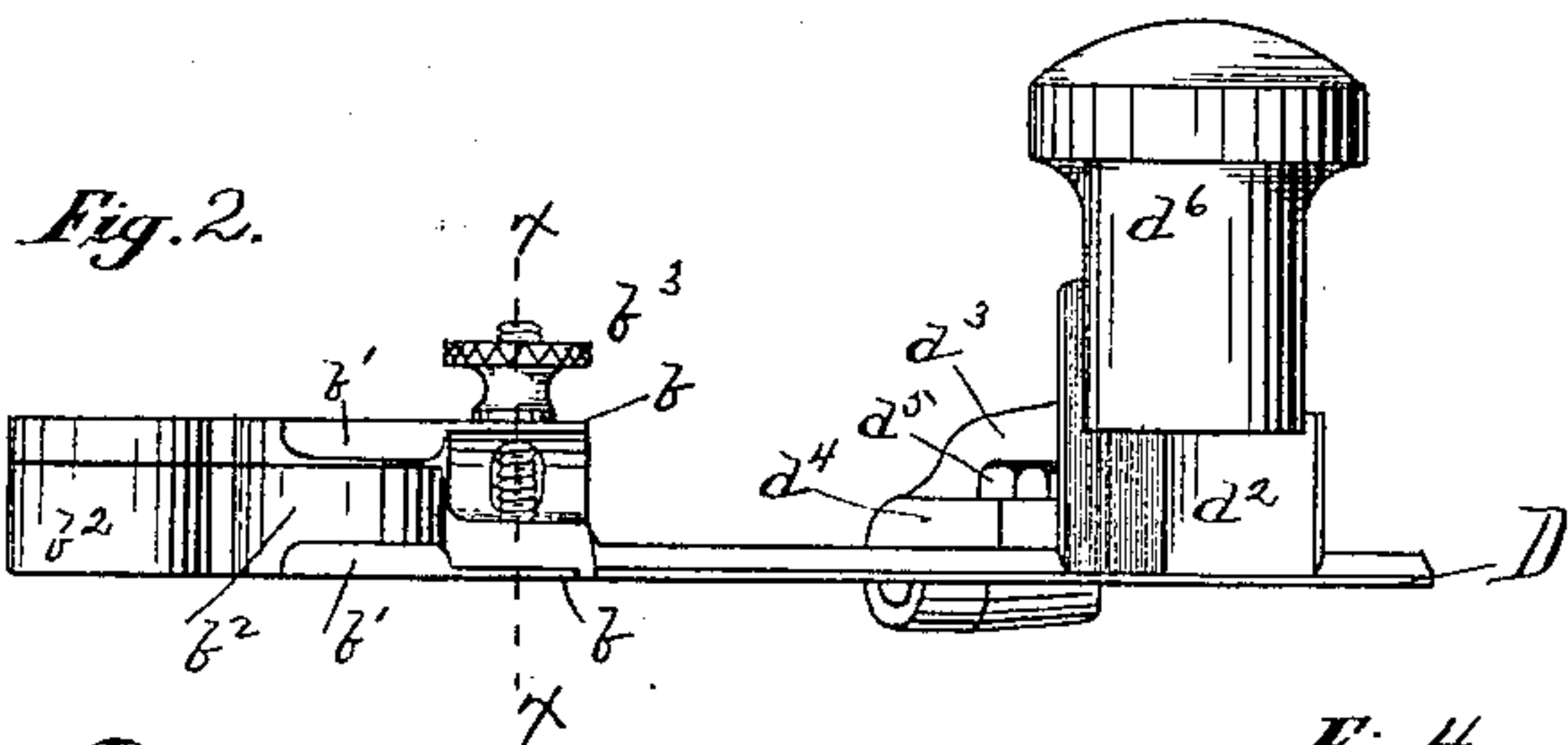
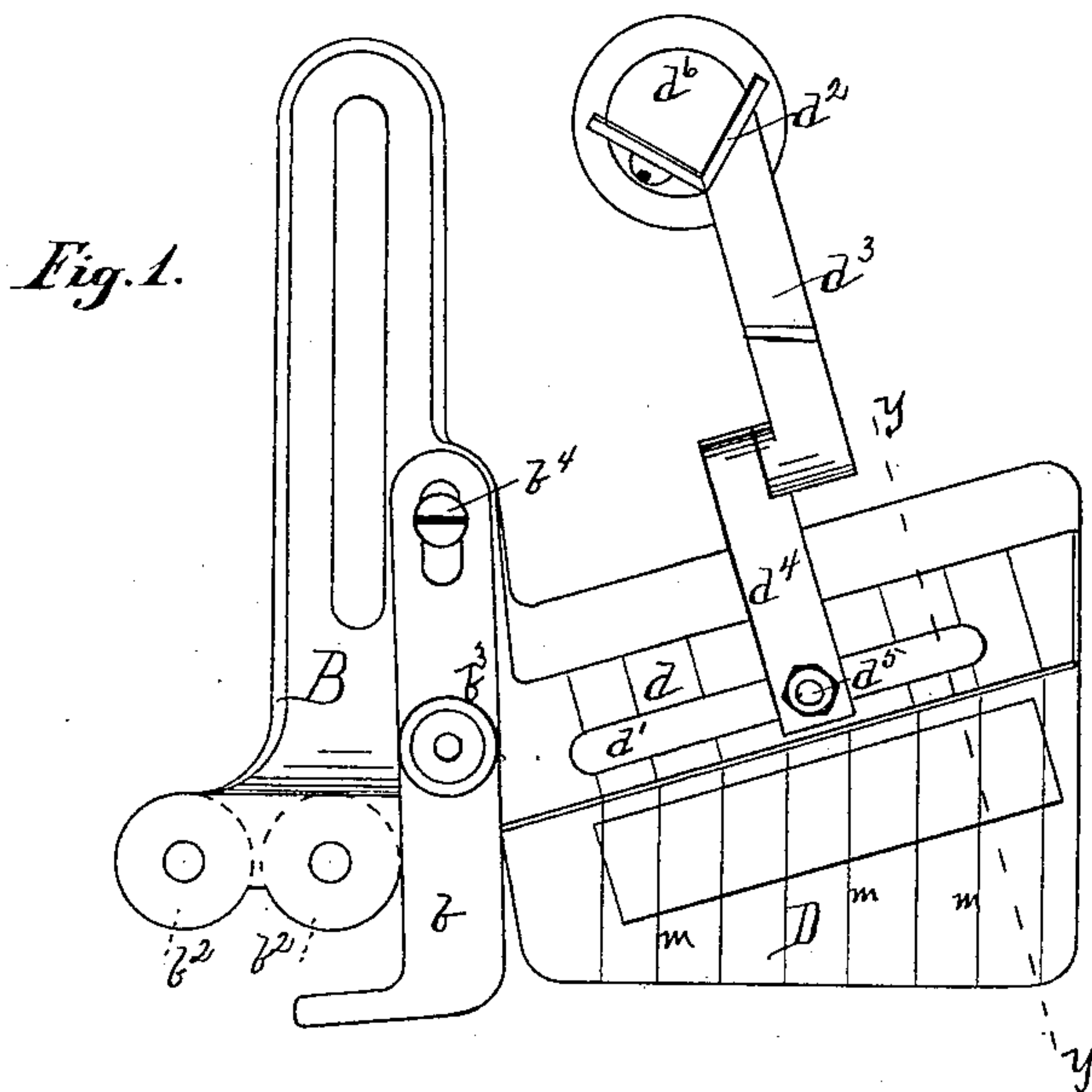
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R. J. WELLES.

BINDING ATTACHMENT FOR SEWING MACHINES.

No. 266,738.

Patented Oct. 31, 1882.



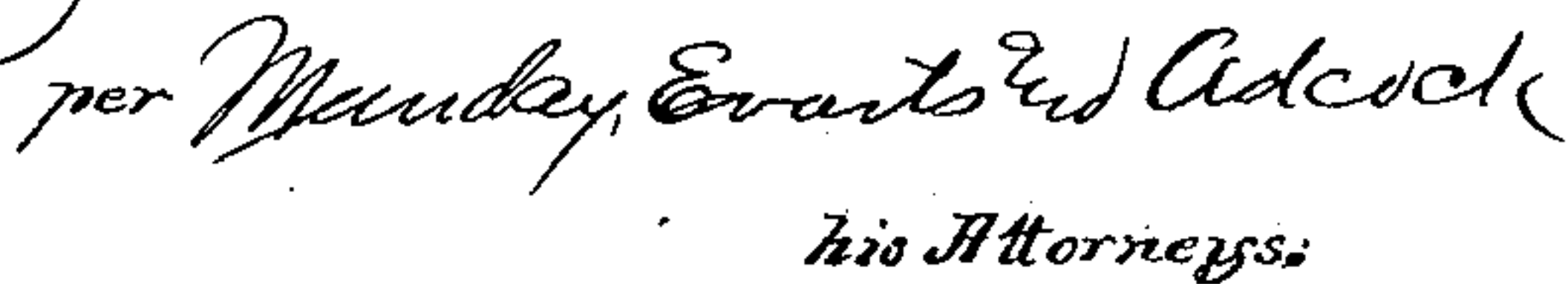
Witnesses:
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H. M. Munday.

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Inventor:
Richard J. Welles,
per Munday Evans & Adcock
his Attorneys:

3 Sheets—Sheet 2.

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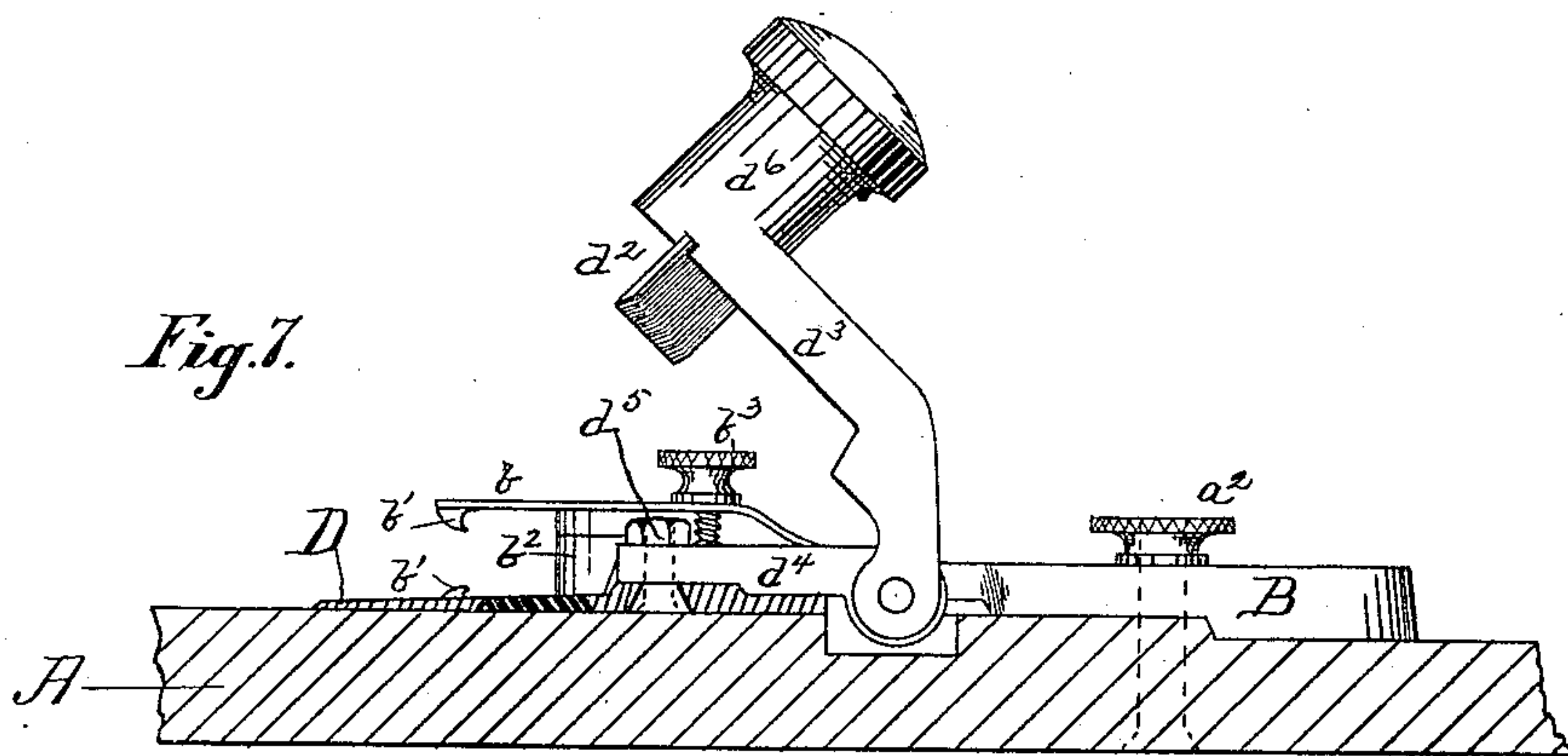
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Witnesses:

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H. W. Munday

Inventor:

Richard J. Welles;

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his Attorneys;

UNITED STATES PATENT OFFICE.

RICHARD J. WELLES, OF CHICAGO, ILLINOIS, ASSIGNOR TO LOUIS E. HASTINGS, OF SAME PLACE.

BINDING ATTACHMENT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 266,738, dated October 31, 1882.

Application filed August 17, 1882. (No model.)

To all whom it may concern:

Be it known that I, RICHARD J. WELLES, of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Binder Attachments for Sewing-Machines, of which the following is a specification.

This invention relates to binder attachments for sewing-machines, and has been designed more especially for use in harness-making, but is capable of employment upon the ordinary domestic sewing-machine, and for other uses.

The invention consists—

First, in the combination, with a sewing-machine and binder, of a device for nicking or notching the binding material to enable the application thereof to a corner of the article being bound. This operation has usually been done heretofore by the operator with the aid of scissors or some equivalent device.

Second, in the combination, with a sewing-machine and binder, of a notching or nicking device and a gage, whereby the operator may know in advance where the nick should be cut and be enabled to stop the machine when the right point has been reached.

Third, in the novel construction of the nicking device and the gage.

Fourth, in the construction of the binding device; and,

Fifth, in the combination, with a sewing-machine and binder, of a pressure-roller, all substantially as hereinafter set forth.

In the accompanying drawings, Figure 1 is a plan view of my improved binder and nicking attachment. Fig. 2 is a front view of the same. Fig. 3 is an edge view of the pressure-roller and the parts by which it is controlled, and Fig. 4 is a bottom view of the same. Fig. 5 is a section of the binder, upon the line $x x$ of Fig. 2. Fig. 6 is a plan of all the parts as they appear when in use and attached to the bed of a sewing-machine. Fig. 7 is a side view of the nicking device, upon the line $y y$ of Fig. 1, with the nicking-tool poised, ready for an operation.

In the drawings, A represents the bed of a sewing-machine; a , the needle, and a' the pressure-foot thereof.

B represents a slotted plate, by means whereof, in conjunction with the set-screw a^2 , the

binder and nicking device are secured to the bed A. To this plate are secured upper and lower spring-leaves, $b b$, having guiding-projections $b' b'$, which may be concaved, as shown, affixed thereto, each of said projections serving as a guide to one edge of the binding material. The edge of the material to be bound, with the binding in position upon it, passes between the spring-leaves and under the pressure-foot and needle, being kept at all times as it progresses in contact with the anti-friction guiding-rollers $b^2 b^2$, having bearings in the plate B. The lateral force necessary to keep the material up to the guide-rollers b^2 may be manual force; or it may be exerted by the grooved roller C, mounted upon a lever, c , pivoted upon the pivot c' in the bed A, the manual force in the latter case being exerted upon the lever. I much prefer, where the material operated upon is stiff enough to permit, to use this roller C, as it enables the operator to maintain a steady, even pressure, avoids the necessity of releasing and taking hold of the material at frequent intervals, and saves the strength and hands of the operator.

The spring-leaves are adjusted to the different thicknesses of material to be operated upon by the screw b^3 , and they are adjustable to accommodate different widths of binding by being slotted longitudinally at the points where they are secured to the plate B by screws $b^4 b^5$.

In many classes of work this binder will be found very useful, as it avoids many evils incident to the binders now in use. Among these evils I will mention the stopping of the feed by the friction upon the material, caused by the guiding devices. This friction is done away with by my device.

A lateral projection, D, of the plate B serves as the gage-plate and support for the nicking device. It is provided with a diagonal ridge or mark, d , and is slotted upon the same angle at d' to permit the adjustment of the nicking device. This device consists of a knife, d^2 , in L form, secured upon an arm, d^3 , pivoted to the slide d^4 , which latter is secured to the part D by the screw d^5 , passing through the slot d' . For convenience, a knob, d^6 , may be provided upon the arm d^3 , whereby to lift and operate said arm. Gage-marks m upon the part D may be continued back of the diagonal line d

at right angles to the latter; or other division-marks may be placed thereon. The diagonal line d should be at such an angle to the line of feed as will enable the binding material to be drawn aside from the article to be bound sufficiently to enable the cutter to descend and nick the former without touching the latter.

In the use of this part of the device I so locate the knife that its apex and the gage-mark, by which it is known that the time for nicking the binding has arrived, will lie in the same circle, having the needle for its center. This is illustrated in Fig. 6, where the dotted line o indicates the circle mentioned. The operator knows when to stop the machine and notch the binding by the fact that the end or corner of the material next in order for binding has reached the gage-mark, as clearly indicated by said Fig. 6; and when the work has progressed thus far the free binding is drawn to one side upon a line with the line d , the cutter is swung over from the open or thrown-back position in Figs. 1 and 6 down upon the binding and a notch cut therein. After cutting the notch, which of course is done in both edges of the binding at the same time, the binding is moved back into line with the feed and the sewing resumed.

I find it convenient, when the material being bound has short sides or ends, to place the notching-knife at such a distance from the needle that when one corner upon the narrow edge is directly under the needle the next corner upon the same edge will be at the exact

position required for the next notching operation. This is permissible of course only when such narrow edges come within the dimensions of the gage-plate.

That portion of the gage-plate which receives the impact of the notching-knife may be made of soft metal or equivalent material, if desired.

I claim—

1. The combination, with the sewing-machine and binder, of a device for notching the corners of the binding material, substantially as specified.

2. The combination, with the sewing-machine and binder, of a device for notching the binding material and a gage for determining the points at which the notches are to be cut, substantially as specified.

3. The nicking device consisting of the swinging arm, provided with an L-shaped cutting-edge, combined with the slide and the supporting-plate, substantially as specified.

4. The notch-cutter hinged to the gage-plate, provided with the diagonal line d , in combination with such gage-plate, substantially as specified.

5. The binder consisting of the spring-leaves, having guide-projections thereon, and the anti-friction rollers for guiding the material to be bound, substantially as specified.

RICHARD J. WELLES.

Witnesses:

L. E. HASTINGS,
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