

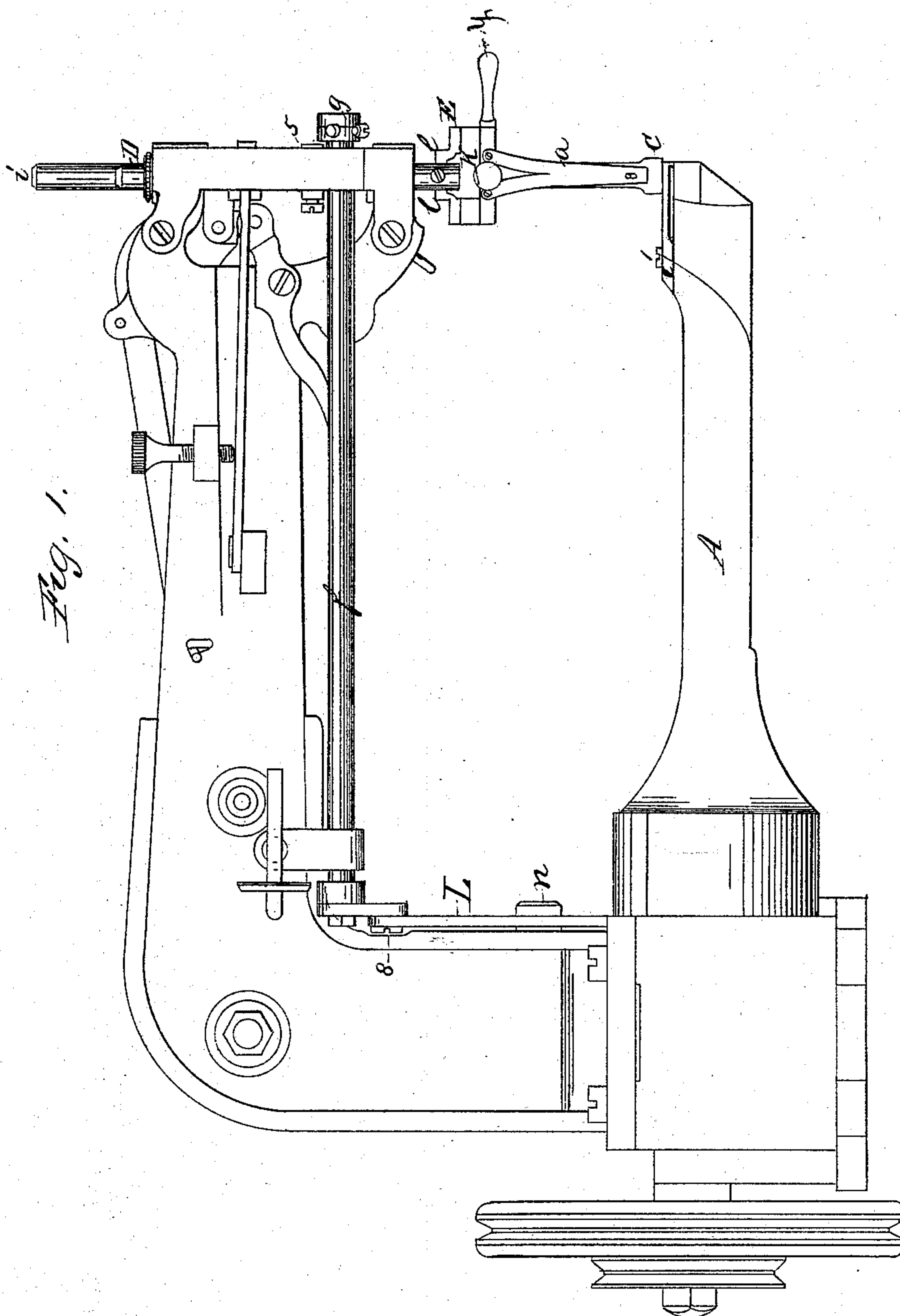
(Model.)

4 Sheets—Sheet 1.

G. H. W. CURTIS.
SEWING MACHINE.

No. 261,913.

Patented Aug. 1, 1882.



WITNESSES:

W. L. Bennett.
John W. Ripley

George H. W. Curtis INVENTOR:

BY

L. J. Gordon

ATTORNEY.

(Model.)

4 Sheets—Sheet 2.

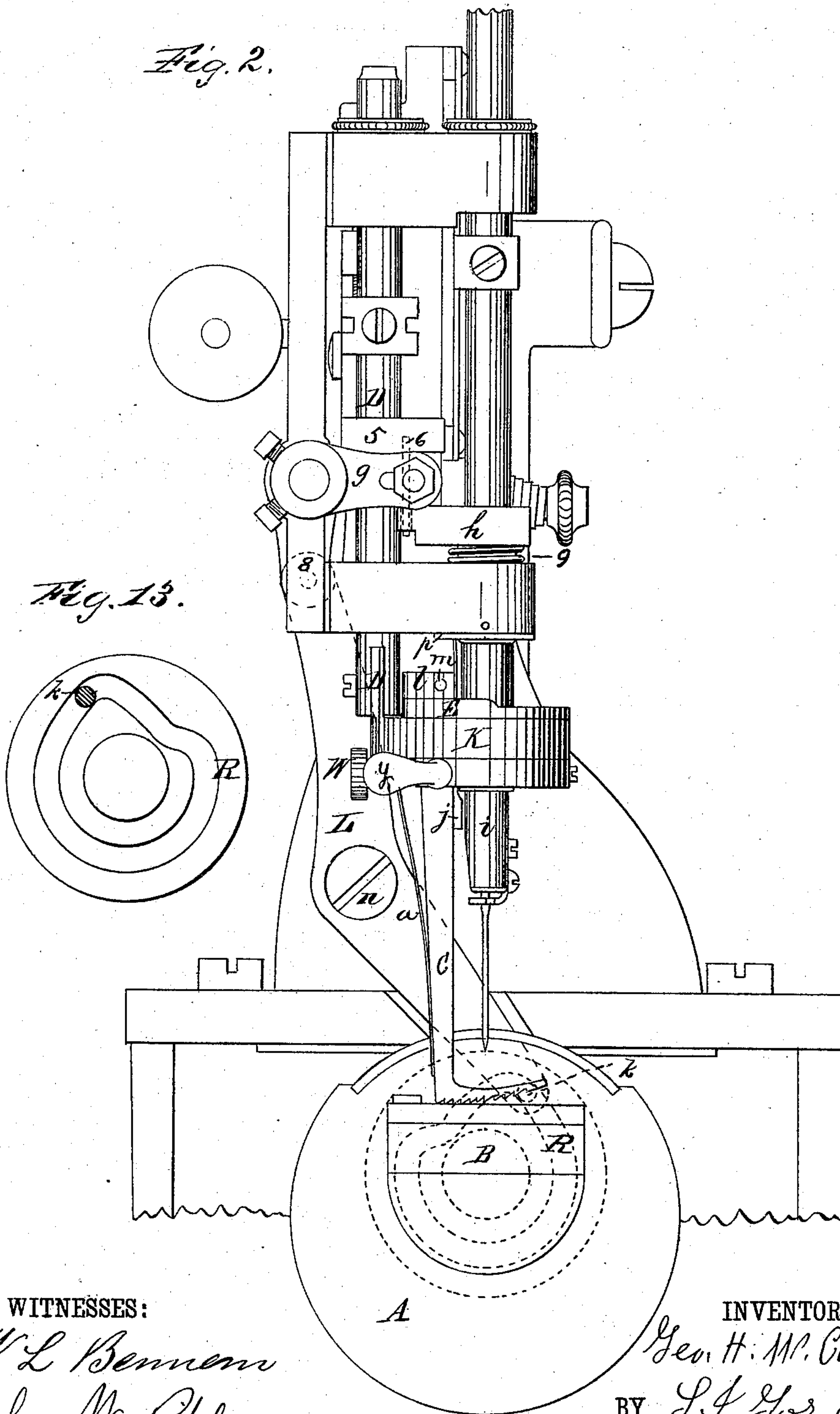
G. H. W. CURTIS.
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Fig. 2.

Fig. 13.



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(Model.)

4 Sheets—Sheet 3.

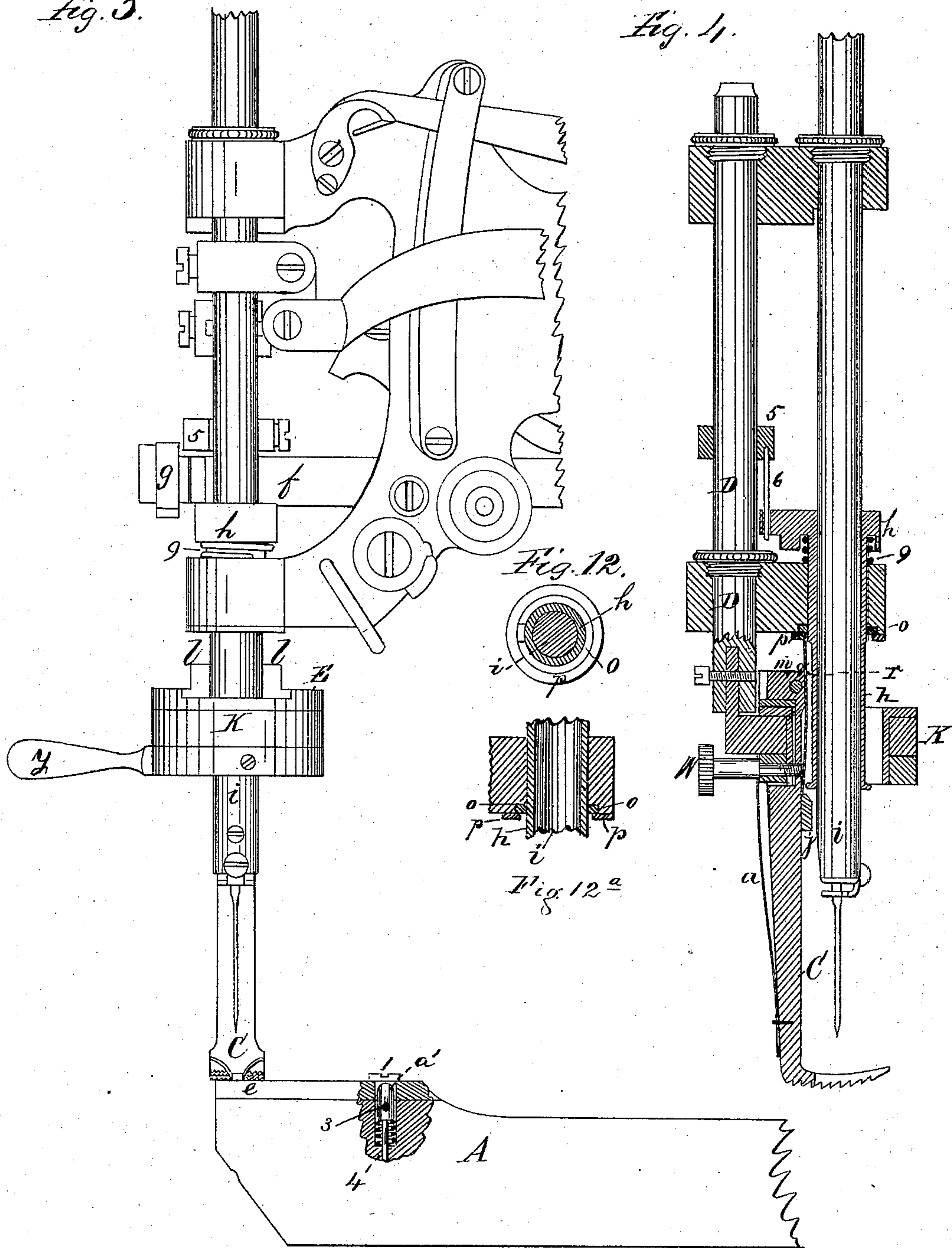
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Fig. 3.

Fig. 1.



WITNESSES:

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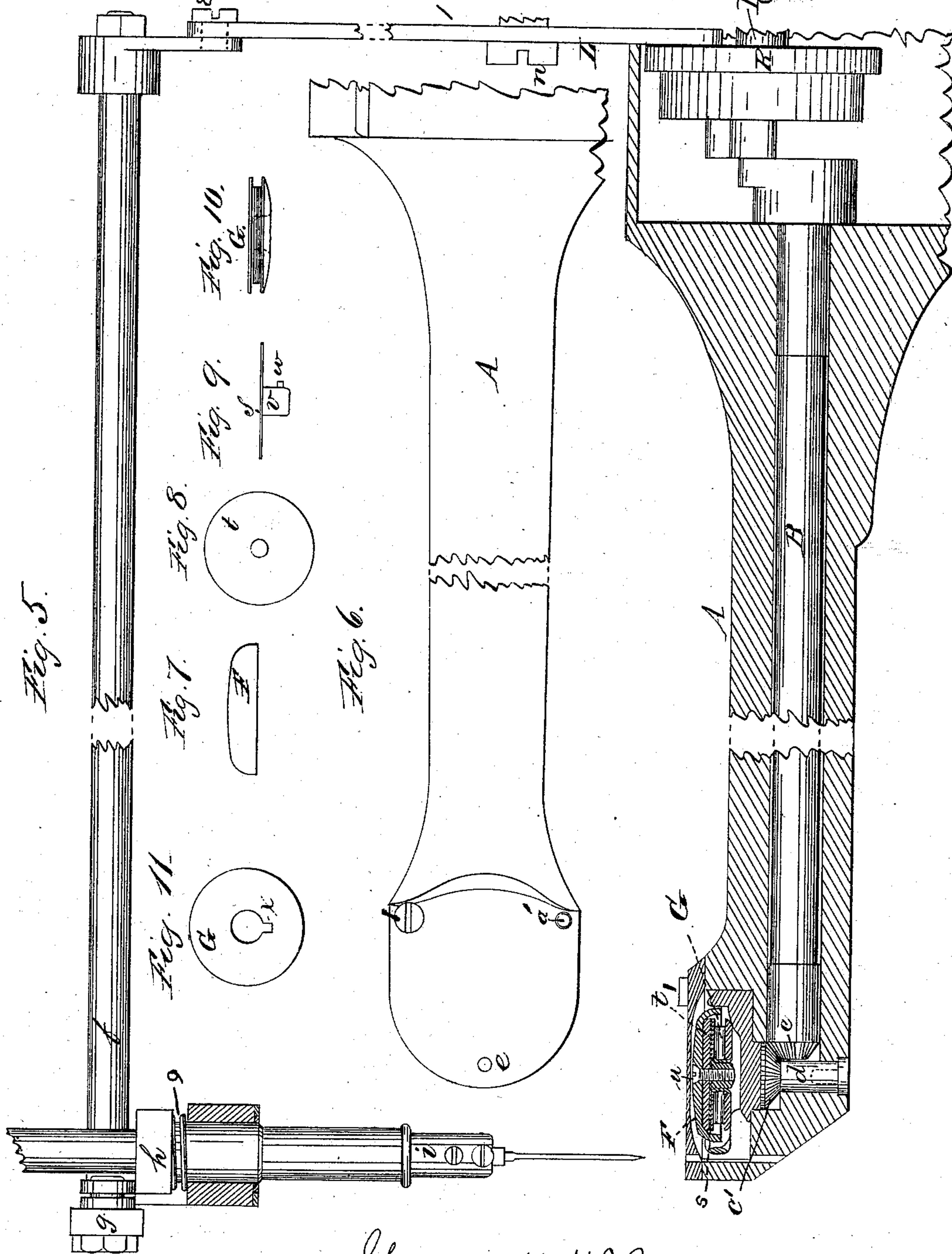
(Model.)

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G. H. W. CURTIS.
SEWING MACHINE.

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WITNESSES:

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John M. Ripley

George H. W. Curtis INVENTOR:

BY J. J. Gordon,

ATTORNEY.

UNITED STATES PATENT OFFICE.

GEORGE H. W. CURTIS, OF BROOKLYN, N. Y., ASSIGNOR TO THE WHEELER & WILSON MANUFACTURING COMPANY, OF BRIDGEPORT, CONN.

SEWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 261,913, dated August 1, 1882.

Application filed March 11, 1881. (Model.)

To all whom it may concern:

Be it known that I, GEORGE H. W. CURTIS, of Brooklyn, county of Kings, State of New York, have invented a new and useful Improvement in Sewing-Machines, which is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a side elevation of a Wheeler & Wilson sewing-machine with my improvements thereon; Fig. 2, a front elevation of same; Fig. 3, a full-size view of a portion of my improved mechanism; Fig. 4, a cross-section of the same. Fig. 5 is a side view of a portion of the needle-bar, collar, and rock-shaft and a sectional view of the work-supporting arm and its mechanism. Fig. 6 is a top view of the arm. Fig. 7 is a side view of the bobbin-case; Fig. 8, a top view of the tension-pad; Fig. 9, a side view of the rotating disk; Fig. 10, a side view of the bobbin; Fig. 11, a top view of the same; Fig. 12, a view of the rotating ring and the plate by which it is supported, with the needle-bar and feed-operating collar in section. Fig. 12^a is a vertical section of the ring and plate and the adjoining parts; Fig. 13, a view of the rock-shaft-operating cam reversed.

The object of my improvement is to provide a machine applicable to repairing the uppers of boots and shoes and the insertion of new elastics, the soles forming no obstacle to the accomplishment of such work by the machine. This result is attained by so connecting the feeding presser-foot with the presser-bar as to permit, by means of appropriate mechanism, the complete rotation of the feeding presser-foot while resting upon the boot or shoe, whereby to move the same in any direction at will.

In the drawings, A represents the arm of the machine, through which passes shaft B, having at its end gear *c*, which, working in gear *c'*, rotates hook-shaft *d*.

Presser-foot C has its under surface roughened to act as a feed in conjunction with throat-plate *e*.

Upon the main shaft B' is located cam R, in the slot of which plays roller or pin *k* upon the end of lever L, swinging upon screw *n*, which secures it to the frame of the machine, connected with an arm of rock-shaft *f* by a similar screw, 8. Main shaft B', by these con-

nections, oscillates rock-shaft *f*, carrying arm *g*, which forces down collar *h* on needle-bar *i* until the lower end of said collar strikes feed-cam *j* on the front of presser-foot C, impelling it forward. Collar *h* is returned to its original position by spiral springs 9. As lever *g* rises it forces up collar 5 on presser-bar D, thereby lifting and releasing presser-foot C, which is returned to its original position by spring *a*. Collar *h* is kept in position by pin 6, secured to collar 5.

At the end of presser-foot bar D is secured circular plate K, upon which is loosely placed an annular feed-disk, E, between the raised portions *l l* of which presser-foot C is suspended by pin *m*. It is obvious that while the sewing is progressing the feed-disk carrying the presser-foot may be turned in any direction by means of lever *y*.

Within the frame, in close proximity to the needle-bar, is a rotating ring, *o*, held up by plate *p*. From this ring is suspended feed-cam *j*, within the slot *q* of which pin *r* at the top of the presser-foot plays, securing the rotation of the feed-cam in conjunction with that of the feed-disk.

This construction and arrangement of parts necessitates peculiar means for getting proper tension on the lower or bobbin thread within its horizontally-placed case. Therefore, inside of bobbin-case F, I provide a rotating disk, *s*, between which and the case is a cloth tension-pad, *t*. Screw-pin *u* draws the disk against the cloth. Bobbin G slides over sleeve *v* on the disk *s*, provided with pin *w*, which lodges in slot *x* in the bobbin-hub and rotates the disk *s*, which is loosened or tightened by screw-pin *u* at pleasure. Throat-plate *e* swings upon screw 1. It is secured in position by latch-pin *a'*, depressed by pin 3, and raised by spiral spring 4.

By these devices it is practical to stitch in any direction at will within any tubular fabric which can be passed over the throat-plate *e*. The stitch is regulated by turning thumb-screw W, which passes through feed-disk E and presser-foot C, pressing against feed-cam *j*.

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

1. The combination, with the presser-bar D

and the feeding presser-foot C, of the rock-shaft *f*, arm *g*, collars *h* and 5, feed-cam *j*, and spring 9, substantially as shown and described.

2. The combination, with the bobbin-case F,
5 of the disk *s*, provided with a sleeve, *v*, having a stud, *w*, an elastic tension-pad, *t*, adjusting screw-pin *u*, and the bobbin G, having a

recess, *x*, in its hub, substantially as shown and described.

GEORGE H. W. CURTIS.

Witnesses:

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S. J. GORDON.