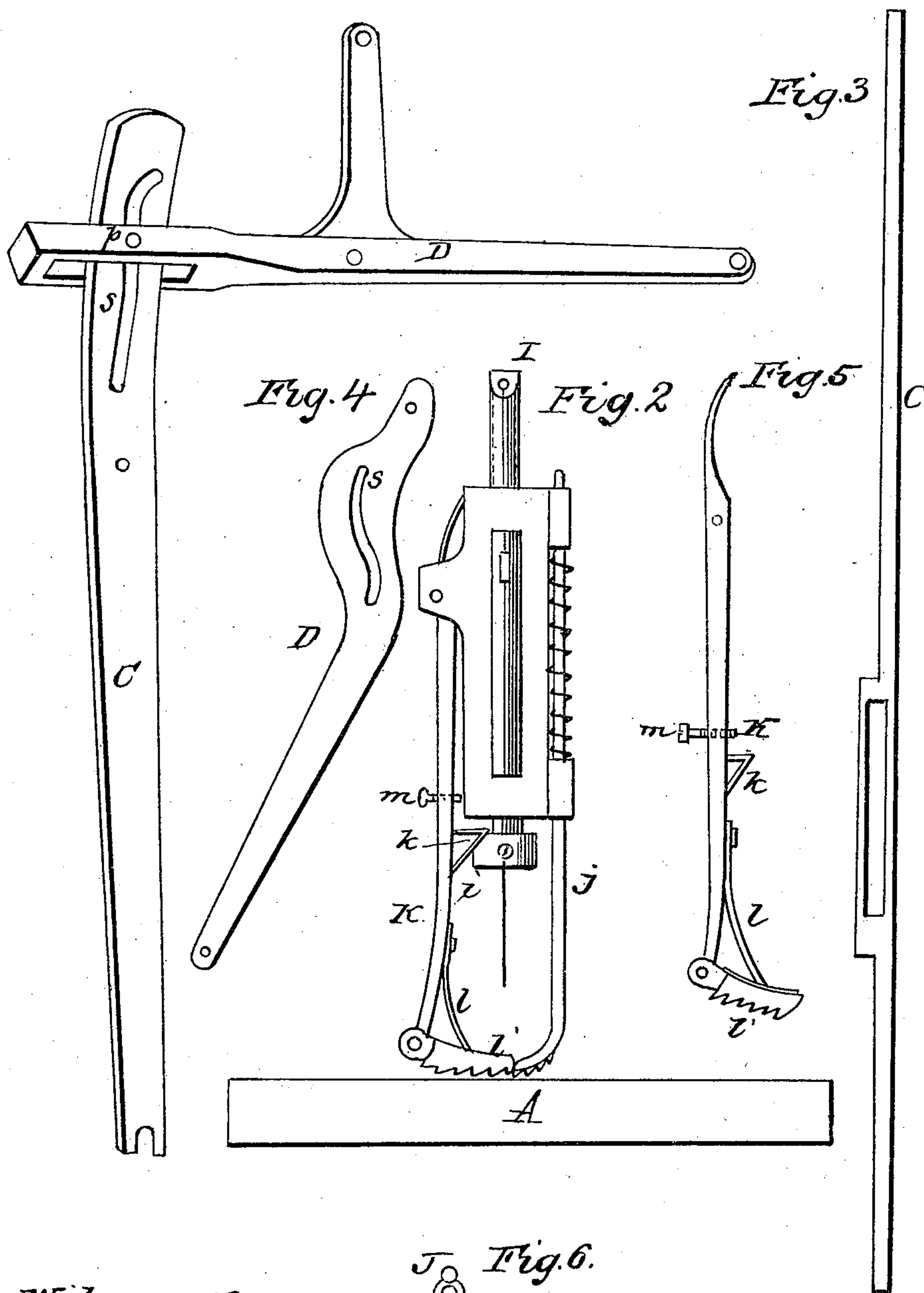


A. N. NEWTON.

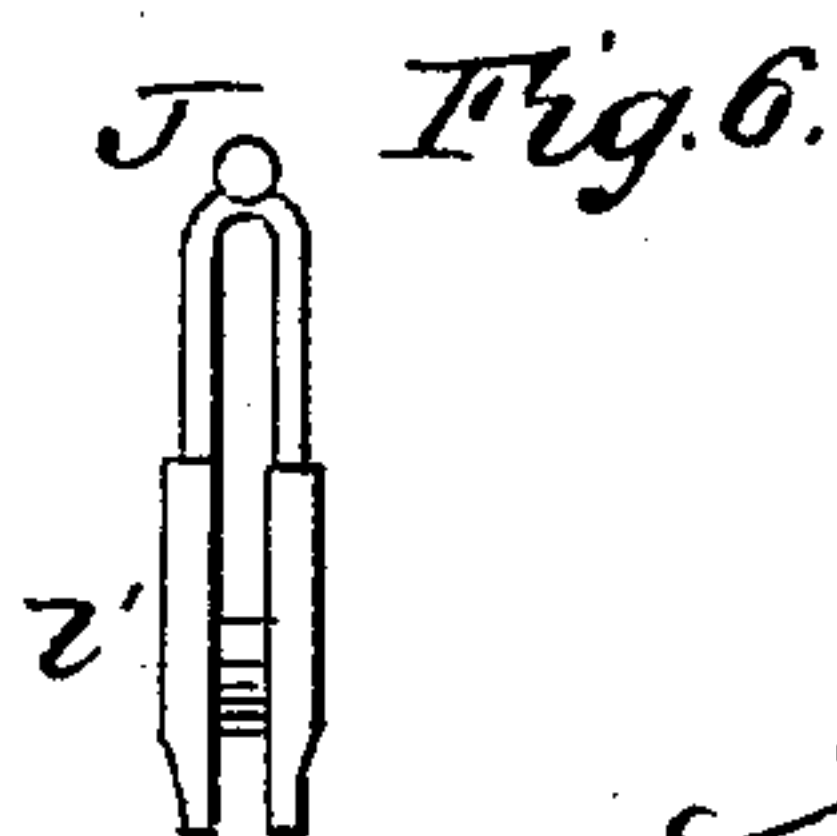
Sewing Machine.

No. 19,439.

Patented Feb. 23, 1858.



Witnesses
Elisha F. Hunt
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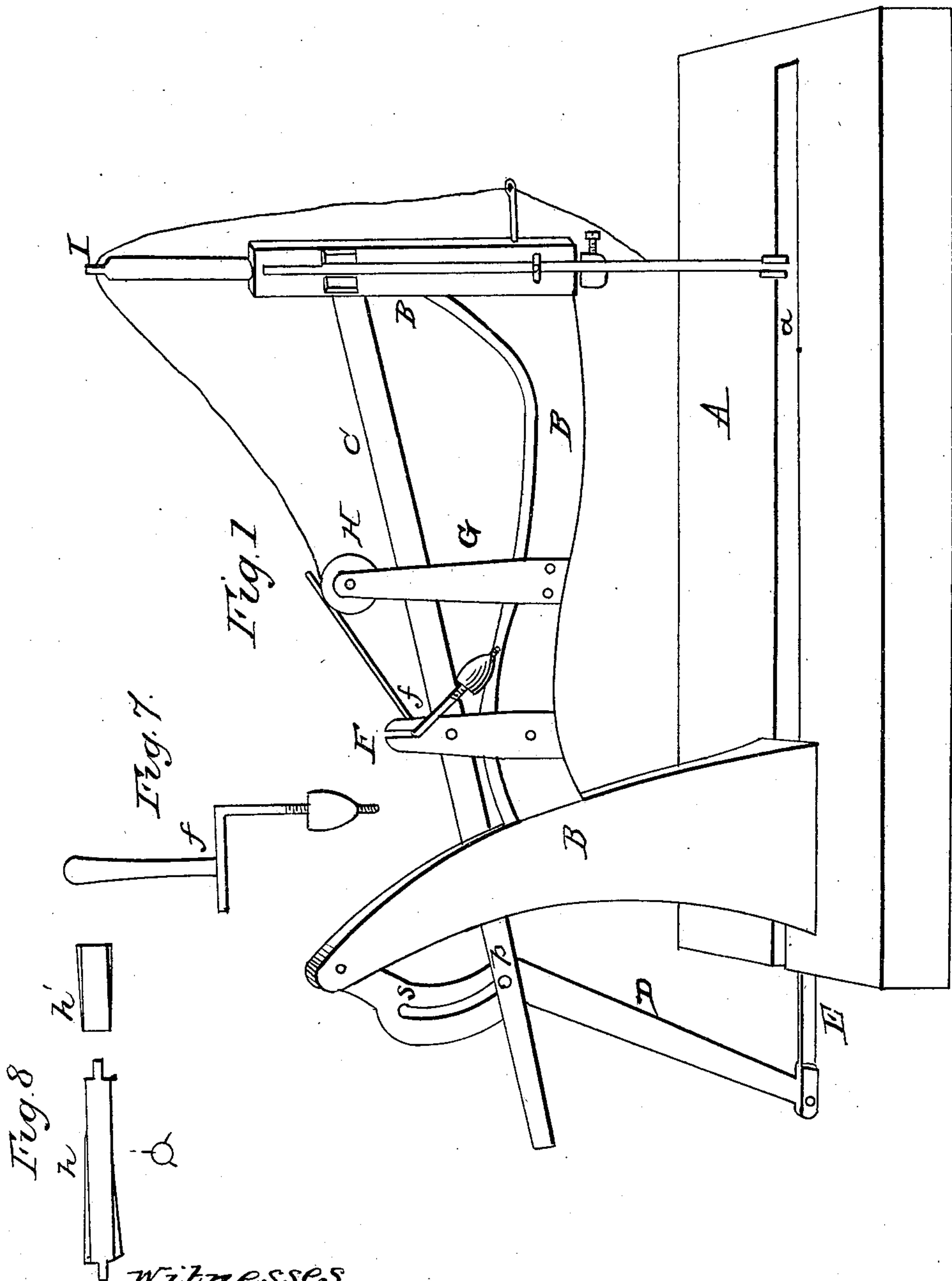
Inventor
A. N. Newton

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UNITED STATES PATENT OFFICE.

ABNER N. NEWTON, OF RICHMOND, INDIANA.

IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. 19,439, dated February 23, 1858.

To all whom it may concern:

Be it known that I, ABNER N. NEWTON, of the city of Richmond, in the county of Wayne and State of Indiana, have invented certain new and useful Improvements in Sewing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perspective view of my invention. Fig. 2 is an end view. Fig. 3 shows lever C. Fig. 4 shows lever D. Fig. 5 shows feed-hand K. Fig. 6 is a top view of feed arrangement. Fig. 7 shows the contrivance for regulating the tension of the needle-thread. Fig. 8 is a contrivance for securing the spool containing the needle-thread upon its shaft or axle.

A is the bed-plate or platform of the machine.

a is a slot or opening for the passage of the shuttle and carrier.

B B B is a frame for the support and attachment of the works. At one end is a guide for the needle-bar; at the other is hinged lever D. Its shape is sufficiently indicated in the drawings. It may be secured to the bottom A in any secure and permanent manner.

C is a lever, by means of which motion is communicated to the needle-bar, and also to the lever D. It is pivoted in upright bearings F F, and receives the lever D through a long mortise. (Shown at Fig. 3.) Motion may be communicated to lever C by means of a crank and pitman or directly by the hand.

D is a lever, whose shape is shown in Fig. 4. Its upper end is curved in order to adapt itself to the shape of the slot *s*. This slot *s* receives a pin, *p*, from lever C, and is so shaped as nearly to coincide with the motion of pin *p* in the first part of the ascent of the needle, thereby allowing a loop to be formed before the starting of the shuttle. The slot then suddenly deflects, so as to give the shuttle a quick passage nearly through, and graduates again to the segment described by pin *p*.

E is a bar or pitman connecting lever D with the shuttle-carrier.

F F are two upright bearings situated upon the frame B, as shown. They furnish support to lever C, and also to the tightener *f*. *f* is a contrivance for tightening the needle-thread. It is composed of a short shaft, a weighted arm,

and friction-plate. Instead of the weighted arm, a spring may be used. The friction-plate is made to bear directly upon the thread upon the spool. As the spool is exhausted of its thread, the thread will find greater resistance from the spool, and will pay off with greater difficulty; but the diminution of the bulk of the thread permits the plate to approach a horizontal, thereby allowing the weighted arm to approach a perpendicular and relieve the thread from a corresponding amount of tension, and thereby equalizing the tightness of the thread.

G is a set of upright bearings for the spool H.

H is a spool to furnish the needle-thread.

h is a shaft or mandrel upon which the spool H is received. Upon one end of this mandrel are three flanges, shaped and situated as shown at Fig. 8. There is also a band, *h'*, with similar flanges upon it. These flanges are used instead of a cone, in order that their edges may indent the spool and prevent its slipping. Shaft *h* is first forced into the spool as far as convenient. The band *h'* is then insinuated between the spool and shaft, and the spool is ready to be placed in the machine. The design of this contrivance is to afford a true mandrel for a spool of any sized bore.

I is the needle-bar, of any ordinary form, except that upon its lower end is the incline plane for operating the cloth-feed K.

J is a cloth-holder or check-feed. Its foot is forked, forming a passage for the needle, and also acting as a guide to the feed-hand K. It is held down upon the cloth by a spiral spring.

K is the feed-hand. Its shape is shown at Fig. 5. Its upper end is a spring which throws the foot back to renew its hold.

k is an incline, which, being touched by the incline *i* upon the needle-bar, gives the motion for feed.

l is a spring that forces the foot down upon the cloth and secures certainty in the feed.

l' is the foot with serrated under surfaces. It is also forked, like the foot of cloth-holder J; but each of the prongs of foot *l'* are grooved upon the under side, so that they may slide upon the prongs of holder J, using them as guides, and being lifted up by them when adjusting the cloth.

m is a set-screw upon feed-hand K, to regulate the length of stitch.

I would state that the slot s of lever D may be transferred to lever C, running lengthwise of said lever, and the mortise of lever C transferred to D. By this arrangement the needle is made to rest in its upward motion while the shuttle (whose motion would be uniform) was passing through the loop. The needle would also rest in its descent at the same point.

What I claim as new and useful, and desire to secure by Letters Patent, is—

1. The slotted lever D, in combination with mortised lever C, for the purposes herein set forth.

2. The combination of levers C D with the needle-bar I, in the manner herein described.

ABNER N. NEWTON.

Attest:

JOHN FINLEY,
JOHN HOLLOPETER.