

(Model.)

J. M. GRIEST.

PLAITER FOR SEWING MACHINES.

No. 306,743.

Patented Oct. 21, 1884.

Fig. 1.

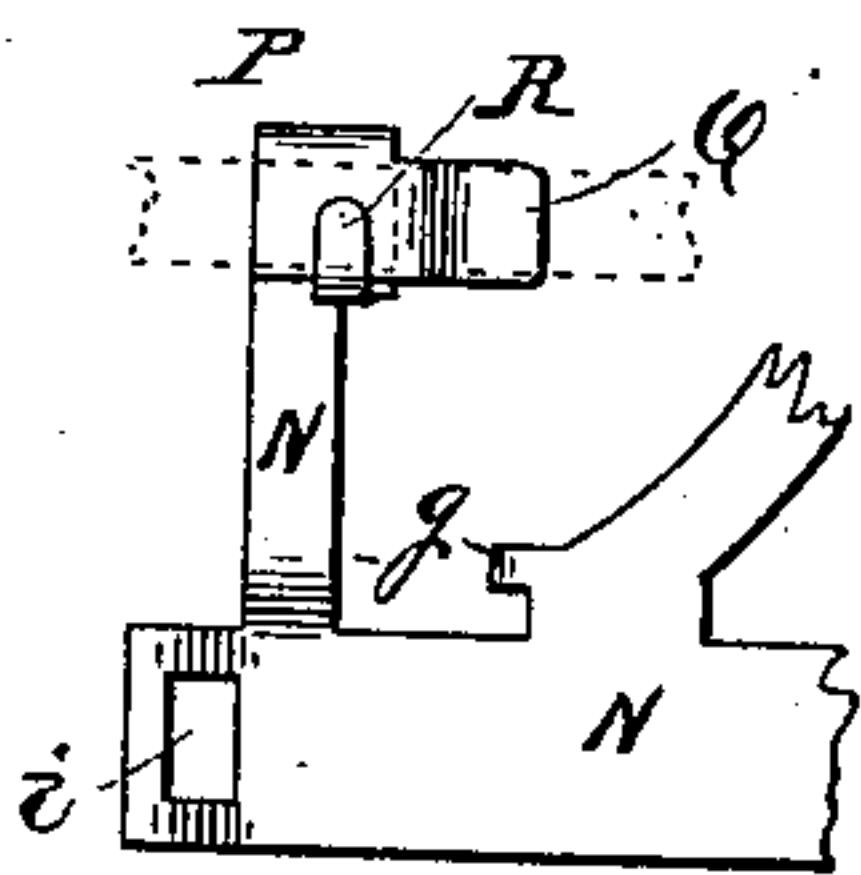
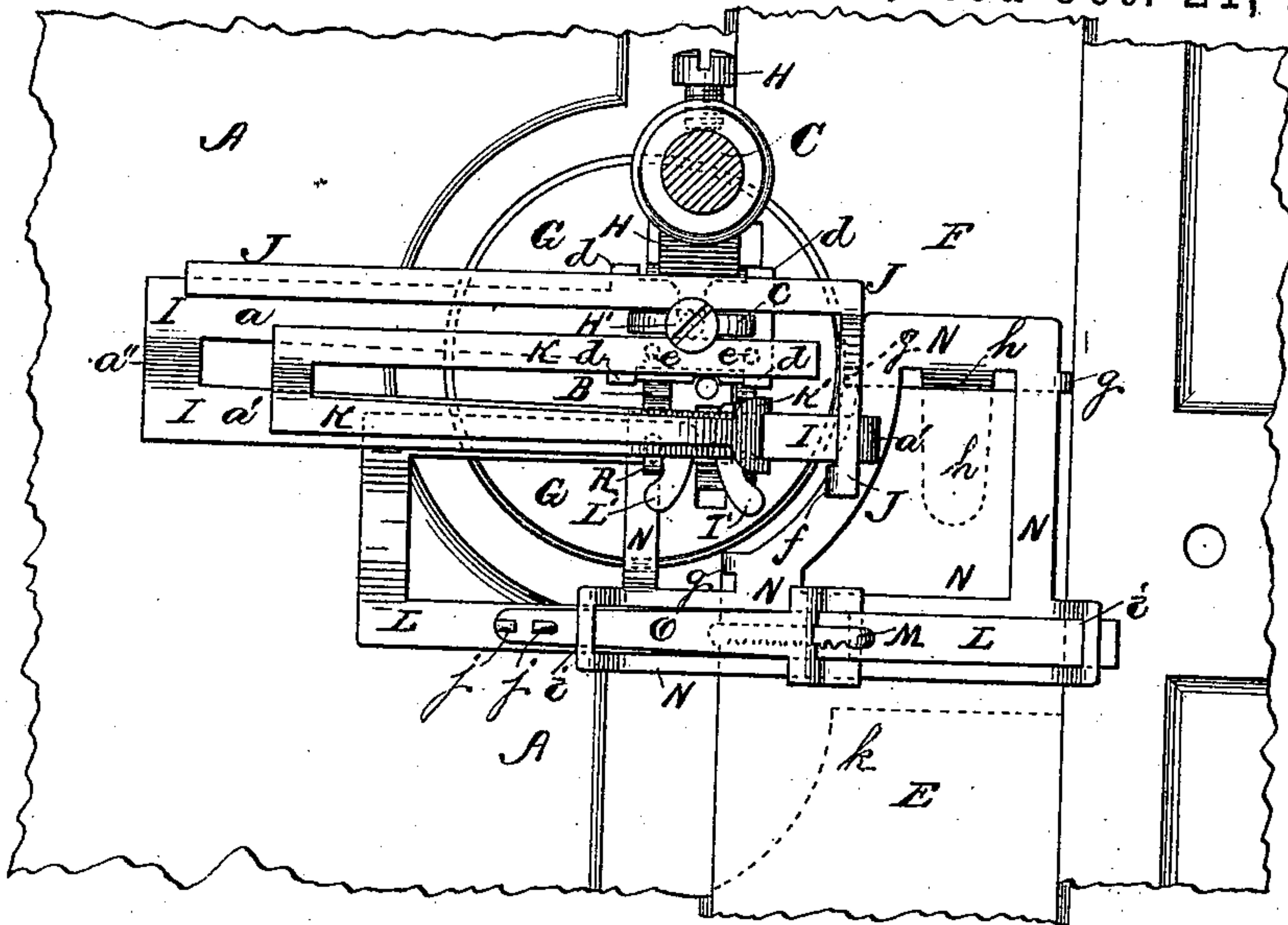


Fig. 3.

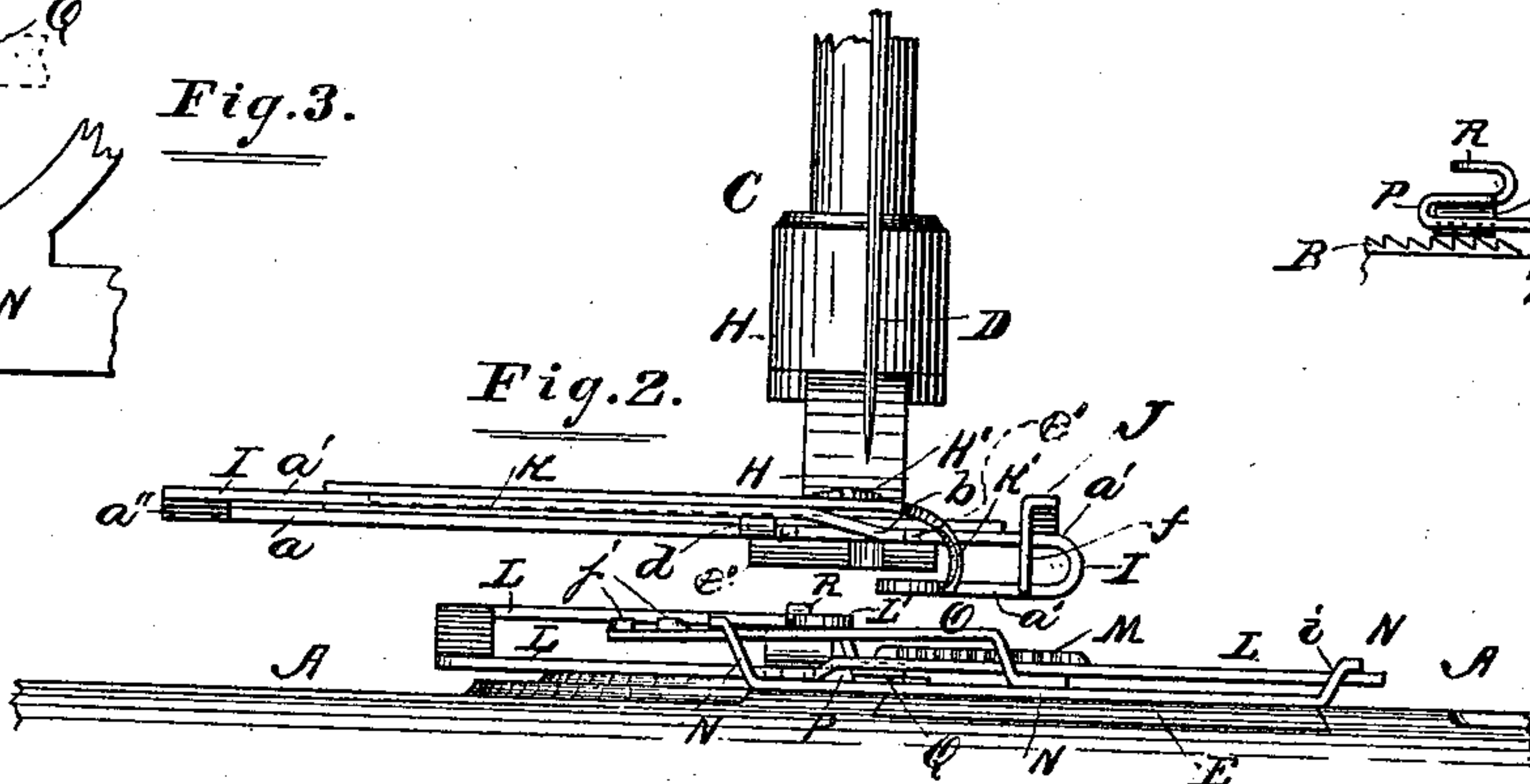


Fig. 2.

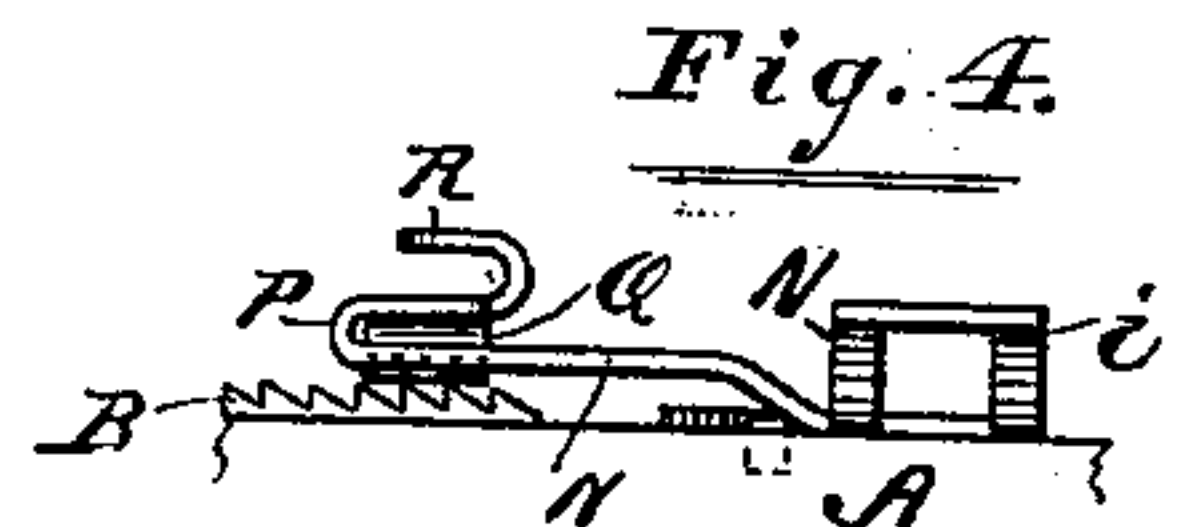


Fig. 4.

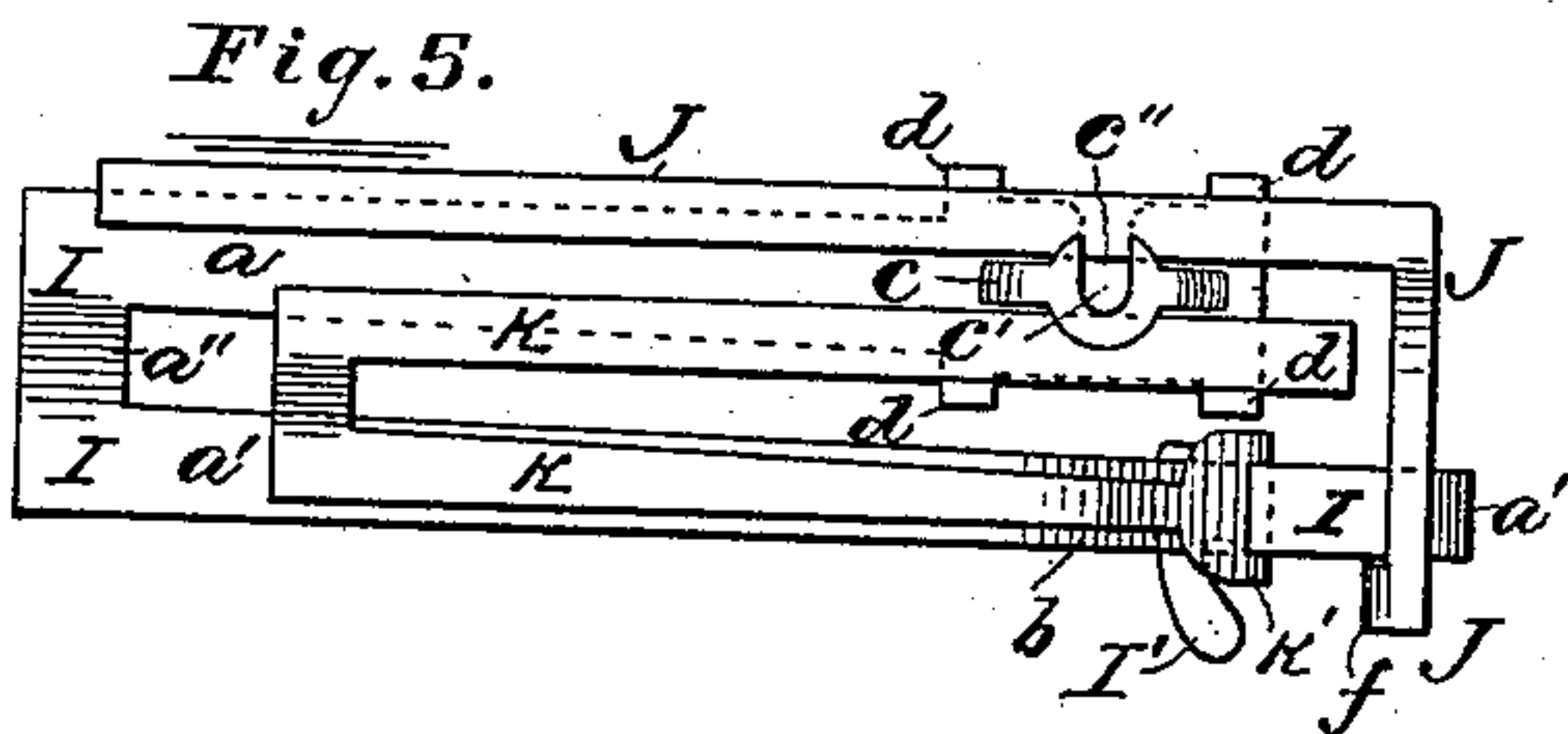


Fig. 5.

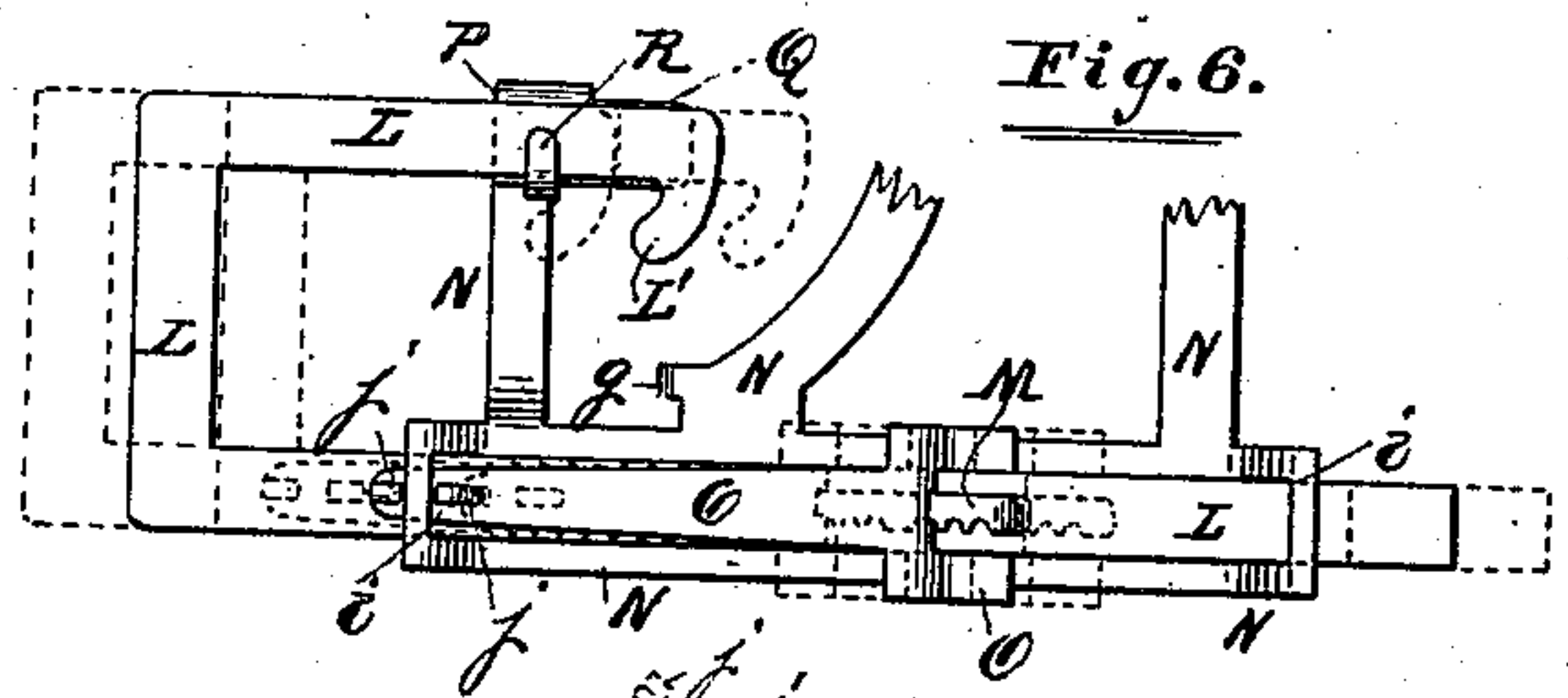


Fig. 6.

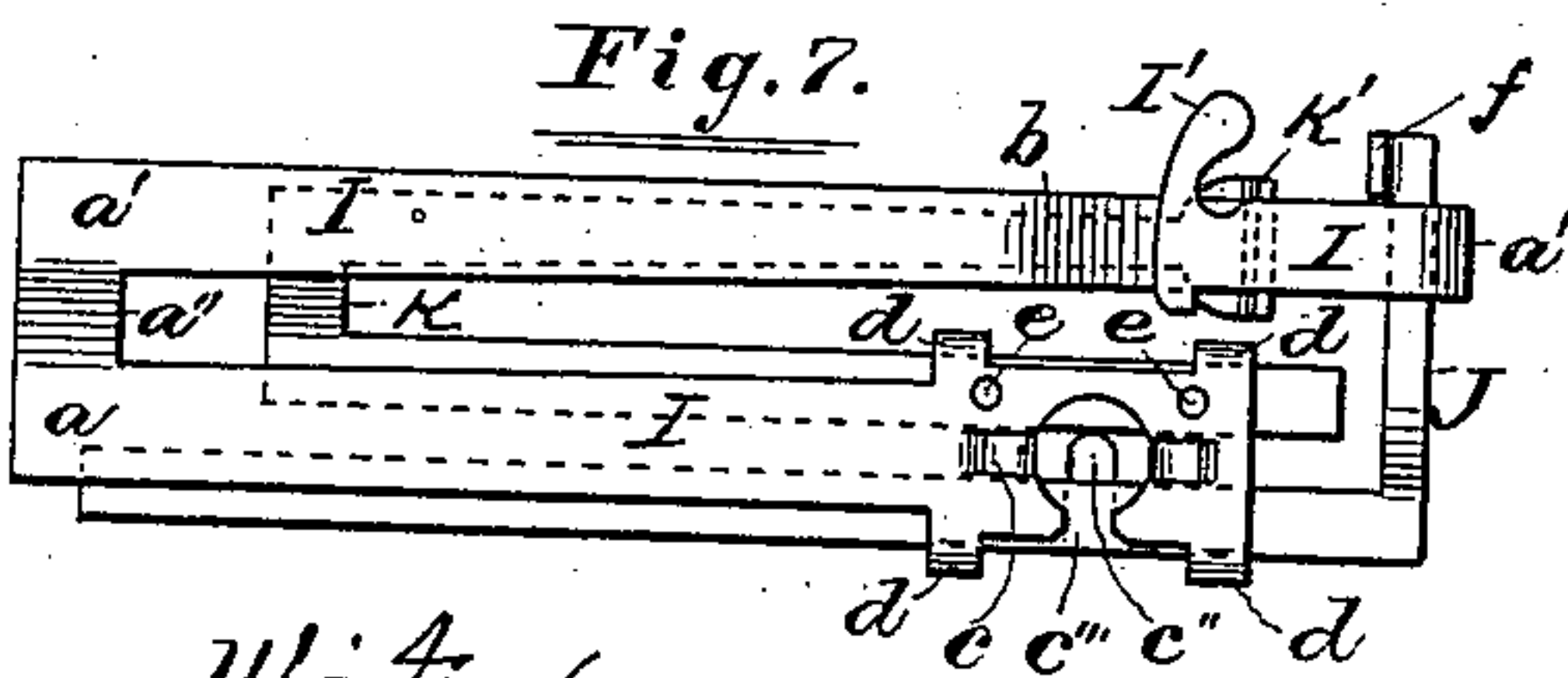


Fig. 7.

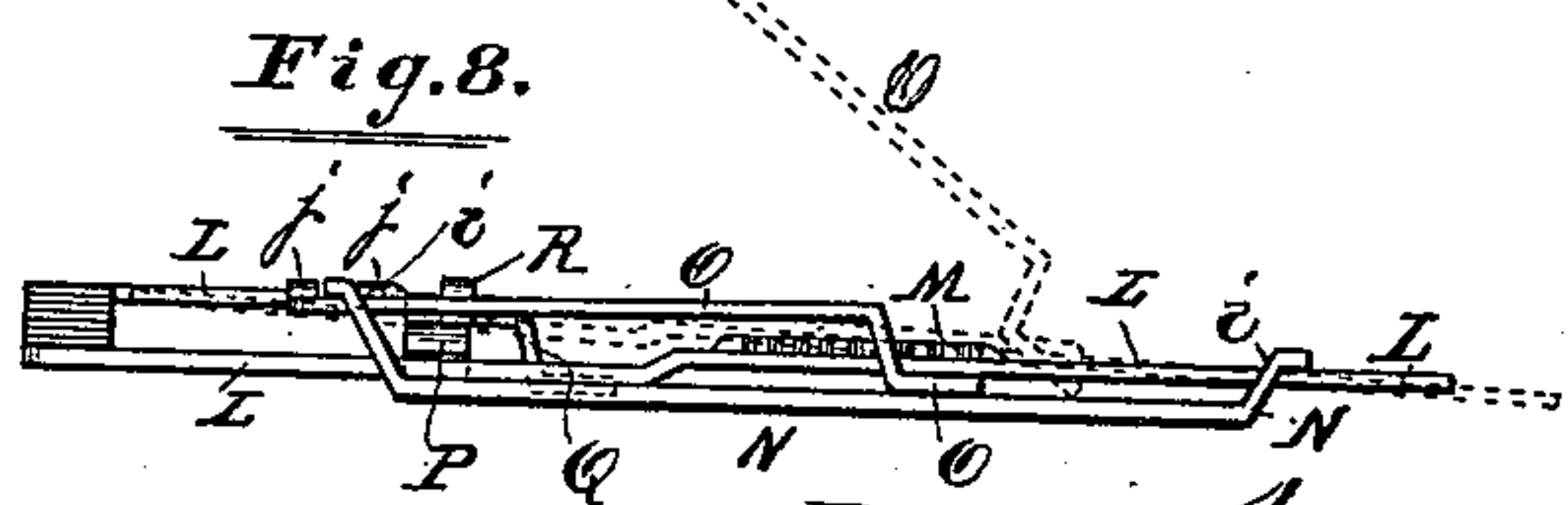


Fig. 8.

Witnesses,
Henry Frankfurter,
W. L. Baker.

Inventor,
John M. Griest
per. F. F. Warner
his Attorney.

UNITED STATES PATENT OFFICE.

JOHN M. GRIEST, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE CHICAGO ATTACHMENT COMPANY, OF SAME PLACE.

PLAITER FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 306,743, dated October 21, 1884.

Application filed November 5, 1883. (Model.)

To all whom it may concern:

Be it known that I, JOHN M. GRIEST, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Plaiters for Sewing-Machines, of which the following, in connection with the accompanying drawings, is a specification.

In the drawings, Figure 1 is a top view of a plaiter embodying my improvements, and shown as attached to the machine. Fig. 2 is an edge view of the same. Fig. 3 is a top view, in detail, of a part of the holder. Fig. 4 is an edge view thereof. Fig. 5 is a top view of the upper set or group of parts. Fig. 6 is a like representation of the lower set or group. Fig. 7 is a bottom view of the upper group, and Fig. 8 is an edge view of the lower group.

Like letters of reference indicate like parts. My invention relates to a class of plaiters an example of which is shown and described in Letters Patent of the United States of America No. 268,398, granted to me the 5th day of December, 1882.

A represents the cloth-plate of a sewing-machine; B, the serrated feed-plate; C, the presser-foot bar; D, the needle; E and F, the shuttle-race slides, and G the throat-plate.

H is the presser-foot, and H' is a screw entering its horizontal part.

I is a horn-plate, and I' is its horn or folder. This plate consists of two longitudinal arms, *a* and *a'*, connected by means of a cross-bar or arm, *a''*. The arm *a''* is bent or raised slightly, as indicated, to bring a portion of the arm *a'* somewhat higher than the arm *a*, and the horn end of the arm *a'* is bent downward and back, as shown, and is also inclined slightly, as shown at *b*. A bridge, *c*, having a widened or enlarged central part, *c'*, in which is an opening, *c''*, is raised near the free end of the arm *a*, and *c'''* is a notch or opening in the same portion of the said arm.

d d are lugs extending upward from the said arm, and *e e* are holes in the arm *a*.

J is a rectangular slide having a depending part, *f*. This slide serves as an adjustable gage, and moves between the bridge *c* and the lugs *d d*, and is overlapped by the part *c'*.

K is a sliding or adjustable scroll-plate, and K' is its scroll. The arm *a'* passes freely through the scroll K', and one arm of the plate K passes between the bridge *c* and the inner lugs, *d d*, and is overlapped by the parts *c'*. The upper group of parts I attach to the presser-foot by withdrawing the gage J, raising the screw H', passing the enlargements *c'* underneath the head of the said screw, replacing the said gage, and tightening or screwing down the said screw upon the said enlargement, thereby retaining the plate I, plate K, and gage J together upon the presser-foot, and rendering it unnecessary to remove the screw H' for the purpose of applying and removing the upper group of parts and setting the gage and scroll-plate. Lateral or torsional movement of the parts applied to the presser-foot is prevented by means of studs *e' e'*, projecting from the presser-foot into the holes *e e*, and these studs and holes also cause the said parts to be set accurately on the presser-foot. The said parts may also be applied and removed with ease.

L is a horned plate belonging to the lower group of parts, and L' is its horn or folder.

M is a rack or serrated portion raised from the long arm of the plate L.

N is a holder or base-plate for holding the plate L properly in place upon the cloth-plate of the machine. This plate or holder is a frame-like structure, and *g g* are lugs depending therefrom. A tongue, *h*, also projects from one arm or bar of the holder N, and extends horizontally in a plane somewhat below the main part or body of the holder, as indicated in Fig. 1. The long arm of the plate L passes freely through slots in upturned ends or corners of the holder, as indicated at *i i*.

O is a spring lever or catch, through which the long arm of the plate L also passes freely. One end of the lever O also passes through one of the slots *i i*, as indicated, and that end has upon it small upraised projections or catches *j j*.

P is a scroll, Q a presser, and R a lug, all formed on one arm of the holder N.

To attach the plate L to the holder N, I pass the long arm of that plate through the slots *i i*, and turn the lug R down over the short arm

of the said plate, but not tightly enough to bind it.

To apply the lower group of parts to the machine, I draw out the plate E to about the position indicated by the dotted lines at *k*, Fig. 1, and then arrange the holder in the opening thus made, the lugs *g g* and the tongue *h* being downward. I then push back the plate E over the tongue *h* and against the lugs *g g*, when the holder will be firmly held in its proper place. The presser Q then rests on the serrated feed-plate. By this means the lower group may be quickly and accurately applied to the machine, and may also be removed with facility.

To adjust the parts for work, I proceed as follows: If the tucks are to be, for example, one-quarter of an inch wide, I set the lever O on the rack N so that the lever, when depressed, will engage the rack one-quarter of an inch from the right-hand end of the latter. I then depress the lever and draw it, together with the plate L, to the extreme left until the horn I' comes in contact with the lug R, as indicated in Figs. 1 and 2. I then lower the upper group and move the lever O, with the plate L, until the raised parts *j j* engage the holder N, after which the scroll K' is moved up to within about a thirty-second of an inch of the horn I', and the gage J is set as heretofore and as described in the said Letters Patent. If the screw H' be now tightened, all the parts in the upper group will be held firmly together. I now move the lever O and plate L to the extreme left and raise the presser-foot. The material or goods are placed between the upper and lower groups, the horn or folder I' depressed by the forefinger of the right hand, while the lower horned plate or folder is moved to the right until the lever O engages the holder N, when the fold will be formed. The gage J extends forward of the fixed holder or horn and of the needle, and projects between the upper horned plate and the long arm of the lower horned plate. The material passes over the latter plate and under the gage, and is held up to it and retained against it without being in contact with any part underneath the goods, thus avoiding friction and the retarding of the movements of the goods. The scroll K' has its portion K located over the horned arm in the upper group, and the arm *a'* of the plate I passes freely through the bent or depending end of the plate K, thus bringing the scroll proper between the upper and lower portions of the arm *a'*, thus holding them together. The presser Q, by reason of its contact with the serrated feed-plate, causes the lower or fixed scroll to rise and fall simultaneously with the upper group of parts, so that the upper and lower parts will be prevented from coming together and interfering with the free passage of the goods through and around the scrolls and folders. The lower scroll is also so connected to the plate L that the said scroll and plate have the

same vertical or yielding action, and the lug R, by so holding these parts together, prevents them from being separated by means of seams or otherwise, thus avoiding the improper passage of the goods between the parts so held together.

It will be perceived from the foregoing description, and on reference to the accompanying drawings, as well as to the Letters Patent hereinbefore referred to, that the principal differences between my present and my said former invention relate to the means employed for attaching the upper group of parts to the presser-foot, for attaching the lower group to the cloth-plate, for adjusting the parts with reference to the width of the folds, for withdrawing the horn or folder in the lower group from the fold, and for gaging the folds.

I do not here claim the holder N, broadly or independently, when constructed substantially as herein shown and described, having made claim thereto in a pending application, No. 110,865, for a patent for improvement in holders for sewing-machine attachments.

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

1. The combination, substantially as specified, in a plaiter for sewing-machines, of the horned plate I, having therein the notch or opening *e'''* and the holes *e e*, scroll-plate K, scroll P, horned plate L, a presser-foot having thereon the studs *e' e'*, and a binding-screw, H', for the purposes set forth.

2. The combination, substantially as specified, in a plaiter for sewing-machines, of the horned plate I, having therein the opening *e'''* and the holes *e e*, and having a bridge, *c*, with its enlargement *c'* and opening *c''*, scroll-plate K, scroll P, horned plate L, a presser-foot having thereon the studs *e' e'*, and a binding-screw, H', all arranged substantially as shown and described with relation to each other, for the purposes set forth.

3. The combination, substantially as specified, in a plaiter for sewing-machines, of the horned plate I, having therein the notch or opening *e'''* and the holes *e e*, and having thereon the lugs *d d* and a bridge, *c*, with its enlargement *c'* and opening *c''*, the adjustable gage J, scroll-plate K, scroll P, horned plate L, a presser-foot having thereon the studs *e' e'*, and a binding-screw, H', for the purposes set forth.

4. The combination, substantially as specified, in a plaiter for sewing-machines, of the horned plate I, scroll-plate K, horned plate L, and the holder N, having thereon the scroll P and presser Q, for the purposes set forth.

5. The combination, substantially as specified, in a plaiter for sewing-machines, of the horned plate I, scroll-plate K, horned plate L, and the holder N, having thereon the scroll P, presser Q, and lug R, for the purposes set forth.

6. The combination, substantially as speci-

5 fied, in a plaiter for sewing-machines, of the fixed horned plate I, scroll-plate K, adjustable horned plate L, having thereon a serrated portion M, the holder N, with its scroll P thereon, and the adjustable catch or lever O, adapted and arranged to engage the said serrations, for the purposes set forth.

In testimony that I claim the foregoing as my own I hereto affix my signature in presence of two witnesses.

JOHN M. GRIEST.

Witnesses:

F. F. WARNER,
J. B. HALPENNY.