

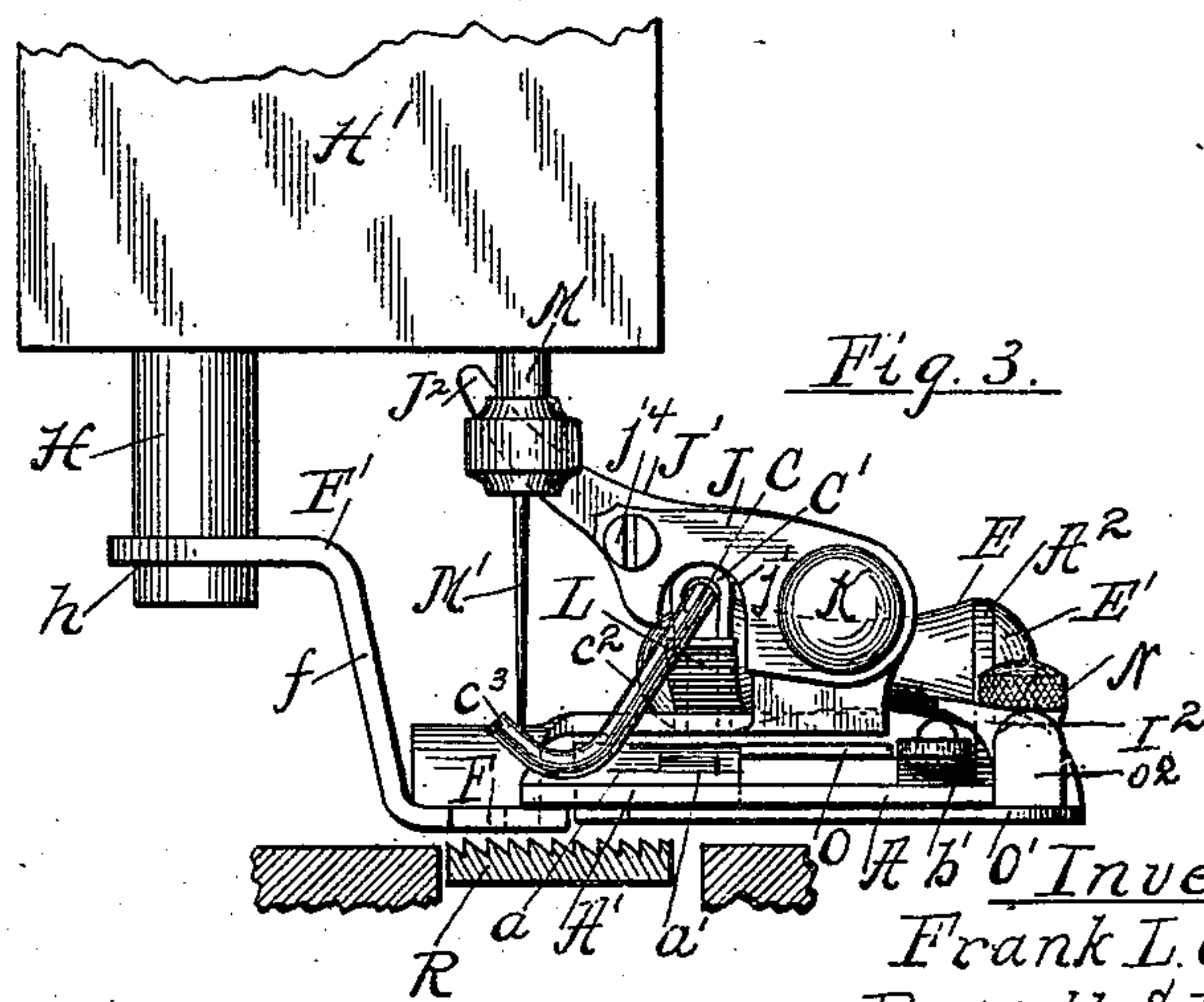
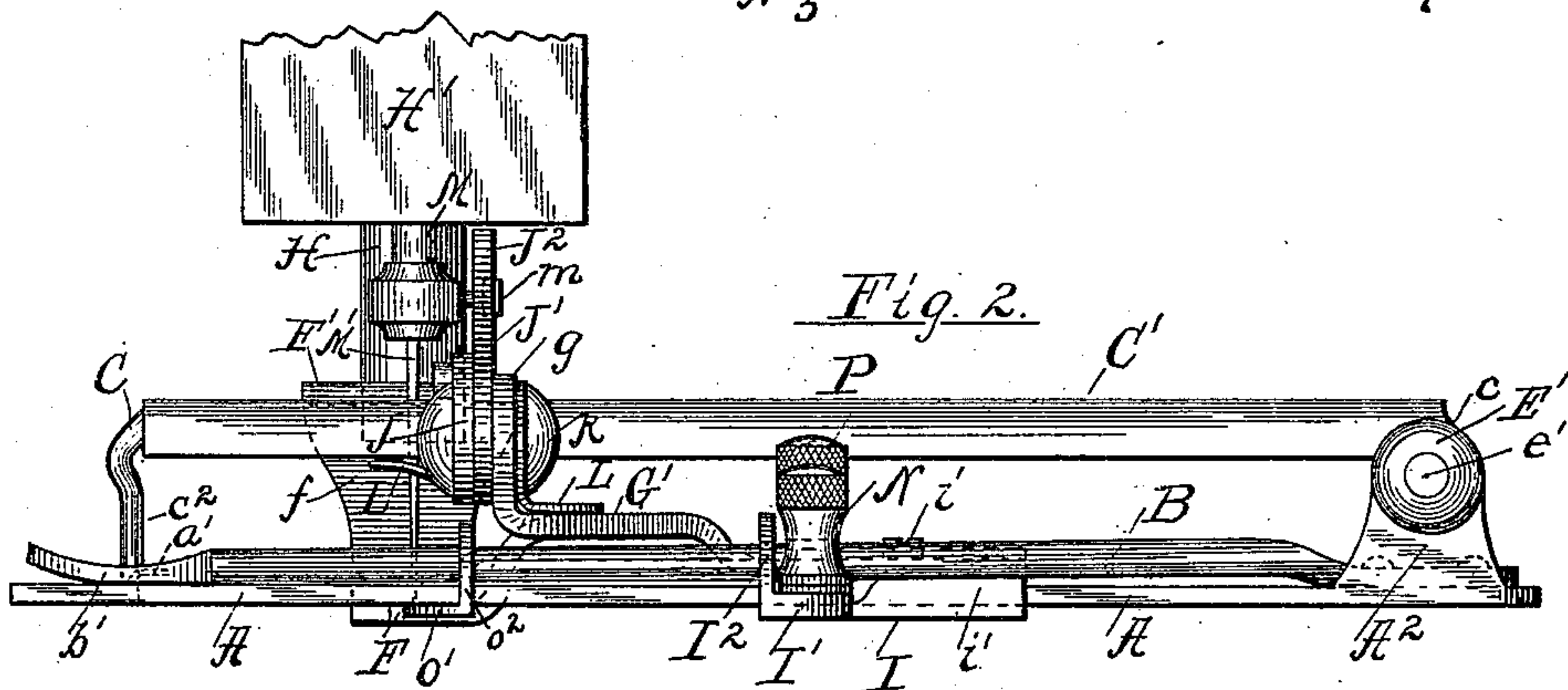
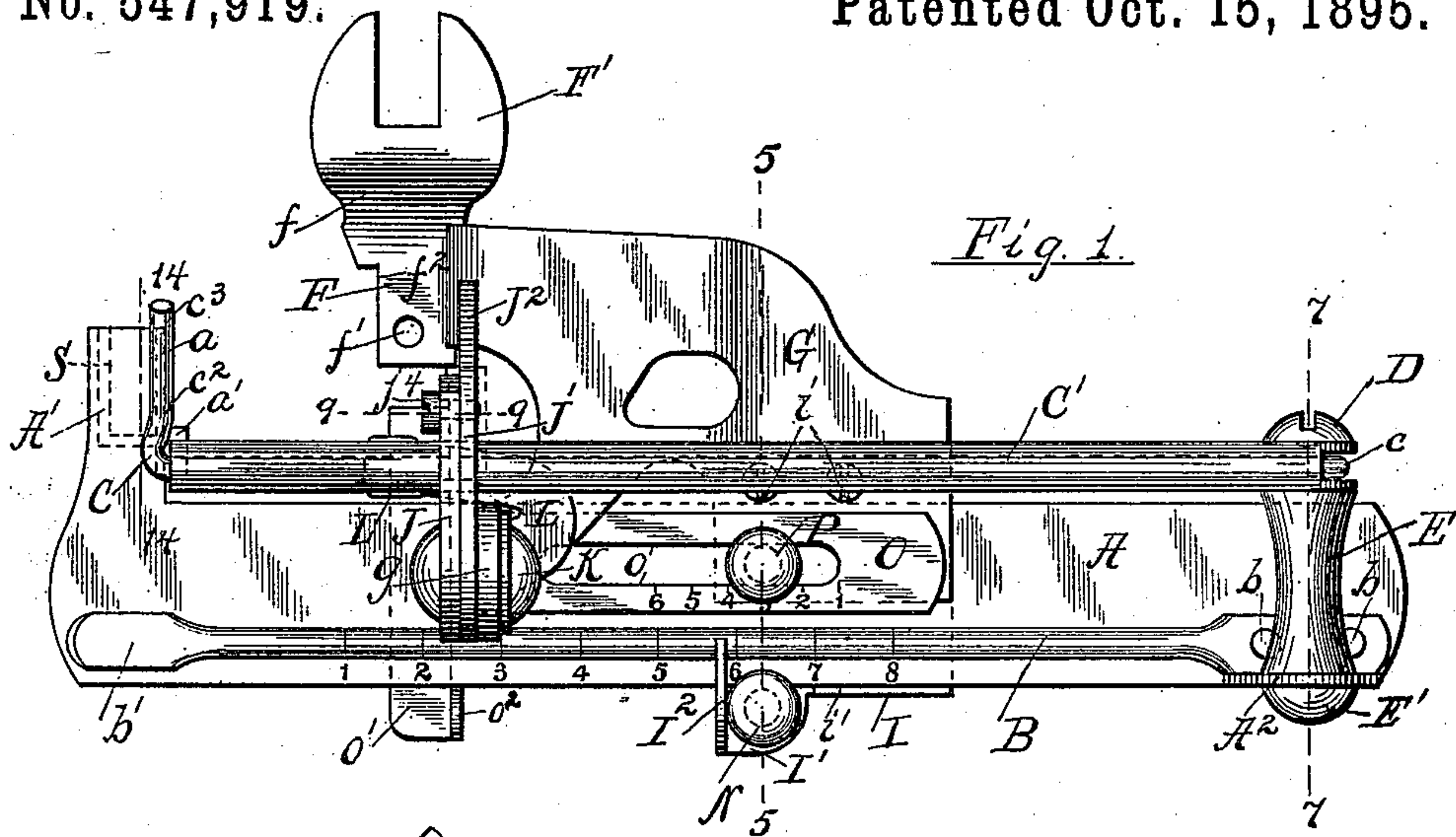
(No Model.)

2 Sheets—Sheet 1.

F. L. GOODRICH & R. S. BARNUM.
TUCK CREASER OR MARKER FOR SEWING MACHINES.

No. 547,919.

Patented Oct. 15, 1895.



Witnesses

John W. Adams
Louis M. V. Whitehead.

Inventors

Frank L. Goodrich
Russell S. Barnum.

By Dayton, Poley & Brown
their Attorneys.

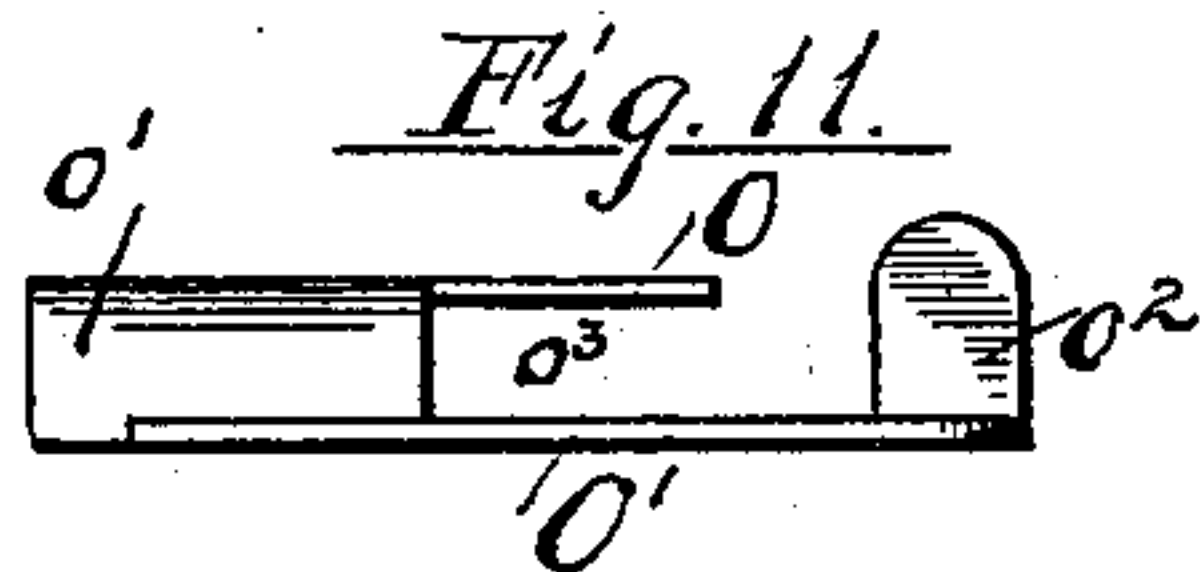
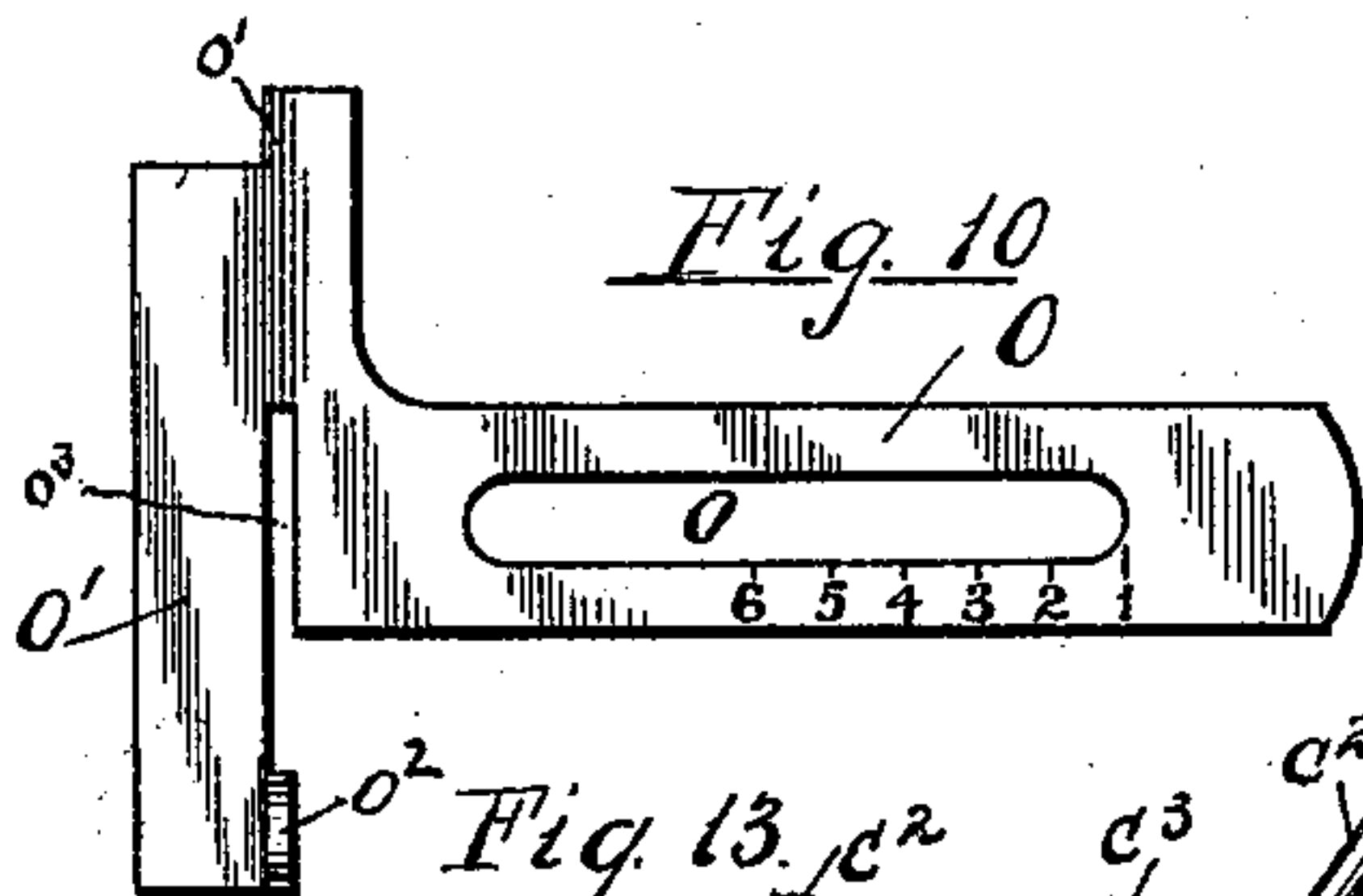
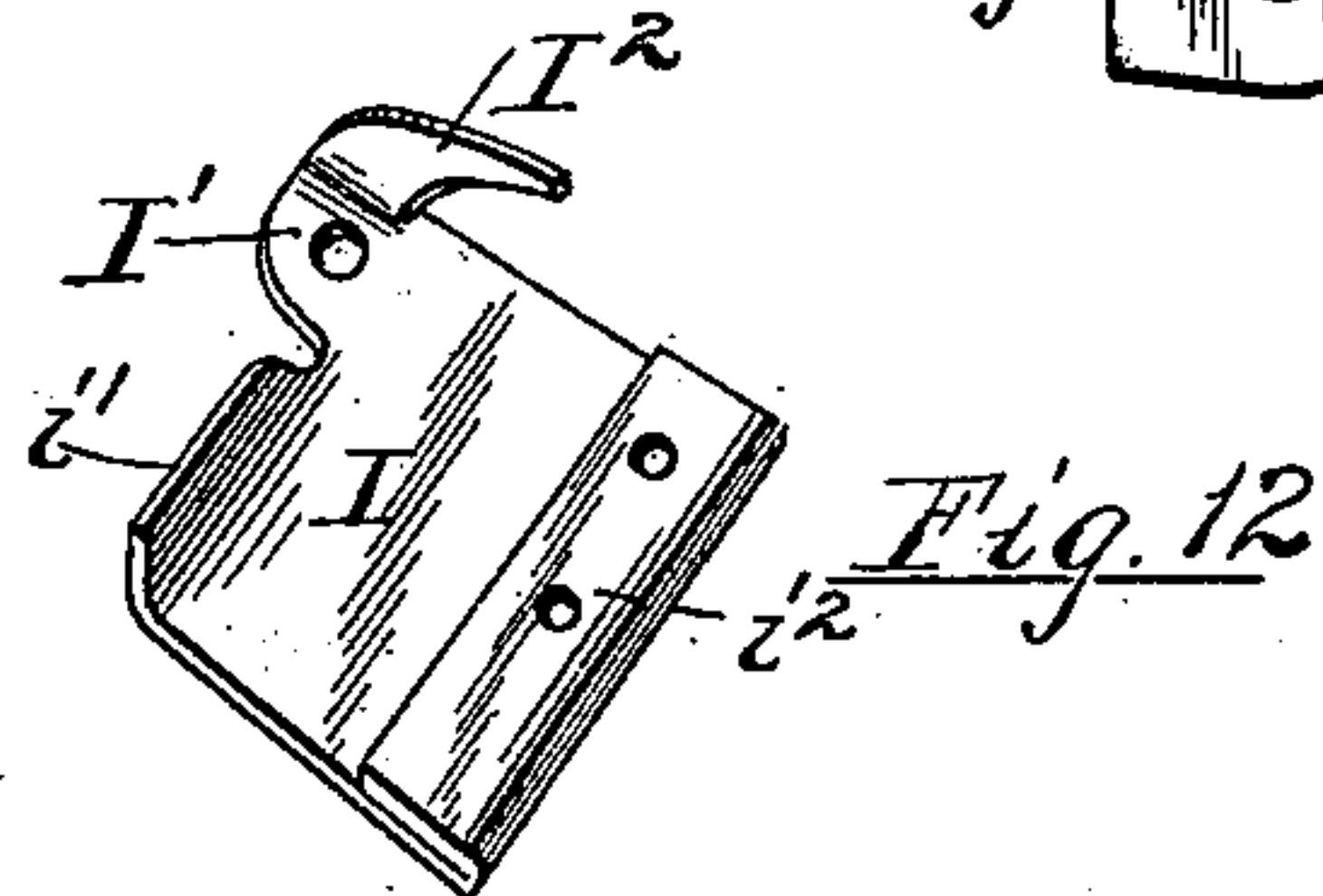
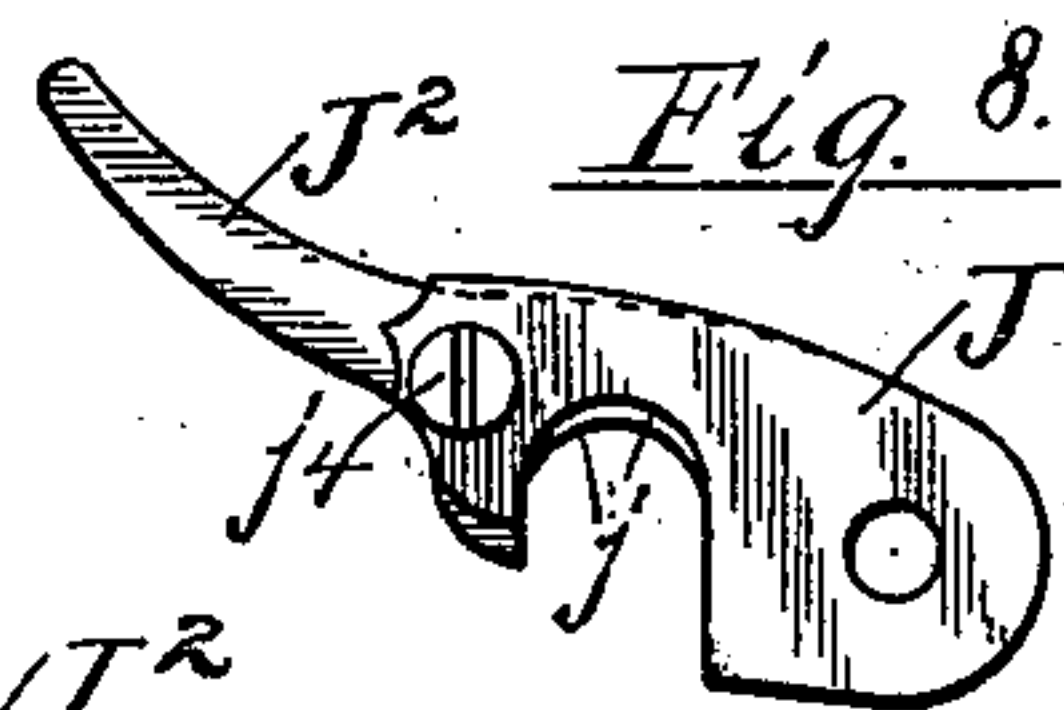
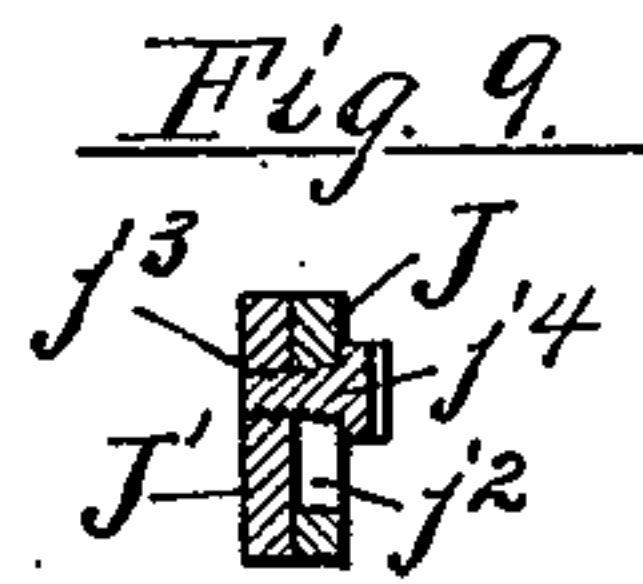
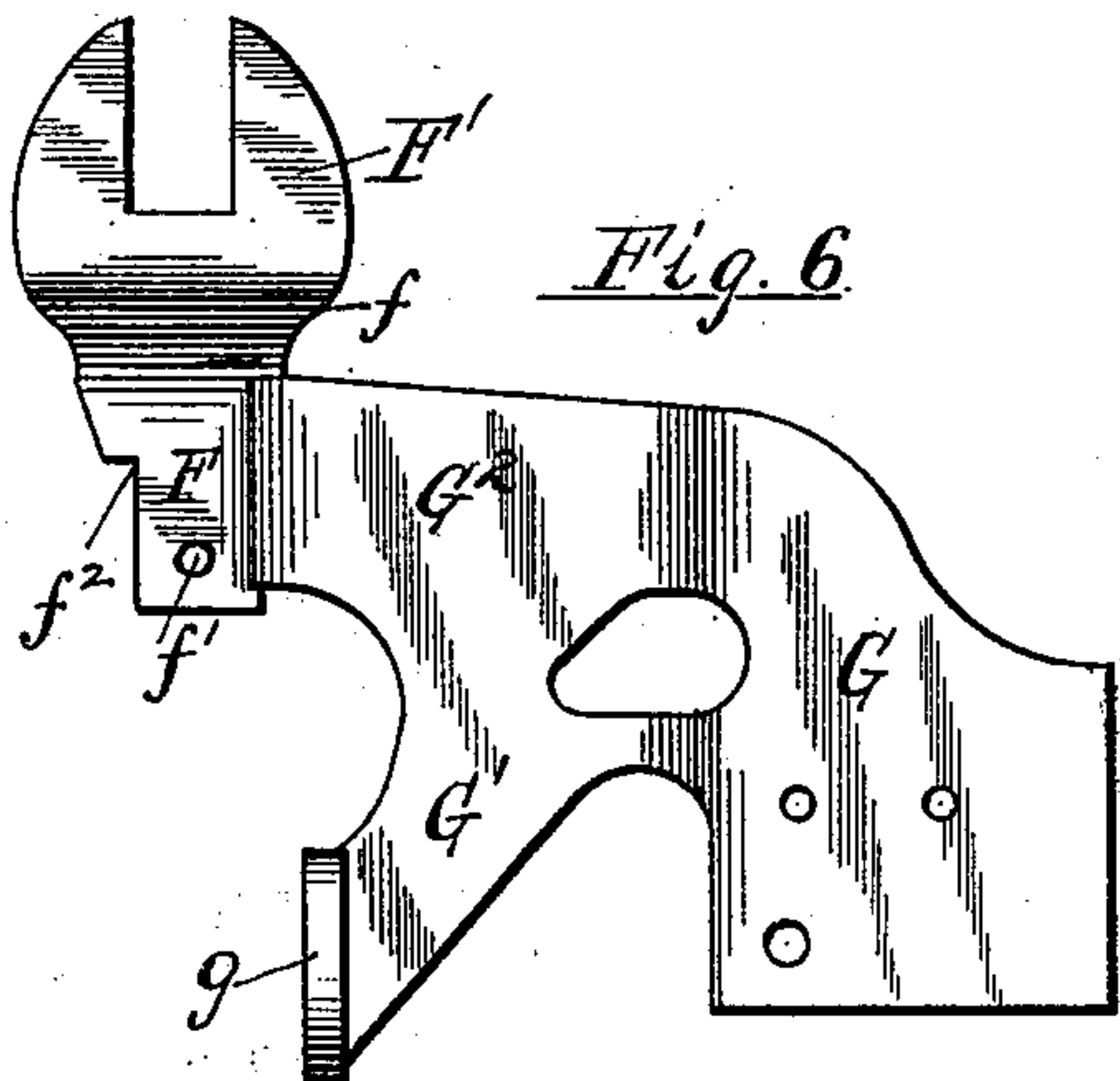
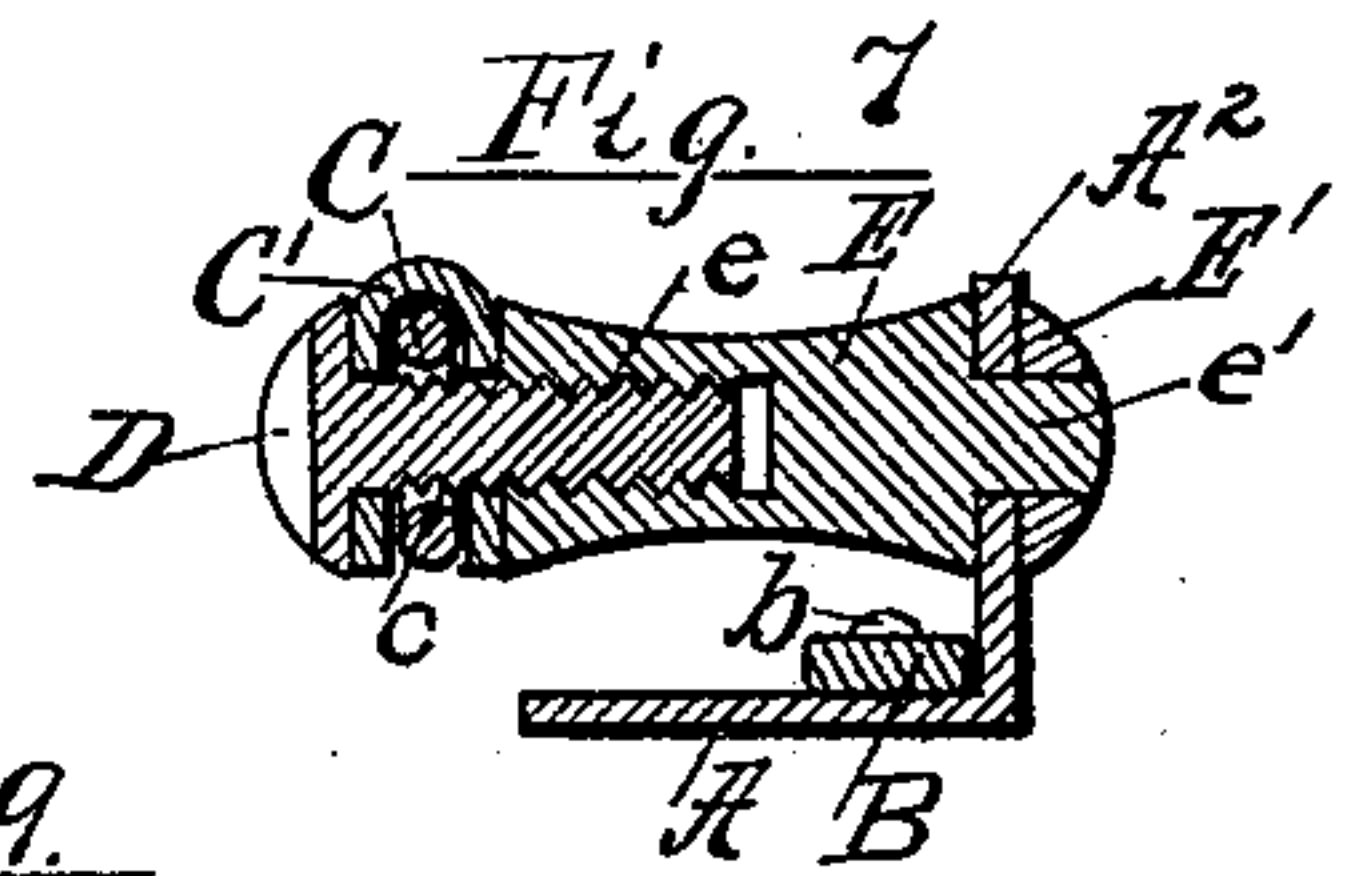
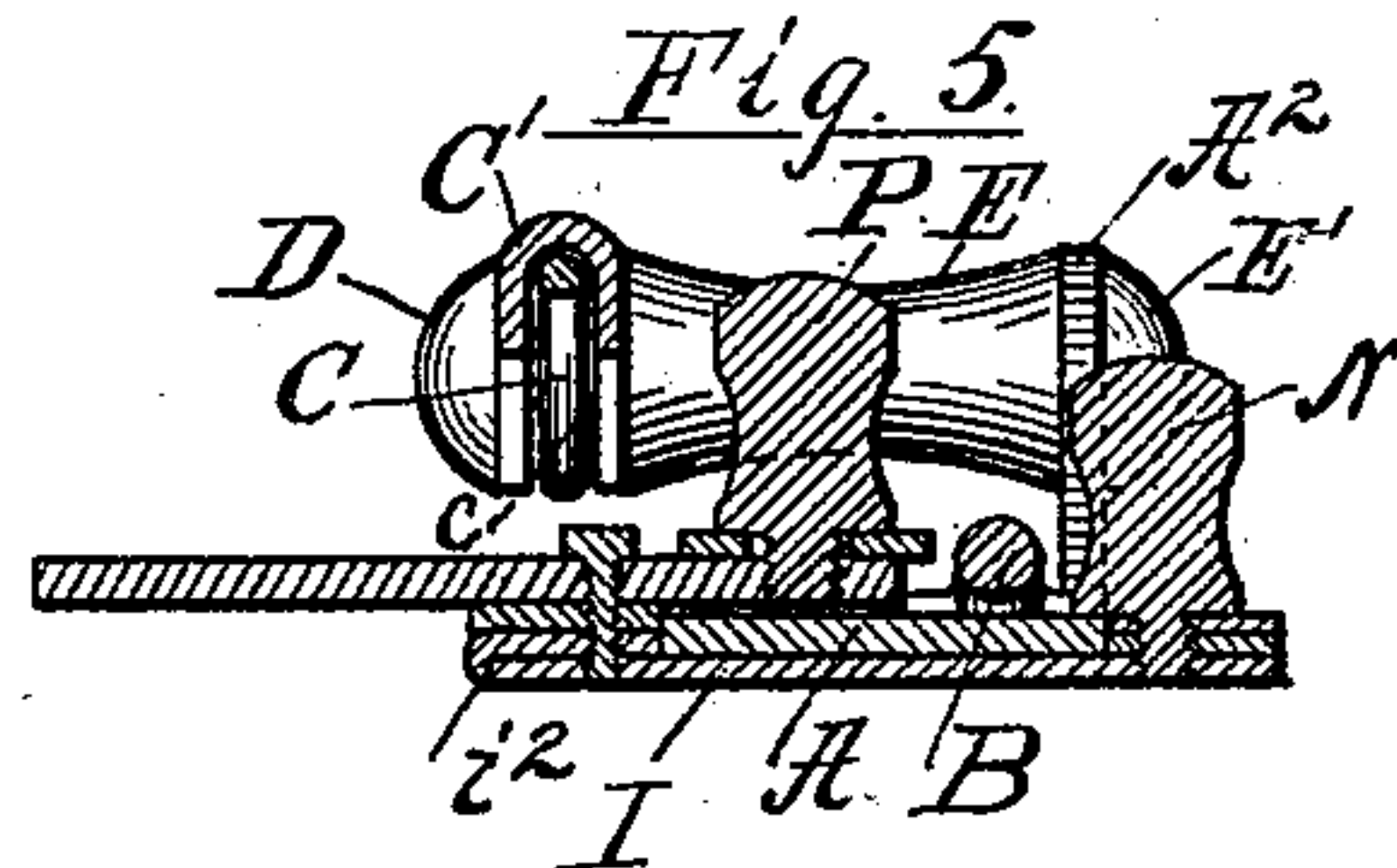
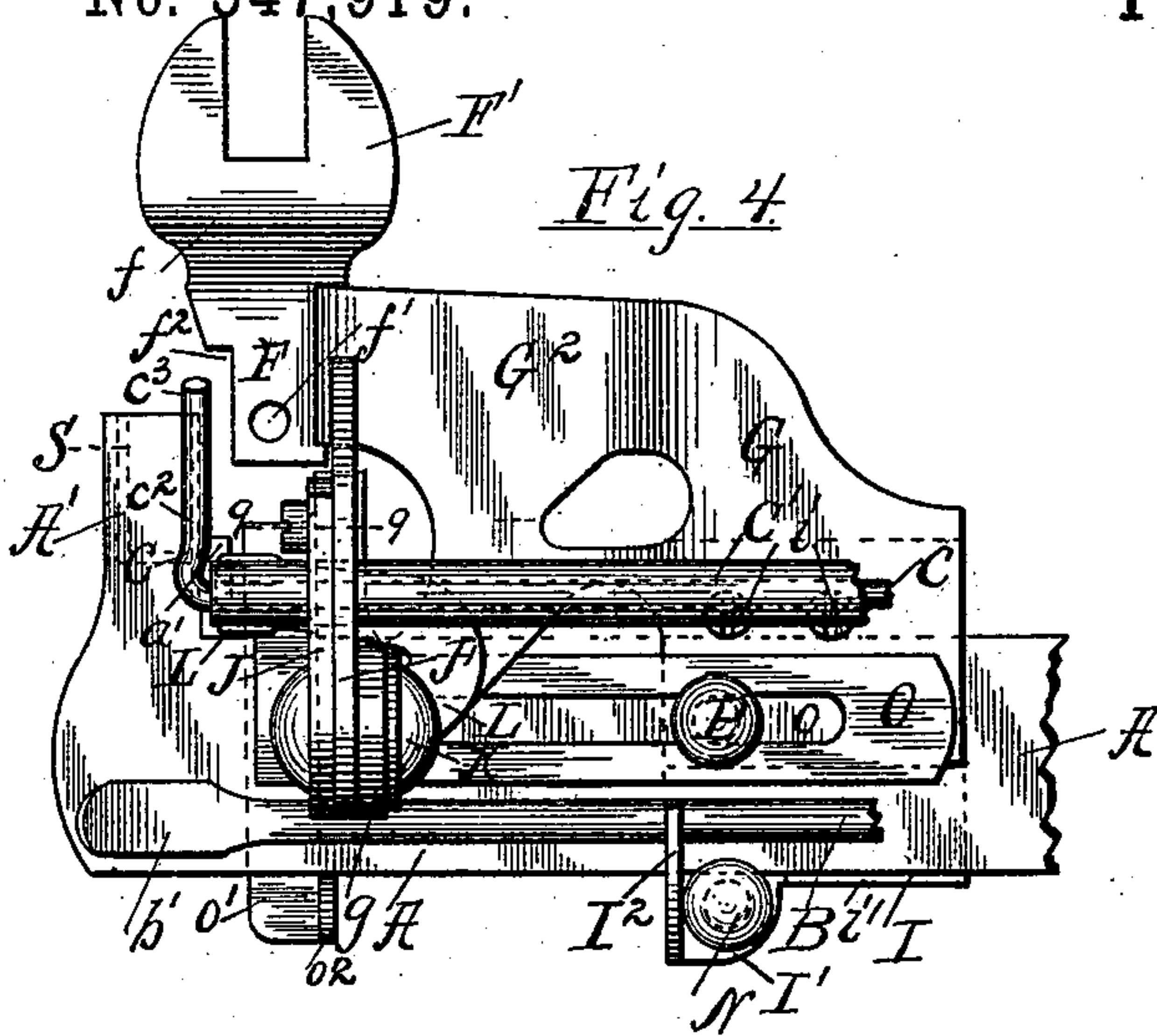
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2 Sheets—Sheet 2.

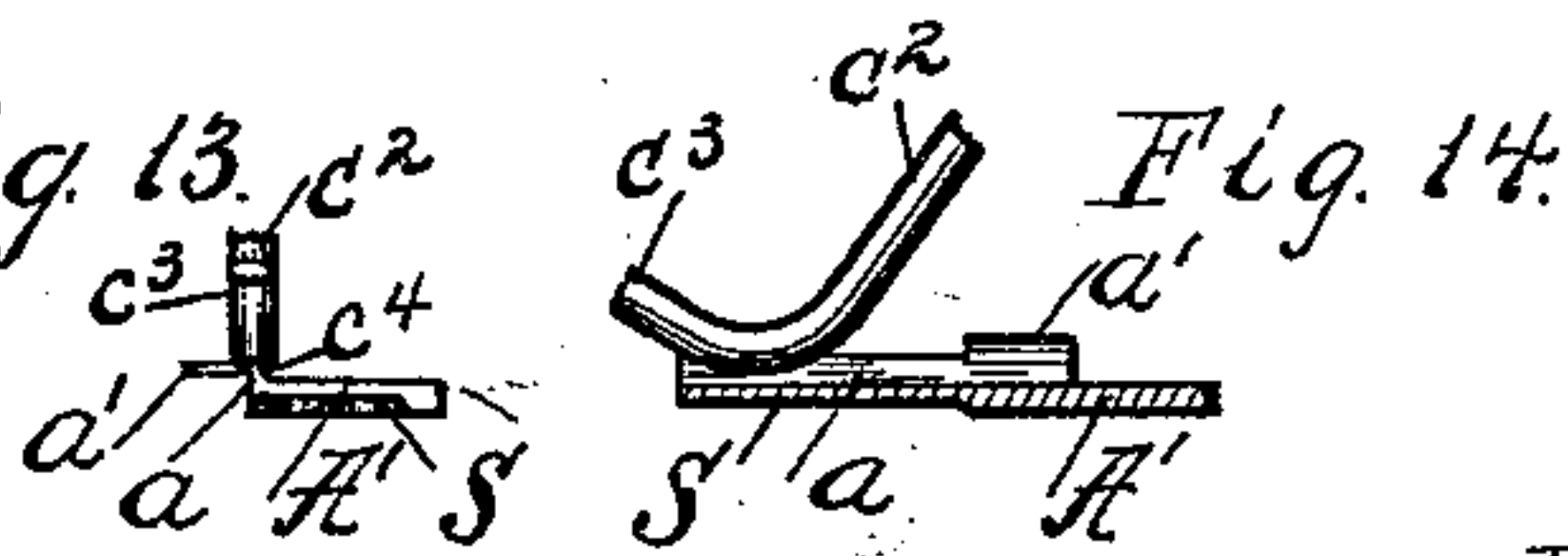
F. L. GOODRICH & R. S. BARNUM.
TUCK GREASER OR MARKER FOR SEWING MACHINES.

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their Attorneys.

UNITED STATES PATENT OFFICE.

FRANK L. GOODRICH AND RUSSELL S. BARNUM, OF CHICAGO, ILLINOIS; SAID
BARNUM ASSIGNOR TO SAID GOODRICH.

TUCK CREASER OR MARKER FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 547,919, dated October 15, 1895.

Application filed September 12, 1892. Serial No. 445,662. (No model.)

To all whom it may concern:

Be it known that we, FRANK L. GOODRICH and RUSSELL S. BARNUM, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Tuck Creasers or Markers for Sewing-Machines; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Our invention relates to that class of attachments for sewing-machines known as "tuck markers or creasers," which are designed to make the creases or marks for the horizontal folds or tucks of greater or less width in fabrics for skirts and similar garments.

The object of our invention is to simplify, strengthen, and improve the general construction of this class of sewing-machine attachments.

To the above purposes our invention consists in certain peculiar and novel features of construction and arrangement, as herein illustrated and described, and more particularly pointed out in the appended claims.

In the illustrations, Figure 1 is a detached plan view of a tuck marker or creaser embodying our invention. Fig. 2 is a front elevation of the same in operative connection with the needle-bar of a sewing-machine. Fig. 3 is an end elevation of the same and showing also, in transverse vertical section, the usual feeding device or plate of the sewing-machine. Fig. 4 is a plan view, on an enlarged scale, of one end of the tuck-marker, the parts being shown as adjusted for creasing for narrow tucks. Fig. 5 is a transverse vertical section of the tuck-marker on the line 5 5 of Fig. 1. Fig. 6 is a detached plan view, on an enlarged scale, of the integral presser-foot and main frame. Fig. 7 is a transverse vertical section of the tuck-marker on the line 7 7 of Fig. 1. Fig. 8 is a detached view, in side elevation, of the adjustable actuating-lever for the creaser-bar. Fig. 9 is a vertical longitudinal section of the same on the line 9 9 of Fig. 4. Fig. 10 is a detached plan view of the gage-plate. Fig. 11 is a detached view,

in front end elevation, of the same. Fig. 12 is a detached perspective view of the shoe-plate and index-point. Fig. 13 is a detached view, in side elevation, of the front end portion of the main or tucker plate and of the front end of the creaser-bar. Fig. 14 is a transverse vertical section of the same on the line 14 14 of Fig. 1.

In the said drawings, A designates the main or tucker plate of the tuck marker or creaser, this plate being of suitably-elongated form as to its body portion and extending continuously from the rear to the front end of the creaser or marker, the outer margin of the plate being suitably graduated, as shown. At its front end this tucker-plate is formed with an integral extension A', which projects at right angles from the said plate toward the rear of the sewing-machine when the marker or creaser is in proper operative position. The inner or rear margin of this extension A' is turned upward to form a creasing-flange *a*, the edge of this upturned flange *a* being tapered to a blunt knife-edge, as shown. At its inner end this upturned portion or flange *a* is formed with an integral outwardly-extending lug *a'*, which affords a sufficient guide for the succeeding tucks. At its opposite end the tucker-plate A is formed with a vertical standard A², integral therewith, and which is located at that margin of the plate which faces the front edge of the sewing-machine table when the creaser or tucker is in proper operative position. To the upper side of said plate A at *b* is riveted a tucker-spring B, which extends horizontally above the tucker-plate toward the front end thereof, as shown. The front end *b'* of the tucker-spring B is preferably flattened, as illustrated, and the rod or spring B is resilient, so as to press this flattened end *b'* downward upon the tucker-plate.

C designates the marking or creasing bar of the attachment, this bar being of such length as to extend from the creasing-flange *a* to the standard A² of the tucker-plate A. Said marking or creasing bar extends above the tucker-plate A longitudinally thereof parallel with the margins of the same, and is embraced throughout its length by a metal sheath C', which is of inverted-U form in cross-section, as shown. The rear end of the

creasing-bar C is bent, as at c , loosely around an attaching-screw D, the stem of which attaching-screw is inserted into an internally-screw-threaded cavity or socket e , which is formed in the inner end of the connecting-stud E. The stem of the screw D passes transversely through the rear end of the sleeve C', which latter is loosely interposed between the head of the screw D and the inner end of the stud E. The opposite or outer end portion e' of the stud E is reduced in diameter and extends transversely through the upper end of the standard A², a suitable head E' being riveted or screwed upon the outer end of the reduced portion e' . It will be obvious from this construction that the standard A² is thus very firmly clamped between the shoulder left by reducing the portion e' and the head E' and that thereby a very strong and firm connection is provided for the stud E, and also that a correspondingly-firm attachment is provided for the creaser-bar C, which in nowise interferes with the required operative movements thereof. At its front or opposite end c^2 this creaser-bar, which is preferably a wire rod, is bent inwardly and downwardly at right angles, the outer extremity c^3 of this portion c^2 being bent upwardly in segmental form. This segmental extremity c^3 of the arm c^2 of the creaser-bar C is caused to come intermittently downward toward the creasing-flange a , and the under side of the segmental portion is formed with a longitudinal notch or groove c^4 , which is of inverted-V shape in cross-section and registers at the proper time with the said flange a .

F designates the presser-foot proper and G the main-frame of the attachment, these parts being formed integrally with each other, and the presser-foot being formed upon the inner corner of the front end of the main frame and extending forwardly therefrom, as shown. At its outer end the presser-foot F is formed with an integral upwardly-extending fork-standard f , at the upper end of which is formed an approximately horizontal fork F', which latter is adapted, when the attachment is in proper operative connection with the sewing-machine, to engage frictionally or otherwise a groove h in the lower end of the presser-foot bar H of the sewing-machine, said presser-bar working vertically, in the usual manner, through the head H' of the sewing-machine.

The main frame G extends over the tucker-plate A, and is secured thereto, so as to slide longitudinally thereof by means of a base-plate or shoe I, which lies directly beneath the tucker-plate A and which is connected to the main frame G by two screws i , which pass vertically through the inner part of the main frame and similarly through the subjacent part of the shoe I. The outer margin of the shoe I is turned upward, as at i' , so as to come into contact with the corresponding outer margin of the tucker-plate, while the opposite margin i^2 is turned or folded over upon

the body portion of the shoe I and lies in contact with the corresponding margin of the tucker-plate, thus forming a guide or groove between the fold i^2 and flange i' for said tucker-plate. At the outer corner of the front end of the shoe I is formed an integral outwardly-projecting lug or extension I', from which rises an index arm or spur I², which extends over the tucker-spring B, this arm or spur acting in conjunction with the graduated scale of the gage O, hereinafter described. At the front end of the main frame G is formed an oblique extension G', the outer end of which is formed with a vertical standard g . The base part of this extension is made of skeleton form and arranged obliquely, as shown, in order that a better view of the fabric may be had as it passes from the gage O. To the upper end of this standard g are pivotally secured the two outer members J and J' of the creaser-bar actuating-lever, a bolt or rivet K passing transversely through the standard and also similarly through the outer portion of the lever-sections J and J'. The inner ends of these lever-sections are formed in their under sides with inverted-U-shaped recesses j , which, when the lever is depressed, receive the creasing-bar C, so as to permit the lever to depress the said bar. The lever-section J is formed at its outer portion with a vertically-elongated slot j^2 , while the lever member J' is formed with an internally-screw-threaded eye j^3 . A screw j^4 extends transversely through the slot j^2 and eye j^3 and serves to bind the two lever-sections J J' adjustably together. The outer end J² of the lever-section J' is curved upwardly and outwardly, so as to cross the path of movement of the screw m , which clamps the needle M' to the needle-bar M of the sewing-machine, the said needle working through an eye or hole f' in the presser-foot F. It will thus be seen that each time the needle-bar M descends the screw m strikes the upwardly-curved end J² and depresses the lever J J' J² in the manner of a cam and consequently effects the depression of the creaser-bar C smoothly and in such manner as to cause its arm c^2 to approach the creasing-flange a , and thus make a crease in the fabric between them, as will be readily understood. As the needle-bar M rises, a spring L elevates the creaser-bar, and this spring is secured at its outer end against the rear of the standard g , the corresponding or rear end of the bolt or rivet K extending through the outer end of the spring L. This spring is of somewhat spiral or volute like form, so that its free end lies directly beneath the creaser-bar C and in contact with the under side of the sheath C' thereof, constantly exerting an upward tendency.

In order to retain the tucker-plate A in any desired position or adjustment with respect to the main frame G and the underlying shoe I, a clamping-screw N is carried by the extension or lug I' of the plate I, the lower end

of this screw impinging upon the outer edge of the tucker-plate and thus locking it in the desired position.

The tucker gage or plate O is shown as resting upon the tucker-plate A and main frame G and as having its body portion of suitably-elongated form, provided with a longitudinal slot *o*. A suitable graduated scale is formed upon the upper side of this gage-plate near its outer margin, the principal graduations of the scale being designated by numerals or in any other suitable manner. A clamping-screw P is carried by the main frame G and passes through the slot *o* thereof, and the lower end of this screw impinges upon the upper side of the tucker-plate, so as to retain the latter in any desired position of longitudinal adjustment. The front end of the gage O is provided with a lateral and vertical extension *o'*, which unites integrally said gage with a cross-bar O', said cross-bar being located beneath the plane of the gage, as shown in Fig. 11, and is provided at its free end with an upturned guide-flange *o''*. A slot or groove *o'''* is thus formed by the proximate margins of the extension *o'* and flange *o''*, within which the tucker-plate rests, which contributes toward guiding said gage O as it is moved longitudinally for adjustment. It will be observed that the faces of the extensions *o'* and flange *o''* are vertical and in line, thereby affording a guide for the fabric as it passes to the needle M'.

As a separate and further improvement, we direct attention to the construction now to be described. Heretofore it has been impossible to prevent contact of the feed-plate with the tucker-plate in this class of attachments, particularly when the parts of the tuck creaser or marker have been adjusted to mark for narrow tucks, and much inconvenience and annoyance, as well as injury, have resulted from this defect. In order to prevent all possibility of such occurrences, we form or mill out the under side of the extension A' of the tucker-plate with a recess or cavity S, which milled-out portion overlies the feed-plate R, and into which the feed-plate rises as it reciprocates without ever coming into actual contact with the tucker-plate A. This will be more readily understood by reference to Figs. 13 and 14 and to the dotted lines in Figs. 1 and 14.

The general operation of the tuck marker or creaser is believed to be obvious from the above description, and hence need not, it is believed, be stated in full here. It will be seen that the attachment is, as a whole, of superior strength, durability, and simplicity as compared with previous forms of attachments of this class; also that the pressure of the creasing-arm is readily variable to accord with different thicknesses of fabrics or when the tucker-plate is adjusted for marking wide tucks, in which latter event greater pressure will be imparted to the bar C by first suitably adjusting the levers J J' to give a greater throw; furthermore, that the lifting-spring

for the creaser-bar is positive and direct in its action, and that there is no possibility of contact of the feed-plate of the sewing-machine with the tucker-plate.

As a further improvement, we upset or raise that portion of the surface of the main frame G from which the part G' extends, and which is lettered G², above the surface of the presser-foot F and the plate G, whereby space is afforded beneath the part G² and the extension G' for the gage O to freely move within.

To further increase the capacity of the tuck marker or creaser for marking narrow tucks, we cut away a portion of the presser-foot F, as shown clearly at *f''*, so that when said presser-foot is depressed said cut-away portion will come opposite to or register with the path of movement of the feeding device, whereby said feeding device may operate independently of and without touching the said presser-foot. It will, of course, be noticed that by providing this cut-away portion *f''* we are enabled to move the extension A' of the tucker-plate closer to the needle. Intermediate the vertical part *o'* and the vertical lug *o'''* of the gage O is a transversely-extending notch or recess *o'''*. It is within this recess that the tucker-plate is inserted, as will be manifest from an inspection of the drawings.

As a further improvement, we direct attention to the shape of the inverted-U-shaped recesses *j* in the lever-sections J J', each of said recesses being provided with a substantially-vertical extension or side wall *j'* at the side adjacent to the pivotal connection of said levers, whereby the upward movement of the levers is limited. Said side walls *j'* engage the adjacent side of the U-shaped covering C' of the creaser-bar, and thus said lever is constantly maintained in proper position for its connection with the needle-bar of the machine. It will be manifest that to disconnect said levers J J' from the creasing-bar the operator will simply depress said creasing-bar slightly with one finger, when the said levers may be readily moved away from the creasing-bar.

We claim as our invention—

1. In a tuck marker or creaser, the combination of the tucker plate provided at one end with a standard and at its other end with a tucker blade, and a creasing bar consisting of a wire rod formed into a vertically disposed eye at one end for its attachment to the tucker plate standard, whereby it is free to pivot vertically but is held from rotary movement, and being bent downwardly at its other or free operative end to engage the creaser blade, a lever pivoted to the tucker plate and provided on its under side with a notch which fits over the creaser bar, said lever operating to depress the creaser bar when struck by the needle bar of the machine, and a plate spring normally maintaining the creaser bar at the upper limit of movement allowed it by the notched lever, substantially as described.

2. In a tuck marker or creaser, the combination of the tucker plate provided at one end with a standard and at its other end with a tucker blade; and a two part creasing bar
 5 consisting of an inverted U-shaped housing and a wire rod inclosed therein, said wire rod being formed into a vertically disposed eye at one end for its attachment to the tucker plate standard, whereby it is free to pivot
 10 vertically but is held from rotary movement, and being bent downwardly and outwardly at its other or free operative end to engage the creaser blade and means for actuating said creaser bar comprising a lever actuated
 15 by the needle bar and arranged to depress the creaser bar, whereby a torsional movement of the creaser bar is produced after its engagement with the fabric, substantially as described.

20 3. In a tuck marker or creaser having a tucker-plate and a relatively long creaser-bar supported thereon only at one end, the means for securing said creaser-bar to the tucker-plate comprising an apertured stand-
 25 ard secured to the said tucker-plate, a stud, as E, riveted or otherwise secured to said standard and provided at its free end with an internally screw-threaded recess, and a shouldered screw the stem of which is threaded to

engage the screw-threads in said recess, and a suitable aperture or eye in the end of said
 30 creaser-bar through which the stem of said screw passes and whereby said creaser-bar is pivotally and removably secured to said stud, substantially as described. 35

4. In a tuck-marker or creaser provided with a creasing bar co-operating with a creaser blade and having an inverted U-shaped housing or part and an operating lever provided with an inverted U-shaped re-
 40 cess to engage said creasing lever, said U-shaped recess being provided with a substantially vertical and extended side wall, as j', substantially as and for the purpose specified.

In testimony that we claim the foregoing as
 45 our invention we affix our signatures in presence of two witnesses.

FRANK L. GOODRICH.
 RUSSELL S. BARNUM.

Witnesses to the signature of Frank L. Goodrich:

RUSSELL S. BARNUM,
 TAYLOR E. BROWN.

Witnesses to the signature of Russell S. Barnum:

TAYLOR E. BROWN,
 GEORGE W. HIGGINS, Jr.