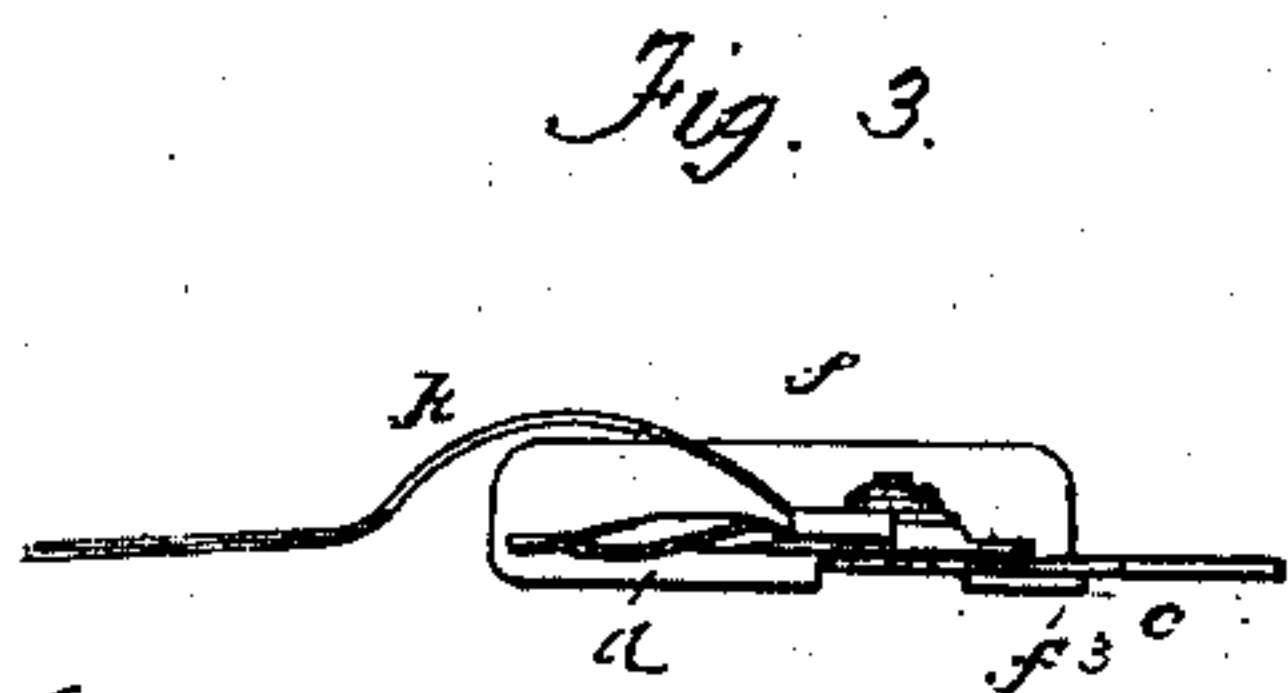
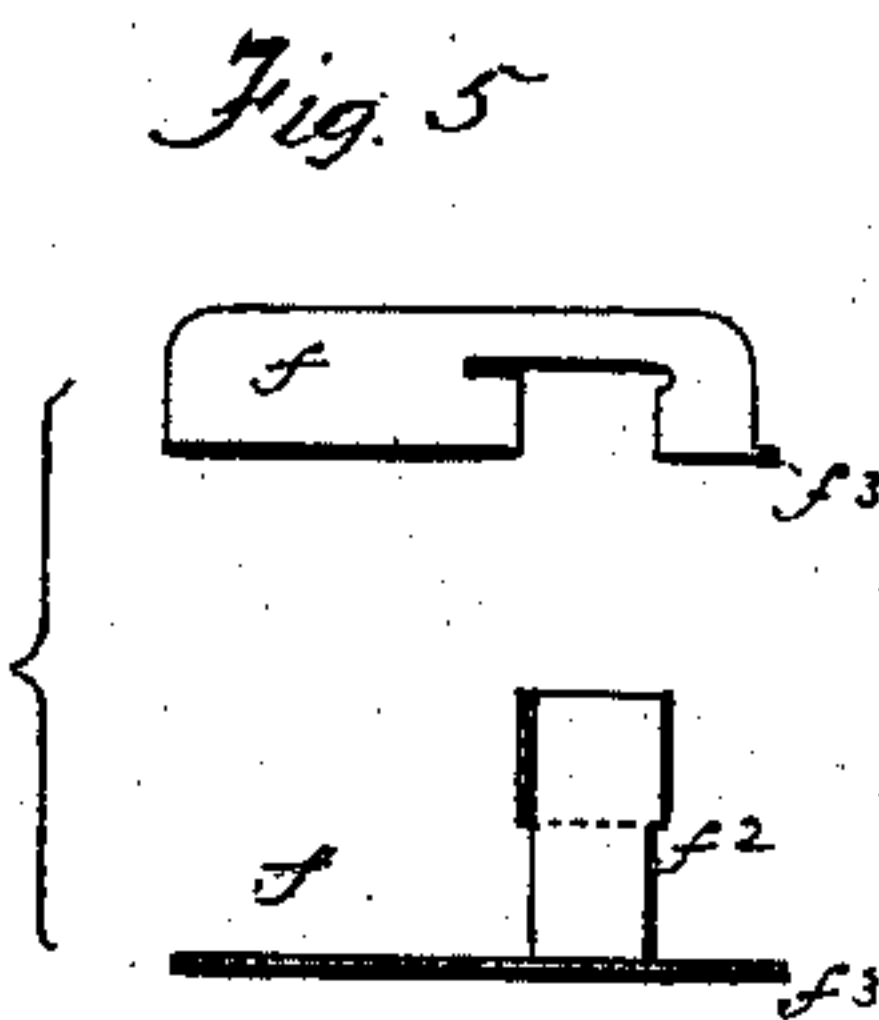
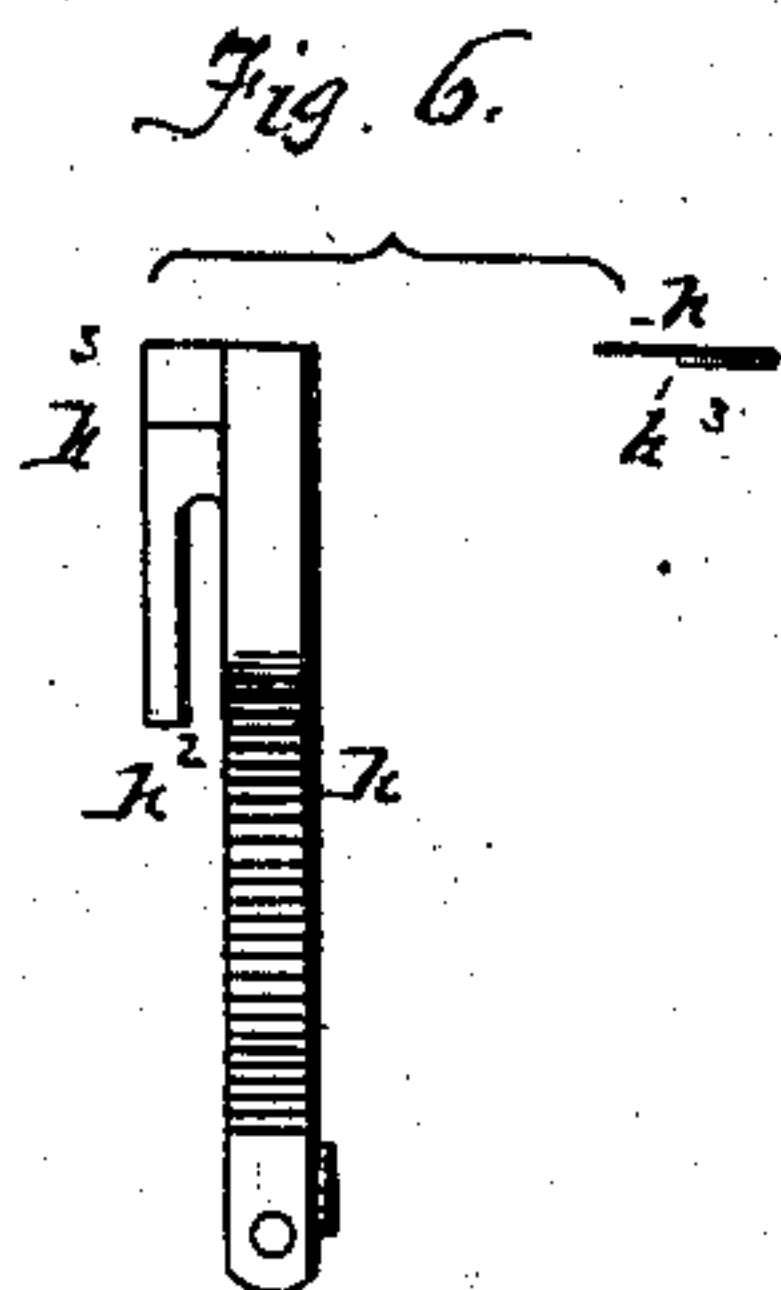
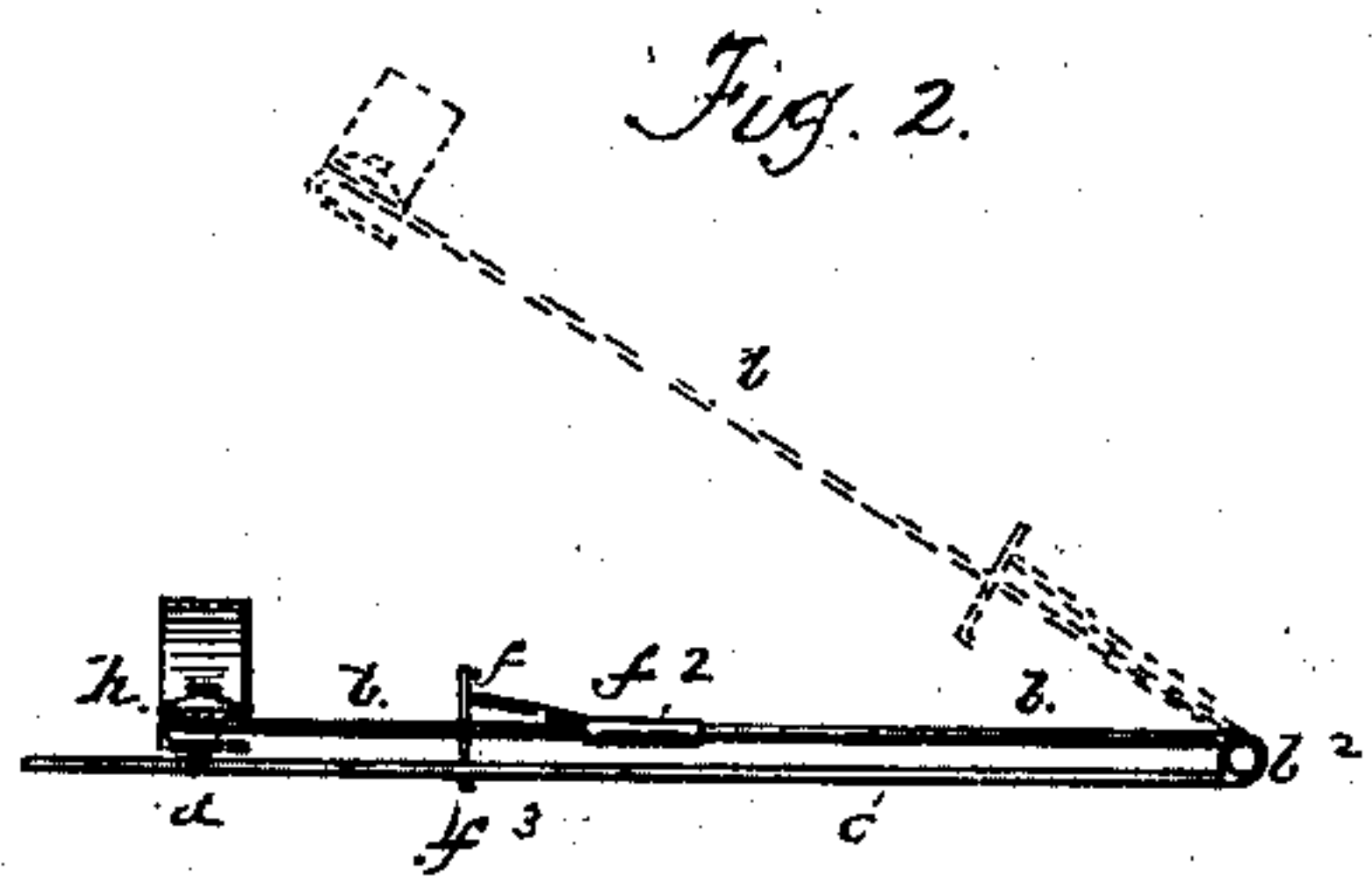
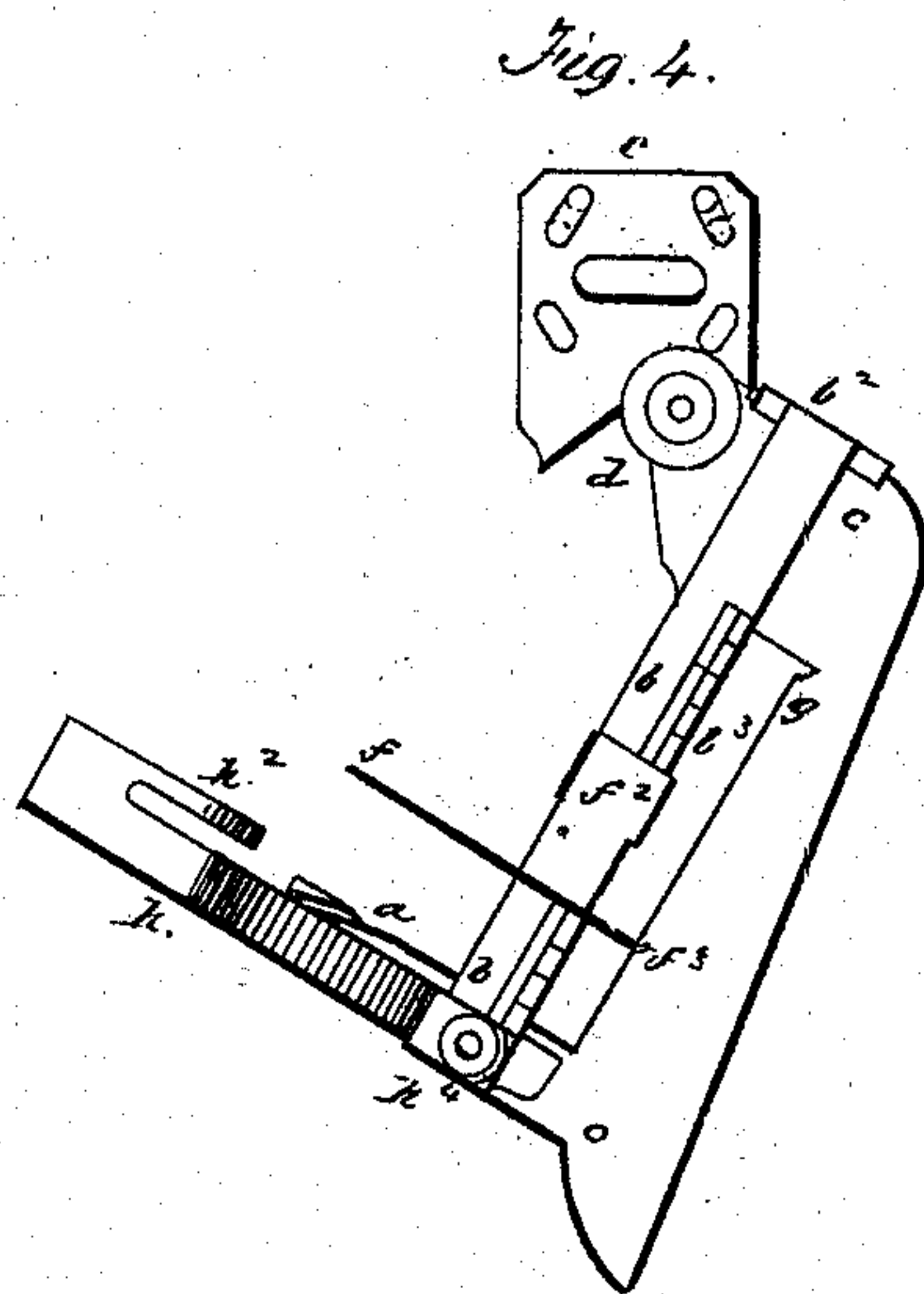
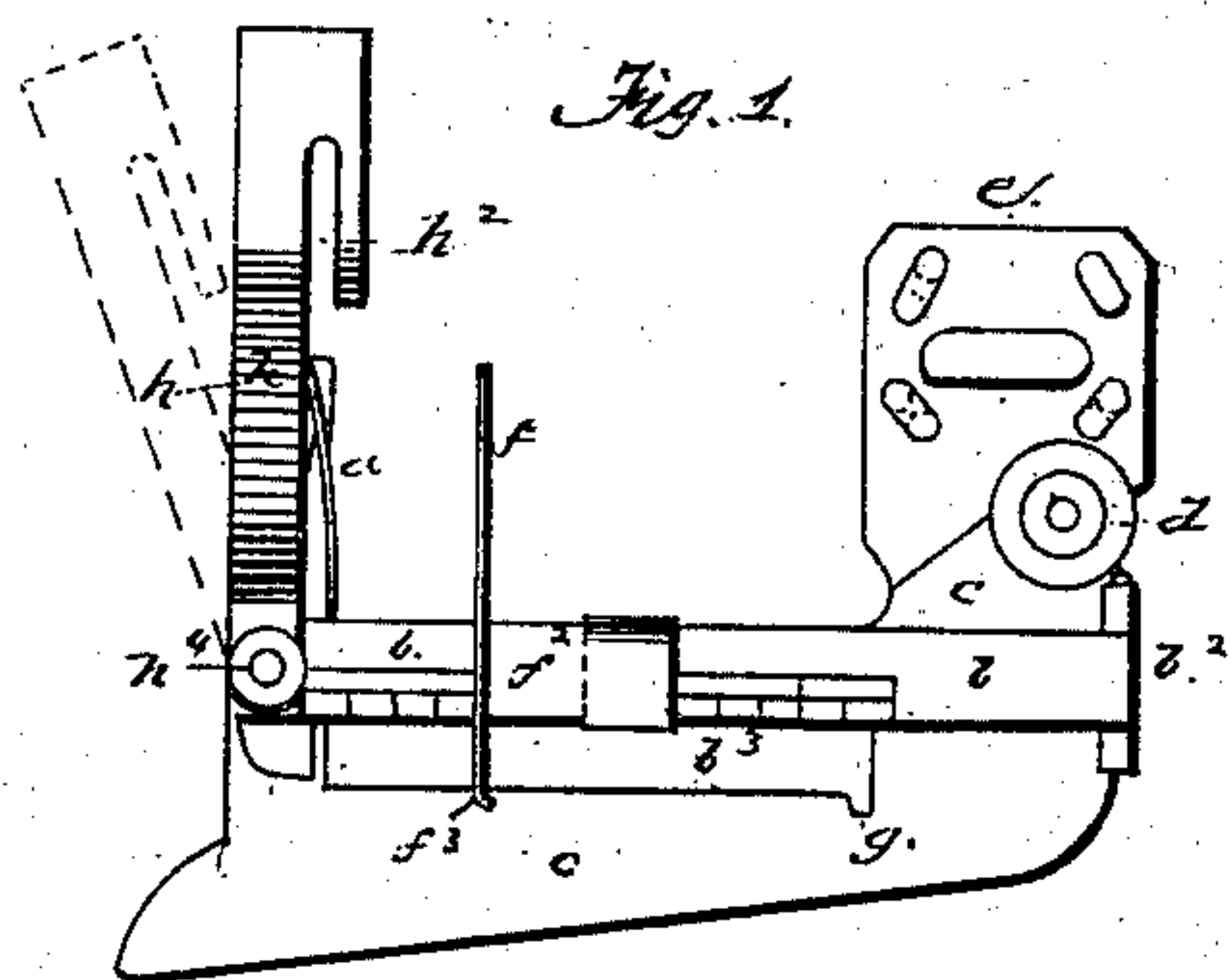


J. MORRISON.  
HEMMER FOR SEWING MACHINES.

No. 80,558.

Patented Aug. 4, 1868.



Witness;  
George Shaw  
Richard Kerrett

Inventor.  
John Morrison

# United States Patent Office.

JOHN MORRISON, OF BIRMINGHAM, ENGLAND.

Letters Patent No. 80,558, dated August 4, 1868.

## IMPROVEMENT IN HEMMER FOR SEWING-MACHINE.

The Schedule referred to in these Letters Patent and making part of the same.

### TO ALL TO WHOM IT MAY CONCERN:

Be it known that I, JOHN MORRISON, of Birmingham, in the county of Warwick, England, machinist, a subject of the Queen of Great Britain, have invented or discovered new and useful "Improvements in Hem-Folders and Tuckers for Sewing-Machines;" and I, the said JOHN MORRISON, do hereby declare the nature of the said invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement thereof; that is to say—

My invention consists of the improvements in or additions to hem-folders, of the kind described in the specification of Letters Patent granted to me in the United States on the 7th day of July, 1863.

In constructing hem-folders according to my present invention, I form the said folder at the end of an arm hinged to a base-plate, the said arm being capable of being turned on its hinge in a vertical plane for the purpose of introducing the fabric to be hemmed. The said base-plate is not fixed directly to the sewing-machine, but is jointed by a rule-joint or other joint to a connecting-piece fixed to the sewing-machine. By means of the said joint the base-plate can be turned at pleasure in a horizontal plane out of the way of the needle of the sewing-machine.

The arm carrying the folder is graduated into inches and parts of inches, and upon the said arm is a spring-slide, by regulating the position of which on the arm, the width of the hem, or of the tuck, when the instrument is used as a tucker, as hereinafter explained, may be determined. The said slide also serves to fix down the arm carrying the folder, the said slide having a finger or projection which engages under the edge of a slot in the base-plate parallel to the said arm. When it is wished to raise the arm, the slide is pushed back on the arm till the finger or projection comes opposite to a cross-slot, when the arm can be raised, the finger or projection being disengaged from under the edge of the plate.

To the end of the arm, and immediately over the folder, a spring-plate may be placed, the said spring-plate having a slot in it through which the needle works. The said spring-plate serves to guide the edge of the hem, if desirable.

When the instrument is used as a tucker, the fabric is passed under the folder and arm carrying it, until it comes against the slide which has been adjusted on the arm to the required width of the tuck.

Having explained the nature of my invention, I will proceed to describe, with reference to the accompanying drawing, the manner in which the same is to be carried into effect.

Figure 1 represents in plan,

Figure 2 in side elevation, and

Figure 3 in end elevation, a hem-folder, (which may also be used as a tucker,) constructed according to my invention.

Figure 4 represents the base-plate of the folder turned aside upon its joint.

Figures 5 and 6 are parts of the same, as hereinafter explained.

The same letters of reference indicate the same parts in each figure of the drawing.

*a* is the folder, constructed of two helical plates of steel, according to the patent hereinafter referred to, the said folder being formed at the end of the arm *b* hinged at *b*<sup>2</sup> to the base-plate *c*. This base-plate *c* is jointed by the rule-joint *d* to the connecting-piece *e* fixed to the sewing-machine. Instead of the rule-joint *d* any, other convenient joint may be used.

By means of the joint *d*, the base-plate *c* and parts carried by it may be turned in a horizontal plane out of the way of the needle of the sewing-machine, as represented in fig. 4. The folder *a* and arm *b* are made by preference from one piece of steel, that is, the arm *b* has a forked piece on its end which is fashioned into the folder *a*. The folder *a* may, however, be made of a separate piece of steel attached to the said arm *b*. The arm, *b*, may be raised in a vertical plane, as indicated in dotted lines in fig. 2, when it is wished to introduce the fabric to be hemmed between the plates of the folder *a*.

The arm, *b*, is graduated in the manner represented in figs. 1 and 4, and on the said arm is a spring-slide, *f*<sup>2</sup>, by regulating the position of which on the arm *b* the width of the hem or tuck may be determined.



By an examination of the drawing, it will be seen that the spring-slide consists of a cross-plate,  $f$ , and a spring-clip,  $f^2$ , which clip slides upon the arm  $b$ , and holds the slide firmly in any position in which it is placed on the said arm. The said spring-slide  $f f^2$  also serves to fix down the arm  $b$  carrying the folder  $a$ . The fixing down of the arm  $b$  is effected by means of a finger or projection,  $f^3$ , on the cross-plate  $f$  passing through the slot  $b^3$ , and engaging under the edge of the base-plate  $c$ . By moving the slide  $f f^2$  until its finger or projection  $f^3$  comes opposite the cross-slot  $g$  in the plate  $c$ , the finger  $f^3$  is liberated, and may be lifted through the said cross-slot, and the arm  $b$  and parts carried by it raised from the base-plate  $c$ , as indicated in fig. 2. The spring-slide is represented separately in fig. 5. Instead of jointing the graduated arm to a base-plate, of the kind represented, the said arm may be jointed to any other convenient part of the sewing-machine.

Immediately over the folder  $a$  is a spring-plate,  $h$ , for the purpose of guiding the edge of the hem as it emerges from the folder  $a$ , the needle of the sewing-machine working through the slot  $h^2$  in the said plate. The under side of the free end of the spring-plate  $h$  has a longitudinal shoulder,  $h^3$ , against which the edge of the hem bears, and is thereby guided. An under side and cross-section of the spring-plate  $h$  are represented in fig. 6, by an examination of which fig. 6 the construction of the shoulder for guiding the edge of the hem will be readily understood. The said spring-plate is not fixed rigidly to the arm  $b$ , but is jointed thereto at  $h^4$ , so that, when necessary, it may be turned out of the way of the needle, as indicated in dotted lines in fig. 1. This spring-plate may be dispensed with, as it is not necessary in all cases to use it.

When the instrument is used as a tucker, the fabric is passed under the folder  $a$  and arm  $b$ , that is, between the folder  $a$  and base-plate  $c$ , until it comes against the slide  $f f^2$ , which has been adjusted on the arm  $b$  to the required width of the tuck.

Having now described the nature of my invention, and the manner in which the same is to be performed, I wish it to be understood that I do not limit myself to the precise details herein described and illustrated, as the same may be varied without departing from the nature of my invention; but

I claim as my invention of improvements in hem-folders and tuckers for sewing-machines—

1. The hem-folder  $a$ , in combination with the graduated jointed arm  $b$  and horizontally-swinging base-plate  $c$ , substantially as and for the purposes herein shown and set forth.
2. The combination, with the graduated arm  $b$  and base-plate  $c$ , of the spring-slide  $f f^2 f^3$ , constructed and used substantially as herein shown and described.
3. The combination, with the hem-folder  $a$ , graduated jointed arm  $b$ , and base-plate  $c$ , of the spring-plate  $h h^2 h^3$ , jointed to the arm  $b$  at  $h^4$ , substantially as and for the purposes set forth.

JOHN MORRISON. [L. s.]

Witnesses:

GEORGE SHAW, *Cannon Street, Birmingham.*  
RICHARD SKERRETT, *Cannon Street, Birmingham.*