

G. GIN.
 DEVICE FOR SINGEING TEXTILE FABRICS.
 APPLICATION FILED MAR. 30, 1908.

962,828.

Patented June 28, 1910.

2 SHEETS—SHEET 1.

Fig. 1.

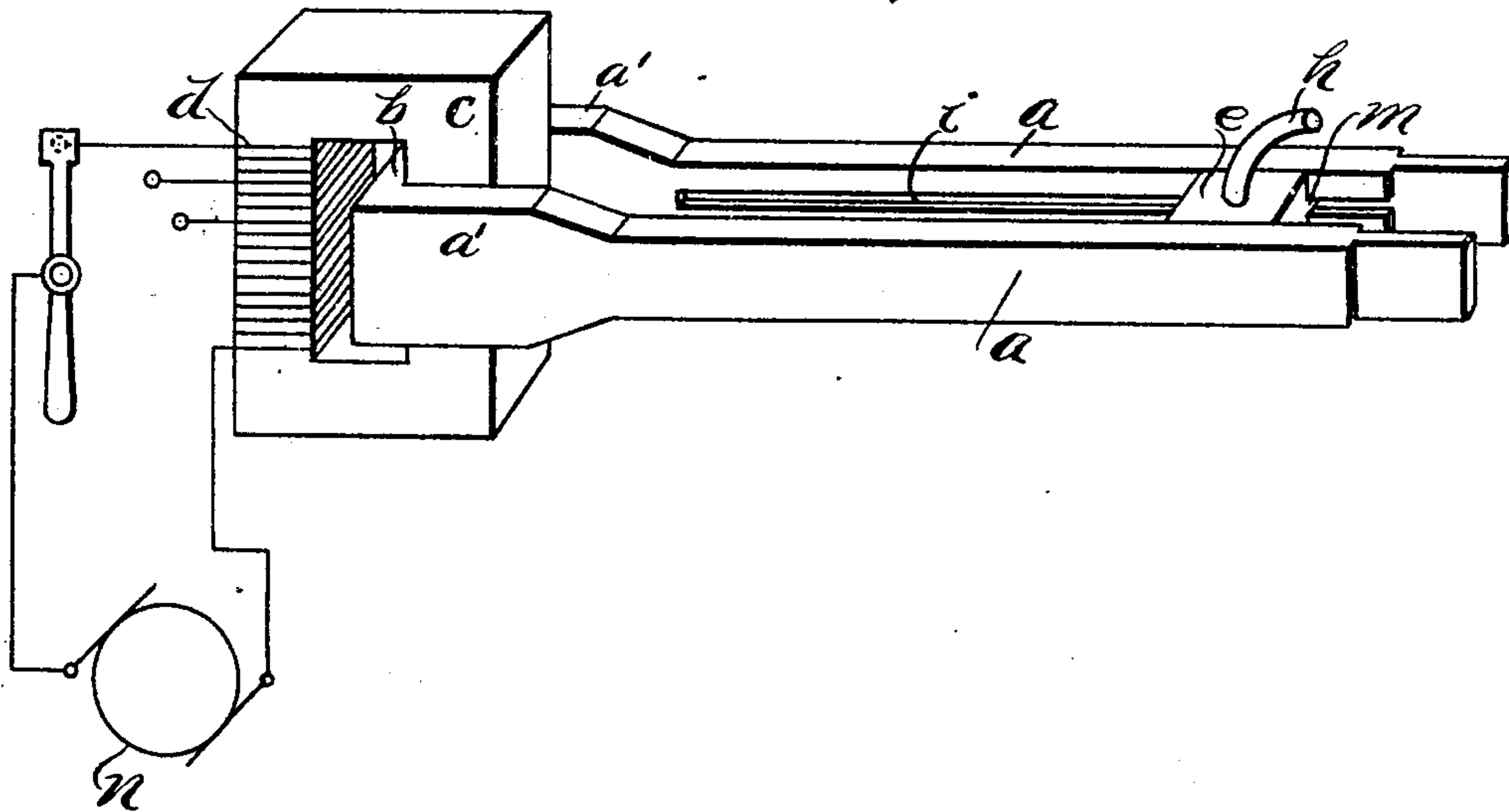


Fig. 2.

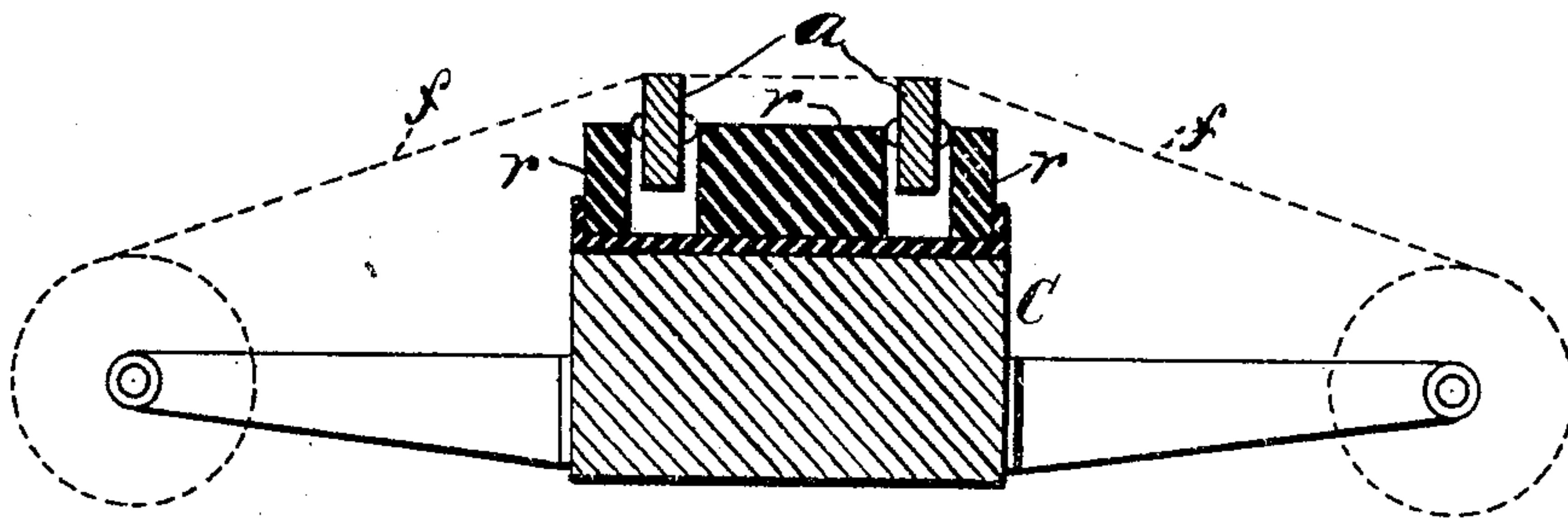
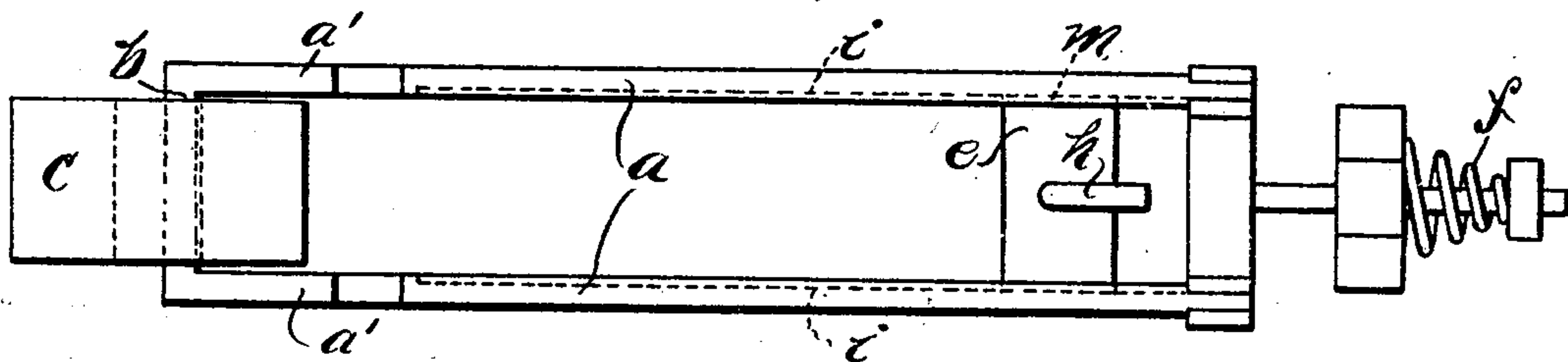


Fig. 3.

Witnesses:
 C. A. Jarvis.
 G. H. Measures.

Inventor:
 Gustave Gin.
 By *Walter D. Edmunds*
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2 SHEETS—SHEET 2.

Fig. 4.

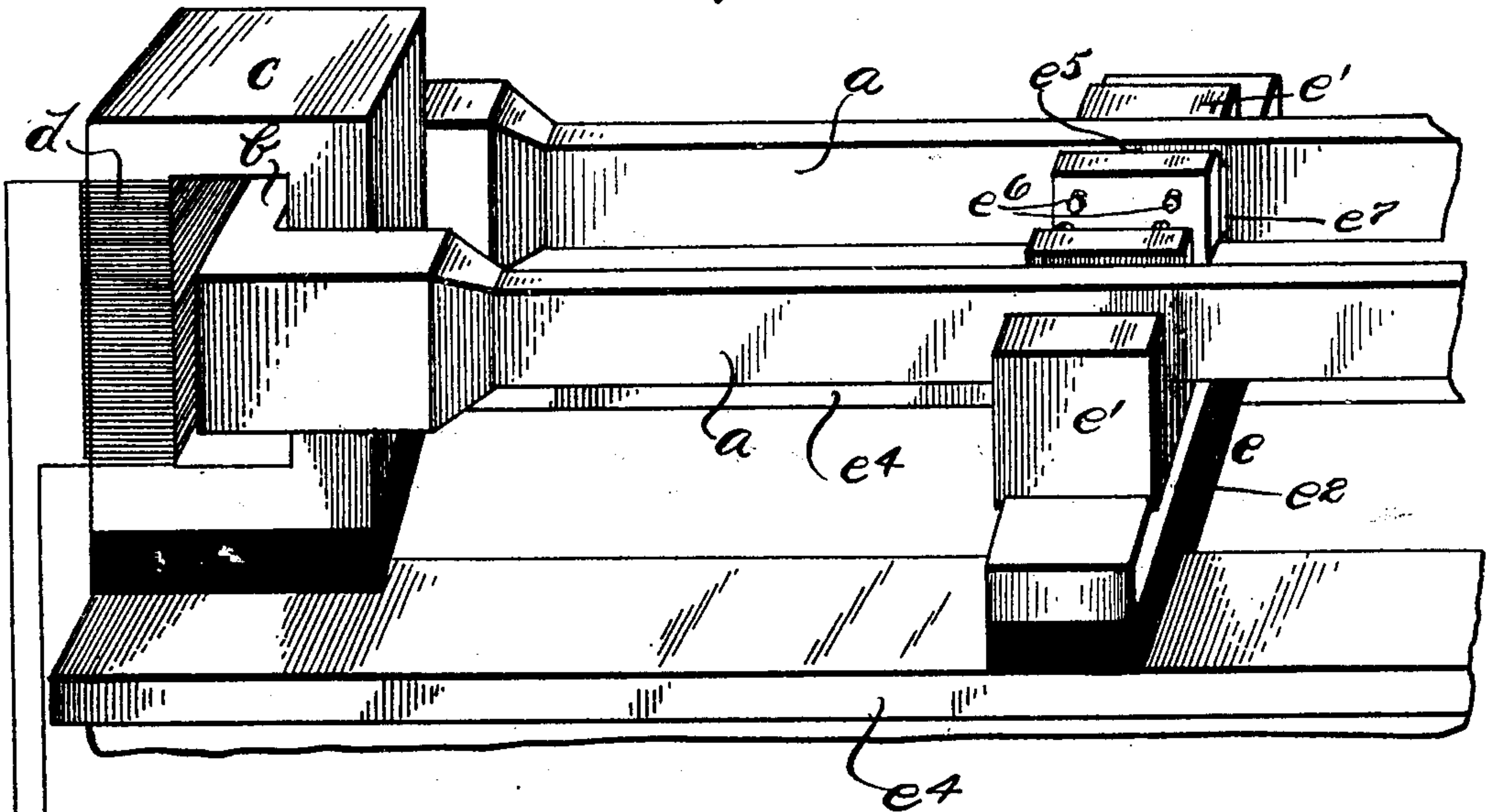


Fig. 6.

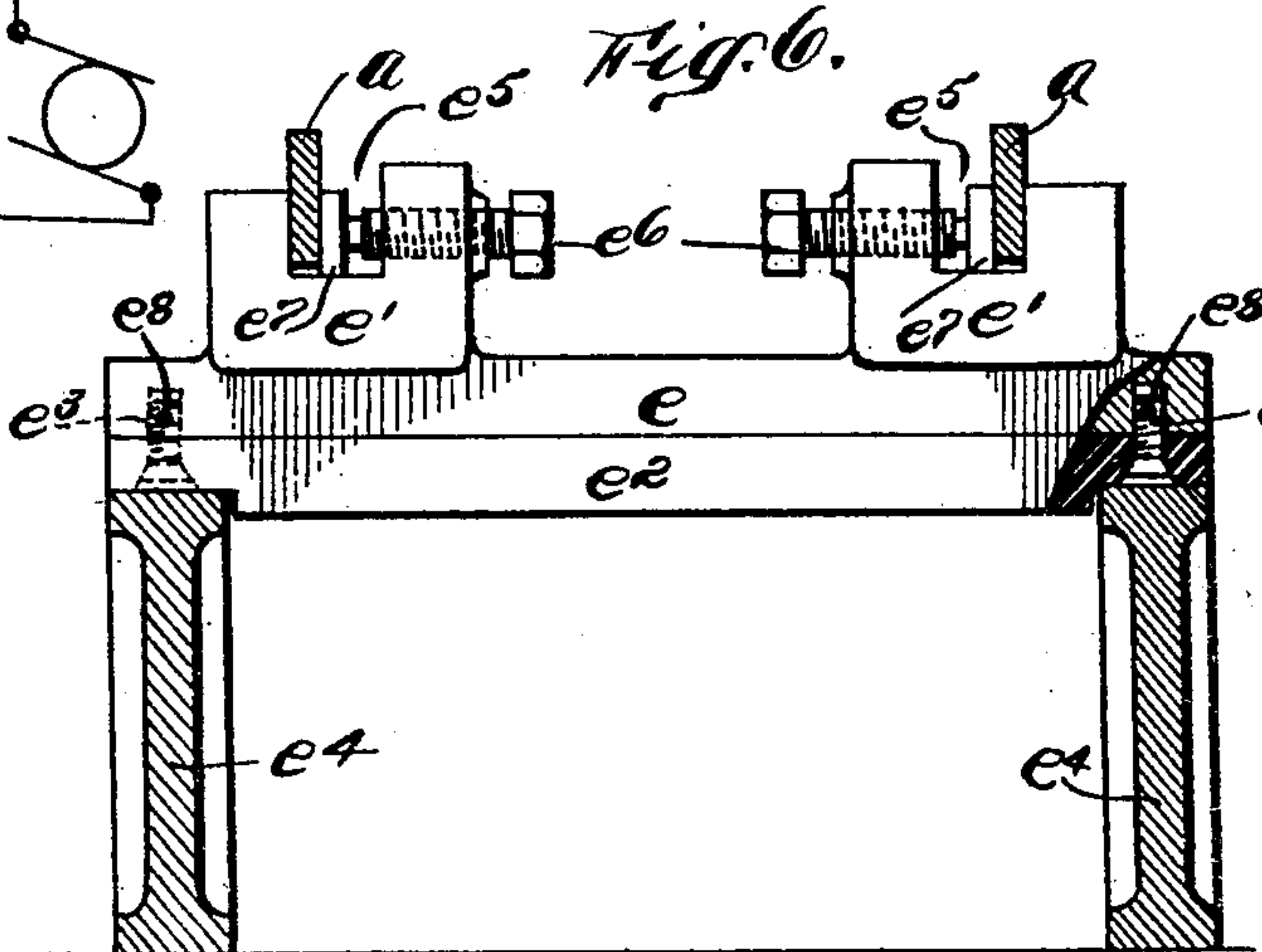


Fig. 7.

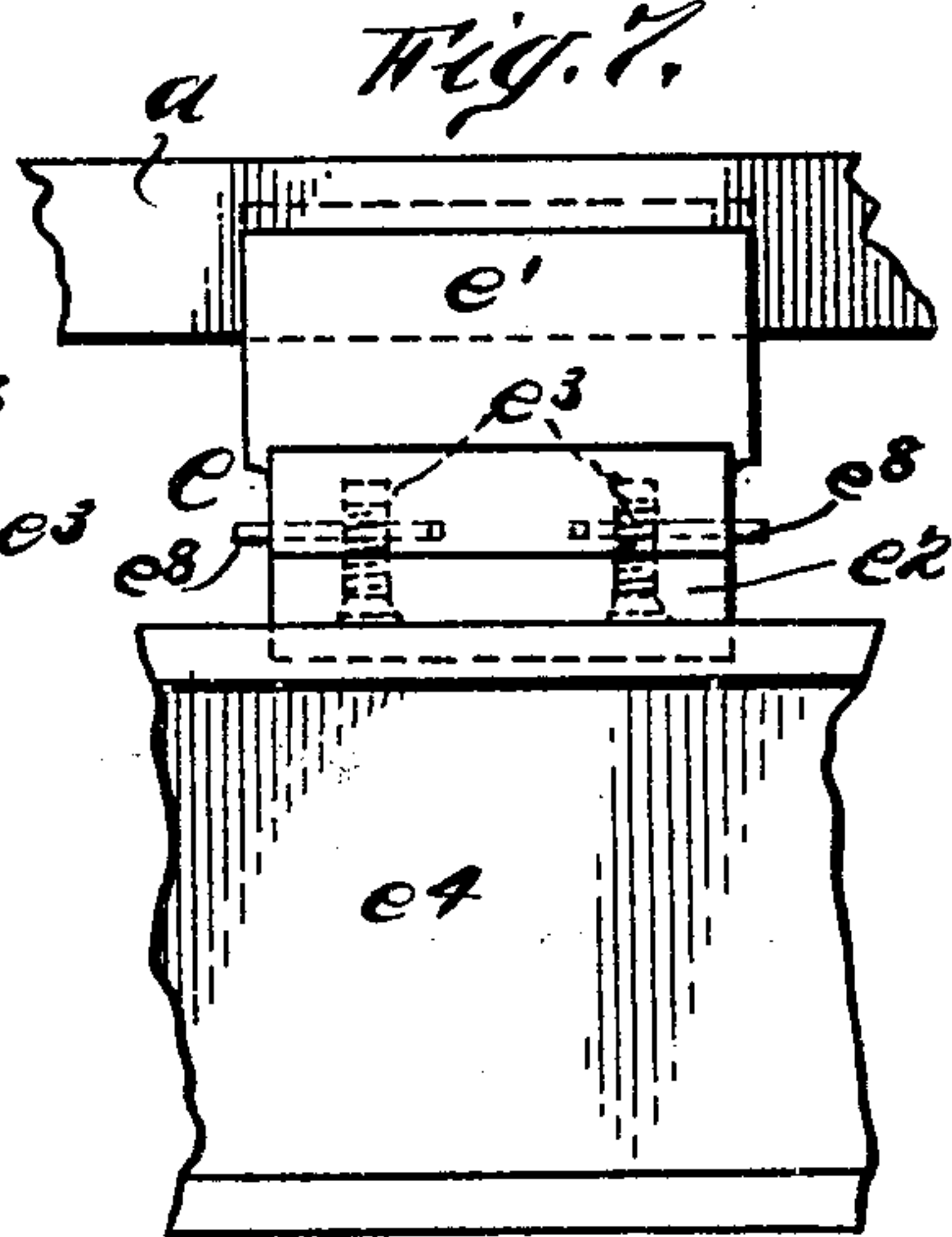
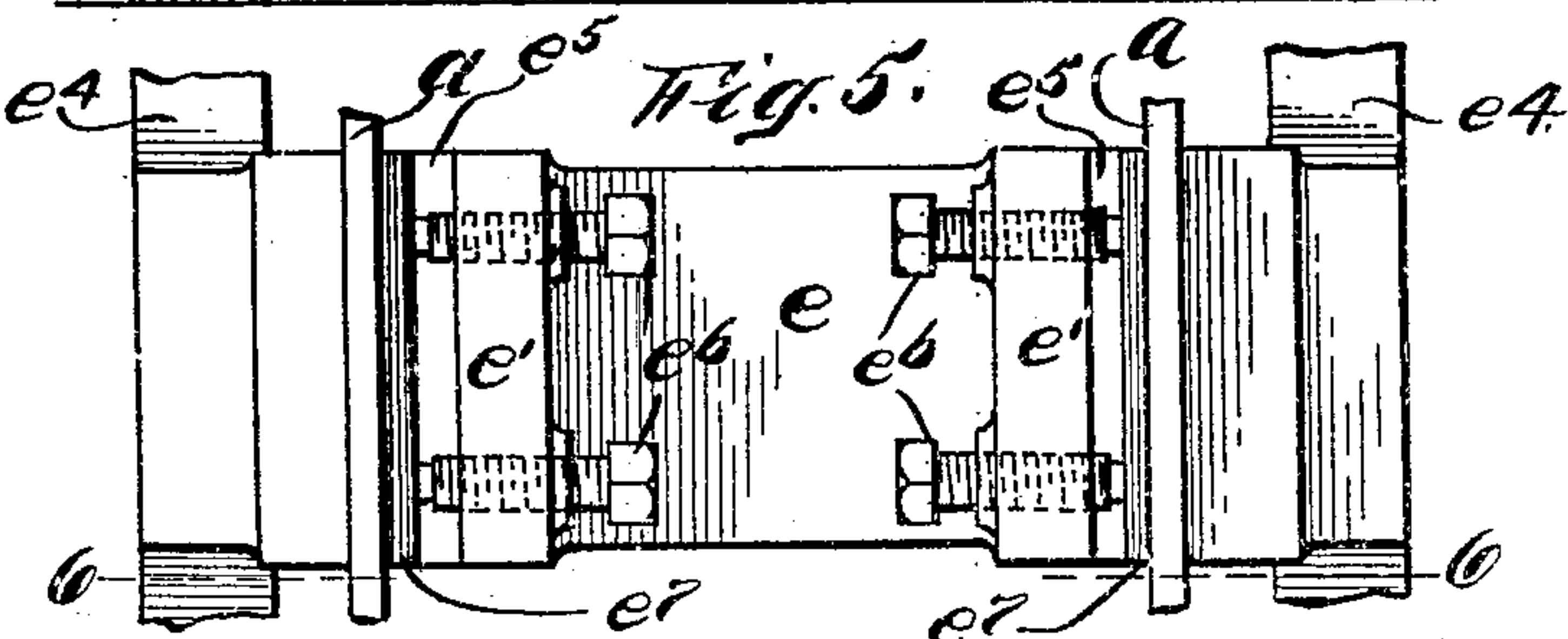


Fig. 5.



Witnesses.
 C. A. Jarvis
 G. G. Measures.

Inventor:
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UNITED STATES PATENT OFFICE.

GUSTAVE GIN, OF PARIS, FRANCE.

DEVICE FOR SINGEING TEXTILE FABRICS.

962,828.

Specification of Letters Patent. Patented June 28, 1910.

Application filed March 30, 1908. Serial No. 424,174.

To all whom it may concern:

Be it known that I, GUSTAVE GIN, of Paris, France, a citizen of the French Republic, have invented certain new and useful Improvements in Devices for Singeing Textile Fabrics, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a diagrammatic perspective view of one form of said devices; Fig. 2 a plan of Fig. 1; Fig. 3 a diagrammatic cross-section.

As well known, the singeing of textile fabrics involves removal, by superficial combustion, of the therefrom projecting pile, nap, or down. Attempts have been made to so singe such fabrics by moving them in proximity to metallic wires, or bars, heated by electricity. Such wires, being of relatively small cross-section, have proved unable to supply sufficient heat for rapid singeing. Said bars, of relatively much greater cross-section, require, to bring them to incandescence, a very intensive current. The resistance of such bars being small, compels resort to generators of low tension, involving the use of conductors of considerable section and expensive connections.

I avoid the disadvantages referred to by using a pair of bars constituting part of the secondary circuit of an induction transformer whose primary circuit is supplied by a current of normal tension.

Referring now to the drawings, *a* are the heating bars, composed preferably of comparatively infusible metal, such as nickel or its alloys, these bars being connected by the extension *b*, disposed to pass through electro-magnetic core *c*, another portion of which is wound with the primary coil *d*, connected with source of electrical energy *n*, the said bars *a* thus constituting part of the secondary circuit of the transformer.

e is a movable electro-conducting member contacting with each of said bars to complete the secondary circuit.

f is a spring, disposed to exert tension upon the bars and maintain their rectilinearity during contraction and expansion due to variations in temperature.

It will be observed that those portions *a'* of the secondary more proximately disposed relatively to the core are of considerably greater cross-section than those parts constituting the singeing bars *a*, whereby, owing to their resulting increased resistance, I

am enabled to raise the latter to the required high temperatures without unduly heating the primary.

Fig. 3 illustrates the bars *a* surrounded in part by refractory material *r* whereby loss of heat by radiation is diminished.

An important feature of my present invention is the connecting bridge or movable conducting member *e*, by means of which I am enabled to limit the heated extent of said bars. It will be understood that the fabrics are usually moved over the bars in contact with latter, whereby considerable heat is withdrawn from the bars and their temperature, at the portions so contacted, kept down sufficiently to prevent unduly burning the fabric. Those portions of the bars located outside of said zone of contact by the fabric retain much higher temperatures than those parts so contacted, with the result that, except for said movable member, the selvages of the fabric would be likely to be undesirably burned, as the fabric sways slightly in its passage, by contact with the outlying undesirably heated portions of the bars. By imparting movability to the said bridge *e*, I am enabled to regulate the length of the heated portions of the bars to suit the varying widths of fabric singed, whereby the aforesaid difficulty is obviated.

The required movable support may be imparted to the bridge *e* in any convenient manner, as for instance, by providing it with lateral flanges *m*, adapted to be received, and slide in grooves *i* on the inner sides of bars *a*, thus permitting bridge *e* to be pushed manually by the operator to the exact position required. To facilitate such manual operation, a handle *h*, or other equivalent device, may be annexed to said bridge *e*.

The operation of the device will be readily understood. The movable member of conducting bridge *e* being moved, adjusted and left in place to correspond with the width of the particular fabric to be treated and the current turned on, the fabric is reeled rapidly over and preferably in contact with the bars, as diagrammatically illustrated in Fig. 3, the reels being indicated by the dotted circles and the fabric by these and the straight dotted lines, such procedure being too well understood by those skilled in the art to require more detailed description here.

The duplication of the singeing bars, as shown, facilitates, enhances and renders more thorough the singeing required.

Having now fully described my said invention what I claim and desire to secure by Letters Patent is:

1. A way of carrying out the process of
5 singeing textile fabrics, consisting in causing the latter to slide in contact with metallic surfaces heated to red heat by an electric current consisting in forming with the contact bars, the secondary circuit of a static
10 transformer.

2. A way of carrying out the process as stated in claim 1 consisting in obtaining the longitudinal rectitude of the heating bars through a stretching spring, the lateral
15 and vertical flexures being prevented by the walls of a refractory channel upon which

bear the bars through the medium of stationary or rotary parts.

3. A way of carrying out the process stated in claim 1, consisting in varying the
20 number of coils of the primary winding by means of a plug switch so as to control the incandescence temperature of the bars.

4. A way of carrying out the process stated in claim 1, consisting in forming the
25 heating bars with one or several pairs of rollers movable about their axis and receiving the current from sliding contacts.

GUSTAVE GIN.

Witnesses:

DEAN B. MASON,
JACQUES MANCERL.