

No. 636,724.

L. E. HACHERELLE.
CLOTH CUTTER.

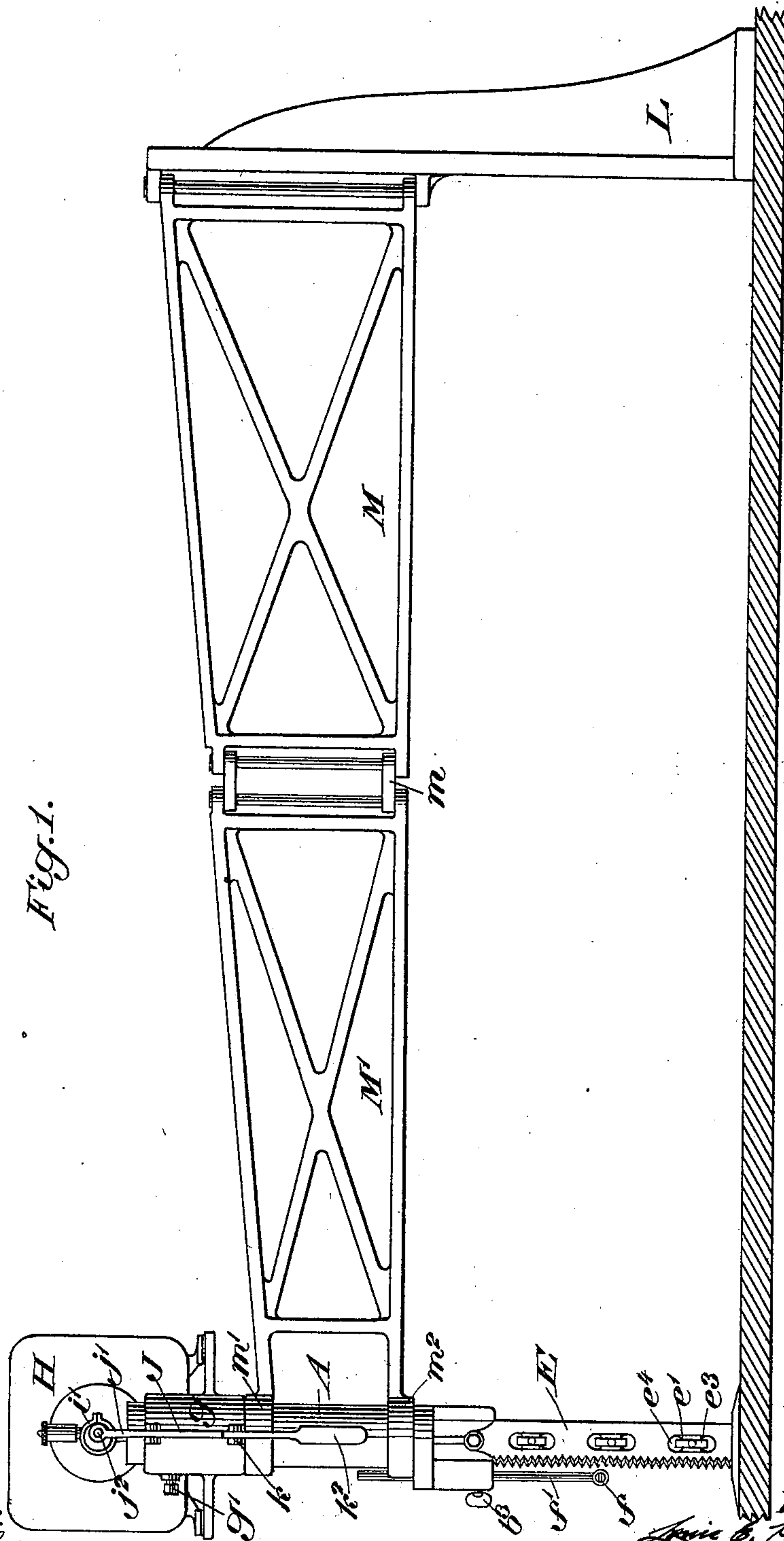
Patented Nov. 7, 1899.

(Application filed Jan. 7, 1898. Renewed Apr. 20, 1899.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.



Witnesses:
M. C. Fletcher
Edward C. Vieder.

Inventor:
L. E. Hacherelle
By attorney
M. C. Vieder

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2 Sheets—Sheet 2.

Fig. 2.

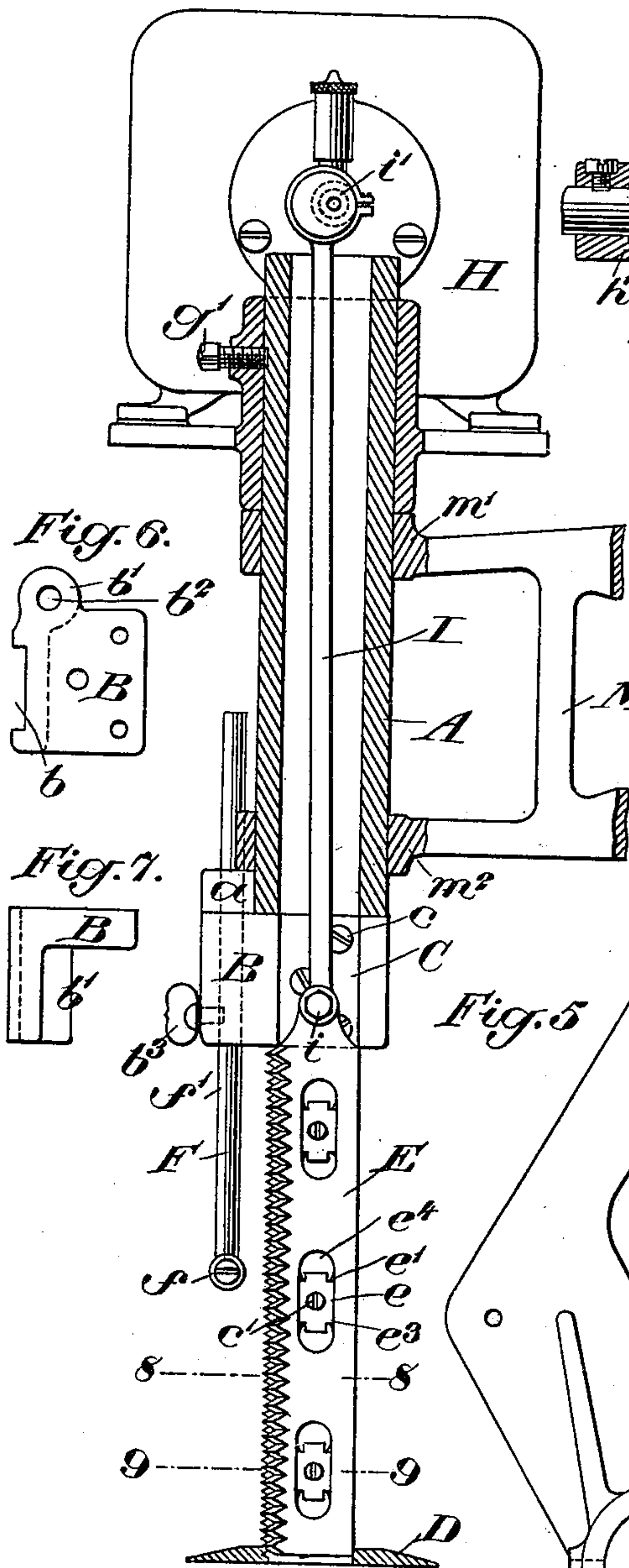


Fig. 6.

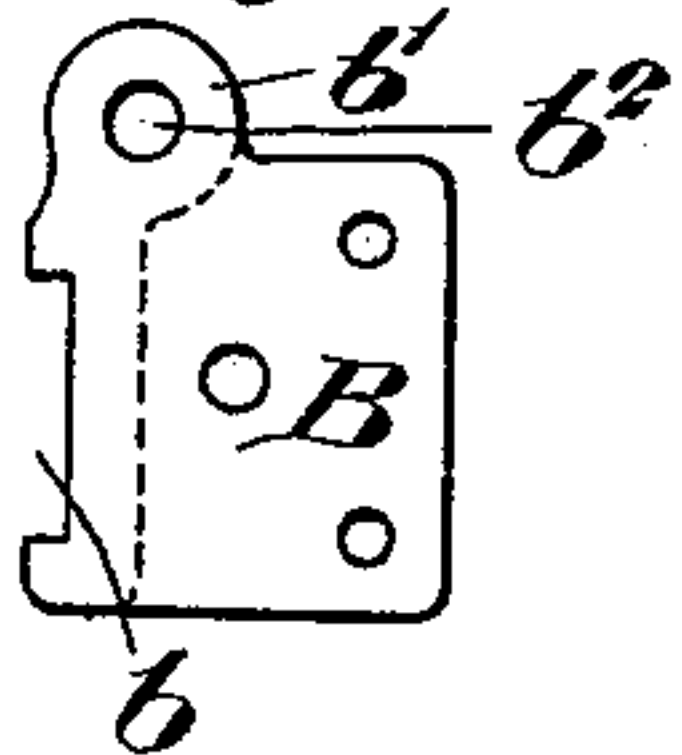


Fig. 7.

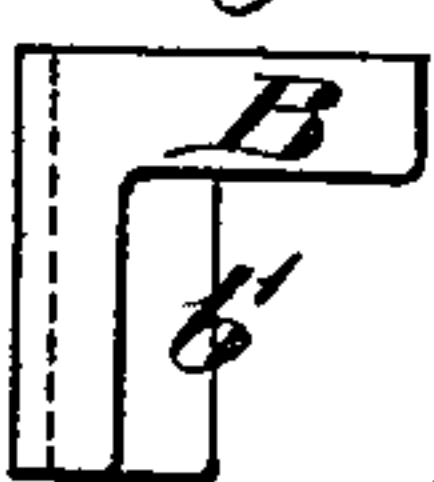


Fig. 5.

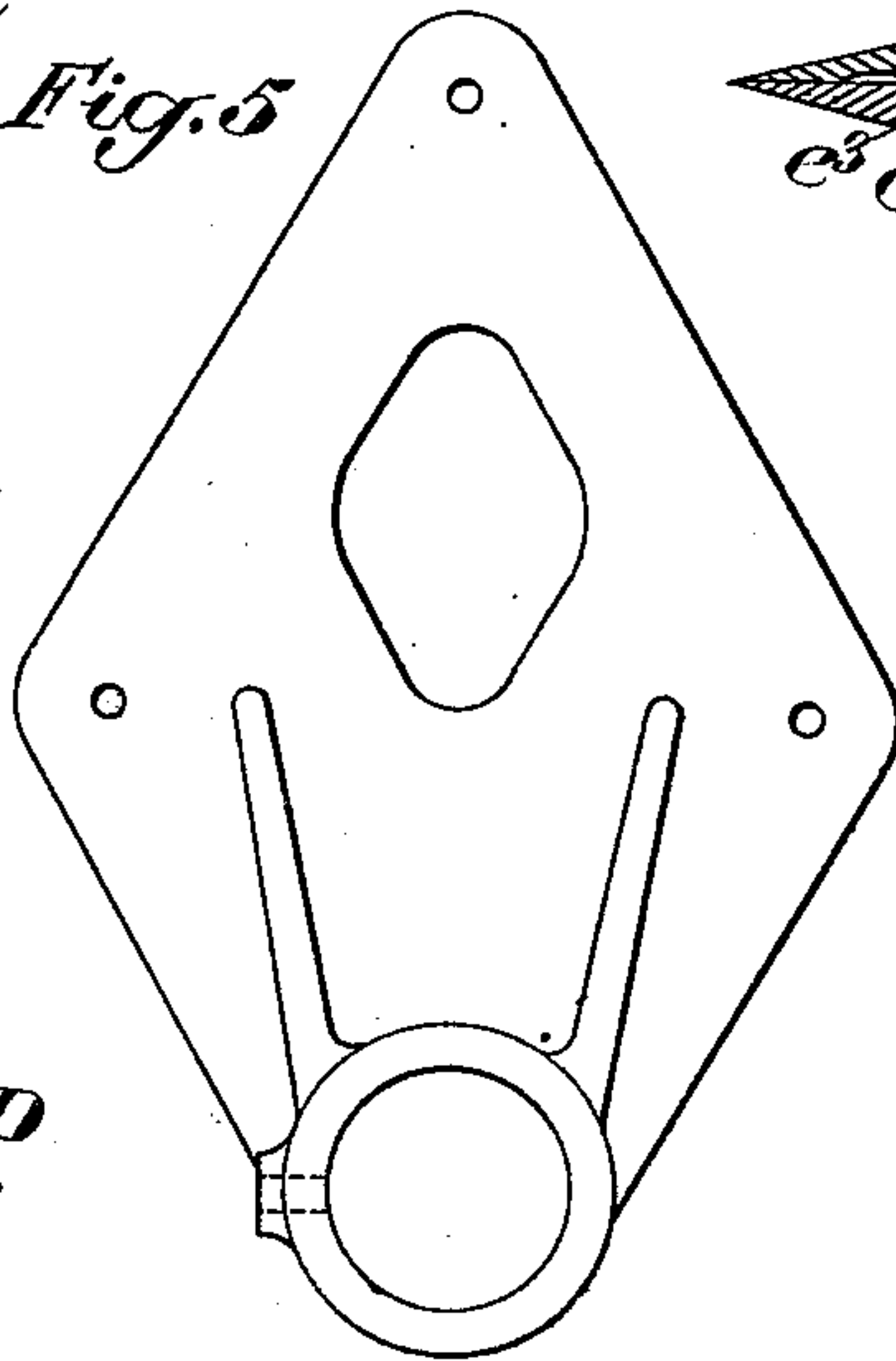
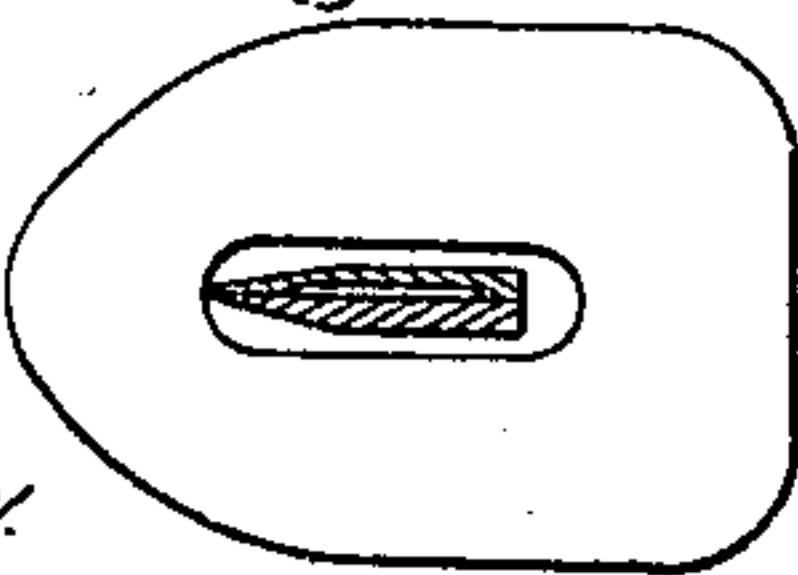


Fig. 8.



Witnesses:
M. C. Fletcher
Edward Vieser.

Fig. 3.

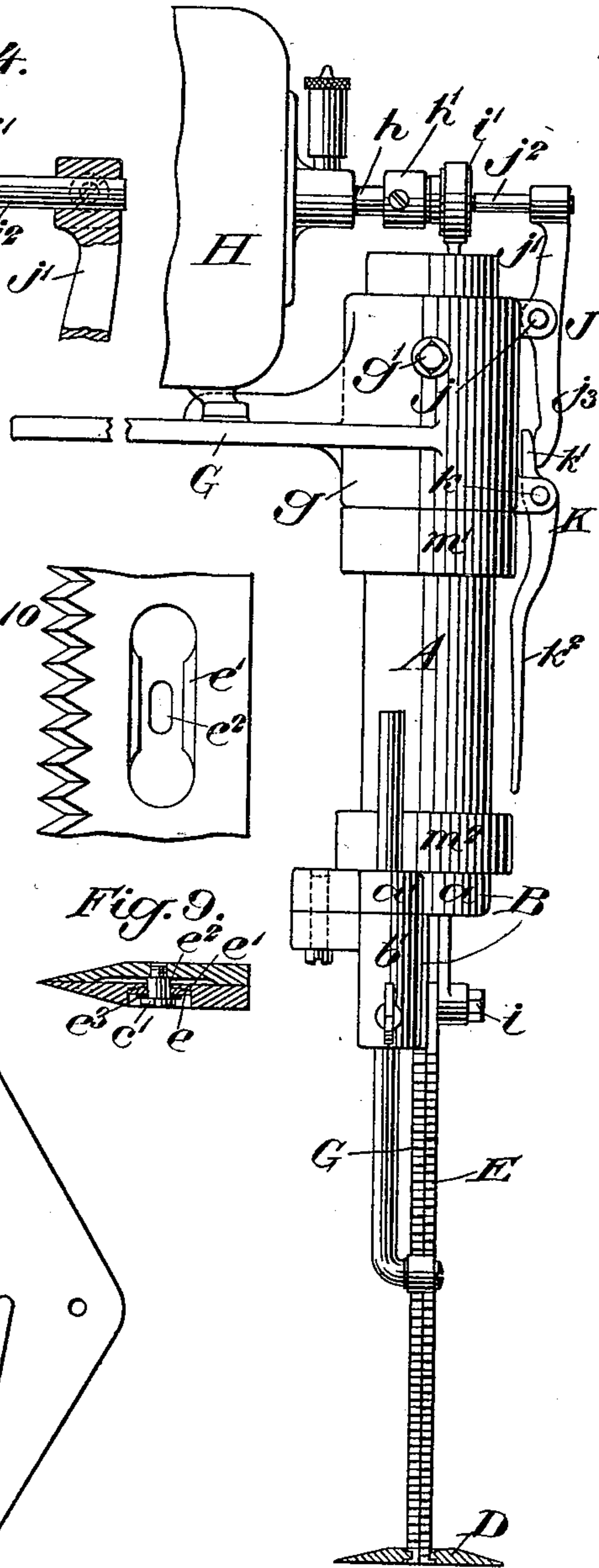


Fig. 4.

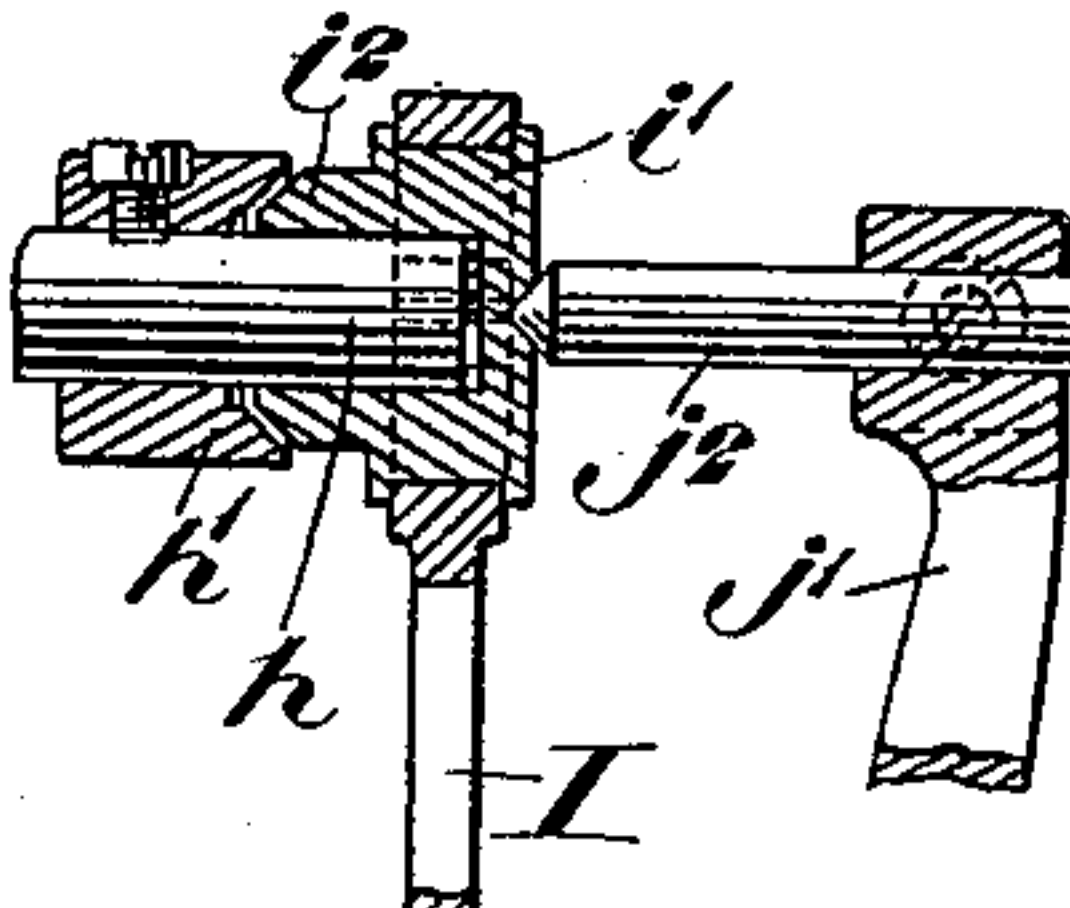


Fig. 10.

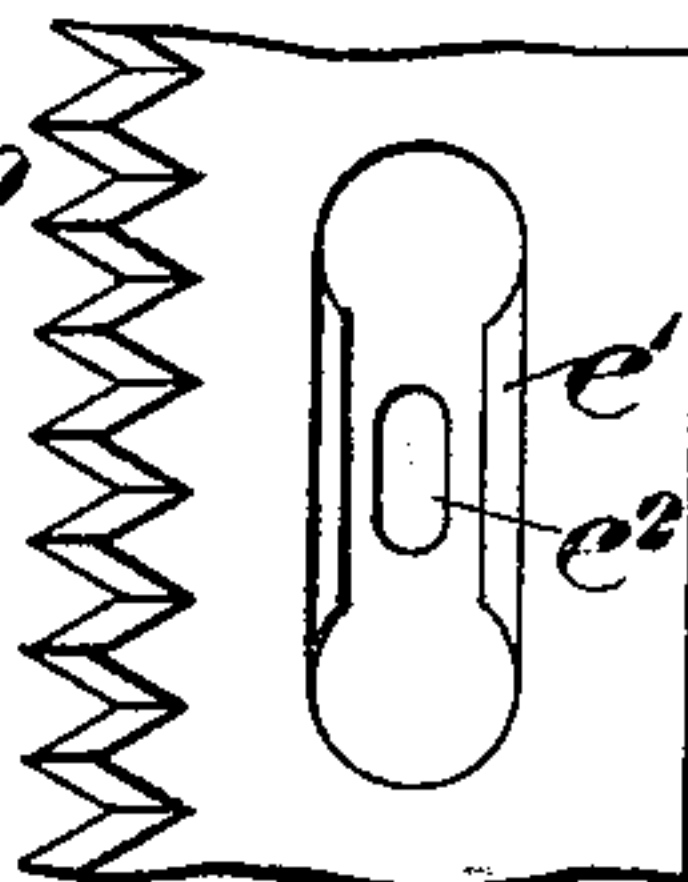


Fig. 9.

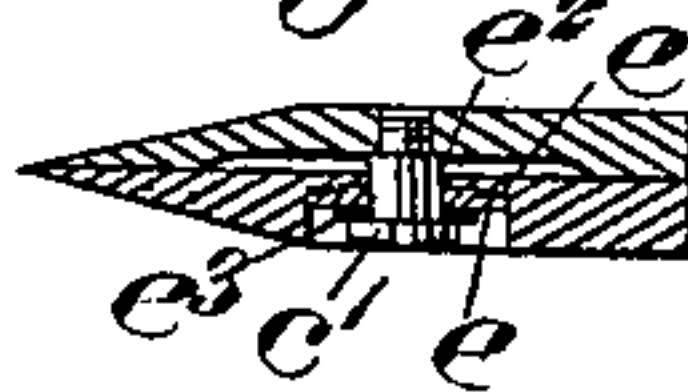
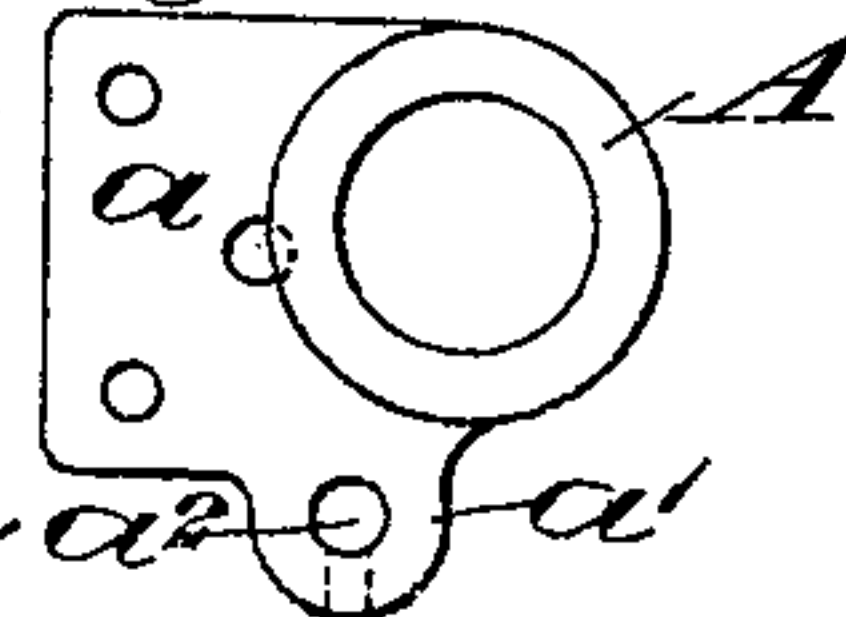


Fig. 11.



Inventor:
Louis E. Hacherelle
by attorneys
Morrison & Luman

UNITED STATES PATENT OFFICE.

LOUIS E. HACHERELLE, OF NEW YORK, N. Y.

CLOTH-CUTTER.

SPECIFICATION forming part of Letters Patent No. 636,724, dated November 7, 1899.

Application filed January 7, 1898. Renewed April 20, 1899. Serial No. 713,754. (No model.)

To all whom it may concern:

Be it known that I, LOUIS E. HACHERELLE, of New York, in the county and State of New York, have invented a new and useful Improvement in Cloth-Cutters, of which the following is a specification.

My invention relates to certain improvements in cloth-cutters in which the cutter may be easily manipulated by hand and in which the movement of the reciprocating cutting-blade is at all times under the control of the hand of the operator which is guiding the cutter.

A further object is to provide a cloth-cutter which will very rapidly and accurately cut the cloth or other material and which will be very simple in construction and in which the teeth upon the cutting-blades will remain sharp for an extended period.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 represents a side view of the cutter, showing it flexibly connected with a suitable stationary support. Fig. 2 is an enlarged vertical section from front to rear through the cutter. Fig. 3 is a front view of the cutter, a portion of the motor being broken away and the foot-plate being shown in section to more clearly illustrate the manner of securing the bottom of the stationary blade thereto. Fig. 4 is an enlarged sectional view of the means for connecting and disconnecting the motor and movable cutting-blade. Fig. 5 is a top plan view of the motor-supporting bracket. Figs. 6 and 7 represent two views of the bracket to which the upper end of the stationary cutting-blade is secured. Fig. 8 is a transverse section in the plane of the line 8 8 of Fig. 2. Fig. 9 is an enlarged transverse section in the plane of the line 9 9 of Fig. 2. Fig. 10 is a detail view of a portion of the movable blade of the cutter, and Fig. 11 is a top plan view of the handle proper.

The handle proper of the cutter consists of an upwardly-extended cylindrical tube A, having a laterally-extended flange a at its bottom. To this flange I secure a bracket B, which bracket is provided with a recess b , within which recess is secured the top or upper end of the stationary cutting-blade C—as, for instance, by suitable fastening-screws

c. The lower end of the stationary cutting-blade C is firmly secured to a foot-plate D, which foot-plate is adapted to slide along upon the table or other surface upon which the cloth or other material to be cut is placed. The shape of this foot-plate D is preferably such as to cause it to freely enter between the bottom layer of the material to be cut and the surface of the table as the cutter is operated.

The stationary cutting-blade C is provided with a series of saw-teeth along its front edge, the flat portion of the said teeth being upon its inner side. This cutting-blade C is preferably hollowed out along its inner side, as shown clearly in Figs. 8 and 9, for permitting the movable cutting-blade to bear for a short distance along its front and rear edges.

The movable cutting-blade is denoted by E, and it is arranged to coact with the stationary cutting-blade C when the movable blade is reciprocated. The movable cutting-blade E is mounted to reciprocate with its inner side in engagement with the portions of the inner side of the stationary blade C which are not hollowed out. The means in the present instance for mounting the blade E upon the blade C consists of a plurality of guides e , adapted to travel along tracks e' upon the opposite sides of suitable elongated slots e^2 in the blade E, the said guides being held in position by suitable studs or pins c' , projecting from the stationary blade C. Each of these guides e is provided with a spring e^3 , which is secured in position by the stud c' , the said springs serving to keep the two blades frictionally engaged with each other to prevent rattling and also serving to keep the portions of the recesses e^4 in which the slots e^2 are formed free from dust and other foreign matter. The front edge of the blade E is provided with a series of cutting-teeth arranged to coact with the teeth upon the blade C. The lower end of the blade E is at all times housed within the foot-plate D, so as to prevent the material being cut from being caught thereby.

The flange a of the handle A is provided with a lug a' , through which a hole a^2 extends, and the bracket B is provided with a similar lug b' , through which a hole b^2 extends, the said holes a^2 and b^2 being in alinement with each other. A gravity-guide, which is adapt-

ed to rest upon the top layer of the material to be cut just in advance of the cutting-blades, consists of an upright rod or bar F , which passes through the said holes $a^2 b^2$ and is provided with a roller f at its lower end. The guide F accommodates itself to different thicknesses of the material to be cut, the said guide being held against twisting or turning laterally by means of a set-screw b^3 , the inner end of which extends into a longitudinal groove f' in the bar F of the die.

A motor-supporting bracket G is provided with a sleeve g , which embraces the upper portion of the handle A and is secured rigidly thereto by means of a suitable set-screw g' . A motor H (in the present instance an electric motor is represented) is supported by the bracket G , the rotary shaft h of the said motor projecting outwardly to a point just above the open top of the handle A .

A connecting-rod I passes through the handle A and is secured at its lower end at i to the top of the reciprocating cutting-blade E and is provided at its upper end with an eccentric i' , loosely mounted upon the free end of the shaft h of the motor H . This eccentric may be connected with the said shaft to be rotated thereby by forcing the said eccentric inwardly along the shaft until its inner conical face i^2 frictionally engages a cup portion h' , rigidly secured to the shaft h . Except when the eccentric i' is held in engagement with the friction-cup h' , the connecting-rod I is at rest.

The means which I have shown for causing the motor to reciprocate the blade E at pleasure is as follows: A two-armed rocking lever J is pivoted at j to the collar or sleeve g of the motor-supporting bracket G , the upper arm j' being provided with an inwardly-extended pin j^2 , which engages the portion of the eccentric i' in a line with the axis of the shaft h . The lower arm j^3 of this lever J is adapted to be engaged and swung outwardly by the upper arm k' of a rocking lever K , pivoted at k upon the said sleeve g , the lower arm k^2 of the said lever being extended downwardly into close proximity to the grip portion of the handle A , where it may be readily grasped by the hand of the operator.

The cutter as a whole may be flexibly connected with a suitable stationary support L . In the present instance I have shown an arm M , hinged to the stationary support L , and an arm M' , coupled to the free end of the arm M by a coupling m , which permits the two arms to be folded back against each other. The free end of the arm M' is provided with a pair of collars $m' m^2$, which embrace the handle A to permit the said handle to be

freely rotated therein. However, this support may be entirely done away with if found desirable, as it forms no part of my present invention.

By constructing the cutter as above described the operator is enabled to instantly connect or disconnect the motor with the reciprocating cutting-blade and as instantly stop the movement of the said blade, or by regulating the pressure upon the eccentric at the upper end of the connecting-rod I the operator may regulate the speed with which the said blade E is reciprocated. This feature is of great advantage, as it does away with the necessity of using more than one hand to operate the cutter, the motor itself not being required to be energized and deenergized every time the cutter is required to be started and stopped.

By hollowing out the stationary blade the friction between the two blades is reduced to a minimum between the teeth upon each of the blades as the blade E is reciprocated. The said teeth are kept sharp and in good condition for a maximum length of time.

It is evident that slight changes might be resorted to in the form and arrangement of the several parts without departing from the spirit and scope of my invention. Hence I do not wish to limit myself strictly to the structure herein shown and described; but

What I claim is—

1. In a cloth-cutter, a motor and its shaft, a stationary cutting-blade, a movable cutting-blade arranged to coact therewith, a connecting-rod secured at one end to the movable cutting-blade, an eccentric at the other end of the said rod, a friction-clutch, one member being carried by the motor-shaft and the other member by the said eccentric and means for operating and releasing the friction-clutch for starting and stopping the movable blade, substantially as set forth.

2. In a cloth-cutter, a motor and its shaft, a stationary cutting-blade, a movable cutting-blade arranged to coact therewith, a connecting-rod secured at one end to the movable cutting-blade, an eccentric at the other end of the said rod, a friction-clutch, one member being carried by the motor-shaft and the other member by the said eccentric and means for operating and releasing the friction-clutch for starting and stopping the movable blade, comprising a pair of coacting levers, substantially as set forth.

LOUIS E. HACHERELLE.

Witnesses:

FREDK. HAYNES,
C. S. SUNDGREN.