

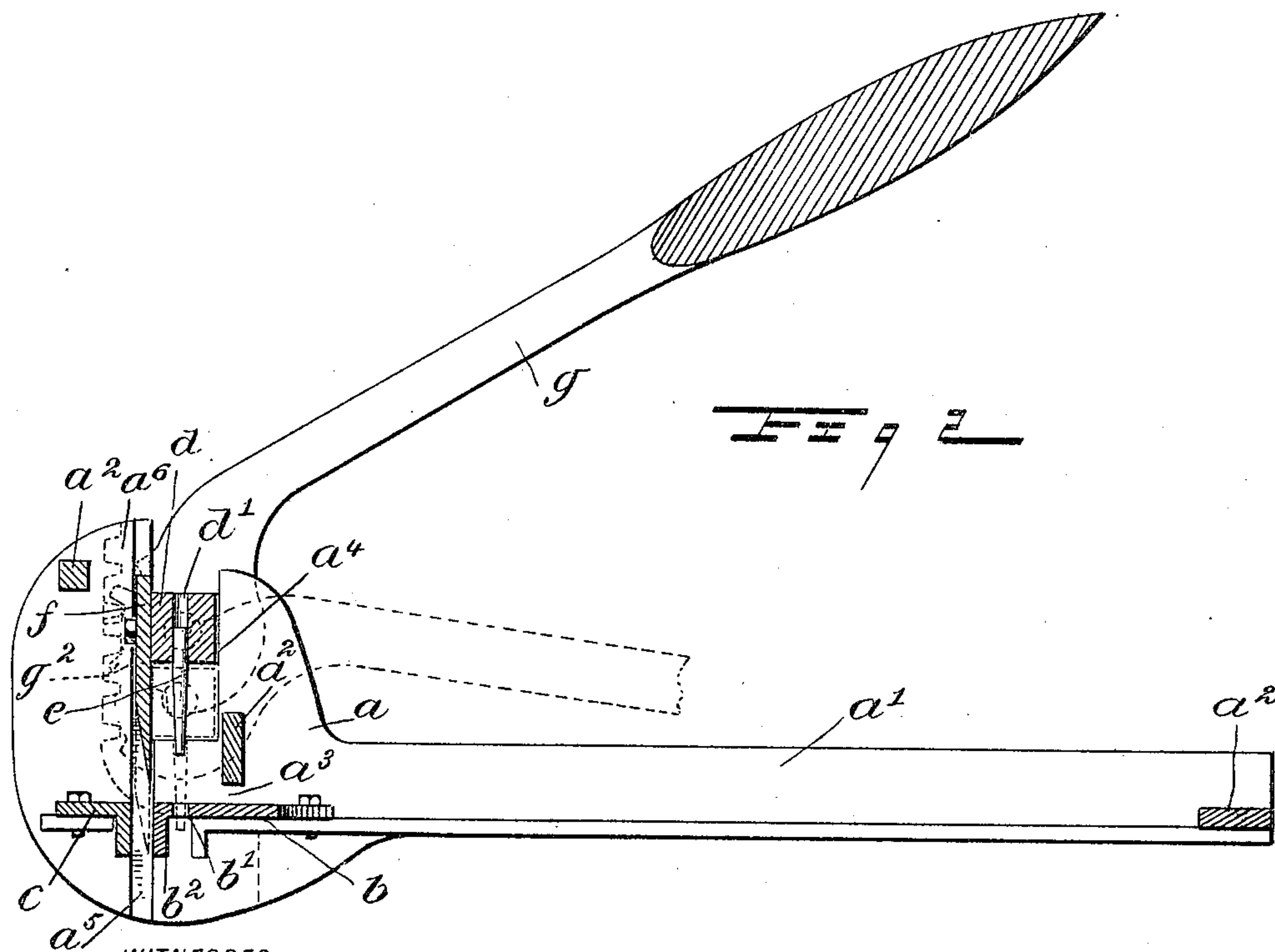
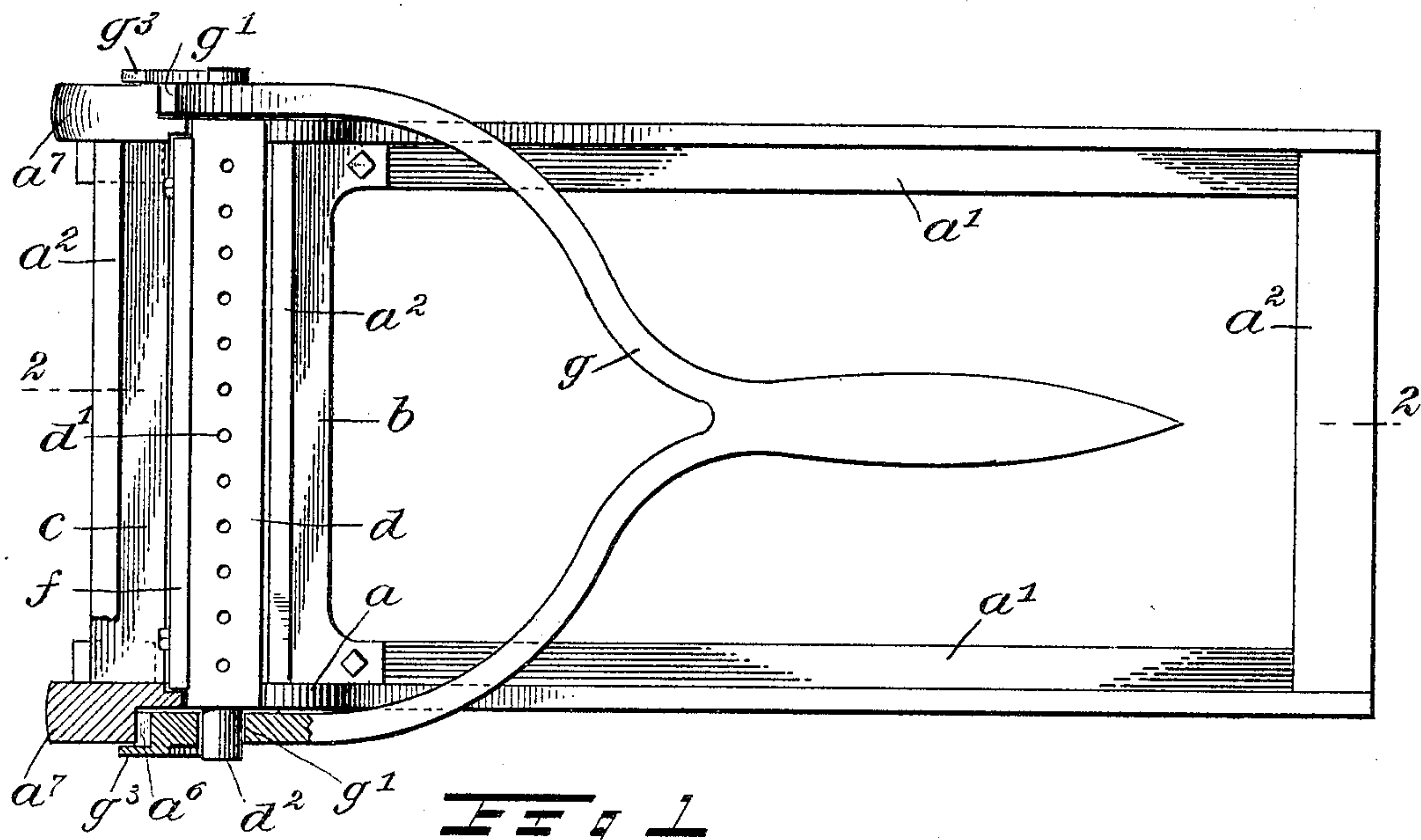
No. 804,108.

PATENTED NOV. 7, 1905.

JOHN EVANS & JAMES EVANS.  
CUTTING AND PUNCHING DEVICE.

APPLICATION FILED JULY 8, 1904. RENEWED OCT 9, 1905.

2 SHEETS—SHEET 1.



WITNESSES:

*John J. Kittle*  
*A. V. Fay.*

INVENTORS  
*John Evans*  
*James Evans*  
BY

*Wm. W. W.*  
ATTORNEYS

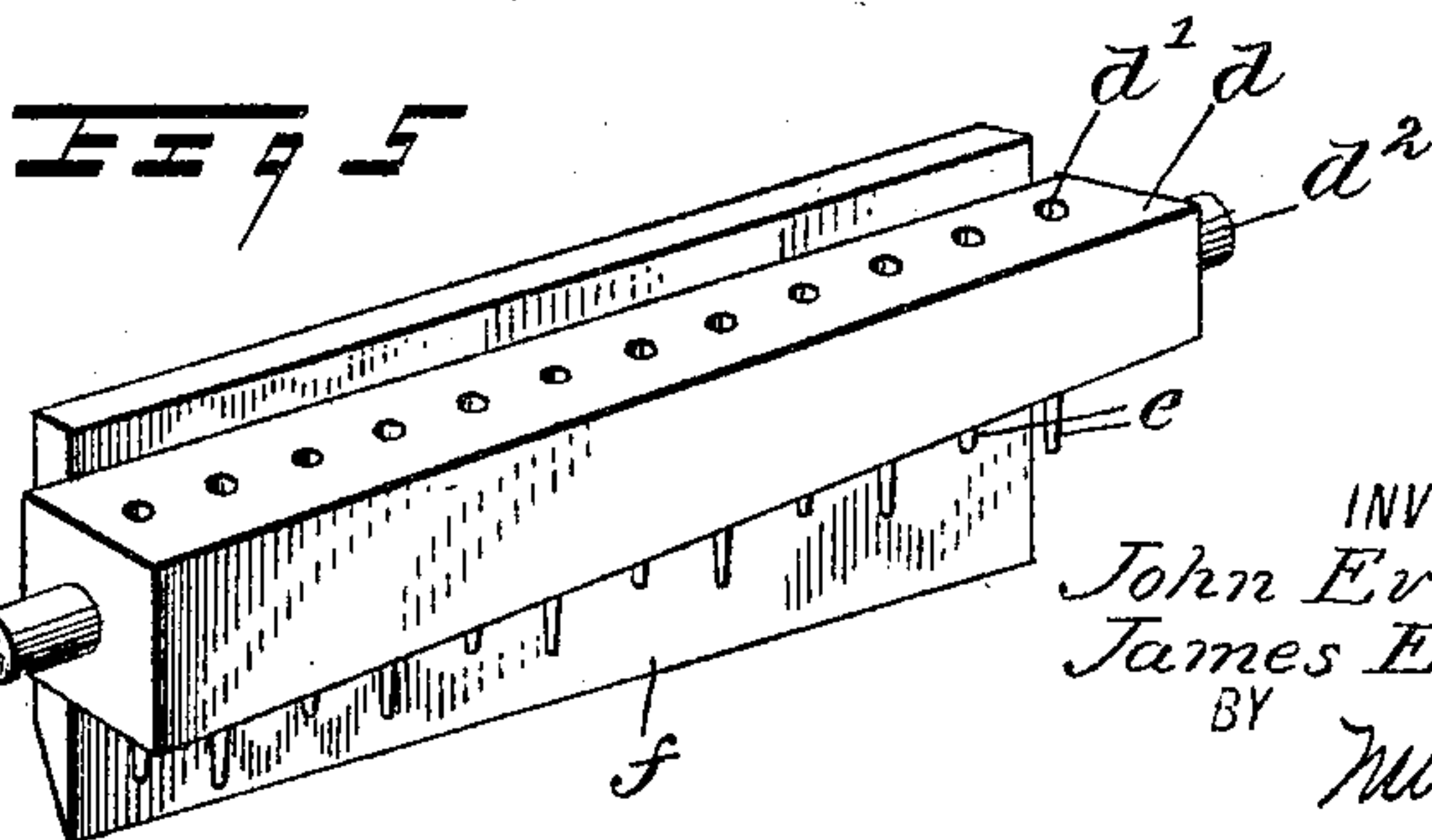
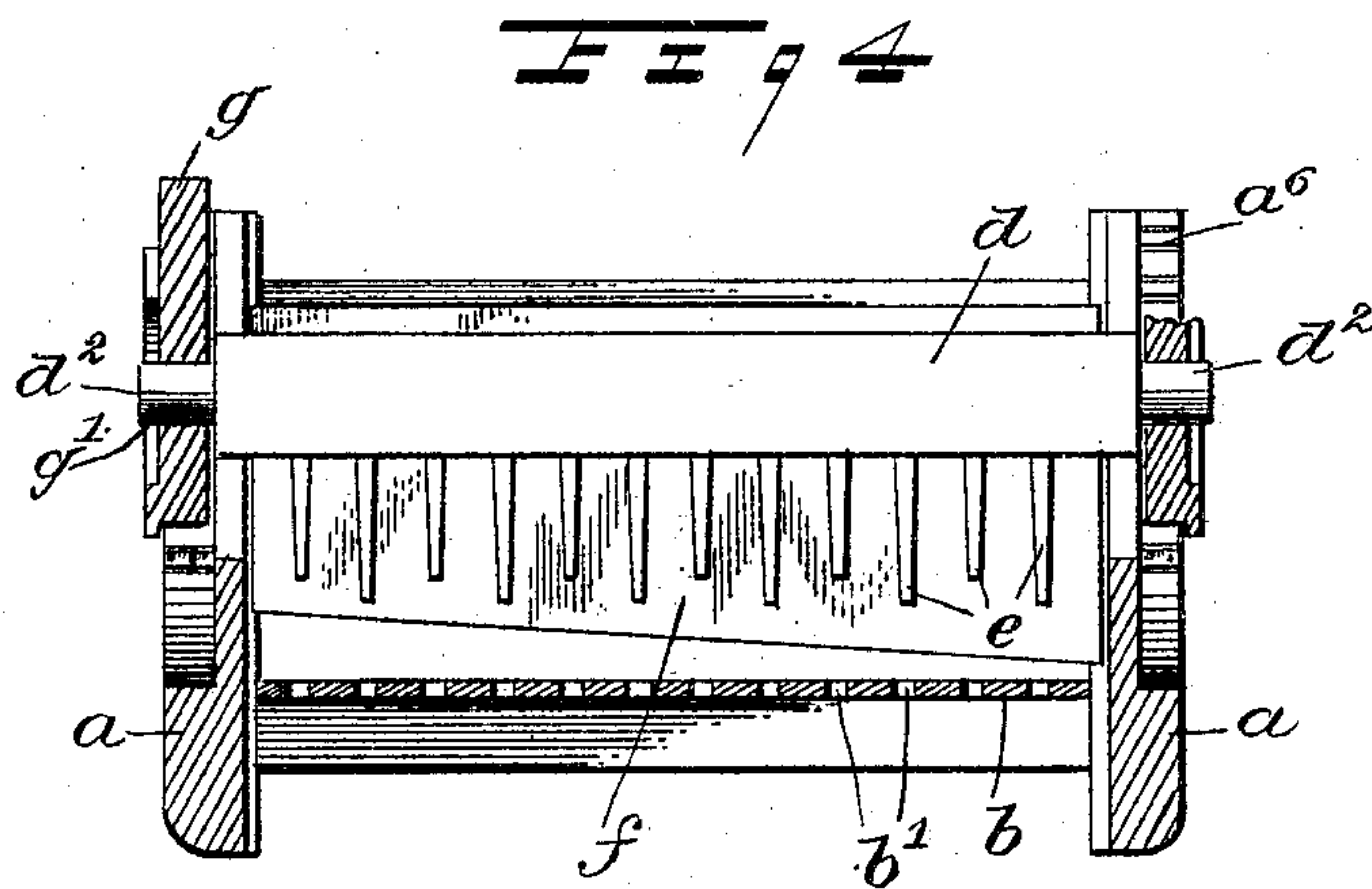
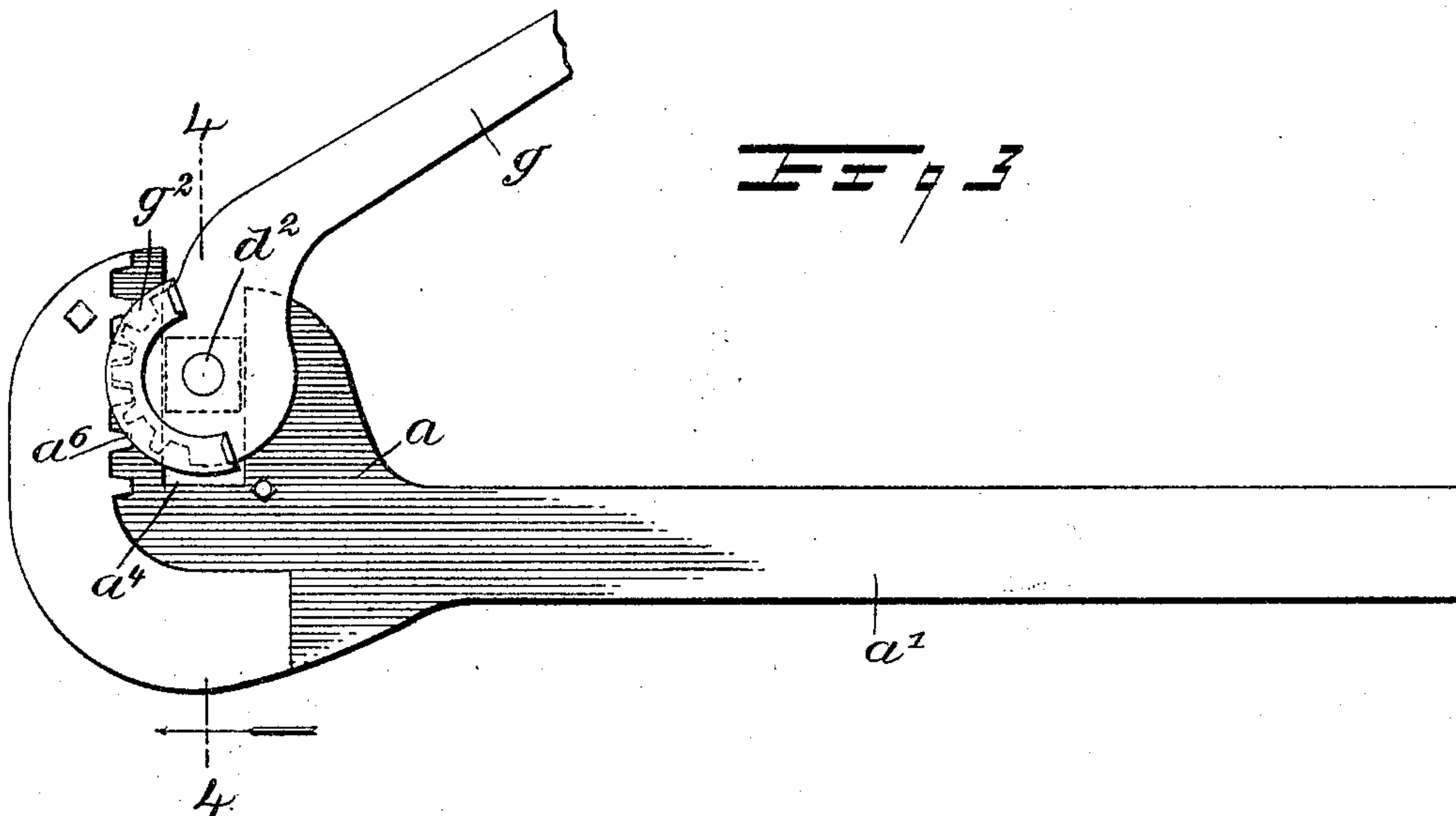
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*John J. Kittle*  
*A. V. Fay*

INVENTORS

*John Evans*  
*James Evans*

BY

*Mumuk*  
ATTORNEYS



# UNITED STATES PATENT OFFICE.

JOHN EVANS AND JAMES EVANS, OF SALT LAKE CITY, UTAH.

## CUTTING AND PUNCHING DEVICE.

No. 804,108.

Specification of Letters Patent.

Patented Nov. 7, 1905.

Application filed July 8, 1904. Renewed October 9, 1905. Serial No. 282 017.

*To all whom it may concern:*

Be it known that we, JOHN EVANS and JAMES EVANS, citizens of the United States, and residents of Salt Lake City, in the county of Salt Lake and State of Utah, have invented a new and Improved Cutting and Punching Device, of which the following is a full, clear, and exact description.

Our invention relates to a device for cutting off the ends of belts and punching lacing-holes therein close to the severed edge, and although it is capable of use for other similar purposes this is the main use to which we contemplate applying it.

The principal objects of our invention are to provide means whereby the belt may be guided within the machine in such a manner as to provide for locating the lacing-holes and cutting off the end at the desired points, and, furthermore, to provide a simple and convenient arrangement of the punches and blades necessary for performing these operations and to secure a convenient and efficient leverage system for the punches and blades.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of a preferred form of our invention. Fig. 2 is a sectional view on the line 2 2 of Fig. 1. Fig. 3 is a side elevation. Fig. 4 is a sectional view on the line 4 4 of Fig. 3, and Fig. 5 is a perspective view of a detail.

The particular embodiment of our invention which is illustrated in the drawings comprises a frame composed of side pieces  $a$ , which are provided with rear extensions  $a'$  and cross-pieces  $a''$ . These cross-pieces may be located at various points in order to secure the necessary strength and rigidity and are shown one at each end of the frame and one near the operating portions of the machine. Upon the lower part of the frame are attached a pair of plates  $b$  and  $c$ , the purpose of which will be mentioned later.

$d$  is a cross-head which is provided with openings  $d'$  for the insertion of punches  $e$  and to which at one side is attached a blade  $f$ .

$g$  is a handle for operating the cross-head, and consequently the blade and punches.

The central one of the cross-bars  $a''$  is placed sufficiently above the plate  $b$  to leave a passage  $a^3$  for the insertion of the belt. It will be observed that the belt is to be thrust through this passage sufficiently far to permit the blade

$f$  to cut off the desired portion and the punches  $e$  to form the desired perforations as the punches  $e$  descend after passing through the perforations  $b'$ , formed in the plate  $b$ , which acts as a support for the belt. The plate  $c$  acts as a support for the portion of the belt cut off.

The portions  $a$  of the frame are provided with slots  $a^4$ , in which the two ends of the cross-head  $d$  are adapted to slide, the walls of the slot constituting guides for the cross-head.

The handle  $g$  is bifurcated and provided with a pair of perforations  $g'$  for the reception of projections or trunnions  $d^2$  at the ends of the head  $d$ . A segmental gear  $g^2$  is provided upon an enlargement of the lower end of each portion of the handle and is preferably made concentric with the perforations  $g'$  and trunnions  $d^2$  and has a guard  $g^3$ . This segmental gear is designed to mesh with a rack  $a^5$ , which is mounted in a vertical position upon a portion  $a^7$  of the side pieces  $a$ .

It will be observed that upon the forcing of the handle  $g$  downward from the position shown in Fig. 2 in full lines the racks and pinions which engage with each other will force the lower part of the handle downwardly along the racks  $a^5$ . This will result in the lowering of the head  $d$ , and consequently the punches and blade, onto the belt, which has previously been placed in the passage  $a^3$  on the plates  $b$  and  $c$ . The punches  $e$  will pass through the belt and will enter the openings  $b'$ , thus forming a clean cut in the belt. The blade  $f$  will pass down by the surface  $b^2$  of the plate  $b$ , and this will permit a clean cut to be made at the end of the belt. When this effect is accomplished, various parts of the device will have the positions indicated in dotted lines in Fig. 2.

It will be observed that with this construction a very effective and efficient leverage is obtained and that upon the belt being placed in position upon the plates  $b$  and  $c$  the depression of the handle  $g$  will force the blade and punches through the leather to accomplish the desired result.

The blade is preferably formed with its edge lower at one end than at the other, and the punches may be constructed in any desired manner and any number may be applied to the device. It is within the scope of our invention to provide punches on both sides of the knife  $f$  and to place more than one series on either side. Any other modifications may be made in the device illustrated



in the drawings without departing from the spirit of our invention, as the drawings merely represent one embodiment of our invention which we have contemplated employing.

5 Having thus described our invention, we claim as new and desire to secure by Letters Patent—

10 1. The combination of a frame having cross-pieces, a pair of plates thereon constituting a support for a belt and having a space between them, a head movably mounted upon said frame, a series of punches and a blade mounted on said head, one of said plates having a series of perforations for the reception of  
15 said punches, and means for forcing said cross-head toward said plates, causing said punches to pass through said perforations and said blade to pass through the passage between the two plates.

20 2. The combination of a frame having cross-pieces, a pair of plates thereon, constituting a support for a belt and having a space between them, a head movably mounted upon the frame, a rack mounted in a stationary position on the frame, a handle pivotally connected to said head and provided with teeth adapted to engage with said rack, whereby the motion of the handle about the head as a pivot

will cause the descent of the head toward said plates, a series of punches, and a blade mounted on said head, the blade being mounted above said space and one of the plates being provided with a series of perforations for the reception of the punches. 30

3. The combination of a frame having cross-pieces, a pair of plates thereon, constituting a support for a belt and having a space between them, a head movably mounted upon said frame, a series of punches mounted on said head, each alternate punch being longer than the others, one end of the blade being lower with respect to the head than the other and one of the plates being provided with a series of perforations for the reception of the punches, and means for forcing the head toward the plates, causing the punches to pass through said perforations and the blade to pass into the space between the plates. 35 40 45

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses. 50

JOHN EVANS.  
JAMES EVANS.

Witnesses:

W. P. DAVIS,  
G. B. ROSS.