

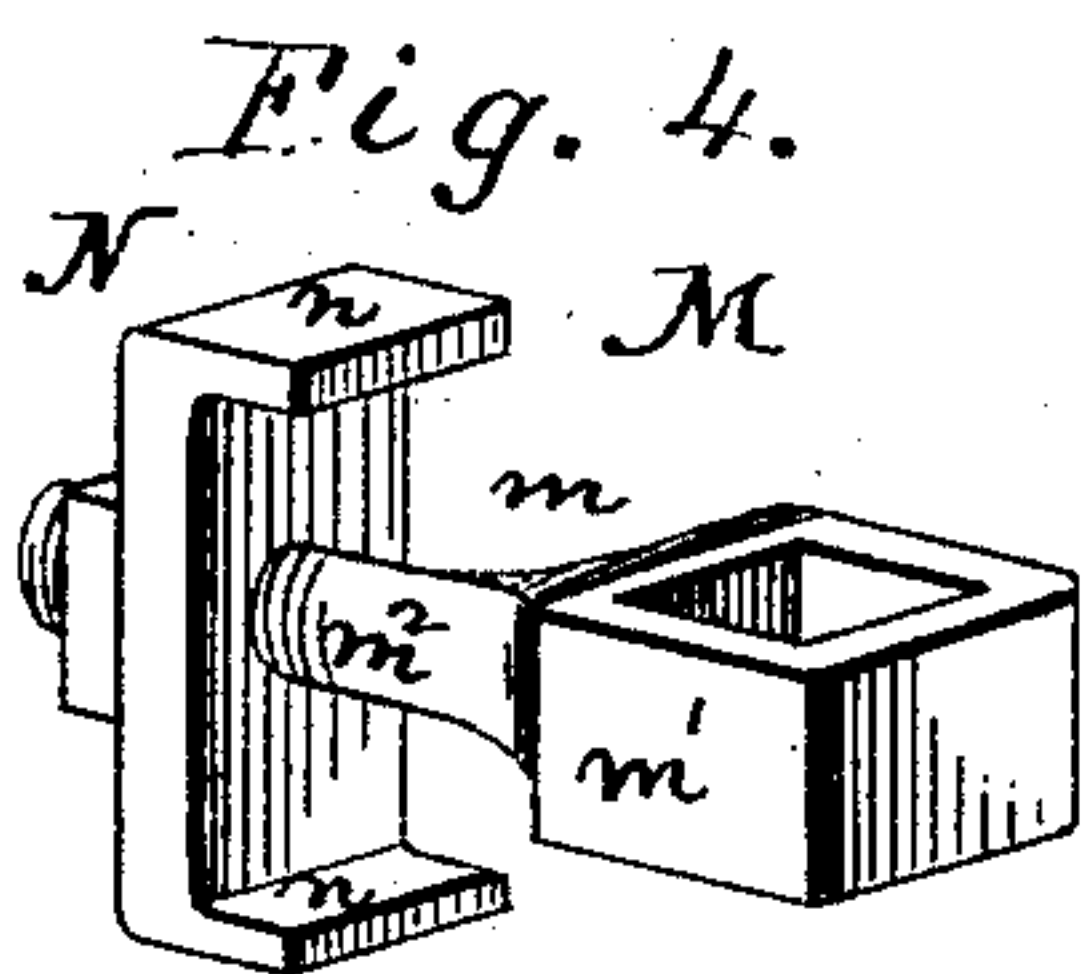
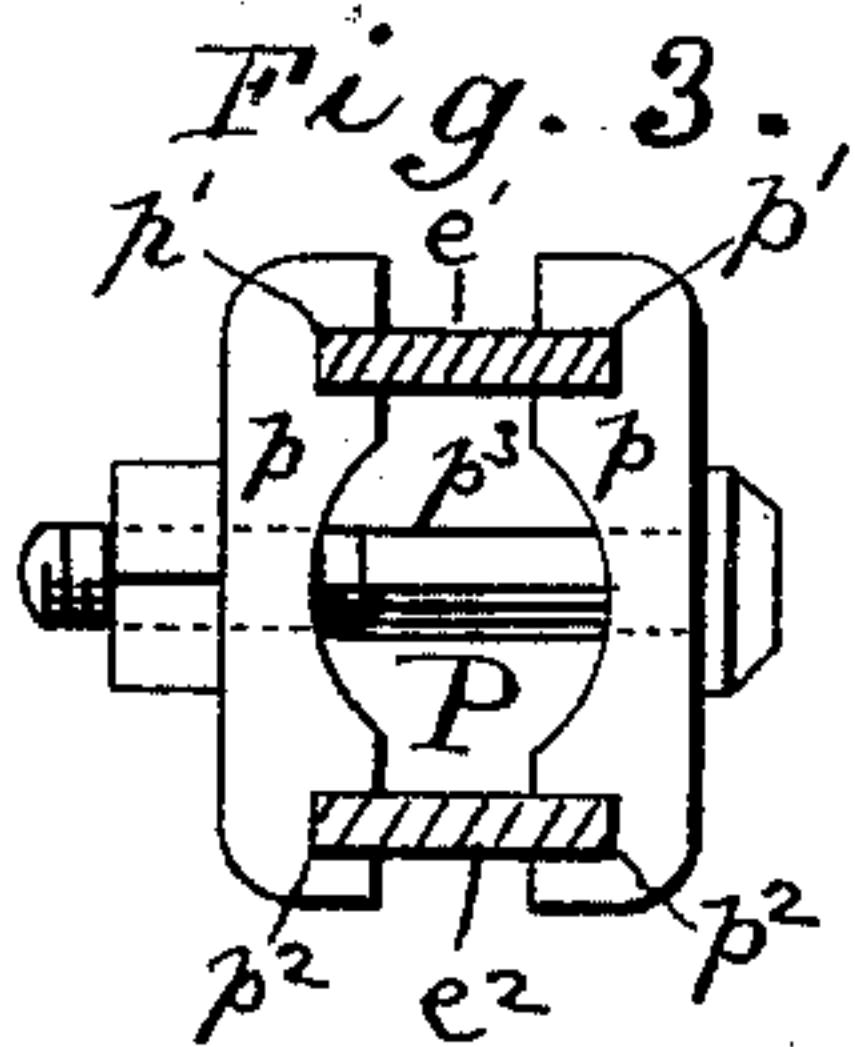
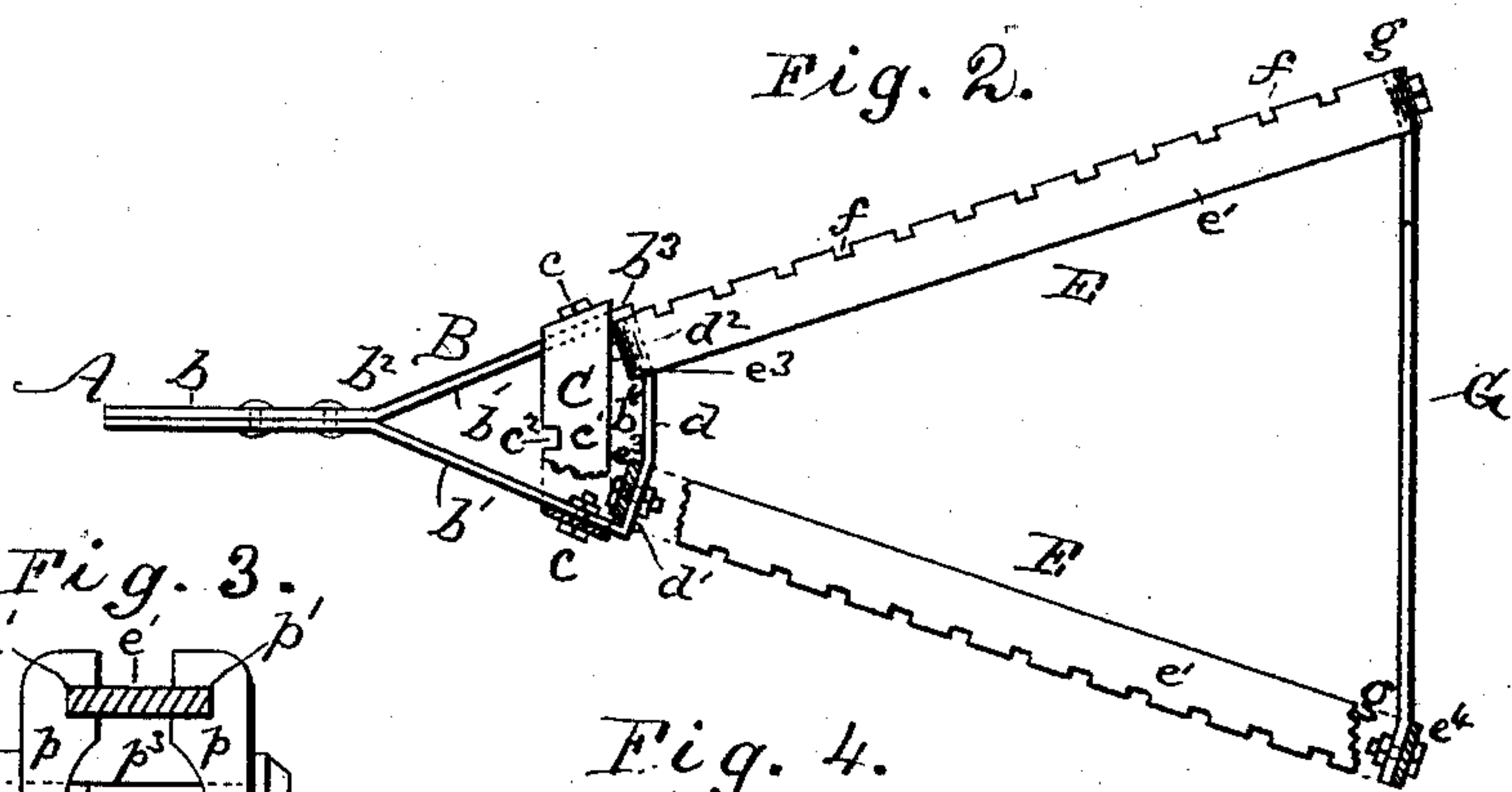
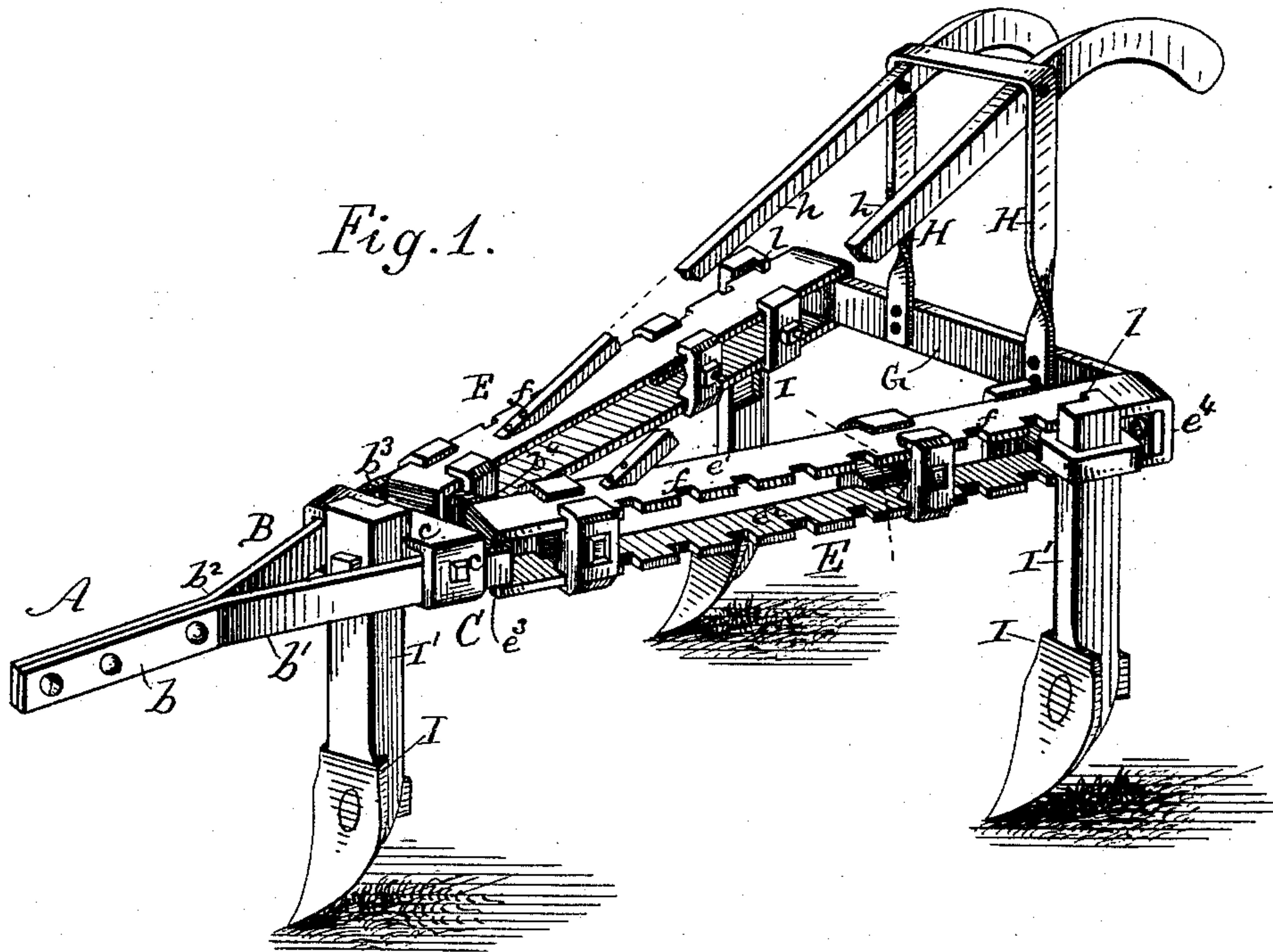
(No Model.)

W. W. POPE.

HARROW.

No. 371,275.

Patented Oct. 11, 1887.



WITNESSES  
Thos. Houghton  
Wm. R. Singleton

INVENTOR  
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per N. H. Singleton,  
Attorney



# UNITED STATES PATENT OFFICE.

WILLIAM WINSTON POPE, OF TYLER TOWN, MISSISSIPPI.

## HARROW.

SPECIFICATION forming part of Letters Patent No. 371,275, dated October 11, 1887.

Application filed March 1, 1887. Serial No. 229,322. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM WINSTON POPE, a citizen of the United States, residing at Tyler Town, in the county of Pike and State of Mississippi, have invented certain new and useful Improvements in Harrows; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

Figure 1 is a perspective view of the device. Fig. 2 is a plan view of the frame, with parts broken away; Fig. 3, a side view of the frame-clamp; Fig. 4, a perspective view of the plow-clamp.

This invention relates to improvements in harrows; and it consists in the construction, hereinafter pointed out and claimed.

In the annexed drawings, the letter A indicates the clevis-holder of the plow. This holder may be made of two strips of metal, B, the portions  $b$  secured together, and the portions  $b'$  diverging therefrom at  $b^2$ , such portions  $b'$  being connected at the ends  $b^3$  by the bar  $b^4$ ; or the holder may be made in one piece, the various parts being formed and arranged as shown in the drawings. Passing around the portions  $b'$ , and held thereto by bolts  $c$ , is a band, C, having top and bottom  $c'$ , provided with notches  $c^2$ . The bar  $b^4$  is shaped so as to have the three parts  $d' d'' d^2$ , the parts  $d' d''$  diverging from the middle part,  $d$ .

Secured by bolt  $e$  to the part  $d'$  is the skeleton frame E, consisting of top and bottom plates,  $e' e^2$ , and ends  $e^3 e^4$ , the former of which is inside of the holder A and bolted to the bar  $b^4$ . To the other side of the holder is similarly secured a duplicate frame, E. The outer edges of the plates  $e' e^2$  of these frames are provided with notches  $f$ , preferably rectangular in shape, as shown. To the rear ends of these frames are bolted the ends  $g$  of the rear cross-brace, G, of the harrow. From this brace rise the uprights H, supporting the handles  $h$ . To this frame are fastened the plows I. The standards I' of these plows are L-shaped in

cross-section, having the offsets  $l$ . Any desired number of these plows may be used. One of them is secured to the band C, the offset  $l$  resting in the notches  $c^2$ , said plow being clamped to the band. The other plows are arranged along the outside of the frames E, the offsets  $l$  resting in certain notches  $f$ , the plows being held by clamps M. These clamps consist of bolts  $m$ , having eyes  $m'$ , which surround the standards I', and threaded shanks  $m^2$ , which pass between the plates  $e' e^2$  and engage plates N, the lips  $n$  of which catch the inner edges of the plates  $e' e^2$ . By means of these clamps M the position of the plows can be varied; also, plows of different size can be used with the same frame. These clamps also brace and strengthen the skeleton frame.

When only a few plows are used, I employ the clamp P to strengthen and brace the frames. This clamp consists of the twin plates  $p p$ , having at top and bottom the notches  $p' p^2$ , adapted in shape and size to the plates  $e' e^2$ . These plates  $p p$  are held together by the bolt  $p^3$ , which passes between the plates  $e' e^2$  and clamps the plates  $p p$  against them.

This construction forms a light and strong harrow, in which the parts are removable and adjustable, and yet are held firmly together. By making the notches  $f$  rectangular tendency to wrench the standards is avoided.

Having described my invention, what I claim is—

1. The combination of the clevis-holder A, the band C around said holder, the skeleton frames E E, secured to said holder, the rear brace, G, and the plows adjustably held to such frames and band, as set forth.

2. The combination of the clevis-holder A, the bar  $b^4$  of which has the diverging parts  $d' d''$ , the band C around said holder, the skeleton frames E E, secured to said parts  $d' d''$ , the rear brace, G, and the plows adjustably held to such frames and band, as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM WINSTON POPE.

Witnesses:

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A. L. LAZAR.