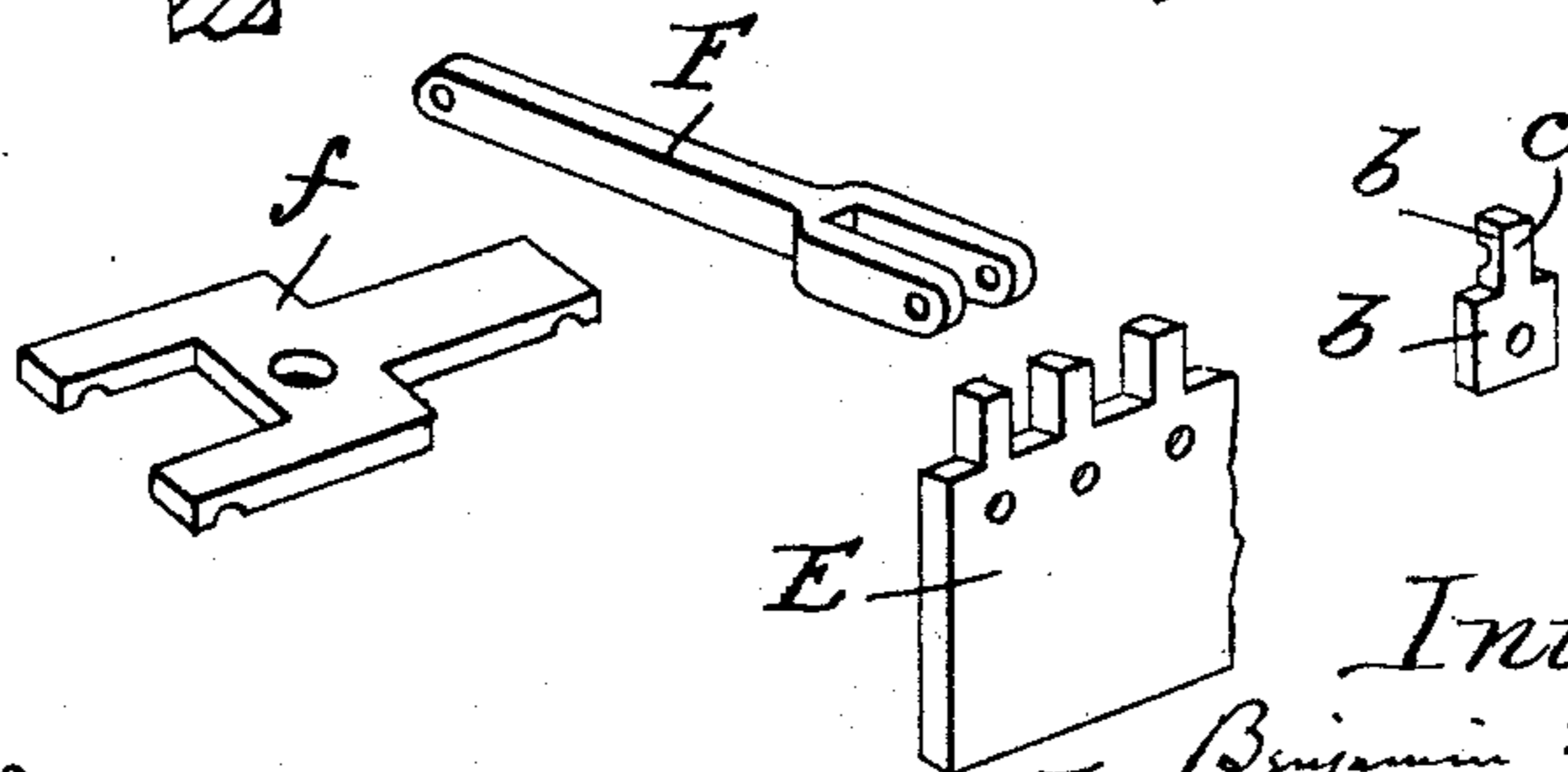
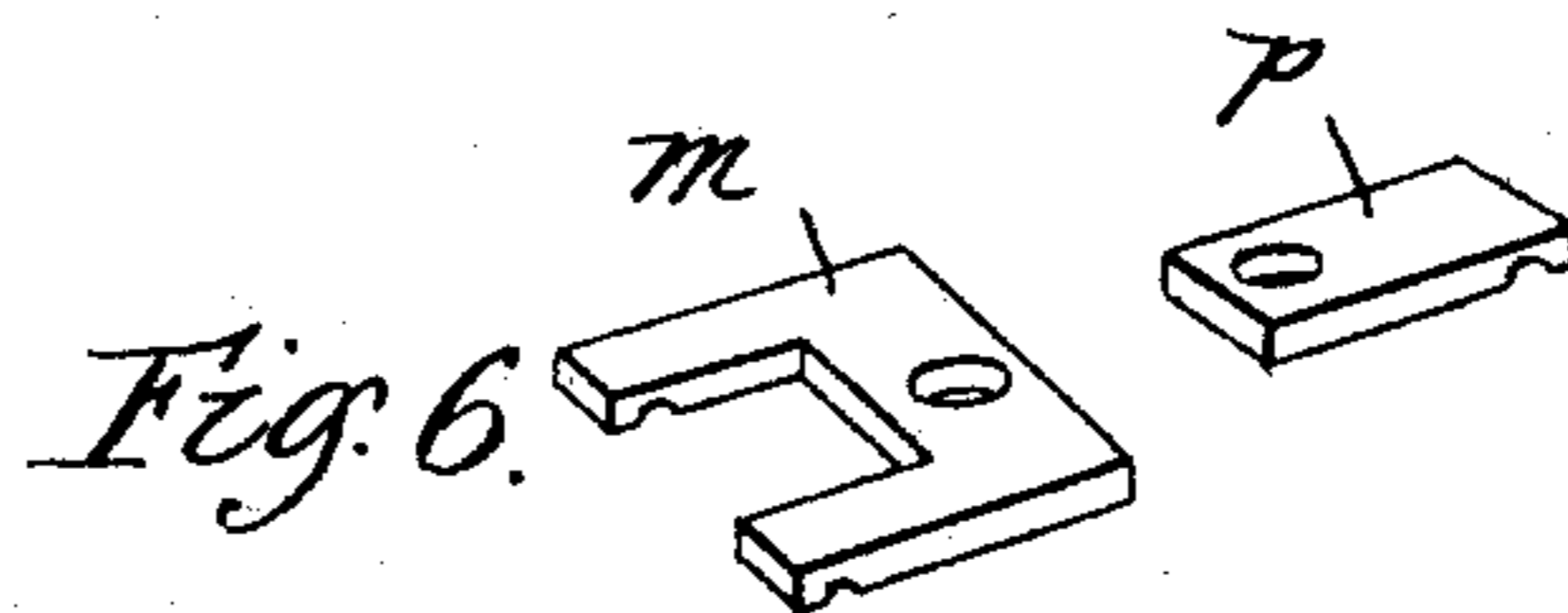
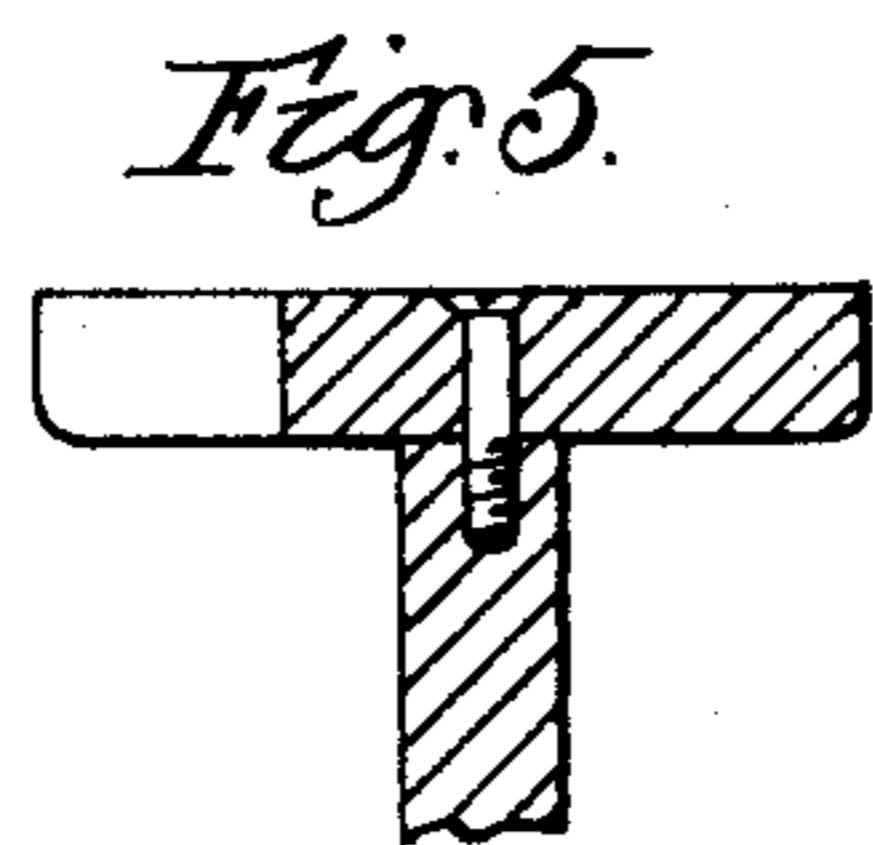
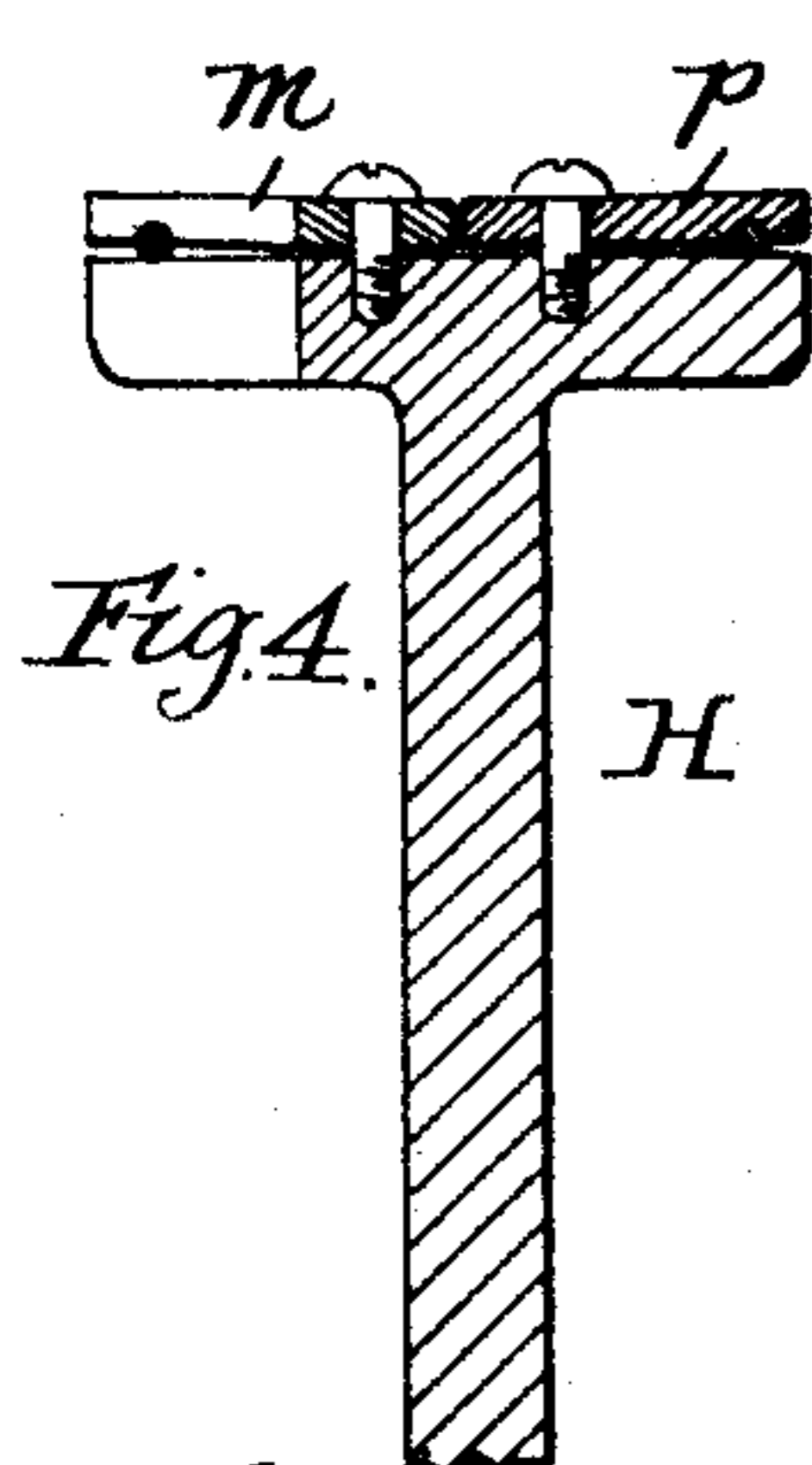
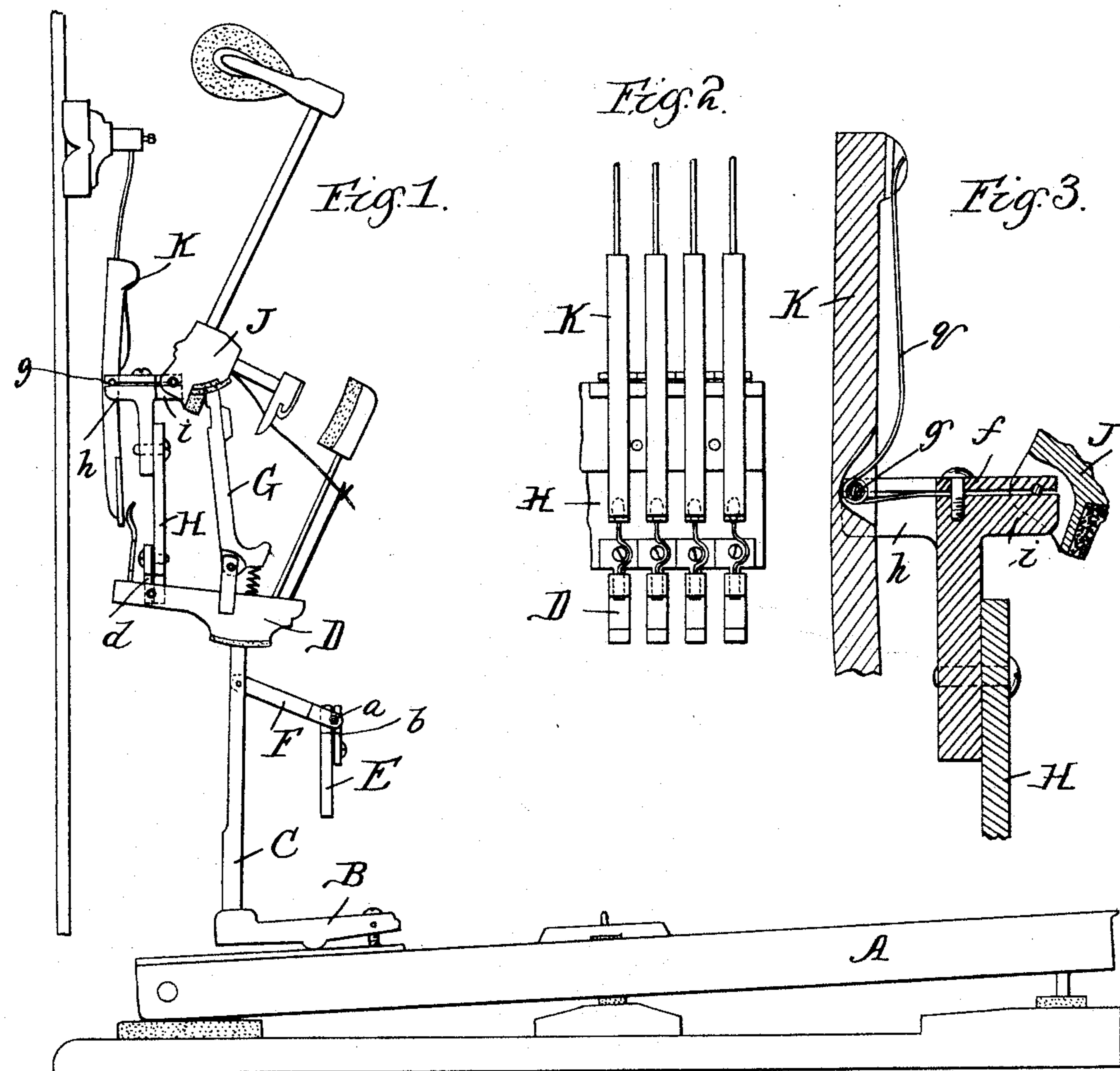


(No Model.)

B. F. CARR.  
PIANOFORTE ACTION.

No. 585,740.

Patented July 6, 1897.



Witnesses.  
 M. N. Rhems  
 Wm. J. Hanning

Inventor  
By Benjamin F. Carr  
Att. Stent.

Atty.

# UNITED STATES PATENT OFFICE.

BENJAMIN F. CARR, OF CHICAGO, ILLINOIS.

## PIANOFORTE-ACTION.

SPECIFICATION forming part of Letters Patent No. 585,740, dated July 6, 1897.

Application filed December 31, 1895. Serial No. 573,947. (No model.)

*To all whom it may concern:*

Be it known that I, BENJAMIN FRANKLIN CARR, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Pianoforte-Actions, of which the following is a full, clear, and exact specification, reference being had to the accompanying drawings.

My invention relates to piano-actions; and it consists in a construction which will permit of the use of a metal main rail and connections, as will hereinafter be fully described in the drawings.

Figure 1 is a side view of a part of a piano-action embodying my invention. Fig. 2 is a rear view of the same; Fig. 3, an exaggerated detail section showing the connection between the damper-levers and the main rail and the hammer pivot-block. Figs. 4 and 5 are modifications. Fig. 6 illustrates the connections between the extension-rail and guide.

A is one of the keys; B, a key-rocker; C, an extension which connects the rocker with the wippen D.

E is the extension-rail, which extends from one end of the piano to the other, and F is a guide, one of which connects each extension C with the rail E. The rail E is of metal and is formed with lugs on its upper edge, as shown in Fig. 6, each lug to receive the furcated end of an extension-guide F, the other end of which is pivoted to one of the extensions C. A pivotal connection is made between the rail and guide by means of a bolt *a*, which connects the ends of the furcations of each guide, and after the furcation is placed over the lug on the rail a cap *b*, having a

groove in the face of the lug *c*, that projects from its upper edge, is screwed onto the rail, so that its groove embraces or clamps the pin up against a lug of the rail, and as the lug of this cap projects between the furcations of the extension-guide a slight twist of the cap will tend to deflect the guide laterally to adjust the extension beneath the wippen or upon the key-rocker.

The wippen and hammer are connected in the usual way by a jack G.

H is the main rail of the instrument. This I make of metal, either in two parts, as shown in Figs. 1 and 2, or in one piece, as in Fig. 4.

The wippen is suspended from its lower end by a clamp *d*. The upper edge of the main rail is flanged, as at *h i*, and to these flanges are pivotally clamped the hammer-block J and damper-lever K by means of a single plate *f*, having grooves on its under side to embrace the pivots *g* and *e*, respectively, or by two plates *m* and *p*, each of which clamps a pivot, as shown in Fig. 4.

The pivot *g* passes through a concavity in the damper-lever and serves as an anchor for the damper-spring, which is twisted about it.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination in a piano-action of clamps for the pivots each comprising a fixed and a movable part having the groove in the movable parts as and for the purpose set forth.

BENJ. F. CARR.

Witnesses:

MARK A. FOOTE,  
S. S. STOUT.