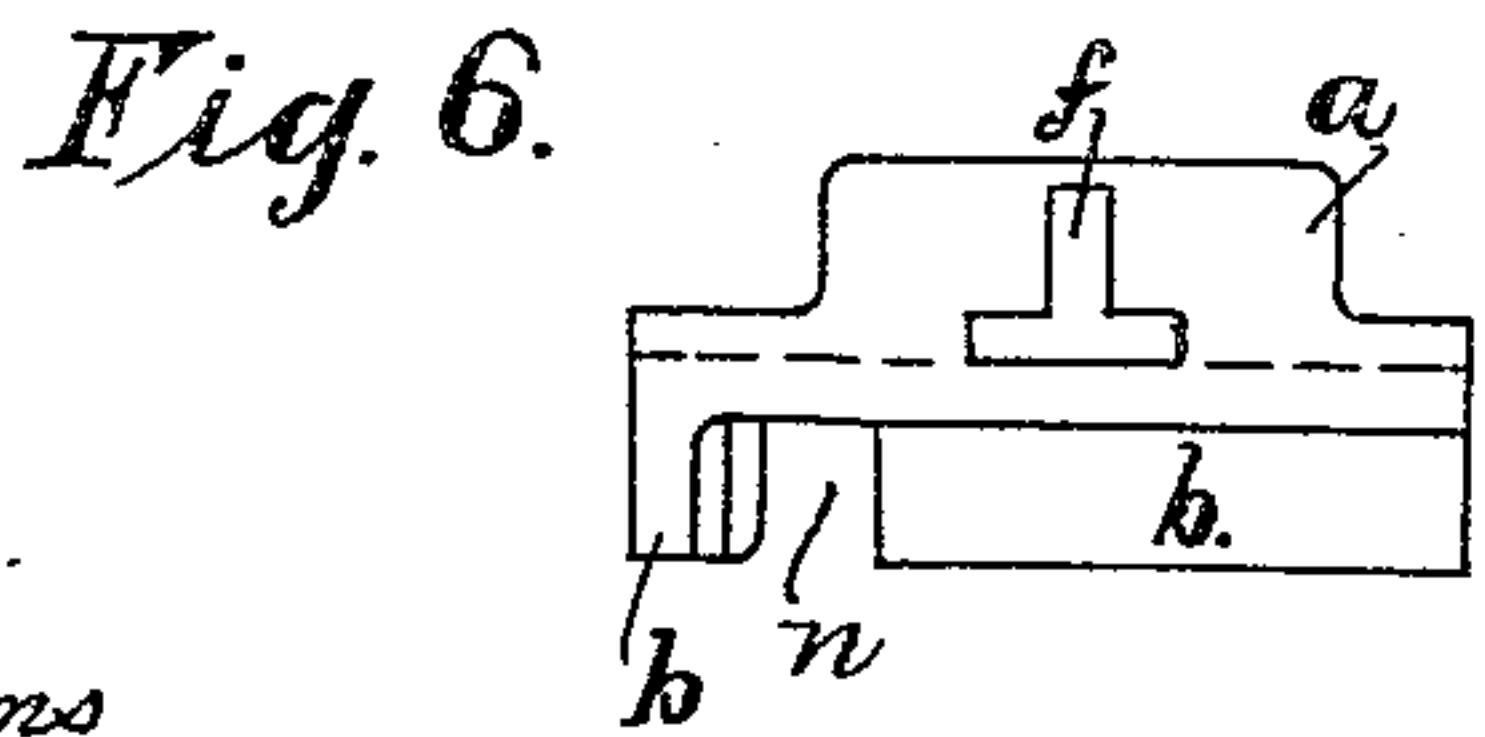
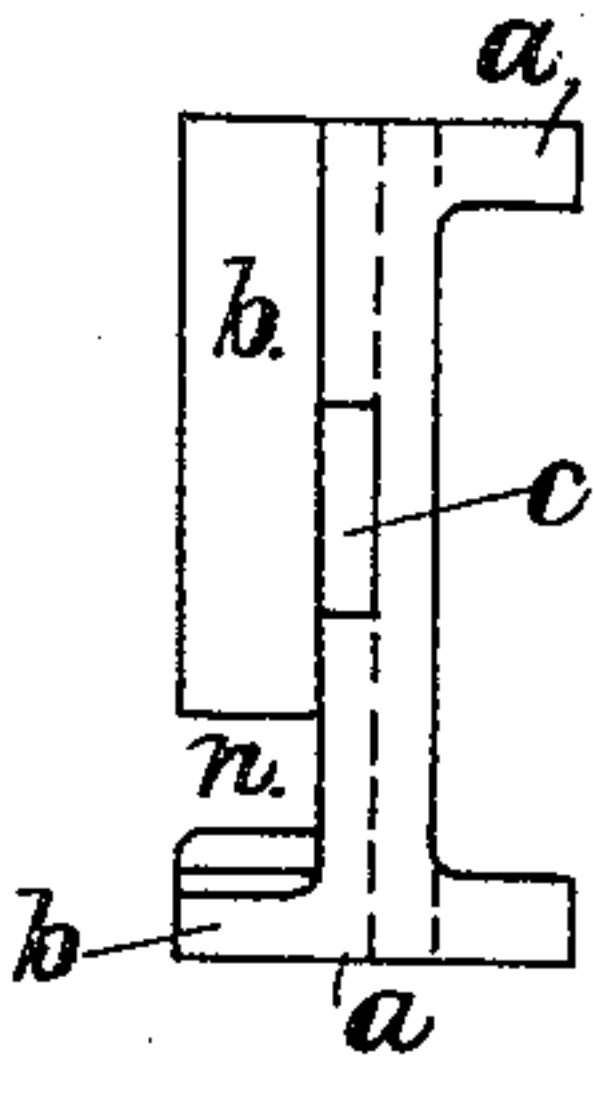
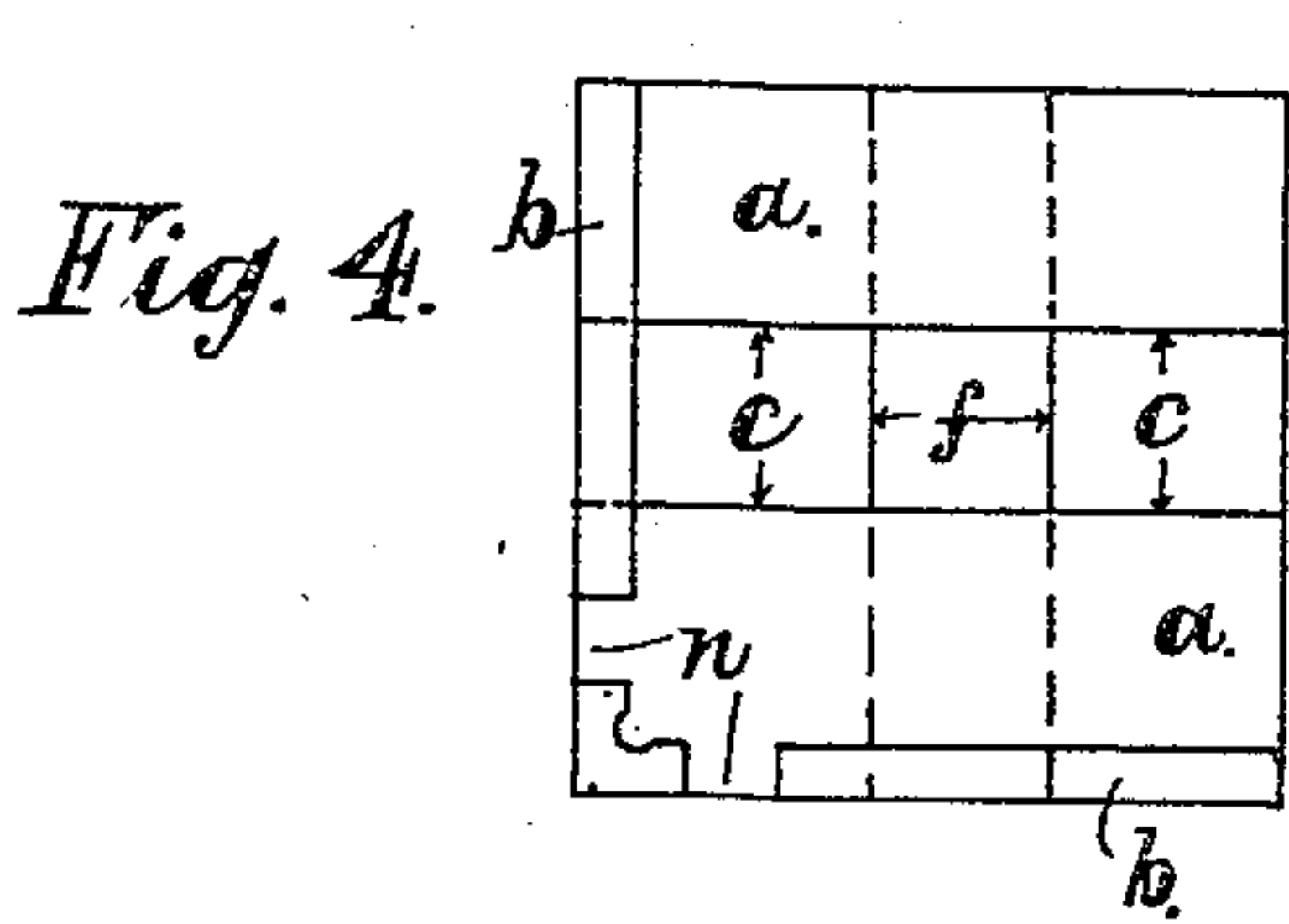
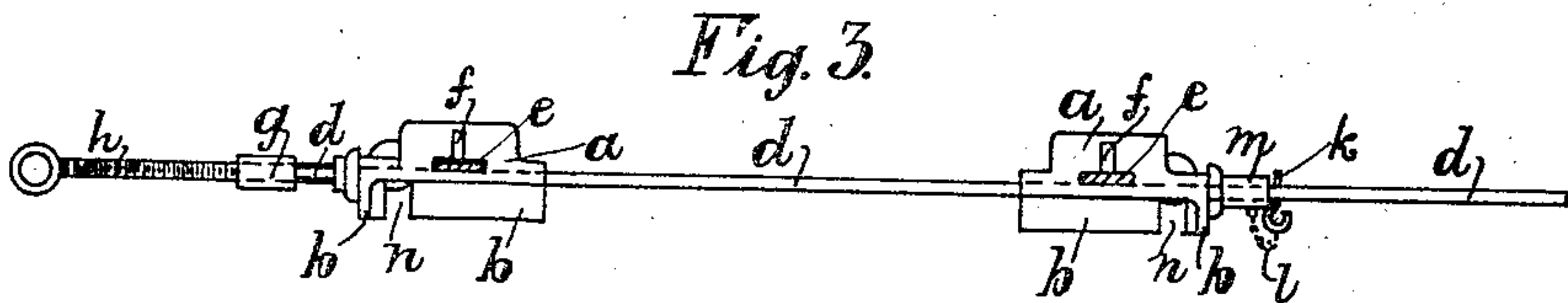
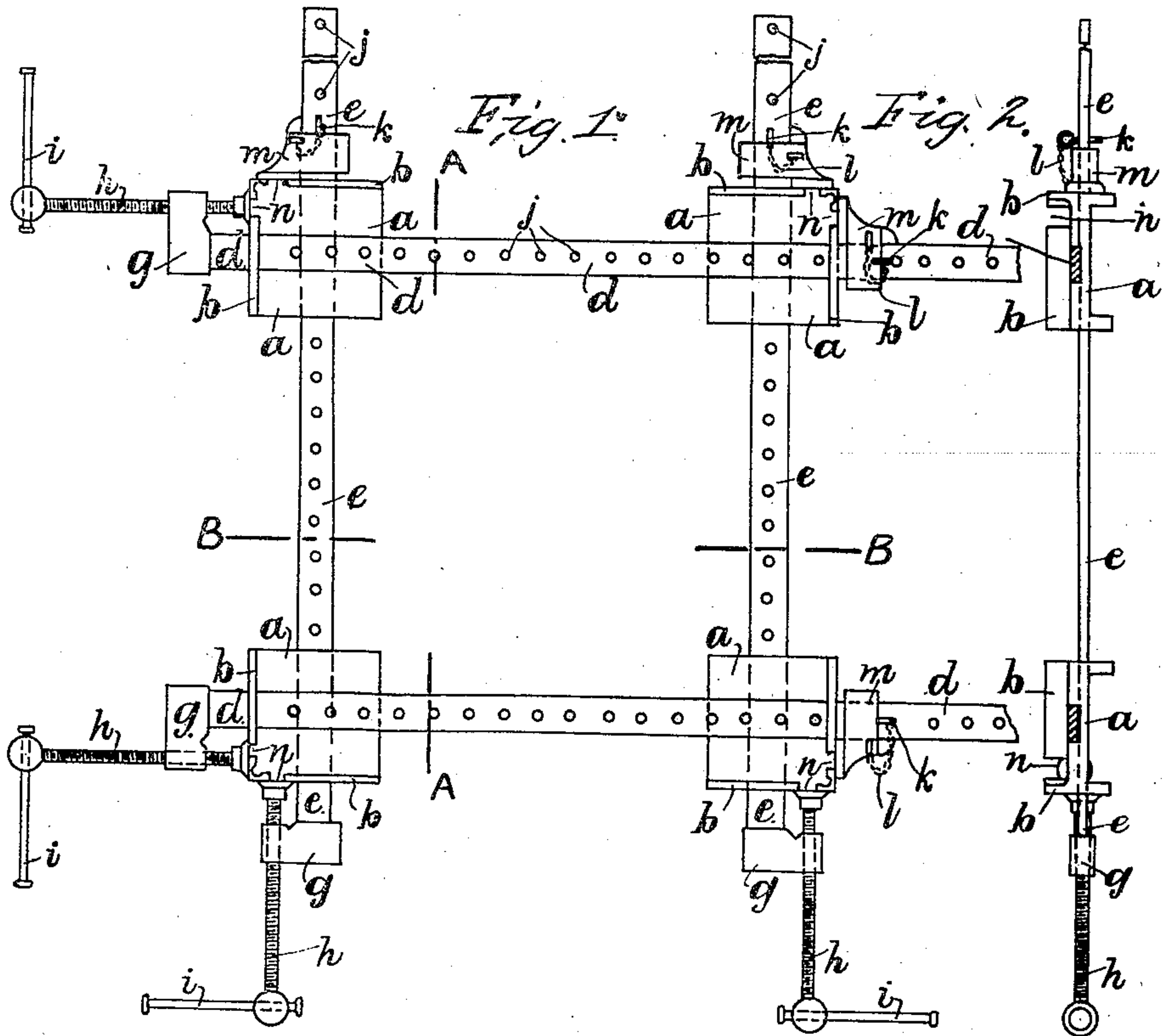


No. 835,809.

PATENTED NOV. 13, 1906.

A. F. BRAMHALL.  
CLAMP.

APPLICATION FILED OCT. 26, 1905.



Witnesses.  
John Stevens  
William Barber

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Attorney.



# UNITED STATES PATENT OFFICE.

ALBERT FREDERIC BRAMHALL, OF MANCHESTER, ENGLAND.

## CLAMP.

No. 835,809.

Specification of Letters Patent.

Patented Nov. 13, 1906.

Application filed October 26, 1905. Serial No. 284,490.

*To all whom it may concern:*

Be it known that I, ALBERT FREDERIC BRAMHALL, wool-stapler, a subject of the King of England, and a resident of Ferndale, Dover street, Crumpsall, Manchester, in the county palatine of Lancaster, England, have invented certain new and useful Improvements in Clamps for Picture-Frames, Window-Frames, or the Like, of which the following is a specification.

This invention relates to an improved clamp for use in the manufacture of picture-frames, window-frames, and similar structures or devices; and the object of the invention is to provide a very simple, cheap, and efficient device which is so constructed that the clamp-bars may, if desired, be used with their width extending in a vertical direction to give vertical rigidity to the frame when in its operative or horizontal position or may be placed with their width extending horizontally when that position is most desirable, according to the work being done or the place or position in which the frame is used; and it is a further object of the invention to provide suitable means for moving the corner-pieces and holding the same to clamp the work and to provide a device having the several advantages of the particular construction, arrangement, and combination of parts, all as hereinafter more fully described, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view of a device embodying the invention; Fig. 2, a transverse section of the same on the line A A of Fig. 1; Fig. 3, a similar view on the line B B, showing the same in an inverted position. Fig. 4 is an enlarged detail of one of the corner-pieces, showing the same in plan view. Fig. 5 is an edge view of Fig. 4, and Fig. 6 is a similar view inverted.

As shown in the drawings, the clamp consists of two pairs of clamp-bars *d* and *e*, held together in the form of a rectangular frame by means of metal corner-pieces *a*. The bars are preferably formed of wood and have a considerably greater width than thickness and are each provided with a series of holes *j* throughout their length.

Each corner-piece *a*, which is preferably formed of cast metal, is made in any desired shape and size, with upwardly-extending edges or flanges *b* along two sides to engage the work near the corner thereof, said flanges being cut away at *n* near their meeting ends

to permit nails to be driven into the work at each corner. A groove *c* of a depth equal to the thickness of the bars is formed in the upper surface of each corner-piece to receive the bars *d*, which lie flat in said grooves and extend through openings forming continuations of said grooves in the raised edges *b*, with their surface flush with the upper surface of the corner-pieces, so that the work may lie flat upon said surfaces, and in the lower side of each corner-piece is formed a T-groove *f* to receive the bars *e* in either a horizontal position, with their upper flat surface lying close to the under side of the bars *d* or with their width in a vertical position, with their upper edges close to the said lower surface of the other bars, so that when the frame is used in a horizontal position to clamp a heavy article the clamp may be stiffened and strengthened against vertical strains by placing said clamp-bars *e* edgewise. The corner-pieces are adjusted along the bars to accommodate various sizes of work and held in place by pins *k*, engaging the holes *j* in the bars, said pins being each attached, by means of a chain *l*, to a block *m*, slidable on each bar.

On one end of each clamp-bar is a laterally-projecting arm *g*, having a screw-threaded opening extending parallel with the bar to receive a clamp-screw *h*, one end of which is adapted to engage the adjacent side of one of the corner-pieces and move said piece along the bar when said screw is turned, by means of a handle *i*, on its outer end.

The operation and manipulation of the device being obvious, and having, therefore, fully described the invention, what I claim is—

1. In a clamp, the combination with clamp-bars, of corner-pieces adjustable on said bars and each having raised edges to engage the work and formed with a groove extending parallel with one of said edges to receive in a horizontal position, the bars extending in one direction and each also formed with a T-shaped groove extending parallel with the other edge to receive the other bars in either a horizontal or vertical position, and means for holding the corner-pieces in the position to which they may be adjusted on said bars.

2. In a clamp, the combination with clamping-bars, of corner-pieces adjustable on said bars and each having raised edges along two sides to engage the work near each corner and formed with a groove in its upper



face of a depth equal to the thickness of the bars to receive one of said bars with its side flush with the upper surface of the corner-piece and each also formed with a T-groove  
5 in its under side extending at right angles to the other groove and adapted to receive one of said bars and hold the same with its surface adjacent to the lower surface of the other bar or with its edge adjacent to said  
10 surface, and means for holding said corner-pieces in the position to which they may be adjusted on said bars.

3. In a clamp, the combination of clamp-bars formed with a series of holes throughout  
15 their length, corner-pieces having raised edges at two sides to engage the work and each formed with a groove in its upper face to receive one of the bars in a horizontal position with its flat side level with the surface of

the corner-piece and also formed with a T- 20 groove at its lower side extending at right angles to the other groove to receive and hold a bar in a horizontal position with its flat side up or in a vertical position with its edge upward, pins to engage the holes in the bars and  
25 hold the corner-pieces, projecting members on the ends of the bars having screw-threaded openings, screws engaging said screw-threaded openings, and means for turning the screws into engagement with the corner- 30 pieces to adjust the same along the bars.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALBERT FREDERIC BRAMHALL.

Witnesses:

JOHN H. WALKER,  
JOHN STEVENS.