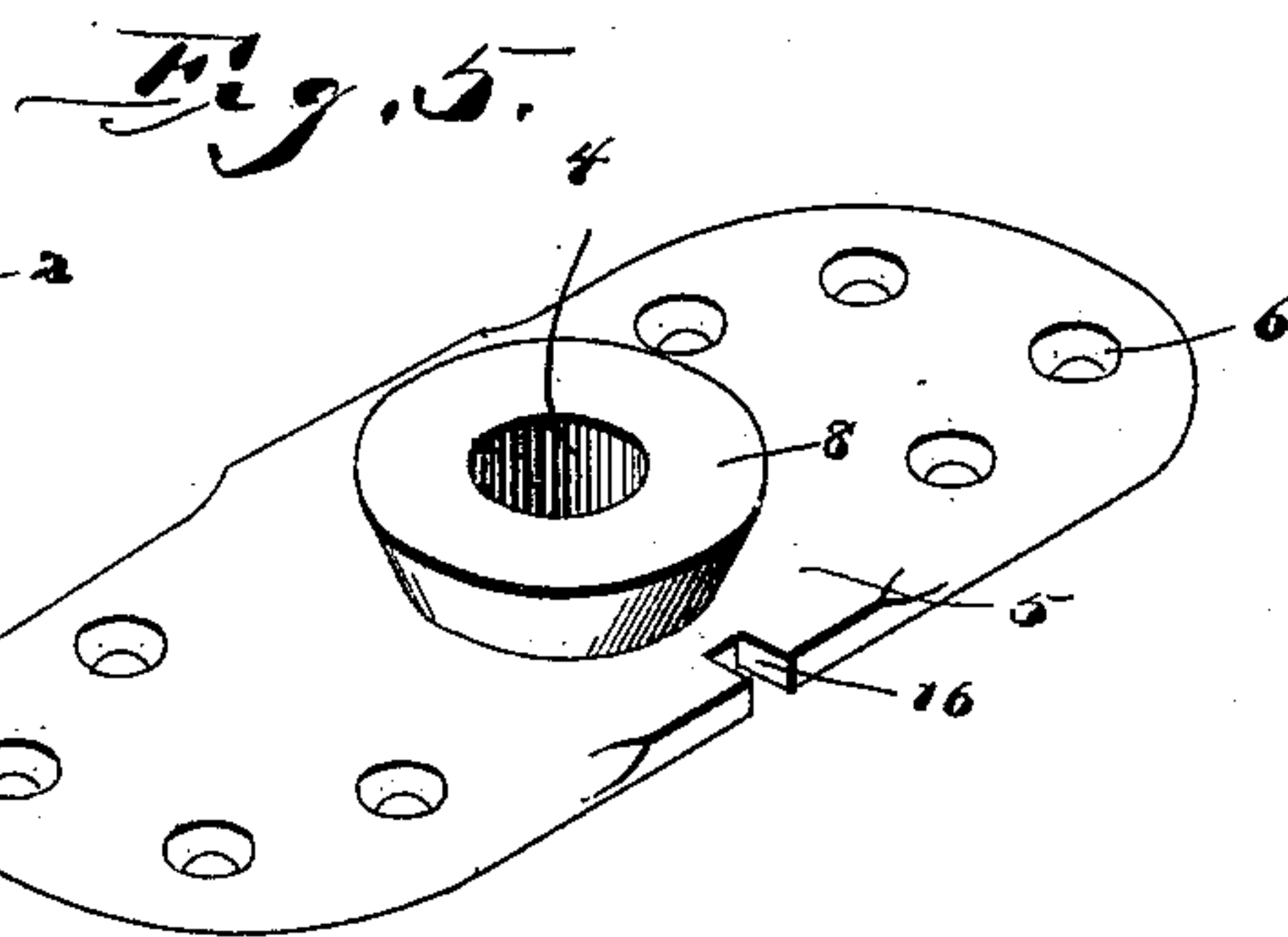
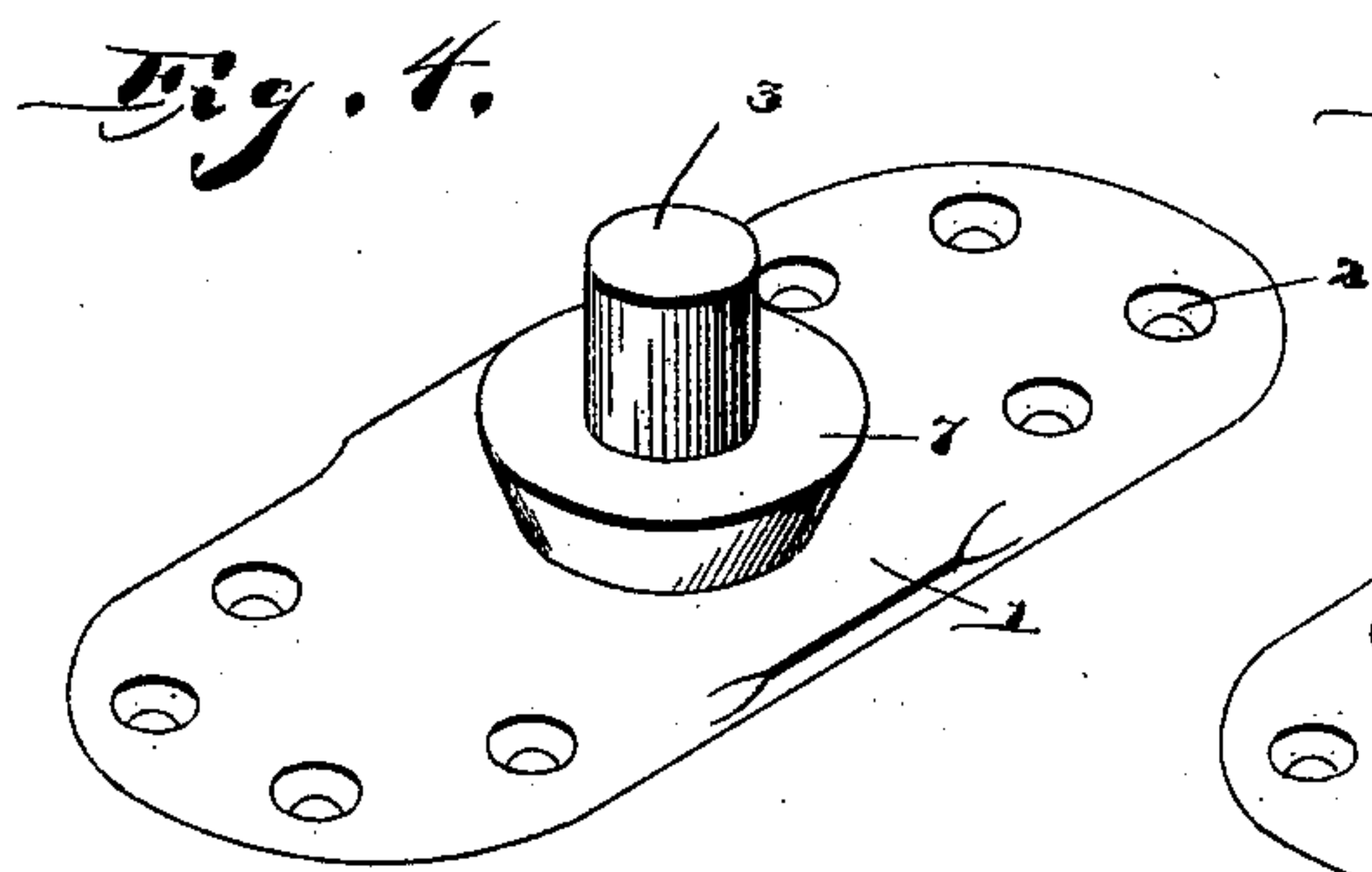
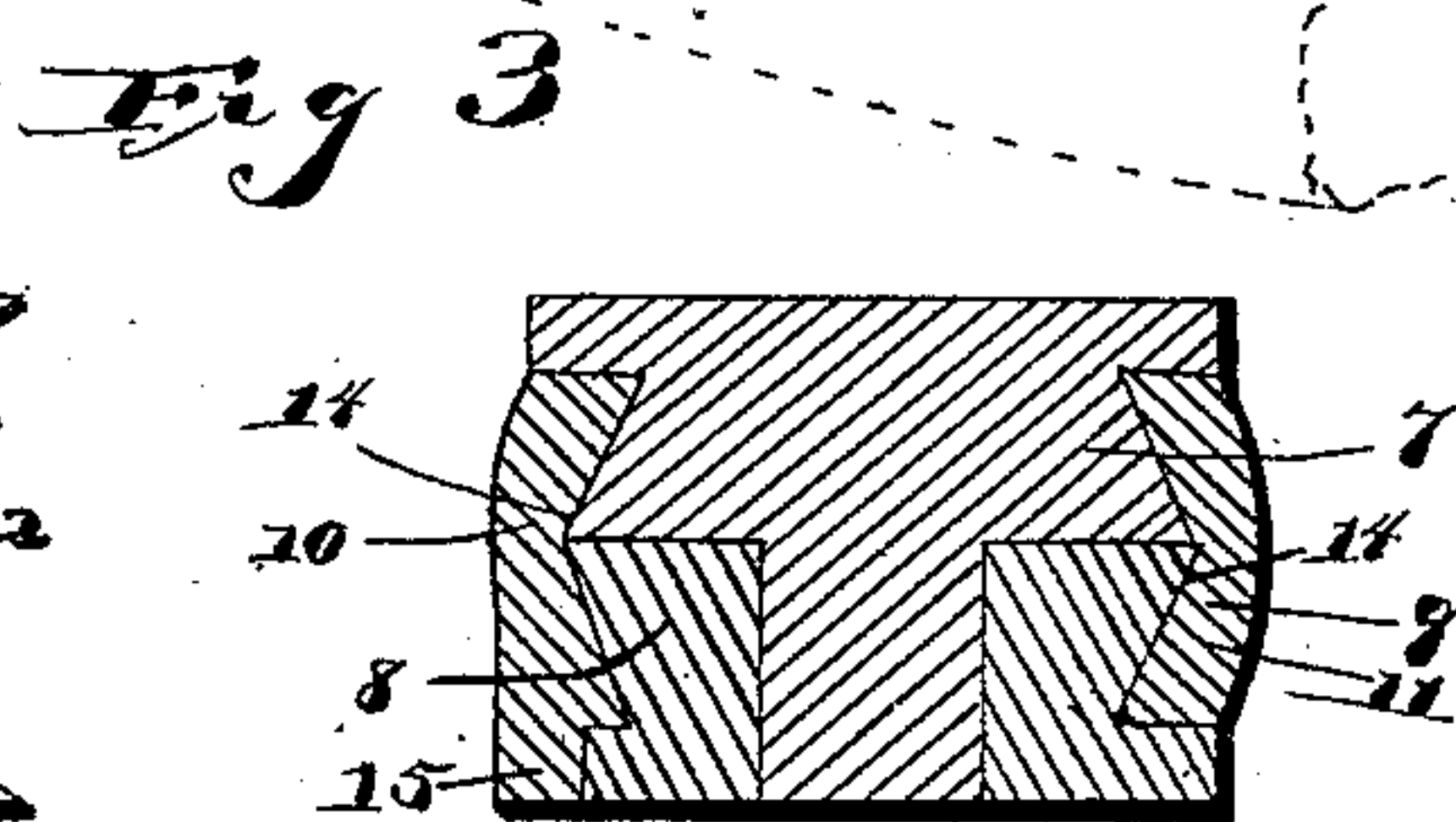
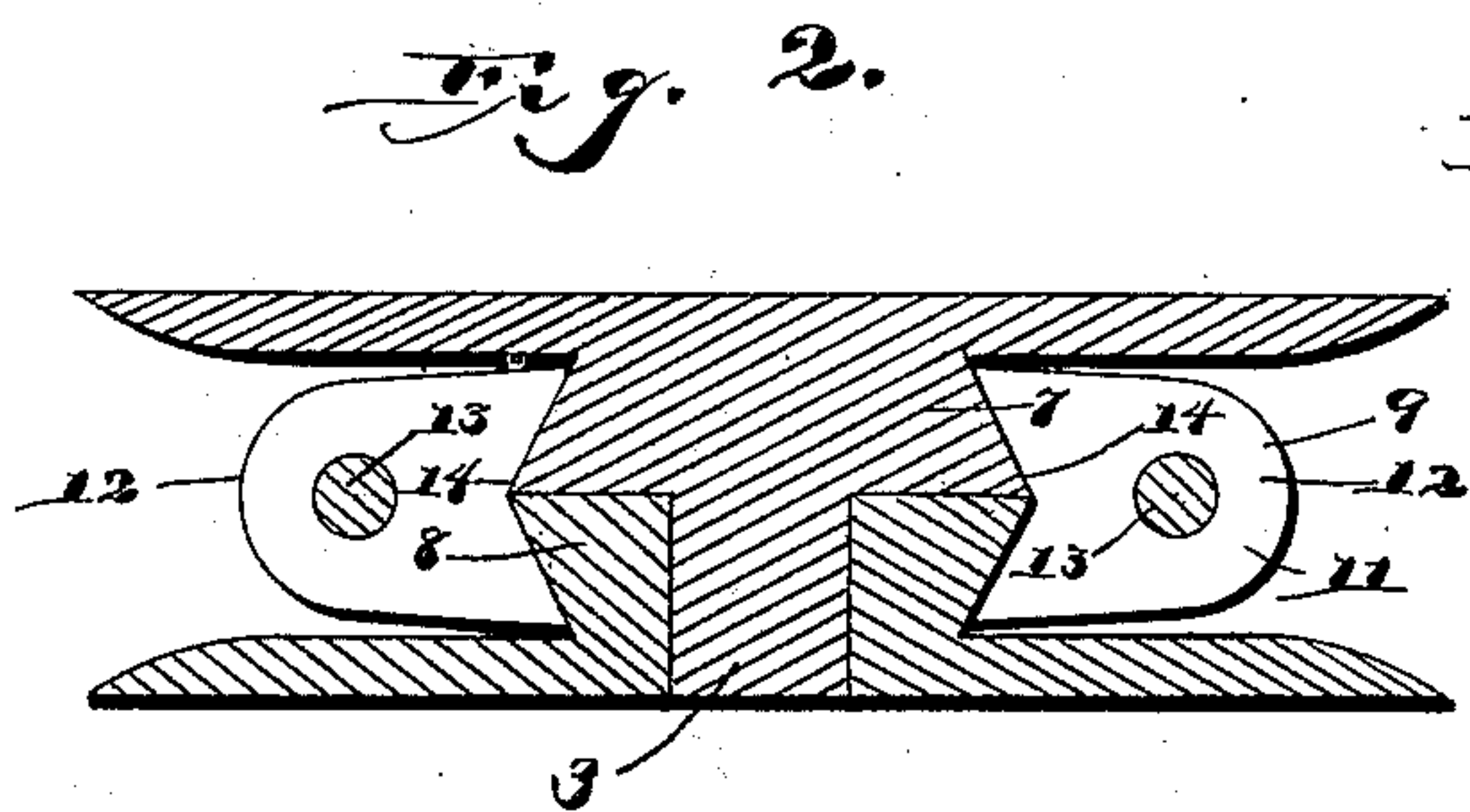
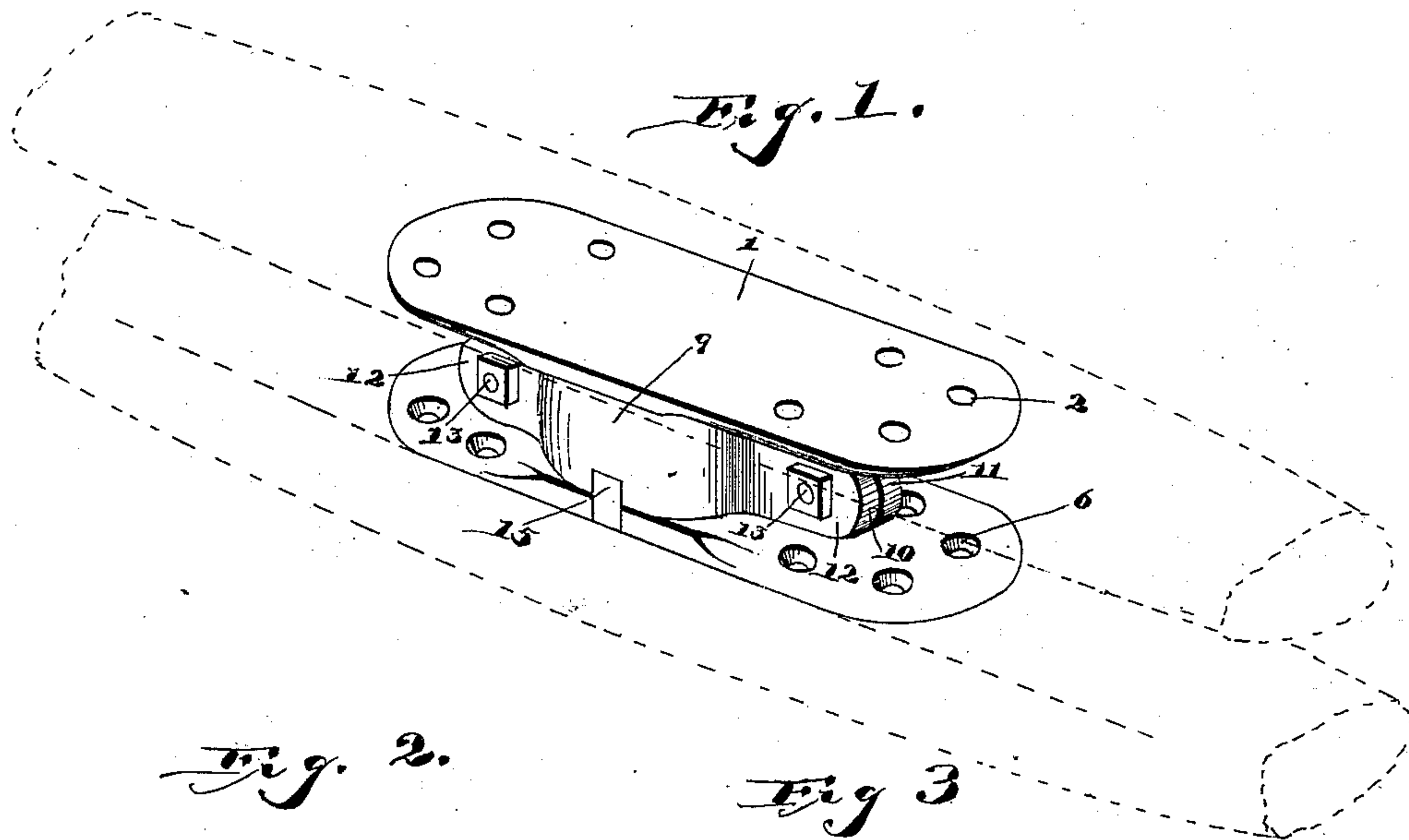


(No Model.)

C. ST. JAMES.  
WHIFFLETREE COUPLING.

No. 422,459.

Patented Mar. 4, 1890.



Witnesses

Samuel Kett

By his Attorneys,

*J. H. Wiley*

Inventor

Clement St. James.

*C. A. Snow & Co.*



# UNITED STATES PATENT OFFICE.

CLEMENT ST. JAMES, OF PITTSFIELD, MASSACHUSETTS.

## WHIFFLETREE-COUPLING.

SPECIFICATION forming part of Letters Patent No. 422,459, dated March 4, 1890.

Application filed January 14, 1890. Serial No. 336,901. (No model.)

*To all whom it may concern:*

Be it known that I, CLEMENT ST. JAMES, a citizen of the United States, residing at Pittsfield, in the county of Berkshire and State of Massachusetts, have invented a new and useful Attachment for Whiffletrees, of which the following is a specification.

The invention relates to improvements and attachments for whiffletrees.

The object of the present invention is to simplify and improve the means for pivoting a whiffletree to the cross-bar of a pair of thills and enable the parts to be secured together without weakening them by bolt-holes.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view. Fig. 2 is a vertical longitudinal sectional view. Fig. 3 is a transverse sectional view. Figs. 4 and 5 are detail views of the plates that are secured to the whiffletree and the cross-bar.

Referring to the accompanying drawings, 1 designates a plate, which is constructed of suitable metal and provided with perforations 2, through which pass screws, by means of which it is secured to the lower face of a whiffletree. The plate 1 is provided on its lower face with a centrally-arranged depending pivot-pin 3, which is preferably formed integral with the plate 1, and is arranged in a central opening or socket 4 of a plate 5, that is similar in shape to the plate 1, and is designed to be secured to the upper face of the cross-bar of a pair of thills by screws which pass through perforations 6. The plate 1 is provided on its lower face at the base of the pivot-pin 3 with an annular flange 7, which is inwardly inclined from its outer edge toward the plate, and the plate 5 is provided around the central opening or socket 4 with an annular flange 8, having an inclined projecting edge similar to the plate 7.

When the parts are assembled, the plates fit together and form a bearing, and are secured together by a collar 9, that is composed of sections 10 and 11, which have their ends 12 arranged parallel with each other and secured together by a bolt 13. The collar is provided

upon the inner faces of the sections with a groove 14, that is V-shaped in cross-section, and conforms to the configuration of the inclined or beveled edges of the annular flanges 7 and 8, when the latter are contiguous and the parts are assembled. The collar fits around the flanges and engages the same and securely holds the parts together and prevents the pivot-pin becoming disengaged from the central opening or socket 4 of the cross-bar plate. In order to prevent the collar turning during the motion of the whiffletree, the section 11 is provided with a depending lug 15, that engages a notch 16 of the plate 5.

It will readily be seen that the device for securing the whiffletree to the cross-bar is simple and inexpensive in construction, adapted to be readily secured to the parts, and does not impair the strength of the latter by bolt-holes.

Having described my invention, what I claim is—

1. The combination of the plate 1, designed to be secured to a whiffletree and provided with a pivot-pin 3, and an annular flange arranged at the base of the pivot-pin, the plate 5, adapted to be secured to a cross-bar, and having an opening or socket to receive the pivot-pin, and provided with an annular flange around the opening or socket, and a sectional collar engaging the annular flanges of both plates and securing the plates together, substantially as described.

2. The combination of the plate 1, designed to be secured to a whiffletree and provided with a pivot-pin 3, and an annular flange arranged at the base of the pivot-pin and provided with a projecting beveled edge, the plate 5, adapted to be secured to a cross-bar, and having an opening or socket to receive the pivot-pin, and provided with an annular flange having a projecting beveled edge, and a sectional collar provided in the inner faces of the sections with a groove V-shaped in cross-section and conforming to the configuration of the edges of said flanges and adapted to secure the same together and prevent the separation of the plates, substantially as described.

3. The combination of the plate 1, provided with the pivot-pin 3 and having an annular flange arranged at the base of the pivot-pin,

the section 5, having an opening or socket to receive the pivot-pin, and provided around the opening or socket with an annular flange, and the sectional collar adapted to engage the  
5 flanges and secure the plates together, one of said sections being provided with a lug arranged to engage a notch in the plate 5, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

CLEMENT ST. JAMES.

Witnesses:

THOMAS H. VILLENEUVE,  
JOSEPH PARKER.