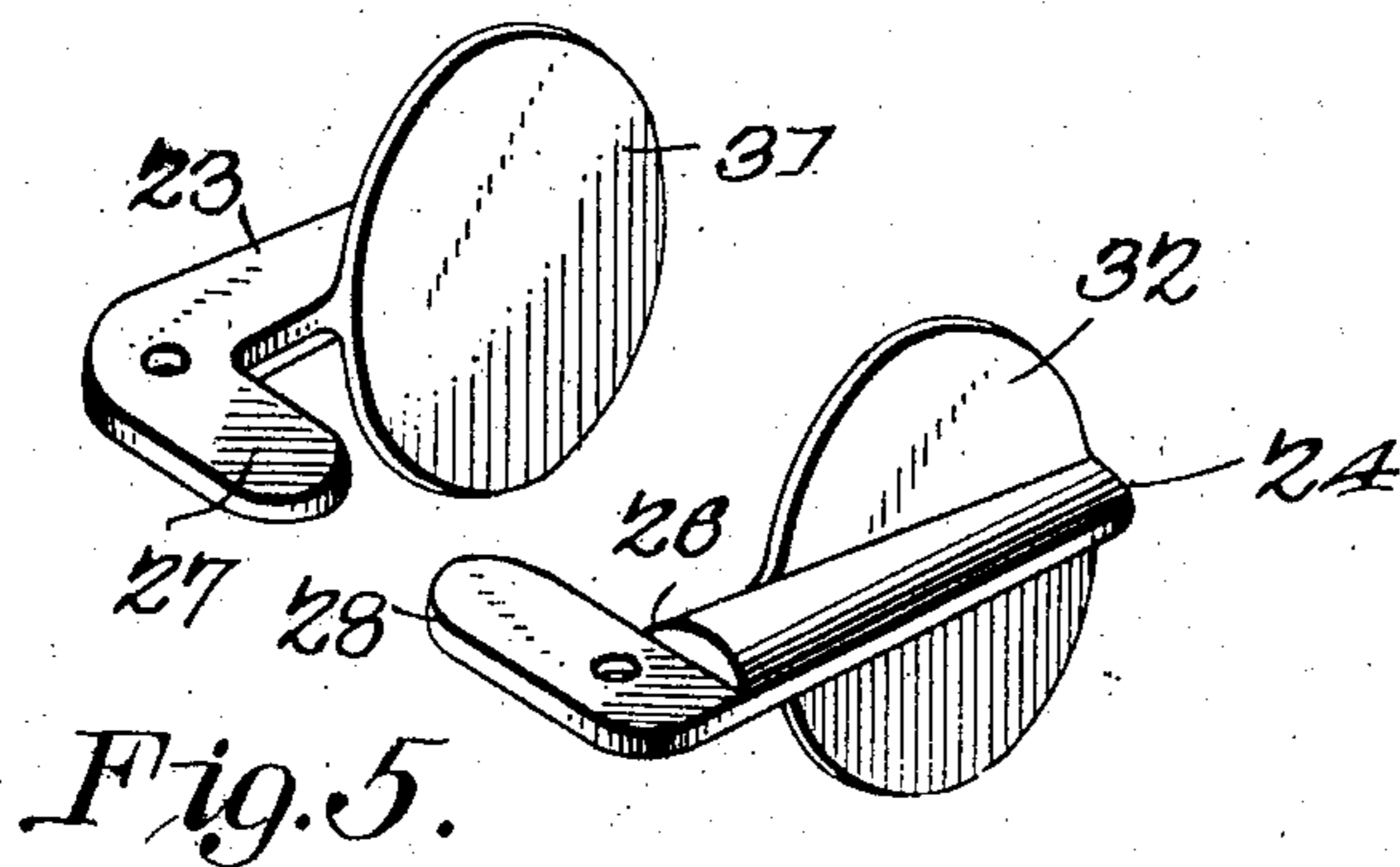
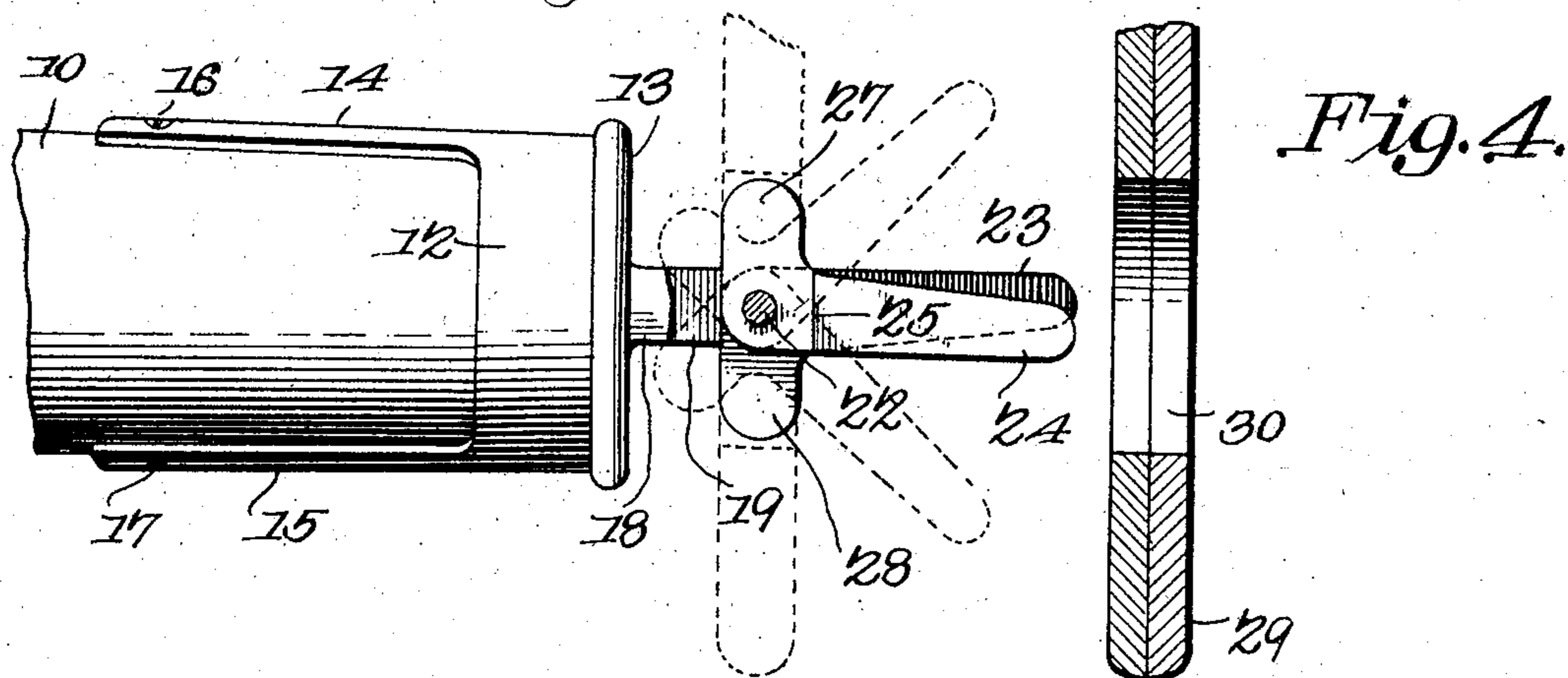
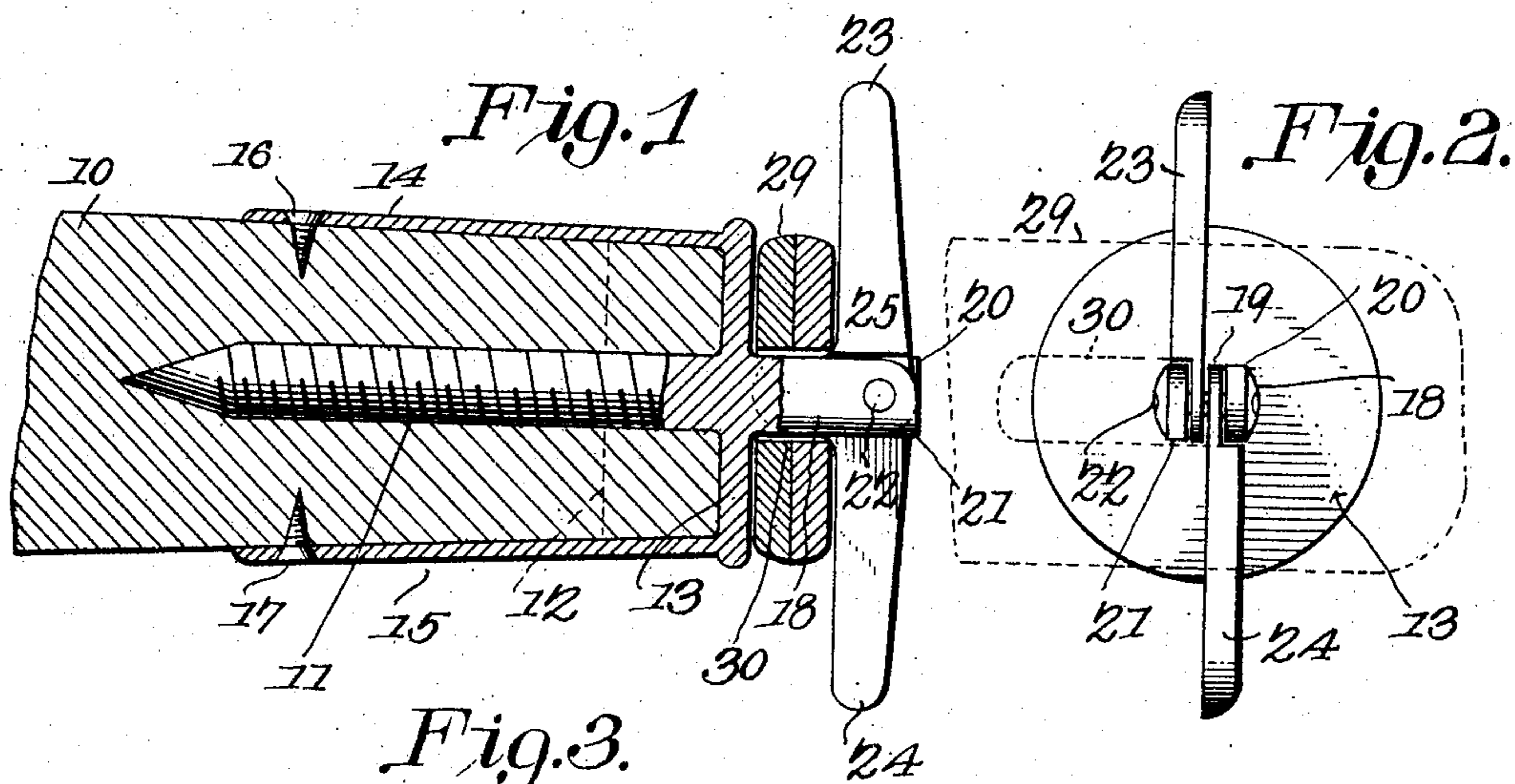


No. 780,557.

PATENTED JAN. 24, 1905.

C. J. EDWARDS.
WHIFFLETREE HOOK.
APPLICATION FILED MAR. 12, 1904.



Witnesses
E. H. Stewart
C. H. Woodward

Charles J. Edwards,
Inventor.
by *C. A. Snow & Co.*
Attorneys

UNITED STATES PATENT OFFICE.

CHARLES J. EDWARDS, OF MARSHALL, MISSOURI.

WHIFFLETREE-HOOK.

SPECIFICATION forming part of Letters Patent No. 780,557, dated January 24, 1905.

Application filed March 12, 1904. Serial No. 197,874.

To all whom it may concern:

Be it known that I, CHARLES J. EDWARDS, a citizen of the United States, residing at Marshall, in the county of Saline and State of Missouri, have invented a new and useful Whiffletree-Hook, of which the following is a specification.

This invention relates to devices employed for detachably connecting two members, such as draft traces or tugs and whiffletrees, but which is adapted for connecting various articles or structures or parts of structures, and has for its object to produce a simply-constructed and easily applied and operated device whereby the desired results may be accomplished.

With these and other objects in view, which will appear as the nature of the invention is better understood, the same consists in certain novel features of construction, as hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which corresponding parts are denoted by like designating characters, is illustrated the preferred form of the embodiment of the invention capable of carrying the same into practical operation, it being understood that the invention is not necessarily limited thereto, as various changes in the shape, proportions, and general assemblage of the parts may be resorted to without departing from the principle of the invention or sacrificing any of its advantages, and the right is therefore reserved of making all the changes and modifications which fairly fall within the scope of the invention and the claims made therefor.

In the drawings thus employed, Figure 1 is a sectional side elevation, and Fig. 2 is an end elevation, of a portion of a whiffletree and draft tug or trace with the improvement applied. Fig. 3 is a side elevation of the parts shown in Fig. 1 with the attachment in its open position. Fig. 4 is a sectional view of the trace or tug in position to be applied. Fig. 5 represents the two locking-levers detached and in perspective and also illustrating a modified construction.

The whiffletree end is represented at 10, of the usual construction.

The improved device consists of a threaded stud 11 for insertion longitudinally in the end of the whiffletree and having a sleeve 12 connected by an end disk 13, the sleeve and disk 8 forming a cap for inclosing the end of the member 10. Extending from the sleeve or ferrule 12 are spaced arms 14 15, attached, as by screws 16 17, to the whiffletree. Extending centrally from the end disk 13 is a stud 18, having a transverse open slot 19. The threaded inner stud 11, disk 13, sleeve 12, arms 14 15, and outer stud 18 will preferably be cast in one piece and of malleable iron or steel, and the terminals of the walls of the aperture of the outer stud 18 will be square at diagonally opposite sides, as at 20 21, and the remaining diagonally opposite sides rounded or concentric to the transverse rivet-apertures therein, as shown.

Pivoted in the cavity 19 by a rivet 22 are two arms 23 24, having reversely-disposed shoulders 25 26 for engagement, respectively, with the square portions 20 21 of the stud 18, by which means the arms may be turned in longitudinal alinement with the stud 18, but will be prevented from moving beyond their alined position by the stop-shoulders, as will be obvious. Extending laterally from the inner or pivoted ends of the arms 23 24 are stop-lugs 27 28, which enter the recess 19 and are entirely inclosed therein when the arms 23 24 are in their oppositely-extended position, as in Fig. 1, and are disposed in alinement to each other and at right angles to the stud 18 when the arms are in their outward position, as in Fig. 3.

The device will be so disposed upon the whiffletree 10 that the cavity 19 will be maintained in a vertical position. Hence the arms 23 24 and their lugs 27 28 will operate only in vertical lines and in opposite directions.

The trace or tug is represented at 29 with the usual elongated aperture 30, the stud 18 being formed to completely fill the transverse area of the aperture.

In applying the trace the same is turned with the aperture 30 vertical and the arms 23 24 turned into their outward positions, as in Fig. 1, when the aperture in the trace can be freely passed over the arms and their lateral

lugs 27 28. The arms 23 24 are then turned down in opposite directions, as in Figs. 1 and 2, which will withdraw the lugs into the recess 19 and permit the trace to be turned into its horizontal position, with the effect of bringing the shorter diameter of the aperture 30 opposite the lugs and effectually preventing them from moving outwardly again, and thus locking the arms 23 24 in their alined position, as in Figs. 1 and 2. The trace or tug is thus effectually locked to the whiffletree so long as it retains a substantially horizontal position. The trace cannot be removed unless its position be reversed, a position in which it could never be placed while in use. Hence there is no danger of accidental displacement, no matter how severely the trace may be agitated or thrown about.

If desired, lateral wings 31 32 may be arranged upon the arms 23 24, as in Fig. 5, and when these are employed it will be necessary in applying the trace or other member to first pass the elongated aperture over the closed arms with the trace in a horizontal position until it is opposite the pivot 22, then partially open the arms 24 25 until they are in the position shown by dotted lines in Fig. 3, then turn the trace into a vertical position and pass it inwardly against the disk 13, and then complete the opening of the arms and turn the trace into its horizontal or operative position.

The device with slight and immaterial modifications may be employed on structures other than whiffletrees—for instance, for securing carriage-curtains and the like—and I do not, therefore, wish to be limited in any manner in the use of the device as before noted.

It will thus be obvious that a very secure, easily applied and operated device is produced which will effectually retain one member coupled to another, while at the same time readily disconnected when the members are associated in an unusual position or in positions which they would not be caused to assume while in use.

Having thus described the invention, what is claimed is—

1. A trace-fastener comprising a stem which has one end screw-threaded and its opposite end provided with a longitudinal bifurcation to form a fork, the members of the fork having reversely-disposed angular and rounded outer terminal edges, a cap rigidly carried by

the intermediate portion of the stem and arranged concentric thereon to encircle the screw-threaded portion, and a pair of reversely-disposed substantially L-shaped trace-locking members pivoted at their vertexes within the bifurcation, each member being provided upon its outer side with a shoulder to engage the angular corner of the bifurcated end of the stem and limit the pivotal movement of the member.

2. A trace-fastener comprising a stem provided at one end with means for connection with a whiffletree and having its opposite end longitudinally bifurcated to form a fork, the members of the fork having reversely-disposed angular and rounded outer terminal edges, and a pair of reversely-disposed substantially L-shaped trace-locking members pivoted at their vertexes within the bifurcation and capable of having their short arms brought into the bifurcation with their long arms disposed transversely of the stem at opposite sides thereof, said long arms being provided at their outer sides with transversely-disposed shoulders for engagement with the angular corners of the respective fork members when the long arms are drawn into longitudinal alinement with the stem to limit further movements of the arms.

3. A trace-fastener comprising a stem which has one end pointed to be driven into one end of a whiffletree, a pair of reversely-disposed substantially L-shaped trace-locking members pivoted at their vertexes to the opposite end of the stem and capable of having their longer arms alined with the stem to be projected through an opening in the trace and also capable of being turned to project the longer arms in opposite directions transversely of the stem with the shorter arms in parallelism with the stem to lock the trace thereon, and a cap rigidly carried by the intermediate portion of the stem and disposed concentrically thereon to encircle the pointed portion of the stem and embrace one end of a whiffletree.

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

CHARLES J. EDWARDS.

Witnesses:

J. L. ROBERTS,
MARTIN LYONS.