

(No Model.)

J. M. WOODCOCK.
TRACK FASTENING.

No. 490,704.

Patented Jan. 31, 1893.

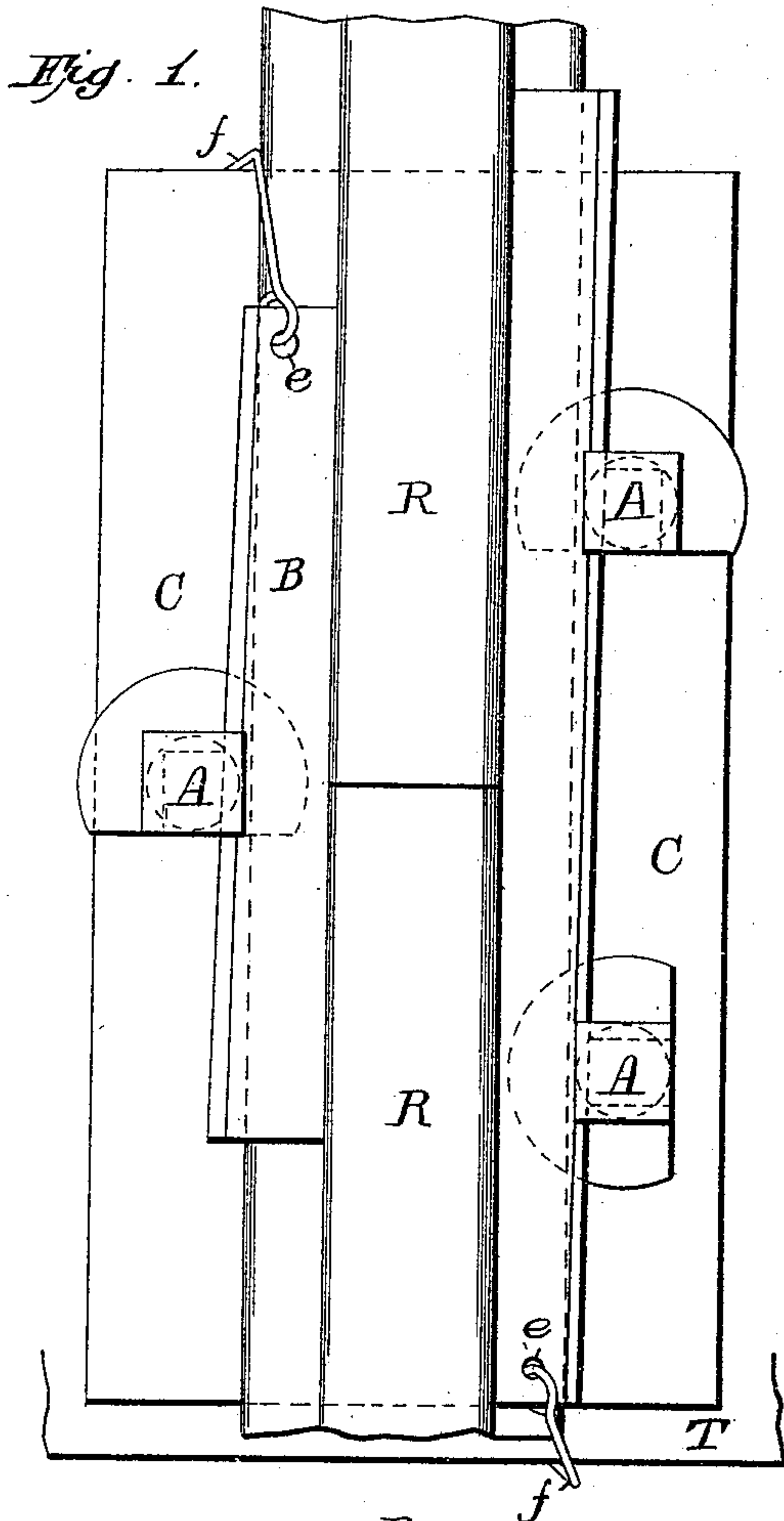


Fig. 3.

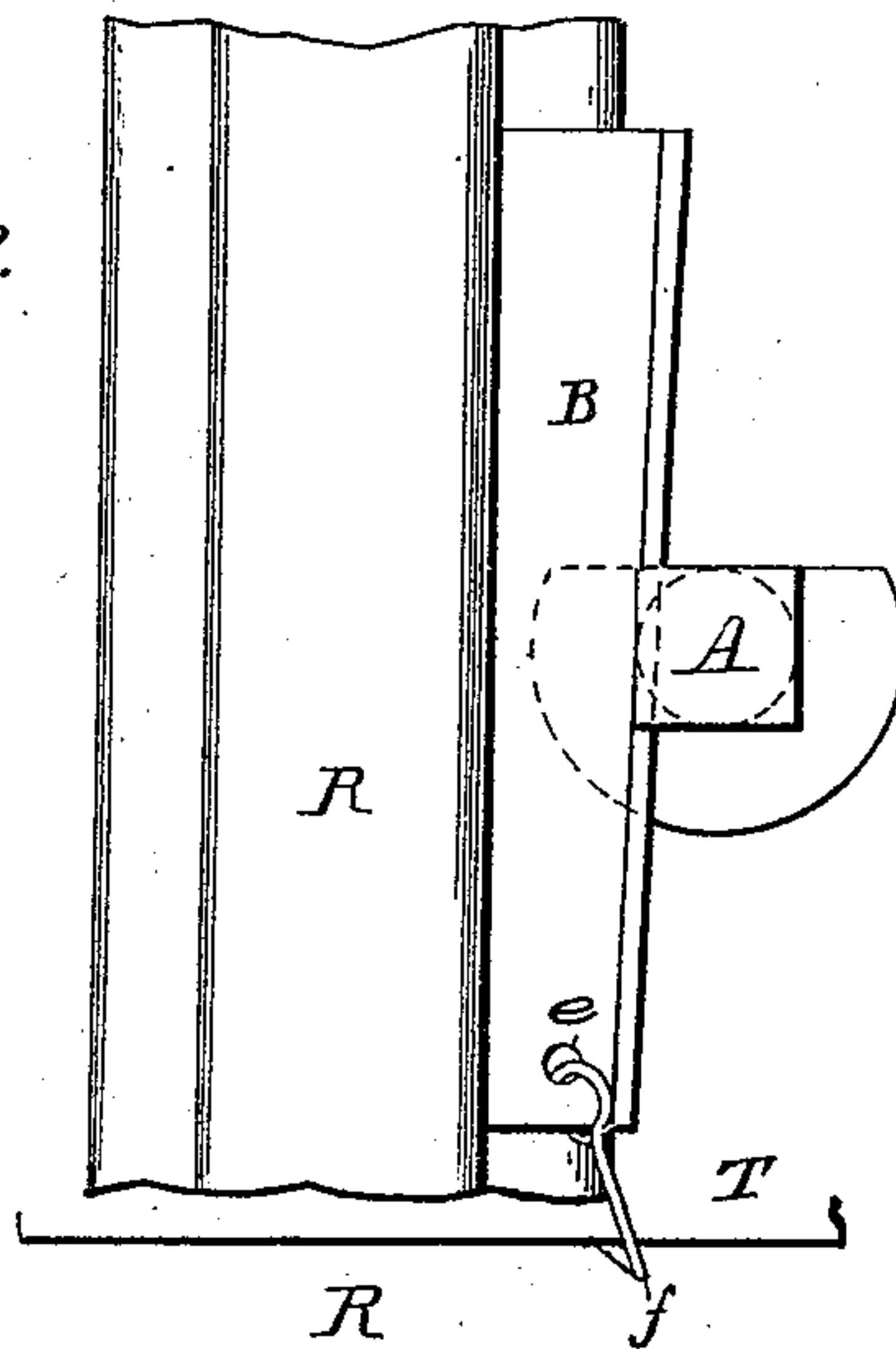


Fig. 4.

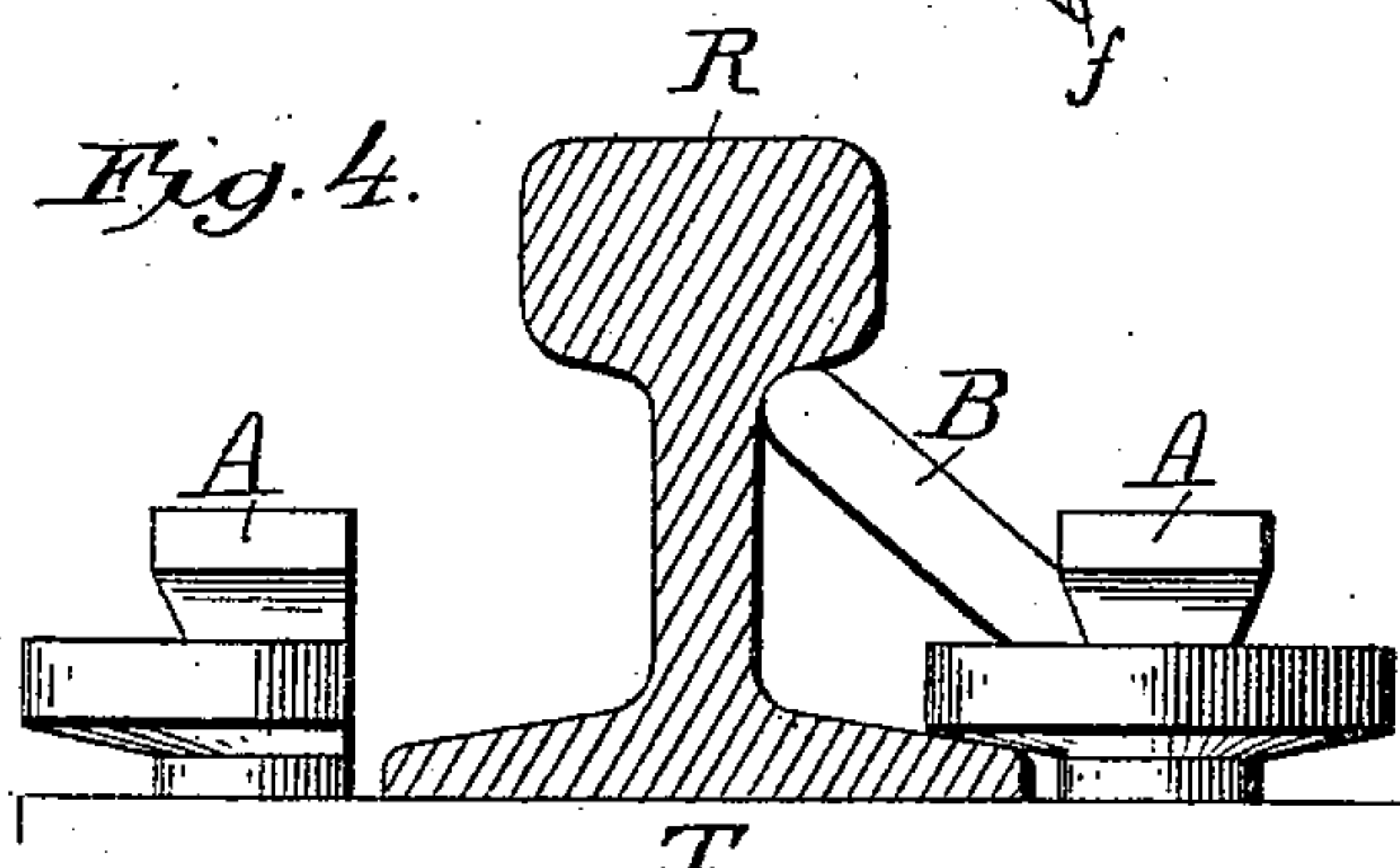


Fig. 2.

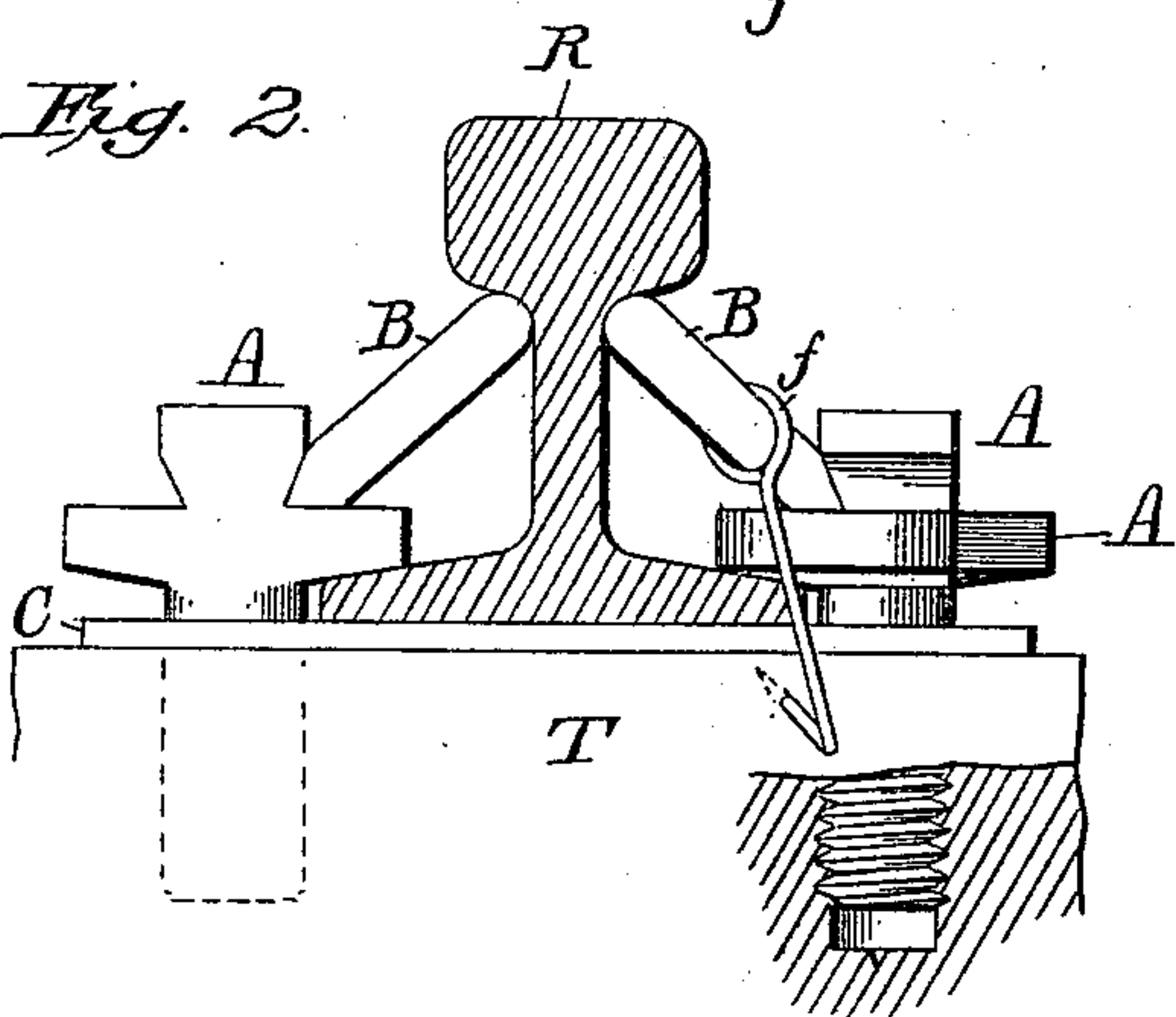


Fig. 5.

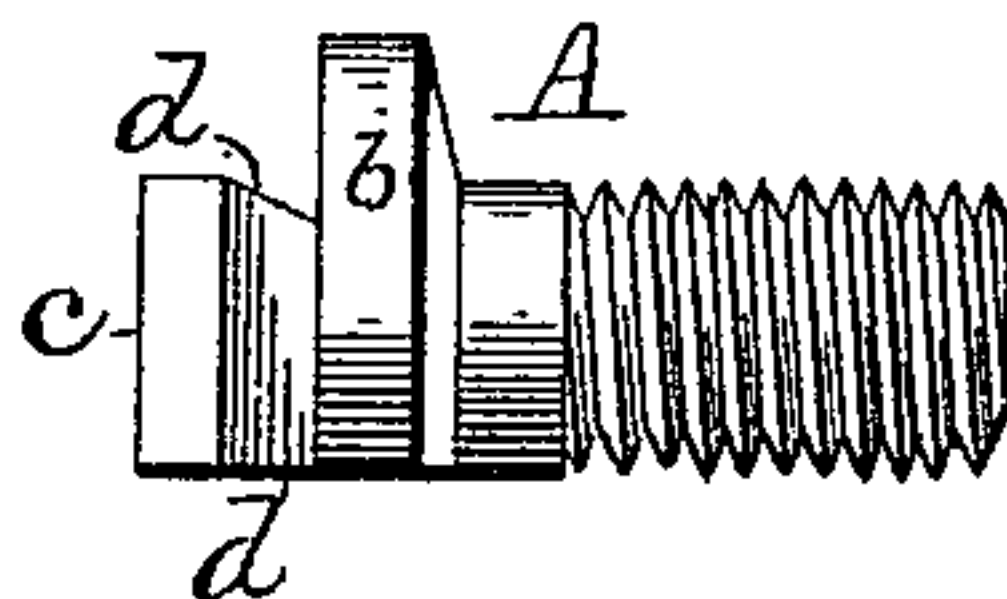


Fig. 6.

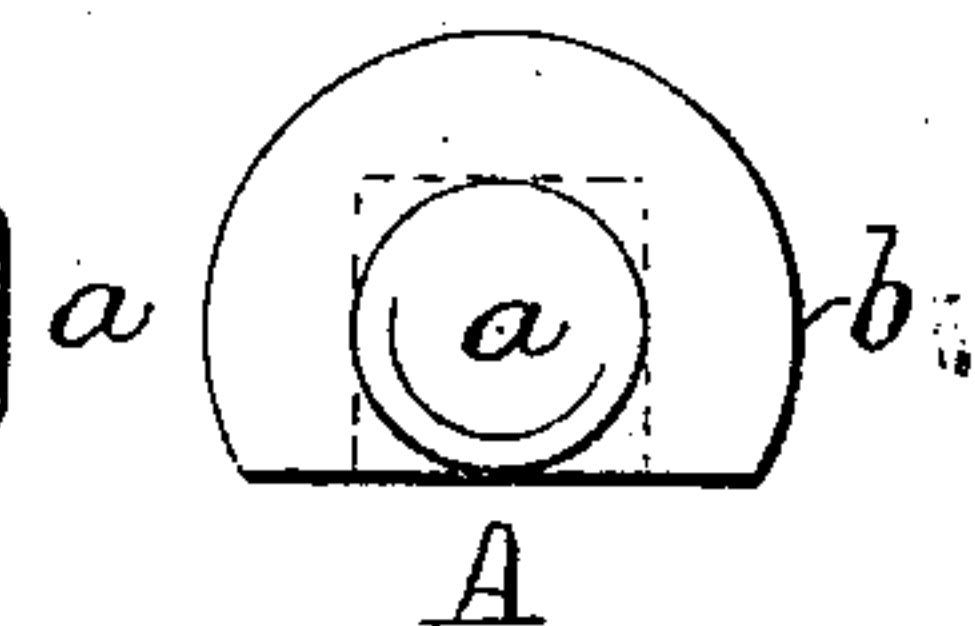


Fig. 7.

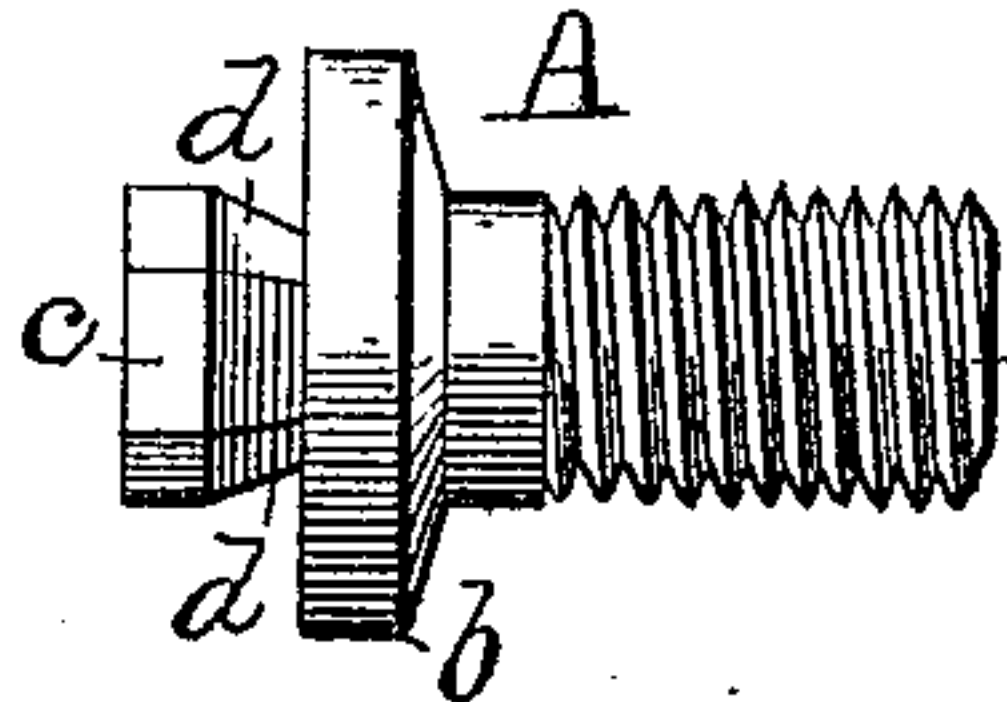
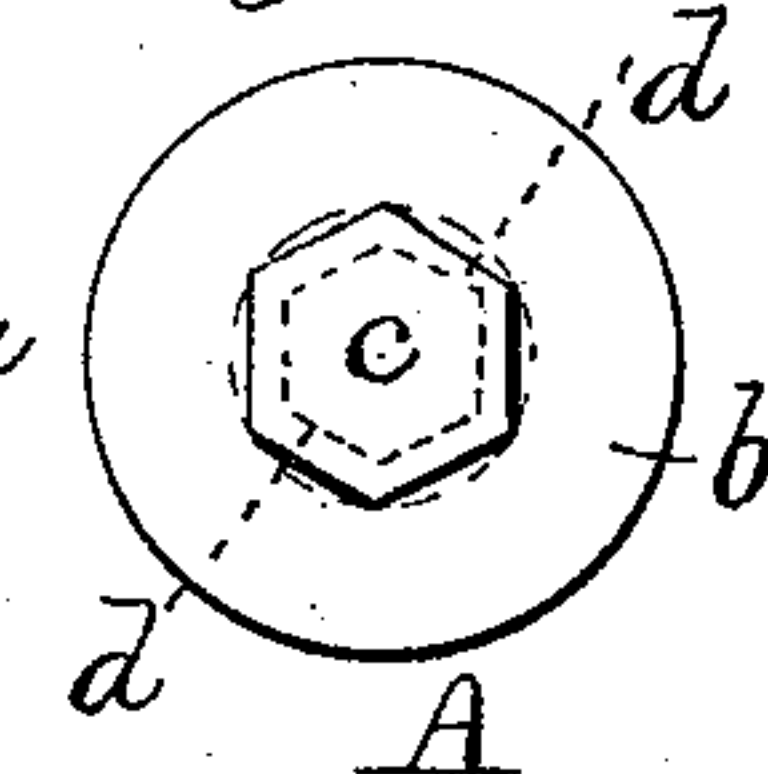


Fig. 8.



Inventor

Witnesses
A. J. Schwarz
Geo. W. Whitney.

James M. Woodcock
By *W. L. Swin*,
Attorney

UNITED STATES PATENT OFFICE.

JAMES M. WOODCOCK, OF BRIDGEPORT, OHIO.

TRACK-FASTENING.

SPECIFICATION forming part of Letters Patent No. 490,704, dated January 31, 1893.

Application filed April 11, 1892. Serial No. 428,640. (No model.)

To all whom it may concern:

Be it known that I, JAMES M. WOODCOCK, a citizen of the United States, and a resident of Bridgeport, Belmont county, in the State of Ohio, have invented a new and useful Improvement in Track-Fastenings, of which the following is a specification.

This invention relates to means for securing ordinary T-rails or rails having a like form of base to the ordinary cross-ties of railways; and the invention consists in certain novel fastening devices hereinafter set forth and claimed; the object of the invention being to provide cheap and efficient substitutes for the insecure and troublesome spikes still commonly used, and at the same time for the ordinary fish-joints with their screw-bolts and nuts, and for ordinary rail-braces with their separate fastenings.

A sheet of drawings accompanies this specification as part thereof.

Figures 1 and 2 of these drawings are respectively plan and sectional views showing the improved fastenings as applied at a rail-joint; Figs. 3 and 4 are like views showing the improved fastenings as applied at intermediate points; Figs. 5 and 6 are respectively side and end views of one of the fastening screws or "screw-posts" shown in Figs. 1 to 4; and Figs. 7 and 8 are side and end views of a modified screw-post.

Like letters of reference indicate corresponding parts in the several figures.

Each of the improved track-fastenings includes one or more vertical screws or "screw-posts" A, of the peculiar construction represented in Figs. 1 to 6, or Figs. 7 and 8, and one or more combined key-wedges and rail-braces B, with or without a shoe-plate C, Figs. 1 and 2, which is only required at rail-joints, for the rail ends to rest upon. Said screw-posts A are intended to be made of malleable iron, and each of them comprises a screw-threaded lower end *a*, Figs. 5 to 8, a wide collar or circumferential flange *b* beveled on its underside, an angular head *c* at its upper end, and undercut portions or notches *d* in some or all of the sides of said head at its intersection with said flange. In that form of screw-post shown in Figs. 1 to 6 a square head *c* has notches *d* in three of its sides, and at the unnotched side of the head the flange *b* is cut

away so that when the screw-post is in the position represented at the left in Fig. 4 the rail may be removed and replaced without removing the screw-post. In the modification represented by Figs. 7 and 8, the screw-post A has a six-sided head *c* with notches *d* in all its sides, and the flange *b* is circular. Each screw-post is screwed into a properly located hole in the cross-tie T until its flange *b* presses tightly upon the subjacent flange or flanges of the rail or rails R, and the object of said notches *d* is to provide for locking the screw-post against becoming loosened by jarring. Said combined key-wedges and rail-braces B coact with the heads of the rails R and with the screw-posts A at their said notches, for so locking them, and for bracing the rails at the same time in such a way as to keep the track from spreading. One edge of each key-wedge is preferably rounded to engage with the head of the rail at its intersection with the web, and the other edge is V-shaped to fit into said notches; and the smaller end is preferably provided with a hole *e*, and with a hook *f* loosely attached to the key-wedge at said hole, and adapted at its free end to be driven into the wooden cross-tie, as in Figs. 1 2 and 3, to prevent the key-wedge from working loose. At rail-joints, Figs. 1 and 2, the said shoe-plates C are inserted beneath the rail ends on wooden cross-ties; and each shoe-plate is provided with two holes at the outside of the rail and a central hole at the inside of the rail for locating three of the screw-posts A as in Figs. 1 and 2. A long key-wedge B serves for both screw-posts at the outside of the rail, and a shorter key-wedge for the screw-post at the inside of the rail. At intermediate points, the screw-posts A with short key-wedges B are used singly in Figs. 3 and 4, alternating as to the side of the rail R on successive cross-ties T.

The improved fastening is primarily intended for securing rails on ordinary wooden cross-ties, as above, but the screw-posts may obviously be adapted to screw into metallic or composite cross-ties, and other like modifications will suggest themselves to those skilled in the art.

Having thus described the said improvement, I claim as my invention, and desire to patent under this specification:

1. In a railway track-fastening, a screw-
post having a screw-threaded lower end, a cir-
cumferential flange immediately above the
threaded-portion, and an angular head above
5 said flange, the flange being cut away in line
with one side of said head, substantially as
hereinbefore specified.

2. In a railway track-fastening, a screw-
post having a screw-threaded lower end, a cir-
10 cumferential flange immediately above the
threaded portion, and an angular head above
said flange provided with notches in some or
all of its sides, in combination with a rail one
base-flange of which is engaged by said flange
15 of the screw-post, and a key-wedge the re-
spective edges of which engage with the head
of the rail and with a notched side of the head
of the screw-post, substantially as hereinbe-
fore specified.

20 3. The combination with a wooden cross-tie
and a superposed rail of one or more screw-
posts, each of which is screwed into said cross-
tie and has a flange which engages with a
base-flange of the rail, and one or more key-

wedges interposed between the head of the 25
rail and said heads of the screw-posts, and
each provided with a hook which is driven
into the cross-tie to keep the key-wedge from
working loose, substantially as hereinbefore
specified. 30

4. In combination with a wooden cross-tie
and the adjoining ends of two superposed
rails, the metallic shoe-plate C, a pair of screw-
posts at the outside of the rail and a central
screw-post at the inside of the rail inserted 35
through said shoe-plate into the cross-tie, a
key-wedge common to said pair of screw-posts,
and a shorter key-wedge at the inside of the
rail, said screw-posts having flanges which
engage with the subjacent rail-flanges and 40
angular heads above the flanges first named,
and said key-wedges serving to lock said
screw-posts and to brace the rails, substan-
tially as hereinbefore specified.

JAMES M. WOODCOCK.

Witnesses.

J. H. SHAFFER,
O. C. WOODCOCK.