

P. H. TRUMAN.
RAIL STAY.
APPLICATION FILED DEC. 1, 1910.

1,004,603.

Patented Oct. 3, 1911.

2 SHEETS-SHEET 1.

Fig. 1.

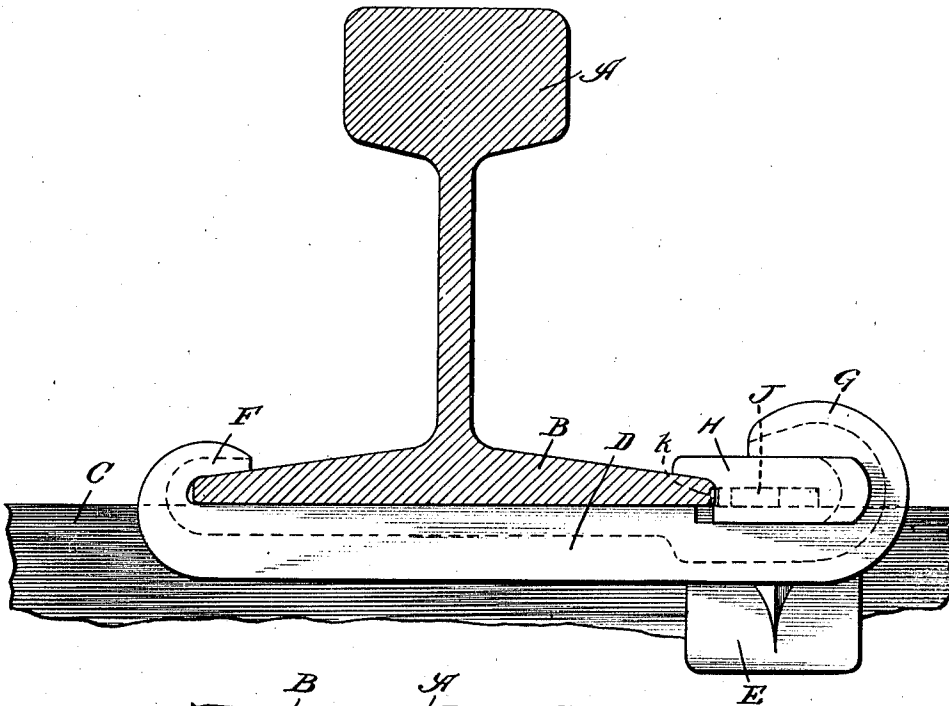
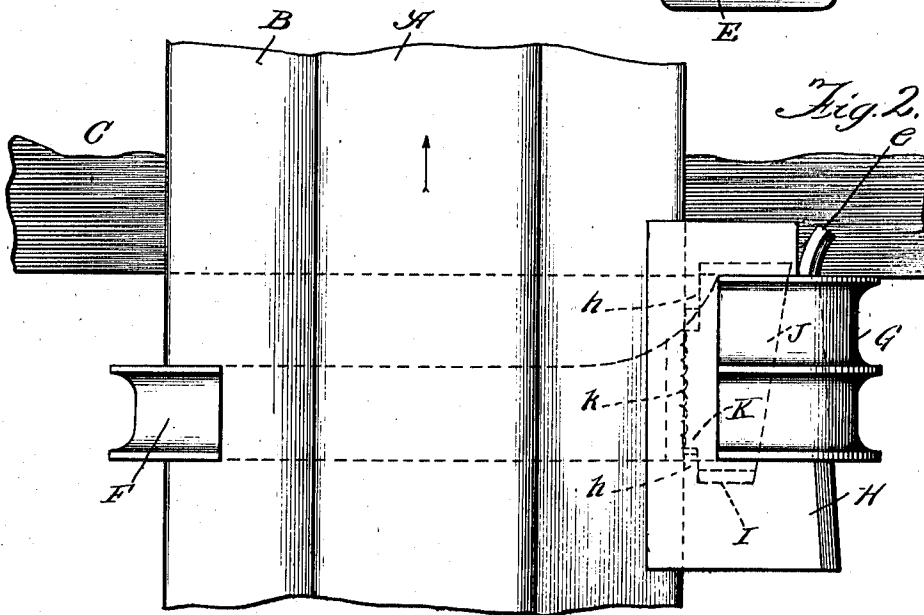


Fig. 2.



Witnesses:

W. D. Perry
L. A. Falkenberg

Inventor:

P. H. Truman
BY *J. R. Barnett*

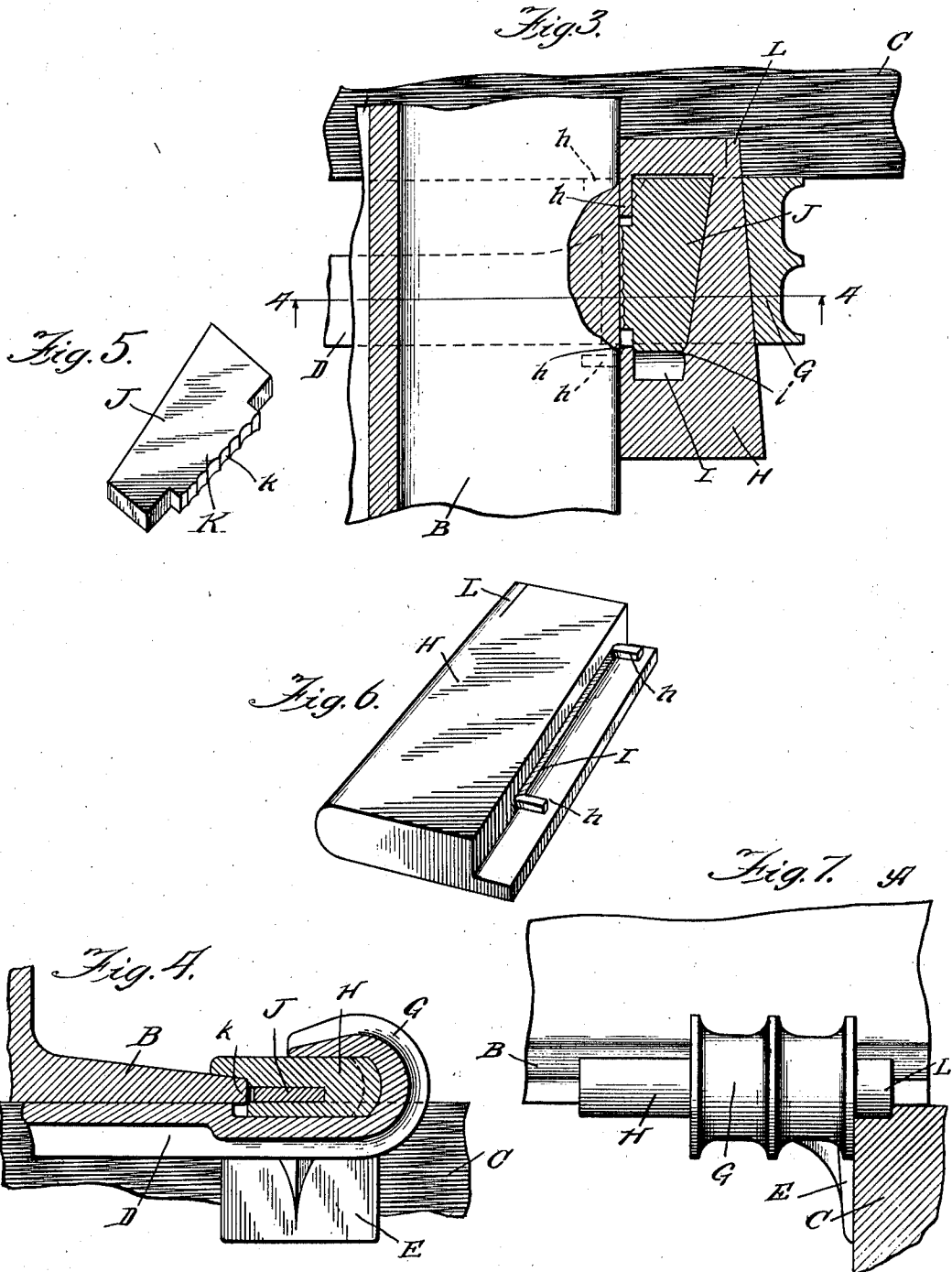
Att'y

P. H. TRUMAN.
RAIL STAY.
APPLICATION FILED DEC. 1, 1910.

1,004,603.

Patented Oct. 3, 1911.

2 SHEETS-SHEET 2.



Witnesses:
G. D. Perry
L. A. Falkenberg.

Inventor:
P. H. Truman
By O. W. Barnett
Atty.

UNITED STATES PATENT OFFICE.

PERCIVAL H. TRUMAN, OF CHICAGO, ILLINOIS, ASSIGNOR TO OTTO R. BARNETT, OF CHICAGO, ILLINOIS.

RAIL-STAY.

1,004,603.

Specification of Letters Patent.

Patented Oct. 3, 1911.

Application filed December 1, 1910. Serial No. 595,068.

To all whom it may concern:

Be it known that I, PERCIVAL H. TRUMAN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Rail-Stays, of which the following is a specification.

My invention relates to a rail stay or anti-creeper, and the invention has for its object to provide the certain novel constructions and arrangements in a device of this sort which will be hereinafter described and claimed.

One of the primary objects of the invention is to provide a novel construction and arrangement of the parts designed to grip the rail base which involves the use of a relatively soft metal friction element and a hard metal biting element disposed so as to obtain a maximum gripping or holding effect from each of said elements.

A further object of the invention is to provide a new and improved arrangement in a rail stay which employs a hard metal biting insert piece, for holding the hard metal part in position in the jaw or other rail engaging member.

A further object of the invention is to provide a novel form of rail gripping or engaging means comprising two oppositely disposed coacting wedges at one side of the rail base which are adapted to be driven together and in contact with the rail base, as hereinafter described.

The invention is illustrated in a preferred embodiment in the accompanying drawings, wherein—

Figure 1 is a side view of the device shown as applied to the rail, the latter being in section, Fig. 2, a plan view of the same, Fig. 3, a sectional plan illustrating the arrangement of the gripping elements at one side of the rail base, the parts being shown in their initial position, Fig. 4, a sectional view taken on the line 4—4 of Fig. 3 looking in the direction of the arrows, Fig. 5, a view, in perspective, of the hard metal biting element, Fig. 6, a similar view, in in-

verted position, of the malleable iron wedge, and Fig. 7, an end view of the assembled device shown in position on the rail.

Like characters of reference indicate like parts in the several figures of the drawings.

Referring to the drawings, A designates a railroad rail of ordinary form, B the base or flange thereof, and C one of the ties on which the rail is supported.

D designates a bar, preferably of malleable iron, which extends under the rail base and is formed at one end with a depending flange or plate E, which is adapted to give the rail stay a relatively fixed position by its abutment against one of the ties C. The bar D, which of course may be of any preferred configuration, is provided (in the particular type of rail stay in connection with which my invention is illustrated) with a jaw F, at one end, which engages with one edge of the rail base B, and at the other end with a larger jaw G. Into the jaw G is driven a wedge H, the inner edge of which is cut away so that the wedge overlaps the upper surface of the rail base B, as shown. The wedge H is formed with a tapered slot I larger at the small end of the wedge than at the other end. In this slot is placed a hard metal biting element J, in form wedge shaped, and provided with the projecting part K, preferably corrugated or toothed, as shown at *k*. Preferably the wedge H, which will ordinarily be made of malleable iron, is cast with the projections *k* at the ends of slot I, and these projections are hammered down flush with the surface from which they project after the element J has been put into the slot so as to hold the latter from falling out. In order to initially hold the hard metal part J at the forward or large end of slot I, a small projection *i* may be formed on the back surface of the slotted opening.

If necessary, in order to hold the wedge H in position after having been driven, a slit L may be made at the outer forward corner and the metal beyond this slit bent out by means of a cold chisel, as indicated at *e*,

Fig. 2, so that the wedge is held from backing out.

The device is applied to the rail in the following manner: The bar D is placed under the rail base with the jaw F hooked over one edge thereof, and with the tie abutment E against one of the ties C, the device being arranged back of this tie relative to the creeping tendency of the rail. The wedge H, with the hard metal element J temporarily held at the forward or large end of the slot therein, is then driven, with a sledge or otherwise, into jaw G as far as it is possible to drive it. The wedge action between wedge H and jaw G tightens the grip of the wedge on the rail base. The wedge action between the biting element J and wedge H forces the former transversely against and into the edge of the rail base. The farther wedge H is driven home the tighter will be its grip on the rail base and the deeper will be the bite of the hard metal element J. In this way it is possible to obtain a maximum hold by both of the rail engaging elements, namely, the frictional engaging element H and the biting element J. The latter moves transversely of the rail base and therefore there is no tendency for the hard metal to plane or scrape along the edge of the rail base as would be the case if it were immovably fixed in wedge H.

While I have shown my invention in a preferred embodiment, it will be readily understood that its controlling principles might be utilized in rail stays constructed on somewhat different lines. I have shown the rail gripping elements constituting the invention as employed at one side only of the rail base. It is clear that, if desirable, these arrangements might be duplicated at the other side. The slant of the several coengaging wedge surfaces might also be varied. Therefore I do not limit myself to the precise arrangements, constructions and form and proportion of the parts shown except so far as these particulars are made specifically limitations on certain of the claims herein.

I claim:

1. In a rail stay, rail clamping means comprising a biting element and a frictional gripping element both in contact with the rail at one side thereof, said elements being movable with respect to each other and conformed so that a tightening movement of one of them forces the other into closer engagement with the rail; said stay being provided with means for giving it a relatively fixed position with respect to the road bed.

2. In a rail stay, rail clamping means comprising a biting element and a frictional gripping element both in contact with the rail at one side thereof, said elements being movable with respect to each other,

and being formed with coacting wedges; said stay being provided with means for giving it a relatively fixed position with respect to the road bed.

3. In a rail stay, rail clamping means comprising two rail engaging elements adapted to bear against the rail on the same side thereof and conformed so that a tightening movement of one of the same forces the other into closer engagement with the rail; said stay being provided with means for giving it a relatively fixed position with respect to the road bed.

4. In a rail stay, rail clamping means comprising two oppositely disposed coacting wedges arranged at one side of the rail base and both in contact therewith; said stay being provided with means for giving it a relatively fixed position with respect to the road bed.

5. In a rail stay, rail clamping means comprising oppositely disposed coacting wedges arranged at one side of the rail, both of the same being adapted to bear against said rail; said stay being provided with means for giving it a relatively fixed position with respect to the road bed.

6. In a rail stay, rail clamping means comprising two oppositely disposed coacting wedges arranged at one side of the rail, one of the same being composed of hard metal and provided with a biting edge and both being adapted to come into contact with said rail; said stay being provided with means for giving it a relatively fixed position with respect to the road bed.

7. In a rail stay, rail clamping means comprising a jaw, a wedge adapted to be driven into said jaw and formed with a tapered slot and a hard metal wedge-shaped element arranged in said slot; said stay being provided with means for giving it a relatively fixed position with respect to the road bed.

8. In a rail stay, rail clamping means comprising a jaw, a wedge adapted to be driven into the jaw and formed with a tapered slot and with projections at each end of said slot, and a hard metal wedge adapted to be received in said slot and held therein by the bending over of said projections; said stay being provided with means for giving it a relatively fixed position with respect to the road bed.

9. In a rail stay, rail clamping means comprising a jaw, a wedge adapted to be driven into said jaw and formed with a tapered slot, a wedge-shaped hard metal element adapted to be received in said slot, projections at the edges of said slot to hold the hard metal element therein, a projection on the inner surface of said slot adapted to initially hold said hard metal element at the forward end of said slot; said stay being provided with means for giving it a rel-

actively fixed position with respect to the road bed.

10. In a rail stay, the combination with a bar formed with a tie abutment and with
5 a jaw at each end, of a wedge adapted to be driven into one of said jaws so as to engage with the rail base, said wedge being formed

with a tapered slot in its inner edge, and a hard metal wedge arranged in said slot, substantially as described.

PERCIVAL H. TRUMAN.

Witnesses:

G. Y. SKINNER,
L. A. FALKENBERG.