

G. W. WHIPPLE.
Railway Switch-Bar.

No. 225,034.

Patented Mar. 2, 1880.

Fig. 1.

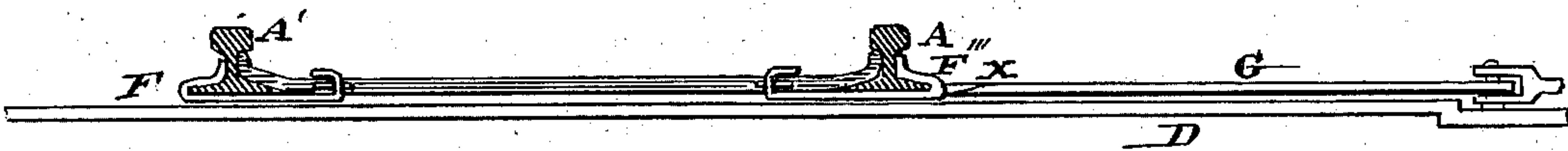


Fig. 2.

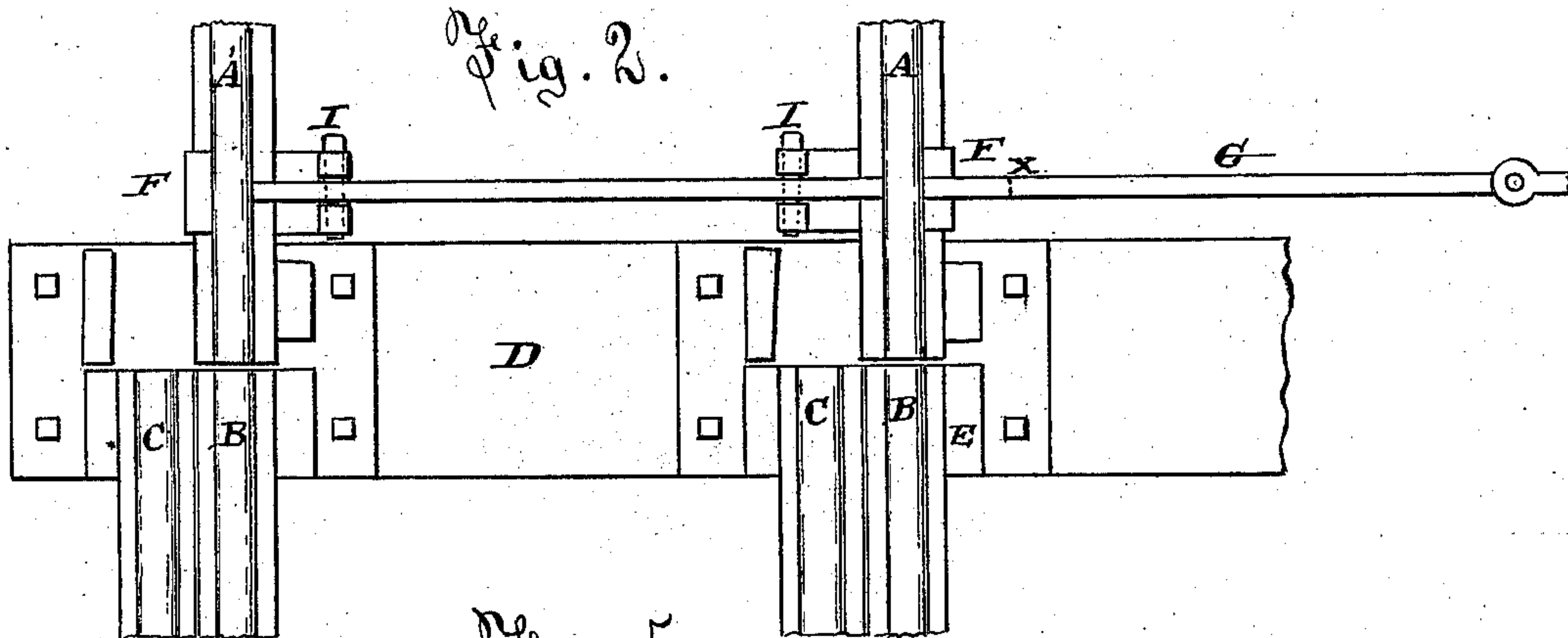


Fig. 5.



Fig. 4.

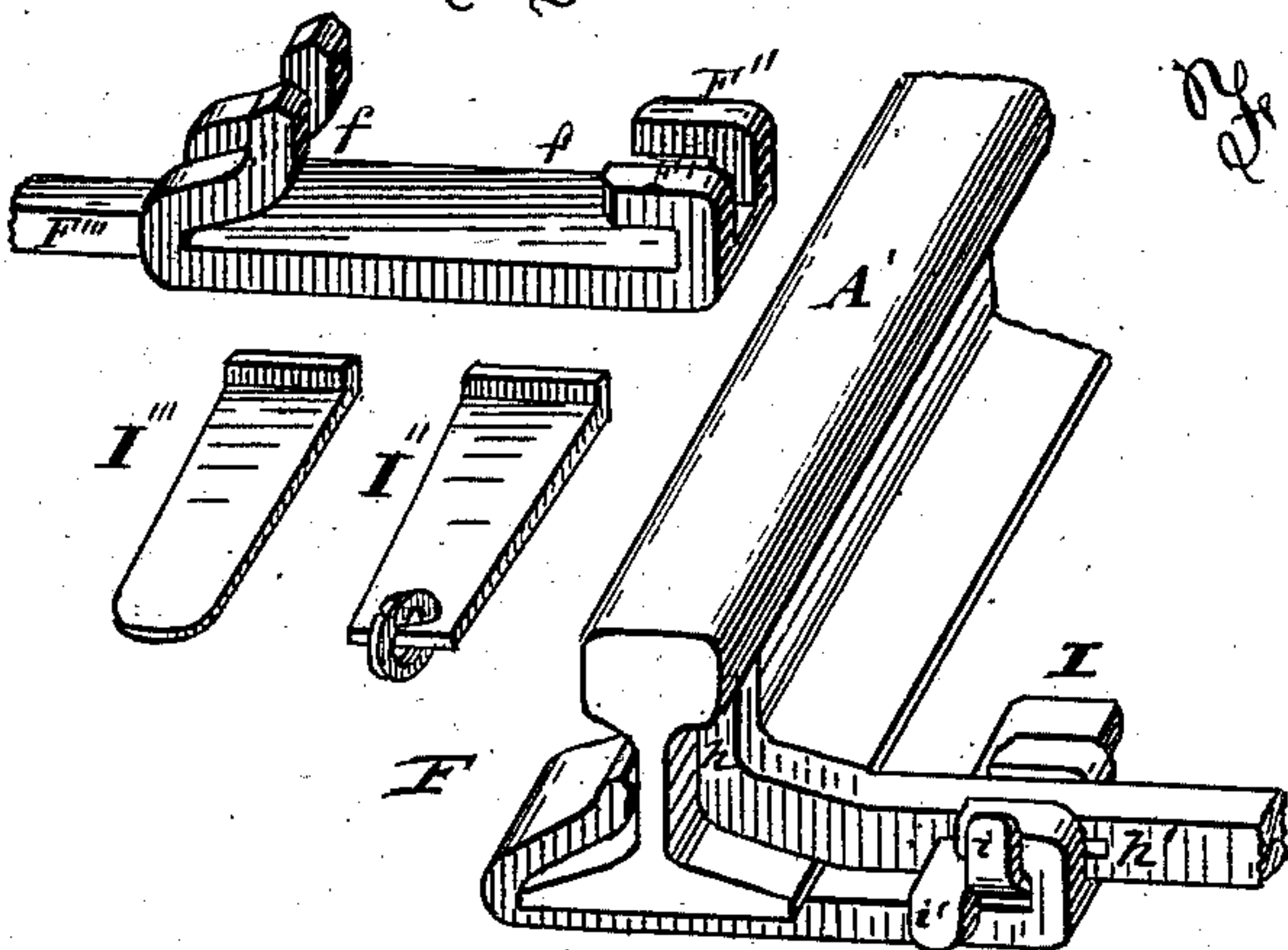
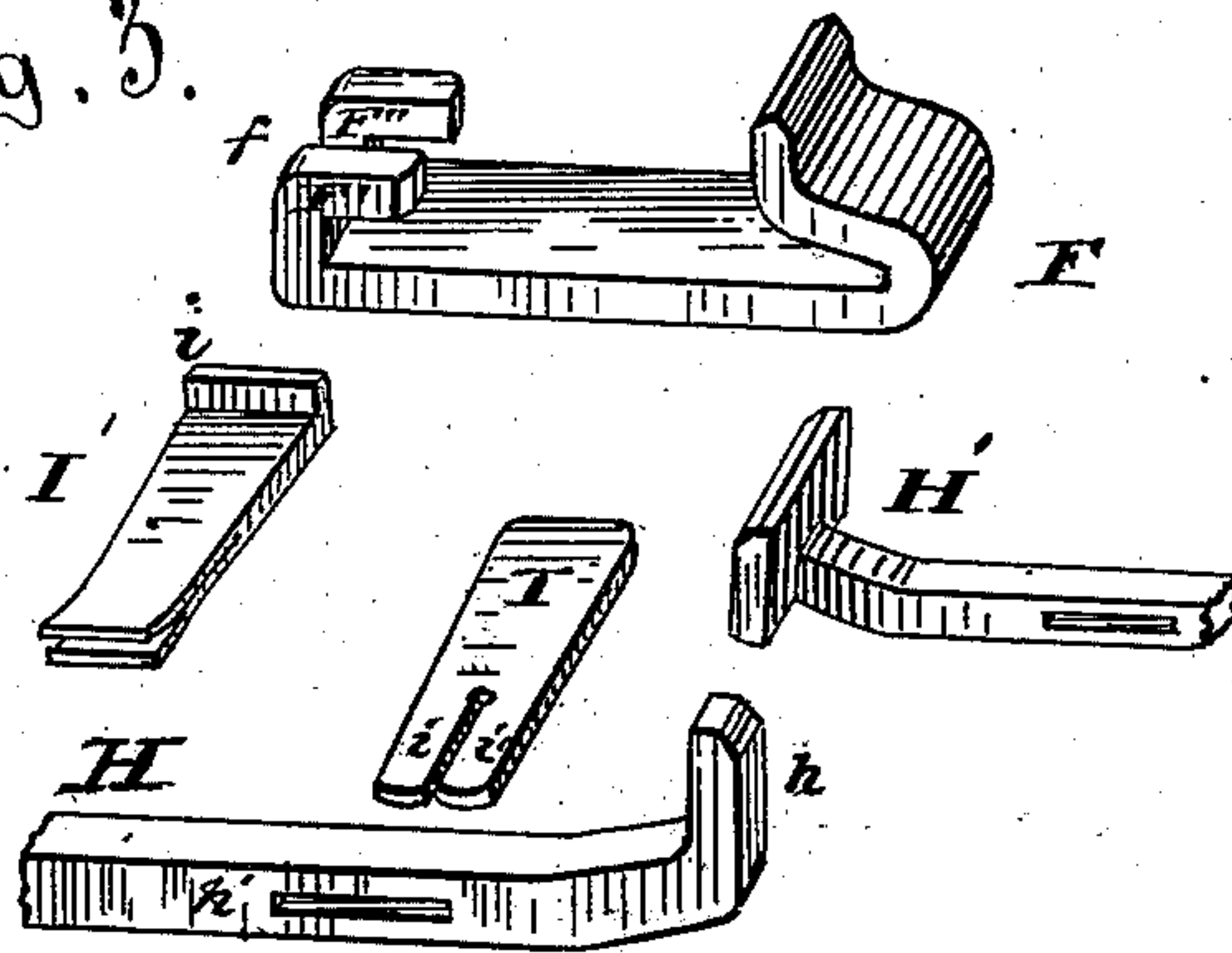


Fig. 3.



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UNITED STATES PATENT OFFICE.

GEORGE W. WHIPPLE, OF LUDLOW, KENTUCKY, ASSIGNOR OF ONE-HALF
OF HIS RIGHT TO MATTHEW H. BENTLEY, OF SAME PLACE.

RAILWAY-SWITCH BAR.

SPECIFICATION forming part of Letters Patent No. 225,034, dated March 2, 1880.

Application filed January 9, 1880.

To all whom it may concern :

Be it known that I, GEORGE W. WHIPPLE, of Ludlow, Kenton county, Kentucky, have invented new and useful Improvements in Railway-Switch Bars, of which the following is a specification.

My invention relates to an improved form of those bars or rods which connect the two rails that constitute a railway-switch, and of which the bar nearest to the outer ends of the switch connects to the switch-stand.

My improvements are designed to enable the heads of the switch-bars to be applied to any desired parts of the switch-rails without the necessity of being first slipped over the extreme ends of the same, and to be securely and accurately clamped in such positions.

In the accompanying drawings, Figure 1 is a side elevation of a switch-bar embodying my invention. Fig. 2 is a top view of the same, together with portions of the stationary tracks and with the supporting head-block. Fig. 3 is a perspective view of two clamp-heads with connecting-rod and keys, one head and key being detached. Fig. 4 represents the clamp-head nearest the switch-stand. Fig. 5 is a side view of a modification of my invention.

A A' may represent the two rails composing the switch. B and C may respectively represent portions of the main and side tracks. D may represent the customary bed-plate or head-block to support the chairs E of the stationary track-rails. F represents the heads or clamps of the switch-bar G. Similar heads are provided for the switch-rods H, which, at distances of about four feet, connect the two rails of the switch.

In the preferred form of my device the rod H, which connects the clamp-heads F, and which, in conjunction with said heads and with the keys or wedges I, serves to bring and maintain the switch-rails to the proper equidistance, is the same both at the extreme end of the switch, connected with the switch-bar, and for the intermediate places. This rod consists of a stout wrought-iron bar, H, of rectangular transverse section. Said bar occupies notches *f* in the inside clamp-hook, or said hook may be described as consisting of

two hooks, F' F''. Each extremity of the bar H is upbent to form a lip, *h*, which snugly fits the top of the rail-base and the inner wall of rail leg or web. Each bar H has near each end of it a horizontal slot, *h'*, for a wedge or key, I, whose thin end, being divided into two portions, *i i'*, enables it to be doubly clinched after insertion, as shown in Fig. 3.

For attachment of the switch-bar the clamp-head nearest the switch-stand may have its middle portion cut and turned back, as at F''' in Fig. 4, and welded to the switch-bar G, as shown at X, Figs. 1 and 2.

The above-described illustration of my invention may be varied in non-essential particulars. For example, the clamp-heads of each or any particular bar may be connected by a permanently-welded bar, as at K, Fig. 5, and two slotted bars, L M, be employed to secure the respective rails, of which one bar, M, may constitute the switch-bar.

Instead of the middle portion of the clamp-head being cut and turned back, as at F''' in Fig. 4, the clamp-head may be left solid and the rod G be welded on the same for the purpose of insuring greater strength. The rod H may terminate in a cheek, H', to afford better lateral support to the rail and prevent crushing and splitting under heavy loads.

The fastening-wedge may have its point split horizontally, as shown at I, and its severed portions be caused to curve outward, so as to securely lock the wedge in place; or the wedge-point may be perforated and receive a split ring, as at I'', or be plain, as at I'''.

A head, *i*, may be formed on the wedge for convenience of driving, and also to facilitate extraction.

While preferring wrought-iron, especially for permanent ways, yet the heads or clamps F may be cast-iron, if preferred.

Among the advantages of my improvement are convenience of taking off and putting on without necessity of raising the sliding rails; avoidance of any lost or slack motion liable to occur from inequalities in size of rails; accurate spacing of the rails, leaving no chance or liability of a lip, (projecting end,) which is a frequent source of accident to trains passing to or from the switch; placing the draft of the

switch-bar at about mid-height of the rail, so as to make the work of shifting the switch easier, and also more precise, than when the draft is some distance below the rail; avoidance of the accidental displacement or shifting of the clamp-heads along the length of the rail, and thus securing a given throw at every movement of the switch-crank.

The lips of the clamp-heads and the ends of the bar H, especially when the latter is furnished with the cheek H', operate, when keyed fast, to afford lateral support to the rail and to prevent splitting and mashing of the latter under heavy loads. The keys or wedges afford an easy means to take up lost motion. There is an entire avoidance of the noise and chafing incident to loose joints.

The construction of the clamp-heads will be seen to be such as to readily allow of their application to the switch-rails at any part of their length without necessity of slipping them on endwise, as customarily done. The slotted

coupling-rod being accurately swaged serves the purpose of a gage to insure absolute equidistance of the two switch-rails at every part of their length.

I claim as new and of my invention—

1. In combination with a pair of switch-rails, the described clamp-heads F, slotted coupling-bar H, and keys I, for the purposes designated.

2. In combination with the clamp-head F, receiving one of the rails, slotted coupling-bar H, and keys I, the clamp-head F' f F'', receiving the other rail and having a portion, F''', cut and turned back to form a part of the switch bar or rod, substantially as set forth.

In testimony of which invention I hereunto set my hand.

GEORGE W. WHIPPLE.

Attest:

WALTER KNIGHT,
J. L. LOGAN.