No. 678,020. Patented July 9, 1901.

J. H. McPARTLAND.

RAIL CLUTCH.

(Application filed Feb. 13, 1901.)

(No Model.)

FIG. 1.

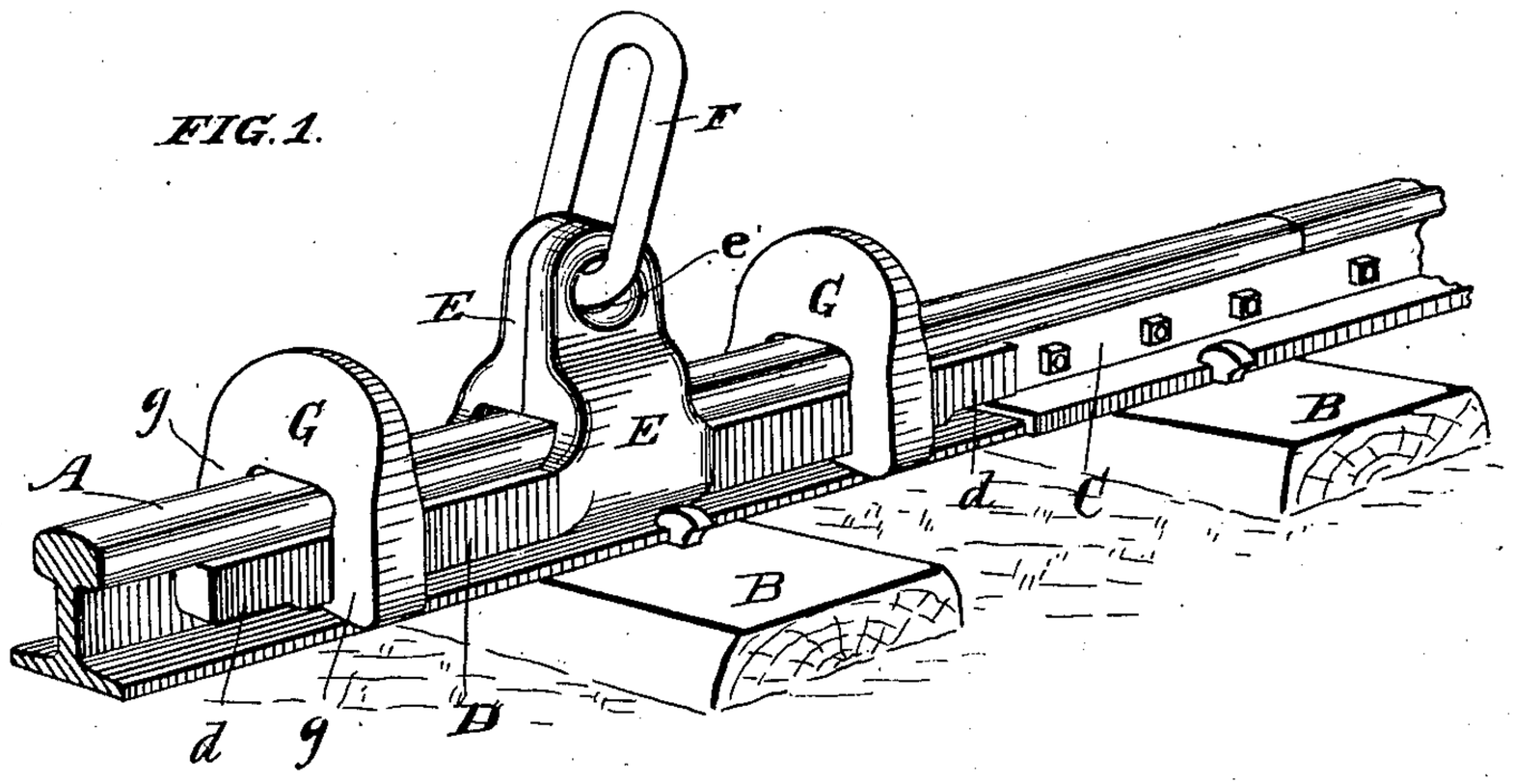


FIG. 2.

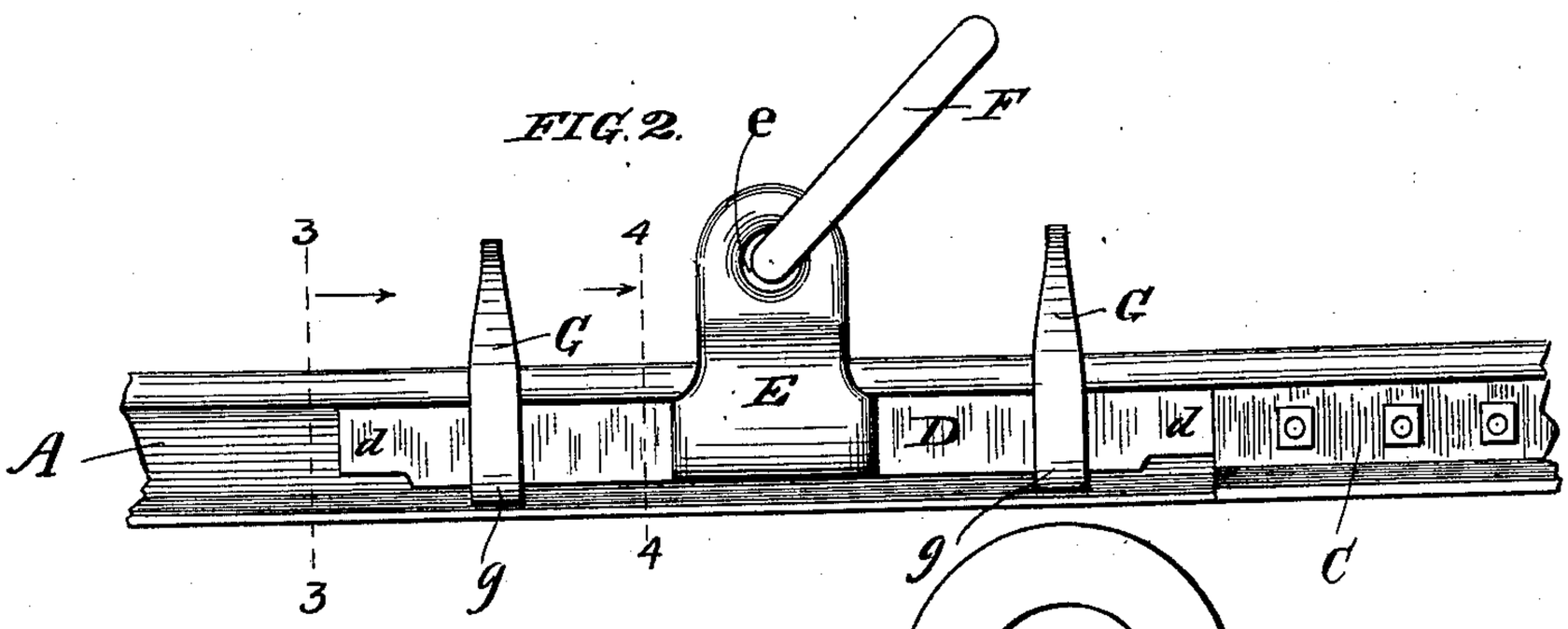


FIG. 3.

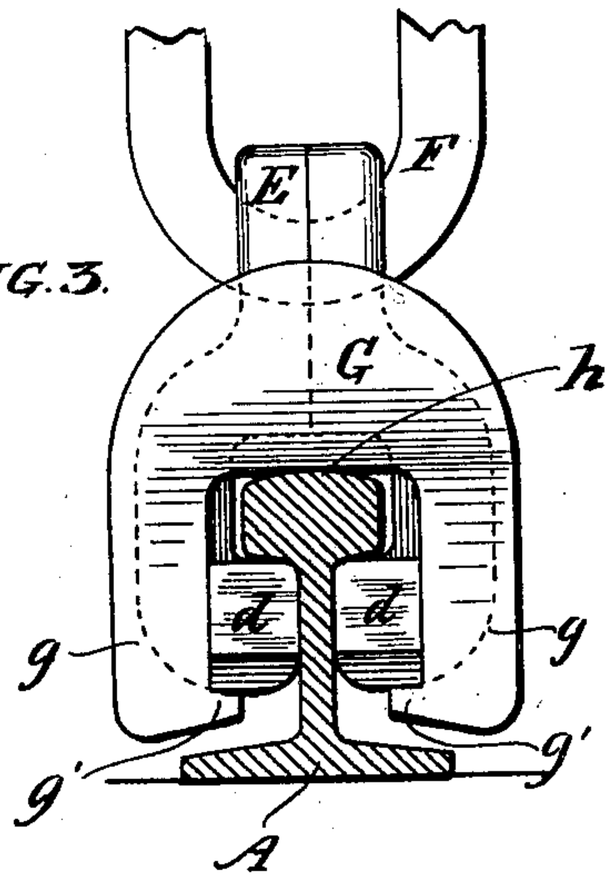
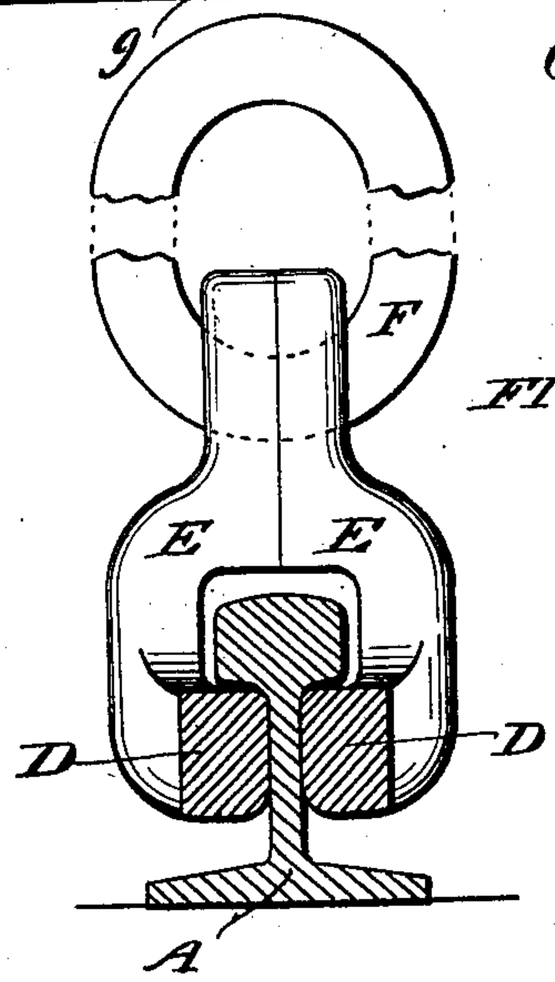


FIG. 4.



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UNITED STATES PATENT OFFICE.

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RAIL-CLUTCH.

SPECIFICATION forming part of Letters Patent No. 678,020, dated July 9, 1901.

Application filed February 13, 1901. Serial No. 47,101. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. McPARTLAND, a citizen of the United States, residing at Burlington, in the county of Des Moines and State of Iowa, have invented certain new and useful Improvements in Rail-Clutches, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to a rail-clutch for use on railways in rerailing cars and engines, in clearing up wrecks, and for all purposes where track-hitches are employed.

The object of my invention is to provide an effective, economically-constructed, and easily-operated appliance by which hitches can be made to the rail for the purpose of using a block and fall or for single-line hitches in pulling derailed engines or cars back onto the track or as an anchor for derricks in turning over or raising such cars or engines, and generally for all purposes in railroad construction, operation, or repair where it is desirable to employ a rail-hitch.

To these ends my invention consists in a rail-clutch embodying the features of construction and operation hereinafter described, and pointed out in the appended claims.

In the accompanying drawings, which illustrate my invention in its preferred form, Figure 1 is a perspective view of my improved rail-clutch shown applied to one of the rails of a railway-track. Fig. 2 is a side elevation of the same. Fig. 3 is a vertical transverse section on line 3 3 of Fig. 2, and Fig. 4 is a similar transverse section on line 4 4 of Fig. 2.

In the accompanying drawings, in which like letters of reference indicate corresponding parts in all the views, A designates a section of a rail of a railway-track to which my improved clutch is designed to be applied, the same resting upon and being spiked to the usual supporting cross-ties B. At C is shown one of the usual splice-bars of the joint formed by the meeting ends of two adjacent rails.

Referring now to the parts or elements that constitute my improved clutch appliance, D D represent two iron bars, which in practice are preferably made about two and one-half feet in length and are adapted to fit into the hollow of the rail A on opposite sides thereof and under the ball or tread portion of the rail, as plainly shown in all the figures of the drawings.

Formed integral with and rising centrally from the horizontal bars D D are two inwardly-extending eyeleted shanks E E, the vertical faces of whose upper ends meet centrally over the ball of the rail, and through the registering eyes *e e* of the latter is welded a ring or link F, to which a hitch may be made. It will thus be seen that the horizontal bars D and their integral shanks E form the two clamping-arms of my improved clutch. It is now obvious that some provision must be made for securing the two clamping-arms thus constituted in fixed engagement with the rail at any desired point on the latter. For this purpose I employ a pair of clasps, (designated as a whole by G G,) each of the latter being of an inverted-U shape, as shown, and having the lower ends of its parallel vertical arms *g g* provided with inwardly-extending lips *g' g'*, as best seen in Fig. 3. The lips *g' g'* are separated by a space just sufficient to enable the clasp to be slipped down over the ball of the rail, and its two arms *g g* are sufficiently wide apart to enable it to embrace the rail A and the horizontal members D D of the clamping-arms, while the lips *g' g'* coöperate with the under sides of said members D D. It will be observed that the bars D D are each of a width considerably greater than the width of the overhanging portion of the tread, or, what is the same thing, the depth of the hollow of the rail, being, in fact, about equal to the latter plus the horizontal extent of the lip *g'*.

The operation of my improved clutch will be readily understood from the foregoing description of its construction. In applying it to a rail the two clamping-arms are opened or spread sufficiently to pass them over the ball of the rail and bring the two bars D D into place in engagement with the vertical web and ball of the rail, as shown. The clasps G G are then slipped down over the ball of the rail beyond the ends of the bars D D and are then forced toward each other along the rail until they embrace and snugly clasp the said bars, in which operation the latter become clamped against lateral or horizontal displacement by the parallel vertical arms *g g* of the clasp and against vertical dis-

placement by the engagement of the lips g' g' with the under side thereof, tending to force the latter hard up against the under side of the ball of the rail through the engagement of the top portion of the clasp with the upper face of the rail, as shown at h, Fig. 3. In order to facilitate the sliding of the clasps G into locking engagement with the bars D, the ends of the latter may be slightly cut away on their under sides, as shown at d.

With the parts thus assembled on the rail a rope or chain from a block and fall or other hoisting appliance can be readily applied to the ring or link F, and the clutch forms a secure anchor for the same. Where a lifting-hitch is to be used, a car or engine is placed on the track on each side of the clutch to prevent lifting of the track when the pull is made. For a line-pull the clutch is placed on the rail with one end of the bars D D abutting the adjacent end of the splice-bars C C of the joint, as shown in Figs. 1 and 2.

It will be seen that the device above described is capable of being used as a track-raiser as well as a rail-clutch by simply securing the ring F to a suitable lifting rod, bar, or lever.

I claim as my invention—

1. A rail-clutch, comprising in combination a pair of clamping-arms having their lower portions adapted to lie in the hollow of the rail on opposite sides thereof, and a pair of clasps adapted to embrace the rail and the clamping-arms over the top thereof and longitudinally slidable thereover, and serving to lock said clamping-arms to the rail, substantially as described.

2. A rail-clutch, comprising in combination a pair of oppositely-disposed clamping-arms, each of which has a lower horizontal member adapted to fit in the hollow of the rail and a vertical shank rising therefrom and extending up over the top of the rail, of a pair of clasps adapted to embrace the rail and the horizontal members of the clamping-arms over the top thereof and longitudinally slidable thereover, and serving to lock said clamping-arms to the rail, substantially as described.

3. In a rail-clutch, the combination with a pair of bars adapted to fit in the hollow of a rail on opposite sides thereof, of a pair of shanks formed integral with and rising from said bars intermediate their respective ends, and at their upper ends meeting above the rail, and a pair of inverted-U-shaped clasps adapted to overlie the rail and the said bars and longitudinally slidable thereover and serving to lock said clamping-arms to the rail, substantially as described.

4. In a rail-clutch, the combination with a pair of bars adapted to fit in the hollow of a rail on opposite sides thereof, of a pair of eyeleted shanks formed integral with and rising from said bars and at their upper ends meeting over the rail, a ring secured through the registering eyes of said shanks, and a pair of inverted-U-shaped clasps adapted to embrace the rail and the said bars and lock the latter to the rail, substantially as described.

5. In a rail-clutch, the combination with a pair of bars adapted to fit in the hollow of a rail on opposite sides thereof, of a pair of eyeleted shanks formed integral with and rising from said bars and at their upper ends meeting over the rail, a ring secured through the registering eyes of said shanks, and a pair of inverted-U-shaped clasps adapted to embrace the rail and the said bars, the said clasps having a pair of inwardly-extending lips formed on their lower ends which engage the under sides of said bars and force the latter into snug engagement with the under surface of the ball of the rail, substantially as described.

JOHN H. McPARTLAND.

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