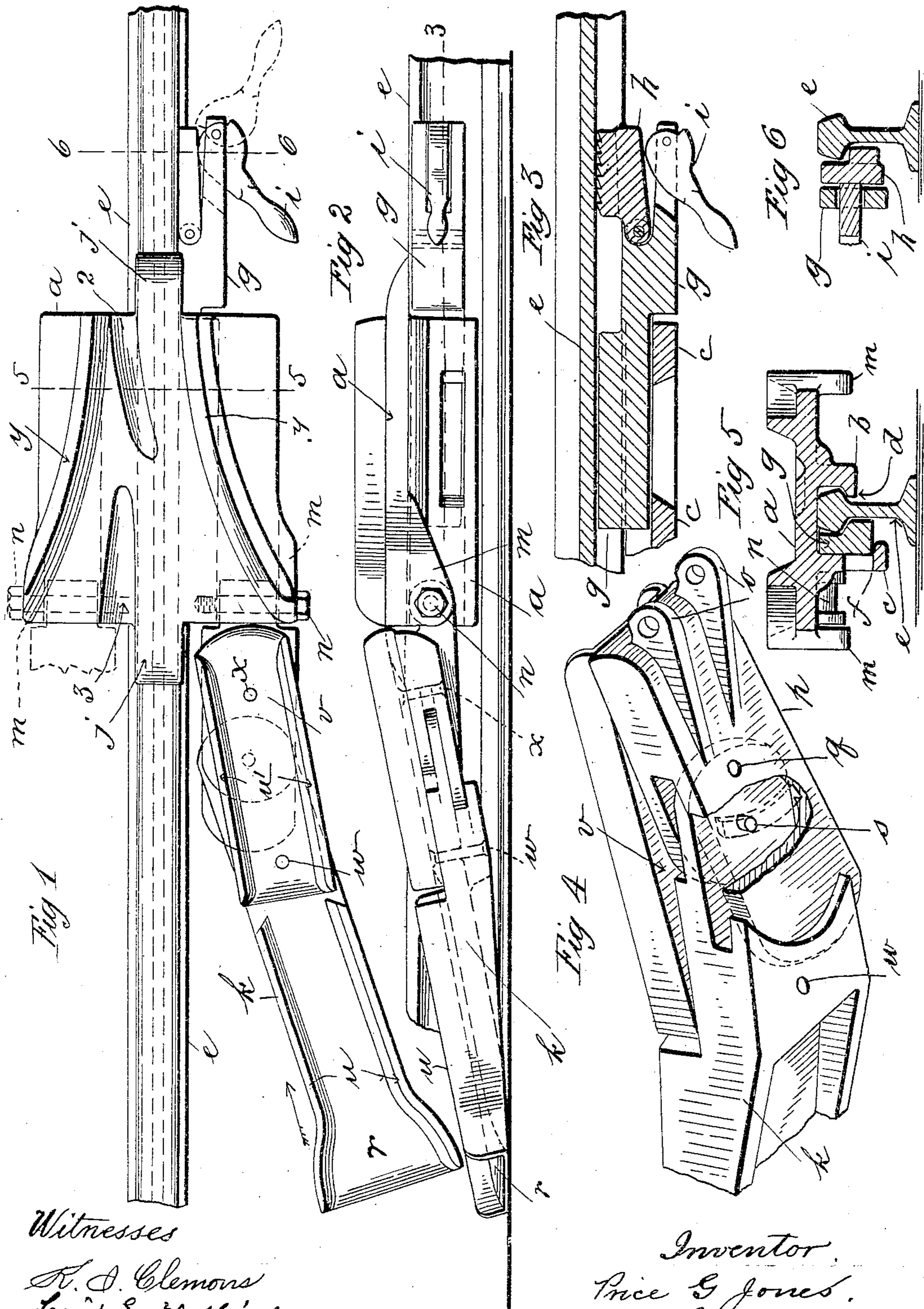


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P. G. JONES.
CAR REPLACING DEVICE.
APPLICATION FILED APR. 19, 1904.



Witnesses

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UNITED STATES PATENT OFFICE.

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CAR-REPLACING DEVICE.

SPECIFICATION forming part of Letters Patent No. 778,541, dated December 27, 1904.

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To all whom it may concern:

Be it known that I, PRICE G. JONES, a citizen of the United States of America, residing at Suffield, in the county of Hartford and State of Connecticut, have invented new and useful Improvements in Car-Replacing Devices, of which the following is a specification.

This invention relates to car-replacing devices, and has for its object the production of a device of this character wherein provision is made for the use thereof in replacing a car which may leave the rail on either side thereof, guiding the derailed wheels into position on the track, and permitting any of the wheels which may have remained on the track to pass over the replacing device without being subject to derailment by said device and without injury to the latter.

The object of the invention is, further, in the provision of certain novel features of construction, which will be fully described in the following specification and the claims appended thereto and clearly illustrated in the drawings forming part of this application, in which—

Figure 1 is a plan view of the car-replacer applied to a rail. Fig. 2 is a side elevation of the same. Fig. 3 is a sectional plan view taken on line 3 3 of Fig. 2. Fig. 4 is a perspective view of the under side of a portion of the jointed trough-shaped arm which serves to guide a derailed wheel to the track. Fig. 5 is a sectional view taken on line 5 5, Fig. 1. Fig. 6 is another sectional view taken on line 6 6, Fig. 1.

Referring now to the drawings, *a* indicates a saddle provided with a channel running longitudinally thereof on the under side and adapted to inclose the tread portion of the rail, said channel being formed by the side pieces or ribs *b* and *c*, depending from the under side of the saddle and cast integrally therewith. Said side pieces *b* extend downwardly far enough only to permit the lip *d* thereon to engage beneath the tread of the rail, the latter being indicated by *e*. The side piece *c* also has an inturned lip *f* on its lower edge, the space between the edges of the lips *d* and *f* being slightly greater than the width of the tread of the rails. This construction permits

the insertion of a key *g* between the side pieces *c* and the rail, said key being formed to fit closely between the tread of the rail and said lip *f* and also between the web of the rail and the side piece which carries the lip *f*, the lower portion of the key, as shown in Fig. 5, being wider than the upper portion thereof. Therefore it is seen that when the saddle *a* is placed on the rail and moved sideways thereon to bring the lip *d* under the edge of the tread the key *g* may be inserted in the forward end of the saddle to securely lock the latter to the rail, because of the bearing which the key has on the lip *f*, together with the engagement of the lower edge of the key with the under side of the tread of the rail.

As shown in Figs. 1, 2, and 3, the key *g* extends somewhat beyond the forward edge of the saddle and that point is separated somewhat from the rail and has mounted in said forward end a jaw *h*, arranged to swing toward and from the web of the rail, the inner edge of the jaw being provided with teeth, as shown in Fig. 3, to engage the web of the rail, the cam-lever *i* being mounted in the end of the key, which may be operated to cam the jaw *h* into engagement with the web of the rail to place the latter under a lateral strain sufficient to bind the saddle securely to the rail, the key in turn being made rigid enough to cause the serrated edge of the jaw to indent the surface of the web, and thus prevent the saddle from moving endwise on the rail when a car-wheel runs onto the rear end of the saddle. At each end of the latter, centrally thereof, there is a tongue *j*, having about the same width as the tread of the rail and resting thereon and whose upper surface, as shown in Fig. 2, inclines downwardly toward the point of said tongue, thereby constituting an inclined surface over which the tread of a wheel may run when it is being replaced or over which the wheels remaining on the track may run after the derailed wheel has been replaced.

It is very necessary that provision should be made in devices of this character for the passage over the saddle *a* of the replacing device of the wheels of those cars which remain on the track, for generally so much effort is required to pull a derailed car into position on

the track again that it and the cars coupled thereto acquire a headway which cannot always be checked in time to prevent several of the following cars from passing over the replacing device. This frequently results in the destruction of the replacing device or a part of it or a fresh derailment of other cars, for the reason that (within my knowledge) provision has not heretofore been made in car-replacing devices for the passage of one or more cars over the saddle without injury to the latter and without danger of derailing. Such provision, however, is made in the construction herein described by the construction of the saddle and the manner of the arrangement and connection of the trough-shaped guide-arm, indicated as a whole in the drawings by *k* and which is shown in Figs. 1 and 2 as being secured to the right-hand side of the saddle, the construction of the latter, however, permitting it to be attached to either side thereof, such attachment being effected by casting a strong depending web *m*, Figs. 1 and 2, upon the outside of the rear end of the saddle parallel with the rail and drilling through this web and into the side of the depending ribs *b* and *c* to receive a bolt *n*, which may pass through the lugs *o*, cast on the under side of the member *p* of the arm *k*, which is jointed at *q* with the end of the member *r* of said arm. To limit the throw sidewise of the member *p*, a pin *s* is inserted in the latter and enters a curved groove *t* in the upper surface of the member *r* of the arm, as shown in Fig. 4 in dotted lines. The members *p* and *r* are preferably mortised together, as shown in Fig. 4, whereby the weight of a car thereon may be supported without subjecting the pivot-pin *q* to undue strain. The member *r* of the trough-shaped guide-arm is the terminal member thereof, its outer extremity being flared more or less, as shown in Fig. 1, and the edges thereof provided with upstanding flanges *u*, whereby a wheel may be kept in place thereon. The other member of this trough-shaped guide-arm is the member *v*, which is supported equally on the member *r*, and the member *p* being pivotally connected with these respectively at *w* and *x* by suitable bolts. This member *v* thus bridging over, as it does, the jointed connection between the members *p* and *r*, serves to still further equalize any weight which this arm *k* must carry. Furthermore, the construction of this arm by reason of the mortising together of the members *p* and *r* permits a very considerable lateral swing without sacrificing strength and without resulting in any quick turns in the guide-arm *k*, but by reason of the peculiar connection of the member *v* with the others leaves the lines of the guide-arm relatively easy. The member *v* is provided with flanges *u'* along the sides thereof similar to the flanges *u* on the member *r*.

The position of the parts as applied to the

rail shown in Fig. 1 shows the arm *k* in position to replace a wheel which has become derailed on the outside of the track, and therefore the car to be replaced, together with such other cars as may be coupled therewith, must be moved in the direction of the arrow shown near the guide-arm *k* in said Fig. 1. Hence the wheel of a car being drawn upwardly on said arm to the level of the track and saddle will be guided onto the latter by means of the flanges on the arm and by means of the flanges *y* on the saddle will be guided into position of alinement with the rail. In the upper surface of the saddle it is to be noted that two grooves are formed, one slightly curved (indicated by 2) and the other substantially parallel with the track, (indicated by 3.) When the car-replacing device is located to guide the wheels which have run off the outside of the track, these wheels running over the grooved guide-arm *k* upon reaching the saddle will be guided by the flanges *y* in such manner that the flange of the wheel will enter the groove 2 and the tread of the wheel running over the tongue *j* the wheel will eventually take the track properly, and if any other cars have remained on the track they in turn will follow along and riding over the tongue *j* on the rear end of the saddle the flanges of the wheel will pass up through the groove 3 and entering the groove 2 follow along the rail without either damaging the saddle or being liable to derailment by contact therewith.

Of course it is clear that two of these car-replacing devices must be used simultaneously and the saddles must be adapted to each rail—that is to say, the saddle for the rail opposite to the one shown in Fig. 1 would differ only from the saddle shown in this figure in that the grooves 2 and 3 would be placed on the opposite sides of the tongues *j* and the key *g* be located on the outside of the rail, as in this figure, whereby in either case the grooves 2 and 3 would be located relatively in the plane of the flanges on the wheels when the latter are in place on the track. The guide-arm *k* may be applied to either side of the saddles. When applied to the inside, (a portion thereof being shown in dotted lines in Fig. 1,) there is always room between the arm and the adjacent edge of the tongue *j* for the passage of the flange of the wheel, so that even though the derailment occurs in the opposite direction from that shown by the location of the parts in Fig. 1 the wheel would be guided onto the track in the same manner in one case as in the other and the wheels of such cars as remained on the track would also follow and run over the saddle in the manner hereinbefore described.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. A car-replacing device consisting of a

saddle for the track having flanges thereon converging from the outer edges of the rear end of the saddle toward the center of the opposite end; a tongue on the forward and rear ends of the saddle extending along the track beyond said saddle ends, a guide-trough adapted to be secured to the rear end of the saddle on either side thereof in position to provide a space between said trough and the track at the point of its junction with the saddle to permit the passage of the flange of the wheel, together with means to removably secure the saddle to the track.

2. A car-replacing device consisting of a saddle for the track having flanges thereon converging from the outer edges of the rear end of the saddle toward the center of the opposite end; a guide-trough adapted to be secured to the rear end of the saddle on either side thereof in position to provide a space between said trough and the track at the point of its junction with the saddle, to permit the passage of the flange of the wheel, together with a key located between a depending portion of the saddle and the web of the rail, a movable jaw mounted in said key, and means to force the jaw into contact with said rail-web to lock the saddle to the rail.

3. In a car-replacing device, a saddle for the track having flanges thereon converging from the outer edges of the rear end of the saddle

toward the center of the opposite end, a tongue on the forward and rear ends of the saddle extending along, and bearing on, the track beyond the saddle ends, said tongues being downwardly beveled toward their extremities; there being a groove in the upper surface of the saddle extending from one side of the base of each of said tongues toward the opposite tongue; together with means to secure the saddle to the track.

4. A car-replacing device consisting of a saddle for the track having flanges thereon converging from the outer edges of the rear end of the saddle toward the center of the opposite end; a tongue on the forward and rear ends of the saddle extending along the track beyond said saddle ends, a guide-trough adapted to be secured to the rear end of the saddle on either side thereof in position to provide a space between said trough and the track at the point of its junction with the saddle to permit the passage of the flange of the wheel, said trough consisting of several sections jointed together to swing toward and from the track, together with means to removably secure the saddle to the track.

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Witnesses:

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