

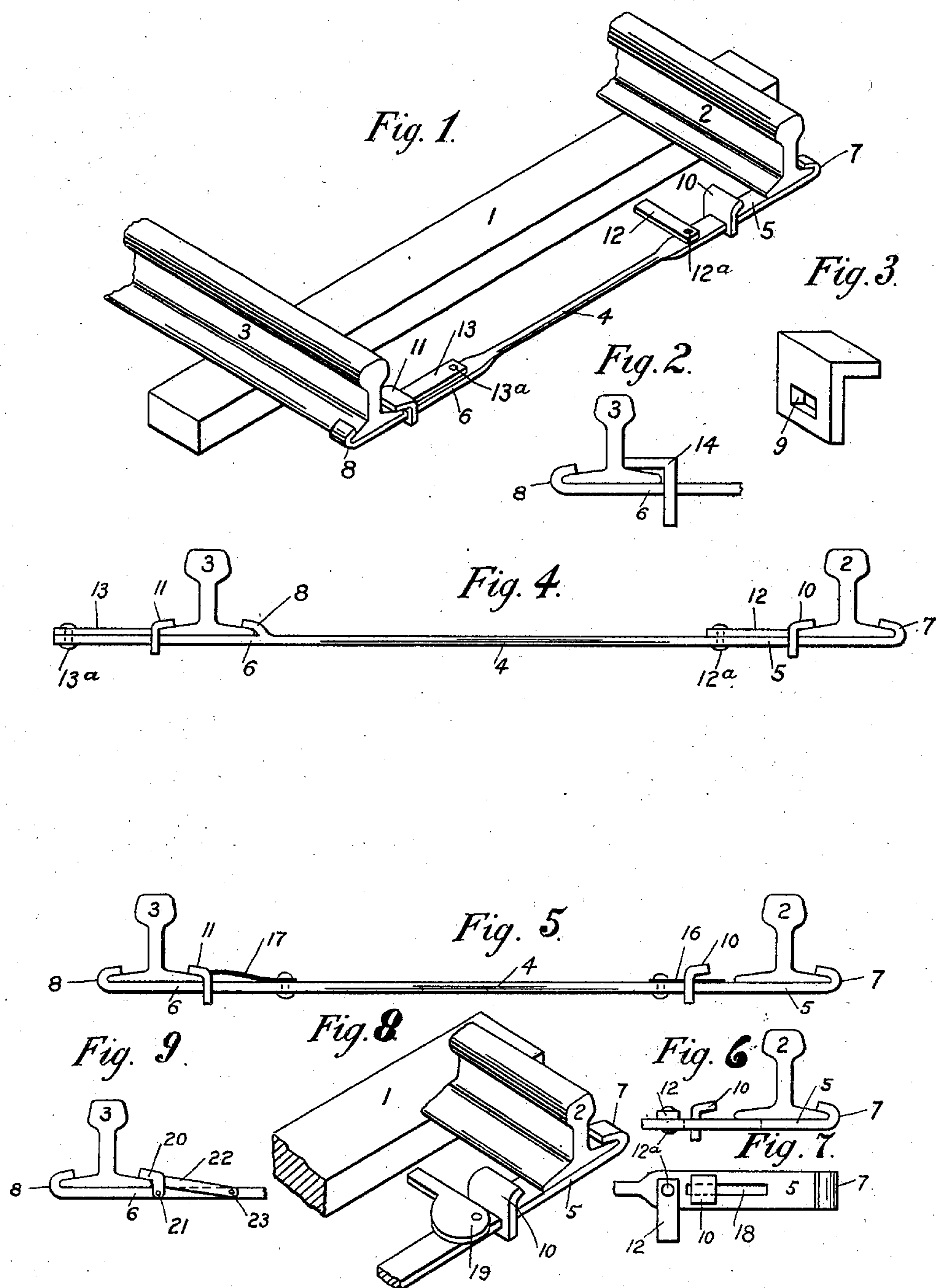
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G. F. H. HICKS.
COMBINED TRACK GAGE AND BRIDLE.

APPLICATION FILED JUNE 28, 1902.

NO MODEL.



WITNESSES:

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COMBINED TRACK GAGE AND BRIDLE.

SPECIFICATION forming part of Letters Patent No. 736,097, dated August 11, 1903.

Application filed June 28, 1902. Serial No. 113,594. (No model.)

To all whom it may concern:

Be it known that I, GEORGE F. H. HICKS, of the city of Chicago, in the county of Cook and State of Illinois, have invented certain
5 new and useful Improvements in a Combined Track Gage and Bridle, of which the following is a full, clear, and exact specification.

This invention relates to improvements in combined track gages and bridles designed
10 for simultaneously gaging and holding the rails of the trackway temporarily in their operative position, especially when laying from track-laying apparatus, such as is now commonly employed for that purpose and which
15 it is desirable to advance as fast as the ties and rails are laid in their operative position.

In the laying of railway-trackways from track-laying apparatus the common practice following the laying of the ties upon the
20 graded bed is to place and gage the rails thereon, spiking them only sufficiently to permit the cars carrying the track-laying apparatus to advance over them for continuing the laying of the trackway and after such passage
25 of the train to again gage and permanently spike the rails. In the operation referred to spikers must be kept at the front of the train while the regular spiking-gang follows behind the train, spiking the track in full, and as a
30 result an objectionable amount of time is lost and considerable expense occurs owing to the fact that frequently the "back" spikers are waiting for the "front" spikers, and vice versa, and more frequently the more numerous track-layers and trainmen are kept wait-
35 ing for the front spiking to be done.

The prime object of my invention is to provide a novel and effective means for both
40 gaging and holding the rails of a trackway in their operative position upon the ties of a railroad in the laying of a railway-trackway by the employment of track-laying machines until the train carrying such track-laying machine has passed entirely over them, and
45 this without the employment of any spikes at all, and thereby dispensing with front spikers and the loss of time and expense heretofore incurred through their employment.

A further object of my invention is to provide a combined track gage and bridle for
50 trackways which may be conveniently attached to and detached from the rails and

which when attached will rigidly hold the rails in their operative position, and this even though a train may in the meantime
55 pass over the trackway so held by this combined gage and bridle.

With these ends in view my invention consists in certain features of novelty in the construction, combination, and arrangement of
60 parts by which the said objects and certain other objects hereinafter appearing are attained, all as fully described with reference to the accompanying drawings, and more particularly pointed out in the claims. 65

In said drawings, Figure 1 represents a perspective view of the combined track gage and bridle embodying my invention, with the gage shown in its operative position embracing the outer flange of the track-rail and with
70 one of the movable or sliding jaws closed upon said rail and the other jaw open and away from the rail. Fig. 2 represents a detailed view of the bridle of the construction adapting it to embrace the web of the rail; 75 Fig. 3, a detailed perspective view of the sliding jaw, more particularly showing the slot in the movable jaw by which it is permanently secured to the gage-bar; Fig. 4, a side elevation of a modified arrangement of the
80 sliding jaws with one of the sliding jaws embracing the inner flange of one rail and the other sliding jaw embracing the outer flange of the other rail of the trackway; Fig. 5, a similar view of another modification in which
85 the locking-bar of the sliding jaw is formed of a spring-plate instead of a rigid bar, as shown in Fig. 1; Figs. 6 and 7, respectively, are detailed end views and plan views of the combined gage and bridle embodying my in-
90 vention in which the sliding jaw is secured to the gage-bar by means of a slot in said bar instead of in the sliding jaw, as shown in the preceding figures of the drawings; Fig. 8, a detailed perspective view showing a modified
95 form of the locking device for the sliding jaw; and Fig. 9 illustrates a further modified form of my invention in which the movable locking-jaw is pivoted and the locking-bar there-
100 for is pivoted upon a horizontal pivot, as distinguished from the vertical pivot shown in the preceding figures of the drawings except Fig. 5.

Similar numerals of reference indicate the

same parts in the several figures of the drawings.

1 indicates a railroad-tie supposedly in its operative position upon the graded bed of a railroad, and 2 3, respectively, indicate the rails thereof in their operative trackway position thereon. My combined gage and bridle for temporarily holding these rails in their operative position (see Fig. 1) consists of a gage-bar 4, which, as shown in Fig. 1, may be rounded at its middle of length, but with its outer ends 5 6, respectively, flattened and terminating in bend 7 8, respectively, adapted to embrace and be clamped to the outer flanges of both rails, which ends are for convenience hereinafter referred to, respectively, as "rigid" jaws 7 8, the length of the gage-bar between these jaws being of a distance corresponding with the gage to which the trackway is to be laid. Sleeved upon the flattened ends of the gage-bar by means of slot 9 (indicated in Fig. 3) are sliding or clamping jaws 10 11, respectively, and pivoted to the gage-bar rearward of the sliding jaws by pivots 12^a and 13^a, respectively, are locking bars or latches 12 13, respectively, one of which jaws and locking-bars 10 and latches 12 (shown in Fig. 1) is out of their operative position for bridling the gage-bar to the rails, while the jaw 11 and locking-bar 13 are, on the other hand, shown in the operative position they have when locking the gage-bar to the rail.

In Fig. 2 is shown at 14 a modified form of one or both locking-jaws 10 or 11, and preferably both, and in which the jaw 14 instead of embracing the flange of the rail embraces the web of the rail and presents thereto an elongated edge parallel to the web of the rail and which when locked to the rail prevents any possible lateral vibration or movement of the rail with reference to the adjacent edge of the locking-jaw, which is possible when the locking-jaw is designed, as shown in Fig. 1, to embrace and hold the rail by frictional contact with the flange thereof, thereby insuring under all circumstances an absolutely perfect gaging of the rails; but in this connection it is proper to observe that with few exceptions the form of locking-jaw shown in Fig. 1 will answer the purpose to the substantial degree required.

In Fig. 4 one of the rigid jaws of the gage-bar—for example, the jaw 8—is formed at such a point thereon as to embrace the inner edge of the rail 3, and in this construction the locking bar or jaw 11 is so arranged upon the gage-bar as to embrace the outer flange of the said rail, and as a result the locking-bar 13 is pivoted near the outer end of the gage-bar, as indicated at 13^a. The advantage of this outside and inside arrangement of the clamping-jaws is that the combined gage and bridle can be detached from the track after the train passes over it without the necessity of throwing the rail out from the clamps or away from them, as is required by the other devices, leaving

the trackway in a perfectly-gaged position for spiking the same.

As is shown in Fig. 5, instead of employing pivoted latch-bars springs 16 17, respectively, may be used for locking the sliding jaws 10 11 in their operative position for clamping the rails to the gage-bar, and these springs may be pivoted so as to be swung in and out of operative position or may be riveted, so as to require their being lifted and lowered in and out of their operative position relative to the sliding jaws.

Figs. 6 and 7 illustrate a modified means for screwing the sliding jaws to the gage-bar in that instead of slotting the jaws the gage-bar is slotted longitudinally, as shown at 18, and the shank of the jaw projected therethrough.

In Fig. 8 is illustrated a modified form of the locking-bar, which consists in forming thereon a cam to engage the sliding jaw instead of having the end of the bar engage such jaw, which cam-locking device presents a means by which an adjustable pressure can be exerted against the locking-jaw and a means provided for taking up wear on both and for tightening the sliding jaws upon the flanges of the rail which may vary either in their degree of inclination or thickness.

In Fig. 9 is illustrated a jaw which is movable to and from the flange of the rails by a pivotal instead of a sliding movement, the jaw 20 thereof having substantially the same form as the sliding jaws 10, but is secured to the gage-bar by means of a horizontal pivot or bolt 21. The jaw to this end may be entirely upon one side of the bar or be forked, so as to embrace both sides thereof and in this latter instance the pivoting-bolt passing entirely through the bar and the lugs forming the fork. If the jaw 20 is upon but one side of the gage-bar 22, then the latch-bar therefor is likewise secured to a horizontal bolt 23, pivoting it to the gage-bar; but if, as suggested, the movable jaw 20 is provided with lugs embracing both edges of the gage-bar, and therefore extends entirely across said bar, then the vertical pivot-latch bar or spring—such as is shown, for example, in Figs. 1 and 6—may be used.

In conclusion it should be observed that my invention is not limited to the specific form and arrangement of devices shown in the several figures of the drawings, for obviously the different forms of movable clamping-jaws may not only be used in connection with any of the several locking devices shown therefor, but such jaws and locking devices may be arranged as shown in Fig. 4 or as shown in Fig. 1. It should also be observed that my invention includes extending the rigid jaws of the gage-bar so that they may present an elongated surface parallel with and engaging the webs of the rails, and this both when whether the edge of the movable jaw may or may not be constructed to operate in a similar manner.

Prior to my invention it was old to pivot a

movable jaw on the gage-bar on an axis vertical thereto and to lock said movable jaw in a closed position upon the flanges of the rails of the trackway by a screw-bolt passing 5 through said jaw and the gage-bar and having a nut upon the upwardly-projecting end thereof. Such a device in practice is objectionable because of the strain on and destruction of the pivot when the jaw is sufficiently 10 tight to hold the rail rigid, and that in many instances owing to variation in the thickness of the flange the pivoted edge has to be driven to and out of its operative position by a hammer, which additionally increases this strain 15 upon and the liability of the pivot to destruction. Furthermore, such a jaw cannot be successfully utilized to embrace the web of the rail so as to hold the rail rigid between the fixed and movable jaws or with absolute 20 certainty against displacement, because the embracing end of the movable jaw must necessarily be struck on an arc of a circle of which the pivot is the center, and thereby can present only a minimum contact-surface, 25 which being rounded will cause the movable jaw to be displaced by even a very slight, to say nothing of the considerable, jar to which the jaws are subjected before the several cars of the train can pass over and beyond them. 30 Furthermore, such a locking-bolt as referred to requires too much time for manipulation

both in screwing and removing it from its locking position on the jaw to permit its use in practice, or to permit the device as a whole any substantial advantage over the forward 35 spiking of the rails.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a combined track gage and bridle, a 40 gage-bar provided at opposite ends with rigid jaws, in combination with opposing movable jaws, and latches pivoted to the gage-bar and adapted to be swung into and out of engagement with the movable jaws, substantially 45 as described.

2. In a combined track gage and bridle, a gage-bar provided at opposite ends with rigid jaws in combination with opposing jaws sliding upon the gage-bar, and latches pivoted 50 to the gage-bar, substantially as and for the purpose described.

3. In a combined track gage and bridle a gage-bar provided at opposite ends with rigid jaws in combination with opposing sliding 55 jaws sleeved upon the gage-bar and latches pivoted to the gage-bar, substantially as and for the purpose described.

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Witnesses:

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