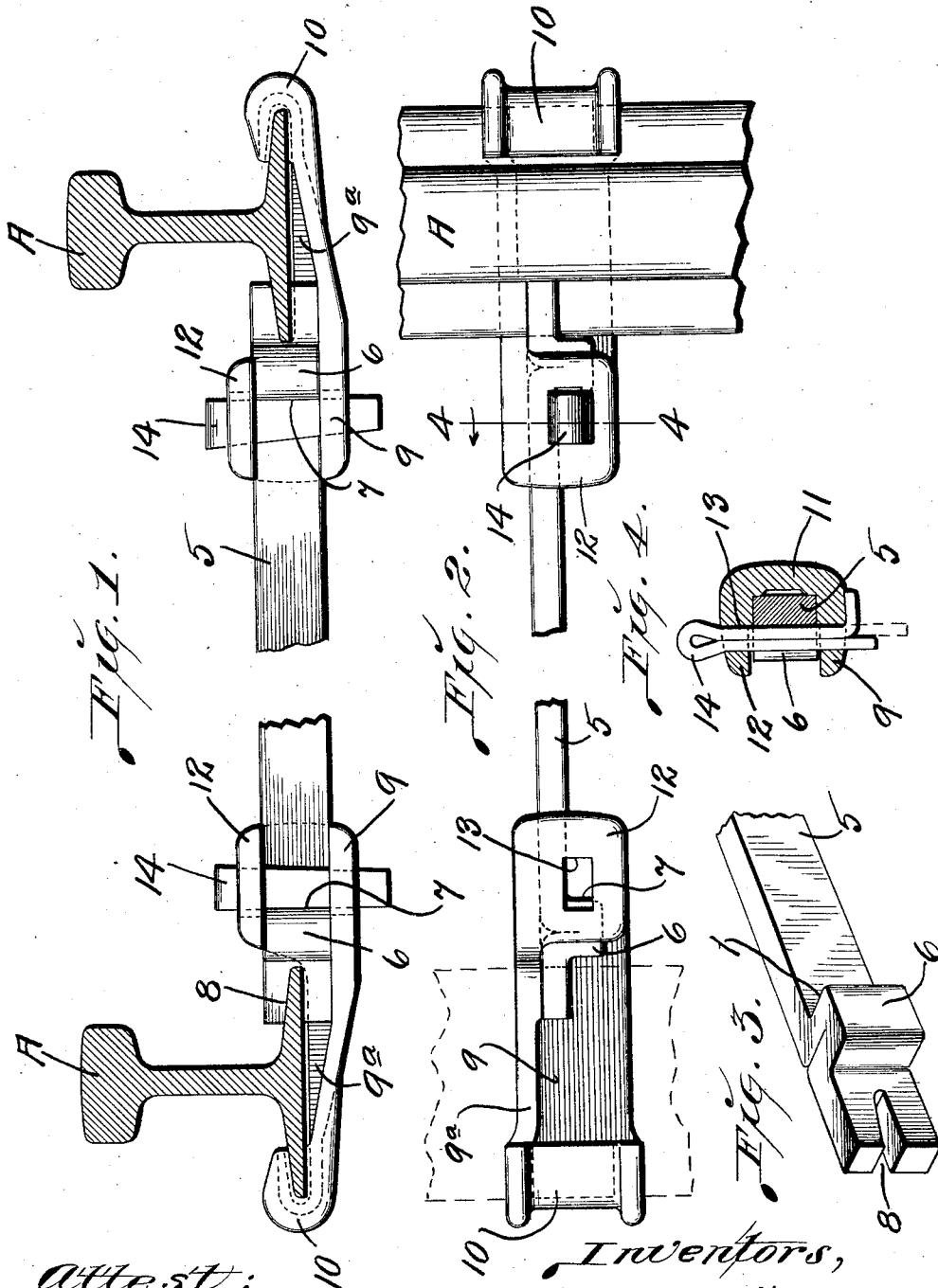


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RAILWAY RAIL GUARD AND GAGE.
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GUSTAV KOMAREK AND GEORGE R. SCHLEIER, OF ST. LOUIS, MISSOURI.

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To all whom it may concern:

Be it known that we, GUSTAV KOMAREK and GEORGE R. SCHLEIER, citizens of the United States, residing at St. Louis, Missouri, have invented a certain new and useful Improvement in Railway-Rail Guards and Gages, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a view showing a pair of railway rails in cross section, and also showing our improved rail gage and guard applied to said rails. Fig. 2 is a plan view of our improved rail gage and guard, and showing a portion of a rail in position at one end of said combined gage and guard. Fig. 3 is a perspective view of one end of the gage bar forming a part of our invention. Fig. 4 is a cross-sectional view taken approximately on the line 4—4 of Fig. 2.

Our invention relates to new and useful improvements in railway track construction, and more particularly to a gage and guard member adapted to be utilized between the railway track rails.

The principal object of our invention is to provide simple, inexpensive means, which, when applied to the rails, will accurately gage the same, and which means forms an effective tie or guard between the rails to prevent the same from spreading.

A further object of our invention is to construct a combined gage and guard which can be readily applied to track rails already in position upon and fixed to the ties, thus obviating the necessity of loosening the rails for the purpose of applying the gage and guard devices.

A further object of our invention is to construct a combined gage and guard which is composed of a minimum number of parts, and which can be readily combined with and connected to railway rails, and further to provide simple means for locking the gage member to the rail-engaging members, and which locking means, when placed in position, is instrumental in drawing the track rails into proper positions against the gage bar.

With the above objects in view our invention consists in certain novel features of

construction and arrangement of parts hereinafter more fully described and claimed.

Referring by numerals to the accompanying drawings, 5 designates the gage member which is preferably made of a commercially rolled bar of steel or wrought iron and rectangular in cross section, although it is obvious that bars of other cross-sectional area can be used. Formed on one of the side faces of this bar and at points adjacent to its ends are lugs 6 which are made by bending portions of said bar outwardly by means of a suitable tool, and the inner faces of these lugs form shoulders 7 adapted to be engaged by the keys that are utilized for uniting the gage bar and the rail-engaging members.

Formed in the ends of the gage bar 5 are horizontally disposed notches 8 adapted to receive the inner base flanges of the track rails A, and the distance between the inner ends of these notches 8 is such that when the inner flanges of the track rails are engaged in said notches, said rails are properly gaged or spaced apart; thus, by the use of our improved gage bar, it is possible to lay a railway track without the use of the ordinary measuring devices and gage bars.

The rail-engaging members utilized in connection with our improved gage bar, and which perform the function of guards to prevent the rails from spreading, are preferably cast in steel or malleable iron, and each guard member comprises a base plate 9 provided on its outer end with a hook 10 that engages over the outer base flange of the track rail.

Formed integral with one end of each plate 9 and on one side thereof is a vertically disposed web or wall 11, and formed integral with the upper portion of this web or wall and extending horizontally therefrom over the end portion of the base plate 9 is a plate 12. The space between the end portion of the base plate 9 and the plate 12 is of sufficient width to accommodate the end portion of the gage bar 5, and formed through the plate 12 and end portion of the plate 9 are alined apertures 13 that are adapted to receive a split key 14. This key is preferably made of a flat metal plate bent double with one of the legs longer than the other in order that it may be bent upwardly against the underside of the base plate, thereby locking the parts in their assembled

positions. The openings 13 are made of sufficient length to permit the guard members to move lengthwise with respect to the gage bar when the keys are driven through said openings and engage against the shoulder 7 on the lugs 6 of said gage bar, such action drawing the hooks 10 into close engagement with the outer base flanges of the rails, and in turn drawing the inner base flanges of said rails firmly into the notches in the ends of the gage bar.

The tops of the plates 9 are cut away slightly, as designated by 9^a, inside the hooks 10, and thus the base flanges of the rails are directly engaged by only the hook portions 10 on the outer ends of the guard castings, which arrangement permits the guard castings to automatically seat themselves upon the base flanges; regardless of any slight defects or roughness on the surfaces of said guard castings. This arrangement also permits the notched end of the gage bar to automatically adjust itself against the inner base flange of the rail without restraint from any part of the guard casting.

The outer ends of the gage bars fit snugly between the plates 9 and 12, and when the keys are driven through the apertures 13 and bear against the shoulders 7 on the rear sides of the lugs 6 the base castings are drawn inwardly toward the gage bar, thereby engaging the outer base flanges of the rails and forcing the inner base flanges into the notches 8.

As hereinbefore stated, the gage bar with its notched ends is made to proper length, and when the inner base flanges of the rails are properly seated in the notches 8, said rails will be properly spaced apart, and by means of the guard castings said rails will be locked in their proper positions.

By our improved construction any ordinary discrepancy or roughness of the castings forming the guard plates will not change the proper gage of the rails, for when the parts are properly assembled, the keys bearing upon the shoulders on the lugs 6 draw the guard castings inwardly, thereby drawing the rails to proper gage. When the parts are assembled the gage bar 5 is positioned between the rails with its notched ends engaging the inner base flanges of said rails, after which the hooks on the outer ends of the guard castings are engaged on the outer base flanges of the rails, and said guard castings are now moved lengthwise of the rails until the ends of the gage bar are positioned between the plates 9 and 12. The keys 14 are now driven in the place after which the long end of said key is bent upward, thereby locking the various parts in their adjusted and assembled positions.

A combined railway rail gage and guard of our improved construction is compara-

tively simple, comprises a minimum number of parts, firmly ties the track rails to each other and prevents their spreading and provides simple means whereby said track rails are readily gaged or spaced apart.

It will be readily understood that minor changes in the size, form and construction of the various parts of our improved device can be made and substituted for those herein shown and described without departing from the spirit of our invention, the scope of which is set forth in the appended claims.

We claim:

1. In a device of the class described, a gage bar provided in its ends with notches adapted to engage the inner base flanges of a pair of rails and which gage bar is provided adjacent to its ends with shoulders, guard members adapted to engage the base portions of the rails and the end portions of said gage bar, and wedges adapted to be inserted through openings in the guard members and bear against the shoulders on the gage bar for locking said guard members to the gage bar and to the rails.

2. In a device of the class described, a gage bar provided with vertically disposed shoulders and with horizontally disposed notches adapted to engage the inner base flanges of a pair of railway track rails, guard members adapted to engage the base flanges of the rails and the end portions of the gage bar, and wedges adapted to pass through openings in the guard members and engage the shoulders on the gage bar to cause the guard members to exert pressure on the rails and move the same into position against the ends of the gage bar.

3. The combination with a gage bar provided in its ends with notches adapted to receive the inner base flanges of a pair of railway track rails, which gage bar is provided with shoulders near said notches, of plates applied to the ends of said gage bar, parts of which plates embrace the ends of said gage bar, hooks on said plates adapted to engage the outer base flanges of the rails, and wedge keys adapted to pass through the plates and engage against the shoulders on the gage bar for locking the bar and plates to each other and to the rails.

4. The combination with a gage bar provided in its ends with notches adapted to receive the inner base flanges of a pair of railway track rails and provided with shoulders adjacent to said notches, of guard members each provided with a pair of plates adapted to engage the guard rail, hooks on said guard members adapted to engage the outer base flanges of the track rails, and wedge keys adapted to pass through openings formed in the plates of the guard members for locking the guard members to the gage bar and to the track rails.

5. In a device of the class described, a railway track rail gage bar provided in its ends with horizontally disposed seats adapted to receive the inner base flanges of a pair of track rails, vertically disposed shoulders on said gage bar adjacent to said seats, means detachably applied to the end of the gage bar for engaging the outer base flanges of the track rails, and means adapted to engage the shoulders on the gage bar for locking the rail-engaging means to the rails and drawing the inner flanges thereof into the seats in said gage bar.

6. The combination with a railway track rail gage bar having notches in its ends adapted to receive the inner base flanges of

track rails, rail-engaging members mounted for sliding movement of the end portions of the gage bar, and wedge keys adapted to engage parts of the rail-engaging means and the gage bar for moving the rail-engaging means upon the gage bar to clamp the base portions of the track rails and lock the rail-engaging means to the gage bar.

In testimony whereof we hereunto affix our signatures in the presence of two witnesses, this 15th day of July, 1912.

GUSTAV KOMAREK.

GEORGE R. SCHLEIER.

Witnesses:

M. P. SMITH,

M. A. HANDEL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."