T. HOWARD.

RAILROAD SPIKE.

APPLICATION FILED JAN. 22, 1914.

1,165,778. Patented Dec. 28, 1915.

Fig. 1.

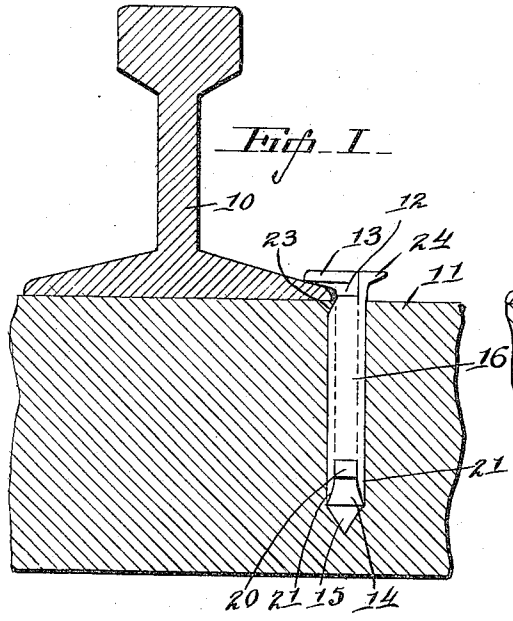


Fig. 2.

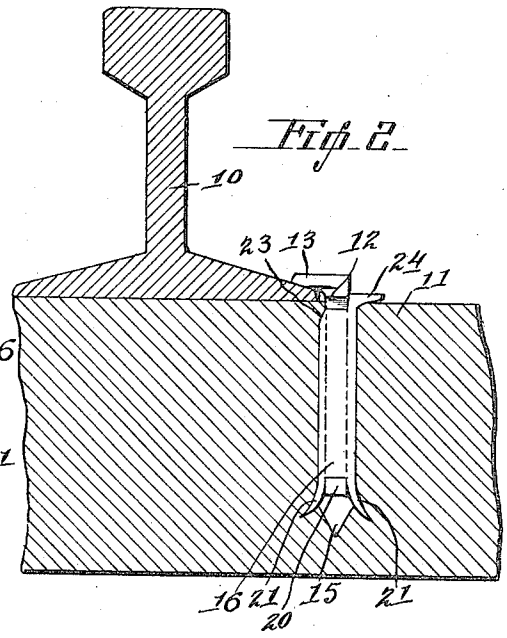


Fig. 3.

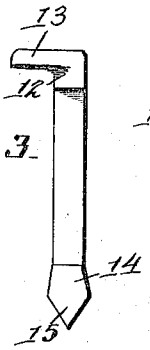


Fig. 4.

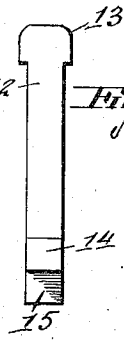


Fig. 5.

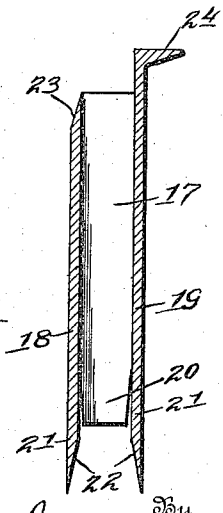
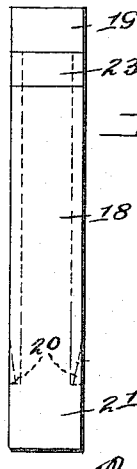


Fig. 6.



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RAILROAD-SPIKE.

1,165,778. Specification of Letters Patent. Patented Dec. 28, 1915.

Application filed January 22, 1914. Serial No. 813,722.

To all whom it may concern:

Be it known that I, THOMAS HOWARD, a citizen of the United States, residing at Jasonville, in the county of Greene and State of Indiana, have invented certain new and useful Improvements in Railroad-Spikes, of which the following is a specification.

This invention relates to an improved spike, and the principal object of the invention is to so construct the spike that after it has been driven into the tie, the locking sleeve mounted upon the body portion of the spike may be driven inwardly to cause the points at the inner end of the sleeve to be spread and thus prevent the spike from working loose.

Another object of the invention is to so construct the sleeve and body portion of the spike that when first driven into the tie, the sleeve and body portion of the spike will travel along and not cause the points of the sleeve to spread until the spike is in engagement with the rail base.

This invention is illustrated in the accompanying drawings wherein—

Figure 1 is a sectional view through a tie rail with the spike in place but not as yet locked; Fig. 2 is a view similar to Fig. 1 with the spike locked; Fig. 3 is a side elevation of the spike with the sleeve removed; Fig. 4 is a rear elevation of the spike; Fig. 5 is a sectional view through the sleeve; Fig. 6 is a front elevation of the sleeve.

The rail 10 after being placed upon the tie 11 is held in place by the spikes which are driven into the tie as shown in Fig. 1 and then locked as shown in Fig. 2. The spike 12 is provided with a head 13 which engages the rail base and with a spreading head 14 which terminates in a penetrating point 15. The spreading head has two of its faces extending in diverging relation to cause the prongs of the locking sleeve to spread and has its remaining faces extending flush with the side faces of the spike 12.

The sleeve 16 which is slidably mounted upon the spike 12 has its side walls 17 terminating short of the lower ends of the front and rear walls 18 and 19 and separate from the front and rear walls for a short distance so that the tongues 20 and 21 will be formed. The tongues 21 which form the locking spurs have their inner faces beveled as clearly shown in Fig. 5 so that these inner faces will fit flatly against the sloping shoulders of the spreading head 14 as clearly shown in Fig. 1. The upper edge portion of the front wall 18 is cut at an incline as shown at 23 to permit the spike to be driven into the tie very close to the rail base and also to permit the wood of the tie to close in around the upper edge portion of the sleeve after the sleeve has been driven to a locked position and assist in holding the spike in place. The rear wall 19 extends above the side walls 17 and is provided with a heel 24 which permits the sleeve to be easily driven into the locked position.

When this spike is in use, the spike is driven into the tie with the sleeve in the raised position until the spike has been driven into the tie a sufficient distance to bring the head 13 into engagement with the rail base. The heel 24 is now struck with the hammer and the sleeve will be driven downwardly thus causing the prongs 21 to be spread by the sloping shoulder of the head 14 until they assume the position shown in Fig. 2. The spike will now be securely locked since the spread prongs or spurs 21 will prevent any tendency of the spike to work loose. It will therefore be seen that a spike has been provided which is very cheap to manufacture and which is so constructed that it will be securely held in a tie.

What is claimed is:

1. A spike provided with a rail-engaging head at its upper end and with a spreading head at its lower end terminating in a penetrating point, a locking sleeve slidably mounted upon said spike between said spreading head and rail-engaging head and provided with spurs engaging said spreading head, and a heel extending above the upper edge of said sleeve and positioned substantially flush with the upper face of the rail engaging head of said spike when said sleeve is in an inoperative position.

2. A spike provided with a rail-engaging head at one end and with a spreading element adjacent its penetrating point, a locking element slidably connected with said spike and provided with prongs engaging said spreading element and with a driving heel, and shoulders extending from the spike to engage said sleeve and move the sleeve with the spike when the spike is being driven into place.

3. A spike provided with an engaging head at one end forming abutment shoulders and with spreading means adjacent its penetrating point, a sleeve slidably mounted

upon said spike and engaging the shoulders of said head when in a raised position, a heel extending from the upper end of said sleeve, and locking spurs extending from the lower end of said sleeve and engaging said spreading means.

4. A spike provided with a rail-engaging head at one end and with a guiding element adjacent its penetrating point, a sleeve slidably mounted upon said spike, locking spurs extending below said sleeve and engaging said guiding element, a driving heel connected with and extending above said sleeve, and means to prevent said heel from extending above the rail-engaging head of the spike.

In testimony whereof I affix my signature in presence of two witnesses.

THOMAS HOWARD.

Witnesses:

WILLIAM BAKER,

ROBERT P. INMAN.

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