No. 652,028. Patented June 19, 1900.

H. JOHNSON.

ANTIFRICTION GUIDE FOR SIGNAL RODS.

(Application filed Jan. 13, 1896.)

(No Model.)

Fig. 1.

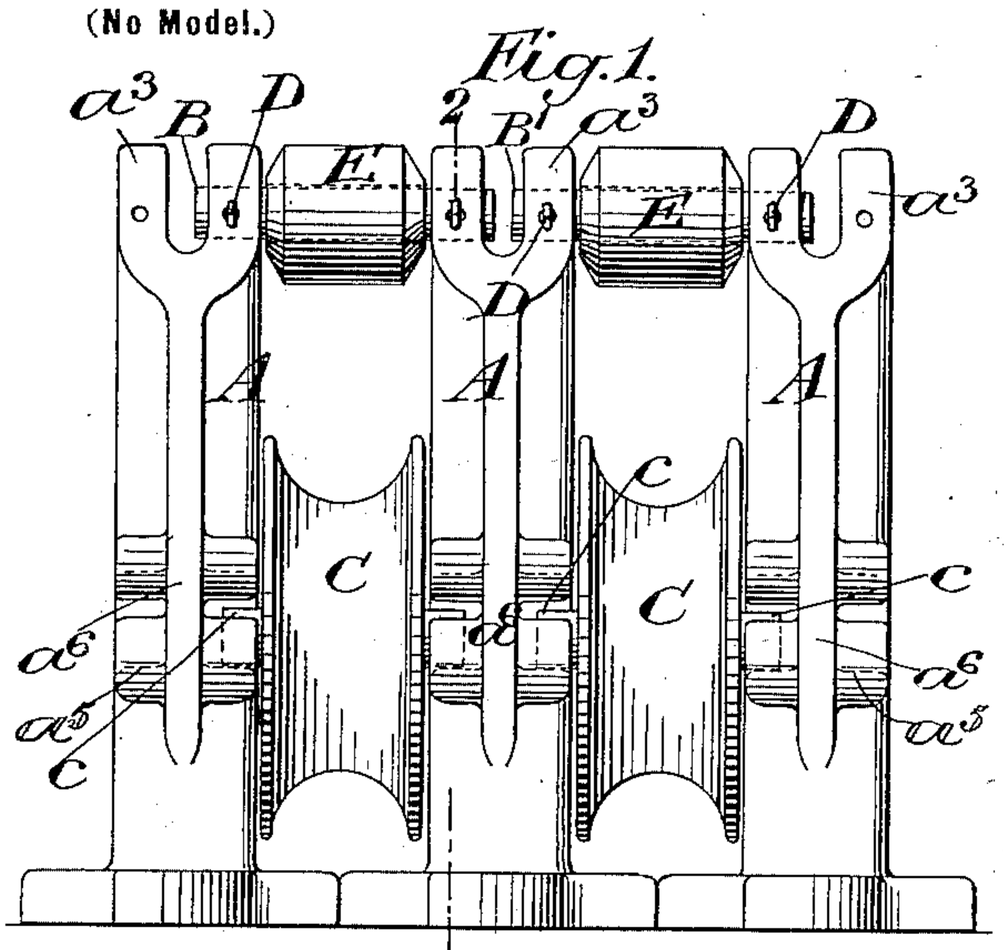


Fig. 2.

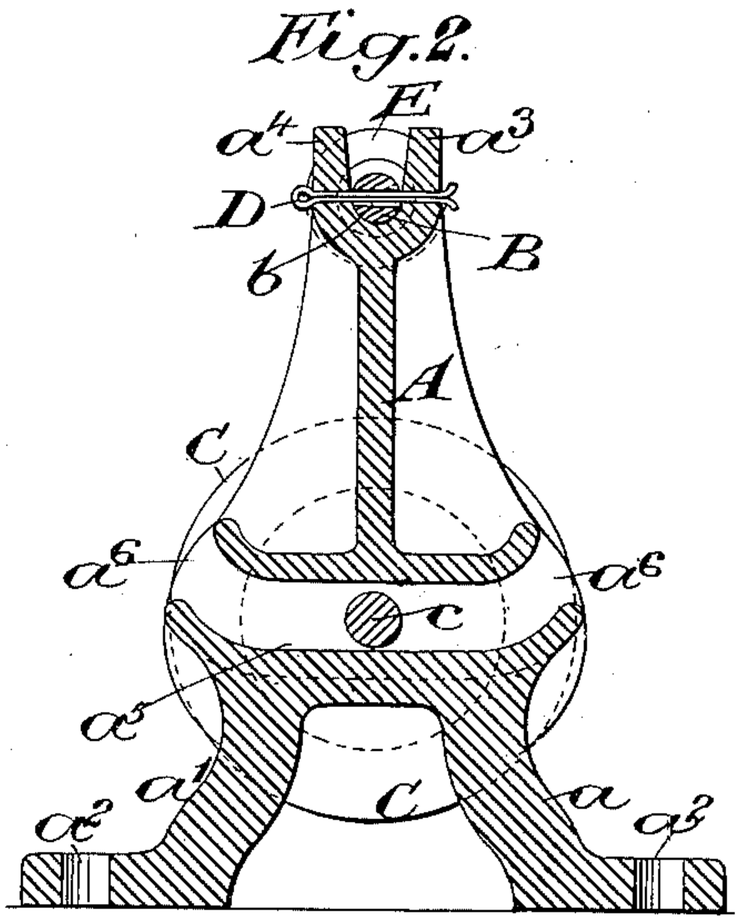


Fig. 3

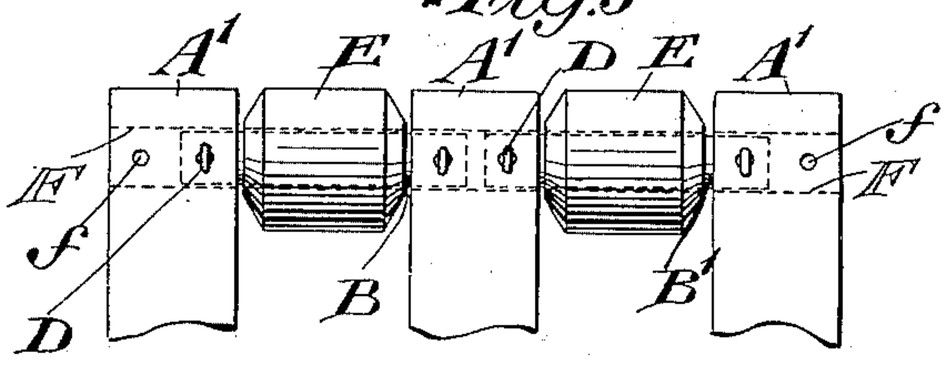


Fig. 4.

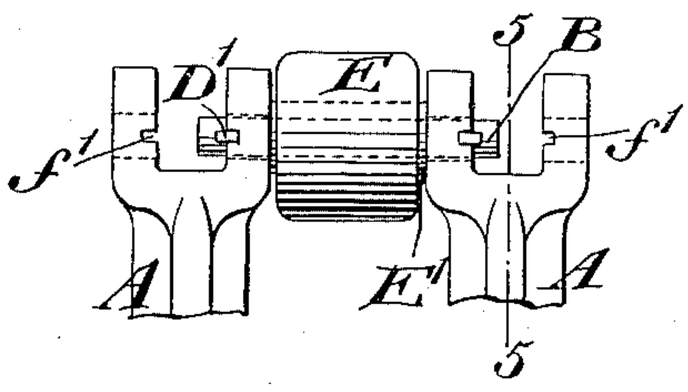


Fig. 5.

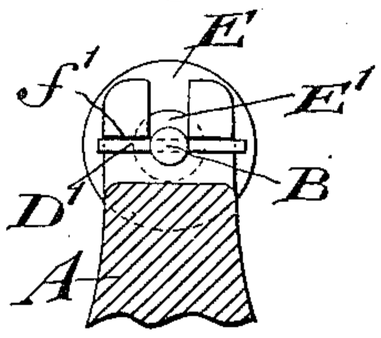


Fig. 6,

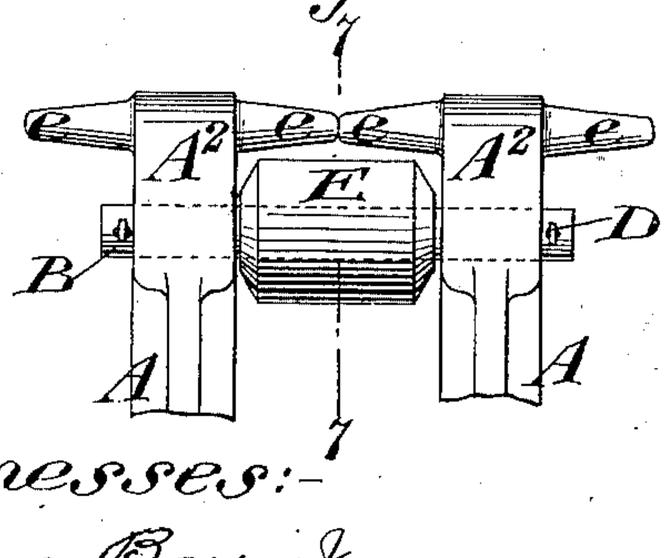
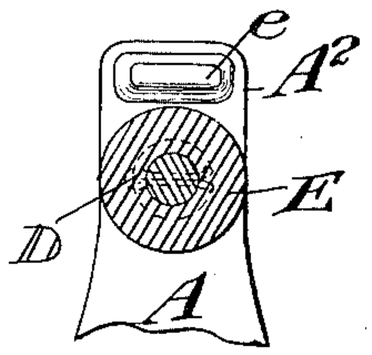


Fig. 7.



Witnesses:-

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UNITED STATES PATENT OFFICE.

HENRY JOHNSON, OF RAHWAY, NEW JERSEY.

ANTIFRICTION-GUIDE FOR SIGNAL-RODS.

SPECIFICATION forming part of Letters Patent No. 652,028, dated June 19, 1900.

Application filed January 13, 1896. Serial No. 575,228. (No model.)

To all whom it may concern:

Be it known that I, HENRY JOHNSON, of Rahway, in the county of Union and State of New Jersey, have invented a new and useful Improvement in Antifriction-Guides for Signal-Rods, of which the following is a specification.

My invention relates to an improvement in antifriction-guides for signal-rods in which provision is made for assembling the guides in groups of two or more at pleasure, spacing them a predetermined distance apart at the top, as well as the base, to hold them steady, providing for the removal of the top roller and its spindle to receive the rod without disturbing a companion roller, and removing or placing in position the supporting-roller without disturbing the supporting-standards.

In the accompanying drawings, Figure 1 represents in side elevation a group of three standards and their interposed supporting and guide rollers set up in the position which they occupy when in use. Fig. 2 is a transverse vertical section through line 2 2 of Fig. 1. Fig. 3 represents in side elevation a portion of the tops of three standards of modified form and the guide-rollers interposed between them. Fig. 4 is a partial side view showing the tops of two standards and the interposed guide-roller, introducing a modified form of spacing and locking means. Fig. 5 is a transverse section through line 5 5 of Fig. 4. Fig. 6 represents a partial side view showing the tops of two adjacent standards with a modified form of spacing means, and Fig. 7 is a transverse section through line 7 7 of Fig. 6.

Referring to Figs. 1 and 2, the standards are denoted by A and terminate at their lower ends in diverging legs $a\,a'$, provided with perforations a^2 for receiving any suitable fastening to hold the standard in position. At its top the standard terminates in two pair of upwardly-extending branches $a^3\,a^4$ for the reception of the guide-roller spindles B B′. The standard is further provided a suitable distance above its base with grooves a^5, extending horizontally across the standard upon each of its opposite sides and separated by a web a^6. The grooves a^5 have their opposite ends open for the reception of the trunnions or journals c of the supporting-rollers C, so that the latter may be inserted in position between two consecutive standards and removed therefrom at pleasure without disturbing the fixed positions of the standards. The spindles B B′, hereinbefore referred to, are made of such length as to extend from at or near the center of one of the standards A to or near the center of an adjacent standard A and are provided with perforations b therethrough for receiving pins or keys D, which are inserted through perforations in the branches $a^3\,a^4$, which register with the perforation b in the spindle when the keys are inserted in two consecutive standards. They serve, through the medium of the spindle extending between the two standards, to lock the tops of the standards firmly in position at a distance apart determined by the distance between the perforations b in the spindle. The spindles B B′ may be dropped into position between the branches $a^3\,a^4$ without disturbing the adjacent spindle, and before the spindle is so placed in position the guide-roller E, which is intended to rotate freely on the spindle, may be slipped onto the spindle so as to occupy a position between the tops of two adjacent standards when the spindle is locked to the standards. By means of this construction and arrangement of parts I am enabled to set up a group of two or more of the standards to accommodate as many of the signal-operating rods as may be desired, and any one of the rods may be at any time removed by simply removing the guide-roller and spindle for that particular rod without disturbing the guides or supporting-standards of any of the other rods. A further advantage is in the uniform structure of the several standards, which present no right or left to be looked after, the entire set of fittings being of such a nature that they may be prepared in quantities at the shop and set up by unskilled as well as skilled workmen along the track without danger of mistake.

In Fig. 3 the tops of the standards A′ are provided with transverse sockets F of sufficient length to receive within them the adjacent ends of two consecutive spindles B B′, and perforations f are formed transversely through the tops of the standards in position to register with the perforations in the ends

of the adjacent spindles to receive the keys D for locking the standards at the predetermined distance apart.

In the form shown in Figs. 4 and 5 the tops of the standards are quite similar to those shown in Figs. 1 and 2 in their general structure; but instead of perforations extending through the pairs of branches for receiving the keys I have provided recesses f' in the inner faces of the branches for the reception of keys D′, which may be made slightly wedge-shaped, as is common, and the guide-roller E is mounted upon a spacing-sleeve E′, interposed between the tops of the adjacent standards, against the ends of which the standards are drawn by means of the wedges D′ when inserted through the connecting-spindle B, on which the sleeve E′ is supported.

In the form shown in Figs. 6 and 7, the standards A^2 are provided at their tops with spacing-lugs *e*, extending in opposite directions therefrom, which when the standards are set up have their ends in contact to prevent the tops of the standards from approaching nearer to each other, the standards themselves being held from spreading apart by means of keys D, inserted through perforations in the spindle B on the outer sides of the two outer standards of the group. While I have shown two standards in the form represented in Fig. 6, it is obvious that more than two may be utilized and set up side by side, with a single spindle B extending through the group and keyed upon the outer sides of the two end standards of the group.

What I claim is—

1. In combination, supporting-standards having branches at their upper ends, a supporting-roller mounted between two of the standards, a guide-roller, a spindle adapted to enter between the branches at the top of two adjacent standards and forming a support for the guide-roller, and means for locking the spindle to the branches against a rotary movement and in removable adjustment, substantially as set forth.

2. In combination, independent standards provided with horizontal grooves open on their adjacent faces for the reception of supporting-rollers, said grooves being open at the end and provided with a continuous upper and lower guide-wall intermediate of their ends, a supporting-roller provided with journals adapted to enter the said grooves in the faces of the standards without disturbing the standards, a guide-roller, a spindle for supporting the guide-roller between the standards and means for removably securing the spindle to the standards, substantially as set forth.

HENRY JOHNSON.

Witnesses:
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