March 29, 1932. A. MAYER 1,851,678

LOCKING DEVICE

Filed July 29, 1929

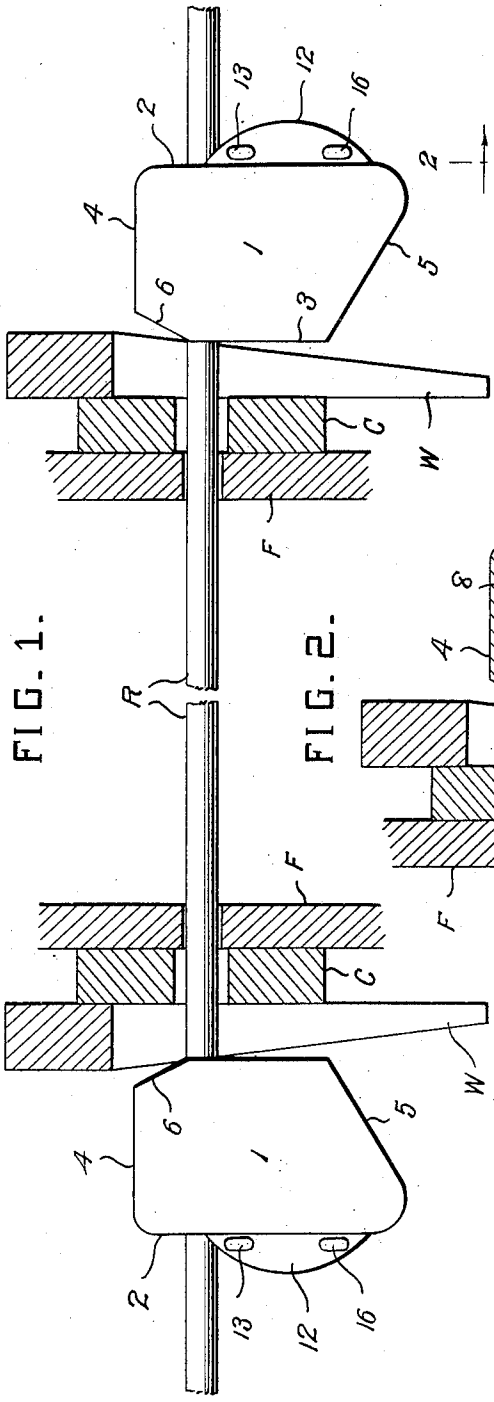

FIG. 1.

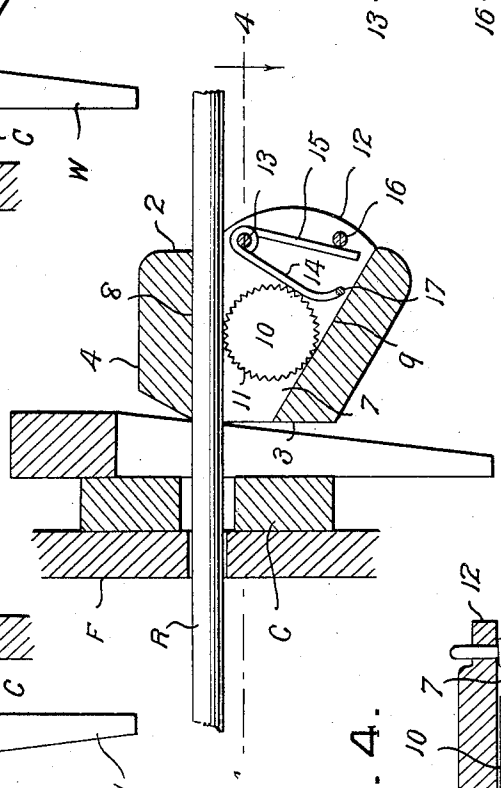

FIG. 2.

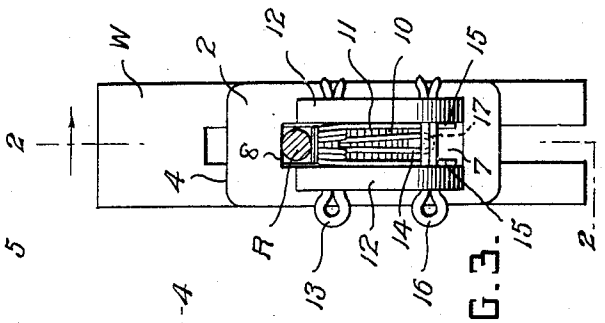

FIG. 3.

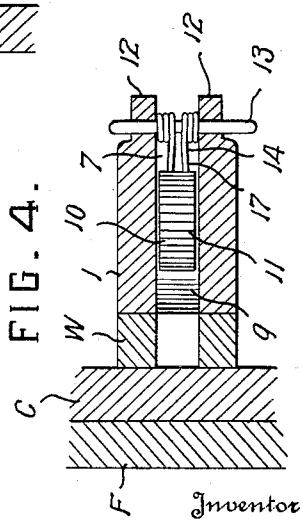

FIG. 4.

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UNITED STATES PATENT OFFICE

AUGUSTINE MAYER, OF BROOKLYN, NEW YORK

LOCKING DEVICE

Application filed July 29, 1929. Serial No. 382,012.

My invention consists in a new and useful improvement in locking devices and is designed to provide a device for locking wire, rods, or bolts in adjusted position, and is intended more particularly for use upon tie rods used on concrete forms. My device is attached on the tie rod to lock it in the desired position to tie the forms, and it can be easily and quickly removed after serving its purpose, and can be used repeatedly, as it is not damaged by its application or its removal from the rod. The particularly novel and useful feature of my device is the fact that it can be easily adjusted in locking position on the rod and can easily be removed therefrom. I have produced a novel form for my device to facilitate its use, the various novel parts being so designed and disposed as to increase the efficiency and durability of the device.

While I have illustrated in the drawings filed herewith and have hereinafter fully described one specific embodiment of my invention, it is to be distinctly understood that I do not consider my invention limited to said embodiment, but refer for its scope to the claims appended hereto.

In the drawings:

Fig. 1 is a side elevation showing a pair of my devices applied to a tie rod.

Fig. 2 is a vertical section on the line 2—2 of Fig. 3.

Fig. 3 is an end elevation.

Fig. 4 is a horizontal section on the line 4—4 of Fig. 2.

As illustrated in the drawings, my device comprises a body 1 which consists of a single casting, having parallel end walls 2 and 3 and a top wall 4 at right angles to the walls 2 and 3. The bottom wall 5 of the body 1 is inclined upwardly from the wall 2 toward the wall 3. The body 1 has an oblique face 6 between the top wall 4 and the end wall 3, the purpose of which will presently be explained The body 1 has a transverse passage 7, the upper wall 8 of which is parallel with the top wall 4, the lower wall 9 of which is parallel with the inclined bottom wall 5. Positioned in this passage 7 there is a locking roller 10 having peripheral teeth 11 and of a diameter sufficiently large as to prevent its discharge from the passage 7 at its end adjacent wall 3. Suitably disposed in ears 12 positioned on the wall 2 on either side of the passage 7 there is a cotter pin 13 on which is mounted a spring 14 having its ends 15 bearing against a second pin 16 in the ears 12 and its loop 17 bearing against the roller 10 tending to urge said roller 10 upwardly along the wall 9 of the passage 7.

As illustrated in the drawings, I apply one of my locking devices to each end of a rod R which passes through the forms F and collars C. I insert a forked wedge W between the collar C and locking device, the oblique face 6 facilitating this insertion. It is obvious from Fig. 2 that the locking device can be moved along the rod R toward the form F, the spring 14 yielding to permit the roller 10 to move downwardly and outwardly to accommodate the rod R through the passage 7 and against the wall 8. When the locking device is flush with the collar C, the wedge W is driven downwardly, the rod R being received in the crotch of the wedge W. It is obvious that the action of the spring 14 forcing the roller 10 between the wall 9 and the underside of the rod R prevents movement of the locking device relative to the rod R in the direction away from the form F. Thus the wedge W tends to force the locking device and with it the rod R away from the form F, and thus cause the rod R to tie the forms F as desired.

While I use two of my locking devices, the use of two wedges is optional, as the effect can be obtained by the use of a single wedge.

When the forms are to be removed, the wedges W are driven out, the rod R is cut between the collars C and the locking devices, and the loose ends of the rod R can be drawn out from the locking devices.

Having described my invention, what I claim is:

1. In a device for locking rods, the combination of a casing having a transverse tapering slot; a pair of ears extending from two walls of said casing and disposed one on each side of said slot; two pins received

through said ears; a spring coiled upon one of said pins, and one of its ends bearing against the other pin; and a roller so disposed in said slotted casing as to be urged by the other end of said spring toward the diminishing end of said slot.

2. In a device for locking rods, the combination of a casing having a slot; a pin so mounted on said casing as to be disposed across the mouth of said slot; a spring mounted on said pin; and a gripping member so disposed in said slot as to be pressed by said spring.

In testimony whereof I affix my signature.

AUGUSTINE MAYER.