A. E. ROXBERG.

HUB FASTENER.

APPLICATION FILED SEPT. 17, 1909.

970,646. Patented Sept. 20, 1910.

Fig. 1.

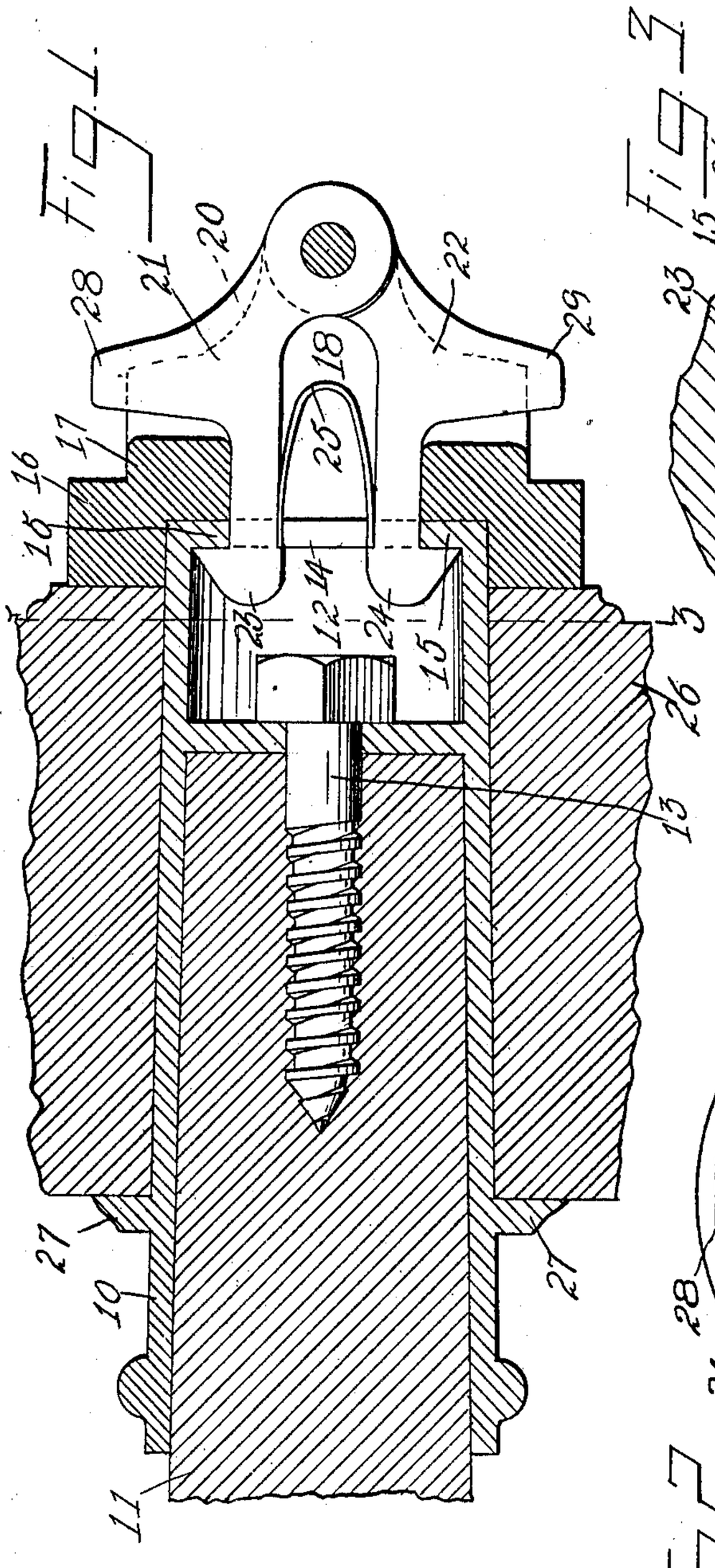


Fig. 2.

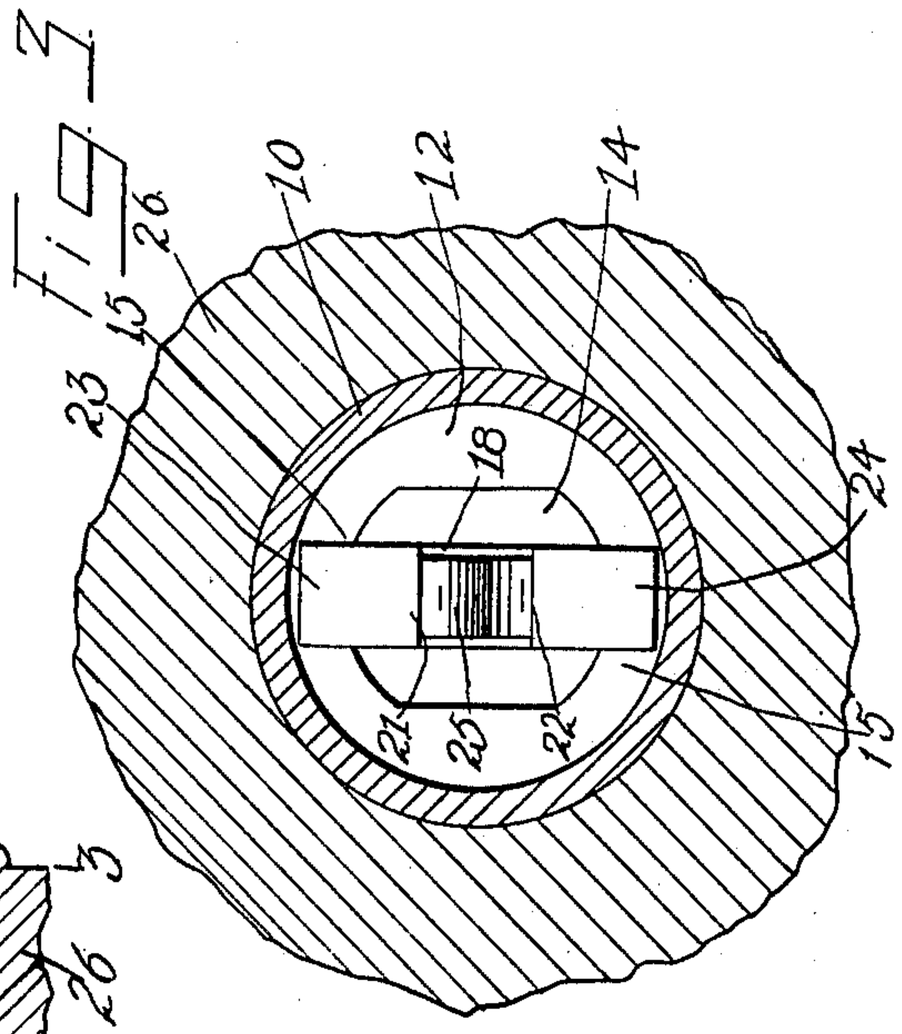
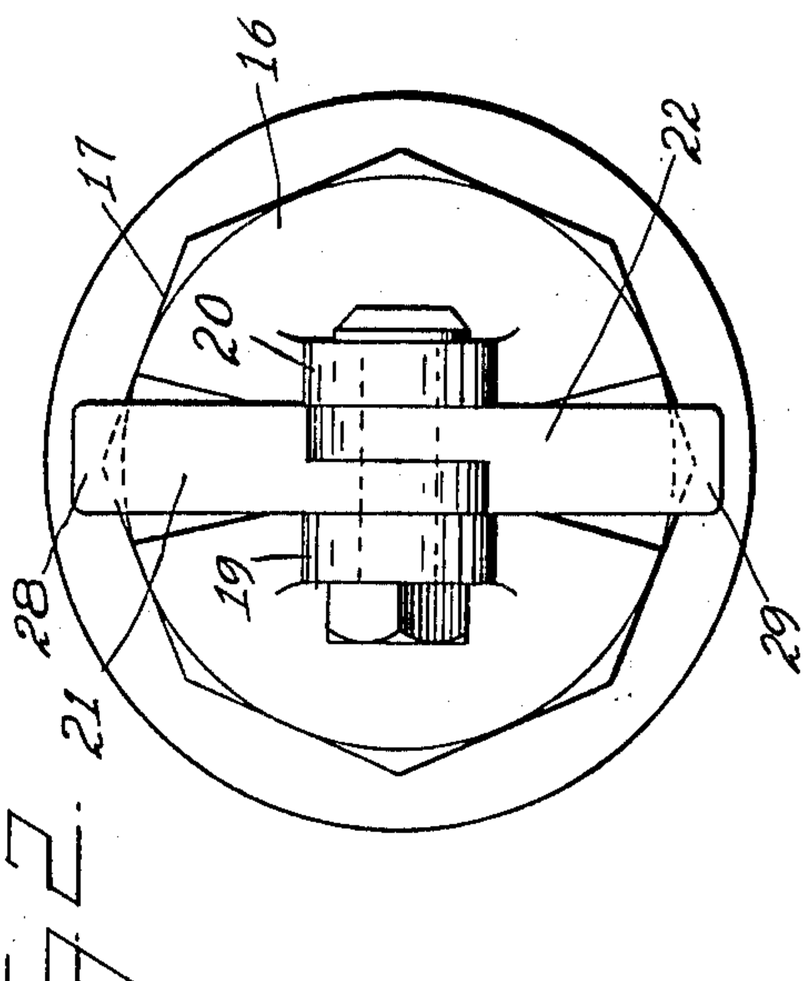


Fig. 3.



Witnesses

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HUB-FASTENER.

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Application filed September 17, 1909. Serial No. 518,262.

To all whom it may concern:

Be it known that I, ARIVED E. ROXBERG, a citizen of the United States, residing at Brainerd, in the county of Crow Wing, State of Minnesota, have invented certain new and useful Improvements in Hub-Fasteners; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to devices employed for securing hubs upon axle journals, and has for one of its objects to simplify and improve the construction and increase the efficiency and utility of devices of this character.

Another object of the invention is to provide a fastening means wherein the use of threaded spindles and nuts are obviated and the fastening means automatically applied, and removable by the fingers of the operator, and without the necessity for employing wrenches or other like implements.

With these and other objects in view, the invention consists in an axle journal having a cavity in its outer end provided with a reduced communicating aperture, a cap engaging over the outer end of the journal, and spring actuated catch devices swinging from the cap and operating through the aperture to lock the cap to the journal and provided with projections to produce finger grips for the operator.

The invention further consists in certain novel features of construction as hereafter shown and described and then specifically pointed out in the claim, and in the drawings illustrative of the preferred embodiment of the invention.

Figure 1 is a longitudinal section of the improved device. Fig. 2 is an end elevation. Fig. 3 is a section on the line 3—3 of Fig. 1.

The improved device may be applied to any of the various forms of axle journals in use, but is more particularly applicable to the journals of the larger class of vehicles, such as farm and freight wagons and the like, and for the purpose of illustration the improved device is shown applied to an axle journal of this class in which 10 represents the skein or shell fitting over the outer end of a wooden axle 11 of the ordinary construction. The outer end of the skein 10 is provided with a cavity or recess 12, and the skein is secured to the wooden axle 11 by a lag screw 13. The recess 12 is formed with a reduced aperture 14 providing communication through the outer end of the skein and whereby overhanging portions 15 are formed, as shown.

Fitting over the outer end of the skein is a cap 16 preferably with a wrench surface 17. The cap 16 is provided with a central aperture 18 preferably registering with the aperture 14 of the skein and provided with spaced ears 19—20 and extending outwardly from the cap at the sides of the aperture 18.

Swinging between the ears 19—20 are two catch members 21—22, the catch members adapted to pass through the aperture 14 and into the recess 12 of the journal when the cap member is positioned upon the journal, the terminals of the catch members having lateral projections 23—24 engaging in the rear of the overhanging portions 15, as shown. The outer faces of the projections 23—24 are oppositely inclined, as shown, so that when the cap is located over the journal the catch members will automatically enter the aperture 14 and extend in the rear of the overhanging portions 15, the catch members being provided with a spring 25 to maintain them yieldably in their extended position.

A portion of the hub is represented at 26, and the inner face of the cap 16 is designed to bear against the outer face of the hub, while the inner face of the hub bears against the usual collar 27 of the skein. At their outer ends the catch members 21—22 are extended laterally as shown at 28—29, and extend beyond the wrench engaging portion 17 of the cap, and form effectual finger grips to enable the operator to easily compress the catch members and thus release the projections 23—24 from the overhanging portion 15. By this means the device may be readily detached from the hub without the use of a wrench or implement other than the fingers of the operator, while at the same time the spring 28 effectually retains the cap in locked position relative to the skein. It will be noted that the outer portions of the ears 19—20 are rounded to correspond to the outer portions of the arms 21—22, so that the outer portions of the arms and the outer portions of the ears correspond hence no object with which the ends of the ears and the outer ends of the arms engage will produce any movement of the arms. It will also be noted that the

lugs 28—29 of the arms 21—22 are located almost entirely between the ears 19—20 and are protected thereby, and are located wholly within the interior of the hub band, not shown. By this means no object with which the hub would be liable to come in contact when in use will cause the release of the arms. This is an important feature of the invention and adds materially to its efficiency and utility. By this simple means it will be obvious that the hub is firmly secured in position upon the journal by simply depressing the cap over the end of the journal with the catch members passing into the recess 12 and their barbed inner ends engaging in the rear of the overhanging portions 15, as described.

When the device is to be detached, the catch members 21—22 are released by the pressure of the fingers of the operator upon the projections 28—29 as above described. To replace the device it is only necessary to force it inwardly over the outer end of the sleeve, the inclined faces of the projections engaging with the edges of the opening and thereby being automatically compressed and caused to again engage in the rear of the overhanging portions.

The improved device is simple in construction, can be inexpensively manufactured, and applicable to axle journals of various sizes, and to axle journals employed upon vehicles of various constructions.

What is claimed is:—

The combination with an axle journal having a hollow outer portion and an inwardly directed flange at the outer terminal of the hollow portion, a cap fitting over the hollow terminal of the journal and adapted to bear against the hub which is located upon the journal, said cap having a central aperture communicating with the interior of the journal and provided with spaced ears extending in advance thereof, a pin extending through said ears, two arms swinging upon said pin and extending through the aperture of the cap and into the hollow of the journal and having laterally directed terminals engaging behind said flange, lugs projecting laterally from said arms and between said ears and between the pin and the cap and extending beyond the ears, whereby means are provided for releasing the arms and protecting the lugs.

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

ARIVED E. ROXBERG.

Witnesses:
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A. T. LARSON.