(No Model.)

J. SHEPHEARD.

PROTECTOR FOR WHEEL SPINDLES.

No. 531,655. Patented Jan. 1, 1895.

Fig. 1.

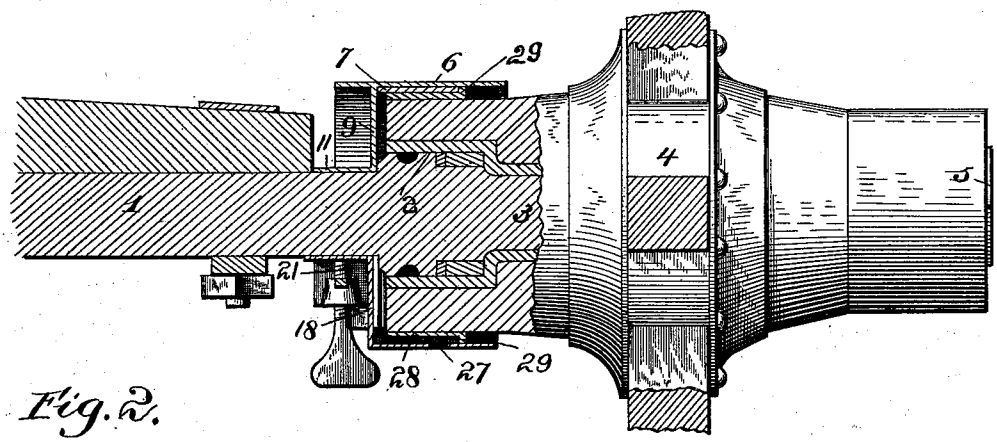


Fig. 2.

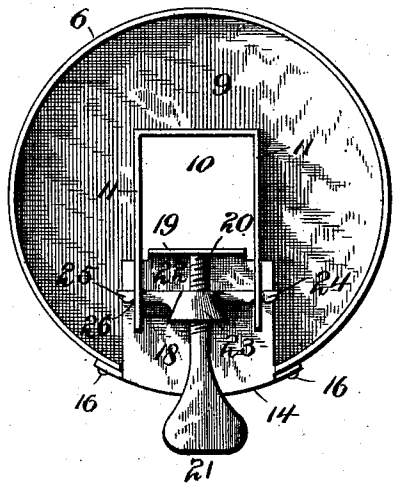
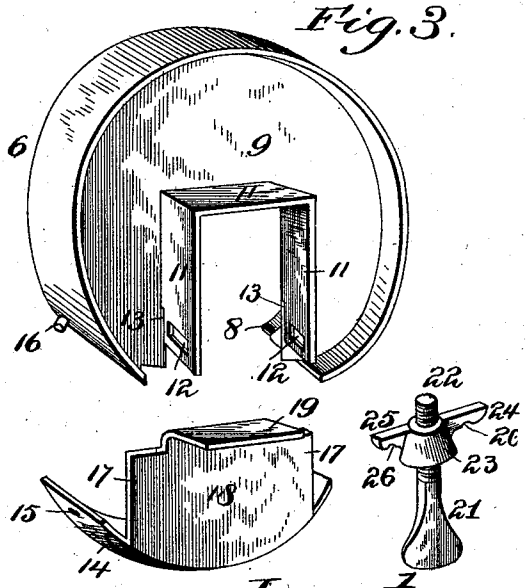


Fig. 3.



Witnesses:

J. B. McGirr.

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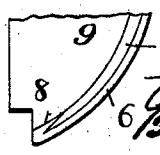
Fig. 4.



Inventor.

James Shepheard

By his Attorneys,

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UNITED STATES PATENT OFFICE.

JAMES SHEPHEARD, OF RAVENNA, OHIO, ASSIGNOR OF ONE-HALF TO J. A. NOONEY, OF SAME PLACE.

PROTECTOR FOR WHEEL-SPINDLES.

SPECIFICATION forming part of Letters Patent No. 531,655, dated January 1, 1895.

Application filed October 3, 1894. Serial No. 524,785. (No model.)

To all whom it may concern:

Be it known that I, JAMES SHEPHEARD, a citizen of the United States, residing at Ravenna, in the county of Portage and State of Ohio, have invented certain new and useful Improvements in Protectors for Spindles, Shafting, &c.; 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.

My invention relates to dust bands or protectors for vehicle spindles, shafting for machinery, locomotives, car wheels, &c., the object being to provide an effective and durable device of this character which may be readily applied to, or removed from, the axle, or shafting and supplied to the trade at a reasonable cost.

The invention consists in the novel features of construction, and combinations of devices hereinafter fully described, and specifically defined in the appended claims.

In the accompanying drawings, Figure 1,— is a central vertical section through one end of an axle and wheel-hub, with my improvement applied thereto. Fig. 2,— is a view in perspective of the improved protector removed from the axle. Fig. 3,— illustrates parts in detail, and Fig. 4 is a detail view showing part of the upper band section, and illustrating the means for securing the ends of the washer within the protector.

The numeral 1, indicates one end of an axle provided with an annular shoulder 2, and the usual spindle 3.

4 indicates the hub, the inner end of which rests against the outer side of the shoulder 2, and 5 indicates the usual burr or nut for securing the wheel upon the axle.

The protector consists of a two-part ring or casing. The main portion 6 of the casing is of circular form to surround the inner end of the hub, and is provided interiorly with a washer 7, of rubber, leather, or equivalent material. This washer is held in place by flanges 8, arranged at the ends of the casing 6, and bent inwardly to serve as keepers for the ends of the washer. The casing 6, is provided adjacent to its inner end, with a vertical cover or partition 9, cut away, or recessed at the point 10, to fit over the axle, and provided with a flange 11, corresponding to the recess 10.

The lower ends of the flanges 11, are formed with elongated slots 12, to serve as bearings for a locking device, as will be further explained. The flange 11, is also formed with vertical slots 13, for the purpose hereinafter described.

The lower section of the protector casing consists of a segmental band 14, formed with openings 15, at its outer ends adapted to take over lugs 16, projecting from the main section 6. The section 14 is also provided with a right angular flange 17, the vertical portion 18 of which fits between the ends of the section 6, and rests in the slots 13 of the flange 11, while the horizontal portion 19 of said right angular flange rests between the ends of the flange 11, and is provided with a depression 20, to receive the impact of the thumb screw 21, of the coupling clamp 22. This clamp device consists of an interiorly threaded body or nut 23, provided on opposite sides with laterally projecting arms 24 and 25; the ends of which project through the elongated slots 12 of the flange 11.

The arm 24 is slightly longer than the arm 25, to facilitate the adjustment and removal of the clamp; and each of said arms is notched on its under side 26 as shown, to engage the walls of the slots 12.

From the construction thus described, it will be apparent that the two-part casing or band, entirely surrounds the axle and hub, and thus effectually protects the spindle from dust, sand, water, &c.

The washer 7, within the protector contacts with an annular band 28 formed with a right angular annular flange 29 on the hub. By screwing the clamping screw 21 tightly against the horizontal end 19, of the flange 17, the parts are firmly held together; and as is obvious, the entire protector may be readily removed from the axle by loosening said screw 21, and then removing the spanning clamp 23.

I preferably provide the segmental section 14, with an opening 27, to permit the escape of any water that may enter between the protector and hub.

The flanged hub band 28 may be made in

different sizes to fit hubs of varying size—and supplied as a part of the protector, or said bands may be applied permanently to the hubs as shown.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a vehicle hub and axle, of a spindle protector consisting of a band or casing formed of two separable sections, one of which is provided with a yielding interior washer, fitting the inner band of the hub, while the other section removably engages the ends of the first section, and is provided with a clamping device, substantially as described.

2. The combination with the main section of the casing, having a recessed vertical partition and a flange adapted to fit over the axle or shafting, of a segmental lower section provided with a right angular flange, and a clamping device consisting of an interiorly threaded coupling, and a thumb screw, substantially as described.

3. The combination with the main section of the circular casing provided with an interior washer, and with a flanged partition or cover, the flange of said cover having elongated slots at its ends, of the segmental lower band section engaging the ends of the main section and provided with a right angular flange, and a clamping device, the ends of which have bearing in the elongated slots of the flanges of the main band section, substantially as described.

4. The combination with the protector, consisting of two separable sections, of a washer arranged within the main or upper section and secured by integral over-bent lugs or keepers of said main section, substantially as described.

5. The combination with the protector, consisting of two separable sections, of a washer arranged within the main or upper section, and a flanged band 28 arranged on the abutting portion of the protector device, and contacting with said washer, substantially as described.

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

JAMES SHEPHEARD.

Witnesses:
M. STUART,
E. W. MAXSON.