

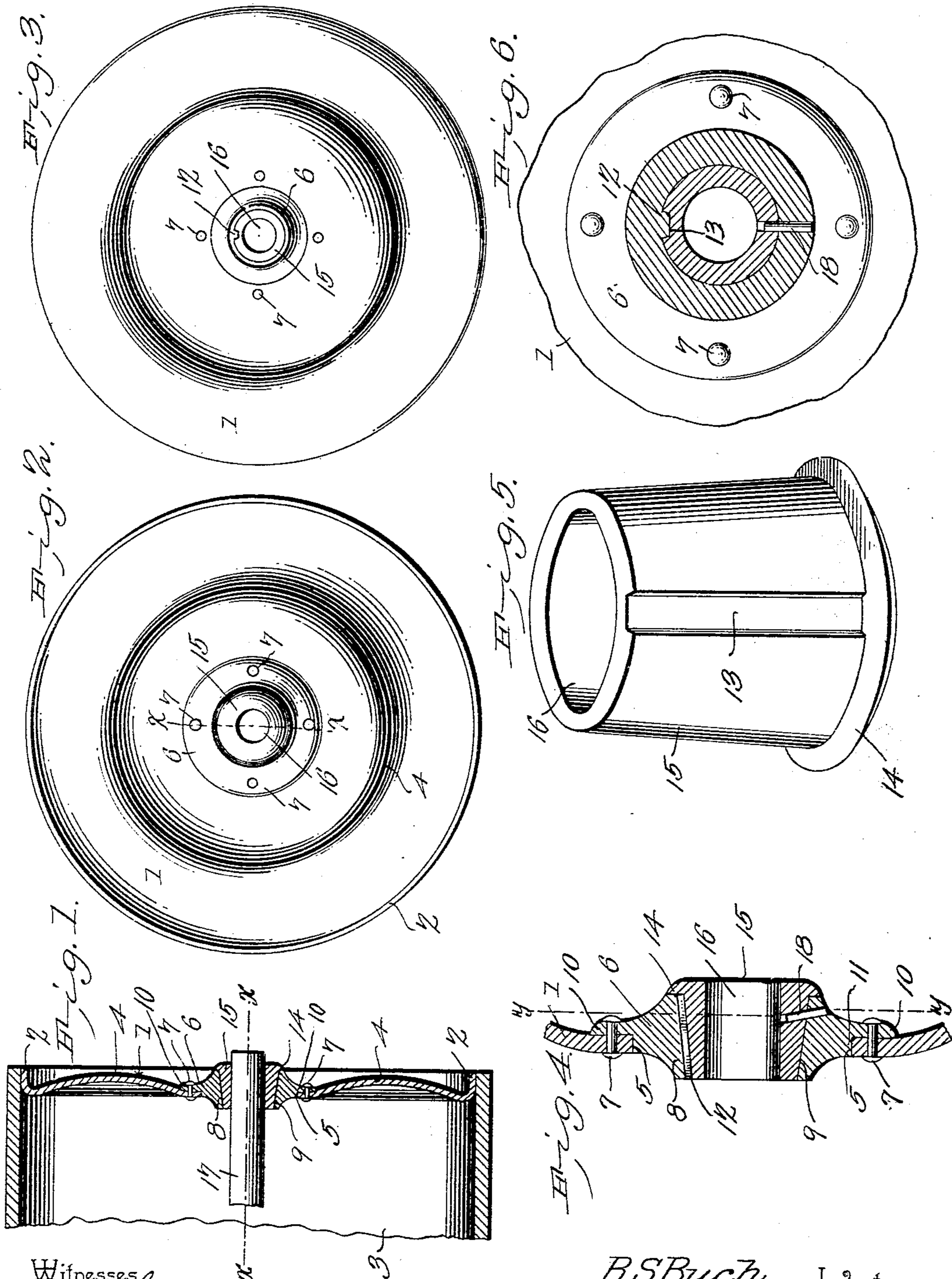
No. 713,598.

Patented Nov. 18, 1902.

R. S. BUCH.
LAND ROLLER.

(Application filed Aug. 29, 1902.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

ROYER S. BUCH, OF ELIZABETHTOWN, PENNSYLVANIA.

LAND-ROLLER.

SPECIFICATION forming part of Letters Patent No. 713,598, dated November 18, 1902.

Application filed August 29, 1902. Serial No. 121,516. (No model.)

To all whom it may concern:

Be it known that I, ROYER S. BUCH, a citizen of the United States, residing at Elizabethtown, in the county of Lancaster and State of Pennsylvania, have invented a new and useful Land-Roller, of which the following is a specification.

This invention relates to land-rollers; and it consists in certain improvements in the same, which will be hereinafter fully described, and particularly pointed out in the claims.

Open-ended land-rollers as they are oftentimes constructed are objectionable on account of the liability of stones and obstructive matter gathering within the same to be eventually thrown out to the discomfort and oftentimes the danger of the operator. The obvious remedy has been to construct the rollers with closed ends or heads, and many varieties of such are now in use, as is well known. One difficulty with rollers having closed ends or heads has been the liability of the bearings to wear out, such bearings having oftentimes been formed integrally with the head, in which event it has been necessary to detach the entire heads for repairs. Separate bearings have been provided; but these have either been riveted to the head, in which event it has been necessary to detach the heads for the renewal of the bearings, or when bolted into position there has been a constant tendency to work loose, thus frequently causing breakage and serious injury. Finally, it has been attempted to provide removable bushings, but heretofore with no great measure of success. Usually, by the way, such ends or heads have been constructed of cast-iron, which for several reasons have been objectionable.

Now my invention has for its object to provide a head for land-rollers constructed of sheet-steel by stamping, whereby not only a very durable, but a very inexpensive article is provided. The said stamped steel head or disk is provided with a central boxing, permanently riveted thereto, and with a bushing detachably mounted in said boxing in such a manner that it may at any time be easily and conveniently removed from the boxing, the said bushing constituting the

axle-box, which revolves upon the spindle or shaft provided for the purpose.

In the accompanying drawings, Figure 1 is a vertical sectional view showing one end of a land-roller equipped with my improved head. Fig. 2 is an elevation showing the outer side of my improved device. Fig. 3 is a similar view showing the inner side of the same. Fig. 4 is a sectional view, on a larger scale, taken on the line *xx* in Fig. 2. Fig. 5 is a perspective view showing the bushing detached. Fig. 6 is a detail sectional view taken on the line *yy* in Fig. 4.

Corresponding parts in the several figures are indicated by like numerals of reference.

1 designates the stamped steel disk, which constitutes the body of the device and which is provided at its rim or edge with an outwardly-extending flange 2 to engage the end of the cylindrical drum 3 of the roller, which may be constructed in any suitable manner and which may be connected by bolting, riveting, or in any other suitable manner with the said flange 2. The disk 1 may be formed with an annular swell 4 for the purpose of increasing the strength thereof, and it has a central opening 5 of suitable dimensions.

6 designates the cast-iron bearing, which is secured permanently by means of rivets 7 to the disk 1. The said bearing is composed of a collar 8, having a coniform central opening or perforation 9 tapering from the outside in an inward direction. The said collar is also provided with a flange 10, having perforations to receive the rivets, by means of which the bearing is secured to the disk. The said flange is also provided with an offset or shoulder 11 of a width equal to the thickness of the steel disk, which rests upon the said shoulder, as will be clearly seen in the drawings. The tapering conical opening 9 is provided with a rib or fin 12, extending between its ends, as shown.

15 designates a bushing having a central perforation 16, which forms the bearing for the shaft or spindle 17 of the roller. The exterior of the bushing 15 is tapered to fit the coniform opening 9, and it has a longitudinal groove 13 to engage the rib or fin 12. The outer end of the bushing 15 has an annular flange 14, which abuts against the outer end

of the sleeve or collar 8. The rib 12, engaging the groove 13, prevents the bushing 15 from revolving within the sleeve or collar 8, and a pin 18, extending transversely through the two members, holds them against longitudinal movement with relation to each other.

The operation and advantages of my invention will be readily understood. By simply removing the pin 18 the bushing 15, which acts in the nature of an axle-box, may be readily withdrawn and a new one substituted. The flange 14 acts as a dust-guard, and the general construction of the device has the merit of extreme simplicity, durability, and general utility.

It will be especially observed that my invention is described as being applied to and used in connection with a stamped steel disk. This fact necessitates the special construction of the device which has been herein described, and it will be found that the bearing, with its related parts, will be possessed of a great degree of practical utility in the exact relation in which they are used.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. A head for land-rollers comprising a stamped steel disk having at its edge an outwardly-extending annular flange for attachment to the drum of the land-roller, and provided with a centrally-disposed cast-iron bearing having a detachable bushing.

2. A head for land-rollers comprising a stamped steel disk having a central opening, a cast-iron sleeve having a flange riveted to the body of the disk and provided with a shoulder forming a seat for the body of said disk, said collar being provided with a tapering bore, and an exteriorly-tapered bushing seated detachably in said bore.

3. A head for land-rollers comprising a stamped steel disk having a central opening, a sleeve extending through said opening and connected permanently with the disk, said sleeve having a tapered opening provided with a rib, a tapered bushing mounted detachably in said opening and having a groove engaging said rib, and an annular flange at the outer end of said bushing.

4. A head for land-rollers comprising a stamped steel disk, a cast-iron sleeve extending through a central opening in, and permanently connected with, said disk, a bushing engaging said sleeve, and means for securing said bushing against longitudinal and rotary movement with relation to said shield, said means being of a nature to permit the sleeve to be readily detached.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ROYER S. BUCH.

Witnesses:

WM. H. BARNES,
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