

No. 752,620.

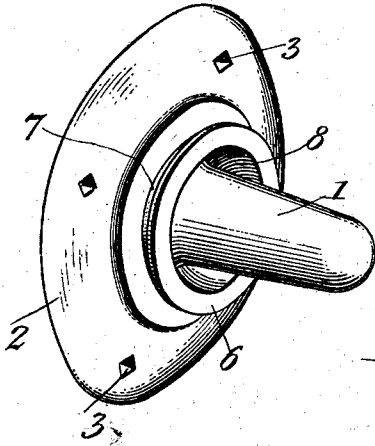
PATENTED FEB. 16, 1904.

C. A. HARDY.  
DISK BEARING.

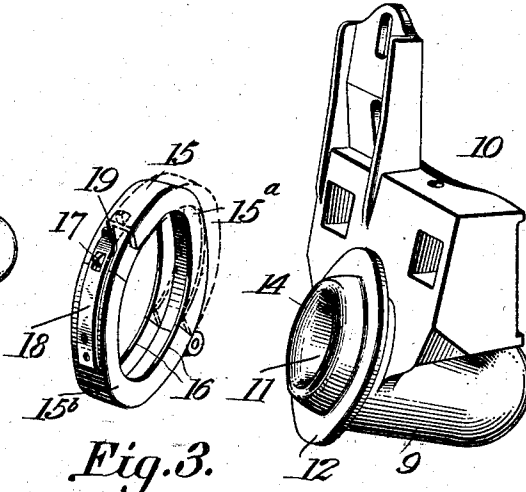
APPLICATION FILED OCT. 31, 1903.

NO MODEL.

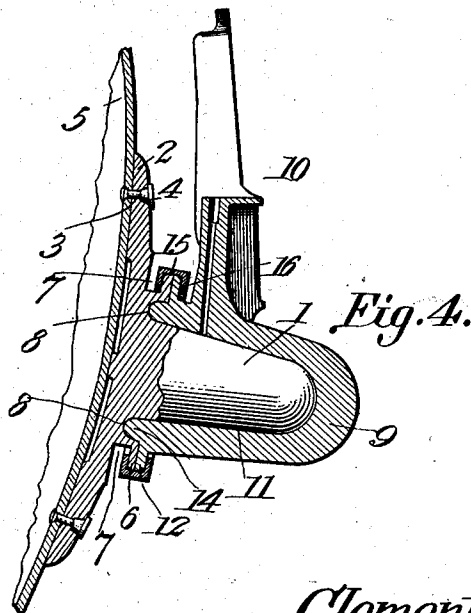
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



*Fig. 4.*

Witnesses

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by

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# UNITED STATES PATENT OFFICE.

CLEMENT A. HARDY, OF LA CROSSE, WISCONSIN, ASSIGNOR TO ALBERT HIRSHHEIMER, OF LA CROSSE, WISCONSIN.

## DISK-BEARING.

**SPECIFICATION** forming part of Letters Patent No. 752,620, dated February 16, 1904.

Application filed October 31, 1903. Serial No. 179,351. (No model.)

*To all whom it may concern:*

Be it known that I, CLEMENT A. HARDY, a citizen of the United States, residing at La Crosse, in the county of La Crosse and State of Wisconsin, have invented a new and useful Disk-Bearing, of which the following is a specification.

This invention relates to disk plows; and it has for its object to provide an improved disk-bearing which shall possess superior advantages in point of simplicity, durability, inexpensiveness, and general efficiency.

Specifically my invention consists in providing a disk-bearing in which the axle of the disk may be mounted for rotation and secured in a more simple and efficient manner than has heretofore been done, and especially without the use of bolts, sliding keys, or other devices, the manipulation of which has usually required the use of tools, sometimes of a special nature.

My invention further consists in providing improved means for so connecting the disk-axle with its bearing as to enable the parts to be disconnected or assembled in a moment's time and without the use of tools either for the purpose of inspection or repairs.

With these and other ends in view, which will appear as the nature of the invention is better understood, the same consists in the improved construction, arrangement, and combination of parts, which be hereinafter fully described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view showing a disk-axle, with the collar to which the disk is attached. Fig. 2 is a perspective view showing the disk-bearing. Fig. 3 is a perspective view showing the connecting member. Fig. 4 is a vertical sectional view taken axially through the device.

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

The disk-axle 1 is provided with a collar 2, having perforations 3 to receive the ends of bolts 4, which serve to connect said collar with the steel disk, a portion of which is shown at

5 and the face of which is countersunk in the usual manner to receive the heads of the connecting-bolts. The axle 1 and collar 2 are usually cast in a single piece. Upon the rear side of the collar 2 is formed an integral annular flange 6, overhanging an annular groove 7 between said flange and collar and also provided with an annular recess 8, surrounding the axle proper, 1, which latter consists of a stub of suitable dimensions.

9 designates the axle-bearing, which is provided with suitable arms 10, whereby it may be attached to the plow-frame; but the latter may, if desired, have the axle-bearing constructed integrally therewith. The bearing is provided with a recess or socket 11 for the reception of the axle portion 1, said bearing being provided near its outer end with an annular flange 12, the face of which is adapted to engage the face of the flange 6 of the axle member. The annular groove 8 in the latter is for the reception of the outer end 14 of the bearing. Inasmuch as the latter is usually constructed of heavy material the outer end 14 may be reduced, as shown in the drawings, so as to fit neatly in the groove 8 and to avoid as nearly as may be any clumsiness of appearance or unnecessary weight.

The means by which the axle member is retained in the bearing of my improved device consists of a ring 15, provided at its edges with inwardly-extending flanges 16, which when the ring is placed in position so as to engage the flanges 6 and 12 of the axle member and the bearing respectively connect said members revolvably together. To admit of the convenient application or removal of the flanged connecting-ring, I prefer to divide said ring diametrically into two parts or sections 15<sup>a</sup> and 15<sup>b</sup>, which are hingedly connected with each other, the free end of one of said sections being provided with a lug 17, adapted to be operatively engaged by a slotted spring-catch 18, suitably connected with the free end of the other section. The outer extremity of the spring-catch is upturned to form a finger-piece 19, by means of which it may be conveniently manipulated.

The operation and advantages of my inven-

tion will be readily understood from the foregoing description taken in connection with the drawings hereto annexed. To connect or assemble the parts, the stub of the axle member is inserted into the socket 11, as best seen in Fig. 4 of the drawings, and the connecting-ring 15 is then applied, thereby firmly securing the parts or members together in such a manner that the axle and the disk carried thereby shall be freely revoluble. It will be observed that when the parts are thus connected the reduced end 14 of the bearing engages in the annular groove 8, while the flanges 6 and 12 are protected by the flange-connecting ring, thus forming a sufficiently dust-proof device.

The facility with which my improved device enables the disk-carrying axle to be connected with or disconnected from its bearing will be appreciated by those skilled in the art to which my invention appertains. The simple construction of the connecting-ring enables the parts to be assembled or disconnected in a moment's time and at any time without the use of any tools whatever.

I have in the foregoing described a simple and preferred construction of my invention; but I would have it understood that I reserve to myself the right of making such alterations and changes as may lie fairly within the scope of my invention and which may be resorted to without departing from the spirit or sacrificing the utility of the same.

Having thus described my invention, I claim—

1. A disk-axle having an annular, annularly-grooved flange disposed about and at a distance from the base thereof, in combination with a

bearing extending into the space between the axle member and its surrounding flange and provided with a flange contacting with said annular flange, and connecting means consisting of a flanged ring engaging the flanges of the axle.

2. A disk-axle comprising an axle member and an annular flange surrounding and spaced from the base of said axle member and having an outwardly-projecting edge overhanging an annular groove, in combination with a bearing for said axle member extending into the space between the base of said axle member and the surrounding flange, said bearing being provided with an engaging flange, and connecting means engaging the flanges of the axle member and the bearing member.

3. A disk-axle comprising a base member or collar having a projecting axle member and an overhanging annular flange surrounding and spaced from the base of said axle member, a bearing member having its inner end extended into the space between the axle member and the surrounding annular flange, said bearing member being provided at a distance from its inner edge with an exterior annular flange, and connecting means for the flanges upon the axle member and the base member, whereby the former is independently revoluble.

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

CLEMENT A. HARDY.

Witnesses:

DORA D. MARSHALL,  
JANE REED.