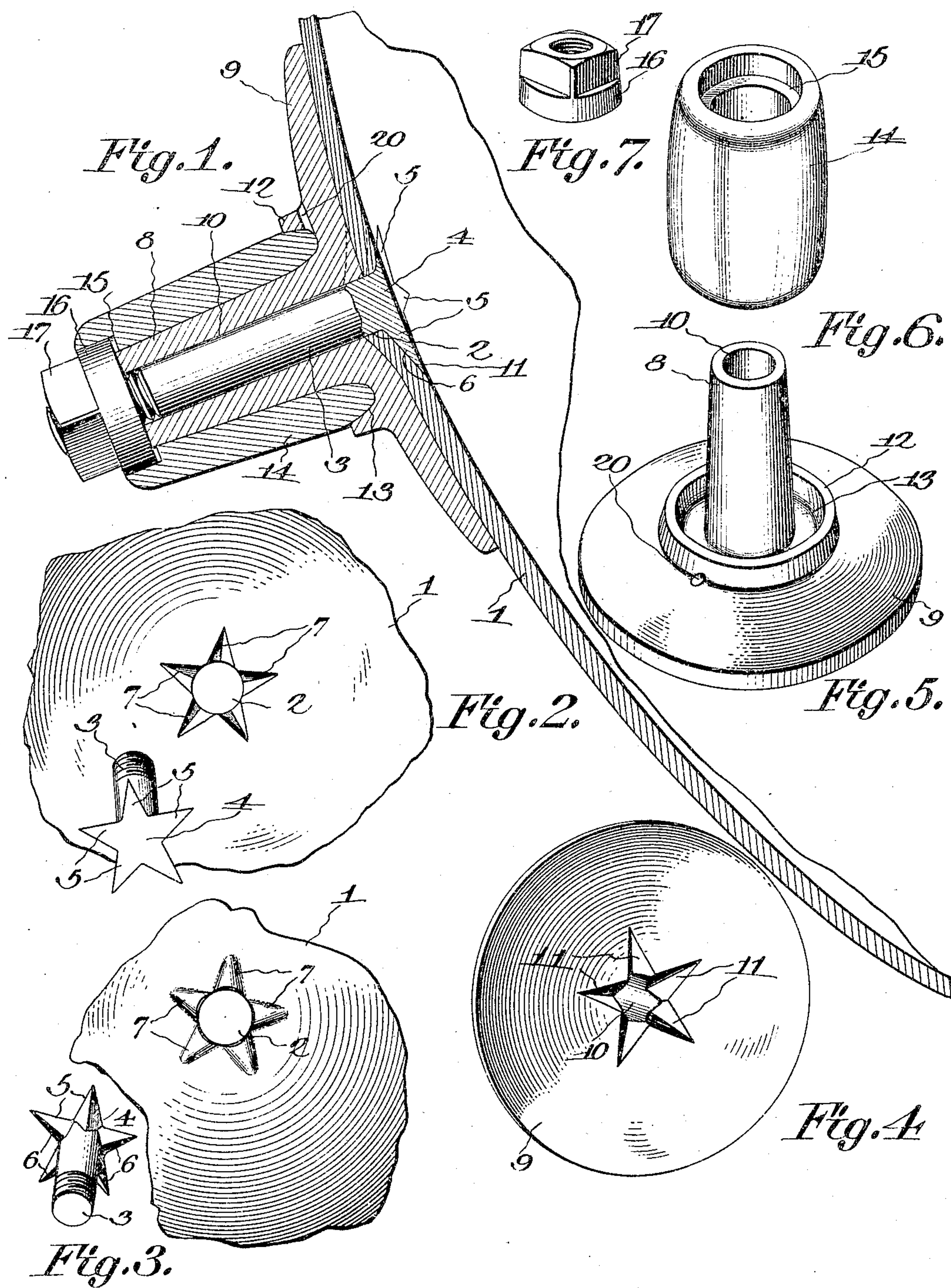


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PATENTED JULY 11, 1905.

W. G. DANIELSEN.
DISK BEARING FOR PLOWS.
APPLICATION FILED MAR. 25, 1905.



Witnesses
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UNITED STATES PATENT OFFICE.

WILHELM G. DANIELSEN, OF LOGAN, UTAH.

DISK-BEARING FOR PLOWS.

SPECIFICATION forming part of Letters Patent No. 794,452, dated July 11, 1905.

Application filed March 25, 1905. Serial No. 251,999.

To all whom it may concern:

Be it known that I, WILHELM G. DANIELSEN, a citizen of the United States, residing at Logan, in the county of Cache and State of Utah, have invented a new and useful Disk-Bearing for Plows, of which the following is a specification.

This invention relates to disk-bearings for rotary-moldboard plows; and among the objects of the invention are to simplify and improve the construction and operation of this class of devices; to provide a bearing in which the bushing or sleeve may be turned from time to time, so as to present a new bearing-surface; to provide a bearing which shall be of extremely simple construction and in which all the component parts may be readily separated or assembled, as may be required, and to so construct the parts as to provide a dust-proof bearing.

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

In the accompanying drawings has been illustrated a simple and preferred form of embodiment of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that the right is reserved to any changes, alterations, and modifications to which recourse may be had within the scope of the invention and without departing from the spirit or sacrificing the efficiency of the same.

In said drawings, Figure 1 is a sectional view of the improved disk-bearing, taken longitudinally of the axis of said bearing and showing also a portion of a disk mounted thereby. Fig. 2 is a front view of the central portion of the disk, showing also in perspective a front view of the connecting-bolt. Fig. 3 is a rear view of the central portion of the disk, showing also in perspective a rear view of the connecting-bolt. Fig. 4 is a perspective view showing the inner side of the journal-base. Fig. 5 is a perspective detail view

of the journal and the base of the same. Fig. 6 is a perspective view of the sleeve or bushing. Fig. 7 is a perspective detail view of the connecting-nut.

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

The disk or rotary moldboard 1 is of ordinary construction, convexo-concave in shape, and provided with a central aperture 2 for the passage of a bolt 3. Said bolt is provided with a head 4 of non-circular shape, said head being in the drawings indicated as being in the shape of a five-pointed star, it being, however, understood that the particular shape is non-essential beyond the fact that said head shall be composed of a plurality of radiating members, as 5, provided on their under sides with ribs 6. The disk 1 is struck up adjacent to the central aperture 2, so as to form a plurality of corrugations 7, the outer sides of which constitute cavities for the accommodation of the ribbed extensions of the bolt-head, while the inner sides of said corrugations form ribs, as clearly shown in Fig. 3 of the drawings. While the corrugations 7 have been described as being "struck up," it is obvious that this term refers only to disks that are made of material which will permit of the corrugations 7 being formed by a striking-up process. If a cast-metal disk is used, the corrugations 7 will be formed therein by properly molding the same.

The journal 8 is provided with a base 9 and with a longitudinal aperture 10, extending through the base, which latter is provided in its inner side adjacent to said aperture with radiating recesses 11, adapted to accommodate the rib-like corrugations upon the inner side of the disk. The base 9 is provided with an annular flange 12, spaced from the journal 8 by a groove 13, which latter accommodates the inner end of the sleeve or bushing 14. The latter is provided at its outer end with an annular recess 15 for the accommodation of the cylindrical portion 16 of a clamping-nut 17, whereby the parts are assembled. The parts are to be so proportioned that the clamping-nut 17 may engage

the outer end of the journal 8 without binding against the bottom of the recess 15 in the bushing, thus permitting the journal to rotate freely in said bushing, which latter in operation is to be supported in the plow-frame in any suitable well-known manner.

The flange 12 upon the base 9 of the journal is provided with a lubricating-aperture 20, through which the bearing may be supplied with lubricating material.

The operation and advantages of this invention will be readily understood from the foregoing description, taken in connection with the drawings hereto annexed, by those skilled in the art to which it appertains.

It will be seen that the bushing 14 constitutes the bearing for the journal 8, which latter carries the disk, said disk, journal, and bushing being assembled by the single bolt and nut 3 17. The nut may be tightened upon the bolt without binding against the bushing, and the cylindrical portion 16 of the nut 17 being tightly fitted within the walls of the recess 15 the inner portion of said recess will act as a lubricant-receptacle in which the oil introduced through the aperture 20 and passing along the journal member 8 may accumulate, thus affording a supply of lubricating material. Again, it will be readily evident that said bushing may be turned in its supporting means, (not shown,) so as to present a plurality of fresh bearing-surfaces, it being well understood that the wear upon the bushing is always in alinement with the axis of the disk-support. Hence by slightly turning the bushing upon the axis of the disk-support a fresh bearing-surface may be at any time presented, and the life of the bearing device will thus be greatly increased. By the peculiar construction of the bolt and the

engaging corrugations in the disk and in the journal-base the disk will be held with absolute security against rotation upon the bolt, and the eye of the disk is in no wise weakened, but rather strengthened, by the corrugations formed therein. The general construction is simple and inexpensive, and the parts of the device may be readily assembled for effective operation.

Having thus described the invention, what is claimed is—

A plow-disk having radial corrugations adjacent to the eye thereof, a journal having a disk-engaging base provided with radial recesses accommodating the corrugations upon the back of the disk, said base being provided with an annular flange spaced from the journal member by an intervening groove and having an oil-passage, a bushing affording a bearing for the journal member, said bushing engaging the groove in the journal-base and provided at its outer end with a recess, a bolt having a head provided with ribbed extensions engaging the corrugations in the face of the disk; said bolt extending through the journal member and the latter extending beyond the bottom of the recess at the outer end of the bushing; and a clamping-nut upon said bolt engaging the outer extremity of the journal member and having a cylindrical portion accommodated in the recess at the outer end of the bushing.

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

WILHELM G. DANIELSEN.

Witnesses:

GEORGE C. RIGBY,
OLOF I. PEDERSEN.