

(No Model.)

E. D. MEAGHER & C. E. TOWER.

BEARING.

No. 306,088.

Patented Oct. 7, 1884.

Fig. 1.

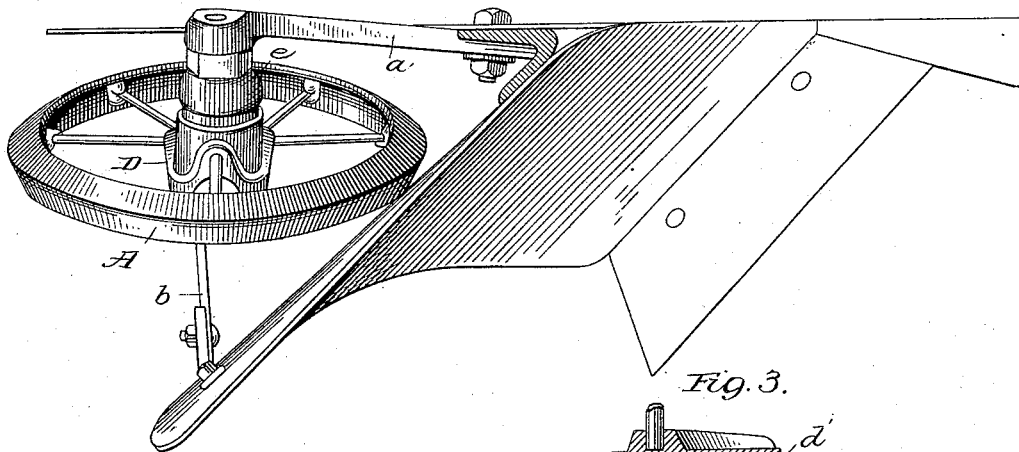


Fig. 3.

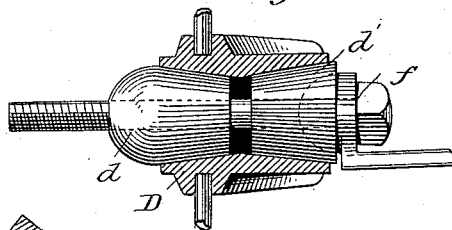
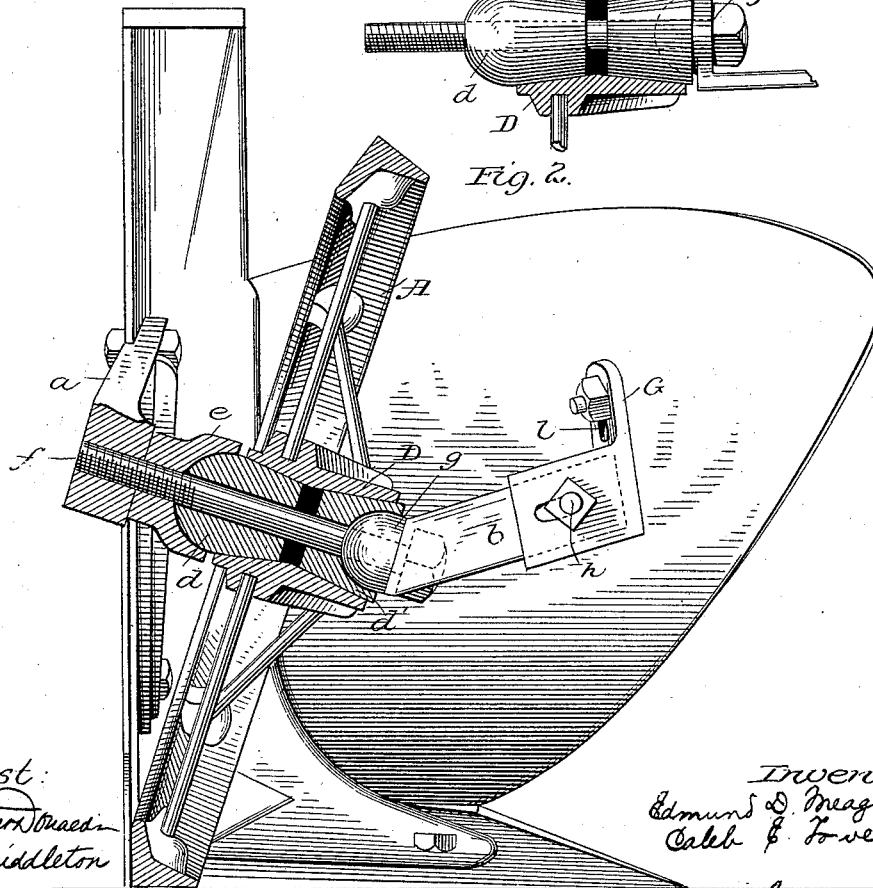


Fig. 2.



Attest:
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UNITED STATES PATENT OFFICE.

EDMUND D. MEAGHER AND CALEB E. TOWER, OF SOUTH BEND, INDIANA,
ASSIGNORS TO THE ECONOMIST PLOW COMPANY, OF SAME PLACE.

BEARING.

SPECIFICATION forming part of Letters Patent No. 306,088, dated October 7, 1884.

Application filed February 12, 1884. (No model.)

To all whom it may concern:

Be it known that we, EDMUND D. MEAGHER and CALEB E. TOWER, of South Bend, in the county of St. Joseph and State of Indiana, have invented a new and useful Improvement in Bearings; and we do hereby declare that the following is a full, clear, and exact description of the same.

Our invention relates to the bearings of the landside supporting-wheel of a plow, and is especially designed for that class of plows in which the wheel is set in an inclined position.

The object of the invention is, first, to provide means whereby the wear may be conveniently taken up.

The invention consists in the construction hereinafter described of rounded journals and bearings for the inclined wheel of a plow.

It also consists in the combination of these rounded forms with the conical or tapering wooden journals of the wheel, and in the special construction of one of the bearing-blocks and the connecting-bolt, whereby the wear may be taken up.

In the accompanying drawings, Figure 1 is a plan view of the plow and wheel. Fig. 2 is a rear view of the plow with the wheel and bearing in vertical section. Fig. 3 is a detailed view of the bearing.

In the drawings the form of the wheel and plow and the general arrangement of the wheel in respect to the plow are the same as shown in Letters Patent granted to E. D. Meagher on the 7th day of February, 1882. The inclined wheel A is supported on one side from a bracket or arm, *a*, extending rearward from the standard of the plow, and upon the other side from a brace, *b*, fixed to the inner face of the mold-board. The wheel is provided with a hub, D, which has a bore tapering from the ends of the hub to the center. Into this hub are set two tapering wooden plugs, *d d'*, which fit snugly in the tapering holes. The outer end of the plug *d* is convex and forms the journal of the wheel on the upper side. It fits into a concave metal bearing-block, *e*, attached to the arm *a* in a manner hereinafter explained. As this concave bearing-block is inclined downward, it forms a protecting cover or shell adapted to prevent the earth falling from the land from working into the bearing.

The plug *d'* on the lower side is formed with a concave bearing-surface similar to the metal bearing on the opposite side. This fits over a metal convex journal, *g*, supported on the bracket *b*. This concaved end of the wooden plug forms a shell or covering, which extends over the convex journal *g*, and protects it also from the falling earth, all of which comes from the upper or land side. The parts are held together by a bolt, *f*, which passes through the brackets, the tapering plugs, the journal *g*, and the bearing-block *e*. This bolt may be secured in any convenient way; but we prefer to secure it by means of a thread upon the end of the bolt which fits a threaded hole in the end of the bracket *a*. The thread being a right-hand one the motion of the wheel tends to keep the bolt in place.

To compensate for the wear of the bearings caused by the friction of the revolving plugs against the stationary metal parts, we thread the hole in the bearing-piece *e* and extend the thread upon the bolt beyond the inner surface of the bearing *e*. With this construction we take up the end wear of the bearings by turning the bearing *e* upon the bolt away from the arm *a* toward the plug *d* until it closes up the space left by the wear on the ends of both plugs. The bolt *f* is then turned in the opposite direction, carrying the wheel with its plugs and bearings until the bearing *e* is brought back to its place against the arm *a*. This operation may be repeated until the open space between the ends of the hub and the bearings are closed up by the wearing away of the rounded ends, when a new set may be inserted. If no provision were made to prevent it, the moving of the wheel and bearings in the direction of the arm *a* and away from the mold-board would strain the latter and probably break it. We avoid this liability by forming an overlapping joint in the bracket *b*, near its connection with the mold-board ear G. The overlapping parts are connected by a bolt, *h*, and a slot in one part of the bracket, which allows the bracket to be extended. Before making any change in the position of the bearings the bolt is loosened, which allows the bracket to be extended until the parts are brought snugly to bear against the arm *a*, when the nut upon the bolt *h* may be tightened in

its new position in the slot. This leaves the mold-board in its original position and free from all strain.

In the patent of Meagher, heretofore referred to, the vertical adjustment of the wheel to give more or less pitch or suction is provided for by a slot in the vertical movable coupling or arm in which the wheel is mounted. In the form herein described it is contemplated that the arm *a* shall be adjustable vertically for the same purpose, and in order to permit this adjustment the ear *G* is also slotted, as shown at *h*, to permit vertical adjustment of the bracket *b*.

We do not limit ourselves to the special concave form of bearing described. This may approach the conical form, or be quite conical; but we prefer the form shown. Nor do we limit ourselves in this respect to this construction to the wooden blocks or to the tapering form of these plugs, as we may use other materials and other forms without departing from the spirit of our invention.

We claim as our invention—

1. In combination with the inclined supporting-wheel of a plow, an upper concave bearing, *e*, and inclined convex journal, a suitable lower bearing and journal, supporting-brackets, and a connecting-bolt, substantially as described.

2. In combination with the inclined supporting-wheel of a plow, a concave bearing,

d', on the lower side, the convex journal set on the bracket, suitable upper bearing and journal, and a connecting-bolt, substantially as described.

3. In combination with the supporting-wheel of a plow, the tapering wooden plugs fitting corresponding holes in the hub, the upper having convex journal and the lower concave bearing, and the metal bearing and journal of corresponding shape supported on the arm and brace, and the connecting-bolt, all substantially as described.

4. In combination, the bracket *a* and bearing interposed between this arm and the journal of the wheel, and a threaded bolt, *f*, fitted to a threaded hole in the bearing, and arm, substantially as described.

5. In combination, the bracket *a*, and bearing interposed between this arm and the journal of the wheel, and a threaded bolt, *f*, fitted to a threaded hole in the bearing and arm, and the extensible bracket *b*, substantially as described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

EDMUND D. MEAGHER.
CALEB E. TOWER.

Witnesses:

ALBERT G. CUSHING,
WM. MILLER.