E. M. HEYLMAN.

ATTACHMENT FOR PLOWS.

APPLICATION FILED DEC. 11, 1918.

1,405,033. Patented Jan. 31, 1922.

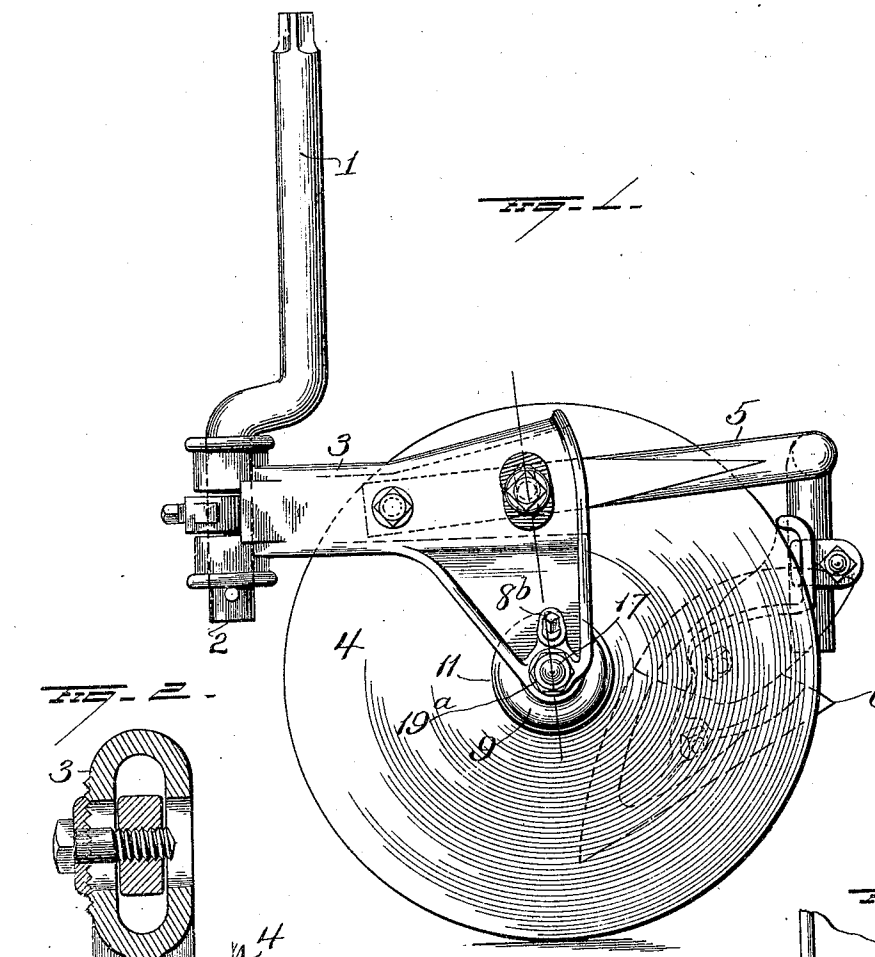


Fig. 1.

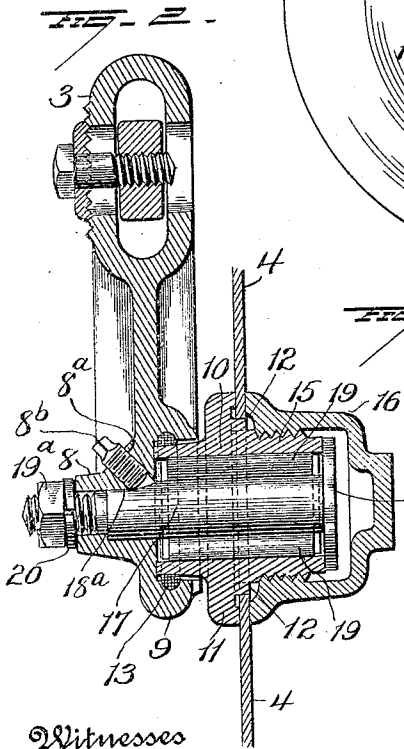


Fig. 2.

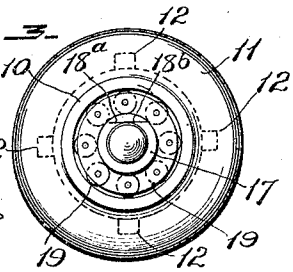


Fig. 3.

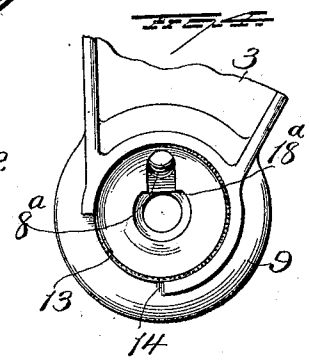


Fig. 4.

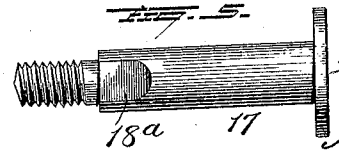


Fig. 5.

Witnesses
E. J. Nottingham
G. F. Downing.

Inventor
E. M. Heylman
By Seymour & Bright
Attorneys

UNITED STATES PATENT OFFICE.

EDWARD M. HEYLMAN, OF SOUTH BEND, INDIANA, ASSIGNOR TO OLIVER CHILLED PLOW WORKS, OF SOUTH BEND, INDIANA.

ATTACHMENT FOR PLOWS.

1,405,033. Specification of Letters Patent. Patented Jan. 31, 1922.

Application filed December 11, 1918. Serial No. 266,285.

To all whom it may concern:

Be it known that I, EDWARD M. HEYLMAN, a citizen of the United States, and a resident of South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Attachments for Plows; 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.

This invention relates to improvements in attachments for plows, and more particularly to the mountings of a rolling colter, one object of the invention being to so mount a rolling colter with respect to a supporting arm at one side thereof that the strain on the bearing will be equalized at respective sides of the blade or disk and whereby undue wear which might be caused by lateral strain shall be avoided.

With this and other objects in view, the invention consists in certain novel features of construction and combinations of parts as herein set forth and pointed out in the claims.

In the accompanying drawings; Figure 1 is a view of a combined colter and jointer embodying my improvements; Fig. 2 is an enlarged sectional view showing the mounting of the colter disk, and Figs. 3, 4 and 5 are detail views.

1 represents a vertically disposed standard which may be secured to a plow in any suitable manner and provided at its lower end with a cranked portion 2. To this cranked portion of the standard, an arm 3 is attached and constitutes a support for the mounting of a colter disk 4. The arm 3 may be made hollow and may adjustably support an arm 5 to which a jointer 6 may be secured.

The arm or support 3 is provided near its lower end with a hub 8, and a recessed portion forming a sand band 9, and one end of a hub 10 enters said sand band. The hub 10 projects through a central opening in the colter disk and is provided with an annular flange 11 to rest against one face of said disk. The hub 10 is also provided with lugs 12 to enter notches in the disk so that said disk and hub will rotate together. A felt ring 13 is disposed within the sand band and encircles that portion of the hub which enters the latter so as to prevent dust and sand from reaching the bearing and said sand band is cut-away, as at 14, so that any sand or dirt that may work in from the top or front will fall out at the rear as the colter blade revolves. This construction keeps a large part of the sand from the bearing within the hub, and dust which may pass through the sand band will be prevented by the felt ring from entering said bearing.

The hub 10 is made with an exteriorly threaded portion 15 for the reception of an interiorly threaded cap 16 which encloses the outer end of the hub and bears against the colter. It will be seen that with the construction and arrangements of parts above described, the colter disk is secured to the hub and clamped between the flange 11 and cap 16.

A spindle 17 extends through the hub 10 and is provided at its outer end with a fixed disk or head 18 which closes the outer end of said hub and protects roller bearings 19 disposed within the latter and surrounding the spindle.

The spindle 17 projects beyond the inner end of the hub 10 and the roller bearing therein and passes through the hub 8 at the lower end of the flange 7 of the supporting arm 3. That part of the spindle within the hub 8 is made with a flattened portion 18^a to engage a flattened face 18^b within said hub and thus the spindle will be prevented from turning. The hub 8 is also made with a lubricant duct 8^a which is normally closed by a screw plug 8^b. The spindle 17 projects beyond the hub 8 and is threaded for the reception of a nut 19^a, between which and the hub 8, a spring washer 20 is disposed.

From the construction and arrangement of parts above described, it will be seen that the spindle on which the disk is mounted is rigidly secured to the support 3 and that the roller bearing extends through the colter disk and projects beyond both sides of the planes of the faces of said disk. The strain on the bearing of the disk will thus be equalized and when said disk is forced into the ground there will be no lateral strain on the bearing which might cause excessive wear.

Slight changes might be made in the details of construction of my invention without departing from the spirit thereof or

limiting its scope, and hence I do not wish to restrict myself to the precise details herein set forth.

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

1. The combination of a soil-engaging disk, a supporting member therefor at one side only thereof, a spindle rigid with said supporting member and projecting laterally therefrom and through and beyond the disk at one side of said supporting member, a hub surrounding said spindle and passing through the disk, said spindle having a part at its free end closing the outer end of the hub, means clamping the disk to said hub approximately midway between the ends of the latter and enclosing the outer end portion of the hub, and anti-friction bearing devices within the hub and between the same and the spindle.

2. The combination of a soil-engaging disk, a supporting member at one side thereof, said supporting member having a recessed portion near its free end, a spindle rigidly secured to the said supporting member and projecting through and laterally beyond the recessed portion thereof, a hub surrounding the spindle and having its inner end portion entering said recessed portion of the supporting member, said spindle provided with a part closing the outer end of said hub, anti-friction bearing devices between the hub and the spindle, a flange between the ends of said hub, and a cap threaded on the outer end portion of the hub and clamping the disk against said flange.

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses.

EDWARD M. HEYLMAN.

Witnesses:

EDWIN NICAR,

GEORGE LANPHERE.