

(No Model.)

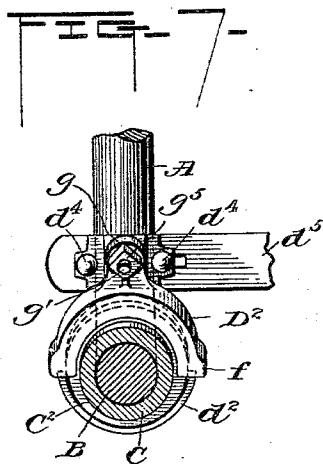
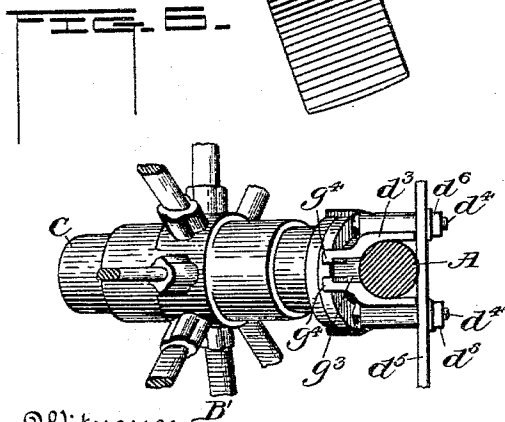
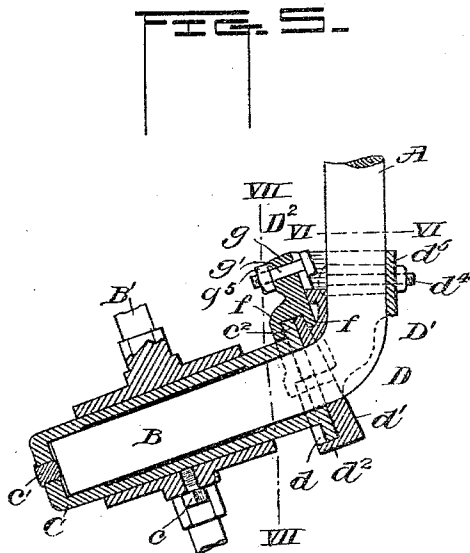
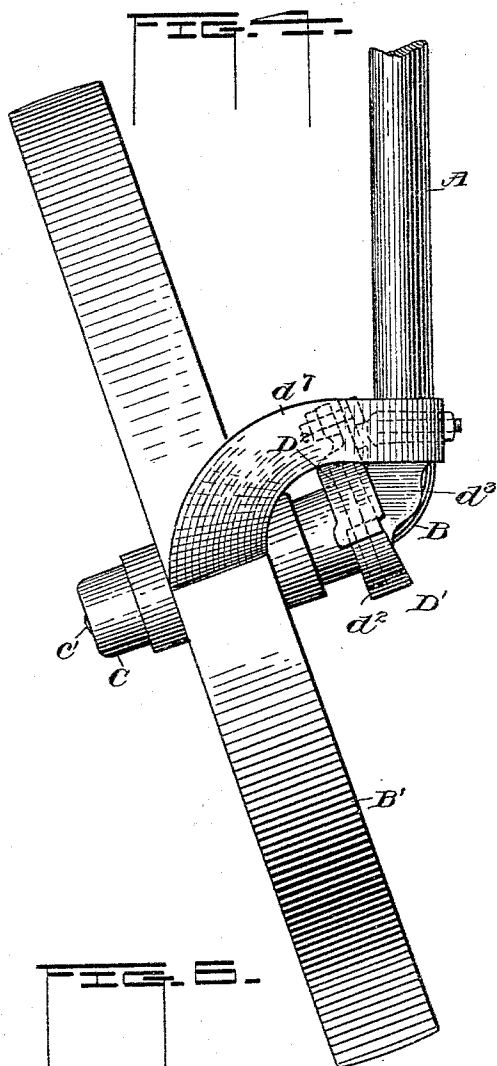
2 Sheets—Sheet 2.

G. MOORE.

STAGGER WHEEL AXLE BOX FOR AGRICULTURAL IMPLEMENTS.

No. 545,129.

Patented Aug. 27, 1895.



Witnesses

Charles E. Rindon

William B. Crowell

Inventor

Gripia Moore

Rutherford W. Dowell

his Attorneys

UNITED STATES PATENT OFFICE.

GILPIN MOORE, OF MOLINE, ILLINOIS, ASSIGNOR TO THE DEERE & COMPANY,
OF SAME PLACE.

STAGGER-WHEEL AXLE-BOX FOR AGRICULTURAL IMPLEMENTS.

SPECIFICATION forming part of Letters Patent No. 545,129, dated August 27, 1895.

Application filed May 15, 1895. Serial No. 549,361. (No model.)

To all whom it may concern:

Be it known that I, GILPIN MOORE, a citizen of the United States, residing at Moline, in the county of Rock Island and State of Illinois, have invented certain new and useful Improvements in Stagger-Wheel Axle-Boxes for Agricultural Implements; 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 wheel-boxes, but more particularly to boxes for the stagger-wheel of plows.

The primary object of my invention is to provide means whereby the oil may be retained in the box and serve to constantly lubricate the axle without any liability of escaping.

A further object is to provide means for readily securing the box to or removing said box and the wheel from the axle.

Another object of the invention is to provide such a connection or joint between the box and the axle as to prevent sand or dust from entering the box to wear and cut the same or said axle.

With these and other objects in view the invention consists in the construction and combination of the several parts, substantially as hereinafter described, and then more particularly pointed out in the claims at the end of the description.

Reference being had to the accompanying drawings, forming a part of this specification, Figure 1 is a general perspective view illustrating the application of the invention to one form of plow. Fig. 2 is an enlarged perspective view of the main member of the box-holder and the manner of securing the same to the axle. Fig. 3 is a perspective view of the cap forming the second member of the box-holder. Fig. 4 is a side elevation of the wheel and its connection with the axle. Fig. 5 is a vertical section through the axle-box and the box-holder, illustrating the axle in elevation. Fig. 6 is a sectional plan view on the line VI VI of Fig. 5 with the cap removed, and Fig. 7 is a vertical sectional view on the line VII VII of Fig. 5.

In the drawings, A may designate an axle

of any suitable construction, which may be secured to the frame or other portion of the plow in any preferred manner, and has its lower end or spindle B bent at an angle to the body portion thereof, so as to cause the stagger-wheel B' to cant or incline, as is usual in such devices. This wheel may be provided with a box C, to which it is secured by a set-screw c or otherwise, the said box being provided with the usual recess for the lubricant and with a closed outer end, in which, if desirable, may be fitted a steel or other plug c' to take up the wear and thrust at the end of said box and axle. Upon the inner end of the box C is a flange or collar c², by which the said box is revolvably held on the axle.

The axle A has a box-holder D, comprising two members D' D², which form an annular recess d, into which the flange c² of the box is adapted to fit and revolve. The main member D' of the box-holder has a flange d' of substantially the same size as the flange c² of the axle-box and against which the face of the flange c² may abut to provide a dust and sand proof joint when the parts are in an operative position. The flange d' is provided with a central aperture through which the end B may be passed, and has a semiperipheral ledge d², forming a portion of the bearing for the flange c² of the axle-box. Extending upward and at an angle to the flange d' is a U-shaped bracket d³, adapted to embrace the bend and body portion of the axle and to be readily slipped into position over the end B of said axle, the said bracket being provided with apertures on opposite sides thereof, in which are arranged the bolts d⁴ d⁵, which have their ends passed through apertures in an opposed clamping-plate d⁵, by which the bracket is rigidly secured to or removed from the axle when the nuts d⁶ d⁶ are screwed off or onto the ends of said bolts. This clamping-plate d⁵ may be extended to form a scraper d⁷ for the stagger-wheel B', as shown in the drawings, or the said plate may be independent of said scraper and the latter dispensed with, or the plate may be used in connection with a separate scraper, if desired.

For retaining the flange c² of the axle-box in the recess d of the box-holder D, I preferably provide a substantially semicylindrical

cap D², having the flanges *ff* forming a recess of sufficient size to embrace the flanges *c*² and *d*¹ of the axle-box and box-holder, respectively, the lower ends of which cap fit over the upper portion of the ledge *d*² and flange *d*¹ of the main member D¹ of said box-holder, thereby forming a dust-proof connection. The cap D² may be provided with a boss or projection *g*, extending upward from the upper portion thereof, and may have its inner surface flush with the inner surface of said cap. This boss is adapted to abut against an outer inclined upper portion of the bracket *d*³, which latter is at a substantially right angle to the axis of the end B, the said boss being provided with an aperture through which the body of the bolt *g*¹ is passed. The head of the bolt *g*¹ is adapted to enter a slotted recess *g*³ in the bracket *d*³, and is retained from being withdrawn from said recess by the ribs *g*⁴ when the nut *g*⁵ on said bolt is tightened.

The manner of using and applying the invention will be readily understood from the foregoing description, in connection with the accompanying drawings. It will be seen when the box-holder D is secured to the axle in the manner heretofore explained and the axle-box C is slipped over the end B of said axle, so that the face of the flange *c*² abuts against the opposed face of the flange *d*¹ of the box-holder, that by placing the cap or member D² in such position that the flanges *ff* of said cap will embrace the flanges *c*² and *d*¹ of the axle-box and box-holder, respectively, and at the same time causing the head of the bolt *g*¹ to enter the recess *g*³, the several parts may be rigidly and securely held together. By loosening the nut *g*⁵ of the bolt *g*¹ so that said bolt may be slipped out of the recess *g*³, the cap D² may be removed and the axle-box and stagger-wheel readily disconnected from the box-holder. This construction not only prevents dust and dirt from injuring the working parts but provides means whereby said parts may at all times be effectually and properly lubricated without the liability of the oil or lubricant escaping from the box. It is of course to be understood that the axle-box may be formed integral with the hub of the stagger or other wheel and that the form of the box-holder may be changed to suit different forms of axles. Instead of providing the flanges *c*² and *d*¹ there may be grooves formed in the ends of the axle-box and box-holder, respectively, adapted to be engaged by the flanges *ff* of the cap D². Other changes of a similar nature may be made, if desired, without departing from the character of my invention; nor is the invention confined to the stagger-wheel of plows, but may be used in connection with wheels of other construction and arrangement.

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

1. The combination with an axle having its end or spindle at an angle to the body portion

thereof, of a box provided with a closed outer end and with a flange on its inner end, a box-holder provided with a U-shaped bracket adapted to embrace the bend of said axle and be secured thereto; said holder having a recess in which the flange of the box may revolve, and means for securing the flange in the recess of the box-holder, substantially as described.

2. In a wheel-box, the combination with an axle having its end at an angle to the body portion thereof, of an axle-box provided with an inner flange adapted to fit over the end of said axle, a box-holder comprising two members one of which is provided with a U-shaped bracket adapted to embrace the bend of said axle and be rigidly secured to the axle and the other to revolvably and removably hold the flange of the axle-box in a recess in said members, and means for securing the two members together, substantially as described.

3. In a wheel box, the combination with an axle having its end at an angle to the body portion thereof, of an axle-box provided with a closed outer end and a flange on its inner end adapted to fit over the end of said axle, a box-holder comprising two members one of which is provided with a U-shaped bracket adapted to embrace the bend of said axle and be rigidly secured to the axle; said member being provided with a flange against which the flange of the axle-box may abut, a cap or second member provided with side flanges forming a recess in which the flanges of the box-holder and axle-box may fit, together with means for removably holding the cap to the first mentioned member, substantially as described.

4. In a wheel box, the combination with an axle-box provided with a closed outer end and a flange on its inner end adapted to fit over the end of an axle, of a box-holder comprising two members one of which is adapted to be secured to the axle, a cap or second member fitting over a portion of the first mentioned member and forming therewith a recess in which the flange of the axle-box may fit, together with a bolt for removably holding the cap to said first mentioned member, substantially as described.

5. In a wheel box, the combination with an axle, of an axle-box provided with a closed outer end and a flange on its inner end adapted to fit over the end of said axle, a box-holder comprising two members one of which is provided with a flange and with a U-shaped bracket adapted to be secured to the axle, a cap or second member fitting over a portion of the flange of the first mentioned member and forming therewith a recess in which the flange of the axle-box may fit and revolve, together with a bolt having its body portion passed through said cap and having its head adapted to fit into a recess in the first or main member by which both members may be removably held together, substantially as described.

6. The combination with an axle, of an axle-box, a wheel carried by said box and adapted to rotate on the end of said axle, a box-holder adapted to revolubly hold the wheel on the axle, a U-shaped bracket forming a part of said box-holder, a clamping plate arranged on one side of the axle, together with bolts for securing the bracket and clamping plate to the axle, substantially as described. 15
7. The combination with an axle, of an axle-box, a wheel carried by said box and adapted to rotate on the end of said axle, a box-holder adapted to revolubly hold the wheel on the axle, a bracket forming a part of said box-holder, a clamping plate arranged on one side of the axle and having an extension forming a scraper for the wheel, together with means for securing the bracket and clamping plate to the axle, substantially as described. 20
- In testimony whereof I affix my signature in presence of two witnesses.

GILPIN MOORE.

Witnesses:

HERBERT G. COPP,
FRED H. COOPER.