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GAS BURNER.

APPLICATION FILED NOV. 15, 1911.

Patented June 3, 1913.

1,063,772.

Fig. 1.

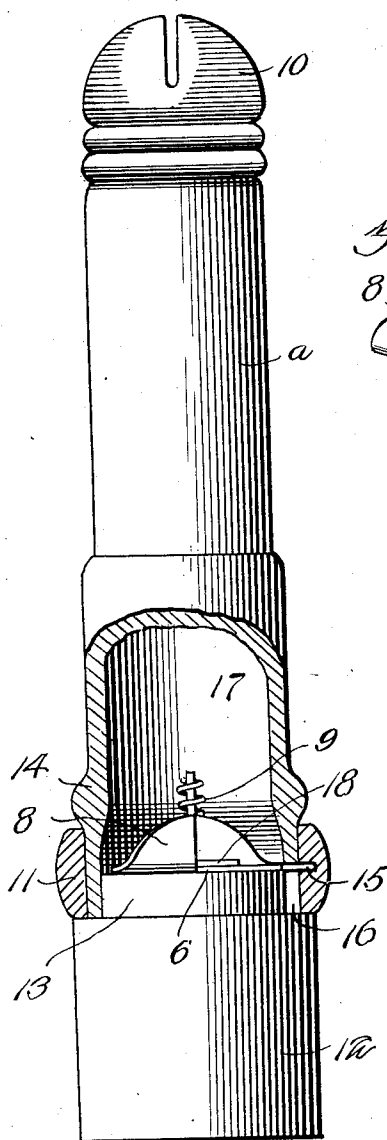


Fig. 2.

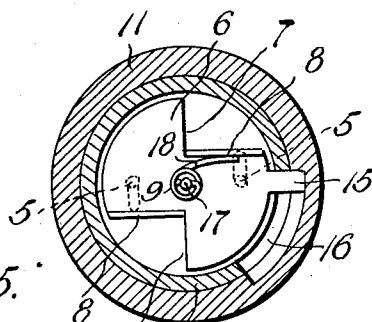


Fig. 5.

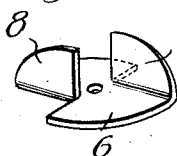


Fig. 3.

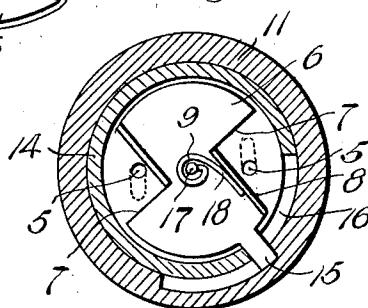
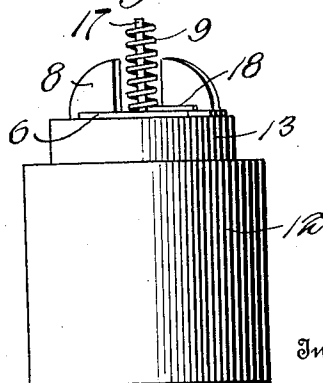


Fig. 4.



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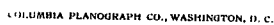
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3 SHEETS--SHEET 2.

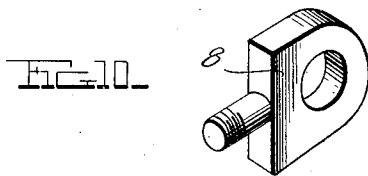
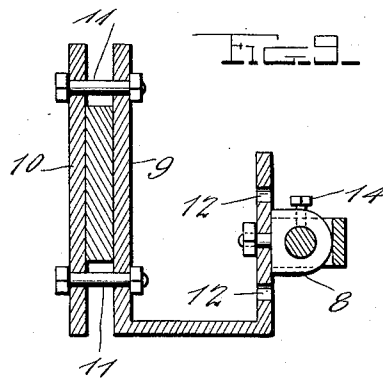
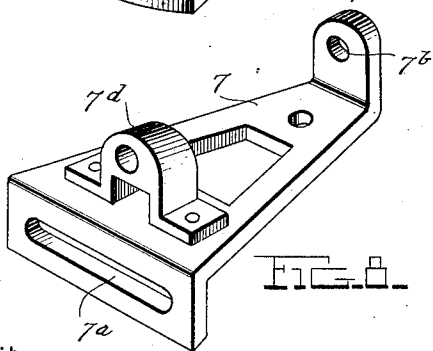
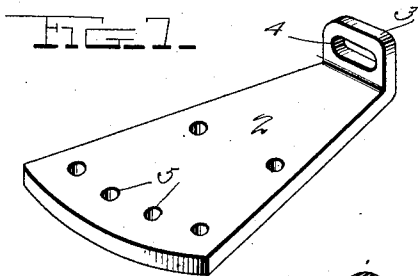
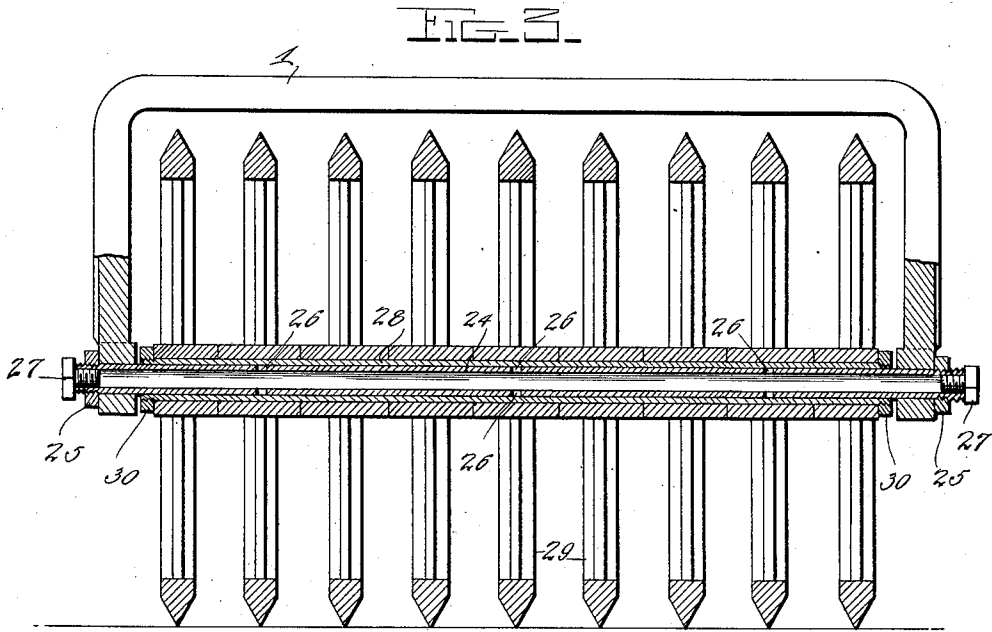


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PACKER ATTACHMENT FOR PLOWS.
APPLICATION FILED MAY 29, 1912.

1,063,773.

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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE

CHRISTIAN CHRISTIANSEN, OF KENMARE, NORTH DAKOTA.

PACKER ATTACHMENT FOR PLOWS.

1,063,773.

Specification of Letters Patent.

Patented June 3, 1913.

Application filed May 29, 1912. Serial No. 700,463.

To all whom it may concern:

Be it known that I, CHRISTIAN CHRISTIANSEN, a citizen of the United States, residing at Kenmare, in the county of Ward and State of North Dakota, have invented certain new and useful Improvements in Packer Attachments for Plows; and I do declare the following to be a full, clear, and exact description of the invention, such as it will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in packer attachments for plows.

One object of the invention is to provide an attachment of this character having means for adjustably connecting the same with a plow frame, and means whereby the angle of the packing disks or rollers may be varied.

Another object is to provide a packer attachment having an improved construction and arrangement of supporting mechanism for the packing rollers or disks.

With these and other objects in view, the invention consists of certain novel features of construction, and the combination and arrangement of parts as will be more fully described and claimed.

In the accompanying drawings; Figure 1 is a side view of a plow showing my improved packer attachment applied thereto; Fig. 2 is a top plan view thereof with parts of the plow removed; Fig. 3 is a central longitudinal sectional view through the packer rollers and their supporting axle and frame; Fig. 4 is an enlarged plan view of the attaching clamp for the spacing rod of the packer attachment; Fig. 5 is a longitudinal sectional view through the joint or connection between the inner and outer members of the draft rod for the packer attachment; Fig. 6 is a detail perspective view of the clip for adjustably fastening the outer end of the draft rod to its supporting bracket; Fig. 7 is a detail perspective view of the supporting and attaching plate for the rear end of the draft rod; Fig. 8 is a similar view of the connecting plate of the joint between the inner ends of the members of the draft rod; Fig. 9 is an enlarged vertical cross section through the attaching bracket for the outer end of the draft rod taken on the line 9—9 of Fig. 1; Fig. 10 is a detail perspective view of the eye-bolt which adjustably supports and connects the

outer end of the draft rod with its attaching bracket.

My improved packer attachment comprises a bail shaped roller supporting frame 1 to the upper cross bar of which is rigidly secured a supporting plate 2 which preferably tapers toward its forward end and has said end turned upwardly at right angles to form a supporting lug 3 having therein an elongated opening or slot 4. In the rear end of the plate 2 are formed a series of bolt holes 5, said holes being preferably arranged in the arc of a circle as shown.

Adjustably connected at its rear end with the plate 2 is a draft rod 6 which is preferably flexible or formed in inner and outer loosely connected sections 6^a and 6^b. The rear end of the section 6^a projects through the slot 4 in the lug 3 and has its rear end turned downwardly and adapted to be engaged with one of the bolt holes 5, said downwardly turned end being threaded to receive a retaining nut 6^c. The inner ends of the sections 6^a and 6^b are pivotally or loosely connected by a connecting plate 7 which is of substantially triangular shape having its rear end bent downwardly and provided with a slot 7^a and having its forward end turned upwardly and provided with an aperture 7^b. The inner end of the section 6^a of the rod projects through the slot 7^a in the downwardly turned rear end of the plate and has its extremity turned upwardly and passed through an aperture in the plate 7 near its forward end as shown. The upwardly turned extremity of the section 6^a of the rod is threaded and has screwed thereon a nut 7^c whereby said end of the section is pivotally secured to the plate. The inner end of the forward section 6^b of the rod projects through the aperture 7^b in the upwardly turned forward end of the plate and has its extremity engaged with a clip 7^d secured to the upper side of the plate adjacent to its rear end as shown. The section 6^b of the rod is positively held against longitudinal movement on the plate by stop nuts 7^e arranged on the rod on each side of the clip as shown. By connecting the inner ends of the sections of the rod as herein shown and described it will be seen that said sections are loosely connected or may swing on each other to a limited extent, thus permitting the roller supporting frame to have

a limited amount of play and relieving the draft rod and its attaching member of undue strain.

The forward end of the draft rod 6 is slidably engaged with an eye bolt 8 secured in the outer side of a substantially U-shaped supporting bracket 9 the inner side of which is secured to a suitable portion of the plow frame preferably by means of a clamping plate 10 and clamping bolts 11 as shown. The eye bolt 8 is adjusted in the outer side of the bracket 9 by means of a series of bolt holes 12 arranged in said side to receive the end of the bolt. The outer end of the rod 6 is adjustably secured to the eye bolt 8 by a hook shaped clip 13 having in its inner end a longitudinal passage with which the end of the rod 6 is slidably engaged. In arranging the clip for fastening the rod, the hook shaped end thereof is engaged with the outer portion of the eye bolt and the rod is adjusted to the desired position in the passage of the clip and is securely fastened therein by a set screw 14 arranged in the clip as shown.

The packer supporting frame 1 is spaced a suitable distance from and secured to the rear end of the plow frame by a spacing rod 15 in the outer end of which is an eye 16 which is engaged with one of the bolt holes 5 in the plate 2. On the inner end of the rod 15 is an eye 17 which is loosely engaged with an eye 18 on the rear end of one member 19 of a clamp 20 the opposing member 21 of which is secured to the member 19 by a clamping bolt 22. The inner ends of the members 19 and 21 of the clamp are curved or otherwise shaped to fit the part of the plow frame with which they are engaged and the outer end of the clamping member 21 is bent inwardly to form a spacing lug 23 which engages the adjacent portion of the clamping member 19 whereby when the nut of the clamping bolt 21 is tightened up the inner ends of the clamping members will be drawn into tight engagement with the rear end of the plow frame.

Fixedly secured in the lower ends of the bail shaped packer supporting frame 1 is an inner tubular disk or roller supporting axle 24 the ends of which project through the sides of the frame 1 and are threaded to receive nuts 25 which are screwed up into engagement with the sides of the frame and securely hold the axle 24 in place. Arranged at suitable intervals in the tubular shaft or axle 24 are oil distributing passages 26. The outer ends of the axle or shaft 24 are also threaded internally to receive threaded plugs 27 which are screwed into said ends and close the same. By thus constructing the axle or shaft 24 the same is adapted to serve as a reservoir to contain lubricating oil which is discharged therefrom through the distributing passages 26.

Revolubly mounted on the inner tubular shaft or axle 24 is an outer tubular shaft or axle 28 on which are arranged the packing disks or wheels 29 of which there may be any desired number. The outer ends of the shaft or axle 28 are exteriorly threaded and have screw thereon nuts or collars 30 between which the packing disks or wheels are clamped on the shaft.

By constructing and arranging my improved packer attachment as herein shown and described, it will be seen that the position of the same may be readily adjusted with respect to the plow frame and that the angle of the wheels or disks may also be adjusted by engaging the inner end of the draft rod with the different bolt holes in the end of the plate 2 on the supporting frame 1.

From the foregoing description taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention as shown.

Having thus described my invention, what I claim is:

1. In a packer attachment for plows, a roller supporting frame, a supporting plate secured thereto and having in its rear end a series of bolt holes, an upwardly projecting apertured guide lug on the forward end of said plate, a draft rod loosely engaged with said apertured guide lug and having its rear end turned downwardly and threaded for engagement with one of the bolt holes in the rear end of said plate, a retaining nut arranged on the downwardly turned end of said rod, a bracket secured to the plow frame, an eye bolt having an adjustable connection with said bracket and adapted to receive the forward end of said draft rod, a clip adjustably secured to said rod and having an operative engagement with said bolt whereby the rod is adjustably secured thereto, a spacing rod to secure said roller supporting frame to the rear end of the plow, and packing rollers revolubly mounted in said supporting frame.

2. In a packer attachment for plows, a roller supporting frame, a supporting plate secured thereto and having in its rear end a series of bolt holes, an upwardly projecting apertured guide lug on the forward end of said plate, a draft rod comprising forward and rear loosely connected sections, said rear section having its outer end pivotally connected with said attaching plate and having its inner end turned up and threaded, a connecting plate having its rear end turned downwardly and slotted to receive

the forward end of the rear section of the rod, said rear section having its threaded inner end loosely engaged with the plate and provided with a retaining nut, said plate having its forward end turned upwardly and provided with an aperture to receive the inner end of the forward section of the rod, a clip to secure said end of the rod to the plate, stop nuts arranged on said end of the rod on opposite sides of said clip, and means to adjustably connect the outer end of the forward section of the rod to the plow frame.

3. In an attachment for plows or the like, the combination of an implement frame, a triangular shaped supporting plate centrally arranged thereon, said plate having in the rear end thereof a series of openings, an upwardly projecting guide lug formed on the forward end of the plate and having a longitudinal recess extending there-through, a draft rod loosely engaged by said lug and having its rear end turned downwardly and threaded for engagement with one of the openings in the rear end of said plate, a retaining nut arranged on said downwardly turned end, a bracket secured to the forward portion of the plow frame and adapted to adjustably secure the outer end of the draft rod to said frame, and a spacing rod securing said frame to the rear portion of the plow.

4. In an attachment for plows or the like,

the combination of an implement frame, a spacing bar securing said frame to the rear portion of the plow, a draft bar composed of two independent front and rear sections, said rear section having its rear end connected to said frame and its front end upturned and threaded, a triangular shaped connecting plate having the rear end thereof turned downwardly and slotted longitudinally to loosely receive the forward portion of said rear section, the plate having near its front end an opening to receive the end of said rear section, a retaining nut adapted to hold said threaded end in engaged position on the plate, and upwardly projecting lug formed on the forward end of said plate and having thereon an aperture adapted to receive the rear end of said front section, a clip mounted on the rear portion of the plate in which the rear end of the front section is pivoted, stop nuts arranged on said front section on opposite sides of the clip, and a bracket mounted on the forward portion of the plow frame and connected to the front end of the front section of said rod.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CHRISTIAN CHRISTIANSEN.

Witnesses:

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