No. 837,986. PATENTED DEC. 11, 1906.

W. WALKER.

HARROW ATTACHMENT FOR PLOWS.

APPLICATION FILED JULY 3, 1906.

Fig. 1.

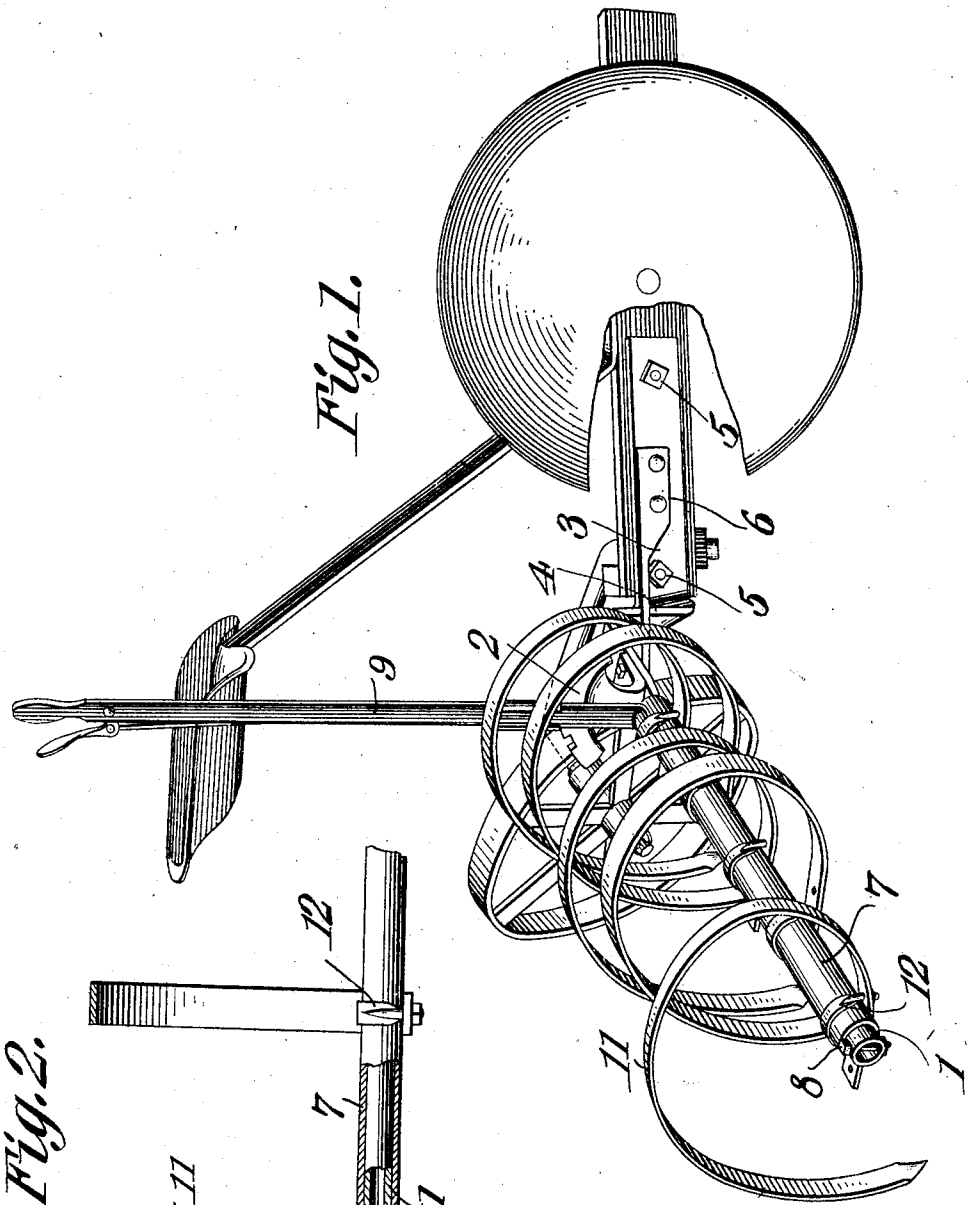


Fig. 2.

WITNESSES:

E. F. Allen

Swaden

Willis Walker,

INVENTOR.

By C. A. Snow & Co.

ATTORNEYS

THE NORRIS PETERS CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIS WALKER, OF SEDALIA, COLORADO.

HARROW ATTACHMENT FOR PLOWS.

No. 837,986. Specification of Letters Patent. Patented Dec. 11, 1906.

Application filed July 3, 1906. Serial No. 324,641.

To all whom it may concern:

Be it known that I, WILLIS WALKER, a citizen of the United States, residing at Sedalia, in the county of Douglas and State of Colorado, have invented a new and useful Harrow Attachment for Plows, of which the following is a specification.

This invention has relation to harrow attachments especially adapted to be applied to the disk-plow type of such implements, but it may be also used to advantage upon mold-board or other patterns of earth-openers.

The invention consists primarily of a tubular shaft having attached at one end a suitable braced angle-iron, by means of which the said shaft is attached to the frame of the implement. A gear-segment is located upon the said shaft at or near the point where the same connects with the said angle-iron. A sleeve is slipped upon said shaft and is mounted for rotation thereon. A series of spring harrow-teeth are secured by clips to said sleeve, the said teeth being out of alinement with each other in a transverse direction. A ratchet-lever is attached to the end of said sleeve, and the ratchet thereof is adapted to engage the gear-segment located upon the shaft. Thus the sleeve and the shaft are secured in fixed relation to each other. A cotter-pin passes through the end of the shaft and is adapted to hold the sleeve in position thereon in a longitudinal direction of the same.

In the accompanying drawings, Figure 1 is a perspective view of the harrow attachment applied to a plow. Fig. 2 is a side elevation of the inner portion of the attachment with parts in section.

The hollow shaft 1 may, if desired, be made of pipe, and at or near one end thereof is located the gear-segment 2. The angle-iron 3 is fixed to one end of the said shaft 2 and is provided at the point 4 with a twist for the purpose of adding rigidity to the same. The bolts 5 secure the said iron 3 to the framework of the implement at any desired point. The brace 6 is connected at its ends to the said iron 3 at or near the ends thereof and is adapted to brace the same against lateral strain.

The sleeve 7 is slid into position over the shaft 1. The said sleeve is mounted for rotation upon the shaft and is retained thereon by means of the cotter-pin 8, which passes through suitable perforations in the end of the shaft 1. The ratchet-lever 9 is fixed to the inner end of the sleeve 7 and is provided with the pawl 10, which is adapted to engage and disengage the gear-teeth of the segment 2. The spring harrow-teeth 11 are secured to the sleeve 7 by means of the clips 12, the ends of which pass through suitable perforations at the upper ends of the spring-teeth 7 and are secured therein by the usual taps screw-threaded upon the ends of the said clips. The upper ends of the spring-teeth 11 are provided with a number of perforations, whereby the position of the teeth 11 may be adjusted upon the sleeve 7 to meet conditions or requirements. The working ends of the teeth 11 are preferably located out of alinement with each other, so that the said teeth will not accumulate or collect trash, &c., as they are drawn over the ground.

The upper end of the lever 9 is within convenient operating distance from the plowman's seat, and by swinging the end of said lever it is obvious that the working ends of the harrow-teeth 11 may be caused to work at different degrees of depth within the soil in breaking the clods and pulverizing the same. Also the said lever may be manipulated in order to bring the working ends of the harrow-teeth 11 out of contact with the soil altogether.

The advantage of this invention resides in the fact that it is a plow attachment and being attached to the plow the ground is harrowed as soon as it is broken. Consequently no time elapses in which the soil might dry out and the clods harden. It is also of convenient form. The shaft being tubular is light and possesses maximum strength. The tubular sleeve extending over the shaft possesses the same and reduces the wear incident to friction between the two said members to a minimum.

The attachment may be easily and readily applied to a plow or detached from the same without changing the construction of the implement in any respect.

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

A harrow attachment for plows consisting of a shaft, means for attaching said shaft to

the frame of the plow, a sleeve rotatably located upon said shaft, a gear-segment fixed to the shaft and adapted to retain said sleeve against rotary movement, a ratchet-lever attached to the sleeve and having a dog which engages said segment, and harrow-teeth carried by the sleeve.

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

WILLIS WALKER.

Witnesses:

TH. CHRISTENSEN,

CHAS. HY. ELLIS.