(No Model.)

W. S. PAYNE.

HARROW ATTACHMENT FOR PLOWS.

No. 588,875. Patented Aug. 24, 1897.

Fig. 1.

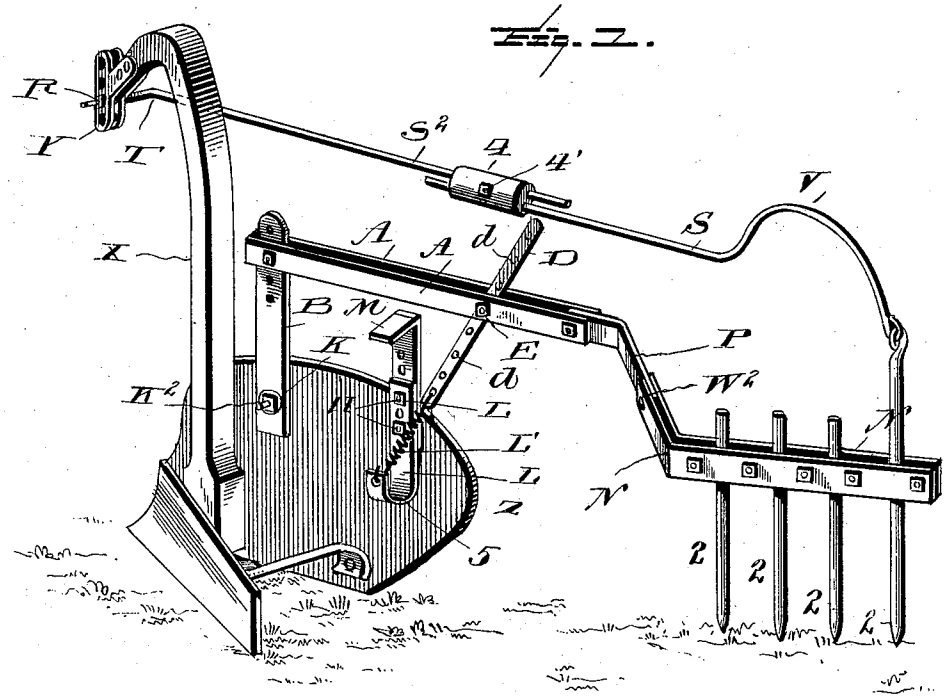


Fig. 2.

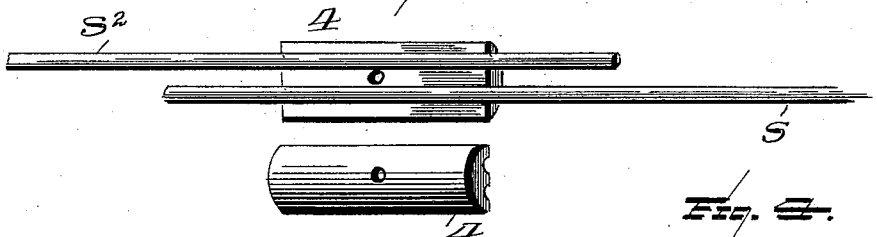


Fig. 3.

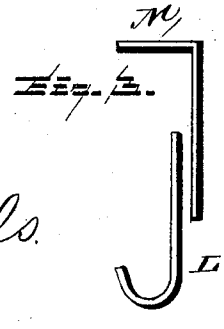
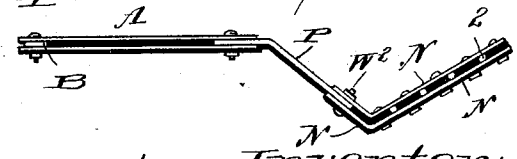


Fig. 4.



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UNITED STATES PATENT OFFICE.

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HARROW ATTACHMENT FOR PLOWS.

SPECIFICATION forming part of Letters Patent No. 588,875, dated August 24, 1897.

Application filed April 3, 1897. Serial No. 630,647. (No model.)

To all whom it may concern:

Be it known that I, WALTER SCOTT PAYNE, a citizen of the United States, residing at Bailey, Chickasaw Nation, Indian Territory, have invented certain new and useful Improvements in Harrow Attachments for Plows; and I do 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in harrow attachments, and especially to a device of this character which may be readily secured to an ordinary working or wheel plow, whereby the earth which has been turned by the plowshare may be thoroughly harrowed.

The invention relates, further, to the provision of a harrow attachment for plows by which the angle at which it is desired to dispose the teeth may be regulated, and also the tension or depth at which it is desired to have the teeth work, suitable means being provided to adjust the harrow so that it can move up and down as occasion may require while traveling over an irregular plowed surface.

To these ends and to such others as the invention may pertain the same consists, further, in the novel construction, combination, and adaptation of parts, as will be hereinafter more fully described, and then specifically defined in the appended claims.

My invention is clearly illustrated in the accompanying drawings, which, with the letters and figures of reference marked thereon, form a part of this specification, and in which drawings similar letters and figures of reference indicate like parts throughout the several views, in which—

Figure 1 is a perspective view of a plow, showing my improved harrow attachment secured thereto. Fig. 2 is a detailed view of the harrow attachment removed. Fig. 3 is a detail view. Fig. 4 is a top plan view of the clamping-bars holding the harrow-teeth.

Reference now being had to the details of the drawings by letter, X designates a plow-beam which has a suitable clevis Y secured to one end and carrying a moldboard Z of ordinary construction.

My harrow attachment, which is adapted for adjustment to any ordinary plow, consists of the two plates A A, secured together by means of a bolt *a* at their forward ends, having a plate B pivoted between the said ends, and the lower end of the said plate B is attached to the moldboard Z by means of a bolt K, which passes through an aperture in the moldboard and plate B and has a suitable nut k^2 mounted thereon. In order to allow the said plate to turn freely at its lower end and not bind against the moldboard and nut, a suitable washer is interposed between the nut and the moldboard, and the plate B is allowed to turn on this washer, while the nut engages against the outer end of the washer. Secured between the rear ends of the plates A is the angle-plate P, which is laterally inclined, as shown in the drawings, and is secured to the plates A by means of the adjusting-bolt W, this adjustment being for the purpose whereby the harrow hereinafter described may be regulated to the furrow. To the lower end of the said angle-plate P are secured the plates N N by means of a bolt W^2, whereby the angle at which it is desired to have the harrow-teeth disposed is regulated. Between the plates N N are clamped the teeth 2 2 by means of bolts passing through registering apertures. These bolts have screw-threaded connection with one of these plates and have nuts thereon, whereby the teeth may be securely clamped and held in a fixed position.

The brace-rod S is curved, as shown at V, and has one end secured to a loop in the harrow-tooth 2 and has its other end held between the clamped members 4, while the brace-rod S^2, which has one end held in the said clamped members, is connected at its other end to the clevis by means of a nut R. By this construction of braces it will be seen that the tension on the same may be regulated by the ends of the rods being adjusted between the clamped members 4. This clamping feature is necessary in order to avoid any slack in the rods in case the angle of the harrow-teeth is changed. If it is desired to let out the rod S^2 slightly at its forward end, (which has a

curved portion T,) it may be done by the nut or tap R on the end of the said rod S^2 or by taking up, if found too loose. The curved portion V in the rod S is provided so as to clear the rod of the soil as it leaves the moldboard of the plow.

Secured to the plates A A, by means of the bolt E, is the plate D, having a series of apertures *d* therein, whereby the plate may be adjusted vertically. Secured to the rear side of the moldboard, by means of the bolts H, is the plate L, which has an upper right-angle portion M, which serves as a stop, limiting the lower throw of the plates A A, while its lower end is curved, as shown at 5, and has secured to its end at F one end of the coiled spring L′, which is connected to the plate D at G. This plate D is the tension-bar, and may be raised or lowered according to the depth that it is desired to have the harrow-teeth extend down into the plowed ground.

From the foregoing it will be seen that the attachment may be readily applied to any plow, and the angle at which it is desired to have the harrow-teeth disposed may be easily and quickly adjusted.

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

1. In combination with a plow, the plate B pivoted to the moldboard, the plates A secured to the upper end of plate B, the plates H, the teeth clamped between same, the angle-plate P connecting the two sets of plates, the adjusting-rods S^2 and S, and a spring-actuated tension device connecting the moldboard with the harrow-plates, substantially as shown and described.

2. In a harrow attachment, the combination with the moldboard, the plates A A and B bolted together, the washer K, on which the lower end of said plate B is pivoted, of the plate L secured to the moldboard, the stop M at its upper end, the adjustable perforated bar D secured to plates A and coiled spring connecting the lower end of said bar, and the lower curved end of plate L, all substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

WALTER SCOTT PAYNE.

Witnesses:
R. T. LYLL,
W. B. GRAHAM.