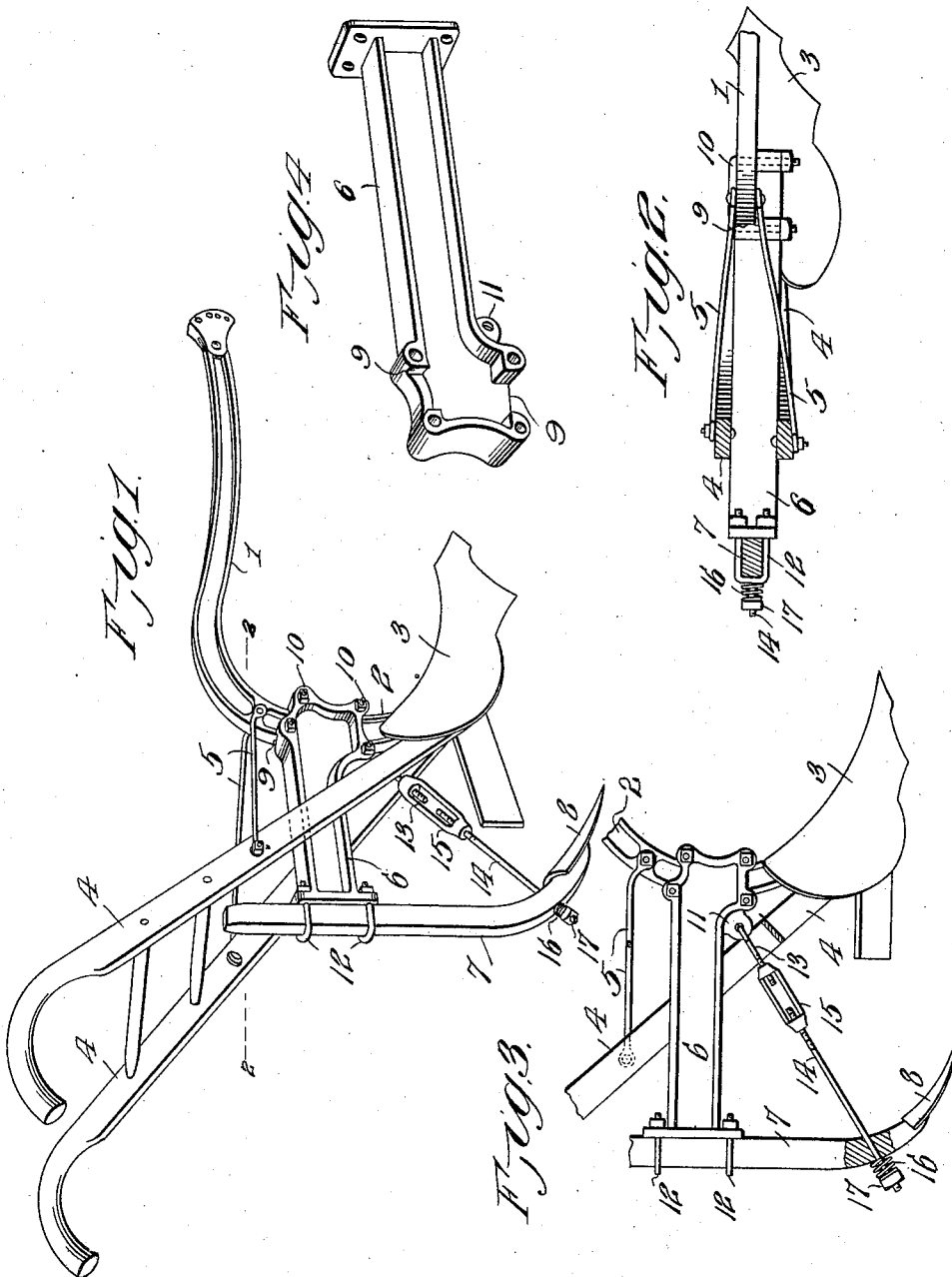


W. A. STEPHENS.
SUBSOIL PLOW ATTACHMENT.

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1,062,198.

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SUBSOIL-PLOW ATTACHMENT.

1,062,198.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM A. STEPHENS, a citizen of the United States, residing at Little Rock, in the county of Pulaski and State of Arkansas, have invented new and useful Improvements in Subsoil-Pow Attachments, of which the following is a specification.

The present invention relates to agricultural implements and more particularly to a subsoil attachment, whereby an ordinary turning plow may be equipped with means for loosening the soil in the bottom of the furrow without bringing such soil to the surface and exposing the same to the elements which destroy the nutritive qualities of the subsoil.

The invention provides an attachment of novel structure which may be quickly applied to a turning plow when required for use and easily disconnected therefrom to be laid aside when not required for immediate operation.

The invention consists of the novel features, details of construction and combination of parts, which hereinafter will be more particularly set forth, illustrated in the accompanying drawing, and pointed out in the appended claim.

Referring to the drawing, forming a part of the application, Figure 1 is a perspective view of a turning plow provided with a subsoil attachment embodying the invention. Fig. 2 is a horizontal section on the line 2—2 of Fig. 1. Fig. 3 is a detail view in elevation of the attachment showing a part of the turning plow, the standard having a portion broken away. Fig. 4 is a perspective view of the beam of the subsoil plow attachment.

Corresponding and like parts are referred to in the following description, and indicated in all the views of the drawing, by the same reference characters.

The numeral 1 designates the beam of the turning plow, the same having its rear portion curved downwardly to form the standard 2 to which a plowshare 3 of ordinary construction is attached. The handle bars 4 are attached at their lower ends to the standard 2 and braces 5 are interposed between the beam 1 and the handle bars to retain the parts in proper position.

The subsoil attachment comprises a beam 6, a standard 7 and a subsoil plow 8. The beam 6 has a recess 9 in its side near the front end to form a seat in which is fitted

the main plow beam 1, said beam being held in place by suitable fastenings, as U bolts or clips 10, which pass through transverse openings formed in the beam upon opposite sides of the recess or seat 9. An eye 11 is located near the front of the beam 6 in the rear of the recess 9 and provides convenient means for attachment of a brace, which extends to the lower portion of the standard 7. The rear portion of the beam 6 has a flange which extends vertically, the upper and lower ends of said flange having openings through which bolts 12 pass for securing the standard 7 to the rear end of the beam 6. The brace interposed between the front portion of the beam 6 and the lower portion of the standard 7 is extensible and comprises rods 13 and 14 and a turnbuckle 15. The upper rod 13 has a hook which engages the eye 11. The lower rod 14 passes through an opening formed in the standard 7 and receives a spring 16 which is confined between the standard and a nut or stop 17 provided upon the lower end of the rod 14. The opposing ends of the rods 13 and 14 are threaded to receive the turnbuckle 15, thereby admitting of adjusting the brace to give the requisite strength to the standard 7. The effective tension of the spring 16 may be regulated by the nut 17 or the turnbuckle 15 or by a combined adjustment of both the nut and the turnbuckle.

The beams of the turning and the subsoil plows are preferably cast and the front portion of the subsoil beam is widened and thickened so as not to be weakened by the provision of the recess 9 and to enable the same to withstand the strain coming thereon when the subsoil attachment is in active operation. To place the subsoil attachment in position it is necessary only to attach the beam 6 to the beam 1, the latter entering the recess 9, after which the bolts or clips 10 are passed through the openings in the front portion of the beam 6, thereby securing the parts. To remove the subsoil attachment the same may be quickly effected by loosening the bolts or clips 10 and disengaging the same from the beam 6 when the latter may be disconnected from the beam 1.

From the foregoing description, taken in connection with the accompanying drawing, the advantages of the construction and of the method of operation will be readily apparent to those skilled in the art to which the invention appertains, and while I have

described the principle of operation of the invention, together with the device which I now consider to be the embodiment thereof, I desire to have it understood that the device shown is merely illustrative, and that such changes may be made when desired as are within the scope of the claim appended hereto.

Having thus described the invention what is claimed as new, is:—

A subsoil attachment for a turning plow, the same comprising a beam having a flange at its rear end provided with apertures to receive fastenings, said beam having a recess in a side near its front end to receive the standard of the plow and having openings at the sides of the recess for receiving

fastenings by means of which the attachment is secured to the turning plow, said beam being further provided near its front end in the rear of the side recess with an eye, a standard having a shovel, means for securing the standard to the flanged end of the beam in the required adjusted position, and an adjustable brace interposed between the lower portion of the standard and the eye at the front end of the beam.

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

WILLIAM A. STEPHENS.

Witnesses:

GEORGE W. HENDRICKS,
GEORGE W. MURPHY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."