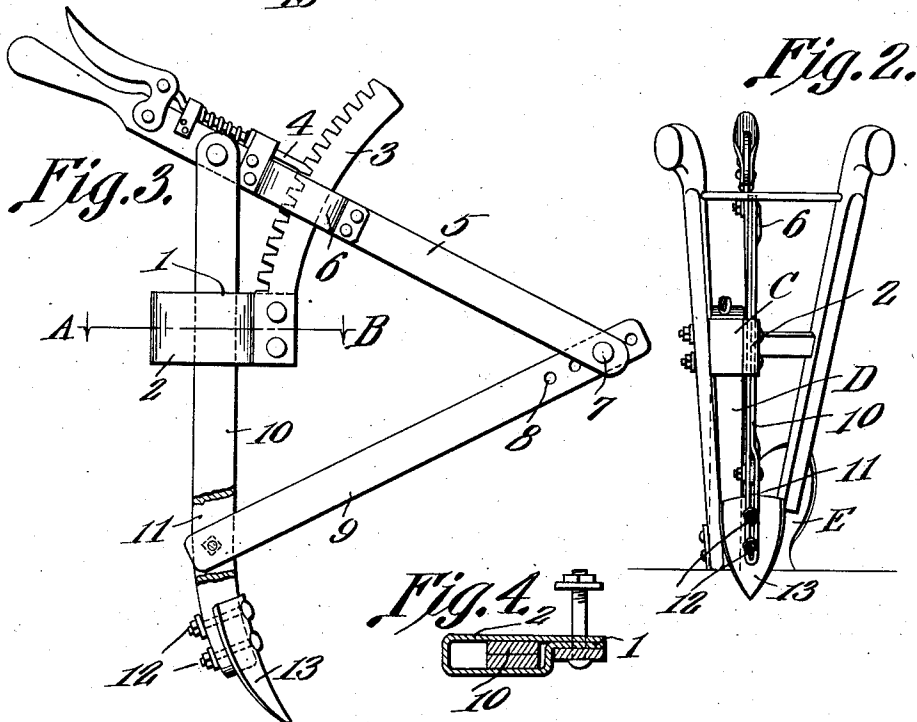
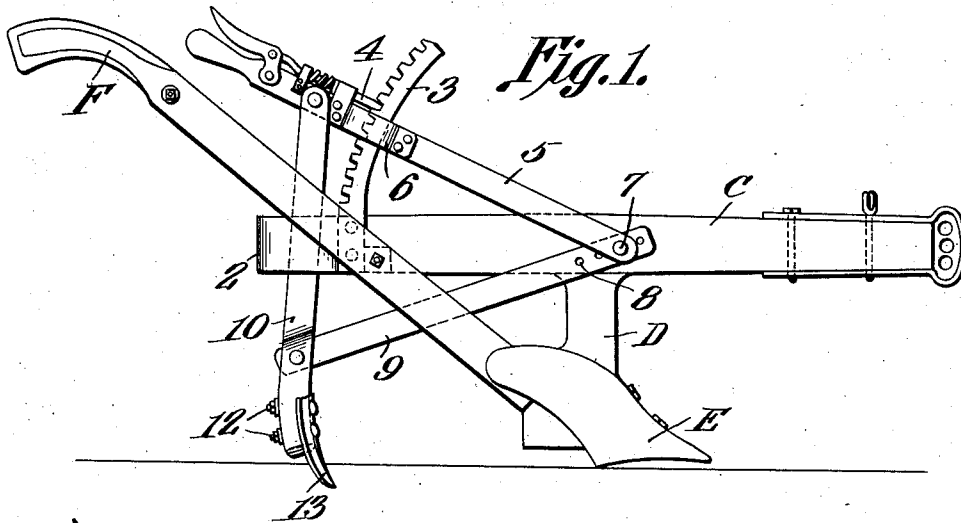


J. F. PALMER.
SUBSOILER ATTACHMENT FOR PLOWS.
APPLICATION FILED OCT. 28, 1911.

1,021,793.

Patented Apr. 2, 1912.



Witnesses

J. F. Palmer
D. H. H. H. H.

J. F. Palmer,
Inventor

by C. A. Snow & Co.
Attorneys

UNITED STATES PATENT OFFICE.

JAMES FRANKLIN PALMER, OF GREENSBORO, GEORGIA, ASSIGNOR OF ONE-HALF TO
SIMEON T. ELLIS, OF HAGAN, GEORGIA.

SUBSOILER ATTACHMENT FOR PLOWS.

1,021,793.

Specification of Letters Patent.

Patented Apr. 2, 1912.

Application filed October 28, 1911. Serial No. 657,359.

To all whom it may concern:

Be it known that I, JAMES F. PALMER, a citizen of the United States, residing at Greensboro, in the county of Greene and State of Georgia, have invented a new and useful Subsoiler Attachment for Plows, of which the following is a specification.

This invention relates to subsoil attachments for plows, one of its objects being to provide a simple, durable and inexpensive device of this character which can be readily attached to plows of different types and which operates to pulverize the subsoil to any desired depth.

A further object is to so mount the attachment relative to the plow beam as to offer the minimum resistance to the forward movement of the plow while the same is in use.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, can be made within the scope of what is claimed, without departing from the spirit of the invention.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings:—Figure 1 is a side elevation of a plow having the attachment applied thereto. Fig. 2 is a rear elevation of the parts shown in Fig. 1. Fig. 3 is an enlarged side elevation of the attachment, a portion thereof being broken away. Fig. 4 is a section on line A—B Fig. 3.

Referring to the figures by characters of reference C designates the beam of a plow, the standard of the plow being indicated at D and the plow share at E. The plow does not constitute any part of the invention and can be of any type desired.

The attachment for use in connection with the plow includes an attaching plate 1 having an integral loop 2 and an arcuate rack 3 extends from the attaching plate and is adapted to be engaged by a spring pressed pawl 4 carried by an actuating lever 5. This lever is provided with a guide strap 6 and the rack 3 extends between the lever and the strap so as to prevent displacement of said

lever relative to the rack. The lever 5 is pivotally mounted, at one end, upon a pivot bolt 7 extending through any one of a series of openings 8 in a draw bar 9, the said bolt 7 serving to fasten the bar 9 to the beam C. It is to be understood that the plate 1 is to be bolted to the beam C adjacent the rear end of the beam. Bar 9 is pivotally connected, at its rear end, to a standard 10 preferably formed in a single length of metal folded at its center to form a longitudinal slot 11 in the lower end portion thereof into which the bar 9 extends. Said slot also receives attaching bolts 12 for holding a plow share 13 upon the standard. The standard 10 is slidably mounted within the guide loop 2 and its upper end is pivotally connected to the lever 5. The slot 11 does not extend throughout the length of the standard but is only formed in the lower portion thereof, as will be apparent by referring to Fig. 2.

As hereinbefore stated the parts constituting the present invention constitute an attachment to be applied to plows of different types. When the subsoil plow is not to be used the lever 5 is moved upwardly and pawl 4 placed in engagement with rack 3, thus supporting the standard 10, plow share 13, and draw bar 9, in elevated position. When it is desired to use the subsoiler, the lever 5 is adjusted downwardly, thus causing the share 13 to swing downwardly and forwardly about the bolt 7 as a center. The share 13 will thus enter the bottom of the furrow and pulverize the subsoil. As the share 13 is swung downwardly and forwardly it presents its lower edge to the soil and the upper face of the share is arranged at an acute angle to the path of the point of the plow so that resistance to the forward movement of the plow is thus reduced to the minimum.

The attachment can be readily applied to a plow beam and can be easily manipulated by a person grasping the handles F of the plow.

What is claimed is:—

1. A subsoil attachment for plows, including a draw bar, a standard pivotally connected thereto, a share carried by the standard, a guide for the standard, separate means for securing the guide and the draw bar to a plow beam, an adjusting lever pivotally connected to the standard and draw

bar, and coöperating means upon the guide and lever for holding said lever against movement relative to the guide.

2. A subsoil attachment for plows, including a draw bar, a standard pivotally connected thereto, a share secured to the standard, a guide for the standard, separate means for securing the guide and draw bar to a beam, an adjusting lever fulcrumed upon one of said means and pivotally connected to the standard, and coöperating means upon the guide and lever for locking said lever against movement relative to the guide.
3. A subsoil attachment for plows including a draw bar, a guide loop, separate means for securing the loop and bar to a plow beam, a standard pivotally connected to the beam and slidably mounted within the guide, a share carried by the standard, a lever fulcrumed upon one of the connecting means and pivotally connected to the standard, an arcuate rack bar extending from the guide loop, and means upon the lever

and coöperating with the rack bar for locking said lever and the standard against movement relative to the beam.

4. The combination with a plow beam, of a subsoil attachment including a draw bar pivotally and adjustably connected to the beam, a guide loop secured to the rear end portion of the beam, a standard pivotally connected to the draw bar and slidably mounted within the loop, a lever fulcrumed upon the connection between the draw bar and beam, said lever being pivotally connected to the upper end of the standard, coöperating means upon the lever and loop for locking said lever against movement relative to the beam, and a share carried by the standard.

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

JAMES FRANKLIN PALMER.

Witnesses:

B. L. BRYAN,
T. F. BEASLEY.

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