C. M. CARRAWAY.

PLOW ATTACHMENT.

APPLICATION FILED JULY 20, 1916.

1,210,901.

Patented Jan. 2, 1917.

2 SHEETS—SHEET 1.

Fig. 1.

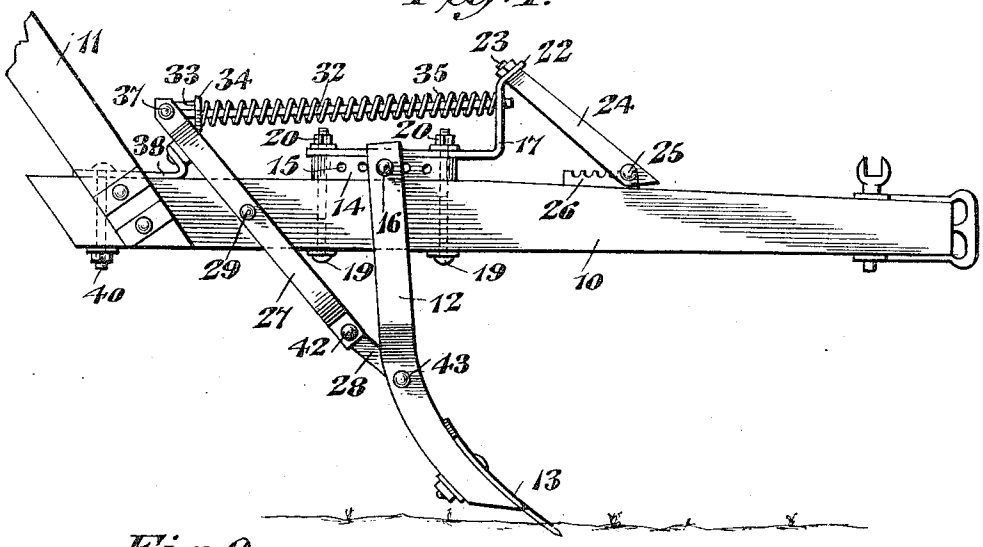


Fig. 9.

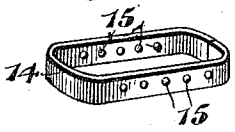


Fig. 10.

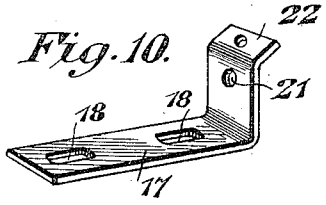


Fig. 2.

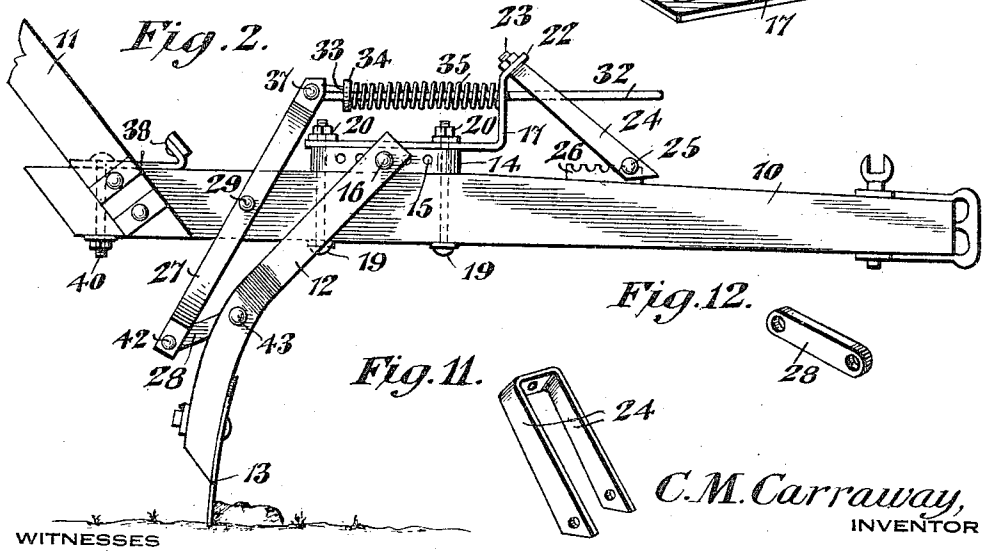


Fig. 12.

Fig. 11.

WITNESSES

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2 SHEETS—SHEET 2.

Fig. 3.

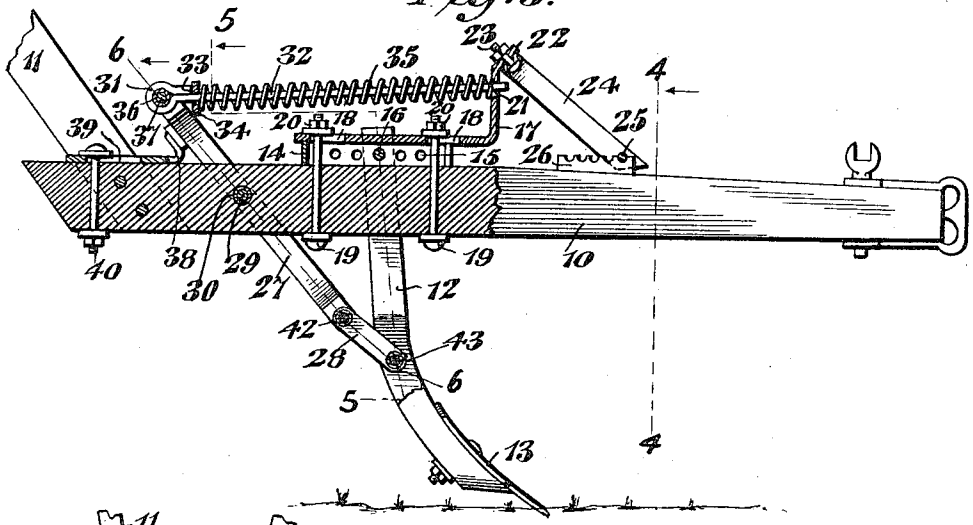


Fig. 4.

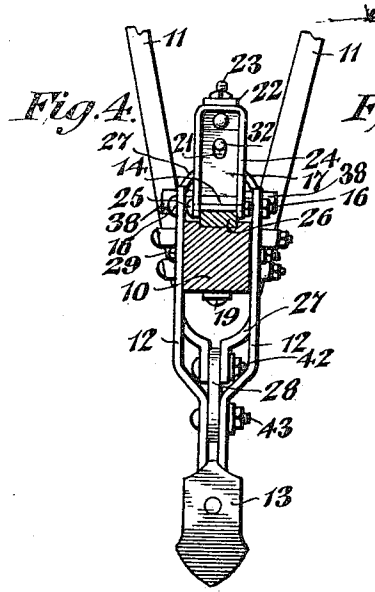


Fig. 5.

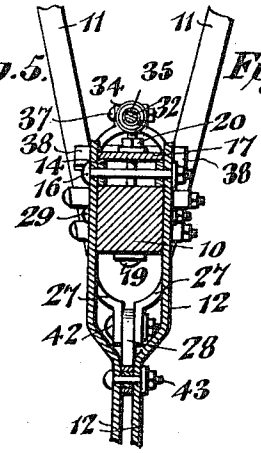


Fig. 6.

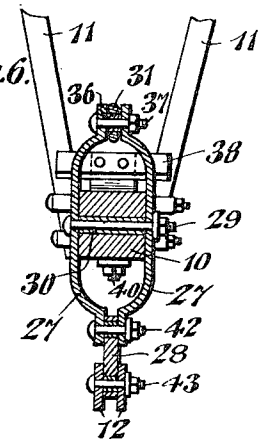


Fig. 8.

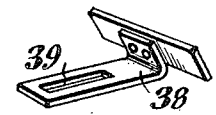
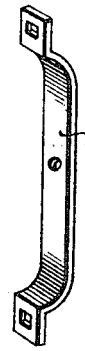


Fig. 7.



WITNESSES

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PLOW ATTACHMENT.

1,210,901. Specification of Letters Patent. Patented Jan. 2, 1917.

Application filed July 20, 1916. Serial No. 110,373.

To all whom it may concern:

Be it known that I, CHARLIE M. CARRAWAY, a citizen of the United States, residing at Shongaloo, in the parish of Webster and State of Louisiana, have invented a new and useful Plow Attachment, of which the following is a specification.

The present invention relates to an attachment for plows.

The object of the present invention is to provide an attachment for plows, which will cause the plow point to yield backwardly when it strikes a stump or other obstruction.

The present invention accomplishes the above object by pivoting a plow standard on the plow beam, and providing a two part brace between the beam and the standard, and a spring which has peculiar connection with the brace to normally and yieldingly hold it open or distended, and which permits the buckling or folding of the brace when the plow standard is subjected to abnormal pressure.

The invention will be best understood from a consideration of the following detailed description, taken in connection with the accompanying drawings forming part of this specification, with the further understanding that while the drawings show a practical form of the invention, the latter is not confined to any strict conformity with the showing of the drawings, but may be changed and modified so long as such changes and modifications come within the scope of the appended claims.

In the drawings: Figure 1 is a side elevation of the usual plow, having the improvements of this invention applied thereto, and showing the parts in normal position. Fig. 2 is a similar view, showing the plow standard swung backwardly, when brought into contact with a stump, or the like. Fig. 3 is a longitudinal vertical section, taken substantially centrally through the plow and the attachment thereto, the parts being in normal position. Fig. 4 is a transverse section, taken on the line 4—4 of Fig. 3, looking in the direction of the arrow. Fig. 5 is a transverse section, taken on the line 5—5 of Fig. 3, showing the pivotal mounting of the plow standard on the beam, and showing the connection between the standard and the lower end of the brace. Fig. 6 is a similar view, taken on the line 6—6 of Fig. 3, showing the brace in section, the pivotal connection between the brace and the plow beam, and the mounting of the spring supporting rod. Fig. 7 is a detail perspective view of a portion of the brace. Fig. 8 is a detail perspective view of the stop or rest employed. Fig. 9 is a detail perspective view of the pivot member used for connecting the plow standard to the plow beam. Fig. 10 is a detail perspective view of the spring guiding member. Fig. 11 is a similar view of the support for the spring and the guiding member. Fig. 12 is a like view, showing the link or lower part of the brace.

Referring to these drawings, wherein like parts are designated by similar numerals of reference throughout the several views, 10 designates the ordinary plow beam, having the usual handles 11 at its rear end.

A plow standard 12, made up of a pair of flat bars, carries upon its lower ends a shovel or point 13. The upper ends of the flat bars are offset outwardly from each other to receive the plow beam 10 therebetween. A pivot member 14, comprising, as shown to advantage in Fig. 9, a single length of strap metal bent into a substantially rectangular frame is seated on the upper side of the plow beam. Rows of registering openings 15 are formed in the opposite sides of the pivot member to receive therethrough a pivot bolt 16, carried upon the upper forked end of the standard 12, to pivotally connect the standard to the plow beam.

A spring support or supporting member 17, best shown in Fig. 10, is seated on top of the pivot member 14. Longitudinally extending slots 18 are formed in the opposite ends of the member 17 and receive therethrough the upper ends of bolts 19, projecting from the beam 10 upwardly through the pivot member 14. Clamping nuts 20 are threaded on the bolts 19 to bind the supporting member 17, and the pivot member 14 upon the beam 10.

The supporting member 17 is turned upwardly at its forward end, is provided therein with a guide opening 21, and is bent forwardly at its upper extremity to provide a lip 22. The lip 22 is secured, by a bolt 23, to a support 24. As shown in Fig. 11, the support 24 is made preferably of a length of strap metal bent substantially U-shaped, and has its closed end secured to the lip 22 by the bolt 23. A transverse pin 25 is carried in the open end of the support 24, and is adapted to rest in any one of a number of transverse grooves in the upper face of a

corrugated block 26, mounted on the plow beam 10. Longitudinal adjustment of the supporting member 17 on top of the pivot member 14 moves the support 24 therewith, and the pin 25 drops into the adjacent groove in the block 26, to reinforce the guiding member 17 in all adjustments.

The standard 12 is supported in normal position, as shown in Figs. 1 and 3, by means of a brace. The brace is composed of two sections, a lever 27, and a link 28. The lever 27 is made up of a pair of arms, one of which is shown in Fig. 7, which engage against the opposite sides of the beam 10, and are pivotally connected thereto intermediate their ends by a bolt 29. The arms 27 are held from binding against the opposite sides of the beam by a bushing 30, which passes through the beam 10 about the bolt 29. Between the upper ends of the arms 27 is hinged the eye 31 of a guide rod 32, extending forwardly through the opening 21 in the supporting member 17. The rear end of the rod 32 is rolled over to form the eye 31, the returned extremity forming a stop 33, against which is pressed a washer 34, by a spring 35, the latter surrounding the guide rod 32, and bearing at its forward end against the upturned part of the supporting member 17. The support 24 receives the thrust of the spring 35 when the same is contracted. From Figs. 3 and 6, it will be noted that the eye 31 of the guide rod encircles a bushing or sleeve 36, which lies between the upper ends of the arms 27, and through which passes a bolt 37, pivotally connecting the arms to the rod 32.

A stop 38, preferably of T-form has a longitudinal slot 39 in its shank to adjustably receive a bolt 40 carried by the beam 10 near the handles. The head of the stop 38 is bent laterally to engage across the rear edges of the arms 27 when the latter are swung back into normal position.

A bolt 42 connects the lower ends of the arms 27 to the adjacent end of the link 28, and a bolt 43 connects the opposite end of the link 28 to the plow standard 12, and is so located that the link 28 is out of line with the lever 27, when the upper end of the lever engages the stop 38. Bushings or sleeves are preferably placed about the bolts 42 and 43, and pass through the opposite ends of the link 28 to prevent binding of the parts, and at the same time to permit the proper tightening of the bolts.

In operation, when the point or shovel 13 strikes an obstruction, as shown in Fig. 2, the point and its standard 12 are swung backwardly, the brace formed by the parts 27 and 28 folding into the position shown in Fig. 2. As the brace is folded, the lever 27 swings about its pivot bolt 29, and projects the guide rod 32 forwardly through the opening 21 in the supporting member, and compresses the spring 35. When the standard 12 is swung rearwardly, the handles 11 of the plow may be elevated to slightly elevate the plow and clear the obstruction.

As soon as the point or shovel 13 is freed, the spring 35 immediately returns the brace to its normal extended position, and projects the standard 12 forwardly into its usual position. The spring 35 has sufficient tension to hold the standard 12 normally in the ordinary position of plows, and to act only when undue resistance is offered to the forward travel of the plow.

The pivot bolt 16 may be adjusted into any one of the row of openings 15 to pivotally hold the standard 12 in various angular positions to support the shovel 13 at the desired angle with respect to the ground surface, when the parts are in normal position.

What is claimed is:—

1. In combination with a plow beam, and a standard, a pivotal connection for the standard mounted for longitudinal adjustment on the plow beam, a brace hinged to the plow beam and extended above the latter and having connection with the standard, and resilient means mounted for longitudinal adjustment on and above the plow beam and engaging the upper end of the brace to normally hold the standard in a forwardly swung position.

2. In combination with a plow beam, and a standard, a pivot member on said beam having a longitudinal row of transverse openings therethrough, a bolt carried upon the upper end of said standard and adapted for engagement in the desired one of said openings to pivotally and adjustably connect the standard to the beam, a brace hinged to the beam and having connection with the standard, a supporting member mounted on said pivot member and adapted for longitudinal adjustment thereon, and a spring between said supporting member and said brace to urge the latter in one direction and yieldingly hold the standard in a forwardly swung position.

3. In combination with a plow beam, and a standard having a forked end receiving the beam therethrough, a pivot member formed of strap metal bent into substantially rectangular form and having registering rows of apertures in its opposite sides, means for securing the pivot member edgewise against the upper side of the beam, a pivot bolt engaging through the forked ends of the standard and through a registering pair of said apertures in the pivot member to pivotally support the standard, a brace pivoted to said beam having connection with said standard, and a spring mounted on the beam and having connection with the brace to swing the brace and the standard forwardly.

4. In combination with a plow beam, and a standard, means for pivotally connecting

the standard in longitudinally adjusted position upon the beam, a brace consisting of a lever pivoted to the beam and having one end projecting below the same and its opposite end projecting above the beam, and a link hinged between the lower end of said lever and said standard, and a spring adjustably supported at one end on said beam and engaging at its opposite end against the upper end of said lever to yieldingly hold the latter and said standard in a forwardly swung position.

5. In combination with a plow beam, and a standard, means for pivotally mounting the standard on the plow beam, a brace consisting of a lever hinged on the beam and extending above and below the same, and a link connecting the lower end of the lever to the standard, a rod hinged to the upper end of said lever, a supporting member mounted for longitudinal adjustment on said beam and having an upturned apertured portion receiving the outer end of the rod therethrough to guide the rod, a spring surrounding the rod between said supporting member and the upper end of said lever, a stop on said beam adapted for engagement with the upper end of said lever to limit the rearward swinging thereof, and means connected to the upturned end of said supporting member to support the same against the pressure of the spring.

6. In combination with a plow beam, and a standard, a pivot member seated on the upper side of the standard, a supporting member seated on the upper side of said pivot member, clamping means carried by the beam engaging the pivot member and the supporting member for binding the same together and to the beam, a brace hinged to the beam and having connection at one end with the standard, a spring interposed between the upper end of the brace and said supporting member to yieldingly hold the brace extended and the standard in a forwardly swung position, a support connected to the supporting member to reinforce the same against the pressure of the spring, and means permitting the adjustment of the supporting member and its support to vary the tension of the spring.

7. In combination with a plow beam, and a standard having a point thereon, a pivot member seated on the upper side of the beam and having a longitudinal row of openings therein, a longitudinally adjustable supporting member mounted on said pivot member and having slots therein, clamping bolts carried by the beam and engaging through the pivot member and through the slots in the supporting member, to bind the supporting member and the pivot member upon the beam, a two-part brace composed of a lever hinged to the plow beam and a link connecting the lower end of the lever to said standard, a rod hinged to the upper end of said lever and extending forwardly through said supporting member, and a spring surrounding the rod between the lever and the supporting member to yieldingly hold the lever in position and project said standard forwardly.

8. In combination with a plow beam, and a standard, a pivot member on the beam, a supporting member on the pivot member, clamping bolts carried by the beam and passing upwardly through the pivot member and the supporting member to bind the same together and upon the beam, a bolt carried by the standard and adapted for adjustment upon the pivot member to adjustably connect the standard to the beam, a lever hinged intermediate its ends to the beam and having one end connected to the standard, a rod hinged to the opposite end of the lever and engaging said supporting member, a spring mounted on the rod and engaging at one end the supporting member and at its opposite end the opposite end of the lever, a U-shaped support connected at its closed end to the supporting member, a pin connecting the free ends of the support, and a block carried by the beam having transverse grooves in its upper face adapted to receive said pin therein and adjustably hold the brace upon the beam.

9. In combination with a plow beam, and a standard, means for pivotally mounting the standard on the plow beam, a lever hinged to the beam and extending above and below the same, a link connecting the lower end of the lever to the standard, a rod hinged to the upper end of said lever, a guiding means mounted on said beam and receiving the outer end of the rod therethrough to guide the rod, a spring surrounding the rod between said guiding means and the upper end of said lever, and means connected to said guiding means to support the same against the pressure of the spring.

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

CHARLIE M. CARRAWAY.

Witnesses:
L. E. Crow,
L. H. Morris.

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