L. E. WATERMAN.

SPRING TRIP FOR PLOWS.

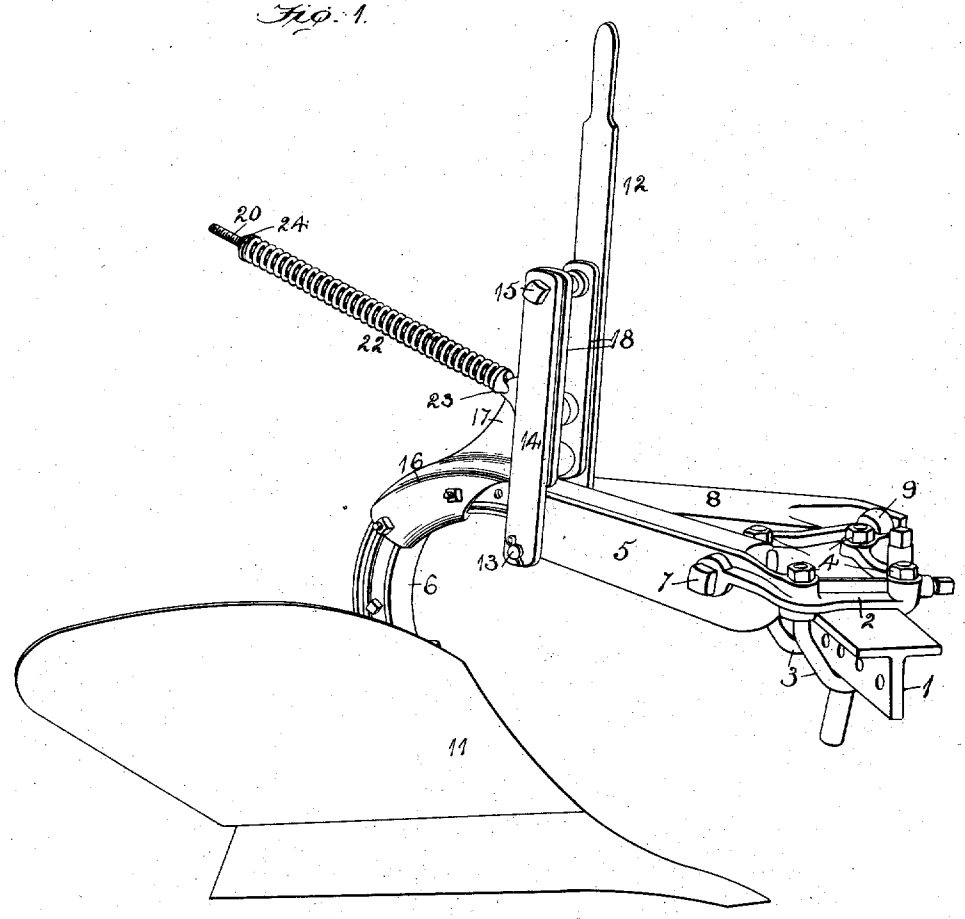
APPLICATION FILED JAN. 7, 1908.

903,117.

Patented Nov. 3, 1908.

3 SHEETS—SHEET 1.

Fig. 1.



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Witnesses

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E. Behel

By A. O. Behel.

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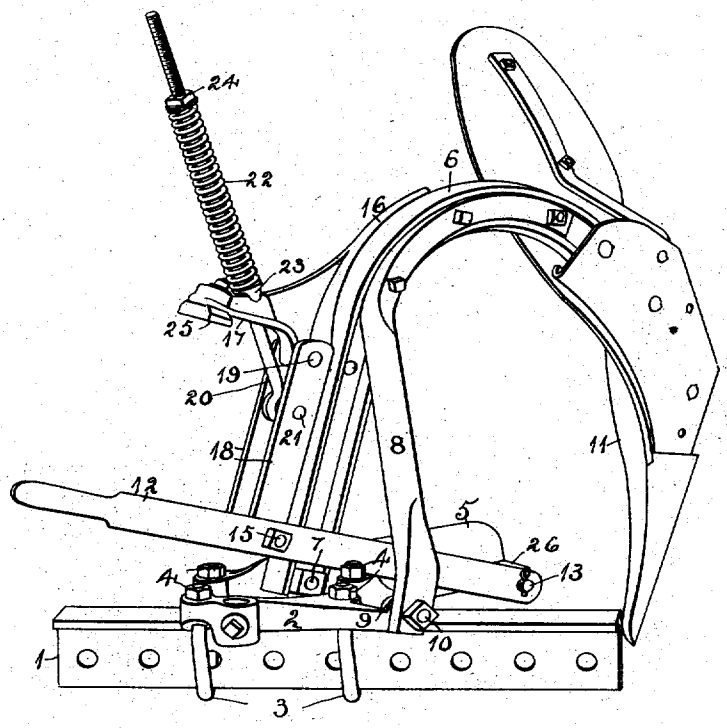
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3 SHEETS—SHEET 2.

Fig. 2.



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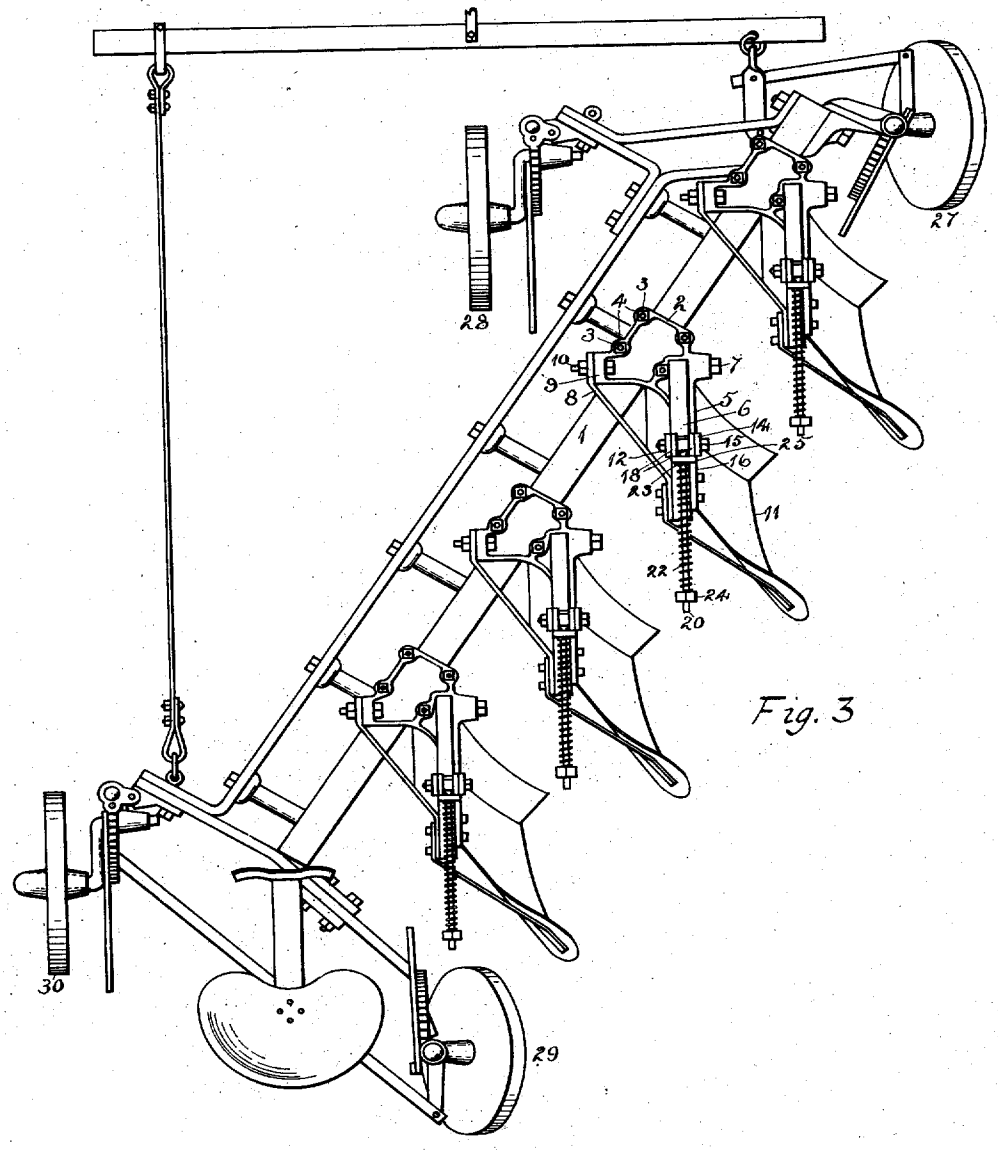


Fig. 3

Witnesses:
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UNITED STATES PATENT OFFICE.

LEWIS E. WATERMAN, OF ROCKFORD, ILLINOIS, ASSIGNOR TO EMERSON MANUFACTURING COMPANY, OF ROCKFORD, ILLINOIS, A CORPORATION OF ILLINOIS.

SPRING-TRIP FOR PLOWS.

No. 903,117. Specification of Letters Patent. Patented Nov. 3, 1908.

Application filed January 7, 1908. Serial No. 409,688.

To all whom it may concern:

Be it known that I, LEWIS E. WATERMAN, a citizen of the United States, residing at Rockford, in the county of Winnebago and State of Illinois, have invented certain new and useful Improvements in Spring-Trips for Plows, of which the following is a specification.

The object of this invention is to hold the plow to its work in a yielding manner.

In the accompanying drawings, Figure 1 is a perspective view of the plow in its working position. Fig. 2 is a perspective view of the plow in its upturned position. Fig. 3 is a plan view of a wheeled plow to which my improvements are connected.

The frame 1 in this instance has its forward end supported by the front furrow-wheel 27, and land-wheel 28, each provided with suitable adjusting levers. The rear end of the frame is supported by the rear furrow-wheel 29, and the land wheel 30, each provided with adjusting levers.

By means of the adjusting levers the frame as a whole can be raised and lowered, and the plowing attachments to be described can be raised and lowered or adjusted into the proper working positions. To the frame is connected a bracket 2 by the U bolts 3 and nuts 4 turned on the screw-threaded ends of the bolts. From the bracket extends an arm 5 which diverges from the point of its union with the bracket.

A plow-beam 6 has a pivotal connection with the bracket 2 by the bolt 7. To the plow beam is secured a brace 8, which diverges from its connection therewith and extends forwardly to a point opposite the pivoted end of the plow-beam 6 when it is pivotally connected with the ear 9 extending from the bracket 2 by the bolt 10. To the plow-beam 6 is connected a plow 11.

To the free end of the arm 5 is pivotally connected a hand-lever 12, by the bolt 13. A bar 14 has one end pivotally connected with the free end of the arm 5 by the bolt 13. The other end of this bar has a pivotal connection with the hand-lever 12 by the bolt 15. To the plow-beam 6 is secured a projection 16 which has a branch 17. To the forward end of the projection 16 are pivotally connected two links 18 by the pin 19, and the other ends of these links are pivotally connected by the bolt 15 to the bar 14 and to the hand-lever 12.

A rod 20 has one end located between the links 18 and is connected thereto by the bolt 21. This rod 20 extends through an opening in the branch 17, and a spring 22 surrounds the rod. A washer 23 is located on the rod 20 and rests in engagement with the branch 17. A nut 24 is turned in engagement with the screw-threaded portion of the rod 20. The upper end 25 of the branch 17 rests in contact with the rear edge of the links 18 when the plow is in working position and acts as a stop to the downward movement of the plow beam.

When the plow is in working position shown at Fig. 1 of the drawings, the links 18 will be in line with the bar 14 and hand-lever 12, and the plow-beam will rest on the projection 26 extending from the arm 5 through which the bolt 13 passes. The spring 22 will hold the plow-beam in this position. Should the plow 11 strike an obstruction, the beam will rise on its pivotal connection with the bracket 2, which will move the ends of the links 18 connected to the projection 16 forward, thereby compressing the spring 22. After the plow has passed the obstruction the spring 22 will return the parts to their normal or working positions. By means of the hand-lever 12 the attendant can raise the plow into the position shown at Fig. 2 which will expose the bottom of the plow so that a new one can be attached or the parts repaired.

I claim as my invention.

1. The combination of a frame, a plow beam having a pivotal connection with the frame, a plow connected to the beam, a bar having one end pivotally connected to the frame, a bar having a pivotal connection with the plow-beam, the bars directly pivotally connected, and a spring exerting its force on the bars.

2. The combination of a frame, a plow-beam having a pivotal connection with the frame, a plow connected to the beam, a bar having one end pivotally connected to the frame, a bar having a pivotal connection with the beam, the bars pivotally connected, a rod having a pivotal connection with the bar connected to the beam and extending through a portion attached to the beam, a spring surrounding the rod, one end of the spring bearing against the beam, and means for adjustably holding its other end with relation to the rod.

3. The combination of a frame, a plow-beam having a pivotal connection with the frame, a plow connected to the beam, two bars pivotally connected to the frame, two bars pivotally connected to the beam, the bars pivotally connected, and a spring exerting its force on the bars.

4. The combination of a frame, a plow-beam having a pivotal connection with the frame, a plow connected to the beam, two bars pivotally connected to the frame, one of the bars provided with a handle extension, two bars pivotally connected to the beam, the bars pivotally connected, and a spring erting its force on the bars.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

LEWIS E. WATERMAN.

Witnesses:
A. O. BEHEL,
E. D. E. N. BEHEL.

Correction in Letters Patent No. 903,117.

It is hereby certified that in Letters Patent No. 903,117, granted November 3, 1908, upon the application of Lewis E. Waterman, of Rockford, Illinois, for an improvement in "Spring-Trips for Plows," an error appears in the printed specification requiring correction, as follows: In line 15, page 2, the word "erting" should read *exerting;* and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 8th day of December, A. D., 1908.

[SEAL.]

C. C. BILLINGS,
Acting Commissioner of Patents.

3. The combination of a frame, a plow-beam having a pivotal connection with the frame, a plow connected to the beam, two bars pivotally connected to the frame, two bars pivotally connected to the beam, the bars pivotally connected, and a spring exerting its force on the bars.

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