L. E. WATERMAN.

PLOW BEAM.

APPLICATION FILED APR. 19, 1913.

1,107,733.

Patented Aug. 18, 1914.

Fig. 1.

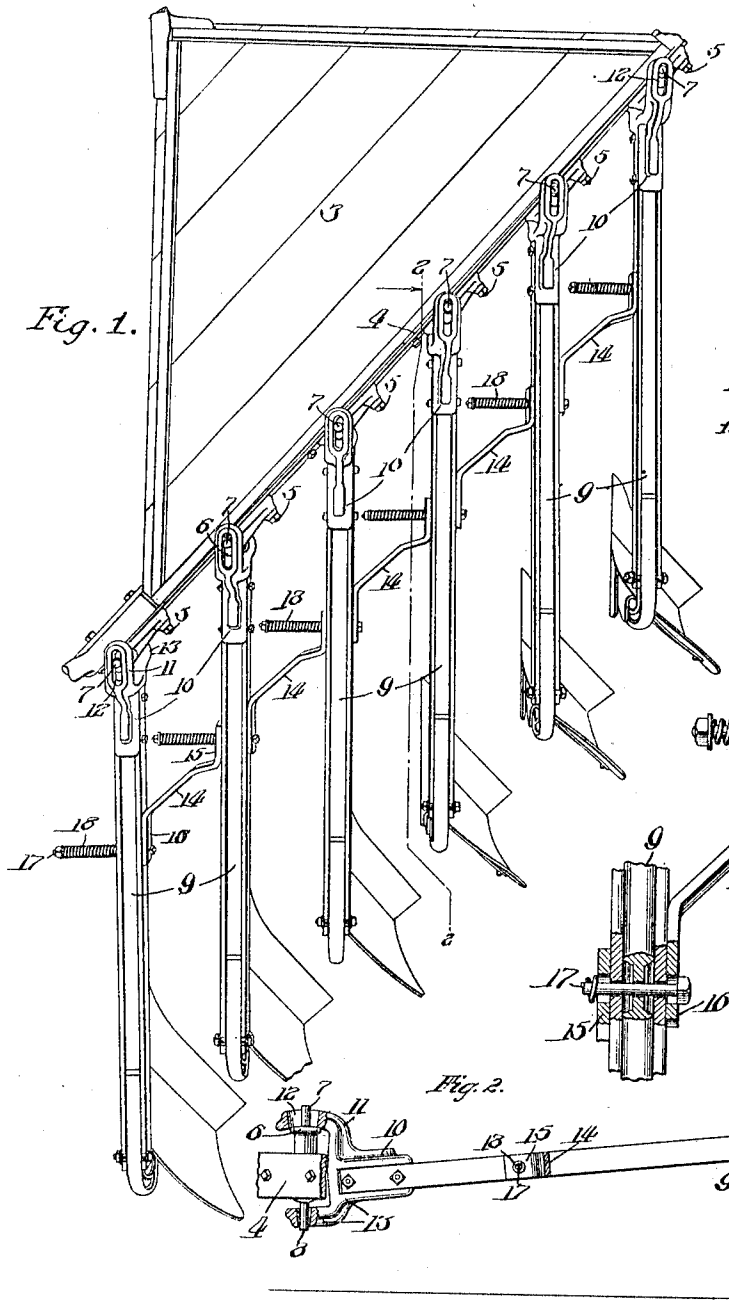


Fig. 4.

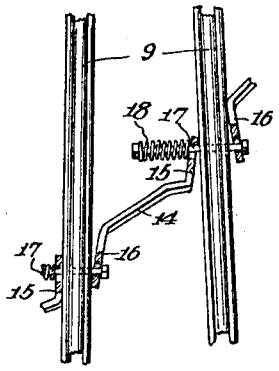


Fig. 3.

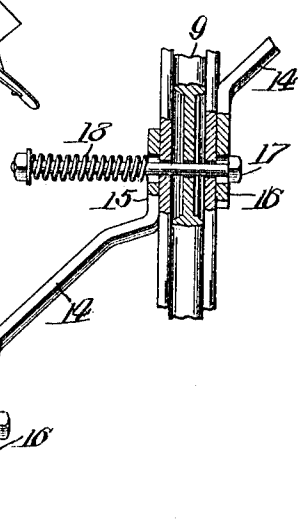


Fig. 2.

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UNITED STATES PATENT OFFICE.

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

PLOW-BEAM.

1,107,733. Specification of Letters Patent. Patented Aug. 18, 1914.

Original application filed May 27, 1912, Serial No. 700,042. Divided and this application filed April 19, 1913. Serial No. 762,385.

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 Plow-Beams, of which the following is a specification.

This invention relates to plow beams and is a division of my application for plows, Serial Number 700,042, filed May 27, 1912.

The object is to construct a plow beam having novel supporting means which shall allow both vertical and transverse swinging movement of the beam from the support; and also to provide yieldable means for connecting adjacent beams to hold the beams parallel, yet allow transverse movement thereof when a beam is moved to one side in avoiding an obstacle.

In the accompanying drawings, Figure 1 is a plan view of a gang of plows connected to a frame and provided with my improved connections. Fig. 2 is a side view of one of the plow beams, taken on the section line 2—2 of Fig. 1, a portion of the pivotal support being broken away. Fig. 3 is an enlarged plan view, partly in section, of the yieldable connections between two adjacent plow beams. Fig. 4 is a view showing movement of one beam relative to another.

A draft frame 3 has a diagonal side plate 4 to which is secured by bolts 5, a plurality of vertically disposed supports, each having a head 6 formed at its upper end and carrying upper and lower rigid studs 7 and 8 respectively.

Plow beams 9 having plows attached to their rear ends are fastened to yoked brackets 10, each of said brackets having its upper arm 11 formed with an elongated slot 12, the arm resting on head 6 with stud 7 located in slot 12, and the lower arm 13 having an opening in which the stud 8 is located and forms a pivot for vertical movement of the plow beam.

Each plow beam is connected to its adjacent plow beam by a yieldable link connection. The links or braces that form these connections comprise bars 14 disposed parallel with the diagonal plate 4, the bars having oppositely extending parallel ends 15 and 16 which are connected to the beams by bolts 17, each bolt extending through a rear end 16 of one bar 14, a beam 9 and a forward end 15 of an adjacent bar 14, and have mounted thereon between the head of the bolt and end 15, a spring 18 which holds the bars in connection with the beams and the beams in a parallel working position.

With such connections for the plow beams it will be seen that each beam has a vertical pivotal and transverse swinging movement from the forward supporting brackets, while the bars 14 compensate for such movement through their spring connections, or in other words, since the braces 14 have slots in their ends 15 through which bolts 17 pass, and said bolts have springs 18 mounted thereupon and abutting said ends 15, that two adjacent beams will be movable toward each other by the intermediate brace rocking on its corners, such movement being allowed by said slot and spring connection. Furthermore, these bars 14 form braces co-acting with their adjacent beams in holding the beams in a parallel working position, allowing an independent beam to be swung to one side when it encounters an obstacle, and also, by their spring actions to bring the beam so displaced back to its normal position.

I claim as my invention.

1. The combination of a frame, a plurality of plow beams connected to the frame and capable of lateral swinging movement, a link connection interposed between each of two adjacent beams, and a yieldable connection between each of two adjacent links.

2. The combination of a frame, a plurality of plow beams connected to the frame and capable of lateral swinging movements, a link interposed between each of two adjacent beams, and a yieldable connection for each beam connecting the beam and two adjacent links.

3. The combination of a frame, a plurality of movable plow beams connected to the frame, a link interposed between each of two adjacent beams, and a spring-bolt for each beam connecting the beam and the links adjacent to the beam.

4. The combination of a frame, a plurality of movable plow beams connected to the

frame, means connecting the plow beams holding the beams parallel, and a yieldable connection between each beam and said means, allowing each beam independent movement.

5. The combination of a frame, a plurality of plow beams pivotally connected to the frame and capable of a transverse swinging movement, a link interposed between and pivotally connected to each of two adjacent beams holding the beams parallel, and a yieldable connection between each beam and said links, allowing each beam independent movement.

6. The combination of a frame having a diagonal side, a plurality of movable plow beams fastened to said diagonal side of the frame, a link connection between each of two adjacent beams, said link connections being disposed substantially parallel with said diagonal side, and a yieldable connection between each of the beams and said link connections.

7. The combination of a frame having a diagonal side, a plurality of movable plow beams connected to said diagonal side of the frame, a link connection interposed between each of two adjacent beams, said link connections being disposed substantially parallel with said diagonal side, and a yieldable connection between each beam and the link connections adjacent each side of the beam.

8. The combination of a frame, a plurality of plow beams independently connected to the frame and capable of a lateral swinging movement, a brace connection between adjacent beams, and springs forming the connection between the braces and beams.

9. The combination of a frame, a plurality of plow beams independently pivotally connected to the frame and capable of a lateral swinging movement, a brace connecting adjacent beams, a bolt connecting one end of the brace and a beam, and a spring surrounding the bolt and located at the landside of the beam.

10. The combination of a frame, a plurality of movable plow beams connected to the frame, a brace interposed between each of two adjacent beams, each brace having its ends parallel, and yieldable means connecting each beam and the parallel ends of the braces adjacent each side of each beam.

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

LEWIS E. WATERMAN.

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