

No. 762,583.

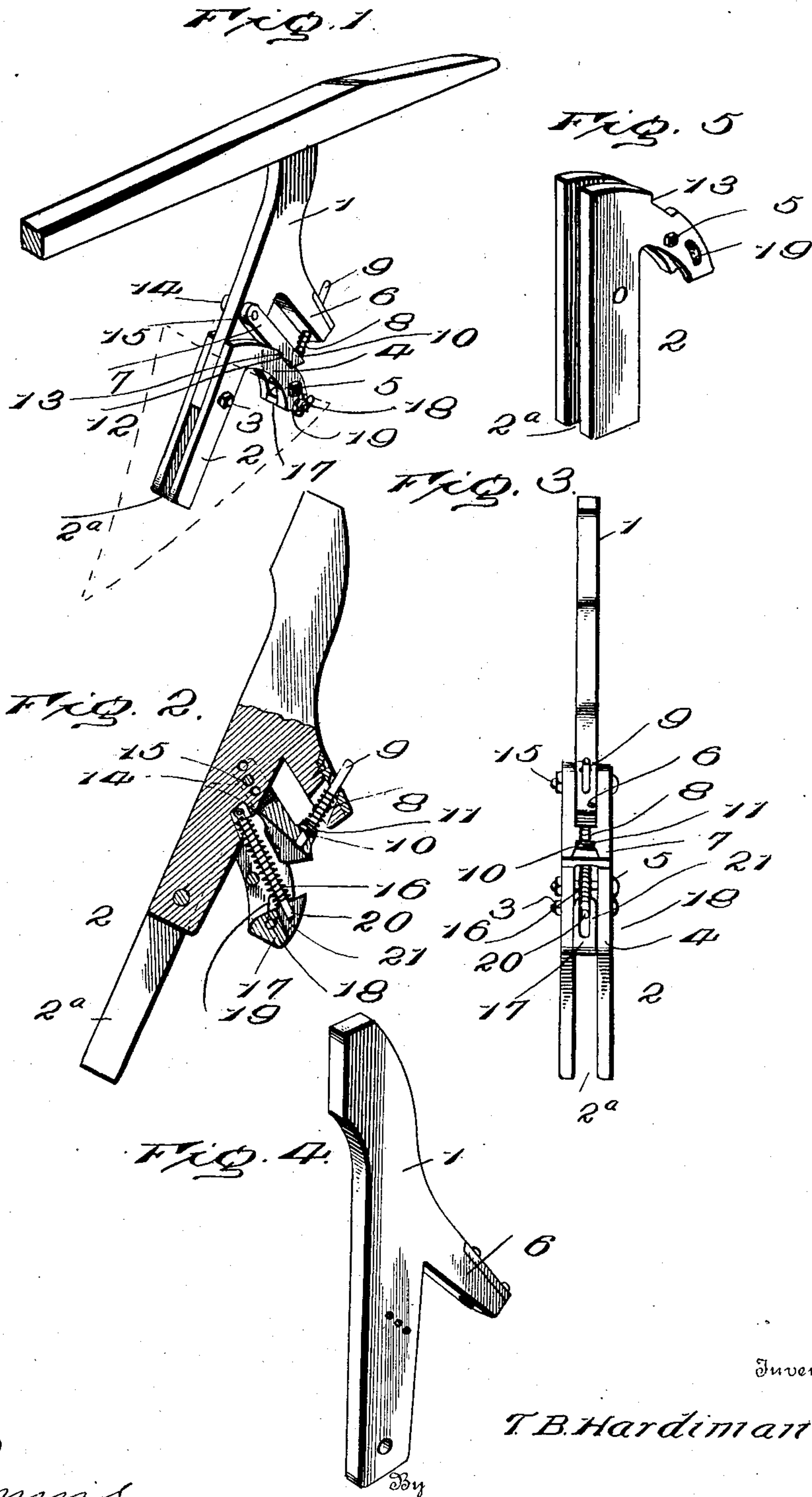
PATENTED JUNE 14, 1904.

T. B. HARDIMAN.

PLOW STANDARD.

APPLICATION FILED JAN. 12, 1904.

NO MODEL.



# UNITED STATES PATENT OFFICE.

THOMAS B. HARDIMAN, OF MOUNT CARMEL, ILLINOIS.

## PLOW-STANDARD.

SPECIFICATION forming part of Letters Patent No. 762,583, dated June 14, 1904.

Application filed January 12, 1904. Serial No. 188,720. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS B. HARDIMAN, a citizen of the United States, residing at Mount Carmel, in the county of Wabash and State of Illinois, have invented certain new and useful Improvements in Plow-Standards, of which the following is a specification.

This invention relates to improvements in plows or like cultivators, and aims especially to provide a novel construction of standard, the foot of the standard being peculiarly mounted, so as to admit of movement thereof should the shovel of the plow meet with obstructions while the implement is being advanced.

The foot of the implement is mounted for a pivotal movement and is held in normal working position by spring means carried by the standard coöperating with a special form of brake means regulable for purposes of the invention, as will appear more fully hereinafter.

The invention obviates the necessity of use of brake-pins and the movement of the foot is entirely automatic, thereby doing away with any likelihood of injury to the operator of the implement in adjusting the position of the foot, as is often incident to the use of the ordinary form of this class of devices.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings.

While the essential and characteristic features of the invention are susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view showing the embodiment of the invention. Fig. 2 is a vertical sectional view through the standard and the foot, showing the relative arrangement of parts more clearly. Fig. 3 is a rear view of the standard and foot. Fig. 4 is a perspective view of the standard alone. Fig. 5 is a detail perspective view of one of the plates comprising the foot of the implement.

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

The invention is adapted for application to any common type of cultivator at present in use and comprises the standard 1 and the foot 2. The standard is adapted to be attached to the beam of the implement and is braced in any suitable manner ordinarily practiced. The foot consists of spaced plates 2<sup>a</sup>, which are secured pivotally to the lower end portions of the standard by means of a fastening 3 in the form of a bolt or similar device, the plates 2<sup>a</sup> receiving the lower end of the standard therebetween. The shovel of the implement is secured to the foot 2 by means of a clamp member or bolt of suitable type for the purpose. Extending rearwardly from the upper ends of the plates 2<sup>a</sup> of the foot 2 and of corresponding form are segments 4, which are integrally formed with the plates in the preferable construction of the device. The segments 4 are secured together or braced by a transverse fastening 5, as will be readily seen. Above the portion of the standard 1 adjacent which the segments 4 are located and also extending rearwardly and integrally formed with the standard is an extension 6. Between the extension 6 and the segments 4 and pivoted to the standard is a brake-dog 7, a spring 8 interposed between the extension 6 and the upper side of the dog 7 normally holding the latter in engagement with the segments 4. The spring 8 is mounted upon a guide-rod 9, the lower end of the said rod 9 being threaded to permit adjustment of a nut 10, bearing against a washer 11, directly receiving the pressure of the spring. The adjustment of the nut 10 permits of variation of the tension of the spring 8, thereby admitting of a greater or less pressure against the upper side of the dog 7. The dog 7 is provided upon its under side with projections 12, which are received by notches 13 in the segments 4, thereby forming an interlocking means between the dog and the foot of the implement. The opposite end of the dog 7 is



bifurcated and the bifurcated portions 14 embrace the standard upon opposite sides, the pivot-pin 15, securing the dog to the standard, passing through the bifurcated portions 5 aforesaid.

The special function of the dog 7 is to provide a brake means cooperating with the foot to prevent movement of the latter rearwardly except when striking an obstruction 10 resisting its progress. The tension of the spring 8 serves to hold the dog in proper engagement with the foot, so that the said foot is prevented from movement except as permissible by the adjusted tension of the spring. 15 When the obstruction is of a sufficient size to overcome the tension of the spring 8, the projections 12 ride out of engagement with the notches 13, and to facilitate this latter movement the engaging end of the dog 7 is 20 inclined or beveled, the rear portions of the notches 13 being likewise formed. In order to return the foot to its normal position after the obstruction has been passed and to accomplish this automatically, a spring 16 is 25 utilized. The spring 16 is interposed between the standard and a plate 17, mounted in movable bearings in the rear ends of the segments 4. The spring 16, further, is located between segments 4, operating in this 30 position. The plate 17 is carried by a transverse pin 18, which is movable in elongated bearings 19 in the segments, as before premised, and is secured at a desired adjustment relative to the said bearings by means of 35 nuts or the like, as shown. The spring 16 is mounted upon a guide-rod 20, similar to that used in supporting the spring 8, the guide-rod 20 having one end mounted in the standard and the other end received between spaced 40 extensions 21, provided upon the plate 17.

The parts arranged in normal positions the foot is prevented from any forward movement by means of interlocking engagement of the spring-dog 7 with the notches 13 of 45 the segments 4. However, should the shovel carried by the foot meet an obstruction as the implement advances and the said obstruction is of a size liable to injure the implement, the brake-dog 7 rides out of engagement 50 with the plates of the foot until the said obstruction is passed, the foot moving rearwardly in the above operation. The obstruction having been passed, the spring 16 automatically returns the foot to its normal 55 position, as heretofore described.

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

1. In a plow, the combination of a standard provided with a rear extension, a foot pivoted 60 to the standard, a segment rearwardly extended from the foot, a brake-dog pivoted to the standard at a point between the rear extension thereof and the segment of the foot,

said dog engaging the segment aforesaid, and a spring interposed between the dog and the 65 rear extension of the standard.

2. In a plow, the combination of a standard provided with a rear extension, a foot pivoted to the standard, a segment rearwardly extended from the foot, a brake-dog pivoted to 70 the standard at a point between the rear extension thereof and the segment of the foot, said dog engaging the segment aforesaid, and an adjustable coil-spring interposed between the dog and the rear extension of the standard. 75

3. In a plow, the combination of a standard, a foot pivoted to the standard and having a rearwardly-extending segment, a brake-dog carried by the standard, a spring normally holding the brake-dog in engagement with 80 the segment of the foot, and a spring having one end bearing against the standard and the other end bearing against the segment of the foot, said spring being adapted to return the foot to its normal position after movement 85 thereof.

4. In a plow, the combination of a standard, a foot pivoted to the lower portion of the standard, a toothed segment projected rearwardly from the foot, a dog pivoted to the 90 standard and engaging the toothed segment of the foot, a plate adjustably mounted upon the segment of the foot, and a spring interposed between the standard and the adjustable plate aforesaid for the purpose set forth. 95

5. In a plow, the combination with a standard, a foot pivoted to the standard and provided with a rearwardly-extending segment, a dog carried by the standard, spring means 100 normally holding the dog in interlocking engagement with the segment of the foot and other spring means cooperating with the segment to return same to its normal position after movement thereof.

6. In a plow, the combination with a standard provided with a rear extension, a foot 105 comprising spaced plates pivoted to the standard upon opposite sides thereof, corresponding segments projected rearwardly from the plates of the foot, a dog pivoted to the stand- 110 ard adjacent the foot and engaging the segments of the said foot, spring means for holding the dog in engagement as aforesaid, and adjustable spring means cooperating with the foot to return same to its normal position after 115 movement thereof.

7. In a plow, the combination with a standard having a rear integral extension, a foot comprising spaced plates provided with rearwardly-extending segments and pivoted to 120 the standard, the segments of the foot being provided with notches, a dog pivoted intermediate the foot and the rear extension and engaging the notched portions of the segments, a spring interposed between the dog and the 125 rear extension of the standard, and other

spring means coöperating with the standard and the segments to automatically return the foot to its normal position.

5 8. In a plow, the combination with a standard, a foot pivoted to the standard, and adjustable spring means interposed between the foot and standard.

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

THOMAS B. HARDIMAN. [L. s.]

Witnesses:

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