

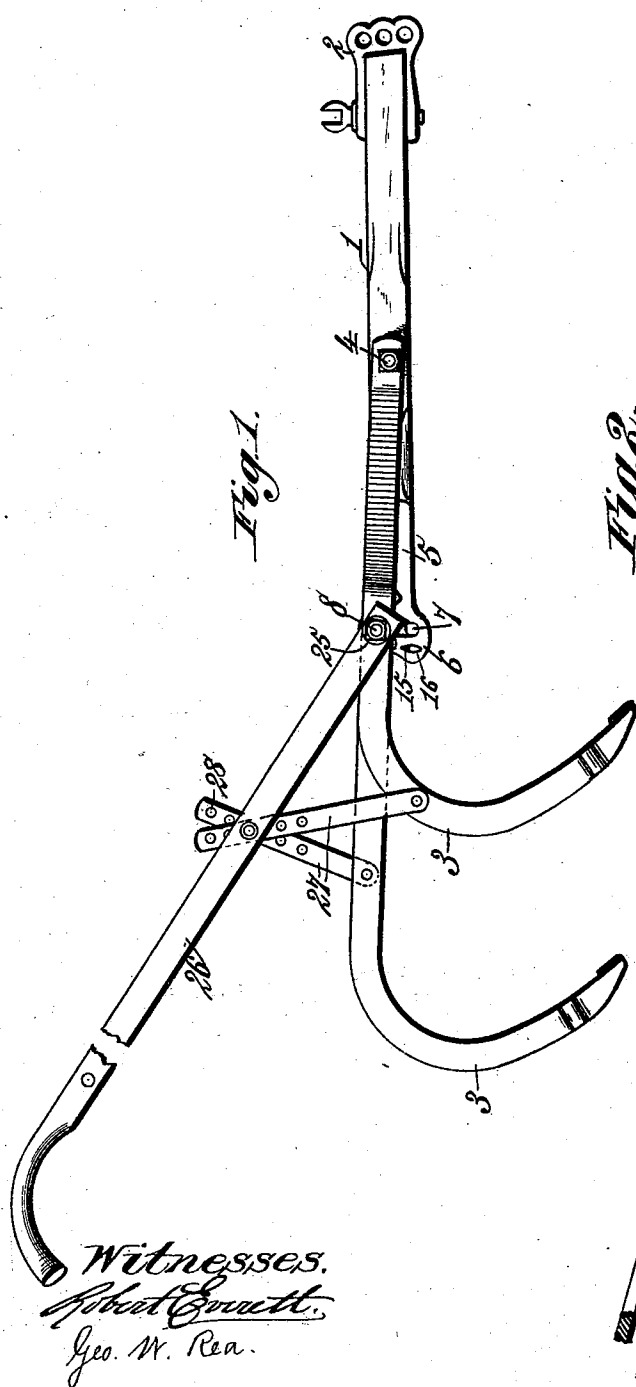
(No Model.)

2 Sheets—Sheet 1.

E. S. CLAYTON.
DOUBLE SHOVEL PLOW.

No. 549,440.

Patented Nov. 5, 1895.



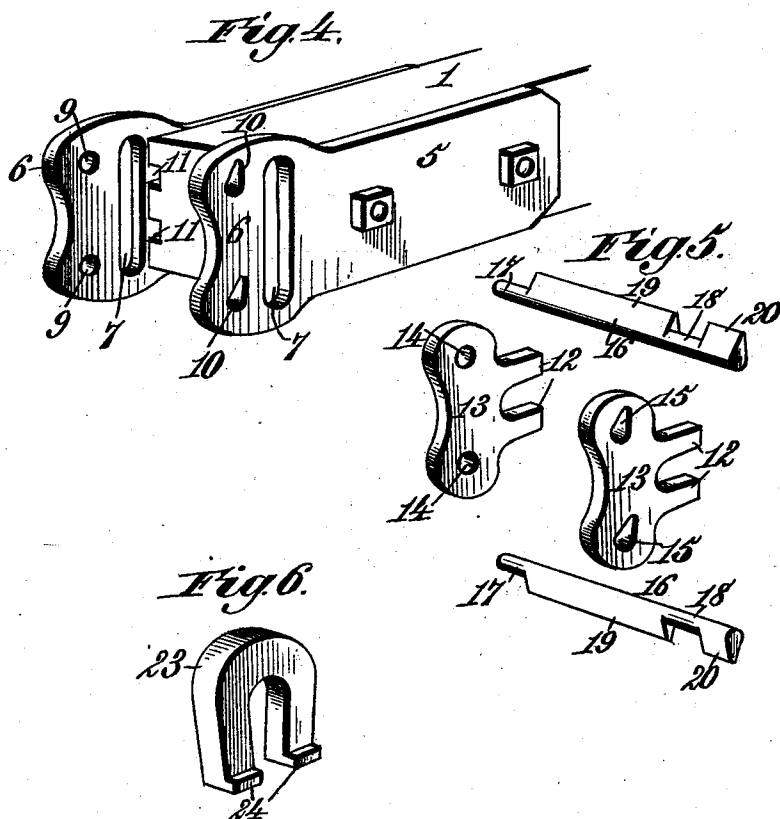
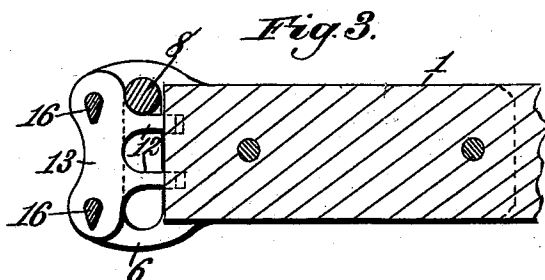
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Witnesses.
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Geo. W. Rea.

Inventor.
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UNITED STATES PATENT OFFICE.

EDWARD S. CLAYTON, OF CORNERSVILLE, TENNESSEE.

DOUBLE-SHOVEL PLOW.

SPECIFICATION forming part of Letters Patent No. 549,440, dated November 5, 1895.

Application filed June 25, 1895. Serial No. 554,026. (No model.)

To all whom it may concern:

Be it known that I, EDWARD S. CLAYTON, a citizen of the United States, residing at Cornersville, in the county of Marshall and State of Tennessee, have invented new and useful Improvements in Double-Shovel Plows, of which the following is a specification.

This invention relates to double-shovel plows; and has for its objects, first, to provide improved means for raising and lowering the side beams or standards with relation to the rear end of the central or main beam, so that the shovels or plows may be thrown more or less onto point or heel without disturbing the level of the implement; second, to provide simple means for adjusting the standards laterally to vary the distance between the furrows; and, third, to improve generally the construction and operation of a double-shovel plow, as hereinafter more particularly set forth.

In the annexed drawings, illustrating the invention, Figure 1 is a side elevation of my improved double-shovel plow. Fig. 2 is a plan of the same. Fig. 3 is an enlarged longitudinal section of the rear portion of the main beam with devices for vertically adjusting the side beams or shovel-carrying standards. Fig. 4 is a perspective of the rear portion of the main plow-beam and mechanism for adjusting the side beams or standards. Fig. 5 is a detail view of the latch-pieces and keys for the vertical adjustment of the plow or shovel standards. Fig. 6 is a view of one of the spreaders for use in varying the width of the plow.

Referring to the several parts of the plow in detail, the reference-numeral 1 designates the main beam, which may have secured to its forward end a draft-clevis 2 of any suitable or preferred construction.

The side beams or plow-standards 3 have their forward ends pivotally connected to the central or main beam 1 by means of a bolt 4, passed transversely through the said main beam and provided with a nut on one end.

To opposite sides of the rear end of the beam 1 are securely bolted metallic plates 5, having their rear ends provided with ears 6, that project in rear of the beam parallel with each other and in vertical planes. Each of these ears 6 is provided with a vertically-

elongated slot 7 for passage of a transverse rod 8, that is also extended laterally through perforations formed in the plow-standards. In one of the ears 6 are circular perforations 9 and in the other ear are perforations 10, that are made somewhat elongated or eccentric on one side. The rear end of the beam 1 is provided with recesses 11 to receive lugs 12, formed on latch-plates 13, that are removably placed at the inner sides of the ears 6 and in contact therewith. Each latch-plate 13 is provided with a pair of the lugs 12, projecting from its forward edge. One latch has circular perforations 14, corresponding with the circular perforations 9 of one ear 6, and the other latch has eccentrically-formed perforations 15, corresponding with the similar perforations 10 in the other ear. Before inserting the lugs 12 of the latch-pieces 13 into the recesses 11 of the central beam 1 the rear end of the said beam will be adjusted in such relation to the side beams or plow-standards 3 and transverse rod 8 that the said rod will occupy a position either above or below the lugs 12 or between the same, according to the required elevation of the plow-feet.

It will be seen that when the latch-pieces 13 are in position the lugs 12 intersect the vertically-elongated slots 7 of the beam-ears 6 and substantially divide each of said slots into three openings, through either of which the rod 8 may pass. In the lowermost adjustment of the rear end of the main beam 1 (or upward adjustment of the plow-standards 3) the transverse rod 8 will occupy position in the upper ends of the slot 7, above the lugs 12 of the two latch-pieces and bearing thereon. In this relative arrangement of the main beam, plow-standards, and rod 8 the plows are thrown more onto their points. By changing the adjustment of the parts so that the rod 8 will be at the bottom of the slots 7 and below the lugs 12 the plows will each be thrown more on the heel. An intermediate adjustment is obtained by arranging the parts so that the rod 8 will be supported centrally of the slots 7, between the upper and lower lugs 12 of the latch-pieces. There are thus given at the rear end of the central or main plow-beam three different sets or pitches for the plows that are carried on the side

beams or standards, and the several adjustments are readily obtained without throwing the plow out of level, as is liable to occur when the adjustments are made through a clevis at the forward end of the beam. This adjustment at the rear end of the main beam also causes the plow to stand perfectly level and steady, and enables the desired action of the plowshares, shovels, or points to be readily and quickly obtained.

For the purpose of securing the latch-pieces 13 in place, so that they will hold the beam 1 and standards 3 in their adjusted position, there are provided keys 16, that are inserted endwise into the openings formed therefor in the ears 6 and latch-pieces 13. These keys 16 are each provided with a circular end 17 to engage the circular perforations 9 and 14 of one ear-piece 6 and adjacent latch-piece 13. Near its other end each key is provided with a circular portion 18 that will permit a turning of the key in the eccentrically-shaped perforations of the other ear 6 and adjacent latch-piece 13, and alternating with these circular portions of the keys 16 are eccentrically-shouldered portions 19 and 20, that form a lock between the two latch-pieces 13 and at the outside of one of the ears after the key has been inserted and turned. It is obvious that when the keys 16 are turned in proper position their eccentrically-formed portions will readily pass through the eccentrically-formed openings 10 and 15 of the one ear 6 and adjacent latch-piece 13, and after insertion of the keys their shouldered portions will naturally assume depending positions that will prevent endwise displacement.

In order to change the vertical adjustment of the plow-standards at the rear end of the main central beam it is only necessary to partially turn and then draw out the keys 16, then remove the latch-pieces 13, change the adjustment of the rod 8 with relation to the beam 1, and then replace the latches and keys.

On the rod 8 outside the ear-pieces 6 may be placed washers 21, and between these washers and the plow-standards 3 are placed filling-pieces 22 in the form of wooden or metal sleeves of any desired length and circumference. The plow-standards 3 are curved or bent outward in a rearward direction from the main central beam 1, and these filling-pieces 22 serve to assist in maintaining the said standards at a suitable distance apart. For the purpose of varying the width of the furrows there are also employed spreaders 23 of horseshoe form that can be readily slipped onto and off from the rod 8 without wholly disconnecting any other parts of the plow. Each U-shaped or horseshoe-spreader 23 is provided with flanges 24 to fit onto an edge of one of the plow-standards to prevent the spreader from turning. If the plow-standards are to be adjusted apart, so as to increase the width between furrows, one or both of the spreaders 23 will be placed on the rod 8 at the inner side or sides of one or both of

the plow-standards; but if the distance between the furrows is to be diminished the standards 3 may be adjusted closer together by placing one or both of said spreaders in a position on the outside of one or both plow-standards. In order to change the position of either or both spreaders 23, to widen or narrow the plow, it is only necessary to loosen a nut 25 on the rod 8, remove the spreader from one side of a standard 3 to the other side, and then tighten up the nut.

The plow-handles 26 are mounted on the outer ends of the rod 8 and are secured by the nuts 25, as shown. To the plow-standards 3 are pivoted the lower ends of braces 27, that have their upper ends provided with series of holes 28, through either of which the said braces may be bolted to the handles 26 in the required position to correspond with any inclination or angle to which the handles may be adjusted. Washers 29 may be placed on the rod 8 at any required points.

The feet of the plow-standards 3 are preferably longer than is usual in plows of this general character, thus affording the advantage of raising the plow so that trash will be allowed to pass under more freely. This form of plow-standards will also raise the handles so that the plowman will not be compelled to stoop, as when the handles are too low.

The crook or curvature of the plow-feet is such that the most satisfactory set is given for causing the plows or shovels to properly take the ground, and no resetting or shaping is required in order to fit the standards to varying requirements of work, all necessary adjustments being obtainable through the adjusting mechanism provided at the rear end of the main or central beam. The manner of supporting and arranging the handles affords, in connection with the arrangement and adjustments of the plow-standards 3, a broad base that makes the plow wider, gives it more steadiness, and enables it to be handled with great ease and efficiency.

The herein-described adjusting-devices may be applied to plows and cultivators of a construction differing from that herein shown, and it will be obvious that I may vary the precise form and location of parts without departing from the spirit of my invention, and that I may provide the standards with shovels or points of any desired form or character.

What I claim as my invention is—

1. The combination with the main or central beam of a plow, and side beams or shovel carrying standards pivoted to the said main beam, or vertically slotted ears secured to and projecting rearward from the rear end of the said main beam, a transverse rod extended through the vertically elongated slots of said ears and through perforations in the side beams or plow standards and having a vertical adjustment in said slots, latch pieces engaged with said rod, and keys engaged with said latch pieces and with the ears on

the central beam, to hold the said rod and plow standards in adjusted position, substantially as described.

2. The combination with the main or central beam of a plow, and side beams or shovel carrying standards pivoted to the main beam, of ears projecting rearward from the rear end of the main beam and provided with vertically elongated slots, a rod extended transversely through said slots and having its ends engaged with the side beams or plow standards, latch pieces provided with lugs to engage said rod at different elevations, and keys adapted to be engaged in perforations of said latch pieces, and ears to hold the said rod and connected plow standards at any adjusted elevation, substantially as described.

3. The combination with a plow-beam, and ears projecting from the rear end of said beam and provided with vertically elongated slots, of plow or shovel carrying standards pivoted to opposite sides of the said plow-beam, a rod extended through the vertically elongated slots of said ears and through perforations in the plow standards, latch pieces adapted to engage said transverse rod at varying elevations on said latch pieces, and keys extended through perforations in said ears, and latch pieces to hold the transverse rod and attached plow standards at any adjusted elevation, the said ears, latch pieces, and keys having a locking engagement, substantially as described.

4. The combination with a main or central plow beam, and side beams or shovel carrying standards having their forward ends pivoted to said main beam, of ears secured to and projecting rearward from the rear end of the said main beam, each of said ears being

provided with a vertically elongated slot, and one of said ears having circular perforations, and the other having perforations of eccentric form, a rod extended transversely through the slots of said ears and through the side beams or standards, latch pieces provided with lugs to engage said transverse rod and hold it at varying elevations and having perforations corresponding with the perforations in the adjacent ears, and keys formed with alternate circular and eccentrically shouldered portions to engage the perforations of the said ears and latch pieces and having a locking engagement therewith, substantially as described.

5. The combination with a main or central plow beam, and side beams or shovel carrying standards pivoted to said main beam, of a transversely extended rod adjustably supported at the rear end of the main beam and extended through the side beams or plow standards, means for imparting a vertical adjustment to said transverse rod to raise or lower the standards, U-shaped spreaders placed on said rod adjacent to the standards and adapted to be adjusted to the inner or outer sides of said standards to widen or narrow the plow, and plow-handles mounted on said transverse rod and having adjustable connection with the plow standards, substantially as described.

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

EDWARD S. CLAYTON.

Witnesses:

R. A. McCORD,
R. L. GRIGG.