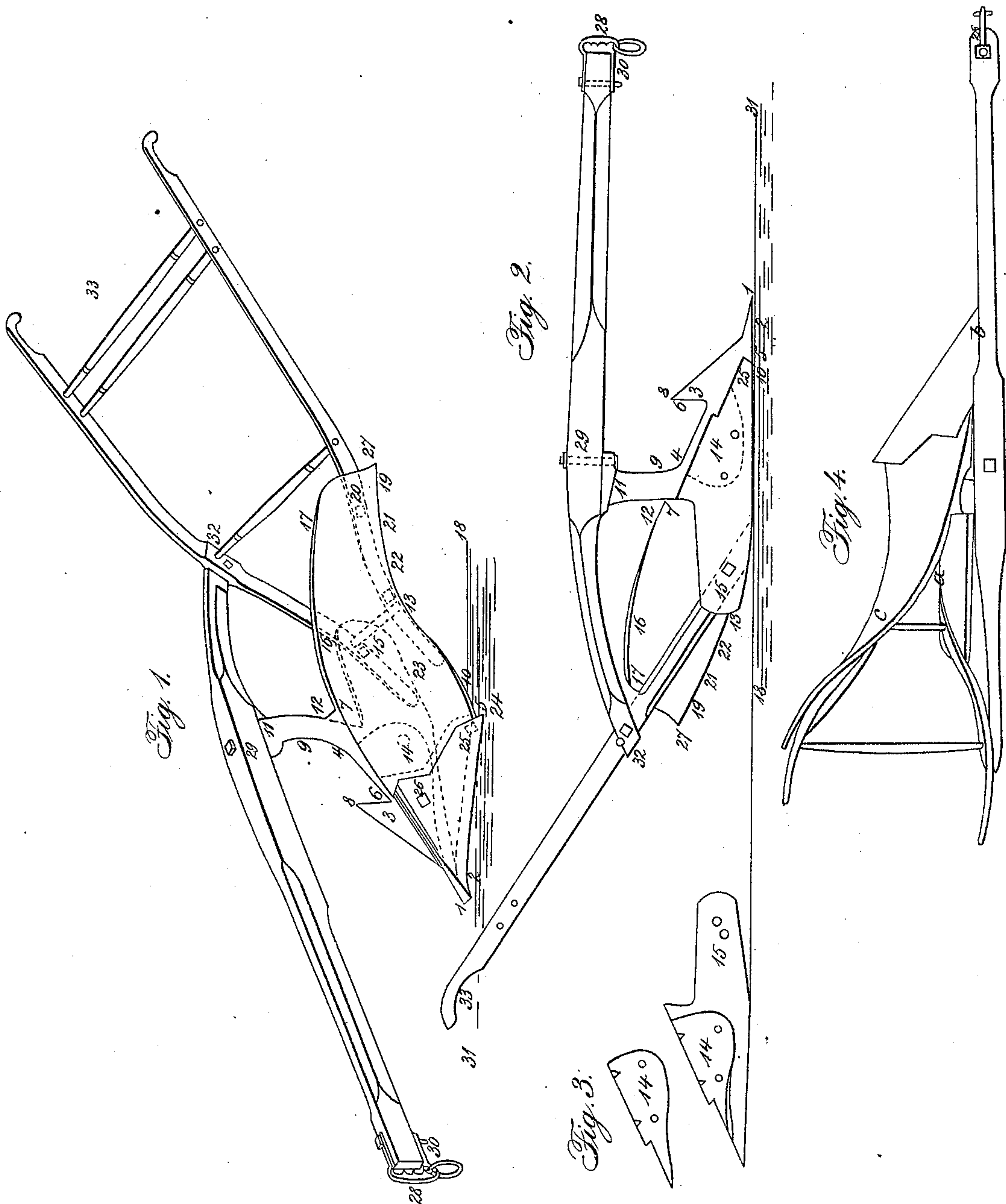


A. CHRIST.

Plow.

No 6,724.

Patented Sept 18, 1849.



UNITED STATES PATENT OFFICE.

ABRAHAM CHRIST, OF UNITY, OHIO.

IMPROVEMENT IN LANDSIDES OF PLOWS.

Specification forming part of Letters Patent No. 6,724, dated September 18, 1849.

To all whom it may concern:

Be it known that I, ABRAHAM CHRIST, of Unity, in the county of Columbiana and State of Ohio, have invented a new and useful Improvement in the Construction of Plows; and I do hereby declare that the following is a full and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a general view of the plow; Fig. 2, the landside; Fig. 3, the piece cast solid to the mold-board to fasten the landside to; and Fig. 4 is a top view.

In Fig. 1 the character 1 represents the point of the share, the length of the point of the share being six and one-quarter inches to where it joins the mold-board; 2, the pitch of the point of the share, three-eighths of one inch; 3, the height of the cutter on the share, nine to nine and one-half inches, and the fore part or edge stands at an elevation of about forty-five degrees with the horizon, the outside being flat or straight, so that by holding a straight-edge along the landside and cutter it will strike the cutter the whole breadth and extend out past the landside and mold-board at least one-eighth of one inch; 4 to 5, the distance from the point of the share to the sheth, nineteen inches; 5 to 6, the height of the mold-board just before the sheth, seven and one half inches; 6 to 7, the cutter where it joins the mold-board to the back part of the sheth, being a flat surface inclining somewhat toward the surface of the mold-board; 8 to 9, the distance from the cutter to the sheth, from six to six and three-quarter inches; 10 to 11, the height from the bottom of the landside to the top of the sheth, sixteen inches. The front part of the sheth stands perpendicular and from the top of the mold-board, inclining from the landside to about the middle of the sheth, about three degrees at the back part thereof, and the front part rounded out from the landside toward the mold-board.

The rounding out and space between the cutter, the flatness between the cutter, the sheth, and the perpendicularity of the sheth are intended to prevent the ground from accumulating about the sheth by reason of the flat surface extending on the mold-board from the

sheth. The sheth, from said point or a little above the middle thereof, forms a regular curve outward toward the landside, so as to incline out from the outside of the hole for the beam-bolt to fasten the beam on top thereof three inches farther than the bottom of the landside, exclusive of the projection of the sole on the bottom of the landside.

The inclining of the sheth outward from the top of the landside one and one-half inch and the inclining of the landside in under the plow one and one-half inch, (which will hereinafter be referred to,) which constitutes the inclining outward of the top of the sheth from the bottom of landside, as before stated, three inches, give the plow the counterbalance to the draft thereof. By inclining the beam and draft outward it will throw the bottom of the landside more in the center of the draft, to give it the counterpoise, considering that the whole stress and force is altogether on one side of the plow, the cutting, raising, and turning of the sward over which said form will prevent it pressing so powerfully the landside against the land and twisting the plow out of the ground at the landside, and causing hard labor to hold and govern, whereas when constructed in this form they will run steady, firm, and are easy of guidance, turn the sward better, and make prettier work every way, and ought to be run on the landside all the plow will bear, or at least to run the hinder edge of the share three degrees above the level of the horizon, which three degrees, in the inclining of the middle of the sheth, is to be run perpendicular.

11, the top of the sheth or plane, is five and one-half inches long and two and three-fourth inches wide. The breadth of the sheth above the mold-board is three and three-fourth inches, and the breadth of the sheth at the top plane is three and one-half inches. 12, the height of the mold-board behind the sheth is nine and one-half inches; then from the outside of the sheth across to the outer edge of the mold-board just behind the sheth, two and one-half to two and three-fourth inches; 1 to 13, the distance from the point of the share to the hinder end of the landside, two feet seven inches, the height of the landside six and three-fourth inches, and inclining from the bottom to the top

outward in the height thereof one and one-half inch. The landside is cast separate, and fastened by two screw-bolts to a metal plate that is cast solid with the plow. (Marked or numbered 14.) The sole on the landside is not to extend out more than one-fourth of one inch, and is one and three-fourth inch wide on the bottom. The length of the bottom of the landside from the point of the share is nineteen and one-half inches, exposed to friction, from thence gradually sloped up to the hind end to the height of one and one-half inch. The shortness of the landside is designed to prevent friction, and lessening the draft at least one-fourth, and also is found to be of great advantage in managing the plow.

14 shows where the landside is fastened to the plow by two screw-bolts to a plate that is cast solid to the plow; 15, the screw-bolt to fasten the handle to the landside, to be as far back as the same will admit of. At 16 the height of the mold-board, being twelve inches back from the sheth, is thirteen and five-eighth inches. At 17 the height of the mold-board at the hind end, just before the handle, is fourteen and one-half inches. The width from the bottom of the landside above the extension of the sole across to the hinder lower point of the mold-board—by laying a straight-edge along the landside—is from seventeen and one-half to nineteen inches. The hind surface of the mold-board is somewhat curvilinear or plano-convex, inclining in above toward the plow to eighty-three degrees, and below inclining under to fifty-five degrees from the horizon.

The height under the hinder end of the mold-board 19 is from eight to ten inches. The form of the hind part of the mold-board and the whole surface of the mold-board is slightly convexed, so that by beginning at the top with a straight-edge and sliding it downward it strikes the mold-board uniformly all along, excepting within about four inches from the fore edge thereof, which gradually rises a little higher on account of scouring and keeping clean better, the straight-edge to be raised one and three-fourths to three inches at least higher behind than before at the most convex part of the hind end, and gradually rising higher as it is moved lower down, excepting at the lower part it may sink to the horizon. It is only calculated to have the straight-edge raised one and three-fourths to three inches in the distance it would strike the mold-board in case it would extend to the fore edge of the same. 20, the upper bolt through the handle and mold-board from the hind end of the mold-board, is seven and one-half inches, and the lower bolt through the same is eight and one-half inches from the one above from center to center of the holes; 21, the form of the mold-board along the lower side, from thirteen and one-half inches back from the termination of the share to the hinder end or point of the same to be concaved one inch to one and one-sixteenth of an inch, and the lower edge of the mold-board from the same

place back to the hinder point is nearly straight. The hinder end of the mold-board is rounded down to a point.

22, the height of the under side of the mold-board fifteen and one-eighth inches back from the termination of the share, is four and five-eighth inches. The height of the same at thirteen and one-half inches back from the share is three and five-eighths inches, more or less, according to the depth intended to plow. The width across the bottom at the thirteen and one-half inches back from the share, from the mold-board to the landside, is nine and one-half inches. 23, the length of the sole of the mold-board from the share back, is three and three-fourths inches. 24, the width across the bottom at the termination of the share, is nine and three-quarter inches. The plow being one-quarter of an inch wider at the termination of the share than it is at thirteen and one-half inches back is calculated to cut and raise the sward easier, cut a larger sward and take it up readier when cut, and cutting a wider sward and leave none standing or remaining uncut. 25, the share at the hind end or edge, extends one and one-quarter inch out from the mold-board, the surface of the share to be slightly concaved. The length of the edge of the share from the point is nineteen inches.

26 is the screw-bolt to fasten the share to the plow. The share has also three dovetails, one under the hinder end and two under the cutter, to keep it firm and permanent. 1 to 27, the whole length of the plow from the point of the share to the hinder end of the mold-board, is forty-three inches. 28 to 29, the length of the beam to the screw-bolt where it is fastened to the sheth of the plow, is forty-three inches. 30 to 31, the fore end, is generally about fifteen and one-half inches high. 29 to 32, the length of the beam from the sheth to where it is attached to the handle, is from thirty-two to thirty-two and one-half inches. The calculation thereof is to act as a long lever, which is one of the first mechanical powers. The beam from the sheth is somewhat bent downward to where it is attached to the handle, about one and one-quarter inch, and straight on the inside next the mold-board, and is fastened to the handle by a screw-bolt. 33, the length of the handle, is four feet ten and one-half inches after bent, ordinary height behind is two feet ten inches, and the handle that the beam is fastened to is bent from a little above the landside outward to where the beam is fastened, and is then bent inward toward the other handle on the mold-board, so that by laying a straight-edge along the landside at the outside, the whole length to the point of the share, and then holding a plumb-line on the outside of the hind end of the handle to strike within two and one-half or three inches of the straight-edge against the land side or edge of the furrow, when the plow stands on the horizontal plane, the width of the handles behind at the outside is two feet one or two inches.

In giving the plow land four and one-half inches is found to answer, but may be varied to suit, according to circumstances, the position the cutter is placed on the share, either in or out of the land, the varying of the team, crowding of the horses, &c.

To give the plow land, take the center of the fore end of the beam, lay a straight-edge along the landside above the projection of the sole, lay a rule against the straight-edge, hold a plumb-line against the center of the beam, and look against the line and find the figure on the rule where it strikes.

Having thus described the construction and operation of my improved plow, what I claim

therein as new, and desire to secure by Letters Patent, is—

Diminishing the bearing of the landside upon the bottom of the furrow, and thus lessening its friction, by inclining at least one-half of its lower edge on the rear end slightly upward, but not so abruptly as to prevent it from resting throughout its entire length against the land side of the furrow, to sustain the pressure of the furrow-slice against the mold-board, and maintain an equal balance of the plow.

ABRAHAM CHRIST.

Witnesses:

GEORGE WHEALEN,
JOHN GLECKLER.