(No Model.) 2 Sheets—Sheet 1.

H. E. McWANE & M. H. DUDLEY.

HILLSIDE PLOW.

No. 372,481. Patented Nov. 1, 1887.

Fig. 1

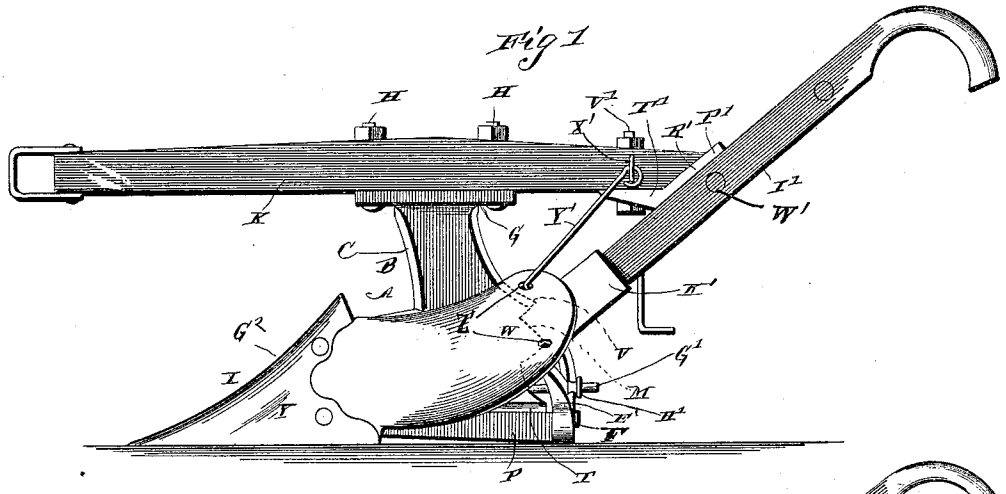

Fig. 2,

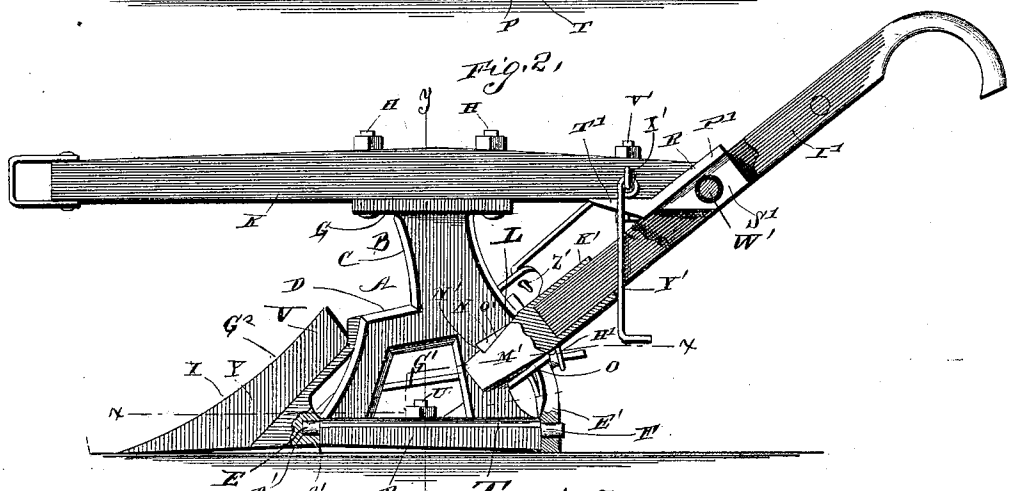

Fig. 3,

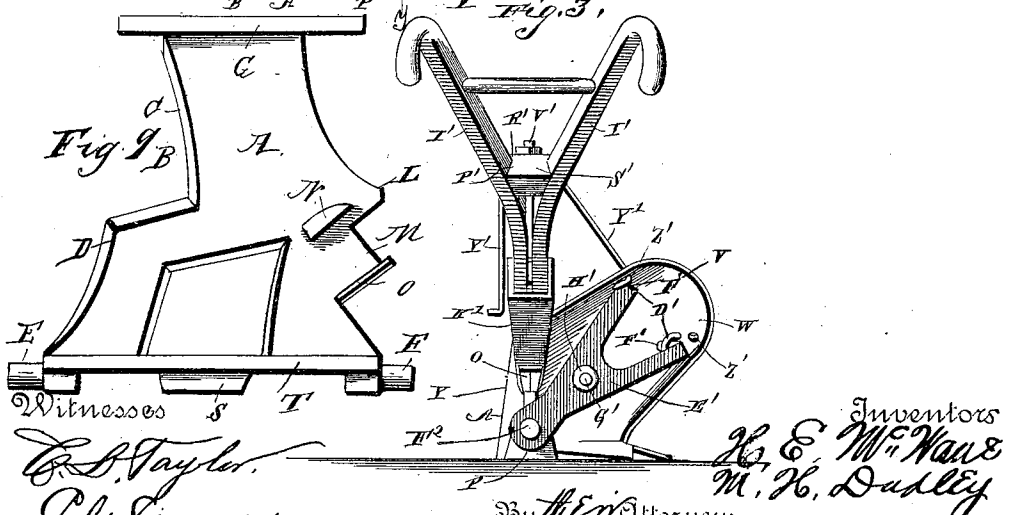

Fig. 4.

Witnesses

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(No Model.) 2 Sheets—Sheet 2.

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Fig. 8.

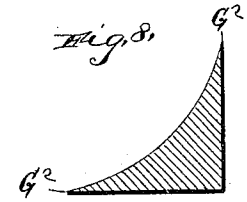


Fig. 4.

Fig. 5.

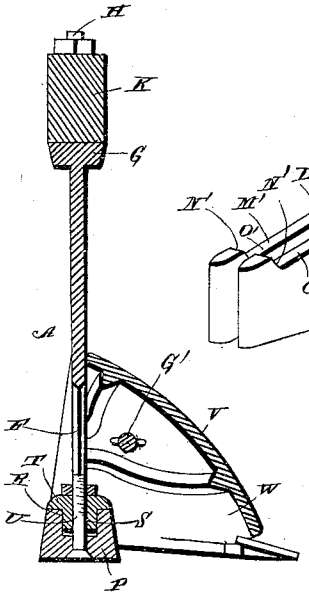


Fig. 6.

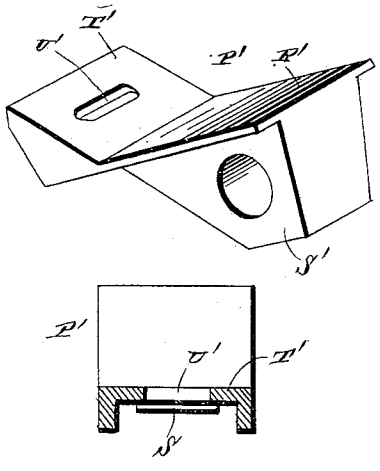
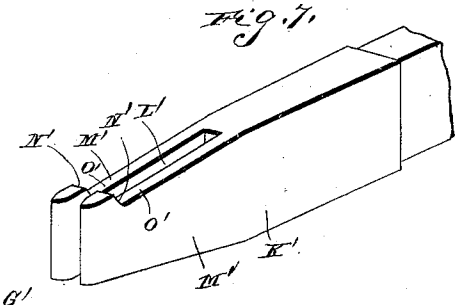


Fig. 7.



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UNITED STATES PATENT OFFICE.

HENRY E. McWANE AND MATHEW H. DUDLEY, OF LYNCHBURG, VIRGINIA.

HILLSIDE-PLOW.

SPECIFICATION forming part of Letters Patent No. 372,481, dated November 1, 1887.

Application filed May 25, 1887. Serial No. 239,343. (No model.)

To all whom it may concern:

Be it known that we, HENRY E. McWANE and MATHEW H. DUDLEY, citizens of the United States, residing at Lynchburg, in the county of Campbell and State of Virginia, have invented a new and useful Improvement in Hillside-Plows, of which the following is a specification.

Our invention relates to an improvement in hillside-plows; and it consists in the peculiar construction and combination of devices, that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the drawings, Figure 1 is a side elevation of a hillside-plow embodying our improvements. Fig. 2 is a similar view of the same with the mold-board turned to the opposite side of the standard, parts of the plow being shown in vertical longitudinal central section. Fig. 3 is a rear elevation. Fig. 4 is a horizontal sectional view taken on the line *x x* of Fig. 2. Fig. 5 is a vertical sectional view taken on the line *y y* of Fig. 2. Fig. 6 is a detached perspective view of the device for connecting the handles to the rear ends of the beam. Fig. 7 is a similar view of the socket to connect the lower ends of the handles to the rear side of the standard. Fig. 8 is a transverse section on the line *z z*, Fig. 4. Fig. 9 is a detached elevation of the plow-standard.

A represents a metallic standard, which is flat on both sides and is of considerable width. The front edge of the standard, at a suitable distance from the upper side of the same, is recessed or cut away at B, for the purpose to be hereinafter stated, thereby forming the forward and upwardly curved edge C, which is beveled on opposite sides, and the forward and downward extending projecting shoulder D, the upper edge of which is also beveled on opposite sides. The lower side of the standard is provided at its front and rear ends with projecting trunnions E and F, respectively. The upper end of the standard has a horizontal longitudinal plate or head, G, the ends of which project beyond the front and rear sides of the standard, and are provided with openings for the reception of bolts H, which bolts extend upward through vertical openings made in the plow-beam K, and thereby secure the said plow-beam to the upper end of the standard. The rear side of the standard, at a suitable distance from its lower edge, is provided with a rearward and upward extending projection, L, at right angles to which is a shoulder, M.

N represents a pair of ears, one of which projects from each side of the standard, the said ears being arranged in line with the inclined lower edge of the projection L.

O represents inclined flanges, which are arranged parallel with the opposing side of the ears N and project from opposite sides of the standard and extend rearward beyond the same for a slight distance below the shoulder N.

P represents a sole-plate of the plow, which has its opposite sides formed alike and tapers slightly from its rear to its front end, thereby making the sole-plate wedge-shaped longitudinally. In the upper side of the sole-plate is a longitudinal groove, R, adapted to receive a tongue, S, which is formed with and depends from the lower side of the standard, as shown in Fig. 5. Horizontal outwardly-extending flanges T project from opposite sides of the standards and bear upon the upper edges of the sole-plate, thereby firmly seating the latter upon the lower edge of the standard.

U represents a vertical clamping-bolt, which extends upward through aligned openings made in the lower side of the standard and in the sole-plate, the said bolt serving to connect the sole-plate firmly to the standard and permitting it to be readily detached therefrom.

V represents the share, which is of the construction usually employed in plows of this class. The mold-board W has its two edges formed alike, and the point X, which is detachably connected to the front end of the mold-board, has sides Y arranged at right angles to each other, and its cutting-edges G^2 of exactly the same contour and diverging from the longitudinal axis of the point. The front end of the mold-board is provided at its lower side with an offset or shoulder, A′, in which is made a socket, B′, adapted to receive the trunnion E of the standard, and thereby pivot the mold-board to the front side of the standard. In the center of the mold-board on its under side, and at a suitable distance in rear of the offset or shoulder A′, is an eye or a keeper, C′.

D′ represents similar eyes or keepers, which are secured to the under side of the mold-board, near the rear end thereof and near its opposite edges, the said eyes or keeper D′ being arranged nearly at right angles to the keeper C′.

E′ represents a brace-arm, which is provided at its lower end with an opening adapted to receive the rearward-projecting trunnion F. The upper end of the brace-arm is bifurcated, and the extremities thereof are provided on their front sides with hooks F′, which enter the keepers D′, and thereby connect the rear side of the mold-board pivotally to the rear side of the standard.

G′ represents a bolt-rod, which has its front end provided with a hook engaging the eye or keeper C′. The rear threaded extremity of the bolt G′ extends through an opening in the brace-arm E′, and a clamping-nut, H′, is screwed onto the rear end of the said bolt-rod, thereby clamping the arm E′ firmly to the mold-board and to the standard, and thus connecting the mold-board to the standard so firmly that it cannot become accidentally detached therefrom. By thus pivoting the mold-board to the lower side of the standard the mold-board is adapted to be swung through a half-circle and caused to bear against either side of the standard, thereby converting the implement at will into either a right or a left hand plow, and thereby adapting it for use on steep hillsides.

By reference to Figs. 1 and 2 of the drawings it will be seen that the rear end of the plow-beam projects beyond the rear edge of the standard for a considerable distance, and that the extreme rear side of the plow-beam is beveled downward and forward.

I′ represents the plow-handles, which diverge from each other and have their lower front ends secured in a socket or ferrule, K′, which is made of cast metal. The front end of the said socket or ferrule is provided with a central vertical longitudinal open slot, L′, the width of which is equal to the thickness of the standard, thereby forming bifurcated arms M′ on the front end of the ferrule or socket, which arms are adapted to bear against opposite sides of the standard at the rear edge thereof. The front upper corners of the said arms M′ are provided with hooks or shoulders N′, adapted to engage the front ends or shoulders of the ears N, and the lower sides of the said ears enter recesses O′ on the upper edges of the arms M′. The lower edges of the said arms are tapered slightly at their front ends, thereby making the arms M′ wedge-shaped. The lower sides of the said arms bear upon the upper faces of the flanges or ears O, that project from the standard, and the projection L and the shoulder M enter the opening L′ in the socket or ferrule. In order to attach the socket or ferrule to the standard, it is first directed forward, so that the projection L and shoulder M enter the open slot L′, and the operator then forces the rear ends of the handles downward, which causes the front ends or arms of the socket to rise, and thereby cause the shoulders N′ to bear against the front ends of the shoulders N and the lower sides of the said ears or shoulders N to enter the recesses O′, as shown in Fig. 2.

P′ represents a casting to connect the handles to the rear end of the plow-beam. The said casting has a plate, R′, that bears against the front upper sides of the handles, and a block or offset, S′, which projects from the rear under side of the said plate and fits between the handles, the said block or offset being wedge-shaped longitudinally, and thereby adapted to spring the handles apart. The front lower side of the casting has a horizontal plate, T′, which projects forward, and is arranged at a suitable angle to the plate R′. In this plate T′ is made a transverse slot, U′. The plate T′ bears under the lower side of the plow-beam, the inclined plate R′ bears against the beveled rear edge of the beam, and the clamping-bolt V′ extends upward through the slot U′ and through a vertical opening near the rear end of the plow-beam, thereby serving to connect the casting P′ firmly to the rear end of the plow-beam and permitting the said beam to be adjusted laterally a slight distance thereon.

W′ represents a transverse bolt, which extends through the plow-handles and through an opening in the offset or shoulder S′, the said bolt serving to secure the said handles firmly to the casting P′.

By this construction it is evident that we provide means for laterally adjusting the plow-beam and for securing the same to the plow-handles at any desired lateral arrangement.

From opposite sides of the plow-beam, near the rear end thereof, project keepers X′, to which are pivoted hook-rods Y′, the outer ends of which are adapted to engage openings Z′ made in opposite sides of the mold-board, near the rear end thereof. The said hook-rods serve to connect the plowshare to the beam, so that the share will not turn on the standard when the plow is in operation.

By reference to Figs. 1 and 2 it will be observed that the upper edge of the shoulder D of the plow-standard is only slightly above the upper edge of the mold-board, and that the curved front edge, C, of the standard is at a considerable distance in rear of the colter or cutting-edge Y of the plow-point. This leaves an opening in the front side of the standard and above the upper edge of the mold-board, which serves to prevent the plow from choking with trash.

A hillside-plow thus constructed is very strong and durable, is adapted to be reversed in a very short time, and is readily taken apart and packed in a small space for transportation.

Having thus described our invention, we claim—

1. In a hillside-plow, the combination of the standard having the edge C at its front upper side, the shoulder D, projecting forward below the said edge, and the mold-board piv-

oted to the standard and having the cutter provided with the projecting edges G^2, which extend beyond the edges of the mold-board, the upper edge of the mold-board being adapted to range nearly even with the upper side of the front projection, D, whereby a recess or opening is formed above the edge of the mold-board and in rear of the cutter or colter, for the purpose set forth, substantially as described.

2. In a plow, the combination of the standard having the ears or flanges N O projecting from opposite sides near its rear edge, and the ferrule K′, adapted to receive the lower front ends of the handles and provided with the bifurcated hooked arms M′, adapted to engage opposite sides of the standard and catch against the shoulders or flanges N O, substantially as described.

3. In a plow, the casting P′, adapted to connect the handles to the rear end of the beam, the said casting having the plate T′, to bear against the side of the beam, and provided with the transverse slot U′, and the rearward and downward projecting shoulder or offset S′, made wedge-shaped longitudinally and adapted to fit between the handles, the said shoulder or offset having the transverse opening for the reception of the bolt to connect the handles thereto, substantially as described.

4. In a plow, the beam, the handles, the casting P′, detachably connecting by bolts the beam and handles, the standard, the socket K′, and the locking device between the standard and the socket on the ends of the handles, and the bolts connecting the standard to the beam, whereby the parts are made separable.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

HENRY E. McWANE.
MATHEW H. DUDLEY.

Witnesses:
ALEXANDER A. TUNSTALL,
JOHN H. LEWIS.