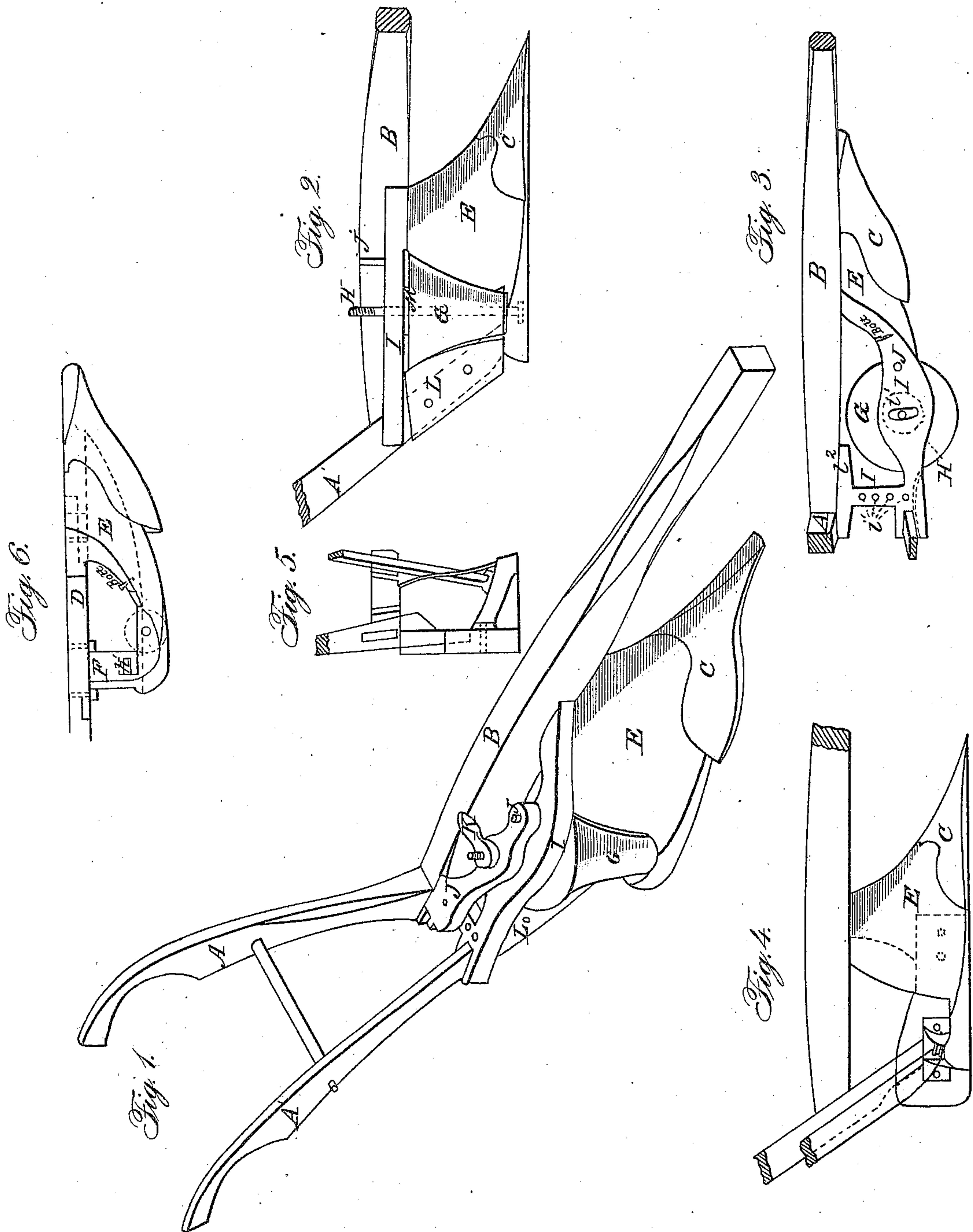


A. B. CHAPMAN.
Revolving Moldboard.

No. 40,733.

Patented Dec. 1, 1863.



Witnesses:

Octavius Knight
of Spaulding

Inventor:

A. B. Chapman
By Munroe & Co. Attys.

UNITED STATES PATENT OFFICE.

AARON B. CHAPMAN, OF PITTSFIELD, MASSACHUSETTS.

IMPROVEMENT IN PLOWS.

Specification forming part of Letters Patent No. **40,733**, dated December 1, 1863.

To all whom it may concern:

Be it known that I, AARON B. CHAPMAN, of Pittsfield, in the county of Berkshire, State of Massachusetts, have invented a certain new and useful Improvement in Plows; and I do hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view of my improved plow. Fig. 2 is a side elevation thereof without the adjusting-lever, hereinafter described. Fig. 3 is a plan of the same with the said lever removed. Fig. 4 is a side elevation with the roller also removed. Fig. 5 is a rear view. Fig. 6 is a plan of the mold-board, share, and landside with the upper parts of the plow removed.

Similar letters of reference indicate corresponding parts in the several views.

The subject of my invention is a plow provided with a concave conoidal roller set in a vertical, or nearly vertical, position at the rear of the mold-board for the purpose of completing the turning of the furrow-slice with better effect and less friction than it is done by mold-boards of common form.

The invention further consists in devices for mounting and adjusting the aforesaid roller and securing the right handle.

In order that others skilled in the art to which my invention appertains may be enabled to fully understand and use the same, I will proceed to describe its construction and operation.

The handle A, beam B, share C, landside D, and the front part of the mold-board E may be of common construction. F represents a lug or brace cast in one piece with or attached to the heel of the mold-board, and extending across to the landside, to which it is attached by a flange and bolts. G is a roller of the form of the frustum of a conoid inverted, placed within a suitable cavity in the back of the mold-board in such position that the concave surface of the said roller will form a continuation of the mold-board and complete the turning of the furrow-slice. For this purpose the said roller is adapted to turn on a vertical shaft, H, held at its lower end in the lug F, and passing through a slot, *i*, in a horizontal

cast-iron bracket, I, as shown in Fig. 3, in which the form of the bracket is clearly represented. In front it rests upon and approximates to the form of the top of the mold-board, and is firmly secured to the side of the beam. At back it is formed with jaws partially inclosing the right handle, A, and with a lateral extension, I', formed with a number of holes or notches, *i'*, for the purpose hereinafter named, and at its end with a flange, *z*, by which it is securely bolted to the handle A and beam B.

J represents a lever, fulcrumed at its forward end, at *j*, to the bracket I, and provided at its rear end with a suitable pin or projection adapted to engage in either of the holes or notches *i'* in the transverse extension I' of the bracket. The upper end of the shaft H passes through a hole in the lever J, and is screw-threaded to receive a nut, K, by which the lever may be pressed down to hold its pin or projection in either of the holes or notches *i'* in which it may be placed, and thus secure the roller firmly in the desired position. By turning up the nut the lever is released so as to permit the roller to be set in or out, as desired, and it is there secured by again turning down the nut K. The lower end of the handle H' is secured by a step, *h'*, in the lug F.

L is a scraper attached to the handle A', or other suitable part of the implement, for the purpose of keeping the roller clear of dirt. M represents a washer interposed between the top of the roller G and the under side of the bracket I, to permit the roller to rotate with freedom. The roller G by its form and position is adapted to receive the final pressure of the furrow-slice and complete the turning of it. It thus takes the place of that part of the mold-board which in common plows receives the principal friction from the furrow-slice, and by this means the power required to draw the plow is much reduced.

By setting the roller in or out in the manner described the plow may be made to turn a furrow of greater or less width, and be thus adapted to the character of the soil or strength of team. The effect upon the ground is also better than is produced by a mold-board of common form.

Instead of plastering the surface, as is done by the common mold-board, the roller leaves

it loose and friable, well adapted for the penetration of moisture or the action of the harrow.

Having thus described my invention, what I claim as new therein, and desire to secure by Letters Patent, is—

1. The roller G, constructed, as shown and described, with concave sides, and mounted upon a vertical, or nearly vertical, shaft at the rear of the mold-board E, in the manner and for the purposes specified.

2. The lever J, employed in connection with a screw-shaft, H, and nut K, or equivalent de-

vices, to adjust the roller G and secure it in any position.

3. The combination, with the roller G and lever J, of the bracket I, constructed as described, and employed for the attachment and securing of the said lever and the handle A', as explained.

AARON B. CHAPMAN.

Witnesses:

CHARLES DU BOIS,
OCTAVIUS KNIGHT.