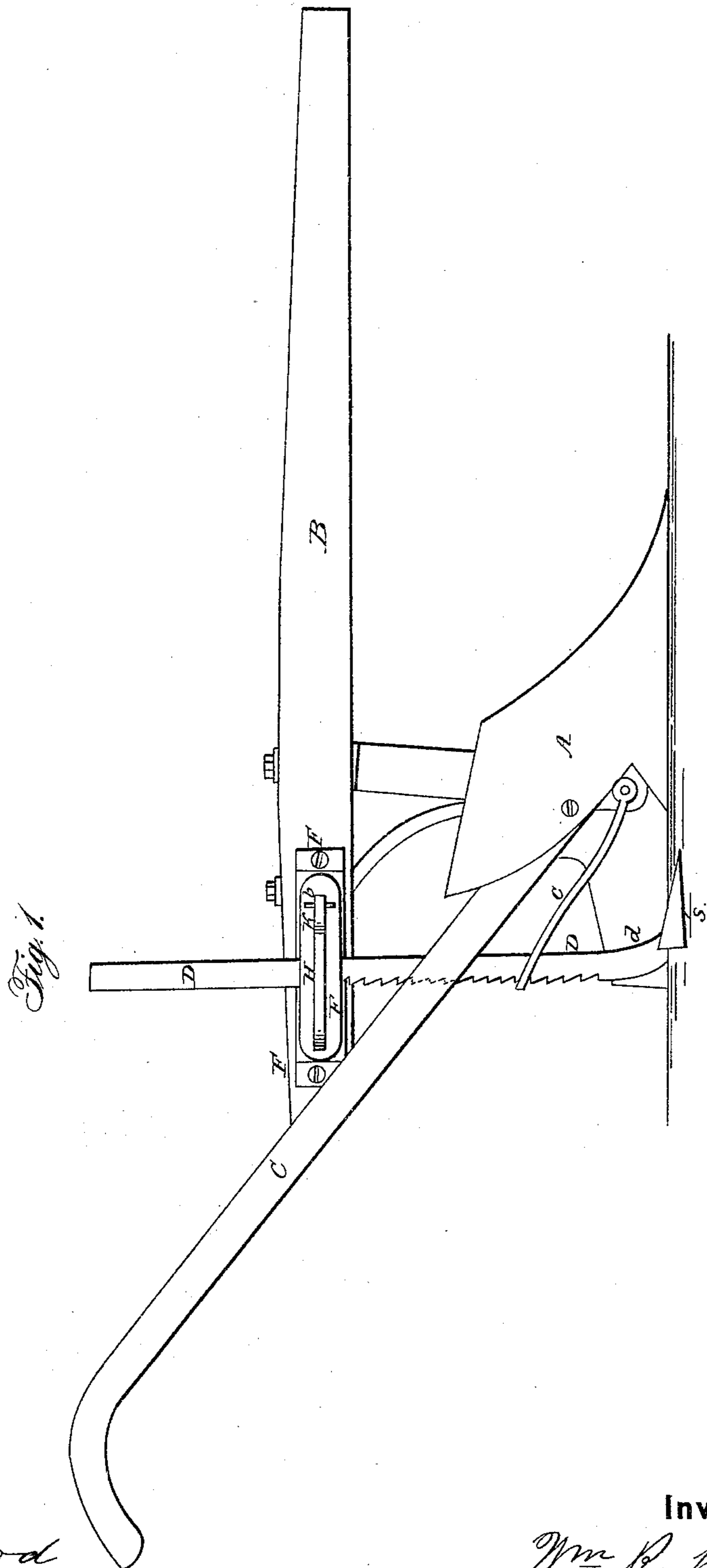


W. R. WALPOLE.

Subsoil Plow.

No. 63,586.

Patented Apr. 2, 1867.



Witnesses:

Amos Wood
J. G. Walker

Inventor:

Wm R. Walpole

2 Sheets—Sheet 2.

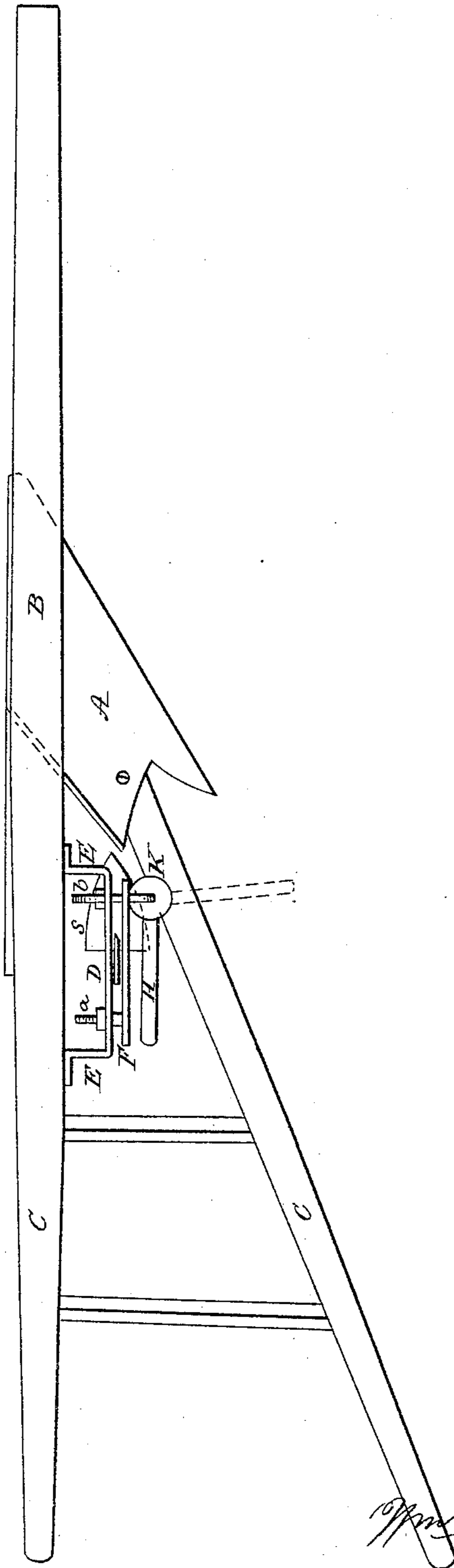
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Fig. 2.



Witnesses:

Wm. G. Wood
J. G. Walker

Inventor:

Mr. R. Walpole

UNITED STATES PATENT OFFICE.

WILLIAM R. WALPOLE, OF CHICAGO, ILLINOIS, ASSIGNOR TO HIMSELF,
WILLIAM G. WOOD, AND JOHN G. WALKER, OF SAME PLACE.

IMPROVEMENT IN PLOWS.

Specification forming part of Letters Patent No. 63,586, dated April 2, 1867.

To all whom it may concern:

Be it known that I, WILLIAM R. WALPOLE, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Subsoil Attachment to Plows; and I do hereby declare and make known that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and the letters and figures marked thereon, which form part of this specification.

My invention consists in a novel mode of attaching a subsoiling device to plows, so that the operation of subsoiling can be accomplished at the same time the ground is being plowed to prepare it for the crops.

To enable those skilled in the art to understand how to construct and use my invention, I will proceed to describe the same with particularity, referring, in so doing, to the aforesaid drawings, in which—

Figure 1 represents a side elevation of my invention; and Fig. 2, a plan or top view of the same.

Similar letters of reference in the several figures denote the same parts of my invention.

A represents any ordinary plow; B, the plow-beam; and C, the handles.

E represents a bar of iron, bent at each end, and secured upon the side of the plow-beam just behind the plow, as shown, so as to leave a space between the beam B and plate or bar E, as clearly shown in Fig. 2.

F represents a movable or adjustable plate, arranged parallel with said permanent plate E, being secured thereto by a bolt, *a*, which is fixed to said plate F, and passes through the permanent plate E, having a screw and nut between the plate E and the plow-beam, by turning which nut the plate F can be moved nearer to or farther from the permanent plate E, as desired.

At the opposite end of said plate F a staple, *b*, passes, and also passes through the plate E, being secured thereto by nuts, as shown. Within said staple there is arranged a cam, K, provided with a handle, H, as shown.

Between the plates E F is arranged the vertical standard D, to the lower end of which is attached a subsoiling-shovel, S. The rear side of the standard D is provided with notches, for the purpose of holding a draft-rod, *c*, which is secured at the front end to the plow A, and

is provided at its rear end with a slot, through which the said standard D passes.

When the cam is thrown out, as indicated by dotted lines in Fig. 2, the standard D is loosened between the plates E and F, and may be adjusted in any desired position. If it be moved up or down, the slot in the draft-rod should be adjusted in another notch on said standard. When the cam is arranged by placing the handle H parallel with the plates, as shown by full lines in the drawings, the standard D is firmly and immovably secured between said plates by the pressure of the said cam.

This method of attaching or securing the subsoiler to the plow is a simple and effectual one, and the device can readily be adapted to standards of different thicknesses by adjusting the nuts upon the bolt and staple aforesaid.

Another feature of my invention consists in the mode of attaching the subsoiling-shovel to the standard shown at *d* in Fig. 1, which is accomplished by extending the lower end of the standard forward upon and over the upper side of the shovel, curving as shown, so as to prevent the clogging of the subsoiler at the point of junction of the standard and shovel.

The object of bending the ends of the plate E so as to leave the space between said plate and the plow-beam is to bring the subsoiler out to the proper position with respect to the plow A; otherwise the plate E could lie in contact with the beam, and the nuts be arranged upon the opposite side of the beam. By bending the standard of the subsoiler, the desired position of the shovel S may be attained without having said plate E arranged as shown, being arranged in such case close upon the beam, as before described.

Having described the nature, construction, and operation of my invention, I will now specify what I claim and desire to secure by Letters Patent.

I claim the combination of the plates E and F, cam and handle K H, the standard D, shovel S, and rod *c*, arranged and operating substantially as and for the purposes specified.

WM. R. WALPOLE.

Witnesses:

J. G. WALKER,
WM. G. WOOD.