

# UNITED STATES PATENT OFFICE.

JOHN WOOD AND REUBEN NORTH, OF ROCHESTER, WISCONSIN.

## IMPROVEMENT IN SUBSOIL-PLOWS.

Specification forming part of Letters Patent No. **18,619**, dated November 10, 1857.

*To all whom it may concern:*

Be it known that we, JOHN WOOD and REUBEN NORTH, of Rochester, in the county of Racine and State of Wisconsin, have invented a new and useful Improvement in Subsoil-Plows; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan or top view of a plow with our improvement. Fig. 2 is a side view of the same, the mold-board being removed. Fig. 3 is a transverse section of the same.

Similar letters of reference in each of the several figures indicate corresponding parts.

The nature of our invention consists in the combination of the auxiliary or subsoil share and its adjustable standard with the adjusting-lever and its attachments, when the whole is constructed and arranged in the relation to the main share, as hereinafter specified. With this arrangement two plows are combined in one in such a manner that when it is desired to perform ordinary surface-plowing it can be done without removing the auxiliary plow or suffering any inconvenience from its remaining on the main plow; and, again, if it is desired to subsoil, it can be done by simply depressing a lever, and while subsoiling, should it become necessary, as it does at each completion of the furrow, to raise the subsoil-share out of operation, it can be done, even while the beam is in full motion, by simply raising the adjusting-lever.

To enable others skilled in the art to make and use our invention, we will proceed to describe its construction and operation.

A B C represent the mold-board, share, and standard of an ordinary cross-plowing plow; D, the beam, and D' D' the handles of the same.

E represents the subsoil plow or cutter. It consists simply of a flat plate set slightly inclined, as shown in Fig. 2. F is the standard to which it is attached. This standard is connected loosely to the inner side of the share B by means of a bracket, *a*. It is also connected loosely with the beam D by means of a vertical slot, *b*, formed in the rear part of the beam, the standard passing up through said slot, as shown in Fig. 3.

G is a lever, attached by a pivot to the beam

at *c* and to the standard by a link, as at *d d*. The lever G has a stop-pin, *e*, near its extremity, which, in connection with a curved perforated plate, H, serves for holding the subsoiling-plow in any position it may be desirable to have it stand.

To bring the subsoiling-plow into operation it is simply necessary for the farmer to depress the lever, as shown in red lines, and then to insert the stop-pin into one of the holes of the adjusting-plate H; and to throw it up out of operation it is simply necessary to raise the lever to the position shown in black. When the lever is thus elevated the subsoil-plow stands slightly above the bottom of the share B and in rear of the mold-board A, or in a position not to come in contact with the soil.

In all other plows adapted for cross and subsoil plowing the subsoil device is arranged so as to be taken off when it is desired simply to cross-plow, and when such is not the case it forms a part of the main plow, or is employed in connection with the same in such a manner that it is absolutely necessary at all times to subsoil in order to perform cross or surface plowing; whereas in our contrivance either the subsoil or surface plow can be used together or separately, as desired, without the necessity of detaching or attaching any additional parts.

Our invention is very simple, and provides the farmer with two plows in one at a very slight expense. It is also very utile, as it can be applied to plows at present in use.

We are aware that a sub-soil attachment to plows is very common; also, that a thin fixed blade has been arranged under the bottom of the surface-plow. Therefore we do not claim such attachment as our invention; but

What we do claim as our invention, and desire to secure by Letters Patent, is—

The combination of the auxiliary or subsoil share and its adjustable standard with the adjusting-lever and its attachments, when the whole is constructed and arranged in the relation to the main share and beam, as herein described and for the purpose set forth.

JOHN WOOD.  
REUBEN NORTH.

Witnesses:

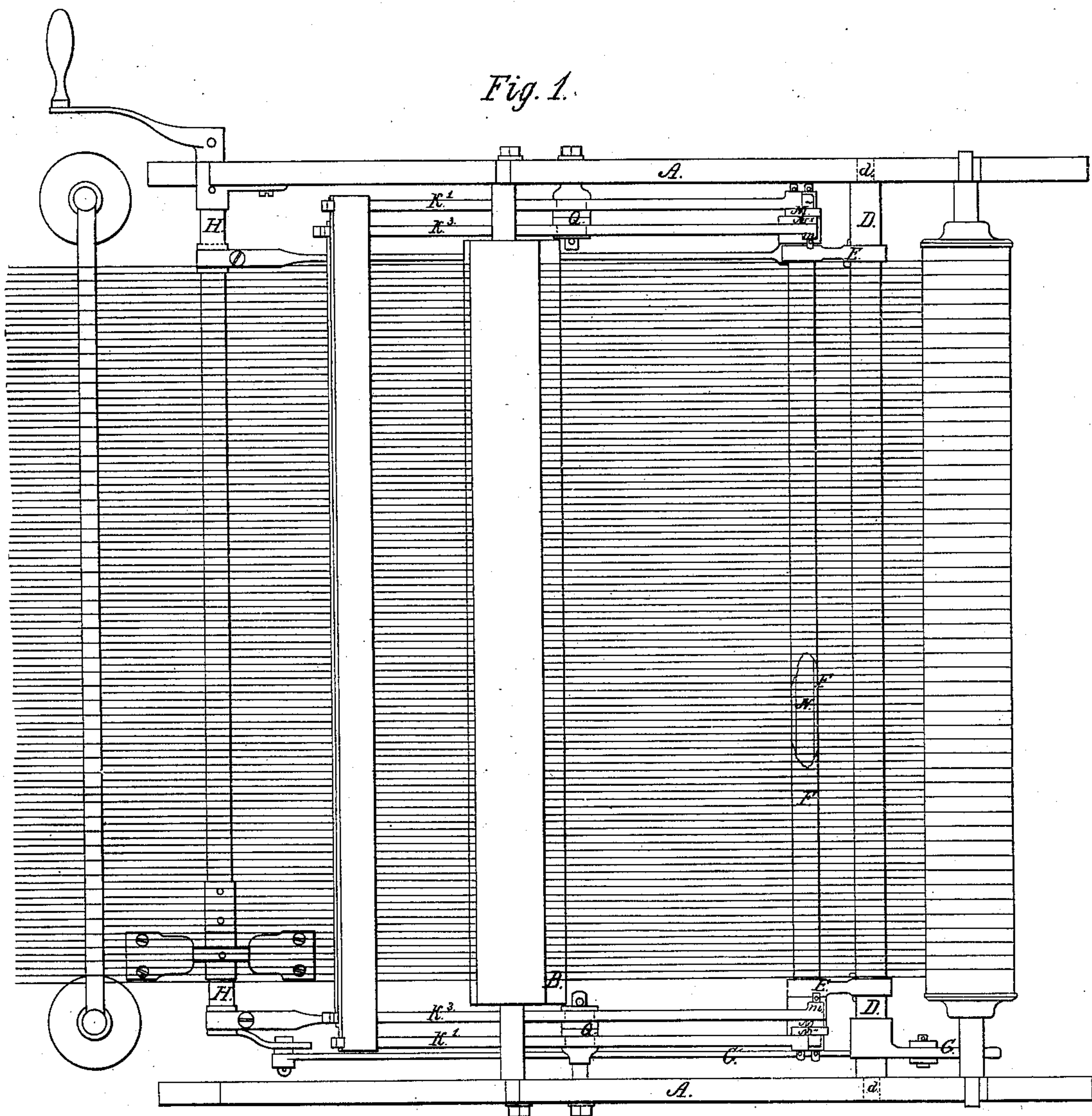
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*Nº 18,620.*

*Patented Nov. 10, 1857.*

*Fig. 1.*





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*N<sup>o</sup> 18,620.*

*Patented Nov. 10, 1857.*

