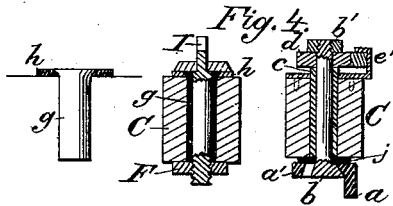
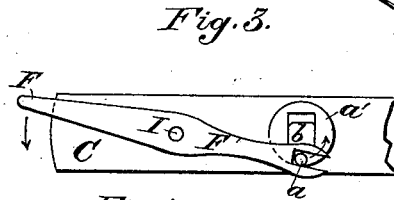
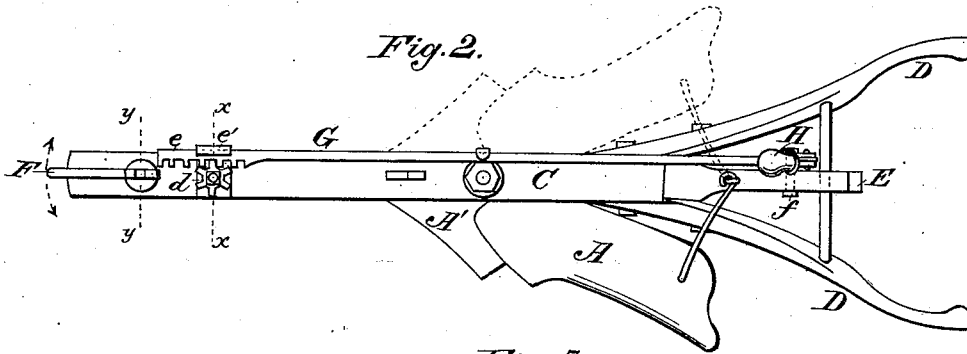
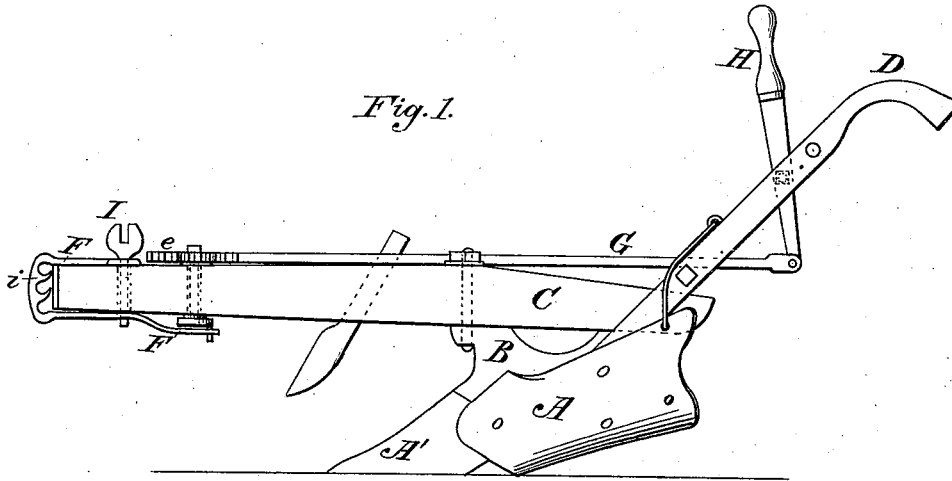


W. E. WHITCOMB.
Plow.

No. 206,511.

Patented July 30, 1878.



Attest:
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Inventor:
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UNITED STATES PATENT OFFICE.

WILLIAM E. WHITCOMB, OF BARRE, VERMONT.

IMPROVEMENT IN PLOWS.

Specification forming part of Letters Patent No. **206,511**, dated July 30, 1878; application filed May 18, 1878.

To all whom it may concern:

Be it known that I, WILLIAM E. WHITCOMB, of Barre, in the county of Washington and State of Vermont, have invented certain new and useful Improvements in Regulating the Line of Draft of Plows; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to an improvement in plows which are so constructed that the width of the furrow may be increased or diminished to any desired extent at the will of the plowman without stopping the plow; and it consists in the combination and arrangement of the parts, which will be first fully described, and then specifically pointed out in the claims.

In the drawings, Figure 1 is a side elevation of the plow; Fig. 2, a plan; Fig. 3, a plan of the lower side of the end of the beam, showing the clevis and crank-wheel. Fig. 4 represents vertical transverse section of the beam on the lines *x x* and *y y* of Fig. 2.

A represents the mold-board of a plow; A', the point, and B the land-side, which is attached to the beam C by means of a screw, bolt, and nut, in the usual manner. D are the handles, and E the standard between them, to which they are securely attached at their lower ends, as well as being further braced by a cross-piece passing through the upper part of the standard. So far the construction of the plow may be similar to those in common use, and therefore requires no specific description. The clevis F, to which the evener or draft-chain is attached, is, however, of peculiar construction, being formed with an extension, F', beyond the pivot upon the lower side, the extreme end of which is provided with a slot, into which the crank-pin *a* enters. This crank-pin is attached to the slotted plate *a'*, secured in position upon the under side of the beam by the bolt *b*, the head of which is of dovetail or other suitable shape corresponding with that of the slot in the plate *a'*. A washer, *j*, is introduced between the end of the sleeve *c* and the slotted plate *a'*, to form an enlarged bear-

ing for the same. This bolt *b* passes upward through a sleeve, *c*, inserted loosely in the beam, so as to present no obstacle to its free revolution with the bolt. A pinion, *d*, is secured upon the upper end of the bolt *b* by means of a nut, *b'*, which, when screwed up tight, brings the under side of the pinion and upper side of the crank-plate *a'* into forcible contact with the ends of the sleeve *c*. This sleeve is of slightly greater length than the thickness of the beam, thus allowing the whole to turn freely in the beam when the nut *b'* is screwed down perfectly tight, so as to hold the several parts in fixed relations to each other. A horizontally-arranged rod, G, provided at one end with a rack, *e*, is placed above and parallel with the beam, the rack *e* being retained in gear with the pinion *d* by means of the guide-plate *e'*, secured by screws or other suitable means to the top of the beam. An adjustable guide for the rod G may be formed on the washer, which is placed beneath the nut which secures the land-side to the beam, if such guide be found necessary. To the rear end of the rod G is attached, by a pivoted joint, the hand-lever H, attached to the standard E by means of a bolt, *f*, upon which it oscillates freely. The pivot-bolt I, upon which the clevis turns, passes through the sleeve *g*, inserted in the beam between the bolt *b* and the front end of the beam. This sleeve is also of slightly greater length than the thickness of the beam, and is provided at its upper end with a washer, *h*, into which it is secured by riveting or other means, so that it shall not drop out of its position in the beam when the bolt I and clevis are removed. A screw-thread is formed in the lower side of the clevis, into which the lower end of the bolt I screws after passing through the sleeve. It will therefore be apparent that, no matter how tightly the bolt I is screwed up, the clevis cannot bind upon the beam, as the sleeve receives the thrust, thus allowing the clevis to swing freely upon the bolt.

From this description of the construction of the parts it will be apparent that any movement of the hand-lever H will cause the rack *e* to act upon the pinion and crank, causing the latter to move the end of the clevis to the right or left, as may be desired. This move-

ment, by throwing the line of draft to the right or left of the axial line of the beam, causes the furrow to be of greater or less width, enabling the plowman to gage the width to the various exigencies which may arise during his progress requiring such change without stopping his team. The hooks *i* at the end of the clevis, which sustain the evener and are used to gage the depth of the furrow, are turned up at their inner ends, so as to prevent the evener from dropping when, in turning or from other cause, the clevis swings to the right or left past the end of the beam.

I have constructed the clevis in a peculiar manner by making one side of it longer than the other, and making a slot at or near the rear end. The front end is divided by lugs, the inner ends of which are curved upward; and whether the clevis is turned to the right or to the left, or is in any intermediate position, the hook of the draft-chain or the eye of the evener, whether hitched high or low, will hang off from the end of the beam, so that in turning the corners of the land the end of the beam will not become injured by the contact and wear of the hook or iron of the evener in its dangling action in the work of turning corners, and thus drawing the plow upon the surface of the ground.

I am aware that a draw-bar has heretofore been made which could be turned to throw the draft from side to side by means of geared devices and a lever within reach of the plowman.

I claim as new, and desire to secure by Letters Patent, the following:

1. In a furrow-gage for plows, the horizontally-swinging clevis *F*, provided with the slotted extension *F'*, in combination with the sleeve *g*, enlarged at the top end to fit the countersunk washer *h*, plow-beam *C*, and the bolt *I*, substantially as and for the purpose specified.

2. In a furrow-gage for plows, the clevis *F*, provided with slotted extension *F'*, in combination with the crank-pin *a*, slotted crank-plate *a'*, washer-bolt *b*, and sleeve *c*, all constructed, arranged, and operating as and for the purpose set forth.

3. In a furrow-gage for plows, the rod *G*, provided with rack *e*, in combination with guide *e'*, pinion *d*, sleeve *c*, crank-plate *a'*, and bolt *b*, constructed and arranged in the manner and for the purpose as specified.

4. In a furrow-gage for plows, the swinging clevis *F*, rod *G*, provided with rack *e*, pinion *d*, crank wheel or plate *a'*, bolt *b*, and sleeve *c*, all combined and arranged to operate in the manner substantially as shown and described.

In testimony that I claim the foregoing as my own I hereunto affix my signature in presence of two witnesses.

WM. E. WHITCOMB.

Witnesses:

E. A. DICK,
J. C. TASKER.