

(No Model.)

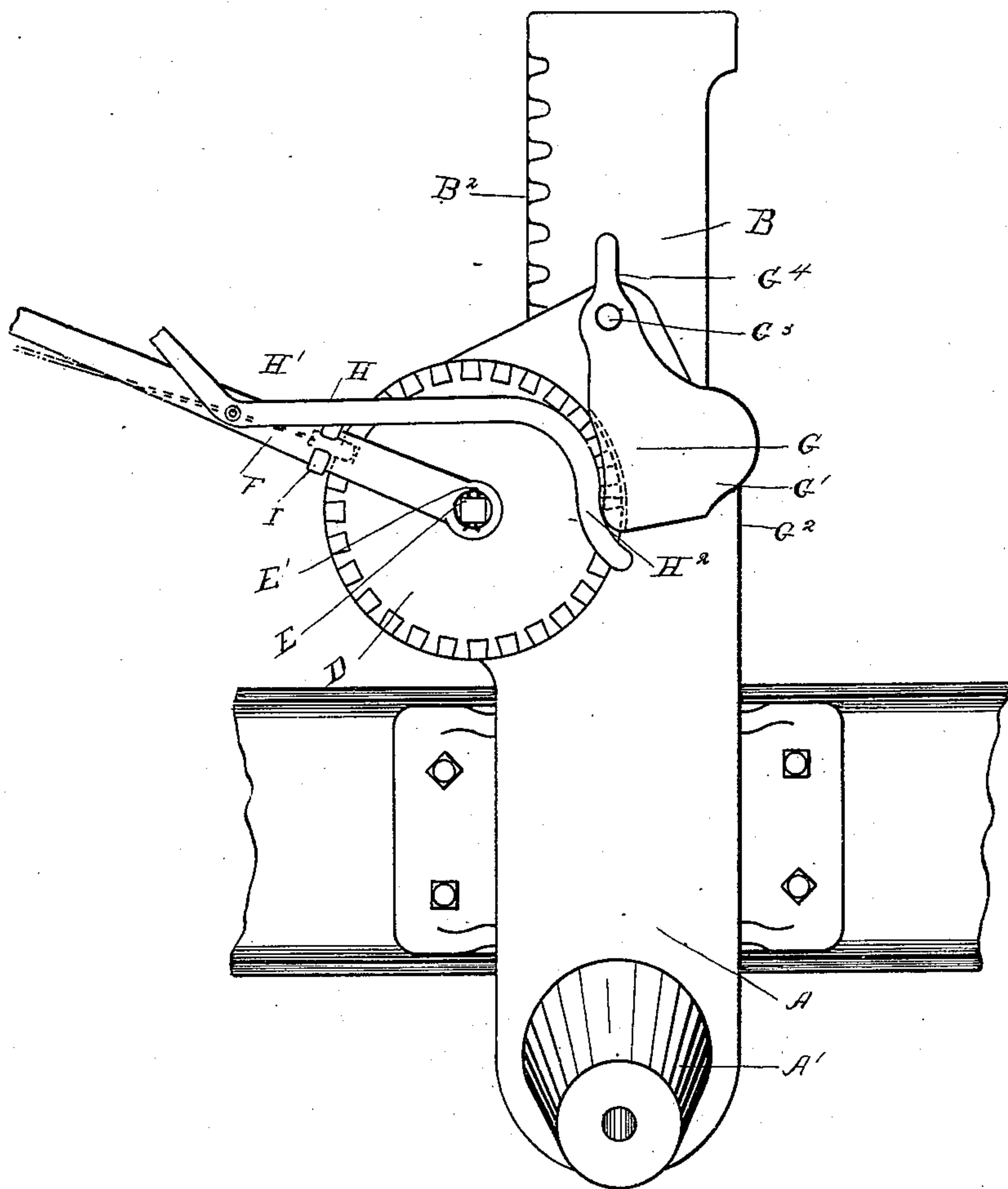
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G. SPALDING & J. S. ROBBINS.  
WHEELED PLOW.

No. 563,516.

Patented July 7, 1896.

Fig. 1.



WITNESSES:

Baldwin Vale  
J. M. Nougues

INVENTORS

George Spalding  
John S. Robbins  
by Boone & Muddock  
ATTORNEYS.

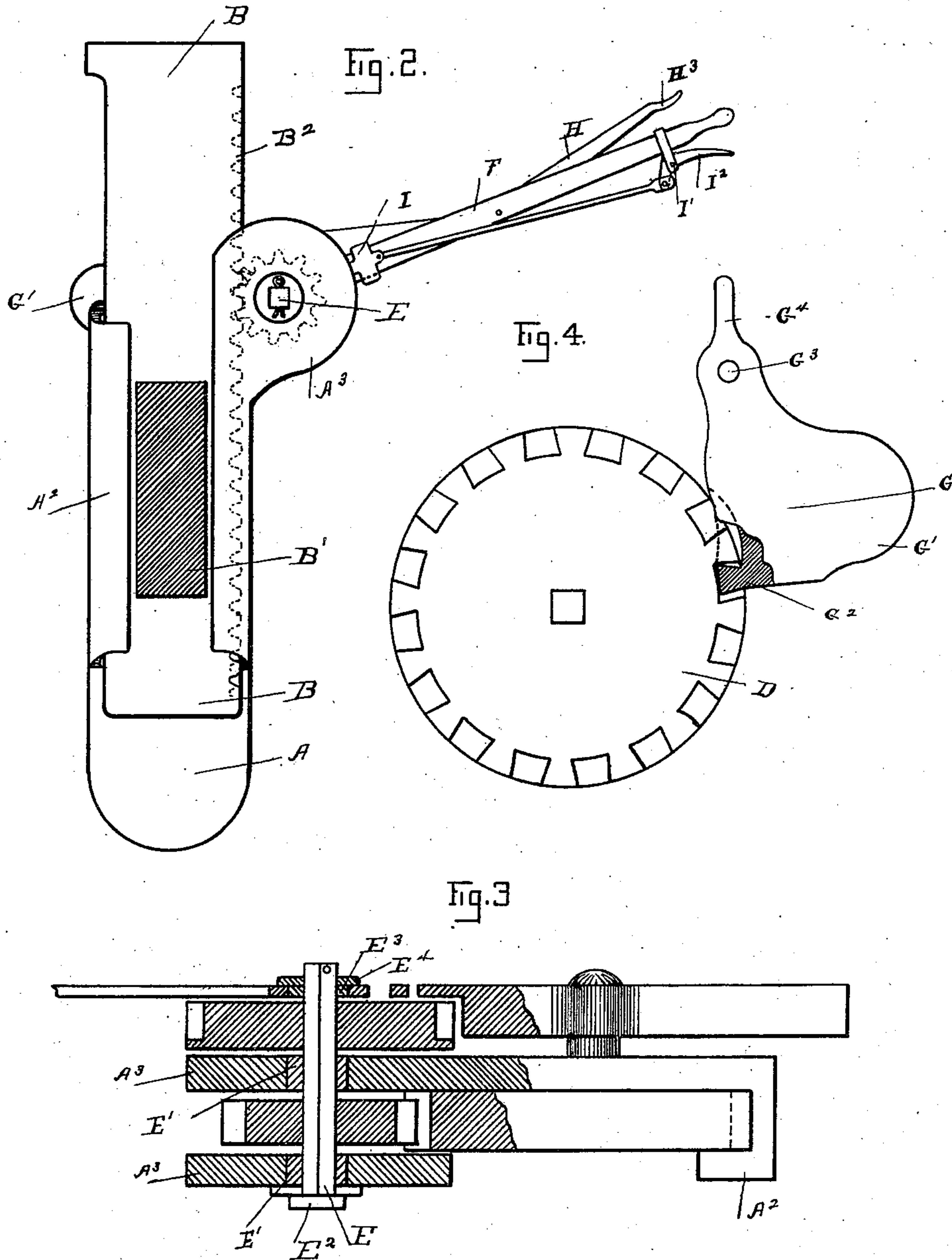
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John S. Robbins  
by Boone & Murdoch  
ATTORNEYS



# UNITED STATES PATENT OFFICE.

GEORGE SPALDING AND JOHN S. ROBBINS, OF STOCKTON, CALIFORNIA.

## WHEELED PLOW.

SPECIFICATION forming part of Letters Patent No. 563,516, dated July 7, 1896.

Application filed January 11, 1896. Serial No. 575,166. (No model.)

*To all whom it may concern:*

Be it known that we, GEORGE SPALDING and JOHN S. ROBBINS, citizens of the United States, residing at Stockton, in the county of San Joaquin and State of California, have invented certain new and useful Improvements in Wheeled Plows; and we do hereby declare the following to be a full, clear, and exact description of said invention, such as will enable others skilled in the art to which it most nearly appertains to make, use, and practice the same.

This invention relates to improvements in wheeled plows, and more particularly to a lever adjustment for the carrying-wheels thereof, and it has for its objects to gain an increased force wherewith to raise the body of the plow and to place the handle of the lever in a desired position without moving the body of the machine.

It consists in the construction and arrangement of the parts hereinafter set forth and claimed.

In the drawings, Figure 1 is a front elevation of the improved lever. Fig. 2 is a rear elevation of the same. Fig. 3 is a plan view of the same, partly in section. Fig. 4 is a detail view of the heavy pawl and pinion.

The object being to lift the body of the plow on the wheels, they are mounted on separate parts, the body of the rack-bar B, and the wheels on the guide-plates A, the former operating within the latter. For this latter purpose the guide-plates are formed with the inwardly-turned edges or lips A<sup>2</sup>, which constitute guides for the rack-bar to slide up and down in. The rack-bar is provided with the bracket B', by which it is hung on the body of the plow, and the guide-plate is provided with the boss A', to form or support the journal of the wheel. At the upper end of the guide-plate are mounted the double pinions C and D. They are rigidly mounted in square bearing ends of the shaft E, which has bearings in the sides of the guide-plate where it extends through them. By this means the movement of one pinion is imparted to the other. The bearings referred to where the square shaft E passes through the wings A<sup>3</sup> of the guide-plate consist of round bushings E' E', having a square hole in them for the passage of the shaft E. By this construction

the mountings are simplified while insuring perfect bearings for the shaft E. The shaft E is secured in position by the head E<sup>2</sup> at the one end and a pin at the other end. The pinions are rotated by the lever F, which is pivotally mounted to the shaft E on the washer E<sup>3</sup>, where it is secured by the washer E<sup>4</sup>. To engage the pinion D, against which it rests, it is provided with the detent I, which strikes between the teeth of the pinion. By withdrawing this detent and resetting it at any point on the pinion D, the best advantage may be taken for purchase or convenience; or after the body of the plow has been raised the lever may be lowered to avoid the limbs of trees or overgrowth. To thus operate the detent it is pivoted on the lever at I', and is provided with the handle I<sup>2</sup>, near the handle of the lever within easy grasp of the operator, a spring being provided to raise the handle and throw the detent into engagement with the pinion.

To hold the pinion D in position is provided the pawl G, which is pivotally mounted at G<sup>3</sup> on the guide-plate. At the lower end it is provided in the face with the tooth G<sup>2</sup>, which strikes into the teeth of the pinion D. This pawl is extended beyond the center of gravity to form the weighted extension G', which throws the tooth G<sup>2</sup> into engagement with the teeth of the pinion. The tooth G<sup>2</sup> is an inverted wedge beveled, as shown, to fit the beveled openings between the teeth and thus prevent disadjustment of the pinion in either direction, such as might be caused by jolting. The pawl is further provided with the handle G<sup>4</sup>, by which it may be held off if desired without operating the lever F. The engagement between the pinion and the pawl being in a beveled construction, it will be seen the pawl must be raised from engagement for adjustment in either direction. This is accomplished by the lever H, which is mounted at H' on the lever I, and the handle H<sup>3</sup> of which extends to near the handle of the said lever. At its lower end the lever H is curved to form the foot H<sup>2</sup> in front of the pawl G. Thus when the handle H<sup>3</sup> is depressed, the foot H<sup>2</sup> strikes the pawl and throws it out of engagement. Being curved, as shown, the pawl is held off while the lever is moved around the pivot.



As above stated, by reason of the rigid connection between the pinions when the one is moved the other is likewise moved. The pinion G is engaged by the teeth B<sup>2</sup> of the rack-bar B, and as the pinion moves in the one or the other direction the rack-bar is raised or lowered, as the case may be, raising or lowering the body of the plow. When, by means of this lever, the body is set as desired, the detent I may be drawn from engagement with the pinion, and the lever F set at whatever angle desired. We find this of great advantage, especially in plowing about the trees of an orchard.

Having thus described this invention, what we claim is—

1. In a wheeled plow and in the raising and lowering lever thereof, the combination with a journal-bracket having a vertical guide-plate attached, of a bracket extended from the plow-frame provided with a rack-bar adapted to slide in said guide-plate, a pinion mounted on said guide-plate and engaging the said rack-bar, and a pawl mounted on

said guide-plate and having an inverted wedge-shaped tooth to engage the said pinion, substantially as described.

2. In a wheeled plow and in the raising and lowering lever thereof, the combination with a journal-bracket having a vertical guide-plate attached, of a bracket extended from the plow-frame provided with a rack-bar adapted to slide in said guide-plate, two pinions rigidly connected mounted on said guide-plate, one of which engages the said rack-bar, a pawl mounted on said guide-plate having an inverted wedge-shaped tooth to engage one of the pinions, a lever to turn the pinions and a lever pivoted on the turning-lever, and adapted to throw the pawl out of engagement with the pinion, substantially as described.

In testimony whereof we have hereunto set our hands this 19th day of November, 1895.

GEORGE SPALDING.  
JOHN S. ROBBINS.

Witnesses:

BALDWIN VALE,  
E. F. MURDOCK.