(No Model.)

R. & S. T. BRUCE.

PLOW.

No. 305,285. Patented Sept. 16, 1884.

Fig. 1.

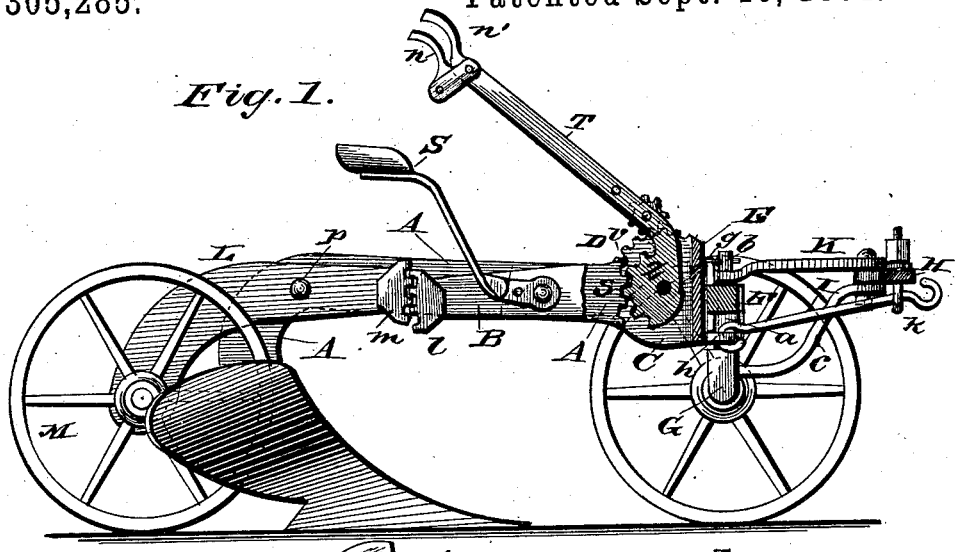


Fig. 4.

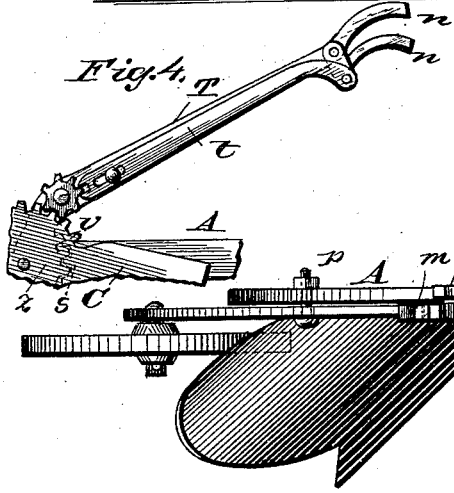
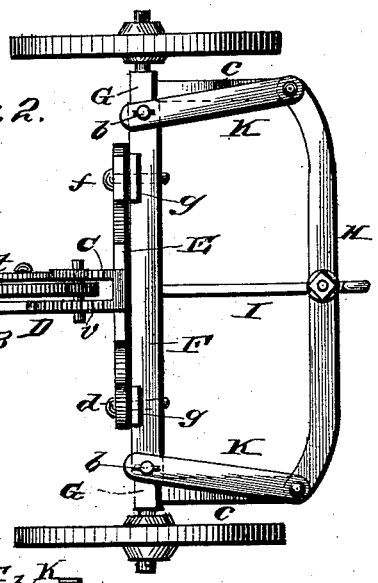
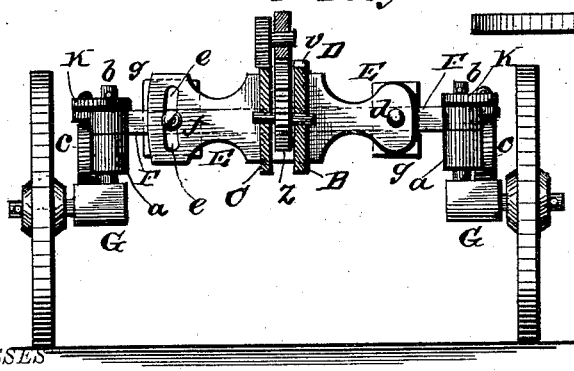


Fig. 2.



T Fig. 3.



WITNESSES

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ROBERT BRUCE AND SIDNEY THOMAS BRUCE, OF MARSHALL, MISSOURI.

PLOW.

SPECIFICATION forming part of Letters Patent No. 305,285, dated September 16, 1884.

Application filed May 17, 1884. (No model.)

To all whom it may concern:

Be it known that we, ROBERT BRUCE and SIDNEY T. BRUCE, citizens of the United States, residing at Marshall, in the county of Saline and State of Missouri, have invented certain new and useful Improvements in Plows; and we do declare the following to be a full, clear, and exact description of the invention, such as 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 or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a side view, part sectional, of our device. Fig. 2 is a plan view of the same. Fig. 3 is a transverse section, and Fig. 4 is a detail view.

This invention has relation to wheel-plows; and it consists in the construction and novel arrangement of devices, as hereinafter set forth, and pointed out in the appended claims.

In the accompanying drawings, the letter A designates the beam of the plow, which is pivoted near its front end between the arms B and C of a holder, D, which consists, essentially, of said arms and a transverse vertical plate, E.

F represents the axle-bar, having vertical socket-bearings *a* at its ends, to receive the pintles *b* of the journal-pedestals G of the wheels, said pedestals having brace-arms *c*, which extend forward and upward, and are pivoted to the ends of a front guide-bar, H, which extends transversely, being located a short distance in front of the axle-bar F. Pivoted links K connect the ends of the axle-bar to the ends of the guide-bar, which is made a little longer than the axle-bar, to facilitate turning in short compass. The transverse holder-plate E is pivoted at one end to the axle-bar, as shown at *d*, and at its other end said plate is provided with a vertical curved slot, *e*, adapted to engage a clamp-screw, *f*, which is secured to the axle-bar or to a bearing-plate or wear-plate, *g*, secured thereto. A similar wear-plate is arranged to serve as a bearing for the pivoted end of the holder-plate E. From a central lug, *h*, of the plate E extends forward, through a bearing, *k*, the draft-rod I. The arm B is rearwardly extended from the holder-plate E, and provided at its end with a segment-gear, *l*, to engage a segment-gear, *m*, on the forward end of a lever-standard, L, which is curved, extending downward in rear of the plow-beam, and carrying a gage-wheel, M. This wheel, operating in connection with the holder-plate and the front wheels, gages the depth of the plow in the ground.

In order to fasten the plow-beam when the plow is adjusted for depth, as well as to enable the driver, seated on a seat, S, which is secured to an arm of the holder, to readily make the adjustment, the devices hereinbelow described are employed. The forward end of the plow-beam, in front of its pivot *p*, is toothed or provided with a toothed segment, as indicated at *s*, which engages a segment-gear, *z*, which is pivoted between the front portions of the arms B and C of the holder, said portions being made broad and being circularly curved at their upper edges, as shown at *v*. These edges are toothed to engage a pinion or pinions on the lever T, which is rigidly joined to the segment-gear *z*. This lever is provided with a slide-lock, *t*, which is operated by means of an auxiliary handle, *n*, which is pivoted to the main lever near its own handle *n'*. By manipulating the handles the slide-lock may be engaged or released. When released, the lever T can be operated by the driver to turn its segment *z*, thereby raising or lowering the plow-beam. The driver can therefore easily adjust the depth of the plow, or raise it out of the ground whenever it may be advisable. The lateral pitch of the plow—such as may be required, for instance, in hillside-plowing—is determined by adjusting the transverse holder-plate E, to which the beam is connected, the adjustment being secured by means of the clamp-screw.

Having described this invention, what we claim, and desire to secure by Letters Patent, is—

1. The combination, with the transverse angularly-adjustable holder-plate, connected to the axle of the front wheels, of the plow-beam pivoted to arms of said holder-plate, and engaging by its front toothed end a segment-gear having an operating-lever, and a gage-wheel having a curved standard pivoted to the plow-beam, and provided with a segment-gear at its forward end, to engage a segment-gear on the end of an arm of the holder-plate, substantially as specified.

2. The combination, with the axle and holder-plate, of the plow-beam having a toothed

end and pivoted to said holder-plate, the segment-lever, and the gage-wheel lever or standard pivoted to said beam, and extending forward of the pivot, to engage the end of an arm of the holder, substantially as specified.

3. The combination, with the axle-bar having vertical sockets for the pintles of the wheel-journals, of the adjustable holder-plate connected to the axle-bar, the plow-beam pivoted to arms of the holder-plate, and the adjusting-gear of the main lever and of the lever-standard of the gage-wheel, substantially as specified.

4. The combination of the front wheels and axle, the holder-plate B E, the rear wheel, and the arm L, the pivoted plow-beam, the lever adapted to raise the front and rear ends of the plow-beam by one operation of the said lever, and lower it by a reverse movement of the same lever, substantially as specified.

5. The combination, with the axle-bar, of the transverse bar H, of greater length than the said axle-bar, the wheel-pintles hinged to the said axle-bar, the pedestals having branch arms *c*, and the connecting-arms K K, whereby the plow may be turned in a narrow space, substantially as specified.

In testimony whereof we affix our signatures in presence of two witnesses.

ROBERT BRUCE.
SIDNEY THOMAS BRUCE.

Witnesses:
HENRY STROTHER,
W. H. BRUCE.