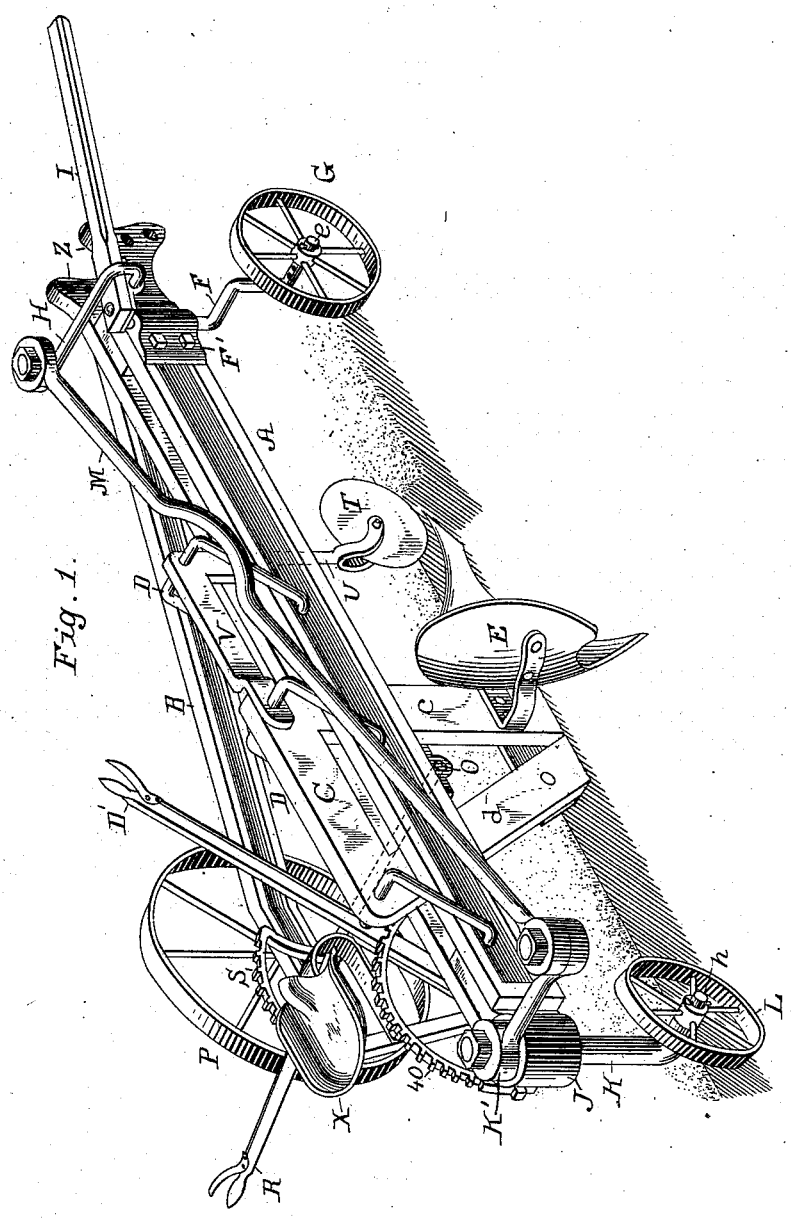
(No Model.) 4 Sheets—Sheet 1.

S. B. & J. C. TOLSON.

THREE WHEEL RIDING PLOW.

No. 382,019. Patented May 1, 1888.

Fig. 1.



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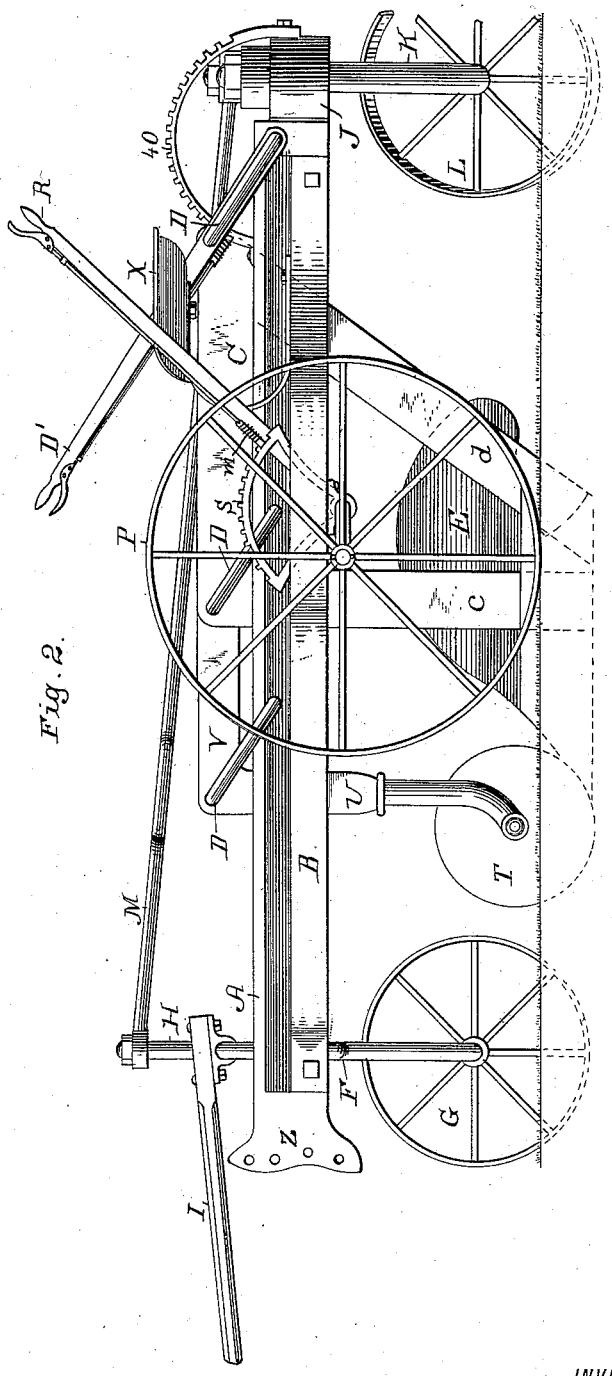

Fig. 2.

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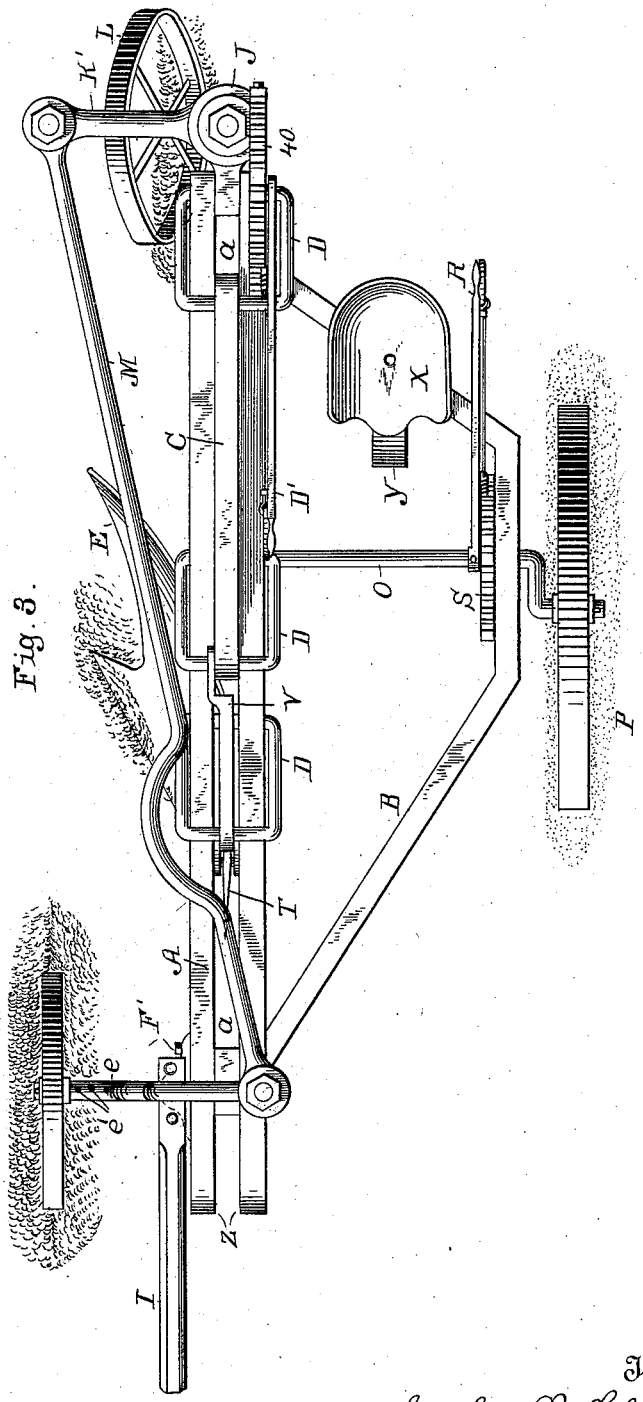

Fig. 3.

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THREE WHEEL RIDING PLOW.

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Fig. 4

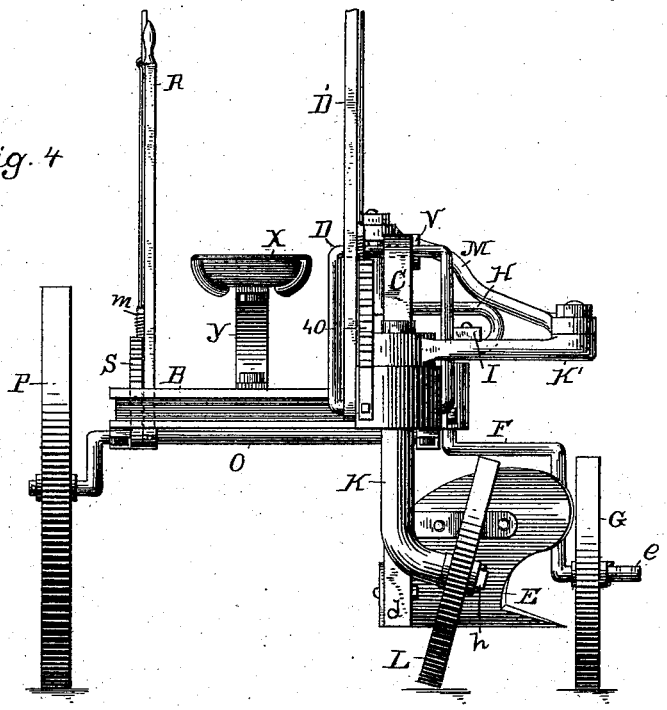


Fig 5.

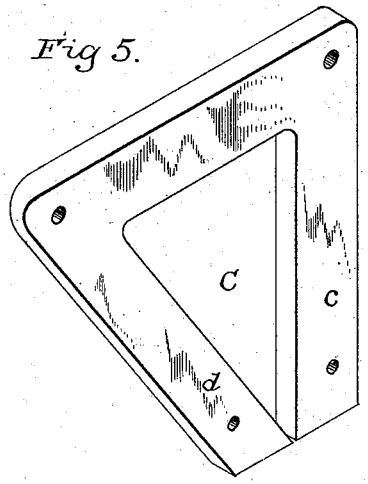
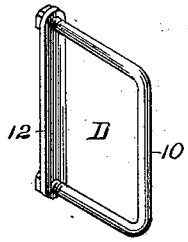


Fig. 6.



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UNITED STATES PATENT OFFICE.

STEPHEN B. TOLSON AND JAMES C. TOLSON, OF KANSAS CITY, MISSOURI.

THREE-WHEEL RIDING-PLOW.

SPECIFICATION forming part of Letters Patent No. 382,019, dated May 1, 1888.

Application filed December 16, 1887. Serial No. 258,106. (No model.)

To all whom it may concern:

Be it known that we, STEPHEN B. TOLSON and JAMES C. TOLSON, of Kansas City, Jackson county, State of Missouri, have invented certain new and useful Improvements in Wheel-Plows, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

This invention relates to riding-plows, the object being to construct and provide a light-draft three-wheel riding-plow which shall do its work in the most effective manner, and which can be controlled by the driver with the greatest convenience and precision.

The invention consists in the devices and the particular construction, combination, and arrangement of parts hereinafter set forth, and pointed out in the claims.

In the drawings, which illustrate the most approved manner of carrying out our invention, Figure 1 is a perspective view of a plow embodying it. Fig. 2 is a side view, looking from the land, with the parts in the position they would assume when the plow is at work. Fig. 3 is a plan view. Fig. 4 is a rear view with parts in position they assume when going to or from the field. Fig. 5 is a detail view, in perspective, of a plow-carrying frame or standard which is loosely mounted in the framing and adapted to be raised and lowered bodily with the plow which it carries, and Fig. 6 is a detail view illustrating a varied manner of constructing the links used in mounting the plow-carrying frame.

The main frame of the machine consists of the beam A and the part B, constructed of suitable material and firmly secured together. Said part B is preferably constructed of a rolled metal bar, bent as shown, and having its ends fastened to the beam. Said beam A is preferably formed of two metallic bars separated by blocks located near their ends, so as to form a comparatively long vertical slot, *a*, in which the plow-carrying frame C and the colter-carrying standard U are loosely mounted, so that said plow and colter may be raised and drawn backward simultaneously. The forward ends of the metallic bars forming the beam A are extended a short distance so as to form a clevis, Z; or, if so desired, a clevis of any preferred style may be adjusted to the beam. Between the rear ends of said bars is clamped the shank of the bearing J for the swiveling rear wheel, L, which will be more minutely described farther along.

Projecting upwardly from the beam A, and having bearings for their lower ends formed therein, are a series of links, D, the upper ends of which are pivoted in the upper portion of plow-frame C and the colter-frame V. To the lower end of said plow-frame the heel of the landside of plow E is rigidly secured. The colter-frame V consists of a standard, U, and a horizontal bar, and the rear end of said bar is connected to the plow-frame, as shown. Said colter-frame is substantially L-shaped, and it carries the colter T in a suitable fork at its lower end.

For the purpose of operating the plow and the colter a lever, D′, is fastened to the rear one of the series of links D, so that it will operate the same as if its rear end were pivoted to the beam or some stationary portion of the frame, and so that it will be connected to the plow-frame in a suitable manner for operation. For holding said lever D′ in any desired adjustment it is provided with a sector-bar, 40, and the usual devices.

In this plow the front and rear furrow-wheels, G and L respectively, are swiveled in suitable bearings and connected together by horizontal bar M, so as to keep the plow always in line with the draft without the driver's aid, and to assist in turning the plow at the end of a furrow.

The vertical standard K of the rear wheel, L, is provided at its upper end with an arm or crank, K′, while its lower end is bent at or nearly at a right angle, and carries said wheel, as shown.

The axle F for the front wheel, G, is swiveled in the vertical bearing F′, and its lower end is bent at a right angle and provided with a series of apertures, *e′*, which are to be engaged by suitable pins, so that said wheel G can be moved in or out, as may be desired. The upper end of axle F is bent so as to form upon it a double crank, H, and to the lower arm of which the rear end of tongue I is connected, and to the upper arm of which the forward end of bar M is connected, so that when the front wheel, G, is turned inwardly or outwardly the rear wheel, L, will be simultaneously turned in a corresponding direction.

The main axle O is journaled in suitable boxes for the purpose, carried by the rear portion of the main frame, and is bent to form a crank at one end, on which the large ground-wheel P is mounted.

The lever R for operating the axle O, for the purpose of leveling the plow on uneven ground, has its rear end rigidly secured to said axle, and a sector-bar, S, is located on B, so as to be engaged by a spring-depressed dog, *m*, in the usual manner, for holding such levers at any desired adjustment.

The driver's seat X is mounted on the rear portion of frame B, so that the operating-levers D′ and R can be conveniently reached therefrom, and so that the driver may use the axle O as a foot-rest.

The plow is operated as follows: In going to or coming from the field both levers should be in a substantially vertical position, as shown more clearly in Fig. 4. Whenever it is desired to raise or move the wheel P it is accomplished by moving the lever R backward or forward. When it is desired to turn the plow at the end of a furrow or elsewhere, the levers are thrown into the position indicated by Fig. 4, the plow E being raised from the ground, when, by reason of the forward and rear wheels being connected together, (in the manner before indicated,) a very short corner may be turned.

The number of plows which may be carried by the main framing is not limited to one, but by the same principle of construction may be increased to any number required, such changes being the only difference between the plow here shown and a gang-plow.

It is evident that such slight changes in the form and construction of the several parts of our plow as would suggest themselves to a skilled mechanic may be made without departing from the spirit and scope of our invention, and we do not desire, therefore, to limit ourselves strictly to the construction herein set forth. For instance, as a varied form of construction for the links D′, we may make them from an iron rod, 10, bent into ⊐ shape and having its ends threaded and provided with suitable nuts, and a removable side piece, 12, as clearly shown in Fig. 6.

Referring again to the operation of the plow, it will be observed that when the plow E is raised from the ground by the action of lever D′ the colter T will also be raised at the same time, the construction being such that both the plow and the colter will be simultaneously raised and drawn backward from the ground by the well-known action of links D, somewhat similar to the manner in which a parallel-ruler operates.

Having thus described our invention, what we claim is—

1. The combination, in a wheel riding-plow, of the supporting-wheels and beam, colter and plow carrying frames or standards, a series of pivoted links loosely connecting the plow and colter carrying frames to the beam, and a hand-lever connected with one of said links, whereby the same are operated in unison to simultaneously raise and lower the colter and plow, substantially as described.

2. In a wheel-plow, the combination, with suitable supporting-wheels and beam, of the plow and colter carrying frames or standards, and a series of pivoted links loosely connecting said plow and colter carrying frames to the beam, said links having their free ends oscillating above the beam, to which they are pivoted, in the manner and for the purpose described.

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

STEPHEN B. TOLSON.
JAMES C. TOLSON.

Witnesses:
S. S. MOREHOUSE,
F. G. FISCHER.