

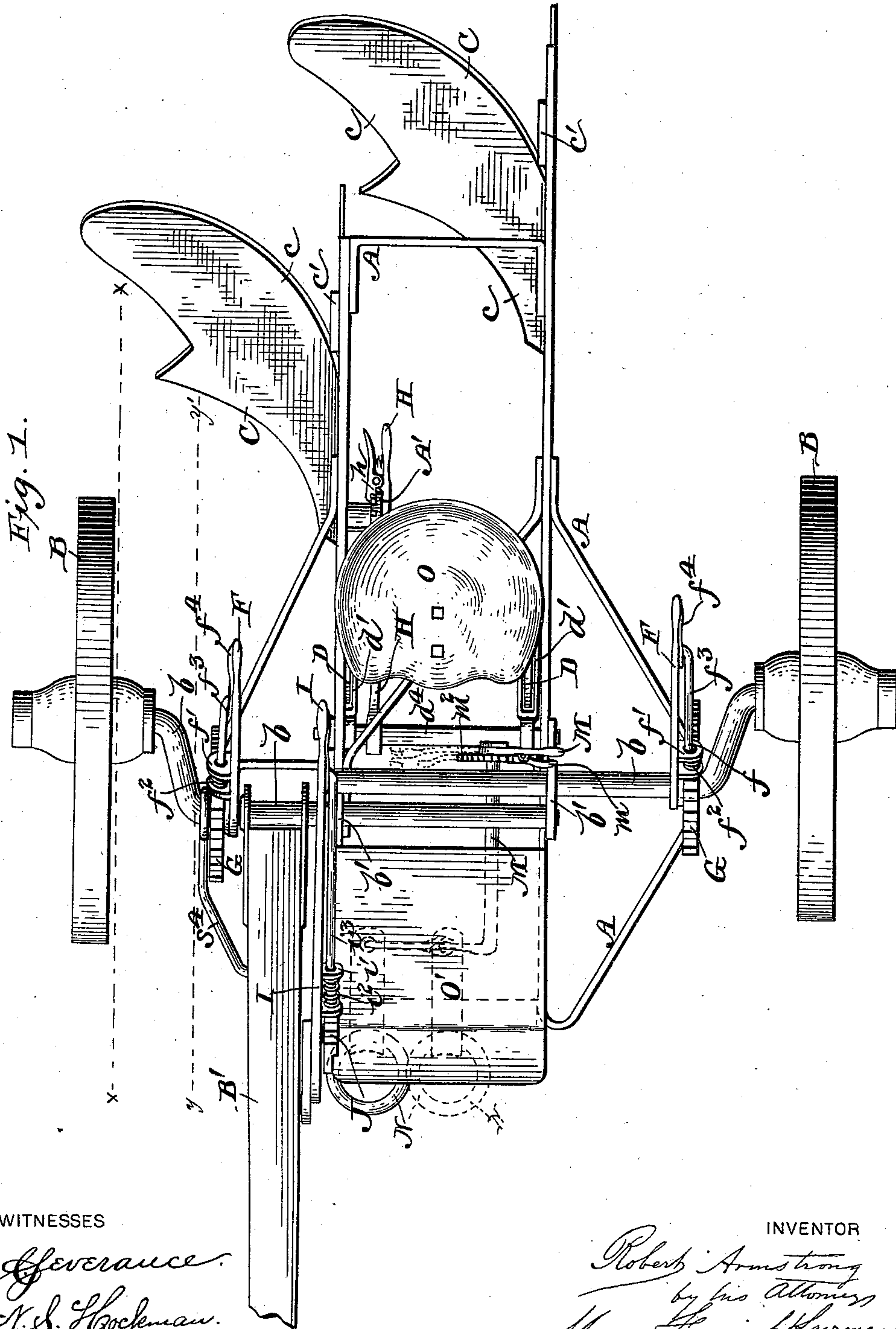
(No Model.)

R. ARMSTRONG.
PLOW.

2 Sheets—Sheet 1.

No. 550,211.

Patented Nov. 19, 1895.



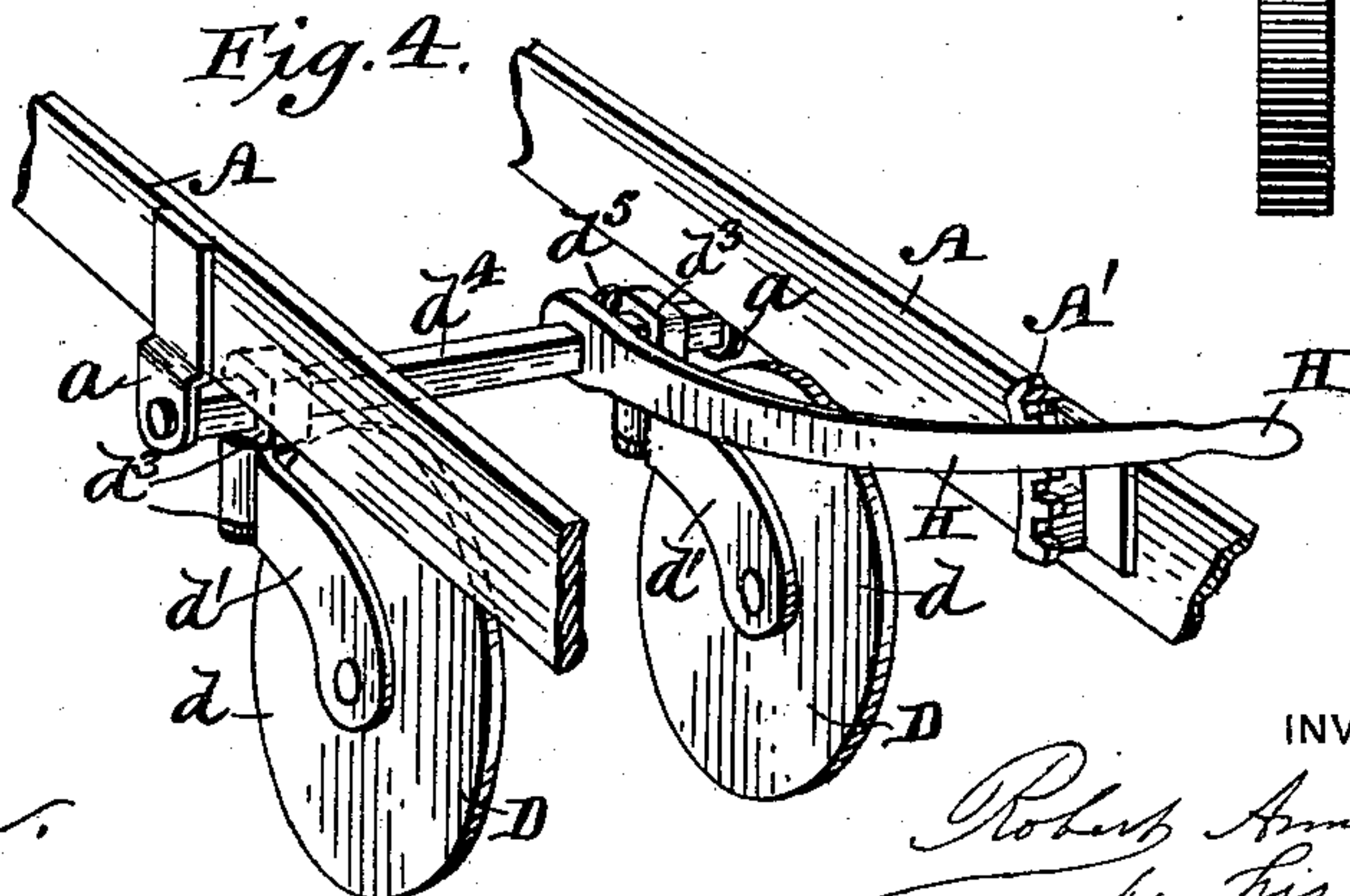
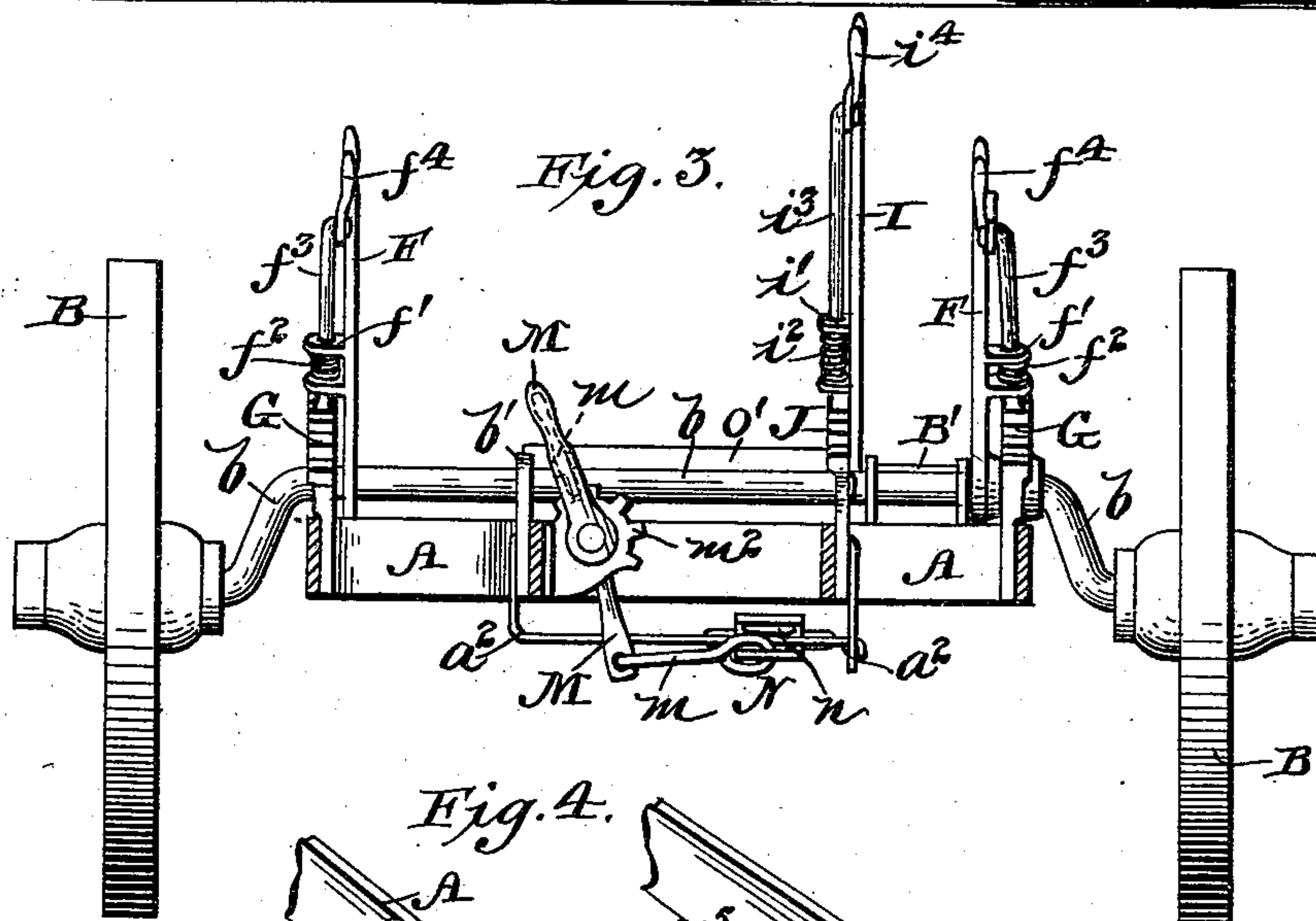
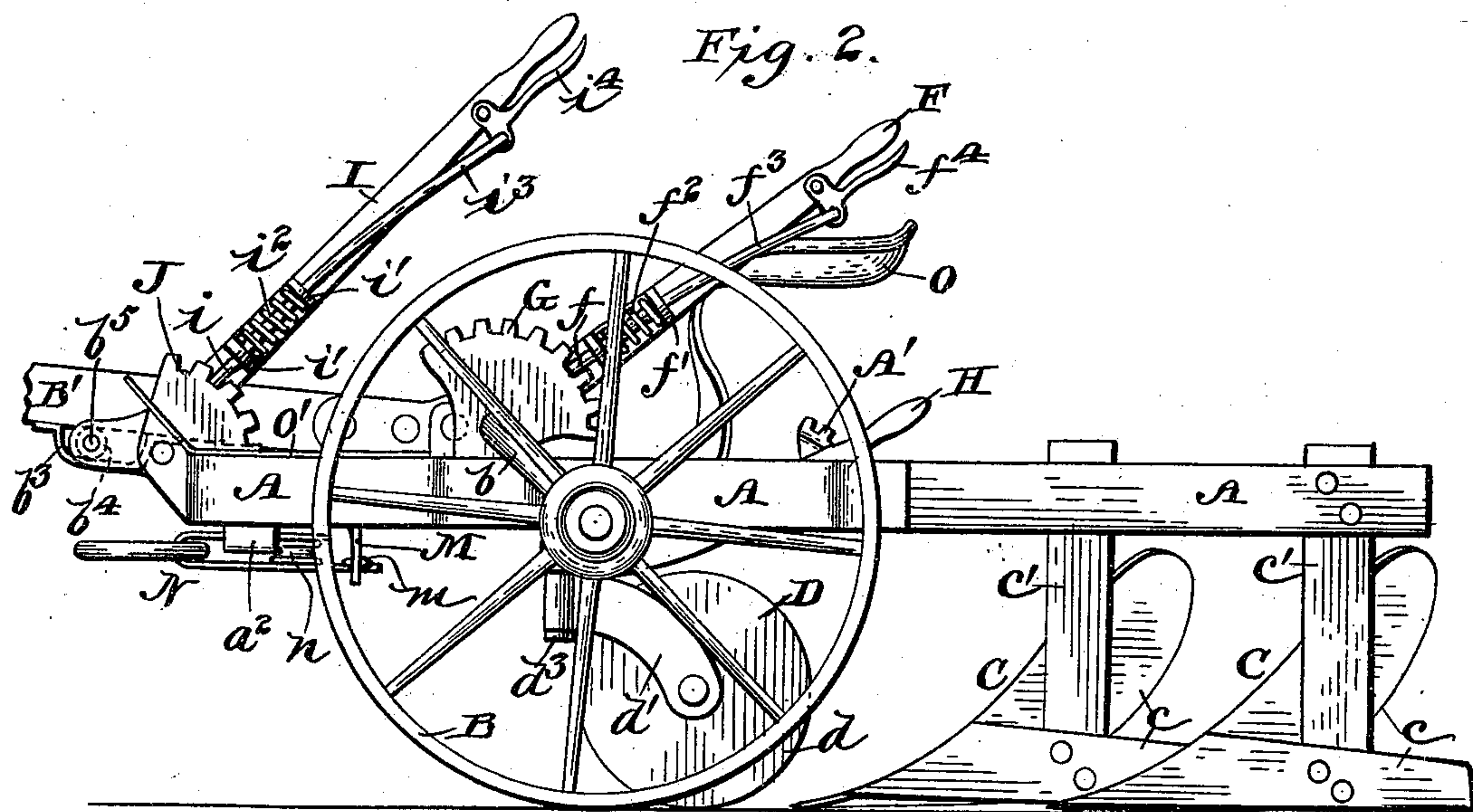
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2 Sheets—Sheet 2.

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WITNESSES

Obedience.
 N. S. Fockman.

INVENTOR

Robert Armstrong
by his Attorneys
Mason, Fenwick & Lawrence

UNITED STATES PATENT OFFICE.

ROBERT ARMSTRONG, OF KEWANEE, ILLINOIS.

PLOW.

SPECIFICATION forming part of Letters Patent No. 550,211, dated November 19, 1895.

Application filed August 13, 1895. Serial No. 559,155. (No model.)

To all whom it may concern:

Be it known that I, ROBERT ARMSTRONG, a citizen of the United States, residing at Kewanee, in the county of Henry and State of Illinois, have invented certain new and useful Improvements in Plows; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as it appertains to make and use the same.

My invention relates to improvements in sulky-plows, and has more particular relation to gang-plows or plows for turning two furrows at once.

The invention consists of certain novel constructions, combinations, and arrangements of parts, all of which will be hereinafter more particularly set forth and claimed.

In the accompanying drawings, forming part of this specification, Figure 1 represents a top plan view of a plow embodying my invention, the clevis being shown by full lines in one position and by dotted lines in another of its positions. Fig. 2 represents a side elevation of the same. Fig. 3 represents a central vertical transverse section through said plow, and Fig. 4 represents a detail perspective view of the colters and their mounting devices.

A in the drawings represents the frame of the plow; B, the wheels; C, the plows, and D the colters.

The wheels B are loosely mounted on the ends of independent crank-axles bb , journaled one in front of the other on the frame by journal-boxes b' . Each of said axles is provided with an operating-lever F F fast thereto. Each of said levers is provided with a plunger-pawl f , working through perforated lugs f' on said levers against the tension of spiral springs f^2 . Said pawls are each provided with a prolonged stem f^3 , which is connected to a pivoted hand-piece f^4 , whereby said pawls are operated. Segmental racks G are mounted on said frame in proximity to said pawls, so as to be engaged by the latter to hold the levers F F, and consequently the crank-axles, in any adjusted position.

The plows C each consist of combined share and moldboard c , and are supported on each side of the frame 1 in rear of the other by hangers c' .

The colters D each comprise a wheel d , jour-

naled in a yoke d' , which in turn is connected to a stud d^2 , having a square apertured head d^3 , adapted to be adjusted on the square colter-operating bar d^4 by means of a screw d^5 passing through said head and engaging said bar. The colters normally occupy a position near each end of the bar d^4 , which bar is journaled in suitable hangers a of the frame. An operating-lever H is mounted on the said bar and is provided at its end with a spring-pressed pawl h , which is adapted to engage a rack A' mounted on the frame. By the movement of this lever the colters are adjusted in height simultaneously because of the rotation of the bar d^4 . The shaft B' is pivotally mounted on one of the axles b and is provided on its under side forward of its pivotal point with an angular plate b^3 , which forms a guide for an antifriction-roller b^4 , mounted on a stud b^5 on the angular end of a pivoted operating-lever I. This lever is provided with a pawl i , mounted in studs i' , and restrained by a coil-spring i^2 . This pawl has an extended stem i^3 , which is connected to a pivoted hand-lever i^4 . This pawl is adapted to engage a segmental rack J, rigidly mounted on the frame.

It will be seen from the above that when the lever I is operated the shaft B', which is connected to the team, has a tendency to rise; but as it cannot do this the rear of the frame is elevated and the plows lifted out of the ground. This lever is used when the plows are to be elevated to turn the machine and at other times when it is desired to raise the plows for any reason.

The clevis N is mounted on a cross-bar a^2 on the front of the machine and is provided with an antifriction-wheel n , that bears against the back of the said cross-bar. This clevis is moved back and forth laterally, or from the position shown in full lines to that shown by dotted lines, so as to cause the plows to cut straight and always the same width, by crank-lever M, which is connected to the same by a link m . This lever is provided with a spring-pressed pawl m' , that engages a rack m^2 , mounted on the frame.

The plow is drawn by horses attached to a doubletree, said doubletree being attached to the movable clevis. The right-hand horse walks in the furrow made by the rear plow on the previous round and the other horse on

the unplowed land. The dotted line xx indicates the edge of the furrow made by the previous round. When the plow is set to cut the narrowest, the lever M is shifted to the position shown by dotted lines. This moves the adjustable clevis to the position shown by dotted lines, which moves the plow bodily the distance between the dotted lines H and yy .

It is very often difficult to get the land-horse to walk just exactly where he should. He is very liable to walk either too much to the right or the left. Especially is this the case if the land to be plowed has been under cultivation the season previous. By such cultivation the earth or soil is thrown to the growing crop, and the row is thus raised and the space between the rows depressed. Very few horses will walk exactly on the back or top of the ridge where the row has grown. They are inclined to walk in the smooth low place between the rows. Now when this smooth place where the horse walks happens to be too far from the furrow cut the previous round, and the horse will persist in walking there, the tendency is to pull the plow bodily over to the side where the horse walks and make the front plow cut too wide a furrow, and if the horse walks too close to the furrow the plow will be carried bodily too close to the furrow, and the front plow will not cut a full-width furrow; but by arranging the clevis to which the doubletrees and horses are attached so that said clevis can be moved either to the right or left, by means of a lever within easy reach of the driver, it will be readily seen that the width of furrow is in full control of the driver. For instance, should the land-horse step six inches to the left the clevis can be moved and thus allow the plow to follow on in the same line it was going before the horse stepped to the side, and vice versa. In case the horse steps too far to the right the driver moves the clevis to the right and allows the plow to continue cutting the same width furrow as it was doing previous to the horse going to the right.

A suitable seat O is mounted above the frame, and a foot-platform O' is mounted forward of the same upon the said frame. A brace-bar s^1 connects one of the axles b and the shaft.

It will be observed that the crank-axles can be operated independently of each other and thus raise or lower either one or the other or both of the plows. By this adjustment the depth of the plows can be regulated at will, or if the plow is running over uneven ground the plows can be adjusted independently of each other.

It will also be noticed that the colters can be easily adjusted from side to side on their supporting-rod.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a plow, the combination of a suitable frame, wheels mounted on the same, a plurality of plows pendent from said frame, a rotary rod having an operating lever and colters adjustably mounted on said rod; the construction being such that the colters are raised or lowered simultaneously by the operating lever, substantially as described.

2. In a plow the combination with a suitable frame, wheels mounted on the same, plows on said frame, a pivoted shaft, a lever pivotally mounted on the frame and provided with an angular end adapted to engage the shaft forward of its pivotal point and thus force the forward end of the frame down and elevate the plows at the rear, substantially as described.

3. In a plow the combination with a suitable frame, of independent crank axles mounted on the same, levers for adjusting said axles, wheels on said axles, pivoted colters adapted to be raised or lowered simultaneously and at will, plows on said frame, and means for raising or lowering the rear end of the frame at will, substantially as described.

4. In a plow the combination with a suitable frame, of independent crank axles mounted on the same, levers for adjusting said axles, wheels on said axles, a rotary shaft, colters adjustably mounted on the same, a lever for operating said shaft and plows mounted to the rear of said colters, substantially as described.

5. In a plow the combination with a suitable frame, of independent crank axles mounted on the same, levers for adjusting said axles, wheels on said axles, colters mounted on the said frame, means for adjusting the colters both vertically and longitudinally, a laterally adjustable clevis for attachment of the horses to the plow, a shaft pivotally connected to the frame and adjusting means connecting said shaft and the front of the frame whereby the rear of the frame can be raised or lowered, and plows on the rear of said frame, substantially as described.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

ROBERT ARMSTRONG.

Witnesses:

JOHN ARMSTRONG,
KATIE MURCHISON.