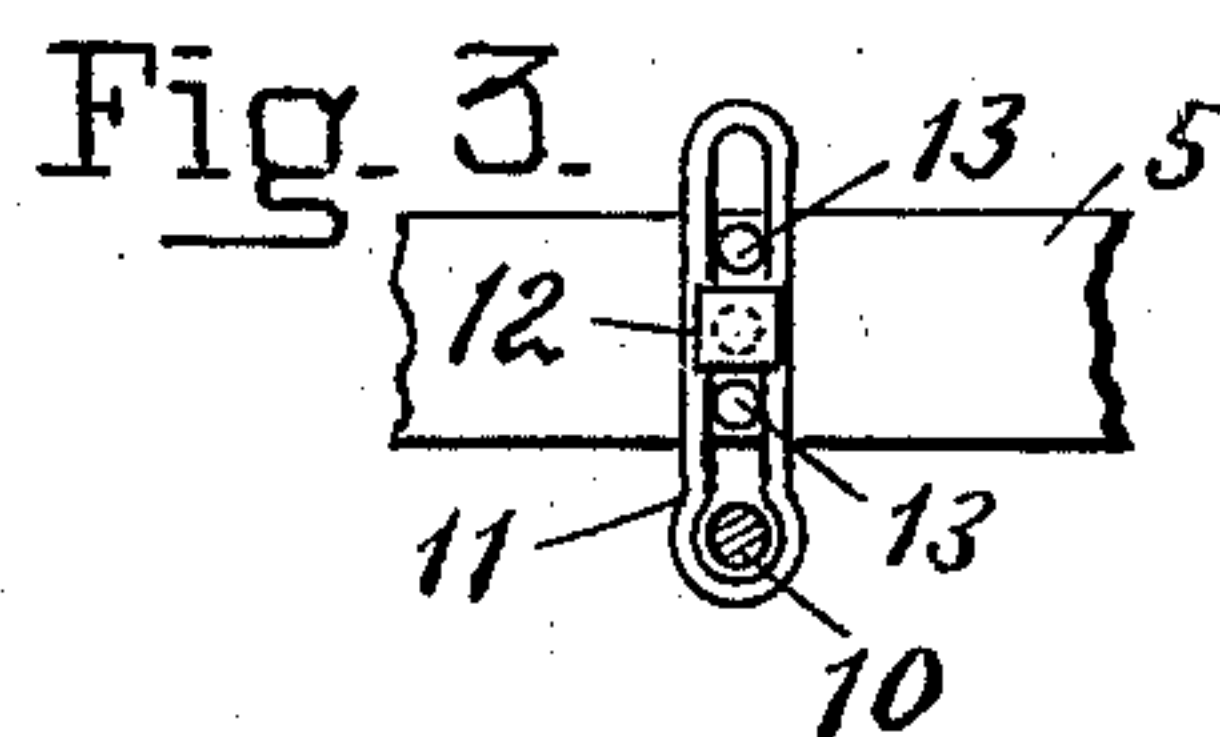
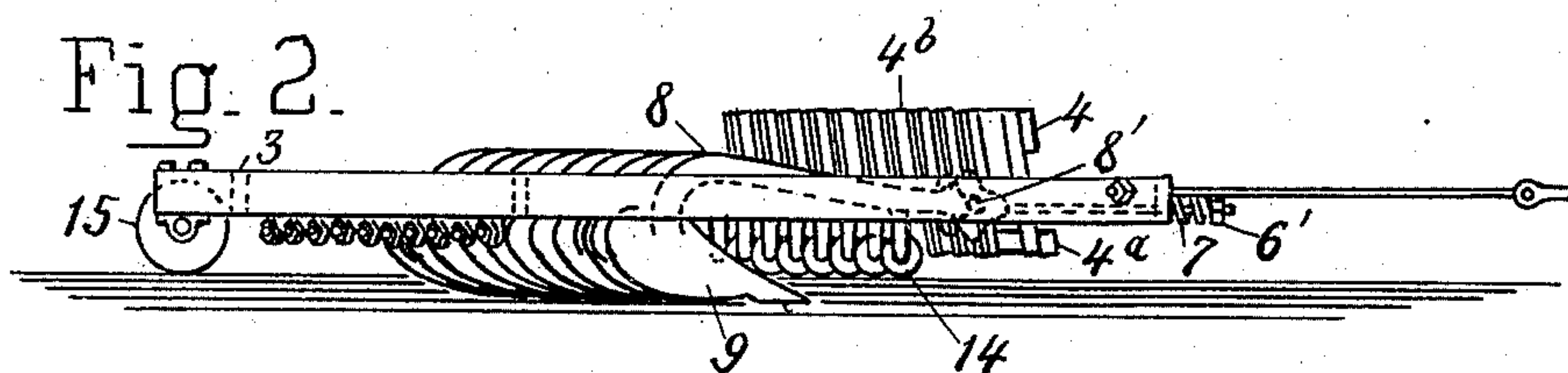
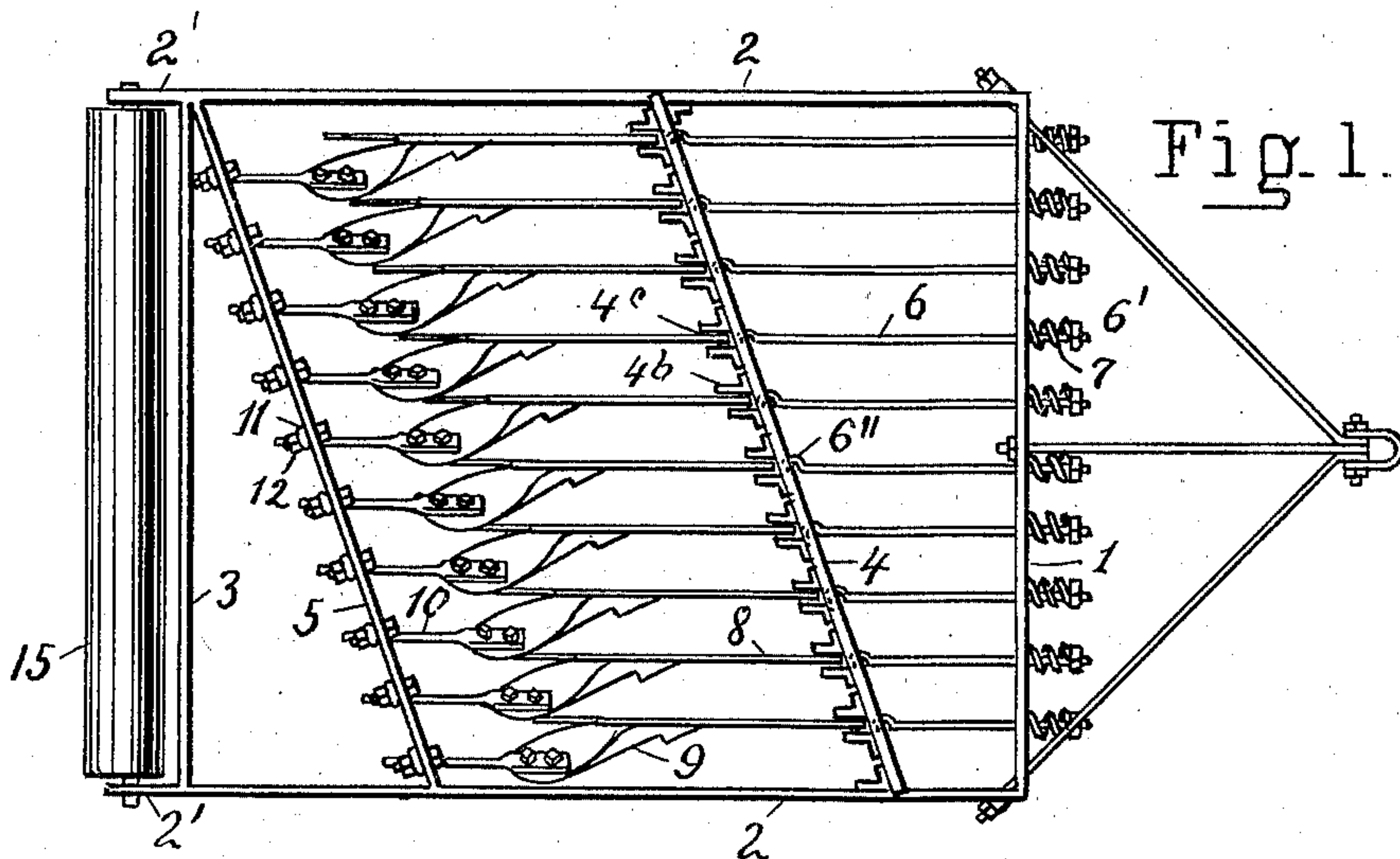


(No Model.)

W. STEPHENSON.
GANG PLOW.

No. 603,979.

Patented May 10, 1898.



Witnesses =

Samuel W. Balch
H. J. Whitman

Inventor,

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UNITED STATES PATENT OFFICE.

WILLIAM STEPHENSON, OF MORRIS, CANADA.

GANG-PLOW.

SPECIFICATION forming part of Letters Patent No. 603,979, dated May 10, 1898.

Application filed March 17, 1897. Serial No. 628,040. (No model.) Patented in Canada January 28, 1896, No. 51,157.

To all whom it may concern:

Be it known that I, WILLIAM STEPHENSON, a subject of the Queen of Great Britain, residing at Morris, in the county of Provincher, Province of Manitoba, Dominion of Canada, have invented certain new and useful Improvements in Gang-Plows, of which the following is a specification.

My invention relates to an improved construction for the mounting of the several plows, together forming a gang-plow, whereby each plow is so supported as to be capable of independent adjustment as well as independent movement, when the latter may be necessitated by an obstacle, and whereby the plows are at the same time properly supported.

The invention, for which I have obtained Letters Patent in the Dominion of Canada on the 28th day of January, 1896, No. 51,157, consists in the construction, arrangement, and combination of parts hereinafter fully described and claimed.

Referring to the accompanying sheet of drawings, which form a part of this specification, Figure 1 is a plan view of a gang-plow constructed in accordance with this invention. Fig. 2 is a side elevation thereof. Fig. 3 is a rear view of a portion of the rear brace and attached slotted stays.

The plows are mounted in a suitable rectangular frame consisting of the front sill 1, side sills 2, and rear sill 3. A forward diagonal brace, one part of which is marked 4, and a rear diagonal brace 5 are securely mounted between the side sills 2. The forward brace consists of an upper and a lower stringer 4 and 4^a, respectively, connected together by the vertical slats 4^b, formed of pieces of angle-iron, the slats forming a series of vertical slots 4^c equal in number to the number of plows mounted in the frame.

A perforation is formed in the front sill 1 in line with each slot 4^c in the front brace. Traction-rods 6 pass through these perforations. The forward ends of the traction-rods are capped by nuts 6'. On the end of each rod 6 between the forward face of the front sill and the nut is a spiral spring 7. The rear ends of the traction-rods terminate in hooks 6².

Each plow has a separate beam 8. The forward

end of each beam is broadened out vertically and is perforated to engage with a hook of one of the traction-rods. Each beam projects through and is free to move vertically in one of the slots 4^c in the forward brace and its end is caught upon the hooks of the corresponding rod, as is shown at 8' in Fig. 2.

A suitable plowshare 9 is secured to the rear end of each beam 8 and is guided by a rod 10, projecting rearwardly therefrom and through a hole in a bracket 11. A bolt 12 passes through a slot in the bracket and makes it fast on the rear brace 5, and wooden dowels 13 keep the bracket from turning. The slot permits the bracket to be adjusted vertically in respect to the brace, so as to properly guide the plow. Should the plowshare strike a stone or other obstacle and be thrown sidewise, the dowel-pins, which are easily renewed, will give way first, permitting the plow to swing to one side, and the other parts will be saved from injury.

The depth of the furrow cut by each plowshare is determined by an adjustable regulator-wheel 14, which is secured on the beam of each plowshare near its forward end. The rear end of the frame is supported by a roller 15, mounted in the rear extensions 2' 2' of the side sills 2. The roller also serves to roll the ground after it has been turned by the plowshares. The frame is attached to the engine through rods 16, connected to the ends of the front sill.

With the above-described construction the depth of the furrow turned by each plowshare is determined by its regulator-wheel, since the forward end of each beam, although held against lateral movement, is free to move vertically in the corresponding slot 4^c to allow its regulator to follow the irregularities of the ground and determine the depth of the furrow without affecting the position of the other plows.

A plow such as is herein described is well adapted to be drawn by a traction-engine, and I have in another application of even date herewith, which has been serially numbered 628,039, shown a straw-burning traction-engine, provided with a fuel-gatherer, which I have found especially well adapted for this purpose.

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

1. The combination, in a gang-plow, of a frame having a series of slots therein, with a series of plows, the forward end of the beam of each plow resting within and being free for vertical movement in one of the slots, substantially as described.

2. The combination, in a gang-plow, of a frame with a series of plows held therein by guides in the front and in the rear of the plowshares, the forward guide of each plow permitting vertical movement when in use independently of all of the other plows, substantially as described.

3. The combination, in a gang-plow, of a frame with a series of plows mounted and held therein by guides in the front and in the rear of the plowshares, the forward guide of each plow permitting independent vertical movement and the rear guides being secured by breakable pins which will let the plow swing to one side on striking an obstacle, substantially as described.

4. The combination, in a gang-plow of a frame, having a series of vertical slots, of a series of plows, each provided with a beam, the forward end of which plays up and down within the corresponding slot in the frame, substantially as described.

5. In a gang-plow, the combination, with a frame, having a series of vertical slots therein, of a series of plows, each provided with a beam the forward end of which plays up and down within the corresponding slot in the frame, and with a breakable part in the connections between the rear of each plow with the frame, substantially as described.

6. In a gang-plow, the combination with a frame, having a diagonal brace, provided with a series of vertical slots, of a series of plows, each provided with a beam the forward end of which plays up and down within the corresponding slot in the frame, traction-rods connected with the front of the frame and with the front of the beams, and a breakable part in the connection between the rear of each plow with the frame, substantially as described.

7. In a gang-plow, the combination, with a frame, having two diagonal braces, one of the said braces having a series of vertical slots therein, of a series of plows, each plow having a beam projecting forwardly through and vertically movable in one of the slots, a traction-rod connected with the forward end of each beam, a series of adjustable brackets mounted on the other brace, a rod on each plow projecting rearwardly through one of the brackets, and a roller carrying the rear of the frame, substantially as described.

8. In a gang-plow, the combination, with a frame, having two diagonal braces and a front brace, one of the said diagonal braces having a series of vertical slots therein, of a series of plows, each plow having a beam projecting forwardly through and vertically movable in one of the slots, a traction-rod connected with the forward end of each beam, and spring interposed between the said rods and the front brace, substantially as described.

Signed by me at Toronto, Canada, this 29th day of January, 1897.

WILLIAM STEPHENSON.

Witnesses:

WM. LAIDLAW,
FRED. LEAR.