

M. L. POULTER.

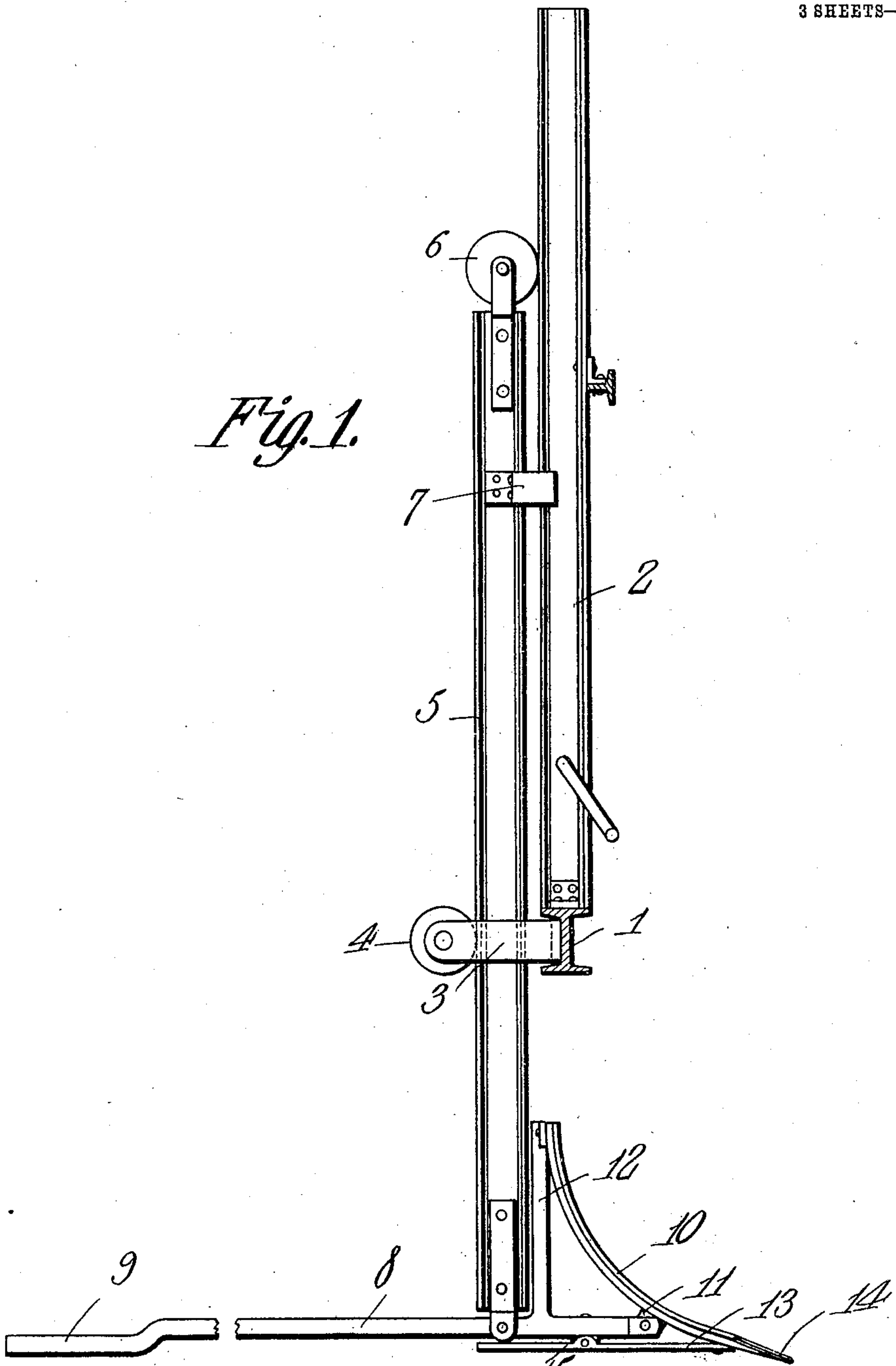
CRUMBER.

APPLICATION FILED JUNE 21, 1909.

969,187.

Patented Sept. 6, 1910.

3 SHEETS—SHEET 1.



Witnesses

E. J. Stewart
E. C. Breinkert

Inventor

Micajah L. Poulter

By *C. A. Snow & Co.*

Attorneys

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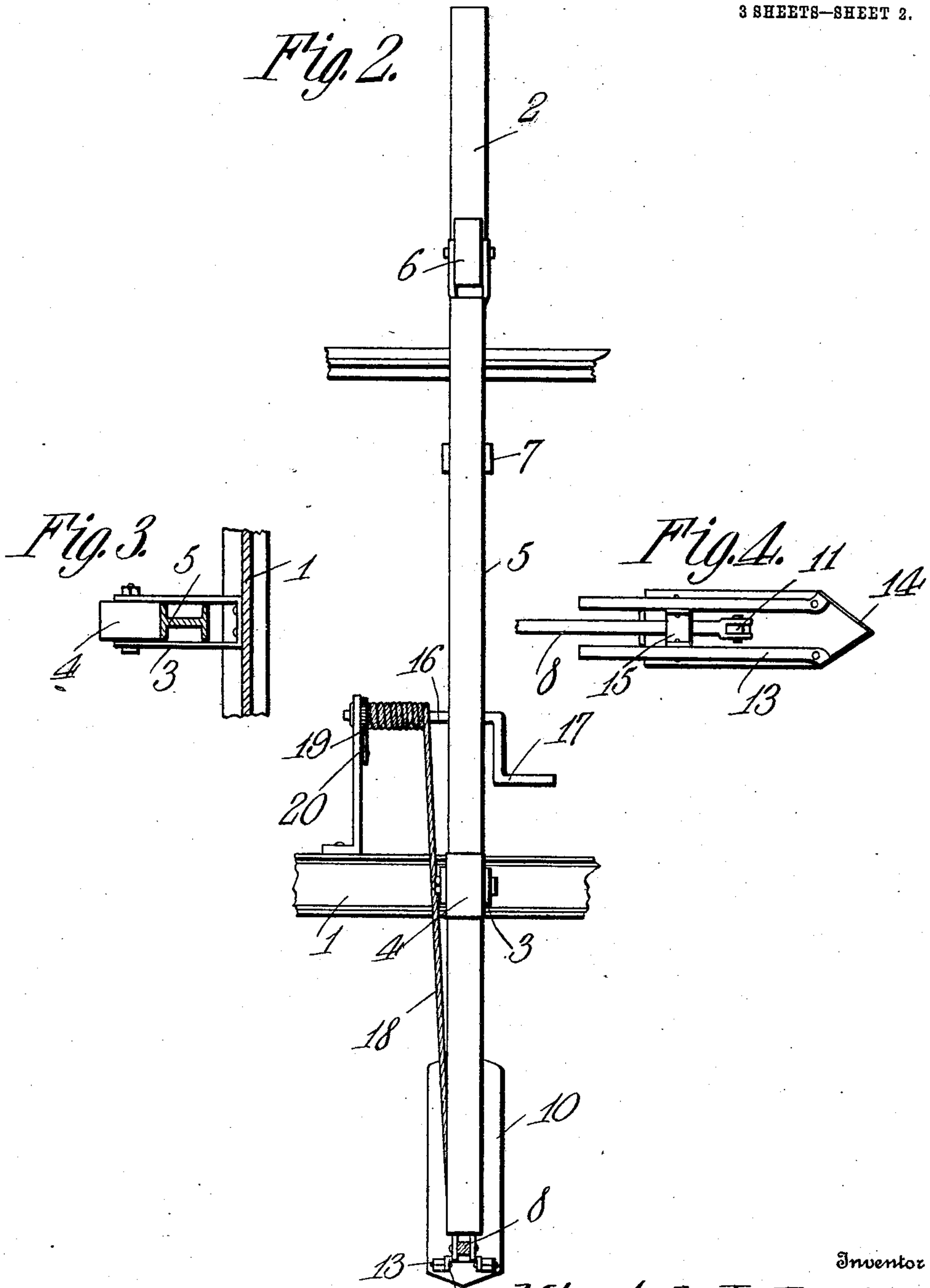
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3 SHEETS—SHEET 2.

Fig. 2.

Fig. 3.

Fig. 4.



Witnesses

C. J. Hunt
E. E. Preinkert

Inventor

Micaiah L. Poulter.

By

C. A. Snow & Co.

Attorneys

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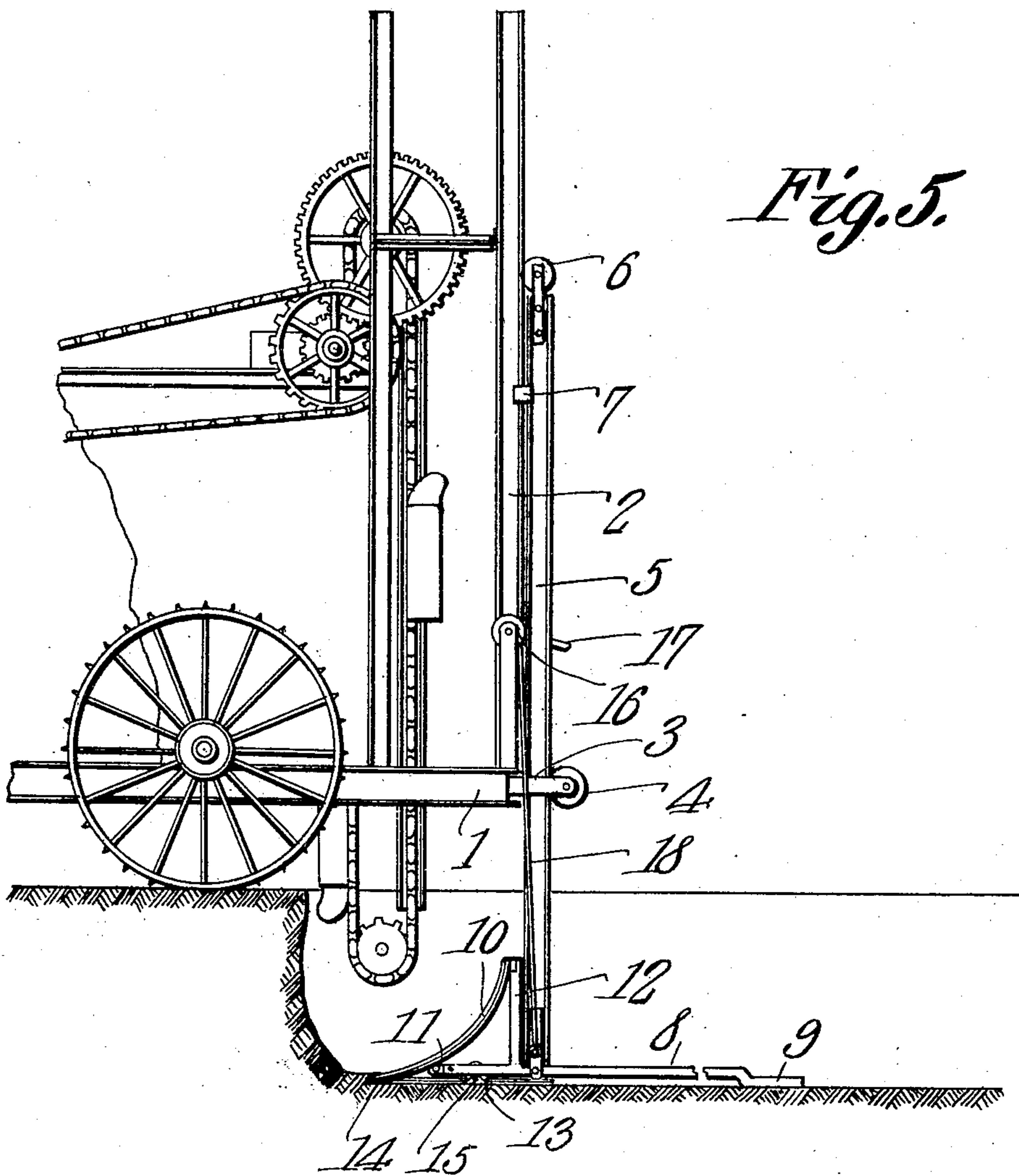


Fig. 5.

Witnesses

J. J. Dawson.

Micajah L. Poulter.

Inventor

By

C. A. Snow & Co.

Attorneys

UNITED STATES PATENT OFFICE.

MICAJAH L. POULTER, OF STOCKPORT, IOWA.

CRUMBER.

969,187.

Specification of Letters Patent.

Patented Sept. 6, 1910.

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To all whom it may concern:

Be it known that I, MICAJAH L. POULTER, a citizen of the United States, residing at Stockport, in the county of Van Buren and State of Iowa, have invented a new and useful Crumber, of which the following is a specification.

This invention has relation to crumbers designed especially to be used in conjunction with ditching machines for the purpose of dressing or removing irregularities from the bottom of a ditch, and it consists in the novel construction and arrangement of its parts, hereinafter shown and described.

As hereinbefore indicated the crumber is in the form of an adjunct or attachment, and it consists, primarily, of a vertically disposed beam mounted for vertical longitudinal movement with means for raising and lowering the same. A runner is pivotally connected with the lower end of the said standard and upon the forward portion of the said runner a longitudinally curved concaved share is positioned, and the said share is provided at opposite sides with forward or supplemental runners which are adapted to travel upon the bottom of the furrow and regulate the depth at which the share will cut in the same.

In the accompanying drawing:—Figure 1 is a side elevation of the crumber. Fig. 2 is a rear elevation of the same with parts in section. Fig. 3 is a horizontal sectional view of the same. Fig. 4 is a bottom plan view of the share of the crumber. Fig. 5 is a view of a portion of a ditching machine with the crumber applied thereto.

As indicated in the accompanying drawing 1 illustrates a portion of the rear frame of the ditching machine to which the crumber is applied. 2 is an upright mounted upon the said frame portion 1, and a rearwardly disposed guide 3 is attached to the frame portion 1. The guide 3 is preferably U-shaped in top plan, and a friction roller 4 is journaled for rotation between the end portions of the same. A standard 5 passes vertically between the side portions of the guide 3 and the periphery of the roller 4 bears against the rear edge of the said standard 5. A roller 6 is journaled for rotation at the upper end of the standard 5, and its periphery bears against the rear edge of the upright 2 mounted upon the frame portion 1 of the ditching machine. The standard 5 carries a clip 7 which slidably engages the

upright 2, but which restrains the upper portion of the standard 5 from rearward movement with relation to the upright 2.

A runner 8 is pivotally attached at a point intermediate of its ends to the lower end of the standard 5, and at its rear end terminates in a downwardly depressed heel portion 9. A share 10 is mounted at the forward end of the runner 8 and the said share is longitudinally curved and transversely convexed. The said share is provided upon its under side with a rearwardly disposed lug 11 which is located at a point intermediate of its ends, and it is with this lug 11 that the forward end of the runner 8 is attached. A brace 12 is mounted upon the forward portion of the runner 8 in advance of the standard 5 and the upper end of the said brace 12 is attached to the upper portion of the share 10. Runners 13 are pivotally or otherwise attached at their forward ends to the rear side of the share 10 and in the vicinity of its opposite longitudinal edges. Thus there is one runner 13 located at each side of the intermediate portion of the runner 8 and the forward end of the share 10 is pointed as at 14, and the forward ends of the runners 13 attach with the share 10 at points between the forward pointed end 14 thereof and the point of attachment of the forward end of the runner 8 therewith. The runners 13 at the opposite sides of the runner 8 are connected together at points intermediate of their ends by a cross strut 15 which lies transversely under the runner 8 at a point between its pivotal connection with the standard 5 and with the share 10. The runner 8 bears directly against the upper surface of the cross strut 15.

A shaft 16 is journaled for rotation on any suitable support provided upon the frame 1 and is provided at one end with a crank handle 17. A cable 18 is arranged to wind upon the shaft, and one end of the said cable is connected with the lower portion of the standard 5. A ratchet wheel 19 is fixed with relation to the shaft 16 and is adapted to be engaged by a pawl 20, which in turn is pivotally mounted upon any appropriate supporting means provided upon the frame 1.

From the above description it is obvious that as the crumber follows behind the frame of a ditching machine and the share 10 is inserted therein so that the runners 13 and the heel portion 9 of the runner 8 bear upon the bottom of the ditch, that the for-

ward portion 14 of the share 10 will cut into the middle portion of the bottom of the ditch and the material thus removed will be forced to the side and upon the bottom of the ditch, and consequently irregularities in the bottom of the ditch will be removed and the ditch is thereby prepared for the reception of the drain tile, etc. By reason of the fact that the runner 8 is pivotally connected with the lower end of the standard 5 the said runner 8 and its attachments are not affected by any unevenness in the surface of the ground over which the wheels of the ditching machine to which the crumber is applied may pass. That is to say, the runner 8 and its attachments are free to swing with relation to the standard 5, so that the pointed end portion of the share 10 will operate upon the bottom of the ditch, and the side edges of the said share will be restrained from coming in contact with the vertical walls of the ditch.

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

1. A crumber comprising a standard, a runner pivotally attached to the lower portion thereof and having its rear extremity terminating in a depressed heel, a share attached to the forward portion of said runner, said share having a forward pointed end, and runners attached to the share behind the forward end portion thereof and lying at the opposite sides of the first said runner.

2. A crumber comprising a standard, a runner pivotally attached to the lower portion thereof and having its rear end terminating in a depressed heel, a share attached to said runner and having a forward pointed end, runners attached to the share at points behind the forward pointed ends thereof, and a cross strut connecting the last said runners together and lying under the first said runner.

3. A crumber comprising a standard, a runner pivotally connected to the lower por-

tion thereof and having its rear end terminating in a depressed heel, a share mounted upon the forward end of said runner and having a forward pointed end, a brace interposed between the forward portion of said runner and the upper end of said share, supplemental runners connected with the said share at points behind its pointed end, and a cross strut connecting the supplemental runners together and lying transversely under the forward portion of the first said runner.

4. In combination with a ditching machine having guiding means a vertically disposed standard mounted for longitudinal movement in the guiding means, and a crumber attached to the lower end of the standard.

5. In combination with a ditching machine having guiding means a vertically disposed standard mounted for longitudinal movement in the guiding means, and a crumber pivotally attached to the lower end of the standard.

6. In combination with a ditching machine having guiding means, a vertically disposed standard mounted for longitudinal movement with relation to the guiding means, friction rollers having contact with the guiding means and standards respectively, and a crumber attached to the lower end of the standard.

7. In combination with a ditching machine having guiding means a vertically disposed standard mounted for movement with relation to the guiding means, a crumber attached to the lower end of the standard, the parts being so arranged that the crumber may sustain the weight of the standard.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

MICAJAH L. POULTER.

Witnesses:

P. A. I. ALVEY,
O. A. COLLINS.