

No. 813,393.

PATENTED FEB. 20, 1906.

T. H. WALKER.
EXCAVATING MACHINE.
APPLICATION FILED JUNE 26, 1905.

2 SHEETS—SHEET 1.

Fig. 1.

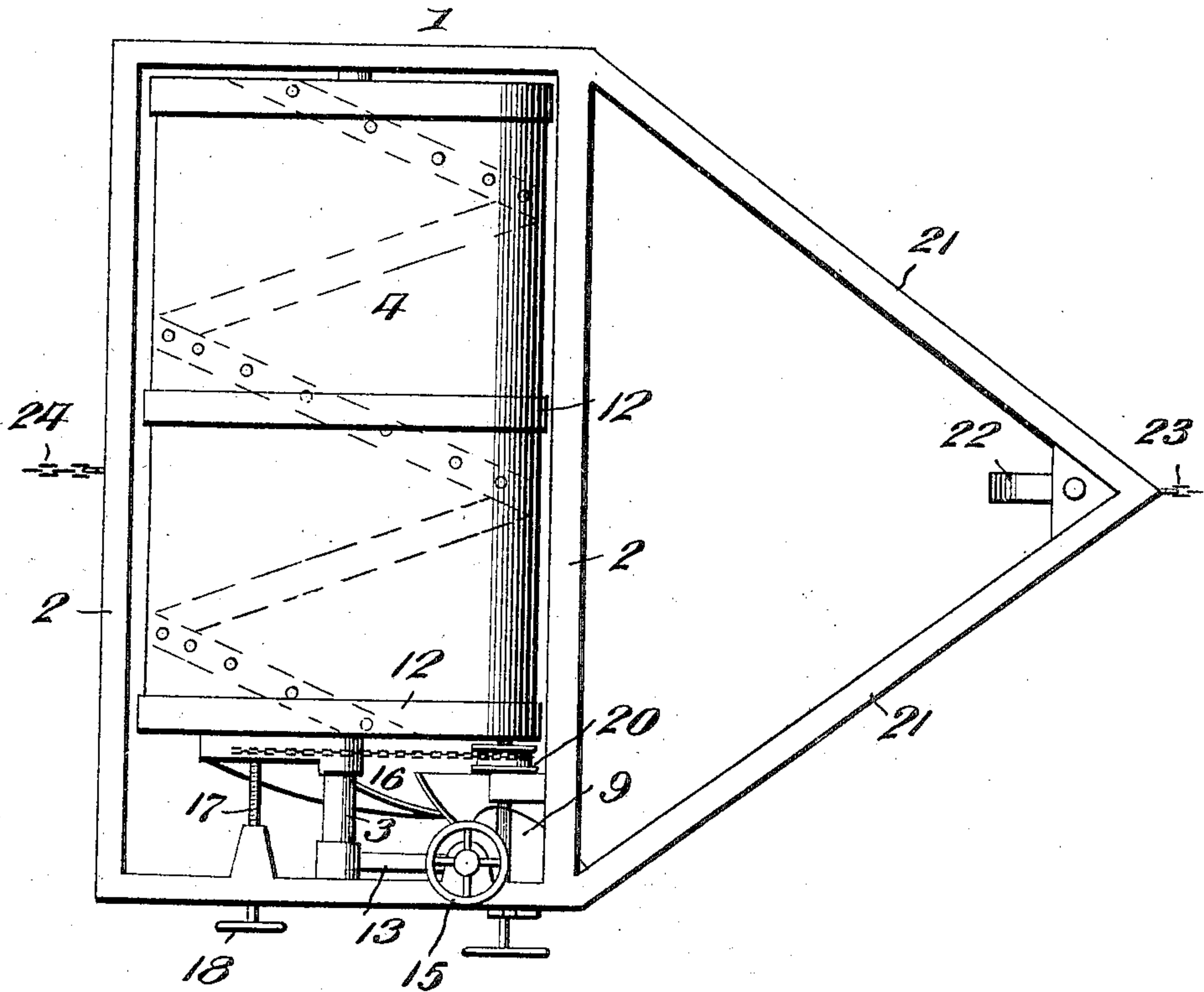
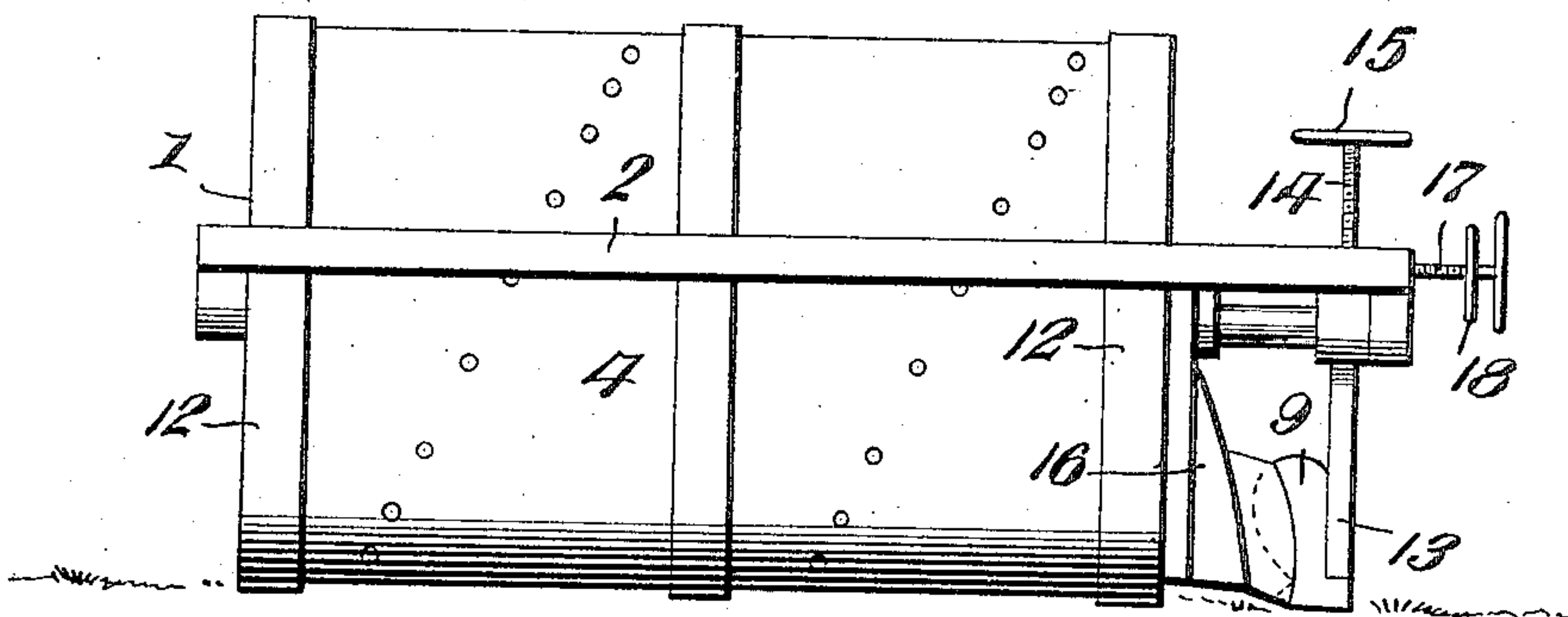


Fig. 2.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 4.

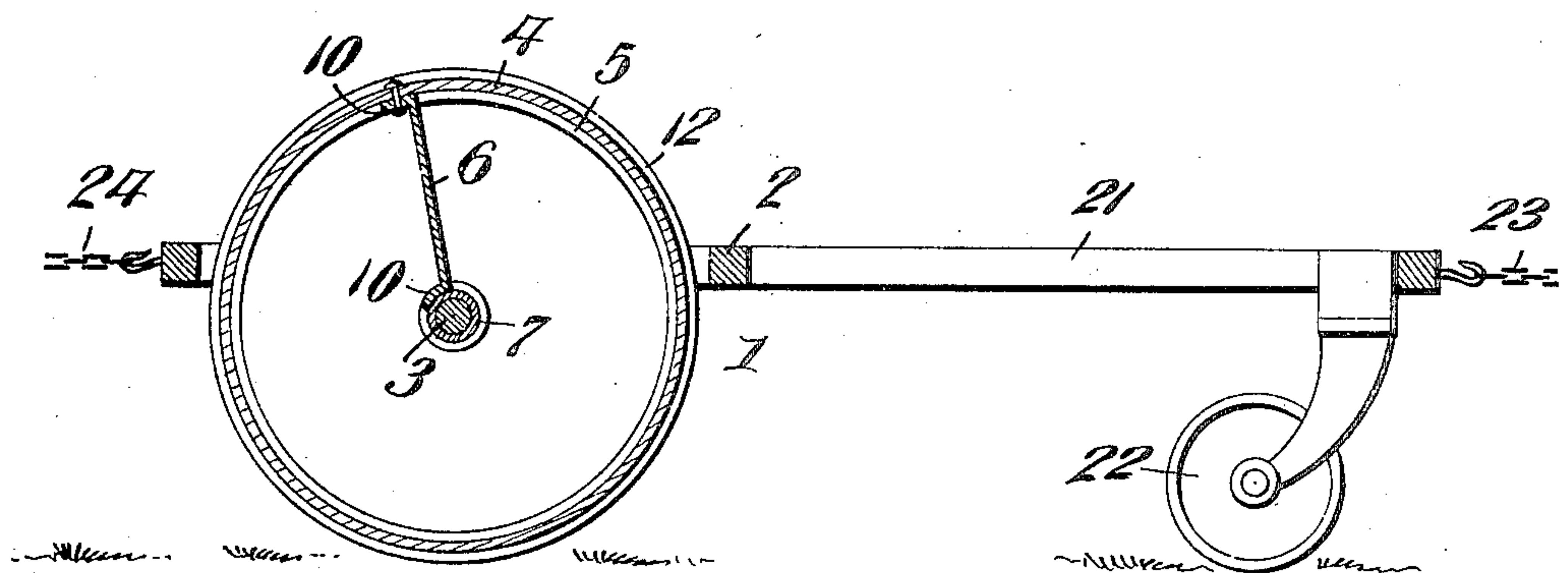
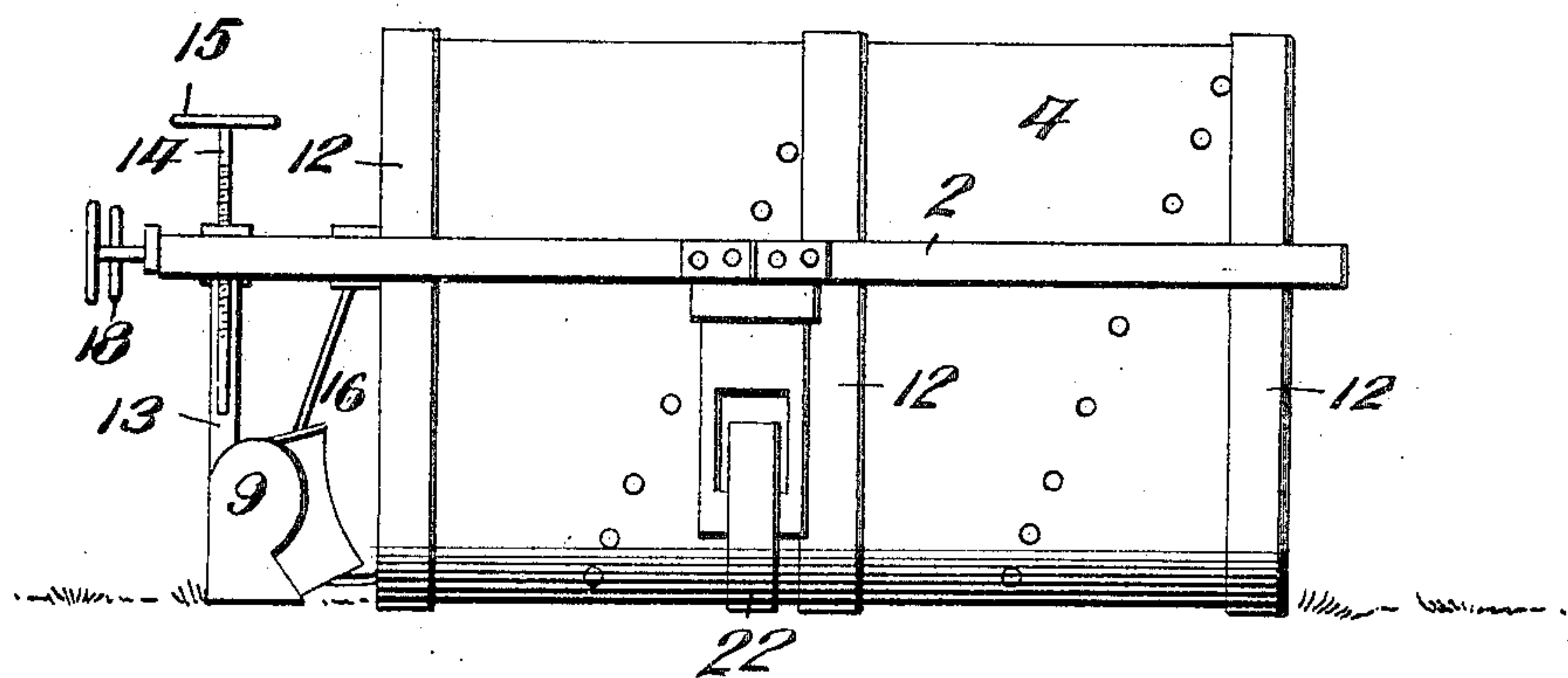


Fig. 3.



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UNITED STATES PATENT OFFICE.

THOMAS H. WALKER, OF TUMWATER, WASHINGTON, ASSIGNOR OF ONE-FOURTH TO PHILIP H. CARLYON, OF OLYMPIA, WASHINGTON.

EXCAVATING-MACHINE.

No. 813,393.

Specification of Letters Patent.

Patented Feb. 20, 1906.

Application filed June 26, 1905. Serial No. 267,141.

To all whom it may concern:

Be it known that I, THOMAS H. WALKER, a citizen of the United States, residing at Tumwater, in the county of Thurston and State of Washington, have invented certain new and useful Improvements in Excavating-Machines; and I 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.

My invention relates to improvements in excavating-machines for use in making irrigating ditches, canals, and the like.

The object of the invention is to provide a simple and powerful excavating-machine having great capacity, so that ditching may be done quickly at a comparatively small expense.

With the above and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of devices herein shown and described.

In the accompanying drawings, Figure 1 is a top plan view of my improved excavating-machine. Fig. 2 is an end elevation of the same. Fig. 3 is a front elevation, and Fig. 4 is a vertical sectional view.

Referring to the drawings by numeral, 1 denotes my improved excavating-machine, which comprises a suitable frame 2 of substantially rectangular form and having mounted thereon a horizontally-disposed shaft 3. Revolvably mounted upon said shaft is a large cylinder 4, which is adapted to run upon the ground and support the said frame. The cylinder consists of an outer cylindrical shell 5, which is connected by a spiral web 6 to a hub or sleeve 7, which surrounds the axle or shaft 3. The spiral web 6 preferably extends from one end to the other of the cylinder and is adapted to conduct the earth loosened by the plow 9 into said cylinder as the machine is drawn forwardly. The web is secured to the hub 7 and rim or shell 5 by riveting its flanges 10, as shown, and the rim or shell 5 is preferably strengthened by one or more annular hooks or bands 12.

The plow 9 is mounted adjacent to one of the open ends of the cylinder upon an extended portion of the shaft 3, this mounting being preferably effected by pivoting the standard or beam 13 of said plow upon said shaft, so that the plow may be adjusted. This adjustment may be effected by means of

a screw 14, which is operated by a hand-wheel 15. The earth loosened by the plow is directed into the open end of the cylinder 4 by means of a curved blade or scoop 16, which is also pivotally mounted upon the shaft 3, as shown. This blade or scoop is adapted to be adjusted and held against the edge of the shell of cylinder 4 by means of a screw 17, having a hand-wheel 18 at its outer end. Said scoop may be swung to an elevated position to permit the contents of the cylinder to be discharged, as hereinafter explained, by means of a cable, chain, or the like 19, which is wound upon a frame or windlass 20, as shown.

In the forward tapered portion 21 of the frame 1 is mounted a caster-wheel 22, which is adapted to support the frame and guide the machine.

The machine may be drawn along in any desired manner; but I preferably operate the same by attaching at its forward and rear ends cables 23 and 24, which have their opposite ends wound upon the drums (not shown) of a suitable hoisting-engine.

The construction, operation, and advantages of the machine will be readily understood from the foregoing description, taken in connection with the accompanying drawings. It will be seen that as the machine is moved forwardly the plow 9 will cut the earth, which will be directed by the scoop or blade 16 into the open end of the cylinder 4, and that the spiral web within the latter will move the earth toward the opposite end of the cylinder. When it is desired to unload the cylinder, the blade 16 is swung upwardly and the machine is drawn rearwardly to reverse the movement of the drum 4, so that the spiral web will turn the material out of the cylinder, as will be readily understood.

Various changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

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

1. A machine of the character described, comprising a suitable frame, a shaft mounted thereon, a revolvable cylinder upon said shaft, a plow at one of the open ends of said cylinder, and means for directing the earth cut by the plow into said cylinder, substantially as described.

2. A machine of the character described, comprising a suitable frame, a shaft thereon, a revoluble cylinder upon said shaft, and open at its ends, a plow at one of the open
5 ends of the cylinder, a spiral web within said cylinder, and a scoop or blade for directing the material or earth cut by said plow into said cylinder, substantially as described.

3. A machine of the character described,
10 comprising a suitable frame, a shaft thereon, a revoluble cylinder upon the said shaft, a spiral web within said cylinder, a plow mounted at one of the open ends of said cylinder, means for adjusting said plow, a scoop or
15 blade adapted to direct the earth cut by said plow into said cylinder, and means for adjusting said scoop or blade, substantially as described.

4. A machine of the character described,

comprising a suitable frame, a shaft mounted thereon, a revoluble cylinder upon said shaft, a spiral web within said cylinder, a plow pivotally mounted at one of the ends of said cylinder, a screw for raising and lowering said plow, a swinging scoop or blade adapted
25 to direct the earth cut by said plow into said cylinder, means for elevating said scoop or wing to permit the earth within said cylinder to be discharged and a caster-wheel at the front of said frame, substantially as described. 30

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

THOMAS H. WALKER.

Witnesses:

EDWIN R. KNIGHT,
R. E. EASTMAN.