

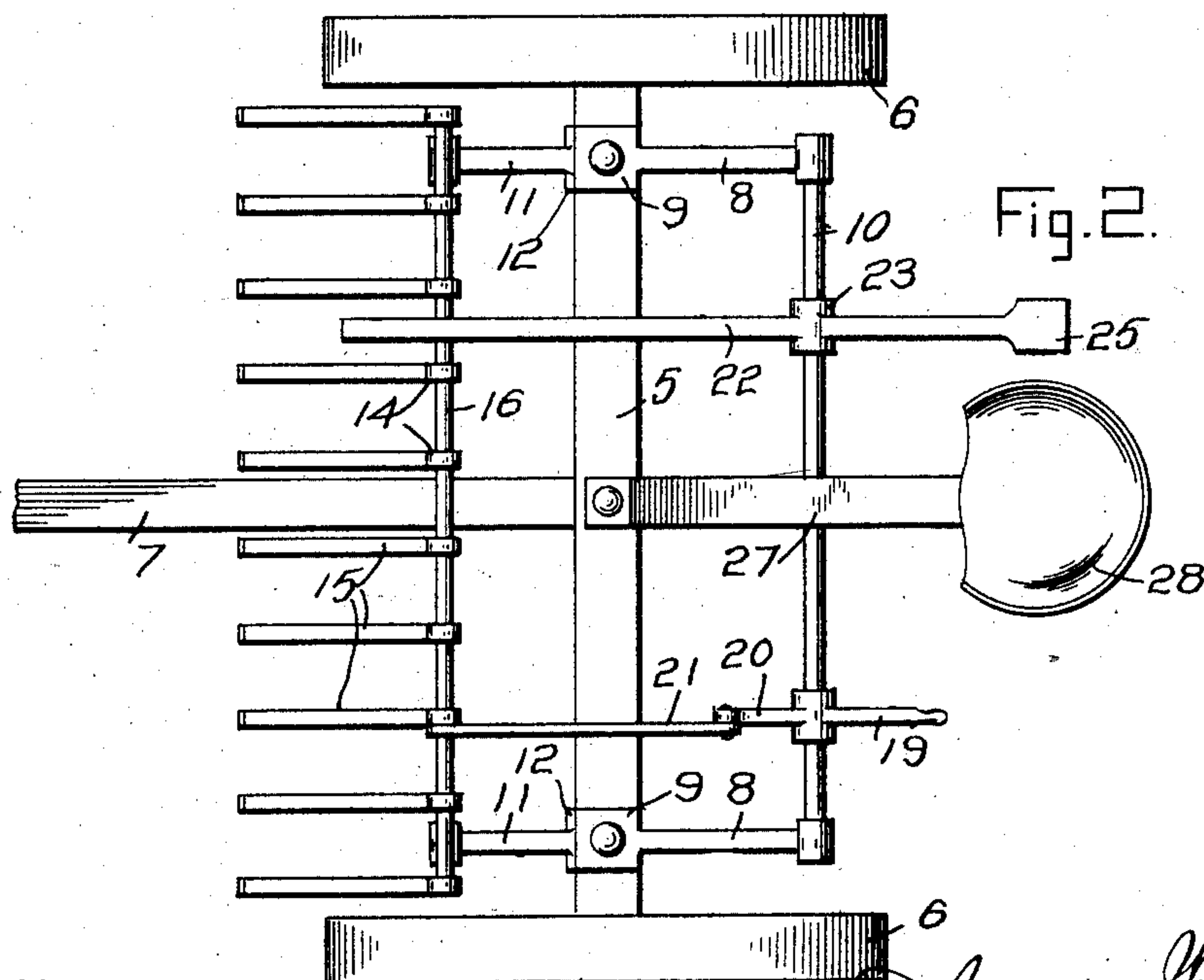
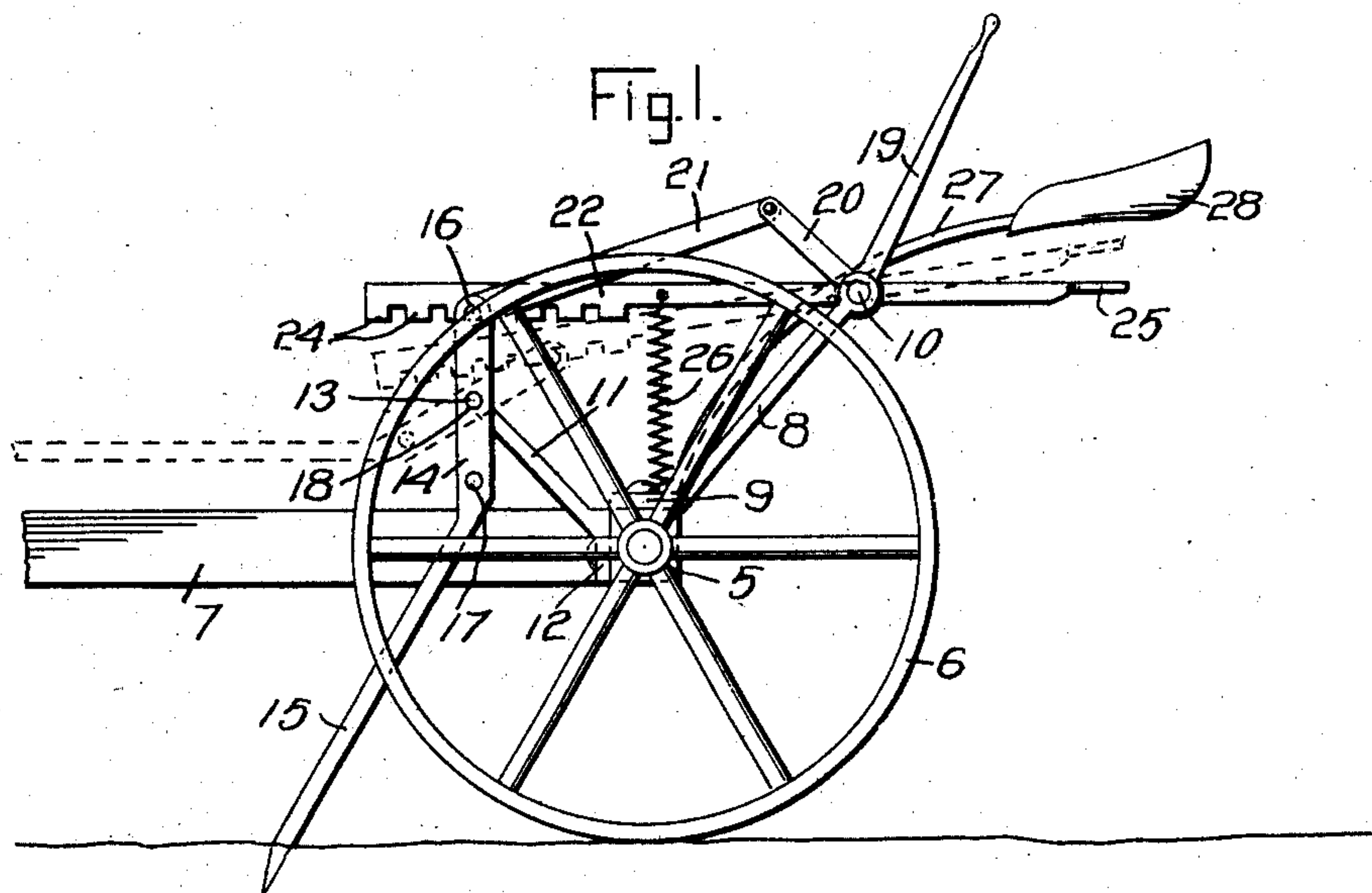
No. 883,624.

PATENTED MAR. 31, 1908.

W. L. COMBS.
ROCK DIGGER.

APPLICATION FILED MAY 18, 1907.

2 SHEETS—SHEET 1.



Witnesses

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Fig. 3

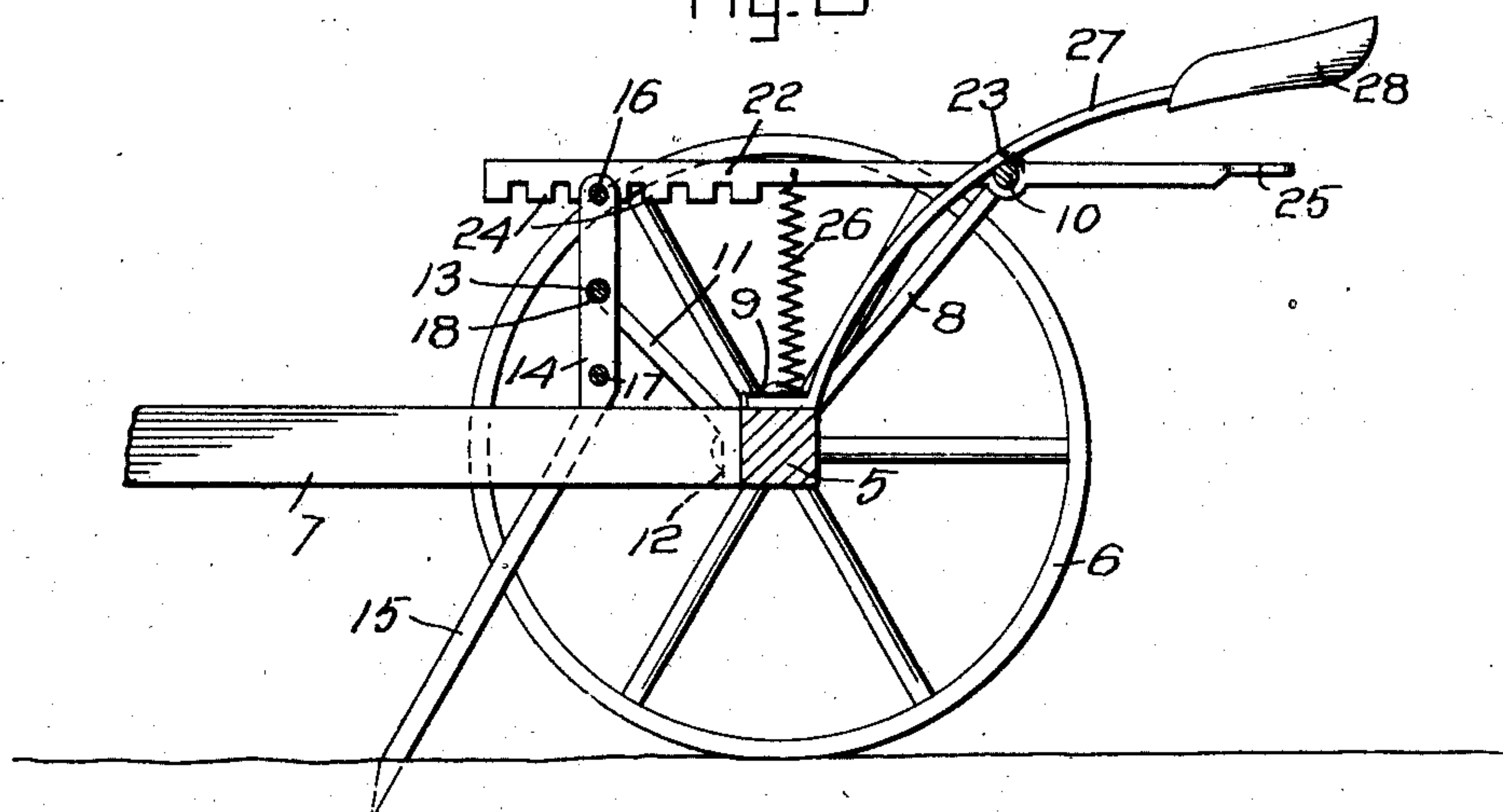
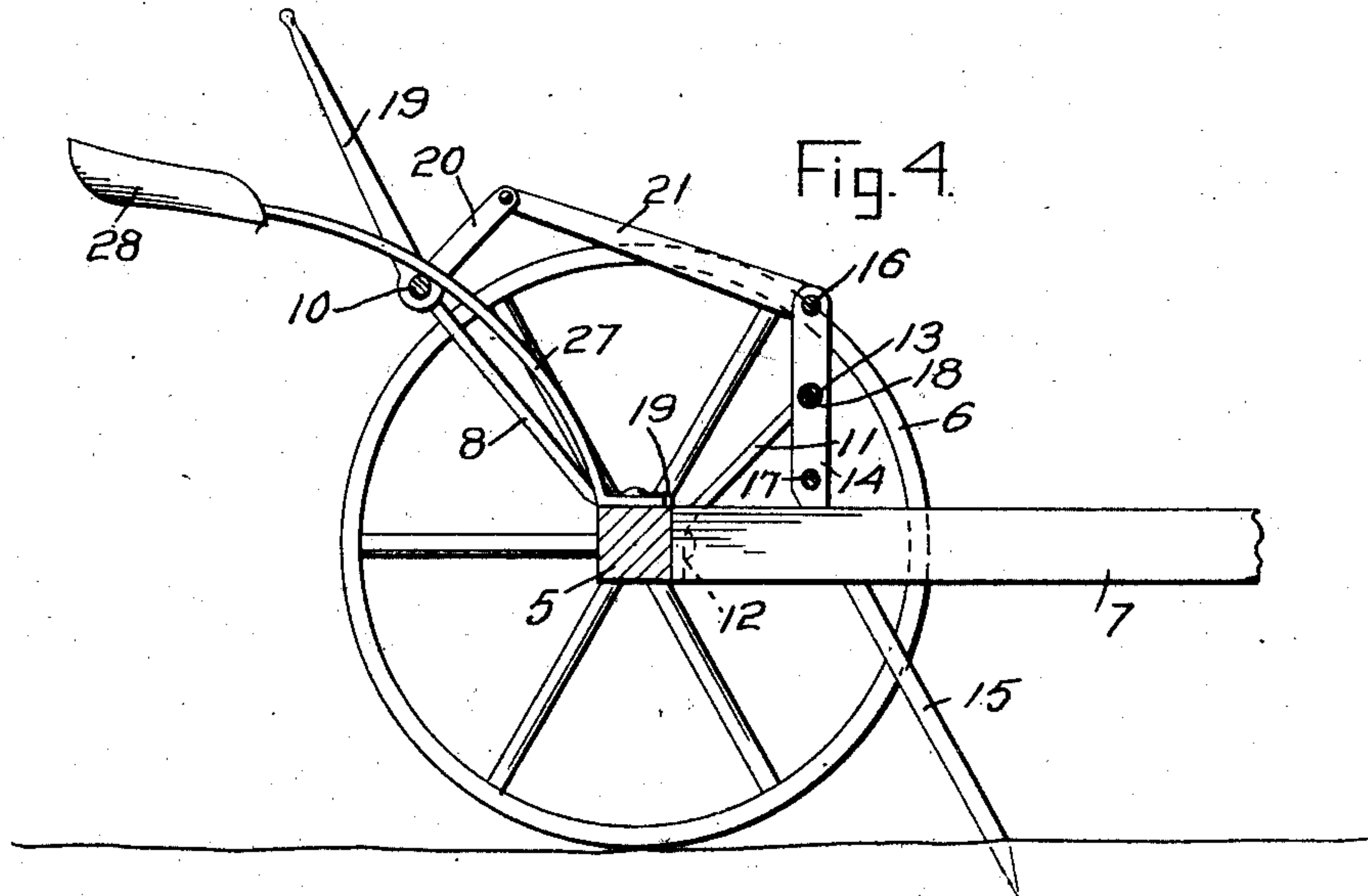


Fig. 4



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UNITED STATES PATENT OFFICE.

WILLIAM L. COMBS, OF BEARCREEK, MONTANA.

ROCK-DIGGER.

No. 883,624.

Specification of Letters Patent.

Patented March 31, 1908.

Application filed May 18, 1907. Serial No. 374,363.

To all whom it may concern:

Be it known that I, WILLIAM L. COMBS, a citizen of the United States, residing at Bearcreek, in the county of Carbon, State of Montana, have invented certain new and useful Improvements in Rock-Diggers; and I do hereby 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.

This invention relates to rock diggers and has for its object to provide an extremely simple instrument of this nature which will effectually perform its function and which will include means for carefully dumping the gathered stones when desired.

Broadly speaking the invention resides in the provision of a series of teeth which are mounted for rocking movement upon a common shaft, means for tilting the teeth, and means for holding the teeth after tilted, said last named means being adapted for actuation to release the series of teeth simultaneously and dump the rocks therefrom.

With the above and other objects in view the invention resides in the construction and arrangement of parts shown in the accompanying drawings, in which,

Figure 1 is a side elevation of the implement showing in full lines the position of the teeth and in dotted lines their position when carrying the rock from point to point, Fig. 2 is a top plan view of the implement, Fig. 3 is a detail longitudinal sectional view thereof looking in one direction, and, Fig. 4 is a similar view taken in the same plane but looking in the opposite direction.

Referring more specifically to the drawings the implement is shown as comprising an axle 5 which is squared except at its spindles and 6 the supporting wheels for the axle which are journaled upon the said spindles. A tongue 7 of any desirable construction is connected at its rear end with the squared portion of the axle intermediate the ends thereof and serves as the draft element for the implement.

The numeral 8 denotes a pair of standards which are provided at their lower ends each with a foot 9 which is bolted or otherwise secured to the squared portion of the axle and the said standards extend upwardly and rearwardly from the axle and are connected at their upper ends by means of a fixed shaft 10. The standards 8 are located one ad-

jacent each end of the axle and a similar pair of standards 11 are secured by means of their foot 12 to the forward face of the axle 5 at points corresponding to the standards 8. The standards 11 as in the case of the standards 8 extend upwardly but forwardly and are connected at their upper ends by means of a fixed shaft 13.

A plurality of rock digging teeth are provided and include each a tooth shank 14 and a working portion 15 which extends downwardly and forwardly at an obtuse angle to its shank. Rods 16 and 17 are engaged through the tooth shanks 14 and serve to connect the teeth in a series, the rod 16 being located at the upper end of the said tooth shank and the rod 17 at a point intermediate their said upper ends and the point of junction of the working portions of the teeth with their shanks. The tooth shanks are provided with alining bearing openings 18 for the passage of the shaft 13 therethrough, and it will be readily understood that by this means the entire series of teeth is mounted for simultaneous rocking movement upon the said shaft.

In order that the angle of inclination of the teeth may be varied to suit varying conditions of land or to support the stones and rocks in order that they may be transferred from place to place, a lever 19 is mounted for rocking movement at its lower end upon the shaft 10 and is provided at its said end with an upwardly and forwardly extending crank arm 20 to which is pivotally connected one end of a connecting rod 21, the said rod being connected at its opposite end in a similar manner to the rod 16. The lever 19 is preferably positioned to one side of the longitudinal middle of the implement for a purpose to be hereinafter described.

In order to hold the teeth rigidly in whatever position they may be placed by the lever 19, a lever 22 is mounted for rocking movement as at 23 upon the shaft 10 and includes portions which extend both forwardly and rearwardly from the said shaft and substantially in a horizontal plane. That portion of the lever 22 which extends forwardly from the shaft 10 is provided upon its lower edge with a plurality of rack teeth 24 which are designed for interchangeable engagement with the rod 16 intermediate a pair of the rock digging teeth, the said lever being preferably positioned upon the opposite side of the middle of the machine of the

lever 19 and provided at its rear end with a pedal 25 by means of which the lever may be oscillated. To hold the lever securely in engagement with the rod 16 a spring 26 is
5 connected at its upper end with a lever rearwardly of the rearmost tooth 24 and at its lower end to the axle 5.

The numeral 27 denotes a seat standard of any desirable construction which is secured
10 to the axle 5 intermediate the levers 19 and 22 and in a line with the tongue 7 and which supports a seat 28.

From the foregoing it will be readily understood that by rocking the lever 19, the
15 pitch of the teeth may be varied and the teeth held in any desired position after said movement by the lever by means of the teeth 24 upon the lever 22 and it is furthermore obvious that when a number of stones
20 or rocks have been gathered in advance of the teeth, they may be rocked to bring the working portions 15 in substantially horizontal plane and the implement then driven to the place where it is desired to dump the
25 rocks. This dumping operation is performed by merely pressing upon the pedal 25 of the foot lever 22 to cause the same to disengage the rod 16.

It is to be understood that I do not desire
30 to be limited to the exact details of construction described and shown, for obvious modifications will occur to a person skilled in the art.

What is claimed is:—

35 1. An implement of the class described comprising a frame supported for travel, a rock shaft mounted in the frame, a single transversely extending series of teeth fixed upon the rock shaft for rocking movement
40 in unison therewith, a rod passed through the upper end of the teeth and in a plane above the rock shaft, means connected with the rod whereby the teeth and their supporting shaft may be rocked, and means mount-

ed in the frame and engageable with the said 45 rod to hold the series of teeth when rocked, said last mentioned means being operable independently of said rocking means to release the teeth.

2. An implement of the class described 50 comprising a frame supported for travel, a rock shaft mounted in the frame, a single transversely extending series of teeth fixed upon said rock shaft for rocking movement therewith, a rod connecting the upper ends 55 of the teeth in a series, means connected with the rod whereby the teeth and their supporting shaft may be rocked, and a lever mounted for vertical swinging movement in the frame and provided with a series of rack 60 teeth for engagement interchangeably with the rod subsequent to rocking of the teeth, said lever being adapted for movement to disengage from said rod.

3. An implement of the class described 65 comprising a frame supported for travel, a rock shaft mounted transversely in the frame, a plurality of teeth fixed upon the rock shaft for rocking movement therewith, an angle lever mounted in the frame, a rod 70 connecting the upper ends of the teeth in a series, connection between the rod and one arm of the angle lever whereby the teeth and their supporting shaft will be rocked upon movement of the lever, and a lever mounted 75 for vertical swinging movement in the frame and provided with a plurality of teeth which are engageable interchangeably with the said rod for connecting the upper ends of the teeth, such engagement serving to hold the 80 teeth in rocked position.

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

WILLIAM L. COMBS.

Witnesses:

W. A. FRANCIS,

JOHN B. HERFORD.