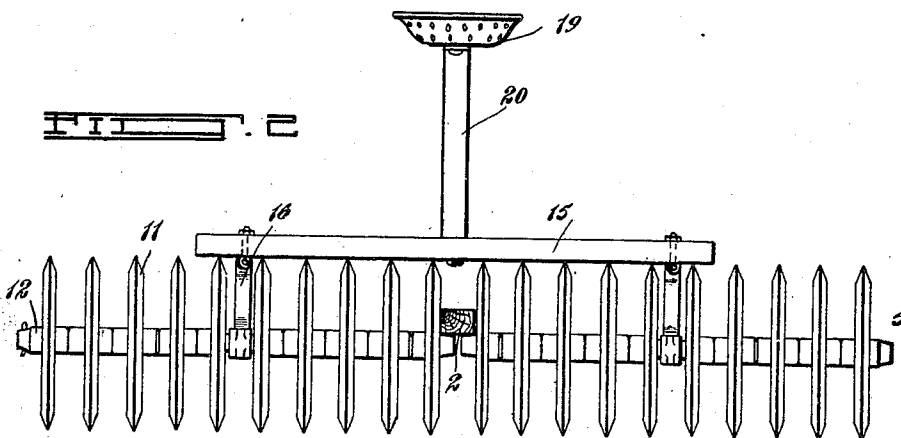


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Patented June 20, 1911.



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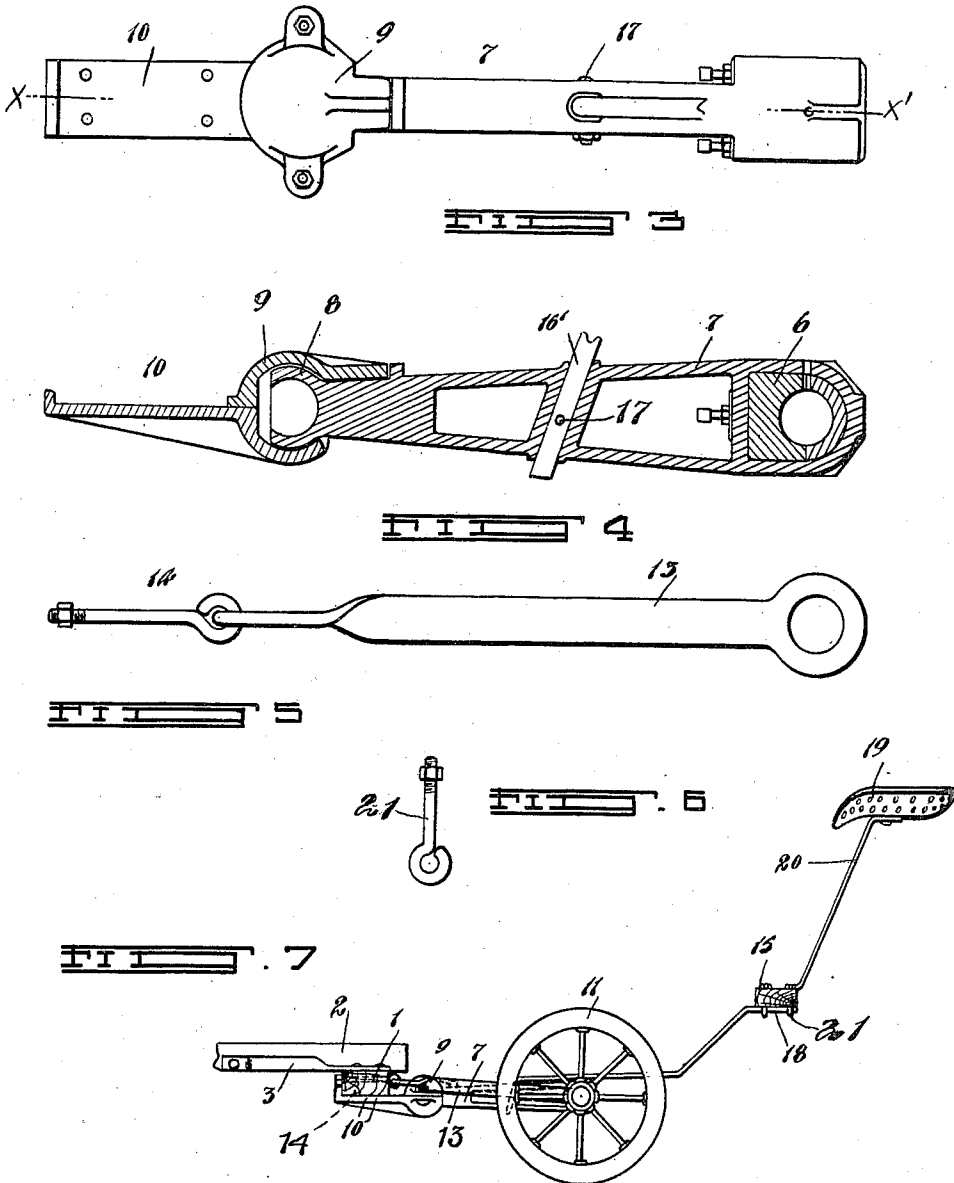
By *Jack Salustianczyk* *Att'y*

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2 SHEETS-SHEET 2.



WITNESSES

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UNITED STATES PATENT OFFICE.

WILLIAM MARSHALL FULTON, OF BRANDON, MANITOBA, CANADA.

MACHINE FOR PACKING SUBSURFACE SOIL.

995,592.

Specification of Letters Patent. Patented June 20, 1911.

Application filed January 13, 1910, Serial No. 537,886. Renewed May 1, 1911. Serial No. 624,467.

To all whom it may concern:

Be it known that I, WILLIAM MARSHALL FULTON, of the city of Brandon, in the Province of Manitoba, Canada, have invented certain new and useful Improvements in Machines for Packing Subsurface Soil, of which the following is a specification.

My invention relates to machines for packing sub-surface soil, and the object of the invention is to provide a packer which will accommodate itself to irregularities in the soil over which it is operated.

It consists essentially in a draw frame, a set of shafts connected to the draw frame through a ball and socket joint, disks located on the shaft, links connecting the extremities of the shafts with the draw bar, and a foot board located to the rear of the disks, the parts being arranged and constructed as hereinafter more particularly described.

Figure 1 is a plan view of my complete machine a portion of the tongue and seat being omitted. Fig. 2 is a rear elevation of the machine. Fig. 3 is an enlarged detailed plan view of the bars which are connected by a ball and socket joint. Fig. 4 is an enlarged detailed sectional view through the bars the section being taken in the plane X X' Fig. 3. Fig. 5 is an enlarged detailed side elevation of one of the links employed. Fig. 6 is a side elevation of one of the eye bolts used for securing the foot boards to a supporting bar. Fig. 7 is an end view of the machine.

In the drawings like characters of reference indicate corresponding parts in each figure.

1 represents a draw bar or beam from which extends centrally the usual tongue 2 suitably held in position by oblique braces 3.

4 and 5 are rotatable shafts of equal dimensions which are mounted centrally in bushings 6 carried by bars 7 which have their ends in the form of a ball 8 which is received by a socket 9 formed at the ends of bars 10 which are securely fastened to the draw bar to either side of the tongue. The bars 7 and 10 are in this way connected by

means of what is usually called a ball and socket joint.

Upon the shafts I have mounted disks 11 which are prevented from longitudinal displacement by means of the end pieces 12 keyed on the shaft.

13 are links which receive the shafts rotatably rearwardly, and having their forward ends formed with an eye which receives the eye bolts 14 which pass through the draw beam 1.

15 is a foot board located behind the disks and carried by the supporting bars 16 now described. Each bar has its forward end bent obliquely to the body portion at 16' and passed through an opening formed in the cast bar 7 where it is secured in position by a removable pin 17. The rear end of each of the aforesaid bars is rounded in the form of a spindle 18 and is received by the eyes of second eye bolts 21 which are firmly secured to the ends of the foot boards 15.

19 is a seat secured to the foot boards centrally by means of a spring bar 20.

When the machine is in use it will be seen that when it is passing over undulating or irregular soil the shafts will turn so as to allow the disks to adjust themselves to the irregularities, such being allowed by the ball joints already described.

The foot boards on which the driver is seated will always remain in the horizontal position regardless of the position of the shafts as the spindles 18 will turn in the eyes of the eye bolts carried by the foot boards.

Although I have shown a particular form of ball joint in the drawing it will be understood that I do not wish to restrict myself to this as other forms could be used to equal advantage.

What I claim as my invention is:

1. In a sub-surface packer, the combination with the draw frame, the shafts carrying the disks, and the bars secured to the draw bars by means of ball and socket joints, of arms secured to the bars, and a foot board rotatably secured to the extend-

ing ends of the arms, as and for the purpose specified.

2. In a sub-surface packer, the combination with the draw frame, the shafts carrying the disks, and the bars secured to the draw bars by means of ball and socket joints, of supporting bars secured to the aforesaid bars and extending rearwardly, said supporting bars being rounded at their

free ends, and a foot board mounted on the bars and secured thereto by eye bolts, as and for the purpose specified.

Signed at Winnipeg, in the Province of Manitoba, this 10th day of July 1909.

WILLIAM MARSHALL FULTON.

In the presence of—

G. S. ROXBURGH,

M. A. SOMERVILLE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
