Dec. 23, 1930. O. F. REITER 1,786,170

STONE GATHERING MACHINE

Original Filed July 5, 1928 2 Sheets-Sheet 1

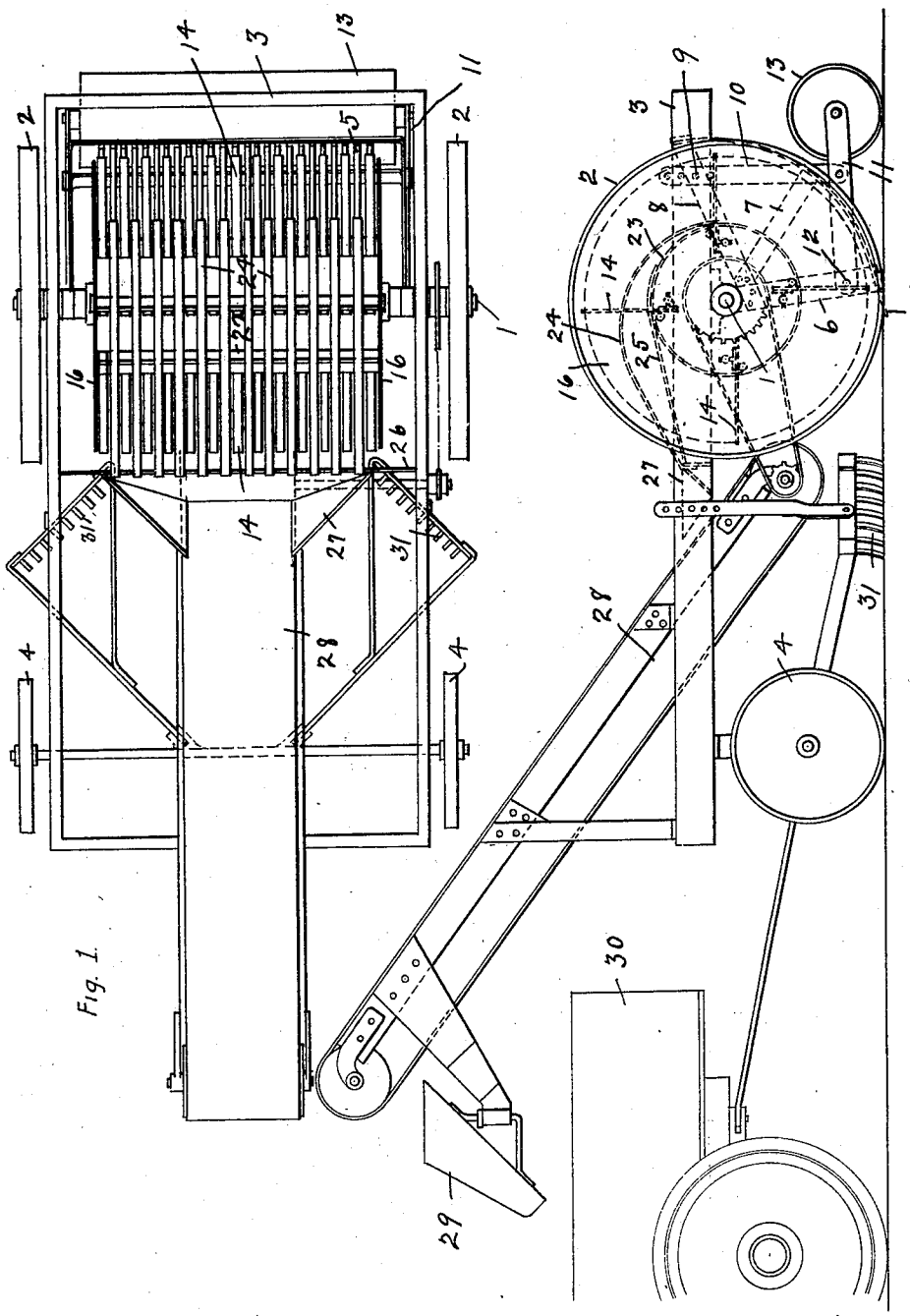


Fig. 1.

Fig. 2.

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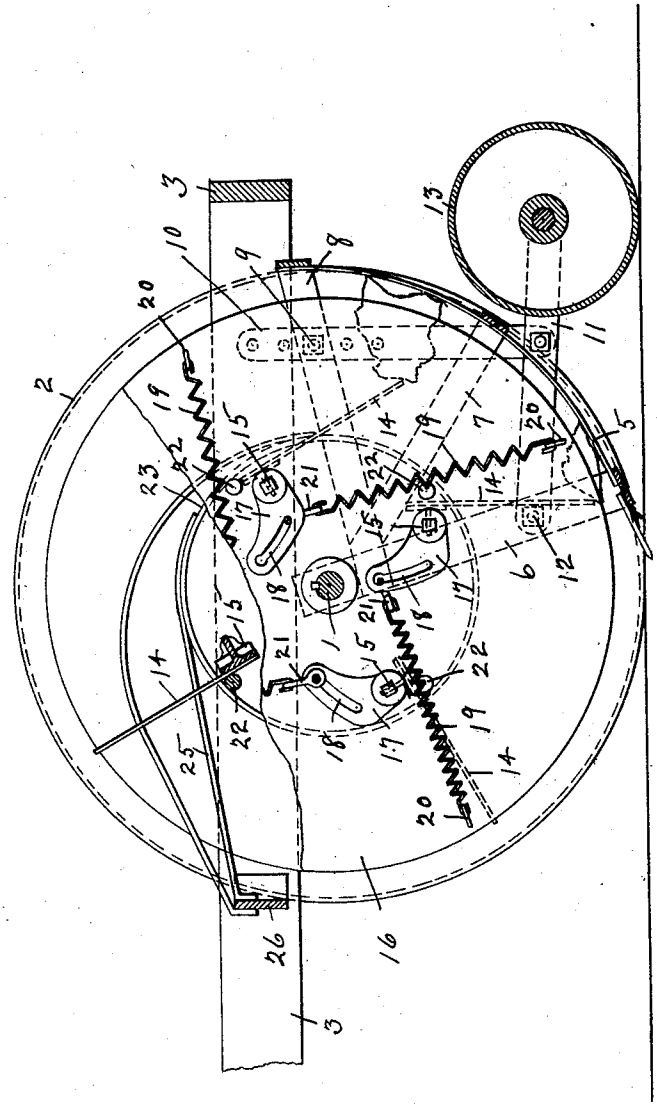


Fig. 3

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UNITED STATES PATENT OFFICE

OTIS F. REITER, OF BALTIMORE, MARYLAND, ASSIGNOR TO THE FARMERS STONE PICKING MACHINE COMPANY, A CORPORATION OF MARYLAND

STONE-GATHERING MACHINE

Application filed July 5, 1928, Serial No. 290,450. Renewed May 16, 1930.

This invention relates to improvements in stone gathering machines, and particularly to machines of this character in which stones are raked and conveyed to suitable carriers or receptacles.

A further object of my invention is to provide a machine of this character having a plurality of raker teeth, a plurality of lifting teeth irregularly disposed around the axle of the machine and moving upwardly and rearwardly over the faces of the raker teeth, and a plurality of raker bars onto which the stones are carried by the lifting teeth and from which the stones fall to a suitable conveyor, from where they are carried to a wagon or other suitable receptacle.

A further object of my invention is to provide means whereby the lifting teeth may be so mounted as to be readily replaced in case of breakage and in this connection to provide means which will prevent breakage of raker teeth and of the lifting teeth by the blocking of stones between these teeth.

The invention consists of the novel construction and arrangement of the parts and combination of the parts hereinafter more fully set forth in the following specification and pointed out in detail in the appended claims.

In the accompanying drawing:

Figure 1 is a plan view of my invention.

Figure 2 is a side elevation of same.

Figure 3 is an enlarged side elevation of the rear of the machine partly in section.

Referring to the accompanying drawings forming part of this specification and in which like reference numerals designate like parts throughout the several views thereof, 1 designates the axle of the machine and 2 the wheels mounted upon and revoluble with said axle. The said axle 1 is mounted in the frame 3, which latter is provided with wheels 4 at the front thereof. The raker teeth 5 are mounted on the cross pieces 6, 7 and 8 and are adapted to be adjusted by means of the bolt 9 passing through the holes in the cross piece 8 and upright 10. The said upright 10 is pivoted to the bar 11, which latter is also pivoted to the cross piece 6 at 12; the said bar 11 has a roller 13 pivoted to the rear end thereof and on which the weight of the raker teeth is supported. The lifting teeth 14 are mounted on the bars 15 and operate above the raker teeth 5; the said bars 15 have their ends projecting through the disks 16 and are each provided on one end with a cam 17 having a slot 18 therein. The coil springs 19 each have one end secured to the disk 16 at 20 and its opposite end connected by a link 21 to the slot 18 of the cam 17. The coil springs 19 hold the lifting teeth in their normal position against the cross bar or stop bar 22, but should the lifting teeth strike an object that cannot be moved, or strike against a stone between the lifting teeth and raker teeth that cannot be lifted, or becomes caught between the teeth, the said lifting teeth 14 will be forced to back against the tension of the spring 19 as shown in Figure 3 of the drawing and permit the lifting teeth to ride over the stone after which they will be drawn back by the springs 19 in their normal position as shown in Figure 3. The disks 16 are keyed to and revoluble with the shaft 1. The lifting teeth operate between the bands 23 which latter surround the shaft 1 and are held in position by the conveyor bars 24 and the stay bars 25, both of which are connected to the cross piece 26 of the frame 3. As the stones are lifted they are carried on to the conveyor bars 24 from which they drop to the hopper 27 and fall into the conveyor 28 and are then conveyed to the hopper 29 from which they fall to the wagon or other receptacle 30. The frame 3 is also provided with a set of raker teeth 31 which converge towards the raker teeth 5. The machine is drawn along in any suitable manner, either by horse power or tractor, and as the raker teeth 5 rake up the stones, the lifting teeth 14 carry them up over the conveyor bar 24 far enough to allow them to fall by gravity into the hopper 27 and to the conveyor 28, from which they are conveyed to wagon or other suitable receptacle.

Having thus described my invention what I claim is:—

1. In a stone gatherer, a rotatable axle, a wheel on each end of said axle, a series of raker teeth operatively supported rearward of the axle, two disks mounted on said axle

between said wheels, a plurality of bars each having its ends projecting through said disks, a cam mounted on one end of each of said bars and having a slot therein, a number of springs each having one end connected to one of said cam slots and their opposite ends secured to said disk, a series of lifting teeth carried by said bars and a series of conveyor bars upon which the lifting teeth discharge, said conveyor bars being downwardly inclined at their front ends to allow the stones to fall therefrom.

2. In a stone gatherer, a rotatable axle, a wheel on each end of said axle, a series of raker teeth operatively supported rearward of the axle, two disks rigidly fixed to said axle between said wheels, a plurality of bars each having its ends projecting through said disks, a cam mounted on one end of each of said bars and having a slot therein, a number of springs each having one end secured to one of said disks and its opposite end secured to one of said cam slots, a plurality of stop bars projecting between and having their ends secured to said disks, a series of lifting teeth carried by said first named bars and normally resting against said stop bars, a cam on one end of each of said first named bars each having a slot therein, a number of springs each having one end connected to one of said disks and its opposite end secured in one of said cam slots, a series of conveyor bars upon which the lifting teeth discharge and a conveyor on to which the stones fall from said conveyor bars.

In testimony whereof I affix my signature.

OTIS F. REITER.