

E. JESCHKE.
DITCHING MACHINE.
APPLICATION FILED MAR. 20, 1911.

1,028,218.

Patented June 4, 1912.

FIG. 1.

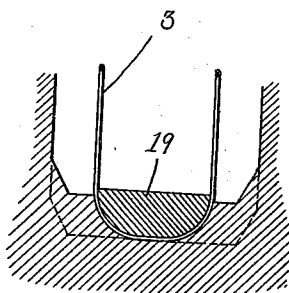
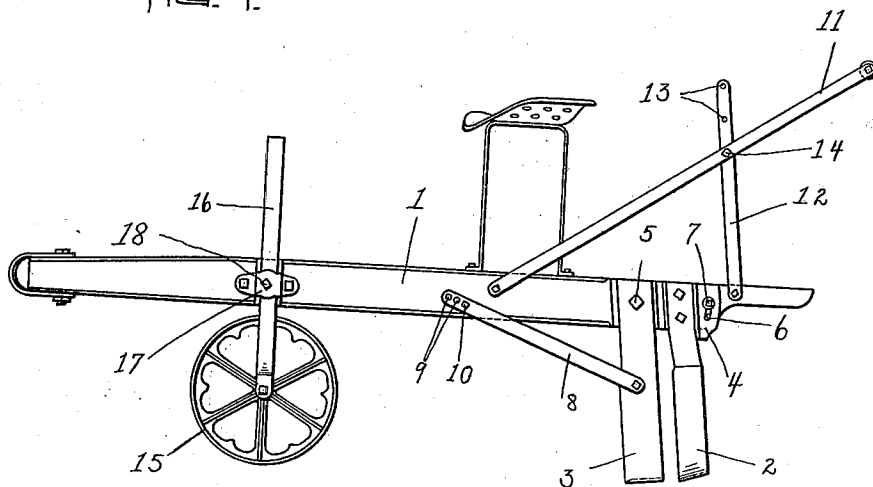


FIG. 2.

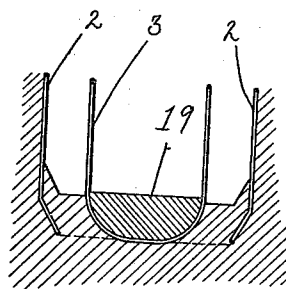


FIG. 3.

WITNESSES:

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DITCHING-MACHINE.

1,028,218.

Specification of Letters Patent.

Patented June 4, 1912.

Application filed March 20, 1911. Serial No. 615,474.

To all whom it may concern:

Be it known that I, EDWARD JESCHKE, a citizen of the United States, and a resident of Bellevue, county of Huron, and State of Ohio, have invented a new and useful Improvement in Ditching-Machines, of which the following is a specification, the principle of the invention being herein explained and the best mode in which I have contemplated applying that principle, so as to distinguish it from other inventions.

My invention relates to what are known as ditching machines, and the general object of the invention is the provision of a machine of this class which will be characterized by extreme simplicity, so that it may be economically manufactured and easily maintained in working order.

To the accomplishment of the foregoing and related ends, said invention, then, consists of the means hereinafter fully described and particularly pointed out in claims.

The annexed drawing and the following description set forth in detail certain mechanism embodying the invention, such disclosed means constituting, however, but one of various mechanical forms in which the principle of the invention may be used.

In said annexed drawing:—Figure 1 is a side elevation of a machine embodying my invention, and Figs. 2 and 3 are cross-sections illustrating a ditch being dug by my improved machine, the two figures showing two different stages of operation.

The machine comprises primarily, a suitable frame 1, provided with means whereby it may be pulled, and also provided with a suitable seat for a driver. Adjustably secured to the frame are two oppositely disposed knives 2, these knives being substantially vertically disposed and bending inwardly at their lower ends, as clearly shown in Fig. 3. In advance of the knives 2, a cutter 3 is secured to the frame 1 and the cutter 3 is made of substantially U-shape, and of less width than the distance between the two vertical knives 2. A convenient manner of providing for the adjustment of knives 2, and cutter 3, is to pivotally secure to the frame 1, a plate 4 on each side of the frame, and then attach the knives 2 and cutter 3 to the plates 4, the plates being provided with ridges bearing against the edges of the knives and cutter, as clearly shown

in Fig. 1. The plates 4, are pivoted to the frame 1 on a bolt 5, which also serves to secure the cutter 3 to the plates; the plates 4 are provided at their rear ends with slots 6, which are engaged by bolts 7, extending into the frame 1. Obviously, therefore, the plates 4, carrying the knives and cutter, may be held rigidly by means of bolts 7, in any desired position about the pivotal axis. In order to render the structure still more rigid, rods 8, are pivoted to two sides of the cutter 3, and their forward ends are secured to the frame 1, by bolts 10, a series of holes 9, providing for adjustment of the rods 8.

A handle 11, is pivoted to the frame 1, and its height may be varied by means of a rod 12, having a plurality of holes 13, a selected one of which is engaged by a bolt 14, extending through the handle. A wheel, 15, is secured to the lower end of a rod 16, which is vertically slidable through a retainer 17, secured to the frame 1, and a bolt 18 provides for securing the wheel rigidly in any desired position.

In operation, the machine is usually drawn by a horse, and the rear end of the machine is manually depressed by an operator, by means of the handle. As the machine progresses, the U-shaped cutter severs a central portion 19, from the ditch being dug, and obviously because of the shape of the cutter, this central portion is severed at an angle to a horizontal plane. The cutter is immediately followed by the knives, which sever the portions at the sides of the cutter. Because the cutter has previously severed the angular central portion of dirt, the knives will complete the cutting operation much more easily, for the side portions will force the central severed portion upwardly between them. In this manner, the excavating of the ditch is rendered much easier than where such central portion is not first severed. After the machine has thus operated through any desired distance, it is necessary to remove the severed dirt by hand. After this has been done, the machine is drawn through the ditch a second time, and the operations are continued until the desired depth has been obtained.

The machine has been made adjustable in all necessary ways, in order to accommodate the machine to various depths below the surface. The cutter and knives may be quickly

adjusted to different depths, and the wheel and handle may be correspondingly adjusted, so that they will cooperate with the knives and cutter no matter at what depth the machine is operated.

Other modes of applying the principle of my invention may be employed instead of the one explained, change being made as regards the mechanism herein disclosed provided the means stated by any of the following claims or the equivalent of such stated means be employed.

I therefore particularly point out and distinctly claim as my invention:—

1. In a machine of the class described, the combination of a frame, a wheel depending from said frame near the front thereof, two plates secured on opposite sides of said frame and pivoted on an axis extending transversely of the frame, two substantially vertically disposed knives secured to the respective plates and bent inwardly at their lower ends, and a U-shaped cutter secured to said plates in advance of said knives, said knives and cutter depending from said frame near the rear thereof and being designed to support the rear end of said frame.

2. In a machine of the class described, the combination of a frame, a wheel depending from said frame near the front thereof, two plates secured on opposite sides of said

frame and pivoted on an axis extending transversely of the frame, said plates being slotted at their free ends, bolts secured to said frame and engaging said slots, two substantially vertically disposed knives secured to the respective plates and bent inwardly at their lower ends, and a U-shaped cutter secured to said plates in advance of said knives, said knives and cutter depending from said frame near the rear thereof, and being designed to support the rear end of said frame.

3. In a machine of the class described, the combination of a frame, two plates secured on opposite sides thereof and pivoted on an axis extending transversely of the frame, said plates being slotted at their free ends, bolts secured to said frame and engaging said slots, two substantially vertically disposed knives secured to the respective plates and bent inwardly at their lower ends, a U-shaped cutter secured to said plates in advance of said knives, and two bars secured to the respective sides of said cutter and adjustably secured to said frame.

Signed by me this 16 day of March, 1911.

EDWARD JESCHKE.

Attested by—

R. R. PARKHURST,
SOL. M. WOLF.