No. 647,828. Patented Apr. 17, 1900.

F. S. GUNNING.

WEEDING MACHINE.

(Application filed Jan. 4, 1900.)

(No Model.)

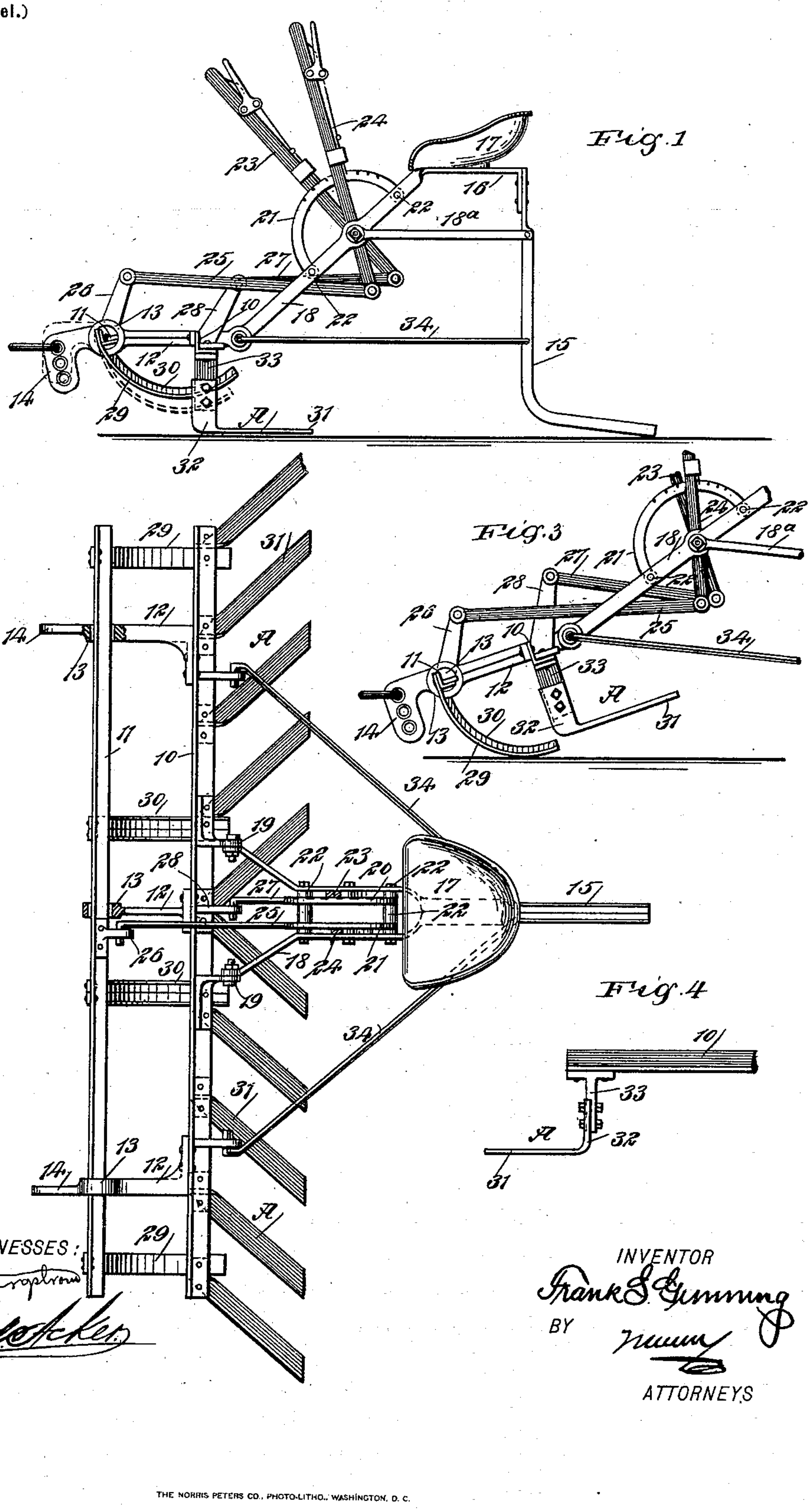

Fig. 1

Fig. 3

Fig. 2

Fig. 4

WITNESSES:

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FRANK SUMNER GUNNING, OF DALLES, OREGON.

WEEDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 647,828, dated April 17, 1900.

Application filed January 4, 1900. Serial No. 350. (No model.)

To all whom it may concern:

Be it known that I, FRANK SUMNER GUNNING, a citizen of the United States, residing at Dalles, in the county of Wasco and State of Oregon, have invented a new and Improved Weeding-Machine, of which the following is a full, clear, and exact description.

The objects of the invention are to provide a simple, light, and durable machine especially adapted for weeding purposes, means through which the depth to which the weeding-knives shall enter the ground may be quickly and conveniently determined and controlled, even while the machine is in operation, and means whereby the machine may be instantly placed in condition to be drawn to or from a field.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is an end view of the improved machine. Fig. 2 is a plan view of the same, parts being in horizontal section. Fig. 3 is an end view of a portion of the machine, illustrating it in position to be drawn to or from a field; and Fig. 4 is a detail view illustrating the manner in which a weeding-blade is secured to the frame.

The frame of the machine consists of a front adjustable portion and a rear main portion. The front adjustable portion of the frame comprises two parallel bars 10 and 11, preferably of angle-iron and placed at a predetermined distance apart, the connection between the two bars being made through the medium of connecting-bars 12, three of which are shown, and these connecting-bars are secured rigidly to the rear longitudinal bar 10 and are provided at their forward ends with sockets 13, through which the forward longitudinal bar 11 is passed and in which sockets said forward bar 11 is capable of turning. The end connecting-bars 12 are provided with clevis extensions 14 of any suitable character.

The main portion of the frame consists of a central drag-bar 15, having an attached upper bar 16, upon which the driver's seat 17 is mounted, and side bars 18, which have a pivotal connection 19 with the rear member 10 of the adjustable portion of the frame, as shown in Fig. 2. The side bars 18 are connected with the drag-bar by means of braces 18^a or their equivalents, and the said side bars 18 are in the form of a yoke and have secured between them racks 20 and 21, through the medium of suitable cross-bolts 22. Levers 23 and 24 are pivoted between the side portions of the main frame and the racks 20 and 21, which levers are provided with thumb-latches adapted for engagement with the racks. The lever 24 is connected by a link 25 and an arm 26 with the front bar 11 of the adjustable portion of the frame, the arm being secured to the said front bar 11, so that this bar may be turned in its sockets as occasion may require. The entire adjustable front portion of the frame, however, may be raised and lowered through the medium of the second lever 23, which is connected by a link 27 and an arm 28 with the rear bar 10 of the adjustable portion of the frame. Runners 29 are secured to the front bar 11 of the adjustable portion of the frame, at or near the ends of said bars, and these runners are curved, their under faces being convexed, and are usually of thin spring steel or equivalent metal. Intermediate runners 30, of stouter material, are secured also to the front bar 11 of the adjustable portion of the frame at each side of the center, as shown in Fig. 2, and these runners determine the depth that the weeding-blades A shall enter the ground, and, furthermore, serve as forward bearings for the machine when it is to be taken to or from the field, as shown in Fig. 3.

Thus it will be observed that through the medium of the lever 24 the runners may be carried up or down the required distance from the ground and that through the medium of the lever 23 the entire front section of the frame may be raised or lowered in such manner as to bring the weeding-blades A into the ground or at an elevation therefrom. The weeding-blades A each comprise a horizontal section 31 and a shank-section 32, a longitudinal edge of the longitudinal section being sharpened, and likewise an edge of the shank 32. The horizontal sections 31 of the weeding-blades A are at a right angle to the rear

bar 10 of the movable section of the frame of the machine and incline outwardly in opposite directions from the center of the said movable section of the frame.

The blades are attached to the rear bar 10 of the movable section of the frame by means of bolts or their equivalent passed through the shanks of the blades and through brackets 33, which extend downwardly from the rear bar 10, as is shown in detail in Fig. 4. Brace-bars 34 are attached to the track-bar 15 of the main frame and are pivotally connected with the rear bar of the adjustable section of the frame at each side of the center of the said rear bar, as is shown particularly in Fig. 2.

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

1. In a weeding-machine, a frame including an adjustable section, weeding-blades and runners carried by the adjustable section of the frame, and a main supporting rear frame, provided with means for manipulating the adjustable section of the frame.

2. In a weeding-machine, a forward frame adjustable in its entirety, the front portion of the frame being adjustable independent of the rear portion, weeding-blades carried by the rear portion of the adjustable section of the frame, runners carried by the forward portion of the adjustable section of the frame, a main frame pivotally connected with the forward adjustable section, and levers carried by the main frame, having a connection respectively with the forward and rear portions of the forward section of the frame of the machine.

3. In a weeding-machine, the combination, with a main frame and levers carried thereby, of a forward frame, consisting of a rear bar pivotally connected with the main frame, and a forward bar adjustably supported by the rear bar, runners attached to the forward bar of the forward frame, weeding-knives carried by the rear bar of the forward section of the frame, and a connection between one of the said levers and the forward bar of the forward section of the frame and a connection between the other lever and the rear bar of the forward section of the frame, as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRANK SUMNER GUNNING.

Witnesses:

E. L. LUEDDEMANN,

J. C. HOSTETLER.