

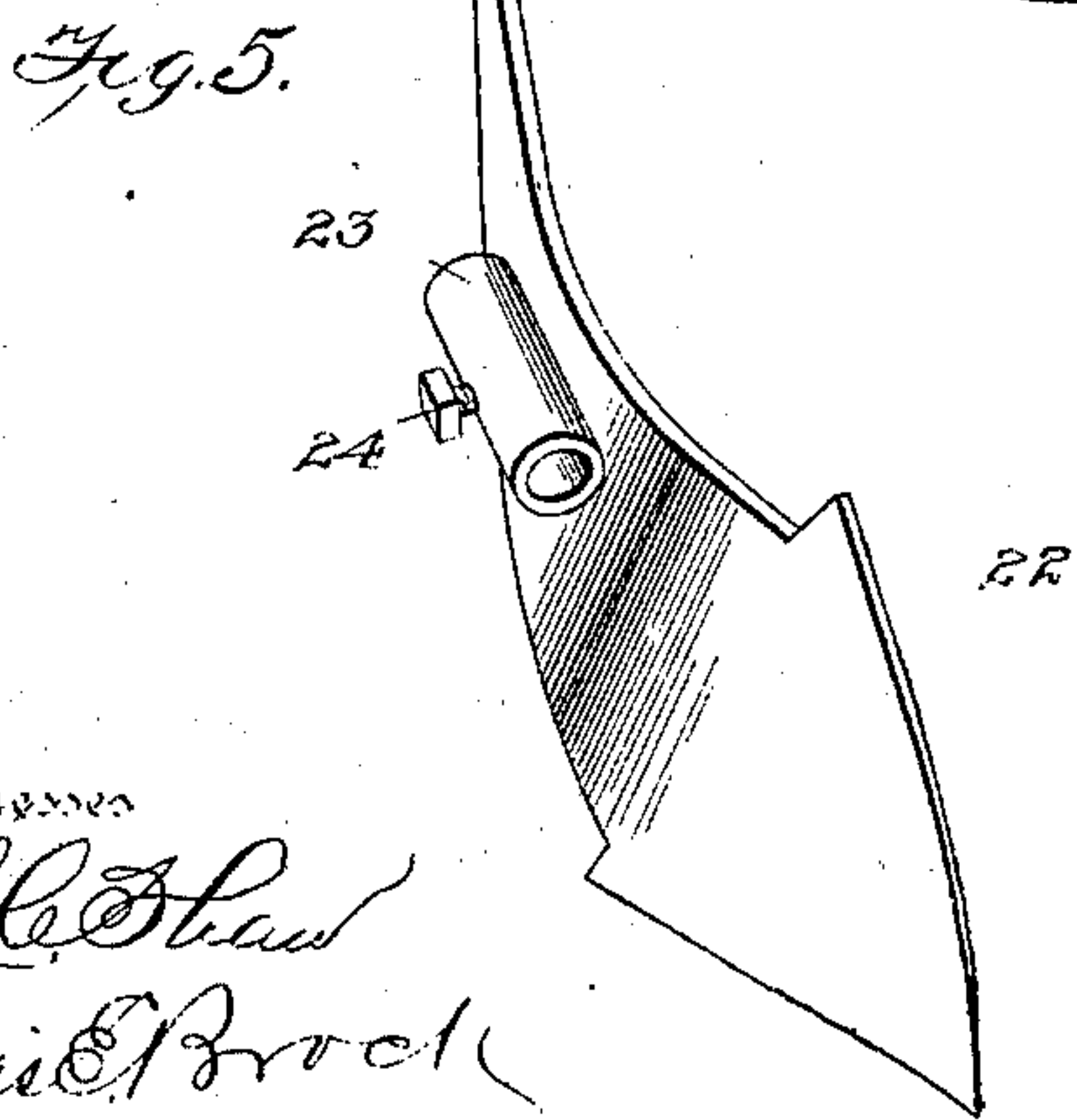
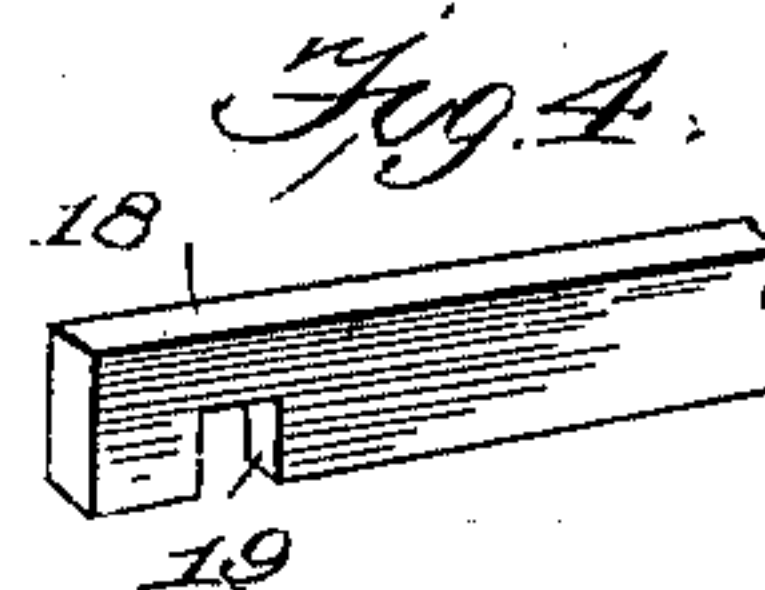
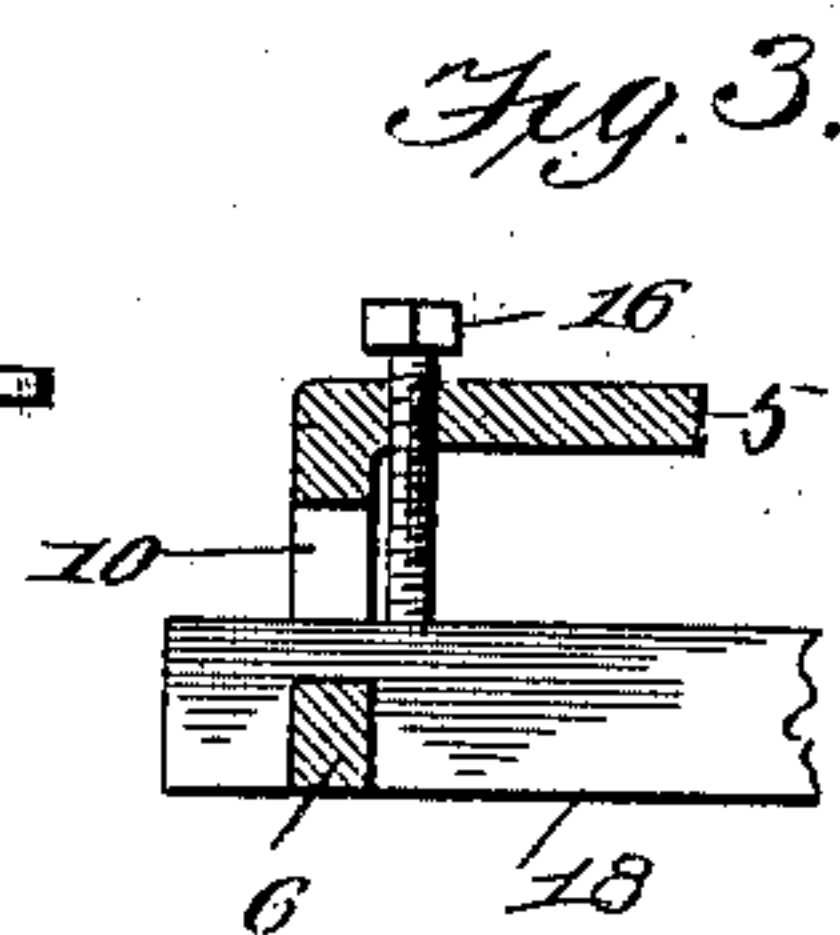
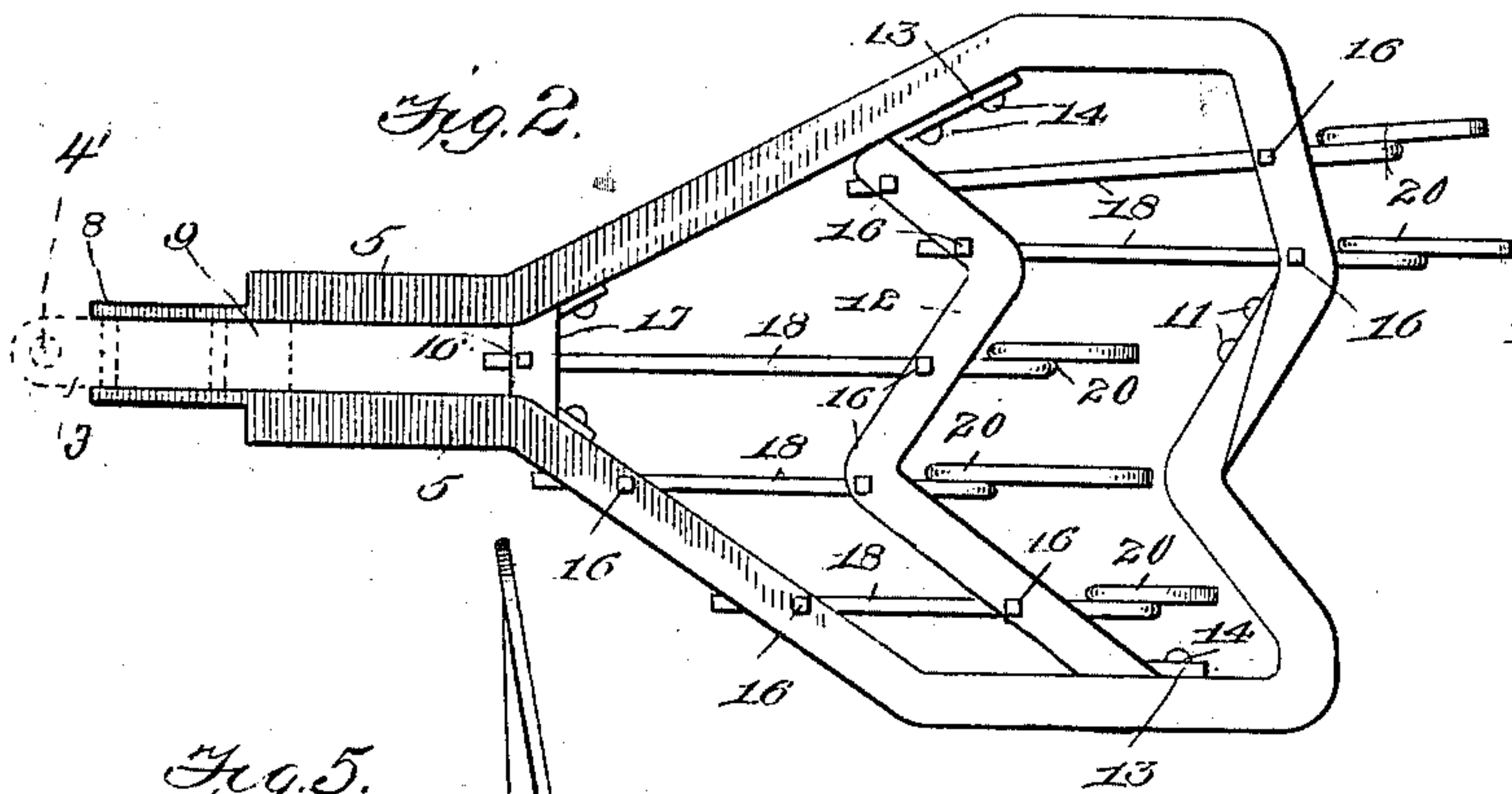
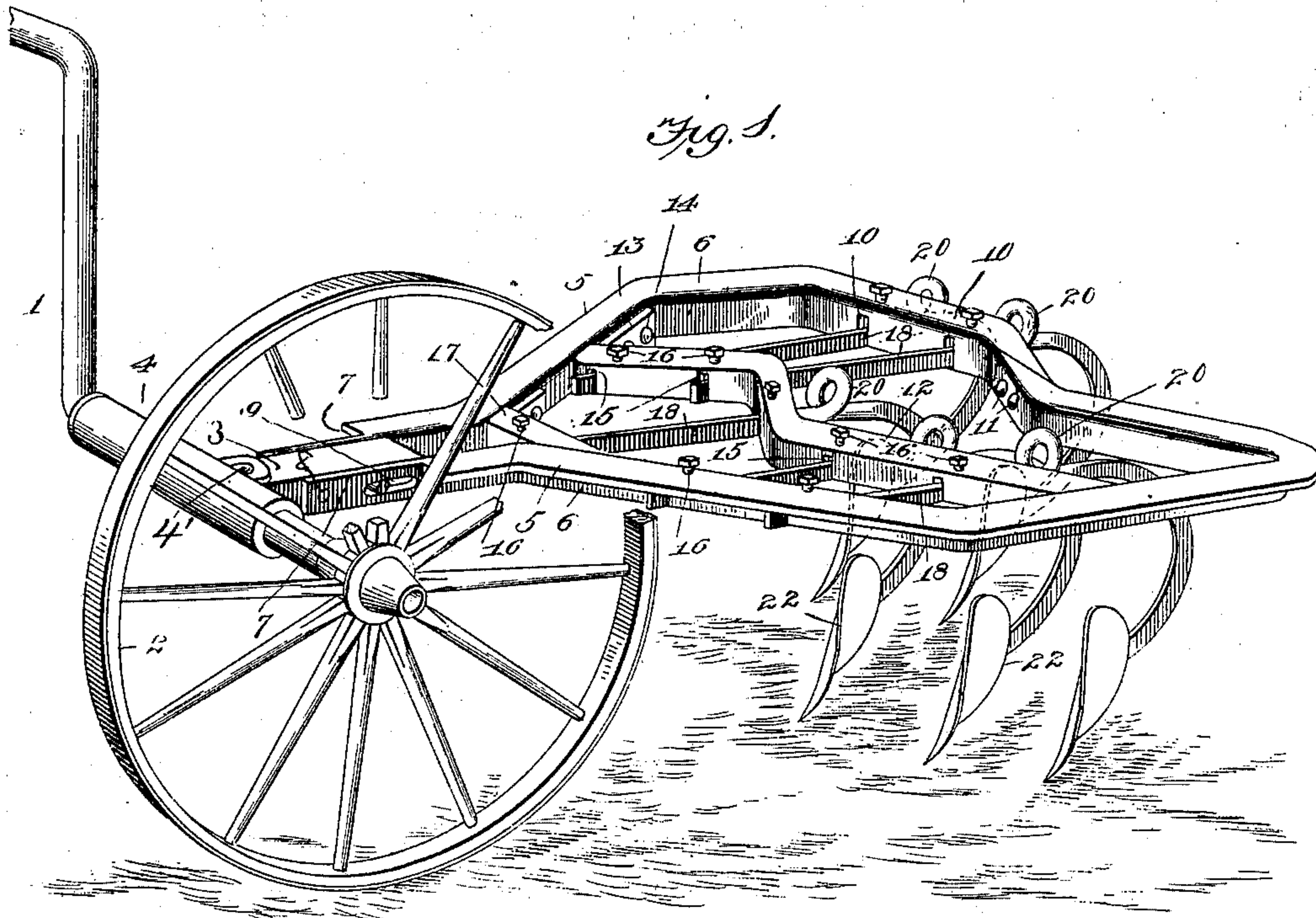
No. 663,919.

Patented Dec. 18, 1900.

J. T. MORGAN.
CULTIVATOR.

(Application filed Jan. 20, 1900.)

(No Model.)



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN THOMAS MORGAN, OF HALF ROCK, MISSOURI.

CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 663,919, dated December 18, 1900.

Application filed January 20, 1900. Serial No. 2,135. (No model.)

To all whom it may concern:

Be it known that I, JOHN THOMAS MORGAN, a citizen of the United States, residing at Half Rock, in the county of Mercer and State of Missouri, have invented a new and useful Cultivator, of which the following is a specification.

My invention relates to cultivators; and it consists of the parts and combination of parts hereinafter fully set forth.

In the drawings, Figure 1 is a perspective view of one side of a cultivator embodying my invention. Fig. 2 is a top plan view of the shovel-frame. Figs. 3 and 4 are detail views, and Fig. 5 is a perspective view of the cultivator shoe or shovel.

Referring to the drawings by numerals, 1 indicates a portion of the axle of the machine, which may be of any approved form and provided with a wheel 2. A coupling-beam 3 is suitably secured to the axle, as by means of a sleeve 4 and a king bolt 4', or it may be connected directly to the axle in the usual manner.

5 represents beams constituting the frame, constructed of angle-iron, the depending portion of which will for descriptive purposes be referred to herein as a "flange" 6, the forward ends of which are each provided with a bolt-opening 8 and a slot 9 for securing it to the coupling-beam 3. By providing the flanges with the slots 9 the frame can be attached to different coupling-beams, in which the bolt-holes are at different distances apart. I prefer to cut away the upper part of the top of the frame over the bolt-hole 8 and slot 9, as shown at 7, for permitting access to the bolts with a wrench. The flange 6 is provided with slots or openings 10, through which the plow-beams project, and the rear portion of the frame is spliced on a bevel and secured together by means of the bolts 11.

12 is a bent or angled center-bar extending across the frame between the side beams 5, to which it is secured by means of the strap 13 and suitable bolts 14. This beam is substantially S-shaped and is provided with openings 15, similar to the openings 10 in the flange 6 of the frame. The openings 15 in the beam 12 and the openings 10 in the flange are each provided with coacting set or clamping screws 16.

17 is a brace and carrying bar extending across the frame between the side beams 5, but nearer the forward end of the same, said bar being provided with an opening similar to the opening 10 in the flange 6 and a set-screw 16.

The general outline of the shovel-frame of my improved cultivator is substantially heart-shaped.

18 represents the spring-carrying bars, provided with notches 19 in their forward ends. These bars are flattened throughout their length except at the joint, where they are coiled, as at 20, where they are round in cross-section. The bars are also round in cross-section at their outer or lower ends. The object of the flattening of the bars, as shown, is to increase their strength and rigidity, while the rounded and coiled portion provides them with the necessary resiliency without impairing their strength, as will readily be understood by those skilled in working metal.

22 is the cultivator shoe or shovel, of the shape and curvature shown, said shovel being provided with a socket 23, in which the lower end of the bar 19 is adapted to fit and be secured by means of the set-screw 24.

The bars 18 are secured in the frame by passing the notched ends through the openings in the flange 6 and beams 12 and 17, and the notch slips over that portion of said flange and beams below the openings and is secured firmly in that position by means of the set-screws 16, as clearly illustrated in Fig. 3.

I have only shown one side or section of my improved straddle-row cultivator, but it will be sufficient to enable those skilled in the art to manufacture a complete machine according to my invention.

It will be observed from the position of the shoes or shovels that the earth between the rows is thoroughly worked and thrown in a manner calculated to induce the best growth.

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

1. In a cultivator, the combination, with a wheeled support, of a frame pivotally secured thereto, and provided with front and rear pieces and a bent or angled center bar and two series of shovel-bars secured to said frame, one series in advance and to one side of the

other series, the forward series being secured to the front piece and to the center bar of the frame and the other series being secured to the center bar and to the rear piece of the frame.

2. In a cultivator, the combination, with a wheeled support, of a coupling-beam pivotally secured thereto, a frame secured to the beam, formed from angle-iron, the top portion being cut away at the beam and the sides being provided with a perforation and a slot adjacent thereto, and two series of shovels secured to the frame, one in advance and to one side of the other series.

3. In a cultivator, the combination, with a wheeled support, of a frame pivotally secured thereto, the beams of which are flanged and the flanges are slotted vertically, shovel-bars secured to the frame, the forward end of each of which is notched upon its lower edge and

fits within one of the slots and a set-screw through the beam adjacent to each slot the end of which is adapted to engage with the upper edge of the bar and keep it in engagement with the beam of the frame.

4. In a cultivator, the combination with the axle, of a rearwardly - extending coupling-beam secured thereto, a frame secured to said coupling-beam, a flange provided with openings depending from said frame, and a bar flat throughout its length except one portion which is round in cross-section and coiled, a notch in the forward end of the bar adapted to engage the flange below said openings and a set-screw to engage the forward end of the bar, substantially as shown and described.

JOHN THOMAS MORGAN.

Witnesses:

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