

No. 749,157.

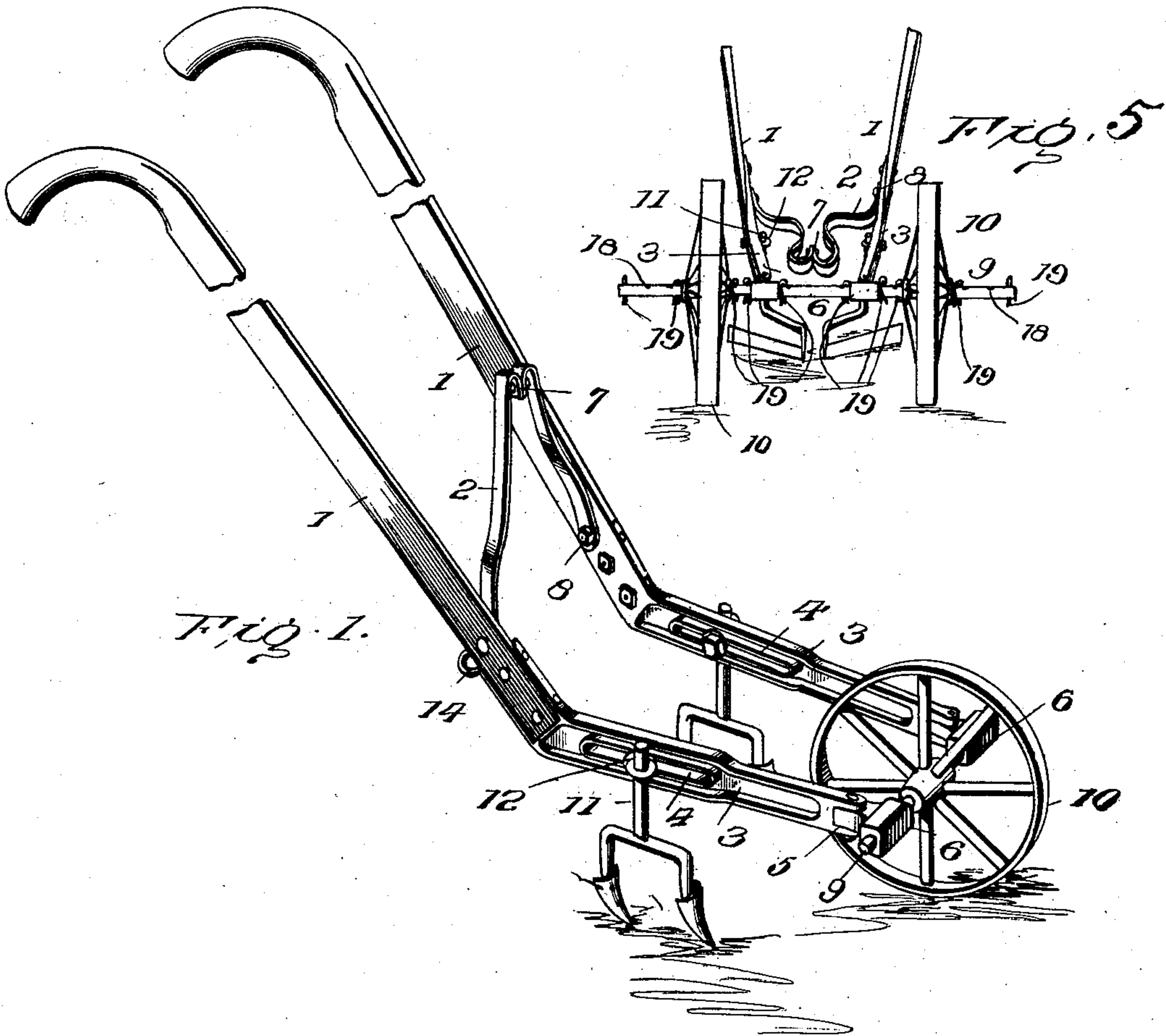
PATENTED JAN. 12, 1904.

J. B. BOMBERGER.  
GARDEN IMPLEMENT.

APPLICATION FILED MAR. 2, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



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2 SHEETS--SHEET 2.

Fig. 2.

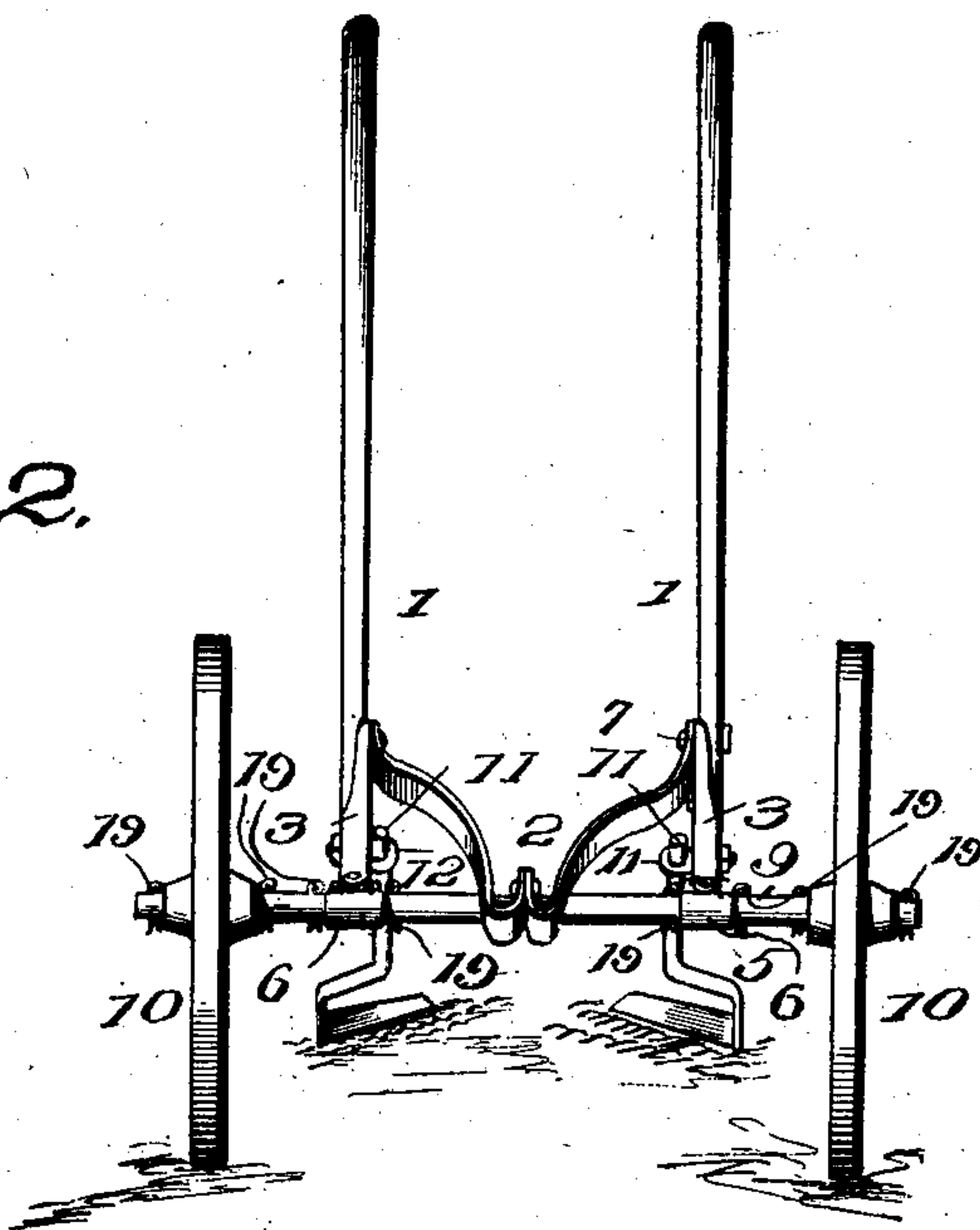
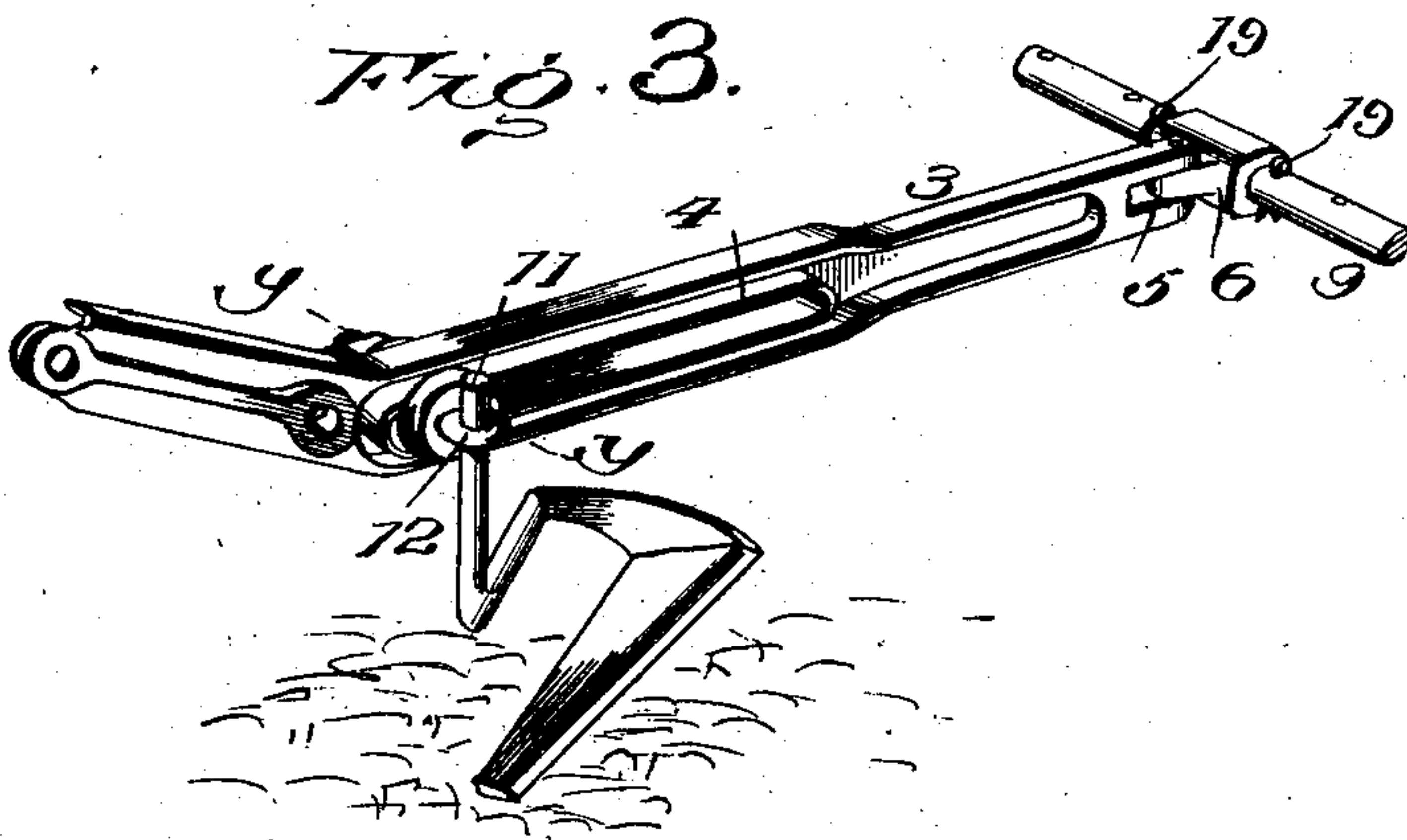
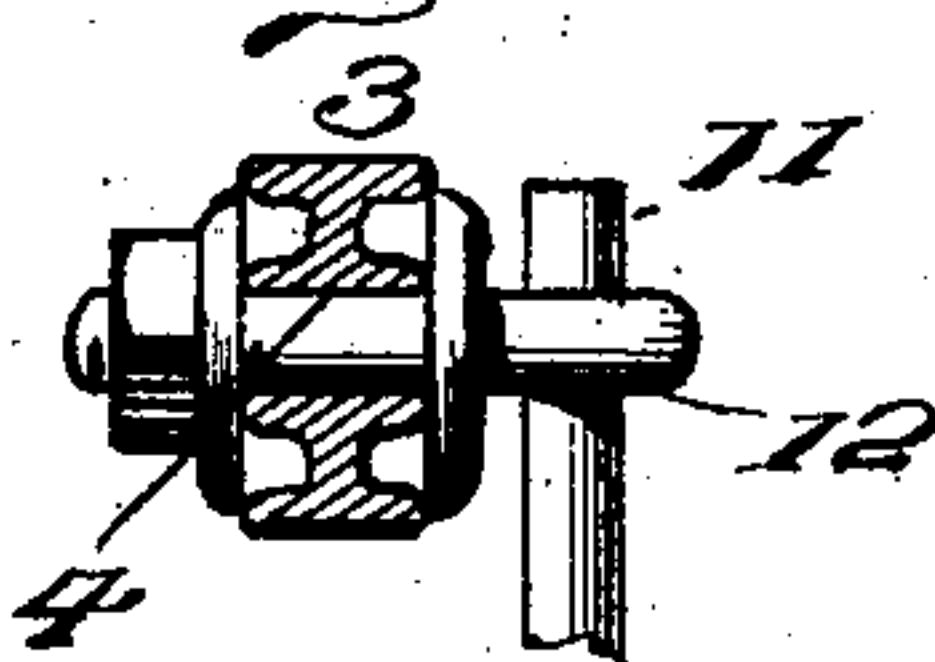


Fig. 3.



*Fig. 4.*



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# UNITED STATES PATENT OFFICE

JAMES B. BOMBERGER, OF MOUNT GILEAD, OHIO, ASSIGNOR OF TWO-THIRDS TO THEODORE BROWN AND ADOLF COHN, OF MOUNT GILEAD, OHIO.

## GARDEN IMPLEMENT.

SPECIFICATION forming part of Letters Patent No. 749,157, dated January 12, 1904.

Application filed March 2, 1903. Serial No. 145,802. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES B. BOMBERGER, a citizen of the United States, residing at Mount Gilead, in the county of Morrow and State of Ohio, have invented certain new and useful Improvements in Garden Implements, of which the following is a specification.

It is the purpose of this invention to provide a device readily convertible for use as a hand cultivator, truck, or implement for tilling the soil, the frame being adaptable for riding machines and vehicles susceptible of propulsion by any motive power.

An essential feature of the invention is a frame comprising an axle, longitudinal bars, and a spring-arch connecting the bars and composed of similar complementary parts loosely connected to each other and to the said bars to admit of their independent movement vertically, laterally, and longitudinally to allow of various adjustments, as may be required, for proper steering and accommodation to surface condition, so as to minimize jar and wear upon the machine.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and drawings hereto attached.

While the essential and characteristic features of the invention are susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the implement rigged for use as a cultivator. Fig. 2 is a front view of the implement rigged for use as a scarifier. Fig. 3 is a detailed perspective view of one of the ends or irons applied to a side bar, showing a scuffle in place. Fig. 4 is a sectional detail about on the line *y y* of Fig. 3. Fig. 5 is a detail view similar to Fig. 2, the scuffle-blades being arranged in reverse position and the handles and ground-wheels being moved closer together.

Corresponding and like parts are referred to in the following description and indicated in all of the views of the drawings by the same reference characters.

The frame forming the vital feature of the invention comprises side bars 1, a connecting spring-arch 2, and metal ends 3, fitted to or forming a part of the bars 1, according as the latter are made of wood or metal. In the preferable construction the parts 1 are of wood and the parts 3 of metal, the latter being rigidly attached to the parts 1 by any suitable fastening means. The end pieces 3 are formed with longitudinal slots 4 and their terminal portions are notched, as shown at 5, to receive either the axle or bearing-blocks 6, according to the special adaptation and use of the frame. As shown, the side bars 1 are formed at their upper ends with grips and constitute, in effect, handle-bars, thereby adapting the implement to be operated by hand. The rear ends of the parts 3 are flexed, thereby enabling the bars 1 to occupy a relative upward and rearward inclination essential for convenient use of the machine.

The arch 2 is composed of similar sections reversely disposed and approximately of S form. The sections or parts of the arch are loosely connected at their meeting ends by a pivot-fastening 7 and are similarly connected at the opposite end to the bars 1 by pivot-fastenings 8. As a result of connecting the bars 1 in the manner stated they are adapted to have independent longitudinal, vertical, and lateral play, as will be readily comprehended. The arch may occupy any relative position, as shown in the several views. Fig. 2 shows the arch turned so as to rest upon the axle 9.

When the machine is to be used either as a cultivator or scarifier, a single ground-wheel 10 is fitted thereto, the axle being journaled in bearings 6, having rearwardly-extended lugs pivoted between the bifurcations at the front ends of the part 3. This manner of mounting the ground-wheel 10 admits of the bars 1 and ends 3 moving laterally, longitudinally, and vertically, so as to shift the earth-treating devices as may be required, according to the nature of the work to be performed. Fig. 6 shows the axle 9 provided with a ground-wheel.

The teeth, blades, or other earth-treating device, such as shown in Figs. 1, 2, and 3, are provided with shanks 11, which are adapted



to be adjustably connected with the end pieces 3 by means of eyebolts or analogous fastenings 12, fitted in the slots 4. The construction is such as to admit of the teeth or blades 5 being adjusted lengthwise of the frame or vertically to meet any condition of work.

The drawings illustrate some of the many uses of the frame; but it is obvious that it may be applied in other connections for machines or vehicles to be operated either by 10 hand or other power.

In the construction shown in Figs. 2 and 3 the axle is provided in its length with a series of openings 18 and cotter-pins 19 for holding 15 the ground-wheels and handle-bars in an adjusted position. The slots 4 in the metal ends 3 enable the blades to be arranged upon either side of said parts 3, as indicated most clearly in Figs. 1 and 5. When it is required to spread 20 the ground-wheels and the handle-bars, the cotter-pins 19 are moved and said parts slipped outward upon axle 9 and secured in the adjusted position by placing the cotter-pins so as to come upon each side of the parts so 25 shifted. Whether the ground-wheels are moved inward close together or spread apart to the maximum distance, the handle-bars are adapted to be moved independently either 30 vertically, laterally, or longitudinally, as required.

Having thus described the invention, what is claimed as new is—

1. In a machine of the character described, the combination with side bars, a spring-arch 35 connecting the side bars to admit of relative longitudinal, lateral and vertical play thereof, substantially as set forth.

2. In a machine of the character described, and in combination with side bars, a spring-

arch loosely connected at its ends to said side 40 bars, to be turned to any relative angular position and admit of relative vertical, lateral and longitudinal play of the side bars, substantially as specified.

3. In a machine of the character specified, 45 the combination of side bars, an axle fitted to the said side bars and provided with a ground-wheel and a spring-arch connecting said side bars, substantially as set forth.

4. In a machine of the character described, 50 the combination of side bars, bearings pivotally connected to said side bars, an axle supported by said bearings and provided with a ground-wheel, and a spring-arch connecting the side bars to admit of relative longitudinal, 55 lateral and vertical play thereof, substantially as set forth.

5. In a machine of the character set forth, side bars having longitudinal slots, an axle applied to the side bars and provided with a 60 ground-wheel, a spring-arch connecting the side bars, attachments and means adjustably connecting the attachments to the side bars through the instrumentality of said longitudinal slots, substantially as set forth. 65

6. In combination, side bars, an axle fitted to said side bars and provided with a ground-wheel, and a spring-arch composed of similar sections of approximately S form oppositely 70 disposed and loosely connected to each other and to said side bars, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES B. BOMBERGER. [L. s.]

Witnesses:

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