

G. W. WEBSTER.

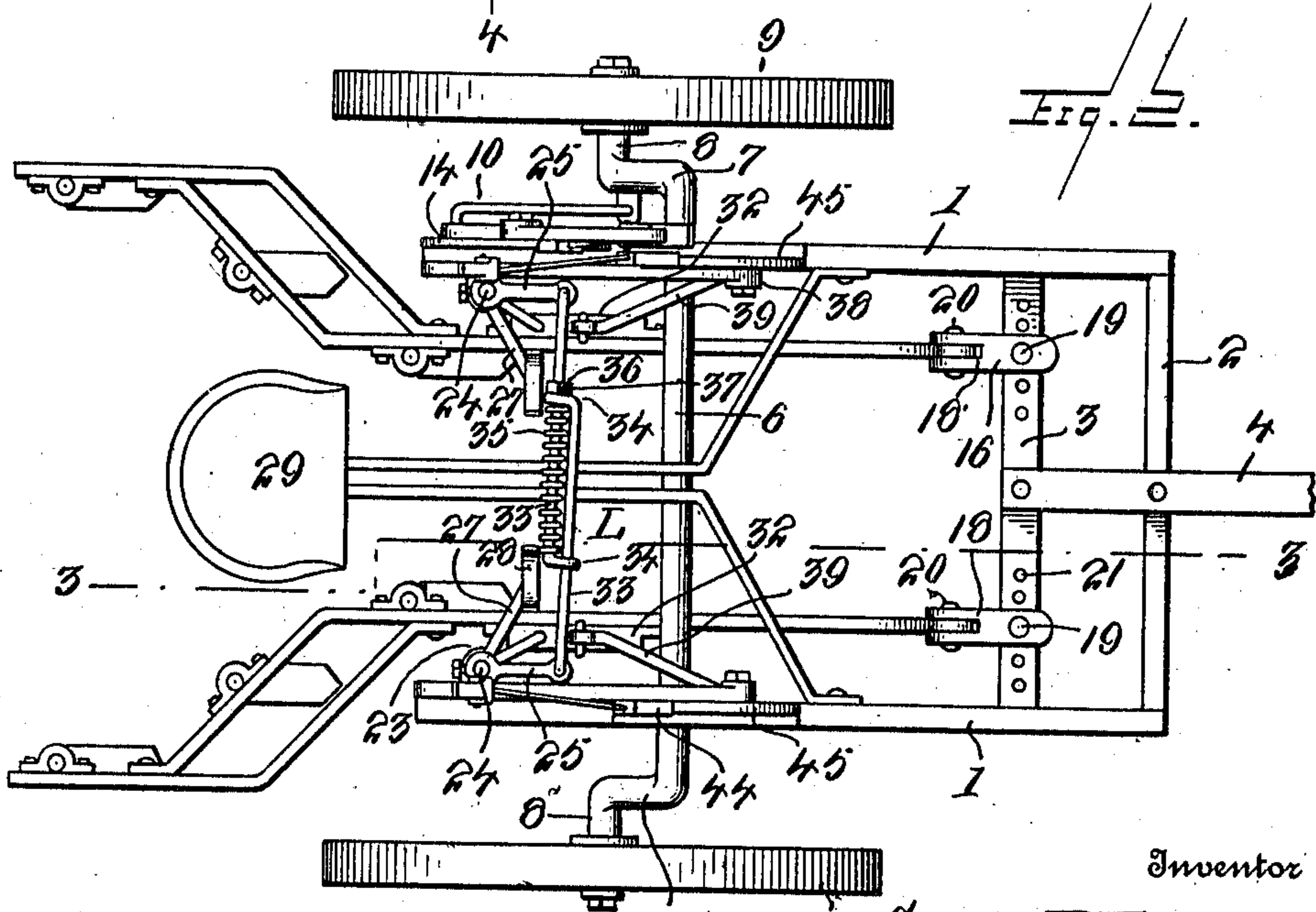
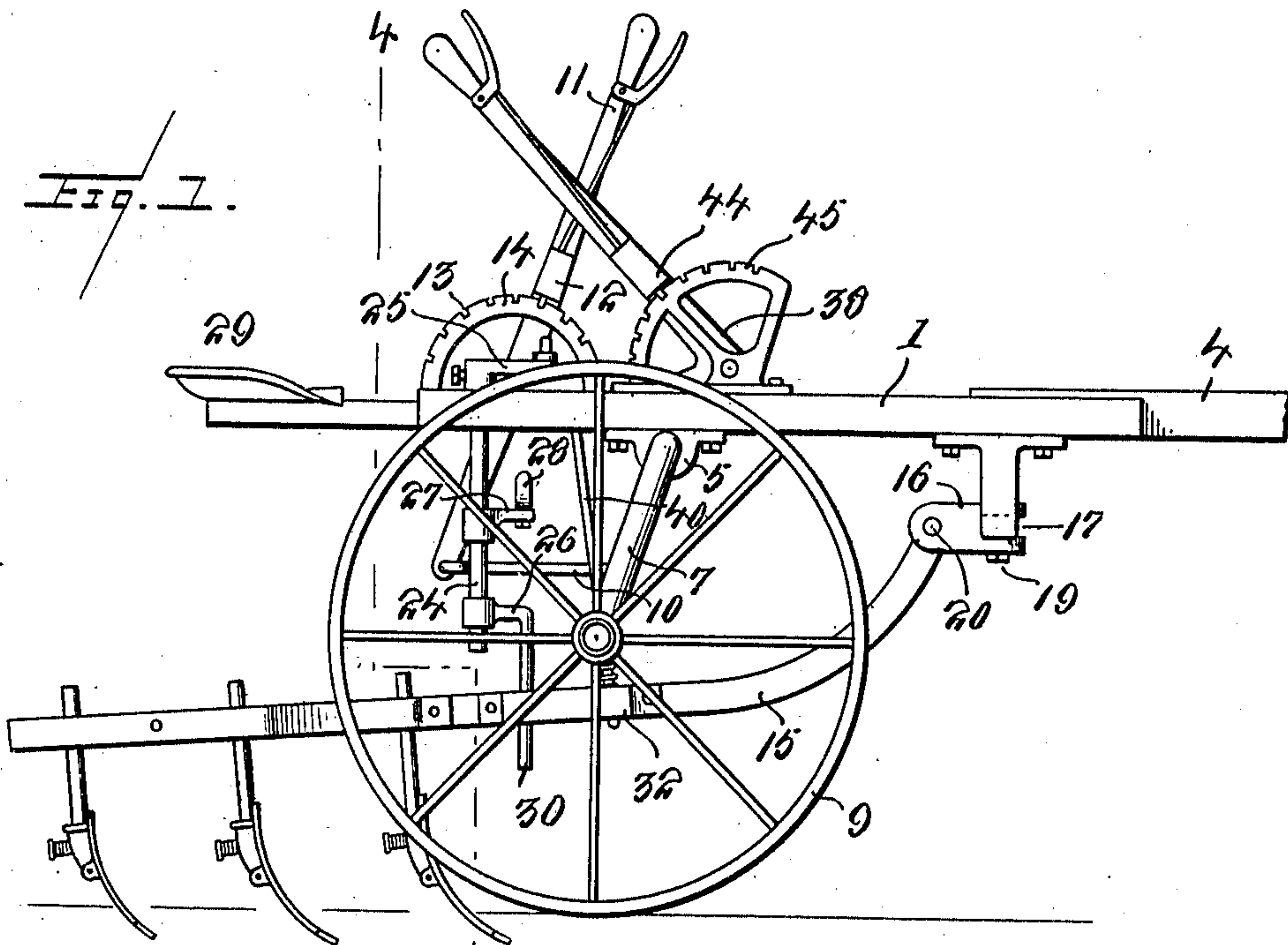
CULTIVATOR.

APPLICATION FILED SEPT. 20, 1910.

990,024.

Patented Apr. 18, 1911.

2 SHEETS—SHEET 1.



Witnesses

E. R. Ruppert.

Wm. Bagges.

Inventor

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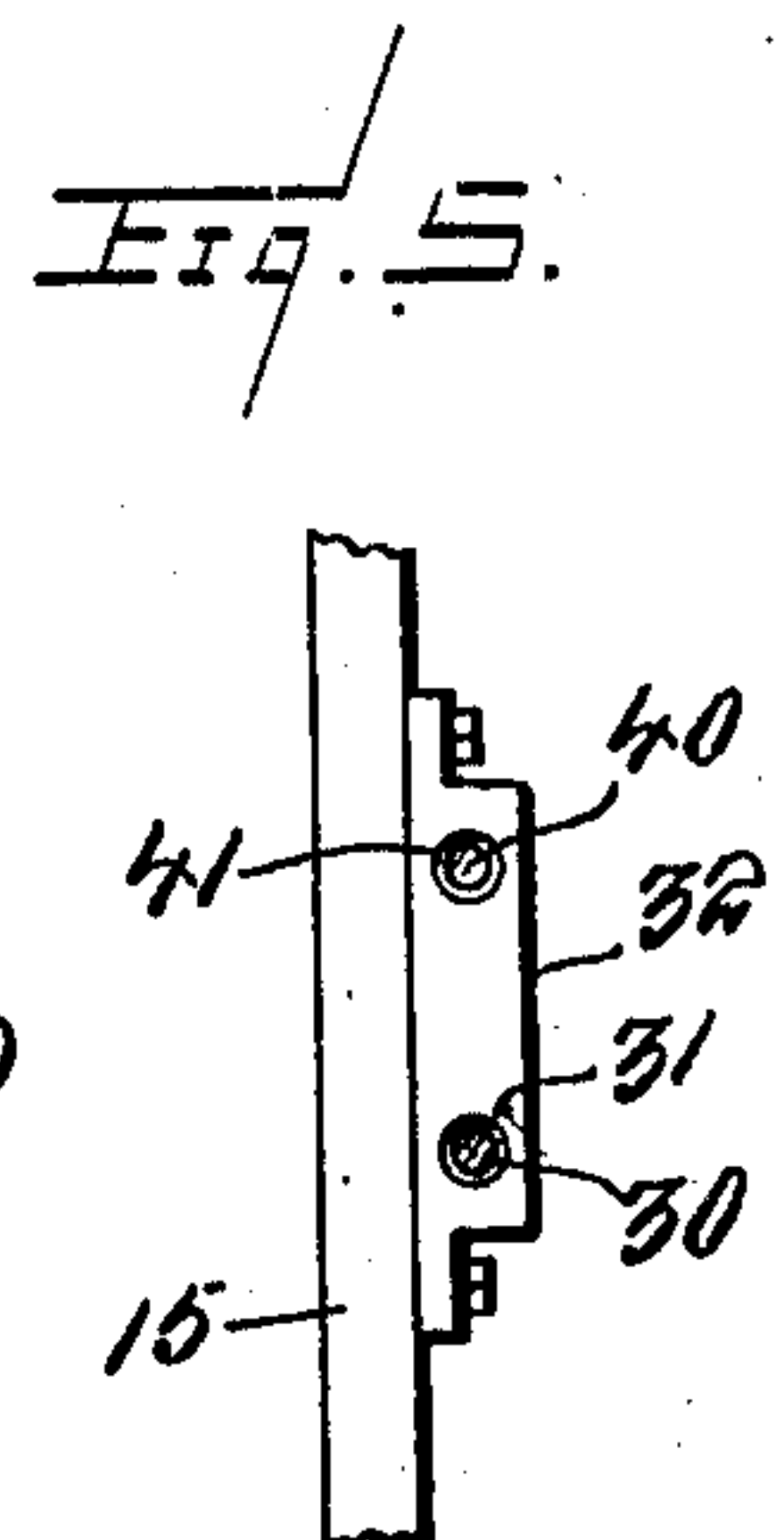
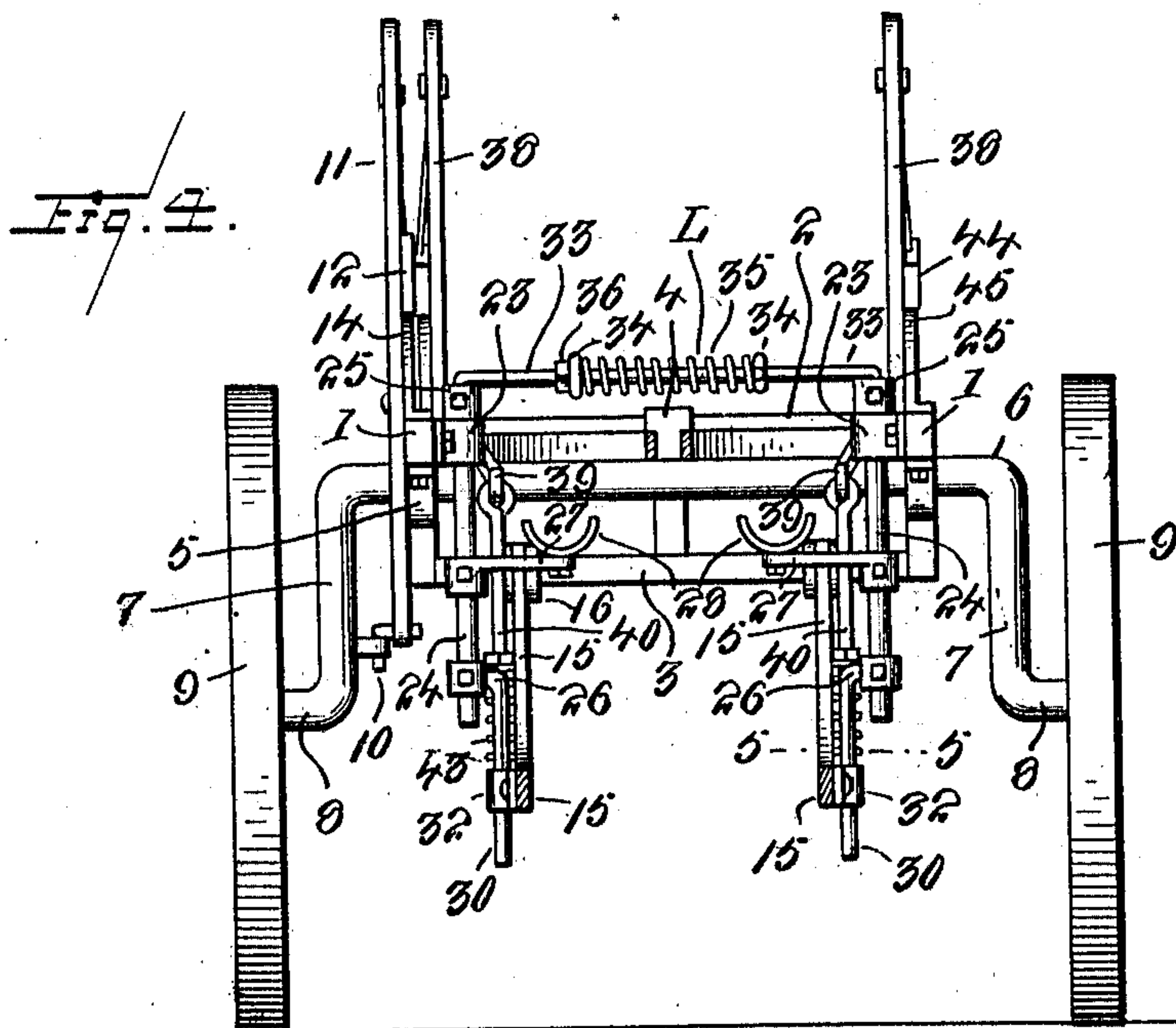
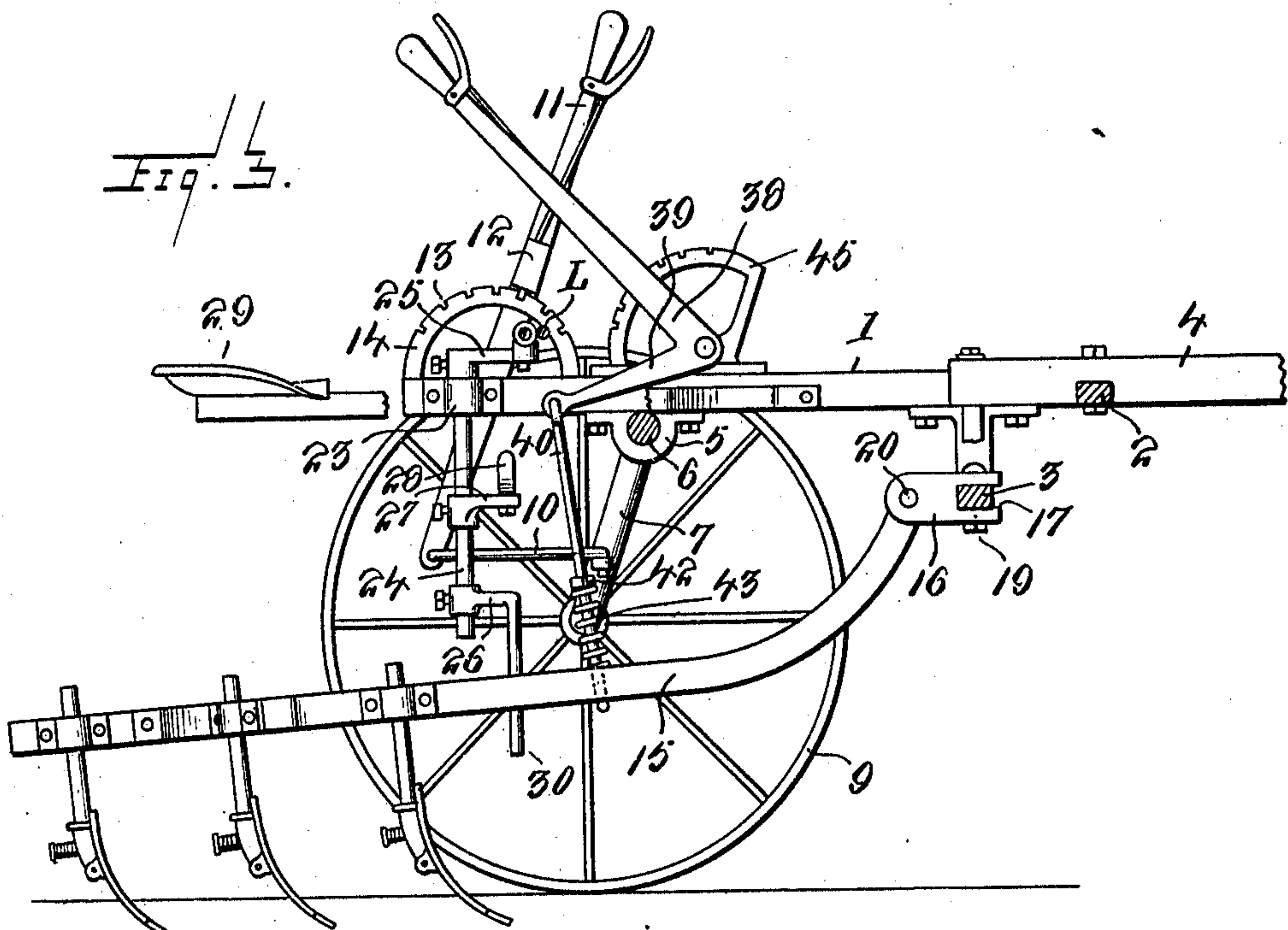
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UNITED STATES PATENT OFFICE.

GEORGE W. WEBSTER, OF DAYTON, VIRGINIA.

CULTIVATOR.

990,024.

Specification of Letters Patent.

Patented Apr. 18, 1911.

Application filed September 20, 1910. Serial No. 582,878.

To all whom it may concern:

Be it known that I, GEORGE W. WEBSTER, a citizen of the United States of America, residing at Dayton, in the county of Rockingham and State of Virginia, have invented new and useful Improvements in Cultivators, of which the following is a specification.

This invention relates to cultivators and particularly to riding or wheel cultivators.

The invention has for its objects to simplify and improve the construction and operation of this class of devices and particularly to provide simple and convenient means whereby the cultivator beams may be adjusted vertically and laterally with reference to the row of plants that is being operated upon while the machine is in operation.

With these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the claims.

In the accompanying drawings has been illustrated a simple and preferred form of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the claims may be resorted to when desired.

In the drawings, Figure 1 is a side elevation of a riding cultivator constructed in accordance with the invention. Fig. 2 is a top plan view of the same. Fig. 3 is a vertical longitudinal sectional view taken on the plane indicated by the line 2—2 in Fig. 2. Fig. 4 is a vertical transverse sectional view taken on the line 4—4 in Fig. 1. Fig. 5 is a sectional detail view taken on the line 5—5 in Fig. 4.

Corresponding parts in the several figures are denoted by like characters of reference.

The frame of the improved cultivator is composed of side bars 1, 1 connected at their front ends by a cross bar 2 and at a short distance from the front ends by a downwardly offset cross bar 3. The tongue 4 is suitably connected with the cross bars 2 and 3. The side bars 1, 1 are provided with boxes 5 affording bearings for the axle 6 having arms or cranks 7 provided with

spindles 8 upon which the transporting wheels 9 are mounted for rotation. One of the cranks 7 is connected by a link 10 with one arm of an adjusting lever 11 which is fulcrumed upon the frame of the machine and which is provided with a suitable stop member 12 adapted to engage any one of a plurality of notches or recesses 13 in a segment 14 which is mounted upon the frame, thereby serving to retain the axle at various adjustments and enabling the frame of the machine to be raised or lowered, according to the inclination at which the axle arms 7 are positioned.

The cultivator beams 15 are connected adjacent to their front ends with the downwardly offset cross bar 3 by means of coupling blocks 16 provided at their front ends with horizontal slots or notches 17 and at their rear ends with vertical slots or notches 18. The notches 17 straddle the downwardly offset cross bar 3 with which the blocks 16 are connected by vertical pins or bolts 19. The notches 18 straddle the front ends of the beams with which the blocks 16 are connected by transverse pins or bolts 20. The coupling blocks 16 will thus constitute universal joints whereby the cultivator beams are connected with the cross bar 3. The latter is provided with a plurality of perforations 21 for the passage of pins or bolts 19, thus enabling the plow beams to be variously spaced at their front ends. The plow beams are provided in the usual manner with blade-carrying standards which may be constructed and arranged in any suitable well known manner.

The side members 1, 1 of the frame are provided near their rear ends with boxes 23 affording bearings for vertically disposed rock shafts 24 provided adjacent to their upper ends with forwardly extending cranks 25, adjacent to their lower ends with cranks 26 and intermediate their upper and lower cranks 27 having foot pieces 28 upon which the driver whose seat 29 is suitably supported upon the frame may place his feet for the purpose of manipulating the rock shafts. The cranks 26 at the lower ends of the rock shafts are provided with downwardly extending arms 30 which are guided through apertures 31 in blocks or boxes 32 secured upon the cultivator beams, said apertures being best seen in Fig. 5. The cranks 25 at the upper ends of the rock shafts 24

are connected together by a link member L which is made up of two rods 33, each provided with a terminal eye 34 engaging the other rod, one of which is provided with a coiled spring 35 abutting terminally upon the two eyes 34 which are thereby forced apart, thus shortening the link, the relative movement of the rods being limited by means of a stop member 36 upon one of the rods, said stop member being preferably adjustably secured by means of a set screw 37 or other suitable means.

Each side member of the frame carries a bell crank lever 38, one arm of which, 39, carries a rod 40 which extends downwardly through an aperture 41 in one of the blocks 32, said rod being provided with a stop member 42 between which and the block 32 a spring 43 is interposed exercising a downward tension against the cultivator beam upon which the block 32 is secured. It will be seen that by manipulating the bell crank levers 38 the downward pressure or tension against the cultivator beams may be regulated, and suitable means, such as stop members 44, engaging quadrants 45 may be provided for the purpose of retaining the bell crank levers in adjusted position.

As will be readily seen from the foregoing description, taken in connection with the drawings hereto annexed, the driver is enabled to completely control the cultivator beams by placing his feet upon the foot pieces 28, whereby the rock shafts 24 may be oscillated, thus moving the cultivator beams to the right or to the left, as may be desired. Should it be desired to increase the distance between the cultivator beams, pressure may be simultaneously exerted upon both foot pieces 28, thereby oscillating the rock shafts in opposite directions and straining the link members 33 against the tension of the spring 35, the arms 30 which extend downwardly from the cranks 26 serving at the same time to spread the cultivator beams apart. When the pressure upon the foot pieces is relaxed, the cultivator beams will be again moved together by the action of the spring 35 which operates to oscillate the rock shafts through the medium of the cranks 25. Lateral adjustment of the cultivator beams may be effected at any time, and when said cultivator beams are adjusted vertically, the arms 30 will slide in the apertures 31, as will be readily understood.

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

1. In a cultivator, a frame, a downwardly offset cross bar, cultivator beams connected therewith and provided with blocks having vertical apertures, vertically disposed rock shafts journaled upon the frame and provided near their lower ends with cranks having arms extending downwardly through the apertures in the blocks upon the cultivator beams, cranks at the upper ends of the rock shafts, an extensible link member connecting said cranks and including a spring which is placed under tension when the link is extended, and cranks secured upon the rock shafts intermediate their upper and lower ends and having foot pieces.

2. In a cultivator, a frame, rotary supporting means for said frame, cultivator beams connected for universal movement with the frame, and means for regulating the distance between the beams including rock shafts journaled upon the frame, cranks upon the rock shafts having downwardly extending arms slidably engaging the beams, cranks at the upper ends of the rock shafts, a link connecting said cranks and including slidably connected extension members, a spring forcing said extension members apart, and a stop member to regulate the sliding movement; and treadle means for actuating the rock shafts.

3. In a cultivator, a frame, rotary supporting means for said frame, cultivator beams connected with the frame for universal movement, bell cranks fulcrumed upon the frame, rods connected with said bell cranks and having sliding engagement with the beams, springs coiled upon the rods to bear downwardly against the beams, and spacing means for the beams including vertical rock shafts journaled upon the frame, cranks upon said rock shafts having downwardly extending arms slidably engaging the beams, cranks at the upper ends of the rock shafts, an extensible link member connecting said cranks, and treadles connected with the rock shafts.

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

GEORGE W. WEBSTER.

Witnesses:

SOL. B. THOMPSON,
JACOB W. HOTT.