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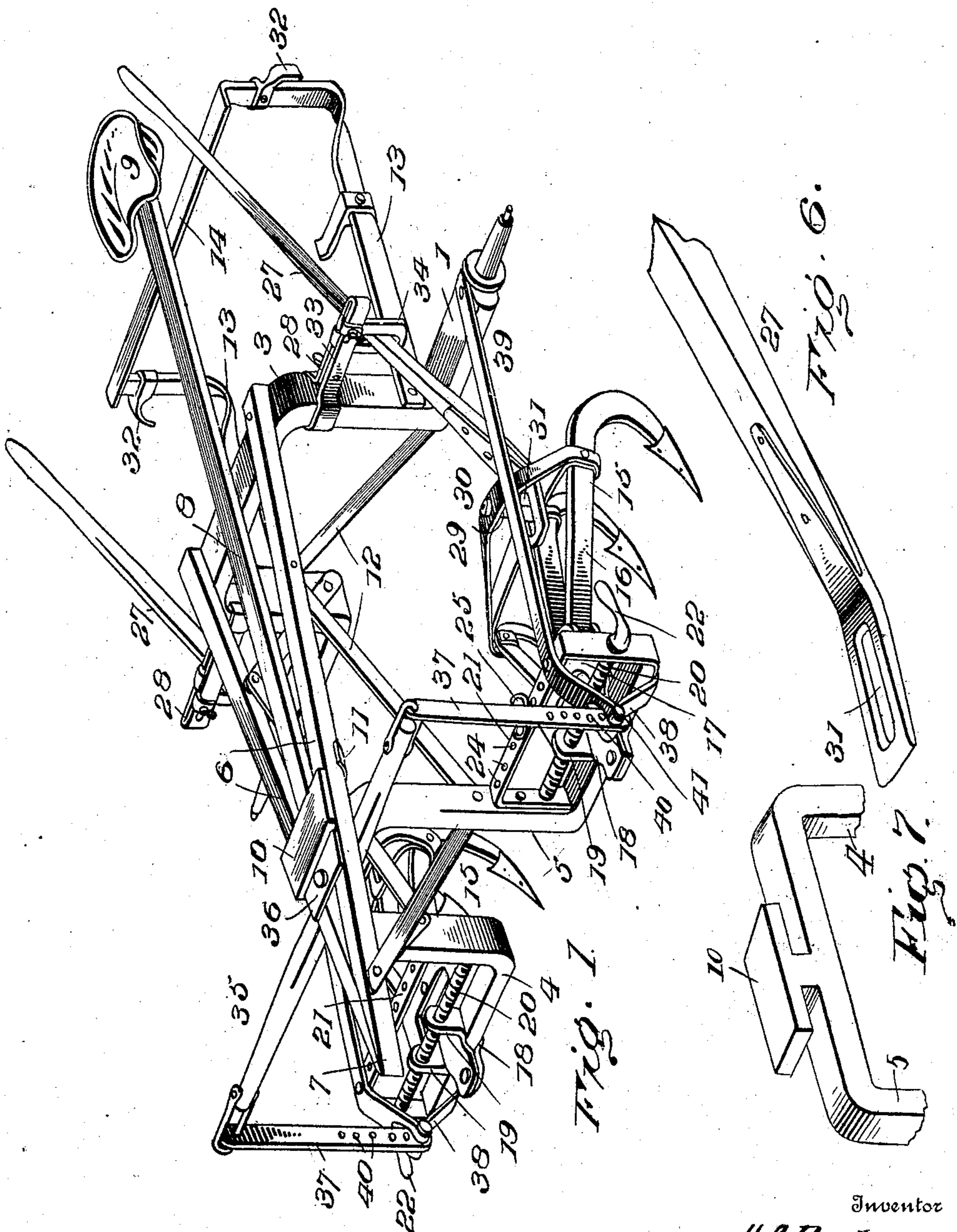
PATENTED JAN. 29, 1907.

H. A. BEHAM.

FLOW.

APPLICATION FILED MAY 21, 1906.

2 SHEETS—SHEET 1.



Witnesses

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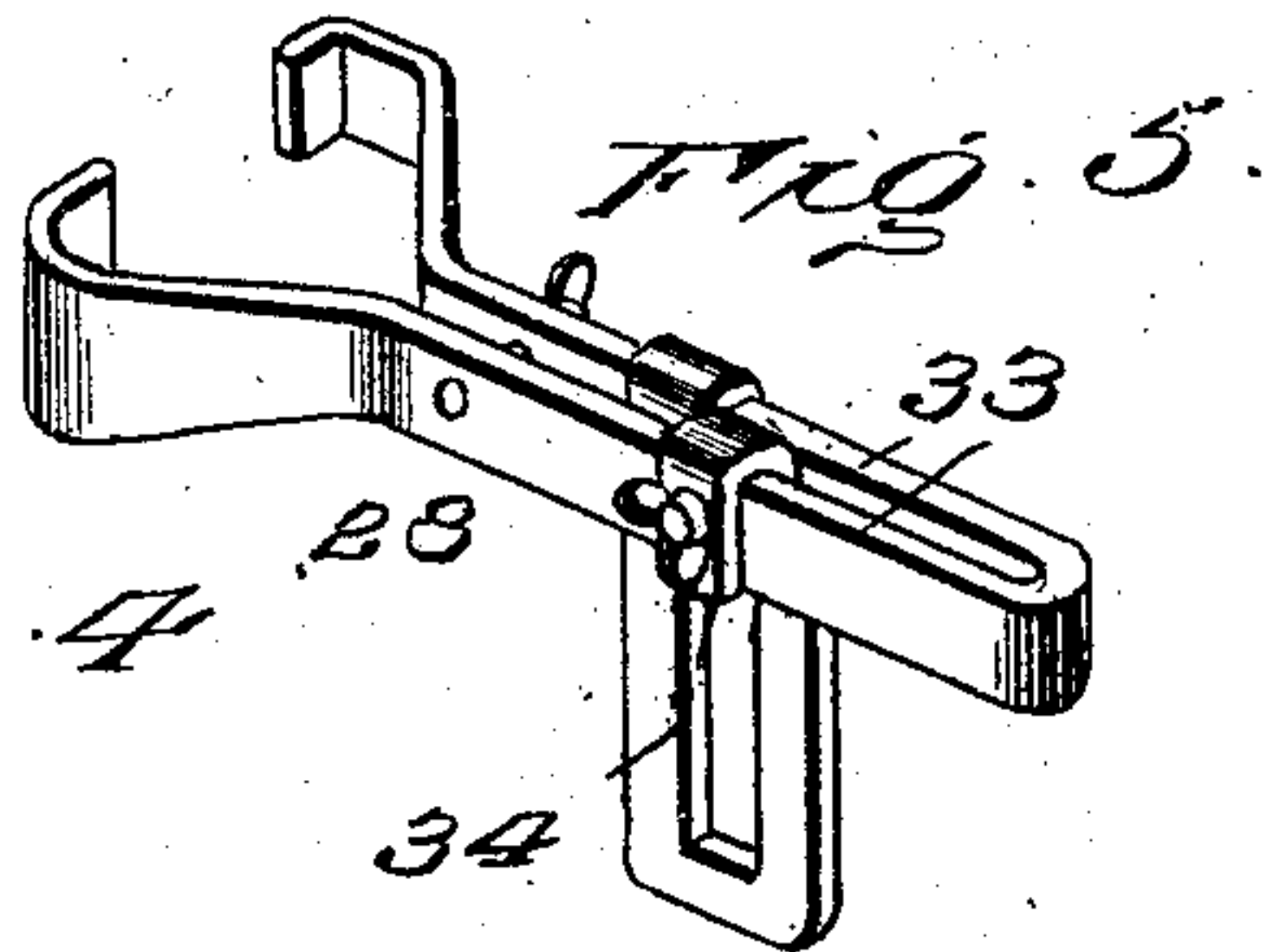
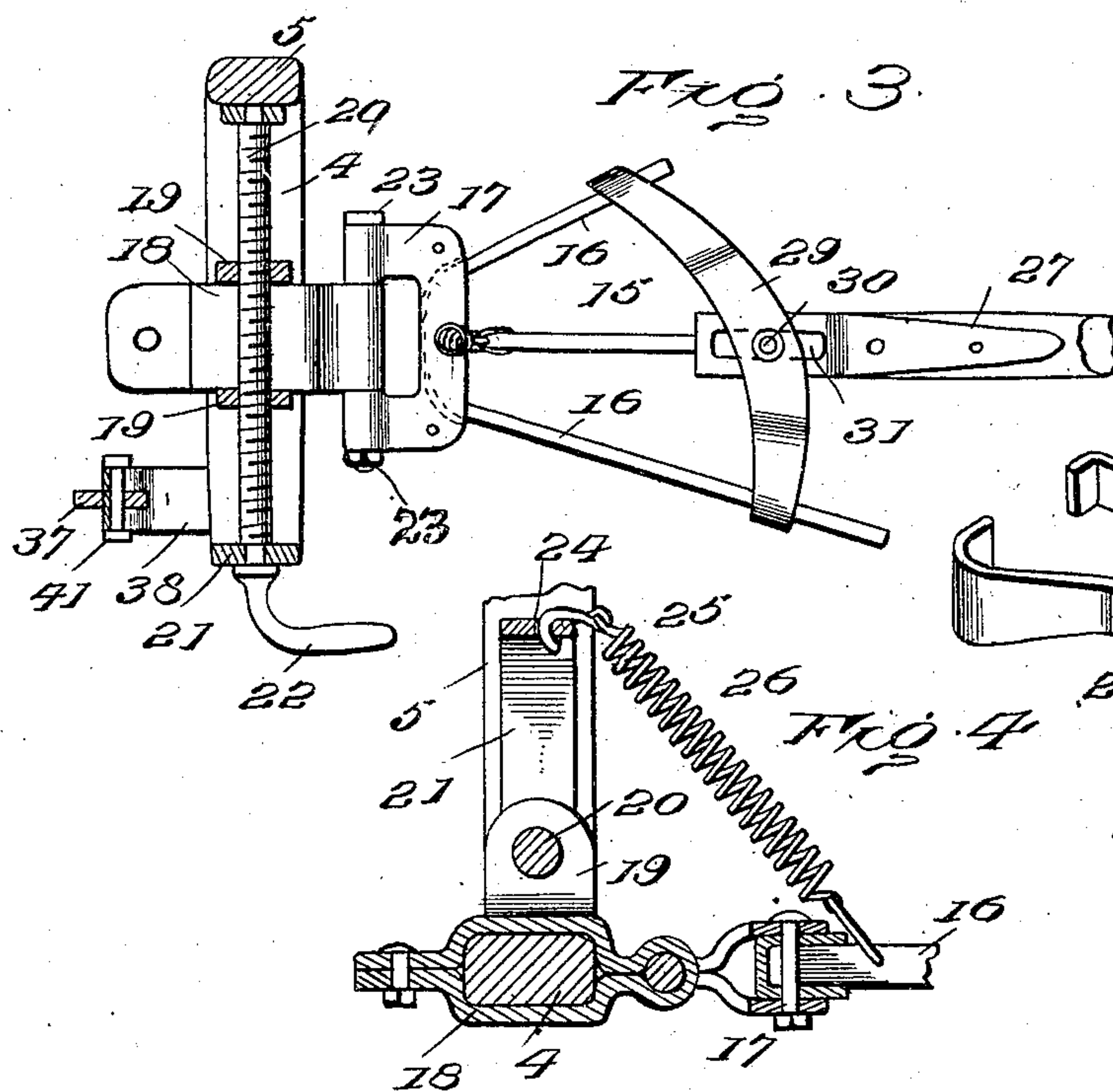
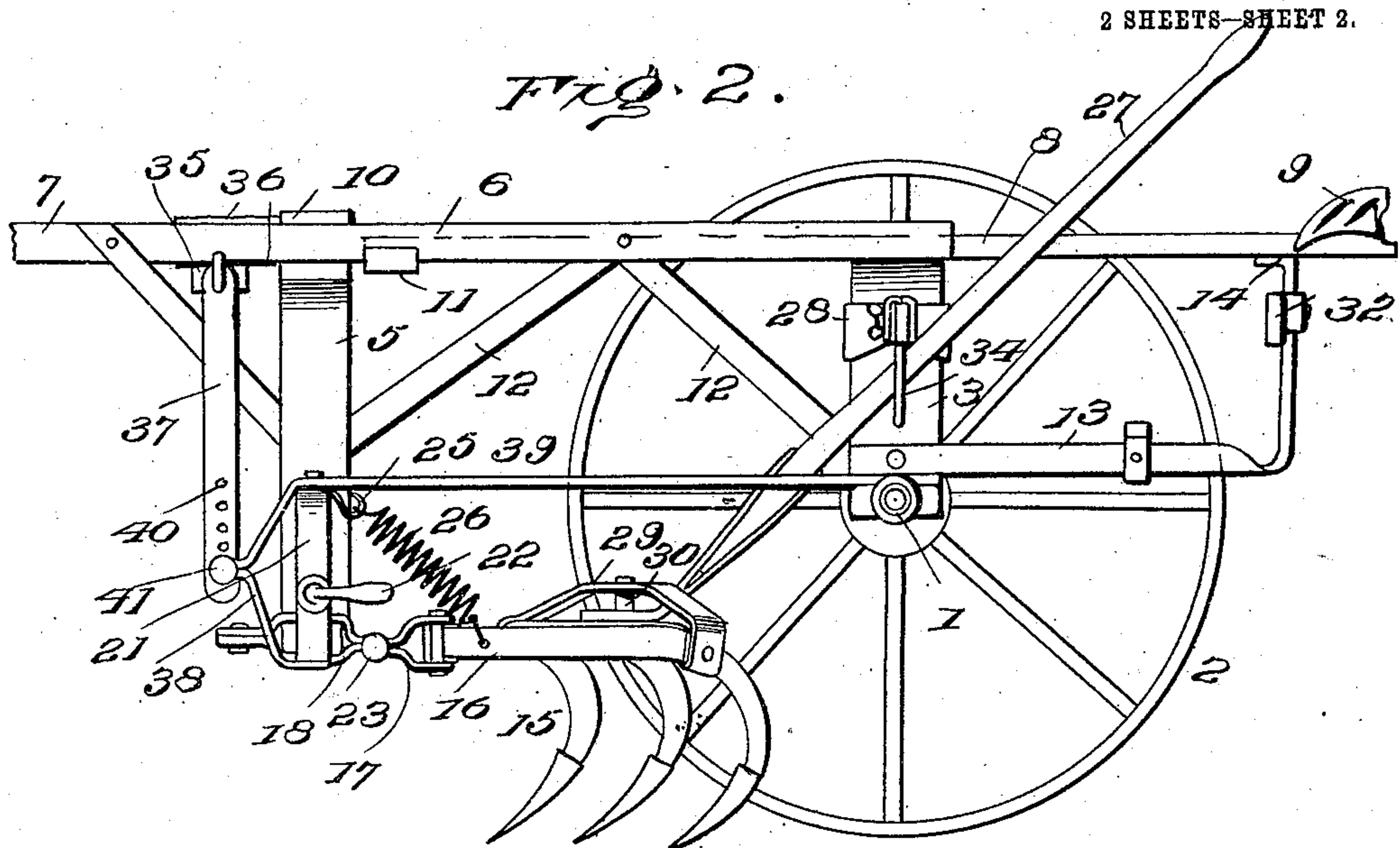
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2 SHEETS-SHEET 2.



Witnesses

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UNITED STATES PATENT OFFICE.

HOWARD A. BEHAM, OF RENFROW, OKLAHOMA TERRITORY.

PLOW.

No. 842,165.

Specification of Letters Patent.

Patented Jan. 29, 1907.

Application filed May 21, 1906. Serial No. 318,024.

To all whom it may concern:

Be it known that I, HOWARD A. BEHAM, a citizen of the United States, residing at Renfrow, in the county of Grant, Territory of Oklahoma, have invented certain new and useful Improvements in Plows, of which the following is a specification.

The present invention relates to agricultural implements, and more particularly to improvements in that type of cultivators which comprise an arched member having a gang of cultivator-teeth trailing from each end thereof.

The object of the invention is to provide a cultivator in which the frame is so designed that the weight of the operator counteracts the tendency of the cultivating-shovels to dig deeply into the ground.

The invention also contemplates novel means for adjusting the cultivator-teeth both vertically and laterally, according to the conditions under which the device is operated.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction and the means for effecting the result reference is to be had to the following description and accompanying drawings, in which—

Figure 1 is a perspective view of the cultivator with the wheels removed. Fig. 2 is a side elevation of the cultivator. Fig. 3 is a top plan view of one of the gangs of cultivators, showing the method of attaching the same to the main frame. Fig. 4 is a vertical sectional view through a portion of the cultivator, showing the mounting of one of the sleeves to which the gangs of cultivators are secured. Fig. 5 is a detached perspective view of one of the brackets upon which the operating-levers are fulcrumed; and Fig. 6 is a perspective view of one of the operating-levers, the handle portion being broken away. Fig. 7 is a detail perspective view of the arched portion of the transverse bar.

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

The numeral 1 designates the axle, which is supported upon the wheels 2 and is arched at its central point, as seen at 3. A transversely-disposed bar 4 is located at the forward end of the frame for the cultivator and is provided with an arched portion 5, corresponding to the arch upon the axle. The

upper portions of the two arches 5 and 3 are connected by a pair of beams 6, which converge toward the forward end of the frame and meet a short distance beyond the bar 4, where they terminate in the draft-tongue 7. The third beam is 8 interposed between the two beams 6 and extends rearwardly beyond the arch 3 and forms a support for the seat 9. The upper portion of the arch 5 is provided upon its outer face with a projection 10, against which the beams 6 fit, the said projection having a head which projects over the top of the said beams. The forward end of the intermediate or third beam 8 fits against this projection 10 and is connected to a transverse member 11, which bears against the lower sides of the two beams 6. Oblique braces 12 connect an intermediate point in each of the beams 6 to the lower portion of the arches 3 and 5, and the forwardly-projecting portions of the beams 6 are also connected in a similar manner to the forward arch. In this manner the frame is braced, so that all the members are held in a fixed position with relation to each other, and an extremely rigid construction is obtained. Bars 13 project rearwardly from the opposite arms of the arch 3 and have their ends bent upwardly and connected by the cross-piece 14, which is secured to the rearwardly-projecting portion of the intermediate beam 8 and coöperates with the same to support the seat 9.

A gang of cultivators 15 trails behind each end of the forward bar 4, and these cultivators are connected to the bar 4 by a peculiar coupling, which enables them to be readily adjusted both vertically and laterally. The beams 16 upon which the cultivator-shovels are mounted are of the usual construction and meet at their forward end, where they are pivotally connected to a link member 17, so that they can swing in a lateral direction. The link member 17 is in turn pivotally connected to the sleeve 18, which is slidably mounted upon the bar and can be moved both toward and away from the arched portion thereof. Lugs 19 project upwardly from opposite ends of the sleeve 18 and coöperate with a rod 20, having a spiral formation for adjusting the sleeve. This rod 20 is journaled between the two arms of an inverted-U-shaped frame 21, secured to the bar 4. The outer end of the rod terminates in a crank-arm 22, by means of which the same can be readily turned when it is

desired to move the sleeve 18. In the specific construction of the link member 17 it will be observed that the same consists, essentially, of two spaced plates, between which

5 the forward end of the cultivator-gang is pivoted, and that opposite ends of the plate are formed with forward projections which engage with the pivot-pin 23, passing through an eye at the rear portion of the sleeve 18.

10 The cross-piece of the inverted-U-shaped frame 21 is formed with a series of openings 24, by means of which the hook member 25 is adjustably connected thereto. This hook member engages with one end of a spiral

15 spring 26, having the opposite end thereof connected to the intermediate cultivator-beam 16. This spring tends to prevent the cultivator-shovels from digging too deeply into the ground, and its connection to the

20 U-shaped frame 21 is regulated according to the position of the sleeve 18 upon the bar 4.

In order to place the operation of the cultivator completely under the control of the operator while the implement is in use, a lever 27 is provided upon each side of the main frame, by means of which each gang of cultivating-blades can be moved from side to side or lifted out of operative position, as desired. These levers are fulcrumed at an intermediate point upon brackets 28, projecting from opposite sides of the arched portion 3 of the axle, and have their forward ends loosely connected to the cultivator, while their rear ends extend back within easy reach

30 of the person upon the seat 9. The three cultivating-beams 16 upon each side of the device have their rear portions connected by spaced cross-pieces 29, having their intermediate portions joined by an upright member

40 30, which passes through an elongated opening 31 in the end of the lever 27. It will thus be seen that a loose connection is obtained between the two members which enables the cultivator-teeth to be raised and lowered or

45 moved to either side, according to the wish of the operator. By pushing the rear end of either of the levers 27 downwardly and securing it under a hook member 32 upon the end of the cross-piece 14 the gang of cultivators controlled by the said lever can be

50 held out of operative position.

The brackets 28, upon which the levers 27 are fulcrumed, are preferably formed of a single strip of material and comprise a pair of

55 outwardly-projecting members 33, which are slightly spaced, the inner ends of the said members being flared outwardly and embracing the sides of the arch 3, to which they are secured. The fulcrum member 34 itself

60 has an approximately U shape, the free ends of the arms thereof passing upwardly between the spaced sides 33 of the bracket and being bent in opposite directions so as to embrace the opposite sides of the bracket. In

65 this manner a slidable connection is obtained

which enables the fulcrum member 34 to be moved either toward or away from the arch 3, as may be required, for the proper control of the cultivator-teeth.

The numeral 35 designates the doubletree, 70 which is pivoted to the forwardly-projecting portions of the beams 6, and for this purpose plates 36 are secured to opposite sides of the beams, the said plates spanning the space between the beams and forming a suitable 75 bearing for the pivot-pin. Each end of the doubletree is connected indirectly to the corresponding end of the bar 4 by means of a link 37, having the opposite end thereof loosely connected to a clip 38, secured to the 80 cross-bar of the inverted-U-shaped frame 21 and an end of the bar 4. In the preferred construction the clip 38 forms a continuation of a rod 39, which has its rear end secured to the axle 1. In this manner the draft is distributed partly through the two arches and 85 the beams connecting the same and partly through the link 37 and rod 39. A series of perforations 40 are formed in each of the links 37, the pivot-pin 41 passing through 90 one of the lower perforations, while the remaining perforations constitute a means for attaching the draft-animals.

In the operation of the device the distance between the two gangs of cultivators is adjusted by turning the cranks 22 and moving 95 the sleeves 18 to the desired position upon the bar 4. Any vertical adjustment of the cultivators can then be readily accomplished by manipulating the levers 27, and at the same time the cultivators can be moved from side to side, as desired. One of the essential features of the invention resides in the fact that the axle 1 is located at an intermediate point between the seat and the cultivators, whereby the tendency of the cultivating-shovels to dig deeply into the earth is counteracted by means of the weight of the operator and the wheels 2 caused to have a firm engagement with the ground. 110

Attention is directed to the fact that in the structure shown in the drawings the brackets 28 are vertically adjustable upon the sides of arch 3 and that the fulcrum members 34 can be locked in a fixed position upon 115 the brackets by means of set-screws, which are provided for that purpose.

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

1. In a device of the character described, 120 the combination of a frame comprising an axle, a bar spaced from the axle, and connecting means between the bar and the axle, means for supporting the frame, a gang of cultivators connected to each end of the bar 125 by means of a suitable coupling, and means for moving the coupling longitudinally upon the bar to effect a lateral adjustment of the cultivating-teeth.

2. In a device of the character described, 130

the combination of a frame comprising a bar, a means for supporting the frame, a gang of cultivators loosely connected to the bar by means of a coupling comprising a sleeve, said sleeve being provided with a projection, a rod having a spiral formation and extending along the bar so as to engage with the before-mentioned projection upon the sleeve, whereby the sleeve may be moved longitudinally upon the bar, and means for securing a draft connection for the frame.

3. In a device of the character described, the combination of a frame comprising a bar, means for supporting the frame, a gang of cultivators loosely connected to the bar by means of a coupling comprising a sleeve, and a rod extending along the bar and engaging with the before-mentioned sleeve whereby the latter can be moved longitudinally upon the bar.

4. In a device of the character described, the combination of an axle, a bar spaced from the axle, connecting means between the bar and the axle, wheels mounted upon the axle, a gang of cultivator-teeth mounted upon the bar, a bracket projecting from the axle, a lever adjustably fulcrumed upon the bracket and engaging with the gang of cultivators whereby the latter can be moved from side to side.

5. In a device of the character described, the combination of a frame comprising two cross-pieces and connecting means between the cross-pieces, supporting means for the frame mounted upon one of the cross-pieces, a gang of cultivators mounted upon the opposite cross-piece, a bracket projecting from the first-mentioned cross-piece, an adjustable fulcrum member connected to the bracket, and a lever pivoted upon the fulcrum member and engaging with the gang of cultivators, whereby the latter can be moved from side to side.

6. In a device of the character described, the combination of an axle having an arched formation, a bar spaced from the axle and also having an arched formation, a pair of beams connecting the arched portions of the two members and projecting forwardly beyond the beam, draft means connected to the forwardly-projecting portions of the beams, an intermediate beam extending between the two arches and projecting rearwardly beyond the rear arch, a seat mounted upon the rearwardly-projecting portion of the intermediate beam, wheels mounted upon the axle, and a gang of cultivator-teeth mounted upon the bar.

7. In a device of the character described, the combination of an axle having an arched formation, a bar spaced from the axle and

also having an arched formation, the upper portion of the arch upon the bar being provided with a projection, spaced beams connecting the arched portions of the two members and fitting against the projection upon the arched portion of the bar, the said beams projecting beyond the bar, draft means secured to the projecting portion of the beams, an intermediate beam resting upon the arched portion of the axle and connected to the before-mentioned pair of beams, the said intermediate beam projecting beyond the axle, a seat mounted upon the projecting portion of the intermediate beam, wheels mounted upon the axle, and a gang of cultivators mounted upon the bar.

8. In a device of the character described, the combination of an axle, having an arched formation, a bar spaced from the axle, connecting means between the two members, a beam supported upon the arched portion of the axle and projecting to the rear of the same, bars projecting rearwardly from the arched portion of the axle and connected by a cross-piece secured to the rearwardly-projecting portion of the before-mentioned beam, a seat mounted upon the said rearwardly-projecting portion of the beam, supporting-wheels mounted upon the axle, a gang of cultivators mounted upon the bar, and a lever fulcrumed upon the axle and loosely connected to the gang of cultivators, whereby the latter can be adjusted both laterally and vertically.

9. In a device of the character described, the combination of a frame comprising a bar, means for supporting the frame, a gang of cultivators trailing from the bar, a bracket projecting from the frame, a fulcrum member adjustably mounted upon the bracket, and a lever pivoted upon the fulcrum member and engaging with the gang of cultivators whereby the latter can be moved from side to side.

10. In a device of the character described, the combination of an axle having an arched formation, a bar located in front of the axle, connecting means between the axle and bar, wheels mounted upon the axle, a gang of cultivators trailing from the bar, a beam projecting rearwardly from the arched portion of the axle, a seat supported by the beam, bars projecting rearwardly from the axle and cooperating with the beam to support the seat, and means for securing a draft connection for the frame.

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

HOWARD A. BEHAM. [L. s.]

Witnesses:

E. E. LEONERD,
C. D. SPRAGUE.