March 9, 1926. 1,576,029

W. L. BRALEY ET AL

CULTIVATOR

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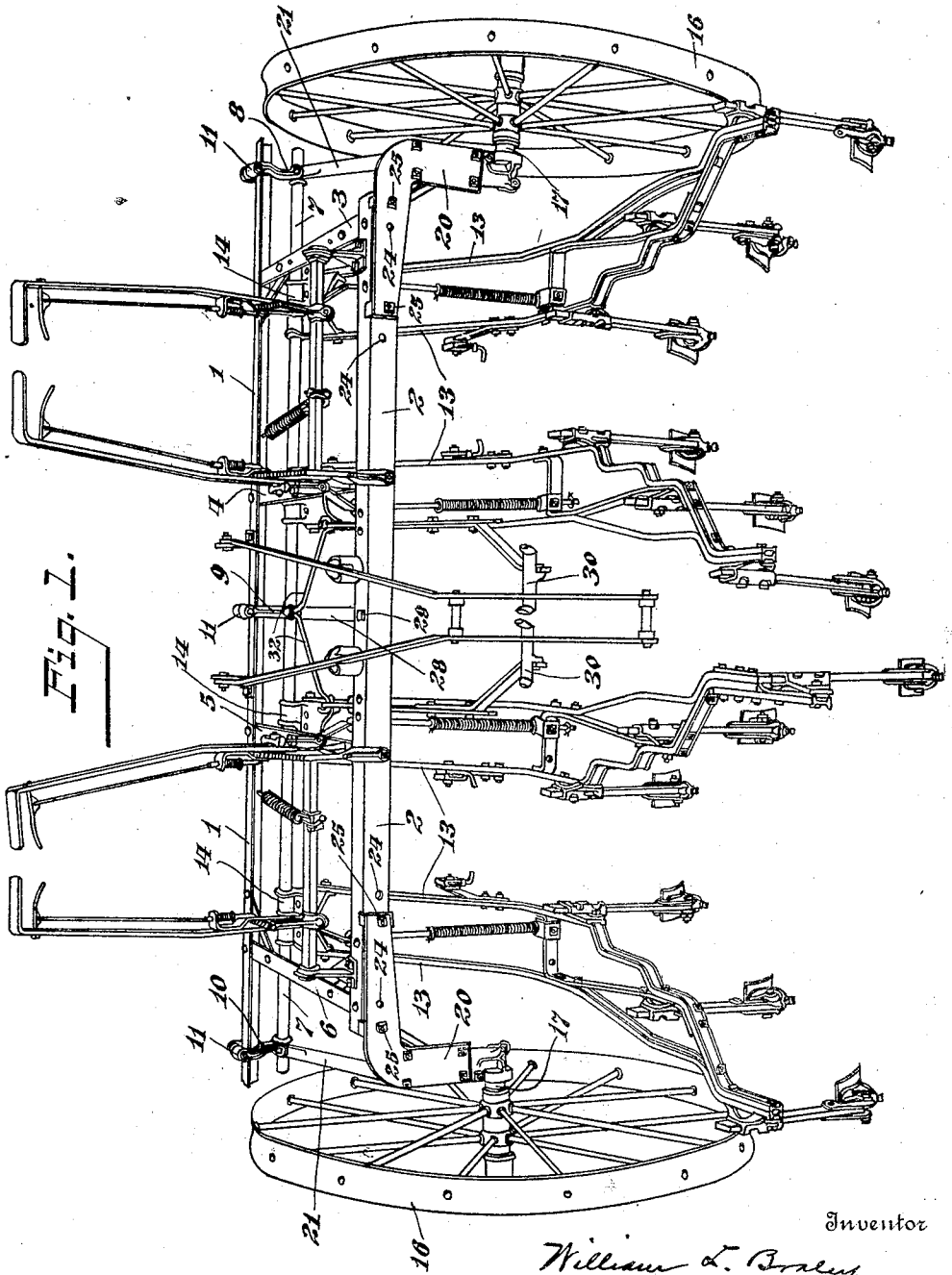


Fig. 1.

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Fig. 2.

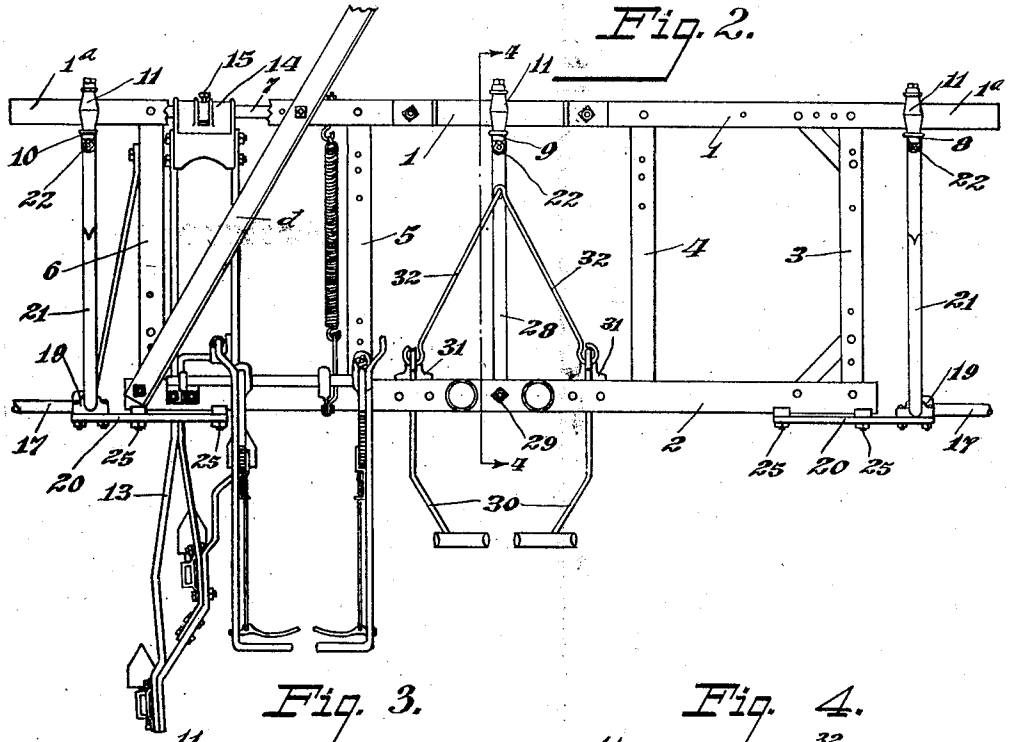


Fig. 3.

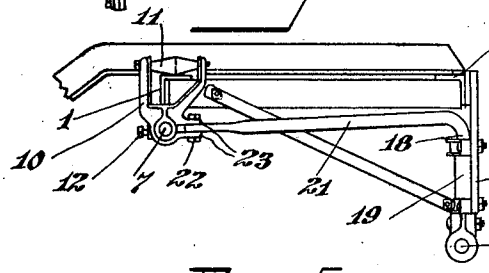


Fig. 4.

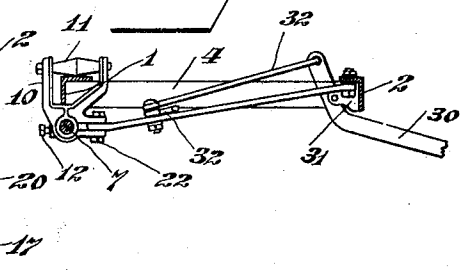
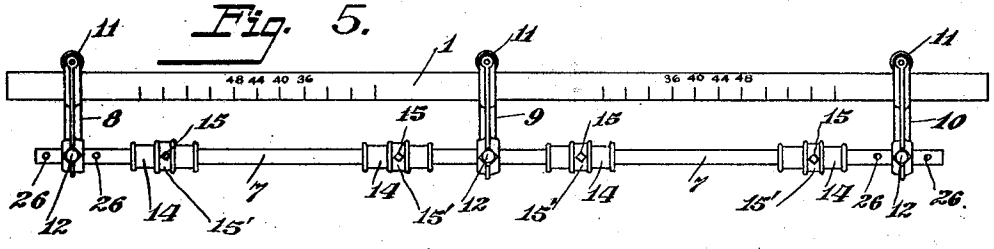


Fig. 5.



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Patented Mar. 9, 1926. 1,576,029

UNITED STATES PATENT OFFICE.

WILLIAM L. BRALEY AND HENRY N. FAAS, OF SPRINGFIELD, OHIO, ASSIGNORS TO THE AMERICAN SEEDING MACHINE COMPANY, OF SPRINGFIELD, OHIO, A CORPORATION OF OHIO.

CULTIVATOR.

Application filed May 2, 1923. Serial No. 636,122.

To all whom it may concern:

Be it known that we, WILLIAM L. BRALEY and HENRY N. FAAS, citizens of the United States, residing at Springfield, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in Cultivators, of which the following is a specification.

Our invention relates to improvements in cultivators, it particularly relating to cultivators of the two row type.

One of the objects of our invention is to provide improved means for shifting the beams and wheels to follow the corn rows, a further object in this connection being to provide shifting mechanism which will also act to brace the draft bar against the strain of draft of the cultivator beams.

A further object of the invention is to provide an improved manner of connecting the wheel spindles to the draft bar to cause the wheels to be turned with the beams, said connections furnishing a means for bracing said bar against the strain of draft.

A further object of the invention is to provide an improved method of adjusting the beams for different widths of corn rows; a more specific object in this connection being to provide a scale at a convenient point with relation to the beams by which the operator may readily set the beams for different widths of corn rows and also to cause the shovels to cultivate at the proper distance from the rows.

In the accompanying drawings:

Fig. 1 is a rear view in perspective of a cultivator embodying the improvements.

Fig. 2 is a partial plan view of the same.

Fig. 3 is a side elevation of a portion of the machine.

Fig. 4 is a section on the line 4—4 of Fig. 2.

Fig. 5 is a front elevation of a portion of the machine.

In the said drawings, 1 represents the front rail and 2 the rear rail of the main frame, these rails being connected by cross-pieces 3, 4, 5 and 6. In this machine the draft appliances are connected with the main frame, a portion only *d* being shown in Fig. 2. The draft bar is shown at 7, being supported from the front rail 1, which is preferably of angle iron construction, by three hangers 8, 9 and 10. Each of these hangers is in the form of a yoke, the arms of which carry a roller 11 which rides upon the top surface of the front rail 1, the lower portion of the yoke being apertured to receive the draft bar 7 which is fixedly secured therein by a set screw 12. The beams 13 are pivotally connected at their forward ends to bifurcated heads 14, mounted upon the draft bar 7 and held against lateral movement thereon by collars 15′ secured to the draft bar by set screws 15.

For the purpose of enabling the operator to readily set the heads 14 at the proper point on the draft bar in order to adjust the beams and their shovels to correspond to the different widths of corn rows, we provide on the forward side of the front rail 1 two scales marked with numerals which indicate the distance between the corn rows. As an example, if the rows of corn are forty inches apart and the operator wishes to cultivate within eight inches of the corn, then each of the heads on the left-hand side of the machine will be set eight inches on each side of the numeral 40 on that side of the frame and the heads on the right-hand side of the machine likewise adjusted with respect to the numeral 40 on the right-hand of the machine.

Each of the carrying wheels 16 is journaled in the usual way upon the horizontal portion 17 of a spindle, the vertical portion 18 of which is journaled in a sleeve 19 clamped to the vertical portion of an L-shaped arm 20, the horizontal portion of which is secured to the rear rail 2. Heretofore it has been usual to connect the spindles to the draft bar by loose links, but in the present case we have formed the spindles with integral forwardly extending arms 21 which are pivotally secured to the respective hangers 8 and 10 by the bolts 22, the hangers being provided with ears 23 for the purpose. In order to adjust the distance between the carrying wheels 16, the horizontal portions of the arms 20 are adjustably secured to the rail 2 and to that end the arms and rail are provided with a series of perforations 24 which receive the bolts 25 so that the arms can be moved in or out relatively to the rail. When an adjustment is made of this character the hangers 8 and 10 are likewise adjusted on the draft bar 7 by positioning the set screws 12 which connect the hangers to the draft bar in the proper recess 26 in the bar.

To give the necessary endwise movement

to the draft bar 7 to guide the machine to cause the shovels to follow the corn rows there is pivotally connected to the middle hanger 9 a longitudinally-arranged bar 28 which is pivotally connected by the bolt 29 to the central portion of the rail 2. A pair of foot levers 30 are pivotally connected to brackets 31 on the rail 2 with their short arms connected to the bar 28 by the links 32. Depression of one foot lever shifts the devices in one direction and depression of the other foot lever shifts the devices in the opposite direction.

It will be noticed that the front bar 1 is extended at the ends, as indicated at 1^a, so as to provide a support for the hangers 8 and 10. The draft and weight of the beams is of course supported by the front rail 1 and by having the front bar 1 extended as shown so as to provide a support for the side hangers which may be positioned in line with the spindle extension, this enables us to employ these spindle extensions to cooperate with the bar 28 to act as braces against the strain of draft.

By the arrangement described it will be seen that the rigid arms 21 of the spindles as well as the bar 28 not only perform the function of adjusting the beams and wheels to follow the corn rows but also act as braces for the draft bar 7 so that the rearward strain of the beams is transmitted directly to the rear rail 2 by the bar 28 and indirectly thereto by the spindle extensions 21 and arms 20.

Having thus described our invention, we claim:

1. In a cultivator, a main frame having a transversely-arranged forward rail, a draft bar, hangers mounted to move on said rail and supporting said draft bar, means for shifting said bar endwise, said shifting means including a brace pivotally connected to said frame at one end and having a pivotal connection with one of said hangers at the other end.

2. In a cultivator, a main frame having a transversely-arranged forward rail, a draft bar, hangers movably mounted on said rail and supporting said draft bar, beams connected with said draft bar, wheel spindles having rigid arms each arm being pivotally connected with one of said hangers, and means for shifting said bar endwise, said shifting means including a rigid brace pivotally connected with said frame at one end and having its other end pivotally connected with another of said hangers, said brace and arms cooperating to take the strain of draft on said bar.

3. In a cultivator, a main frame having a transversely-arranged front rail, said rail being extended beyond the sides of said frame, hangers movably mounted on said rail and its extensions, wheel spindles having rigid arms connected with the hangers on said extensions, a draft bar supported by said hangers, beams connected to said draft bar, and means connected with a hanger on said rail for shifting said draft bar endwise, said means comprising a rigid bar pivotally connected at its rear end with the main frame and having a pivotal connection at its forward end with said hanger.

4. In a cultivator, a main frame having a transverse forward rail, a draft bar, hangers mounted to move on said rail and support said draft bar, and means for shifting said bar endwise, said shifting means including a brace pivotally connected to said frame at one end and having a pivotal connection with said bar at the other end, a pair of foot levers, and a link connecting each foot lever with said brace.

In testimony whereof, we have hereunto set our hands this 24th day of April, 1923.

WILLIAM L. BRALEY.
HENRY N. FAAS.