

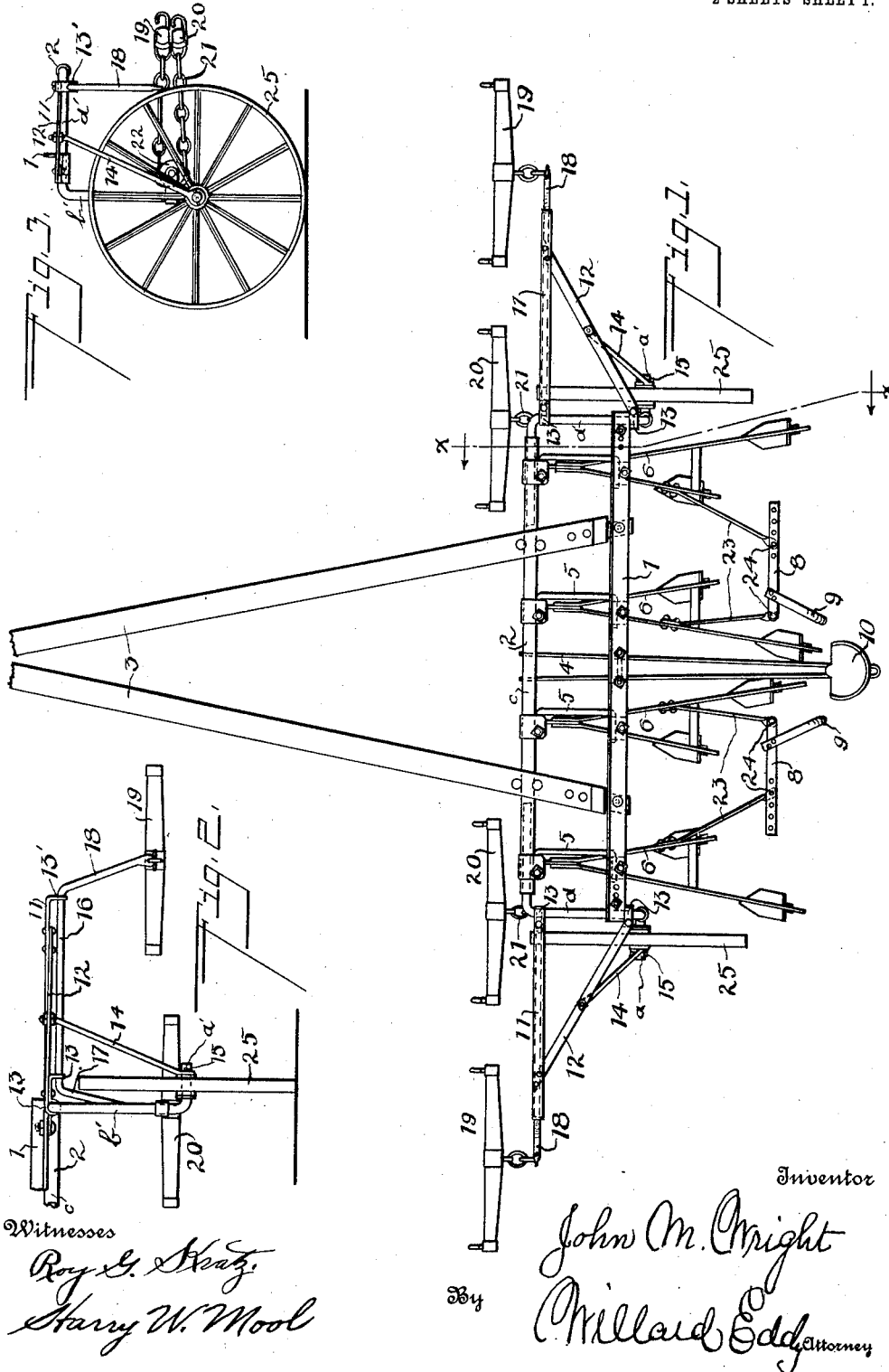
J. M. WRIGHT.
CULTIVATOR.

APPLICATION FILED NOV. 26, 1910.

Patented Sept. 12, 1911.

2 SHEETS—SHEET 1.

1,002,951.



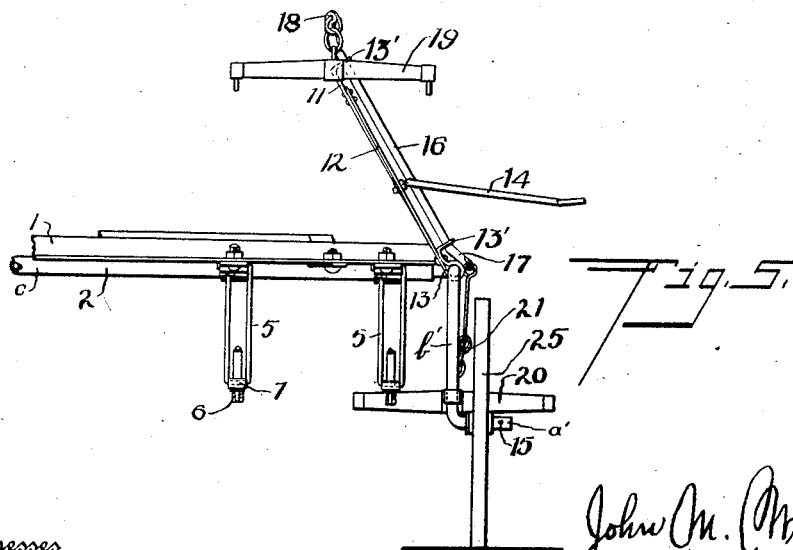
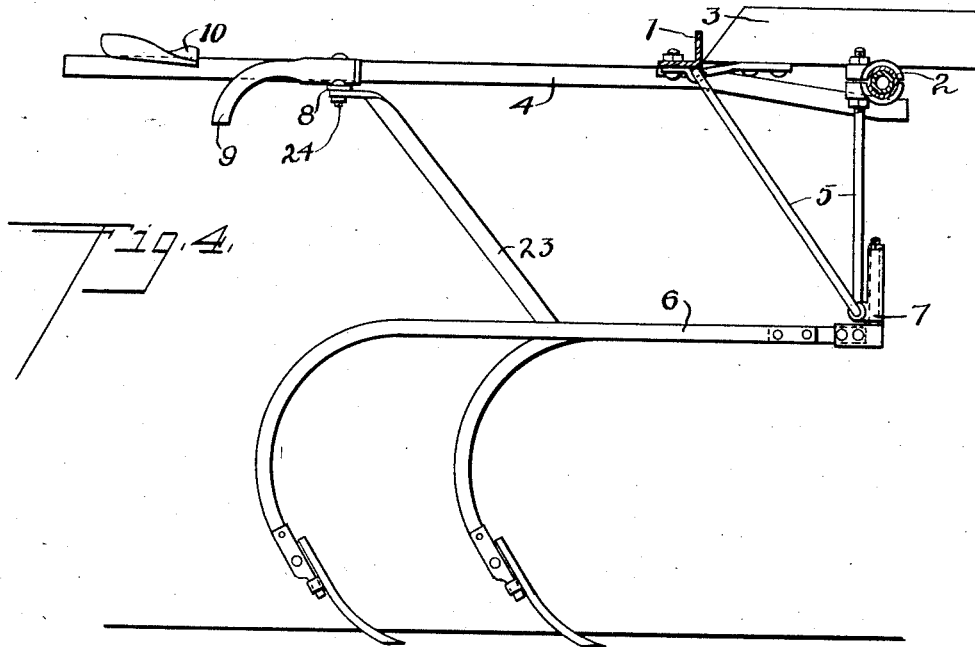
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Witnesses

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UNITED STATES PATENT OFFICE.

JOHN M. WRIGHT, OF BRAINARD, NEBRASKA.

CULTIVATOR.

1,002,951.

Specification of Letters Patent.

Patented Sept. 12, 1911.

Application filed November 26, 1910. Serial No. 594,265.

To all whom it may concern:

Be it known that I, JOHN M. WRIGHT, of Brainard, in Butler county, Nebraska, have invented certain new and useful Improvements in Cultivators, which improvements are described in the following specification and are illustrated by the accompanying drawings.

This invention belongs to the class of double straddle-row wheeled cultivators which are provided with pivoted gangs, coupled in pairs, and are adapted to be drawn by four horses abreast. It contains general features of the cultivator of the same class, which is described in Letters Patent of the United States No. 677,836, which were issued to me July 2, 1901.

It is the object of the invention to render a cultivator of this class light both in draft and in neck-weight, simple in construction, adjustable to a diminished width when not in action, and easy to be managed when in use; to render a single machine of this kind fit to be used in different situations, in which the rows of corn, cotton, or other crop under cultivation, are spaced respectively at different distances apart; and in general to produce a superior cultivator of the class just specified. To accomplish this result, I incorporate in my improved cultivator a peculiarly bent axle, which forms part of the cultivator frame, dependent gang studs, which are rigidly attached both to said bent axle and also to the main beam of the machine, and are adjustable thereon, links by which the gangs are coupled together in pairs, two terminal hinged wings, which extend outwardly beyond the wheels of the vehicle, and rocking draft equalizers, which are mounted on said hinged wings.

The best manner in which I have contemplated applying the principles of the invention, is illustrated by said drawings; in which—

Figure 1 is a plan view of a cultivator which embodies those principles. Fig. 2 is a rear view of a portion of the same machine, including one of its hinged wings, extended as in use. Fig. 3 is an end elevation of the same. Fig. 4 is an enlarged transverse vertical section on line X—X of Fig. 1. Fig. 5 is a rear elevation of a portion of the machine, including said hinged wing folded up as not in operation.

The frame of the cultivator, which is shown in these views, comprises a main cross

beam 1, a bent axle 2, a bifurcated pole 3, a seat beam 4, and dependent gang studs 5, all rigidly connected together. The bent axle 2 comprises opposite terminal portions, *a* and *a'*, on which the wheels 25 turn, adjacent portions, which extend from said terminal portions vertically upward, parallel portions, *d* and *d'*, which continue horizontally forward, and a horizontal middle portion *c*, uniting portions *d* and *d'*. In other words, this axle is bent upward from the spindles, then forward in a horizontal plane, and then laterally to similar bent portions at the opposite side of the frame. The middle portion *c* of the bent axle consists preferably of an iron tube, to which the contiguous portions of the axle, *d* and *d'*, are rigidly and adjustably united by telescoping. The gang studs 5 are dependent brackets, which are rigidly attached to the cross beam 1 and to the middle section *c* of axle 2, and are laterally adjustable thereon, according to the desired relative position of the gangs. Each of these studs, being formed of a bent rod, comprises two downwardly converging limbs, as shown in Fig. 4. To these studs, and at the junction of said limbs, shovel gangs 6 are attached by hinge-and-swivel joints 7. These gangs, being provided with upreaching arms 23, inclined toward each other and backward, are coupled together in pairs by flat links 8, which are pivotally attached to those arms, and are adapted to hold the same at varied distances apart, according to the desired position of the gangs. Handles 9 are rigidly mounted on these links, within easy reach of the operator on seat 10, and are in operation directed continually toward him at an angle which varies with the lateral movement of the coupled gangs in such a manner that the handles reach toward him most directly when farthest removed—an effect which is due in each case to the variable direction of link 8, upon which the handle is mounted. That link is sometimes in a position of parallelism with the main beam, as shown in Fig. 1, but is not connected for parallel motion.

The hinged wing, which is above mentioned as a feature of the invention, comprises a rigid frame, consisting of a front bar 11 and a rear brace 12, which are provided with terminal eyes 13, alined on part *d* of axle 2 to form a hinge joint, permitting the wing to be extended and to be folded up as hereinafter described. In order that this

wing, when in use, may be maintained in its extended position, as in Fig. 1, the same is provided with an eye brace 14. One end of eye-brace 14 is attached to the hinged wing; and, in Figs. 1, 2, 3 and 5, is shown pinned to brace 12 of that wing. The other end of eye-brace 14 embraces detachably the extension *a* of the axle, outside the wheel 25, and is held in position thereon by pin 15.

On the front side of bar 11 of this wing, is mounted a rock-bar 16, which is provided with terminal dependent lever arms 17 and 18, and serves as a draft evener. To the free end of the outer arm 18, is attached an outer swingletree 19; while to the free end of the inner arm 17, and to an inner swingletree 20, is attached a draft chain 21, running over a sheave 22 on the vertical member *b* of the bent axle. The wing may be released from its horizontally extended position, shown in Fig. 1, by manually disengaging the eye-brace 14 from the end of the bent axle, and may then be folded up and over into the position shown in Fig. 5, for purposes of travel or storage, or for the purpose of negotiating a narrow gate or passage.

Such being a construction which satisfies the requirements of the invention, but little explanation is needed to show how the above stated object of the invention is accomplished in its several branches. The cultivator is light in draft and neck-weight, because the hitch of the swingletrees is near the shovels and low, being carried down to a point directly between the horse collars and the shovel points by means of the dependent rock arm levers. The pairs of coupled gangs, as well as the individual gangs of each pair, can be set at any required distance from each other, according to the nature of the work in hand, because the gang studs are adjustable laterally upon the main frame; hence one and the same machine can be used both where the plant rows are situated at one prescribed distance apart and also where the rows are at another distance apart. At the same time the cultivator is adjusted to a diminished width, when not in action, by merely folding its wings. It is simplified in construction and made easy of management by the omission of the usual arch or inverted U-bracket for coupling the

gangs together in pairs, and by substituting therefor the rigidly attached arms of the coupled gangs and the flat handle-carrying link, which is pivoted to those arms.

I claim—

1. A two-row cultivator, comprising a bent axle and a main beam rigidly joined together, gang beams having rigid upreaching arms, studs secured to the bent axle and to the main beam, flexible connections between said gangs and said studs, links having a plurality of bolt holes, and bolts pivoting said links to said arms adjustably.

2. A cultivator, comprising a frame, mounted on wheels, lateral wings, hinged about normally horizontal axes to the opposite ends of the frame, and rocking draft eveners, journaled on the wings.

3. A cultivator, comprising a frame, terminal wings, hinged to the frame, and normally horizontal rockbars, mounted on the wings, and provided with dependent lever arms for draft attachment.

4. In a cultivator, a frame, a wing hinged to the frame, a rockbar journaled on the wing, and lever arms carried by the rockbar.

5. A cultivator, comprising a frame on wheels, two hinged wings which turn on normally horizontal end portions of the frame, and mechanism for draft attachment, carried by the wings.

6. A cultivator frame, comprising a main beam and a bent axle, which are rigidly fastened together; said axle consisting of horizontal terminal portions on which the wheels turn, an offset middle portion to which the pole and seatbeam are attached, upreaching vertical portions continuous with said terminal portions respectively, and parallel horizontal portions uniting said offset portion with said vertical portions; in combination with two hinged wings turning on said horizontal portions respectively and carrying mechanism for draft attachment.

In testimony whereof I hereunto subscribe my name in the presence of two witnesses.

JOHN M. WRIGHT.

Witnesses:

J. G. MARRON,
A. O. KLEIN.