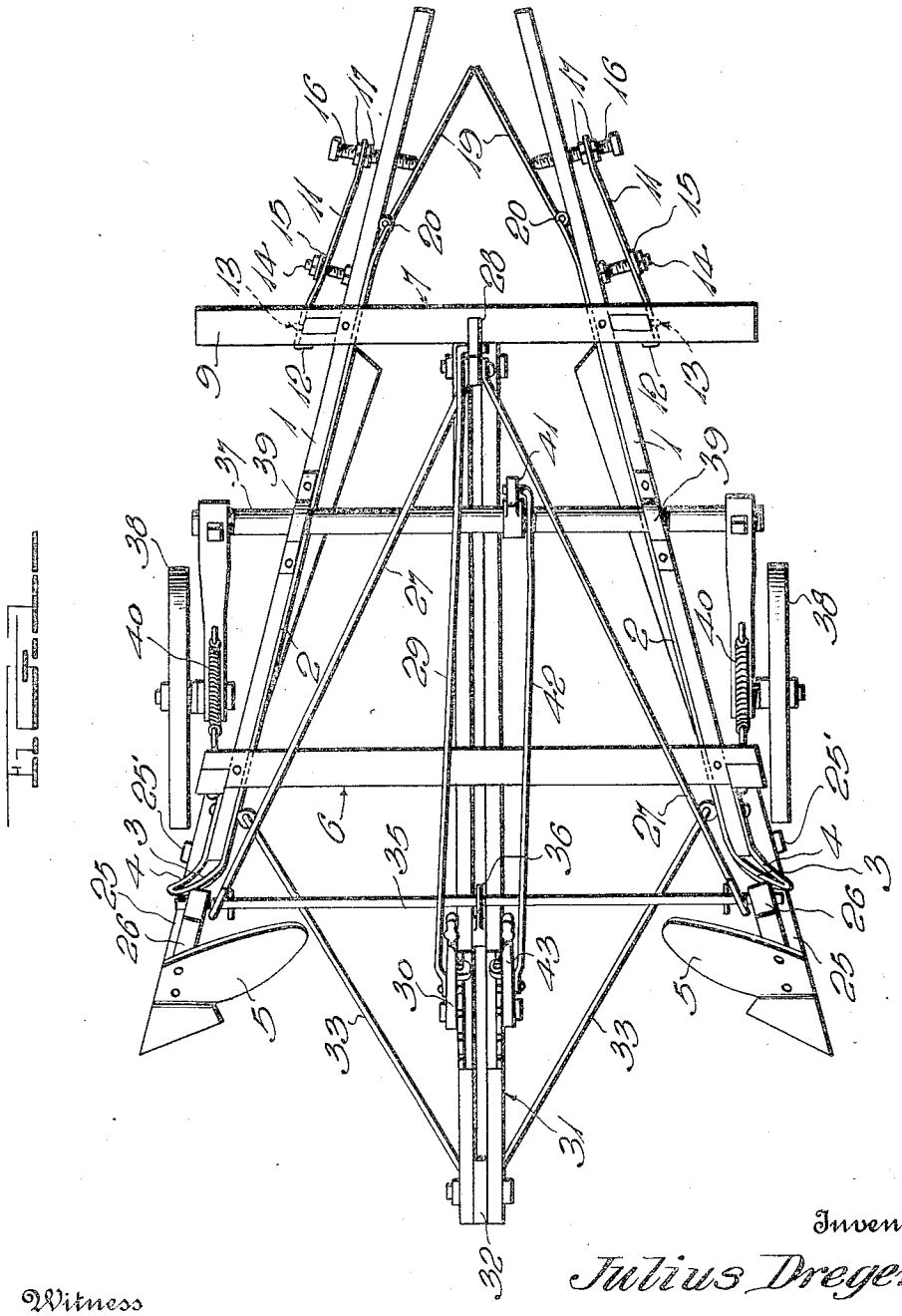
Nov. 4, 1924. 1,514,039

J. DREGER

RIDGE FORMING MACHINE

Filed July 9, 1923 3 Sheets-Sheet 1



Witness
H. Woodard

Inventor
Julius Dreger

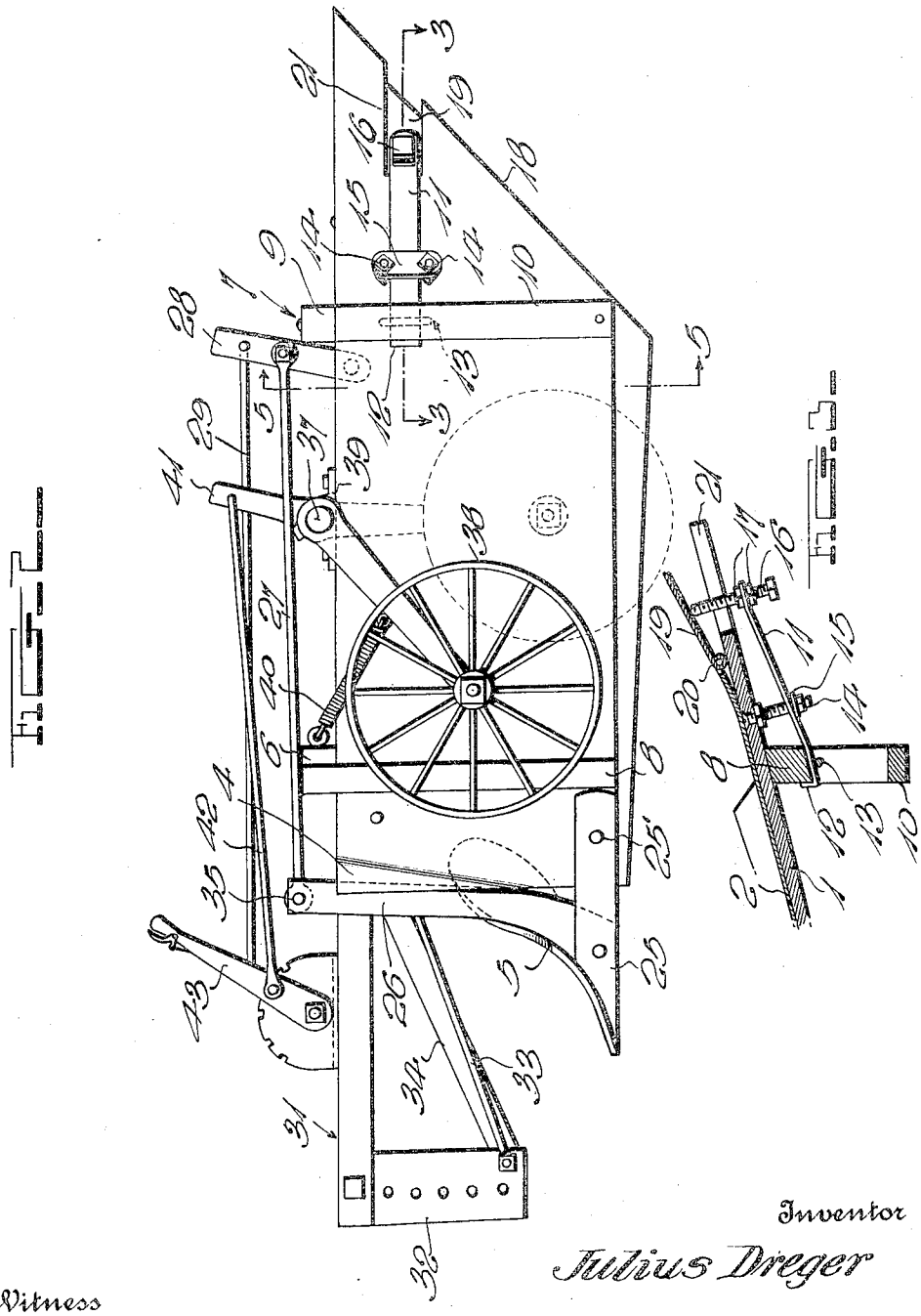
By H. B. Wilson & Co
Attorneys

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RIDGE FORMING MACHINE

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Julius Dreger

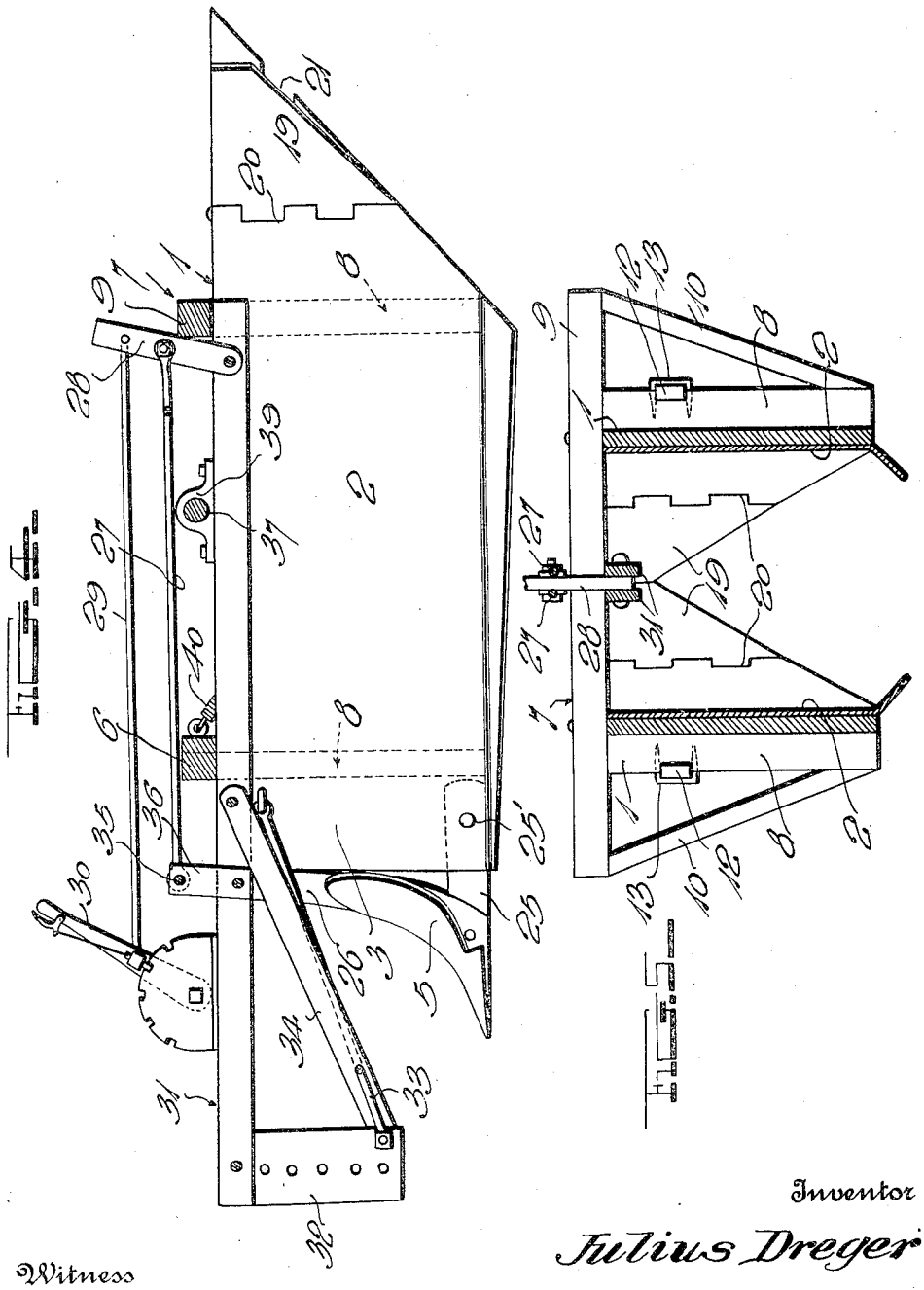
By H. Wilson & Co
Attorneys

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RIDGE FORMING MACHINE

Filed July 9. 1923 3 Sheets-Sheet 3



Witness
H. Woodard

Inventor
Julius Dreger

By A. B. Williamson & Co
Attorneys

Patented Nov. 4, 1924. 1,514,039

UNITED STATES PATENT OFFICE.

JULIUS DREGER, OF MARYSVILLE, CALIFORNIA.

RIDGE-FORMING MACHINE.

Application filed July 9, 1923. Serial No. 650,357.

To all whom it may concern:

Be it known that I, JULIUS DREGER, a citizen of the United States, residing at Marysville, in the county of Yuba and State of California, have invented certain new and useful Improvements in Ridge-Forming Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in machines for forming ridges of earth and the present disclosure is directed more particularly to a machine of this character adapted primarily to form water checking ridges to confine irrigating water on any desired areas of land.

The object of the invention is to provide a simple and inexpensive, yet an efficient and desirable machine of the character set forth, which may be easily used to form a solid ridge, at a single operation.

With the foregoing in view, the invention resides in the novel subject matter hereinafter described and claimed, the description being supplemented by the accompanying drawings.

Figure 1 is a top plan view of a ridge former constructed in accordance with my invention.

Figure 2 is a side elevation.

Figure 3 is a detail horizontal sectional view on line 3—3 of Fig. 2.

Figure 4 is a central longitudinal sectional view.

Figure 5 is a vertical transverse section on line 5—5 of Fig. 2.

In the drawings above briefly described, the numerals 1 designate a pair of horizontally disposed, rearwardly converging walls whose inner sides are preferably lined with metal as indicated at 2, the metal at the front ends of said walls being extended forwardly from the latter as at 3, curved outwardly, and then bent rearwardly as indicated at 4, the rearwardly bent portions being secured to the outer sides of the walls 1, at the front ends of the latter. This construction co-operates with the mold boards of a pair of turning plows 5 at the front ends of the walls 1, for throwing earth inwardly between said walls, so that the latter may form this earth into a ridge. The mounting means of the plows 5 will be hereinafter described.

For rigidly securing the walls 1 in proper spaced relation, I provide a suitable front arch 6 and a rear arch 7, the legs 8 of these arches being secured against the outer sides of said walls. The crown bar 9 of the arch 7 preferably extends beyond the legs of this arch and has its ends connected to said legs by appropriate inclined braces 10. Extending across the upper ends of the legs 8 of the arch 7 are two horizontal spring arms 11 which are shown most clearly in Figs. 2 and 3. The front ends of the arms 11 are preferably bent inwardly to provide flanges 12 to engage the front sides of the legs 8 and any appropriate means, such as the staples 13, may be provided to secure said front ends of the spring arms in place against said legs. Between their ends, the arms 11 are connected with the side walls 1, by yokes, each of which preferably consists of two bolts 14 disposed above and below the adjacent arm 11, and a vertical plate 15 carried by the outer ends of said bolts and contacting the outer side of the arm. The rear ends of the arms 11, each carry an inwardly extending thrust device which is preferably in the form of a screw 16 having lock nuts 17. The functions of these parts will be more fully described hereinafter.

In order to properly shape the ridge, the rear ends of the walls 1 are cut on forwardly declined lines as indicated at 18 and the rear ends of the metal linings 2 terminate in triangular wings 19 at the inner opposed sides of the rear corners of said walls, said wings being connected to the linings by vertical hinges 20. The inner ends of the set screws or the like 16 which pass through slots 21 in the walls 1, contact with the wings 19 and thus force them yieldably inward into the contacting relation shown in Fig. 1. Thus, these wings effectively shape the crest of the ridge but if stones or other objects are encountered, the wings 19 may readily yield outwardly against the action of the spring arms 11. The tension of these arms may be adjusted as required, either by means of the yokes 14—15 or the screws 16.

The preferred mounting of the plows 5 is illustrated as consisting of rearwardly extending beams 25 pivoted at 25′ to the outer sides of the walls 1, thus permitting said plows to be raised or lowered as occasion may require. For effecting vertical move-

ment of the plows, I preferably provide them with upstanding arms 26 connected by rearwardly converging rods 27 with an upstanding lever 28. From this lever, I have shown an operating rod 29 leading forwardly to a hand lever 30 having suitable locking means. The levers 28 and 30 are mounted on a two-part longitudinal beam 31 which is suitably secured to the crowns of the arches 6 and 7. The front end of the beam 31 extends beyond the front arch 6 and is provided with a suitable hitch 32 braced to the walls 1 by rods 33 and to said beam, by another brace 34.

I prefer to connect the upper ends of the arms 26 by a transverse rod 35 whose center is supported by an upstanding link 36 pivotally mounted on the beam 31. This link is of less length than the chord of the arc upon which the arms 26 swing and hence it will be seen that movement of these arms will longitudinally spring the rod 35, when said arms are moved in the position to lower the plows 5. Thus, the tension of the rod will be exerted to assist in again raising the plows.

In order that the machine may be readily transported from place to place, I have provided it with an arched axle 37 having ground wheels 38. This axle is mounted in appropriate bearings 39 on the walls 1 and under the action of springs 40, is normally held in a position to support the wheels 38 above the ground as shown in Fig. 2. By means of a crank arm 41 on the axle, however, a link 42 connected to said arm, and a lever 43 mounted on the beam 31, the axle may be operated to lower the wheels, thus raising the machine clear of the ground.

Excellent results are obtainable from the details disclosed and they may therefore be followed if desired, but within the scope of the invention as claimed, numerous minor changes may be made.

I claim:

1. A ridge former comprising a pair of horizontally elongated walls widely spaced at their front ends and converging into closely spaced relation at their rear ends, a pair of rearwardly converging wings at the upper corners of said walls, means hingedly connecting the front ends of said wings with said walls on vertical axes, and yielding means holding said wings inwardly but permitting outward swinging thereof

2. A ridge former comprising a pair of horizontally elongated walls widely spaced at their front ends and converging into closely spaced relation at their rear ends, a pair of rearwardly converging wings at the upper corners of said walls, means hingedly connecting the front ends of said wings with said walls on vertical axes, spring arms secured at one end at the outer sides of said walls, and thrust devices carried by the free ends of said arms, said thrust devices contacting with the outer sides of said wings to press them yieldably inward.

3. A ridge former comprising a pair of horizontally elongated walls widely spaced at their front ends and converging rearwardly, a transverse arch at the rear end of said walls whose legs are secured against the outer sides of said walls, a pair of horizontal springs at the outer sides of said walls having their front ends secured against the outer sides of the aforesaid legs, yokes tying the intermediate portions of said springs to said walls, thrust devices extending inwardly from the rear ends of said springs, and hinged wings carried by the rear ends of said walls and engaged by said thrust devices.

4. A ridge former comprising a pair of horizontally elongated rearwardly converging ridge forming walls, a pair of turning plows pivoted to the front ends of said walls for turning earth inwardly between said walls, arms rising from said plows and rigidly connected with the latter, and means connected to said arms for tilting said plows downwardly or upwardly at will independently of and without affecting the position of the ridge-forming walls.

5. A ridge former comprising a pair of rearwardly converging horizontally elongated walls, front and rear transverse arches whose legs are secured to the outer sides of said walls, a central longitudinal member secured to said arches and extending forwardly therefrom for pulling the machine, an arched wheeled axle straddling said walls and mounted in bearings carried by the latter, a lever mounted on said longitudinal member and connected with said axle to turn the latter and raise or lower the walls, adjustable plows at the front ends of said walls, a second lever mounted on said longitudinal member, and connecting means between said second lever and said plows for adjusting the latter.

6. A ridge former comprising a pair of horizontally elongated rearwardly converging walls, a pair of turning plows pivoted to the front ends of said walls for turning earth inwardly between said walls, arms rising from said plows and rigidly connected with the latter, a transverse rod extending between the upper ends of said arms, a pivotally mounted link shorter than said arms and supporting the center of said rod, and means for swinging said arms forwardly and rearwardly to control said plows.

In testimony whereof I have hereunto affixed my signature.

JULIUS DREGER.