

April 10, 1928.

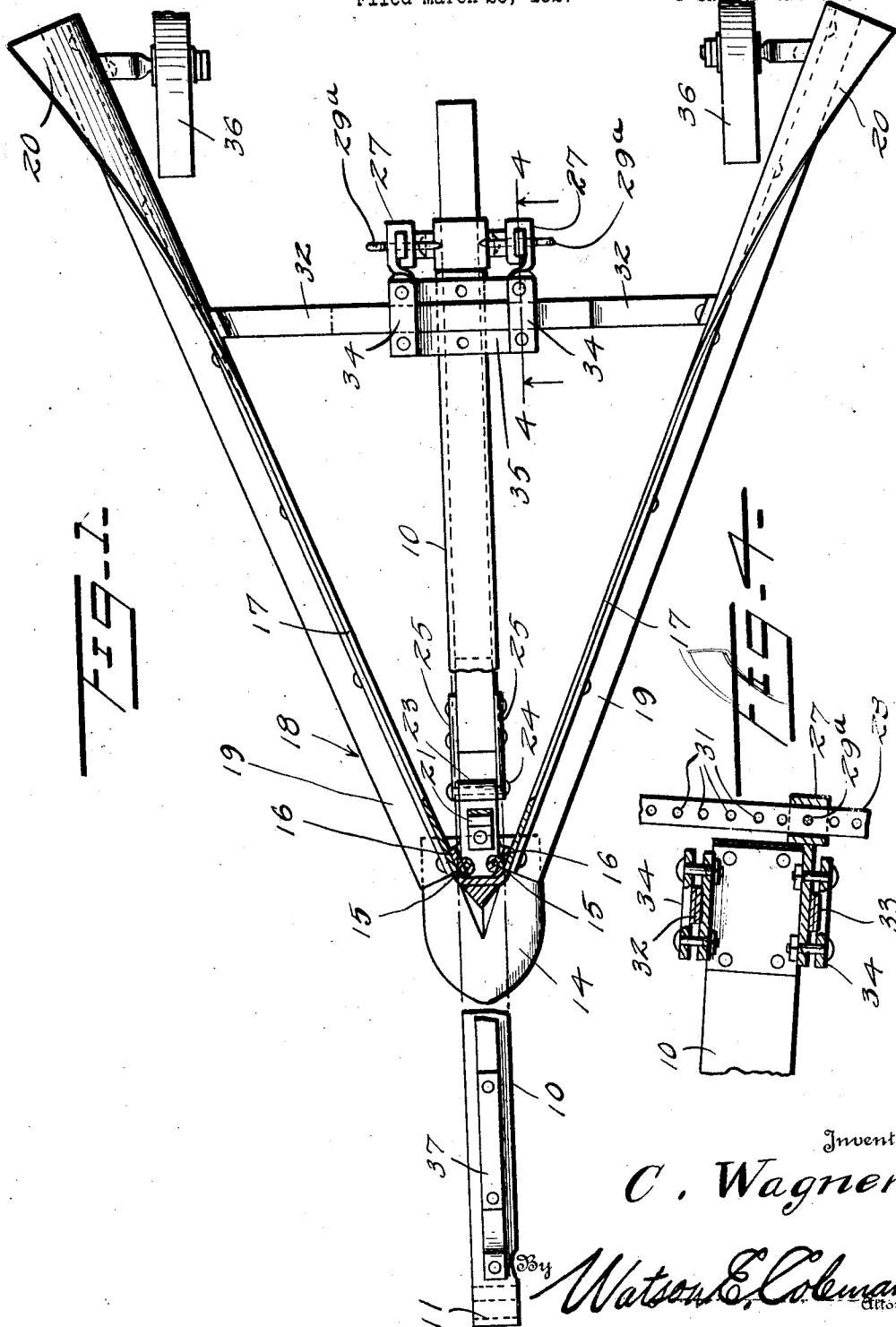
C. WAGNER

1,665,428

DITCHER

Filed March 26, 1927

2 Sheets-Sheet 1



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April 10, 1928.

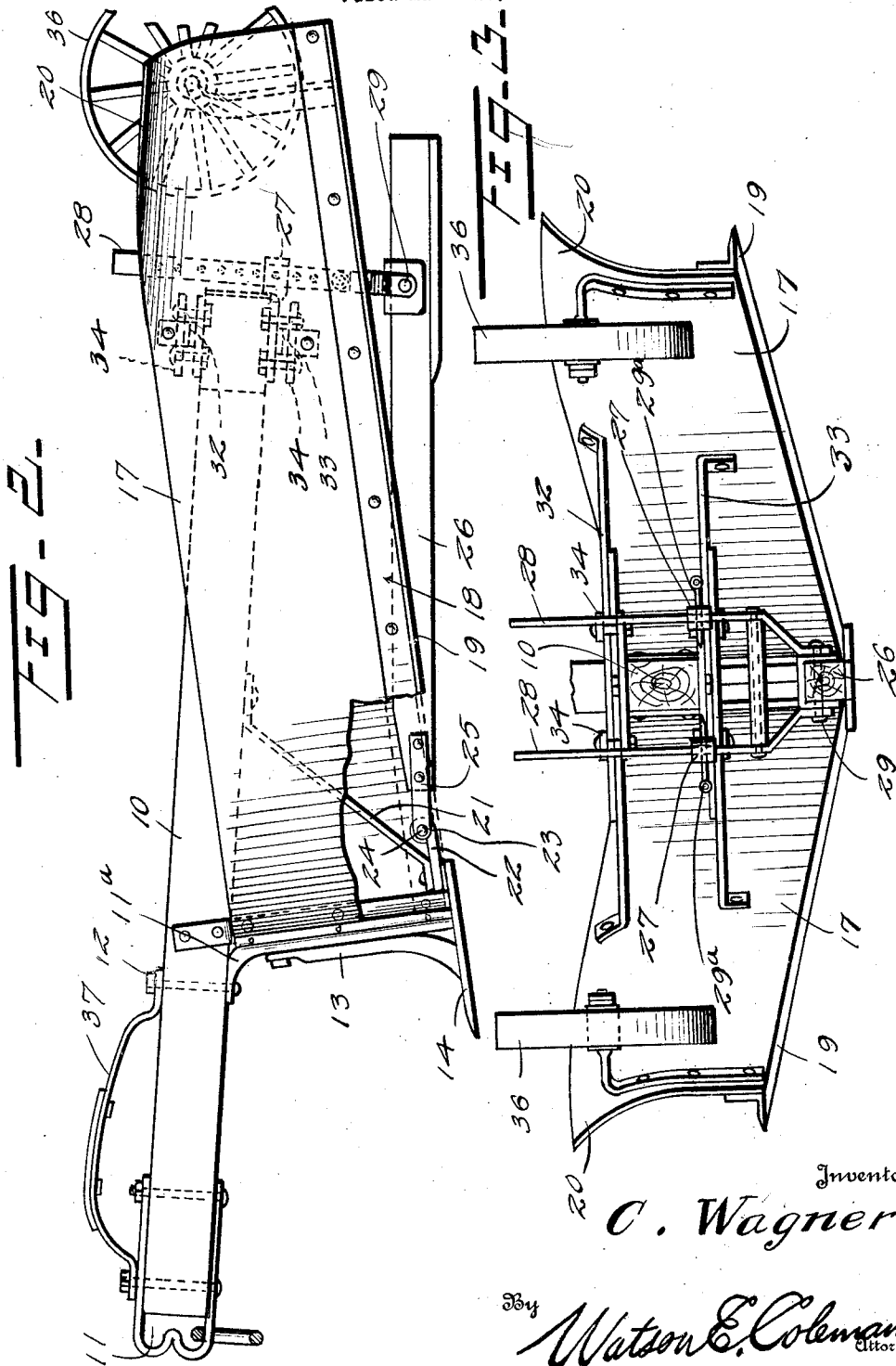
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DITCHER

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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE.

CARL WAGNER, OF FORT MORGAN, COLORADO.

DITCHER.

Application filed March 26, 1927. Serial No. 178,738.

This invention relates to ditchers.

An important object of the invention is to produce a device of this character, which is adjustable to determine not only the depth of a ditch formed thereby, but likewise the angle at which the sides of the ditch are disposed to one another.

A further object of the invention is to produce a device of this character wherein the adjustment may be readily made.

A still further object of the invention is to produce a device of this character, which may be readily transported from place to place.

These and other objects I attain by the construction shown in the accompanying drawings, wherein for the purpose of illustration is shown a preferred embodiment of my invention and wherein:—

Figure 1 is a plan view partially in section of a ditcher constructed in accordance with my invention;

Figure 2 is a side elevation thereof partially broken away;

Figure 3 is a rear elevation thereof;

Figure 4 is a section on the line 4—4 of Figure 1.

Referring now more particularly to the drawings, the numeral 10 generally designates a beam adapted at one end 11 for connection with a draft device. Adjacent this end of the beam, a standard 11^a is secured at its upper end to the beam, as at 12 and projects downwardly therefrom. This standard has secured to its forward face a coulter 13 and to its foot a share 14. Opposite sides of the standard have secured thereto one plate 15 of pairs of hinged plates, the other plates 16 of which are rigidly secured to the forward ends of mold boards 17. Each mold board 17 along its lower edge has secured thereto an angle iron or steel strip 18, the horizontal flange 19 of which aligns with the lower edge of the mold board. The rear end of the mold boards have their upper corners flared outwardly, as indicated at 20, to provide deflectors during deep ditching operations.

The lower end of the standard 11^a is braced to the beam at a point rearwardly of the point of attachment of the upper end of the standard by an upwardly and rearwardly inclining brace 21 and the securing elements which connect the lower forward end of this brace to the standard serve to secure thereto a longitudinally extending rear-

wardly directed plate 22, the rear end of which has an eye 23 receiving a hinge pin 24, which likewise passes through arms 25 secured to the forward end of a shoe beam 26. Secured to the rear end of the beam 10 is a guide structure including vertically directed eyes 27 engaging the vertically extending upper ends of arms 28, the lower ends of which are pivotally connected to the shoe beam 26 adjacent the rear end thereof, as at 29. The vertical adjustment of the arms 28 through the eyes is maintained by pins 29^a extending through openings formed in the eyes and through one of a series of vertically spaced openings 31 formed in the arms.

Secured to the inner face of each mold board 17, in alignment with the rear end of the beam 10, are a pair of vertically spaced horizontally extending arms 32 and 33, of which the upper arm 32 has its inner end projecting over the upper face of the beam and the lower arm has its inner end projecting beneath the under face thereof. Adjacent ends of the arms overlap and are clamped to one another and to the beam by clamps 34 mounted upon the outer ends of plates 35 which are secured to the beam. It will be obvious that by loosening these clamps, the mold boards may be moved toward or away from one another and the angle of the walls of the ditch, which is being formed thus controlled. It will likewise be obvious that by moving one of the mold boards in against the beam, the cutting action of this mold board will be suspended and a ditch having one wall thereof substantially straight will be formed.

In order to permit ready transportation of the ditcher from place to place, each mold board at its rear end provides a support 36 engaging the ground when the ditcher is inverted and the beam adjacent its forward end is provided with a support 37. In the present instance, the supports associated with the mold boards are shown as wheels and that associated with the beam as a shoe.

Since the construction hereinbefore set forth is capable of a certain range of change and modification without materially departing from the spirit of the invention, I do not limit myself to such specific structure except as hereinafter claimed.

I claim:—

1. In a ditcher, a beam, a support extending downwardly from the beam adjacent the

forward end thereof, a share secured to the lower end of the support, rearwardly diverging mold boards pivoted to the support, means connecting the rear ends of the mold boards with the beam whereby said mold boards may be secured in adjusted angular relation thereto, a second beam having its forward end pivotally connected to the lower end of the support at the rear thereof, a shoe upon the lower face of said beam at the free end thereof and means connecting the free end of the last named beam with the first named beam for vertically adjusting said free end.

2. In a ditcher, a main beam, a support extending downwardly therefrom adjacent the forward end thereof, a share attached to the lower end of the support, a pair of mold boards pivoted to the support, arms upon adjacent faces of the mold boards and extending inwardly therefrom over the beam, clamps carried by said beam for securing the arms in adjusted position with relation thereto, a shoe arranged beneath the lower end of the beam and means connecting the shoe and beam whereby the shoe may be vertically adjusted.

3. In a ditcher, a main beam, a support extending downwardly therefrom adjacent the forward end thereof, a share attached to the lower end of the support, a pair of mold boards pivoted to the support, arms upon adjacent faces of the mold boards and extending inwardly therefrom over the beam, clamps carried by said beam for securing the arms in adjusted position with relation thereto, a beam pivoted at its forward end to the lower end of said support, a connection between the main beam and the last named beam at the rear end thereof for vertically adjusting the rear end of the last named beam and a shoe carried by the lower end of the last named beam.

4. In a ditcher, a main beam, a support

extending downwardly therefrom adjacent the forward end thereof, a share attached to the lower end of the support, a pair of mold boards pivoted to the support, arms upon adjacent faces of the mold boards and extending inwardly therefrom over the beam, clamps carried by said beam for securing the arms in adjusted position with relation thereto, a beam pivoted at its forward end to the lower end of said support, an arm extending upwardly from the rear end of the last named beam, a guide carried by the main beam and through which the arm extends, the guide having openings therein, the arm having a series of longitudinally spaced openings coacting with the openings of the guide for the reception of a pin and a shoe carried by the lower end of the last named beam.

5. In a ditcher, a main beam, a support extending downwardly therefrom adjacent the forward end thereof, a share attached to the lower end of the support, a pair of mold boards pivoted to the support, arms upon adjacent faces of the mold boards and extending inwardly therefrom over the beam, clamps carried by said beam for securing the arms in adjusted position with relation thereto, a beam pivoted at its forward end to the lower end of said support, an arm extending upwardly from the rear end of the last named beam, a guide carried by the main beam and through which the arm extends, the guide having openings therein, the arm having a series of longitudinally spaced openings coacting with the openings of the guide for the reception of a pin and a shoe carried by the lower end of the last named beam, said guide comprising an extension of an element of one of the clamps.

In testimony whereof I hereunto affix my signature.

CARL WAGNER.