

No. 869,115.

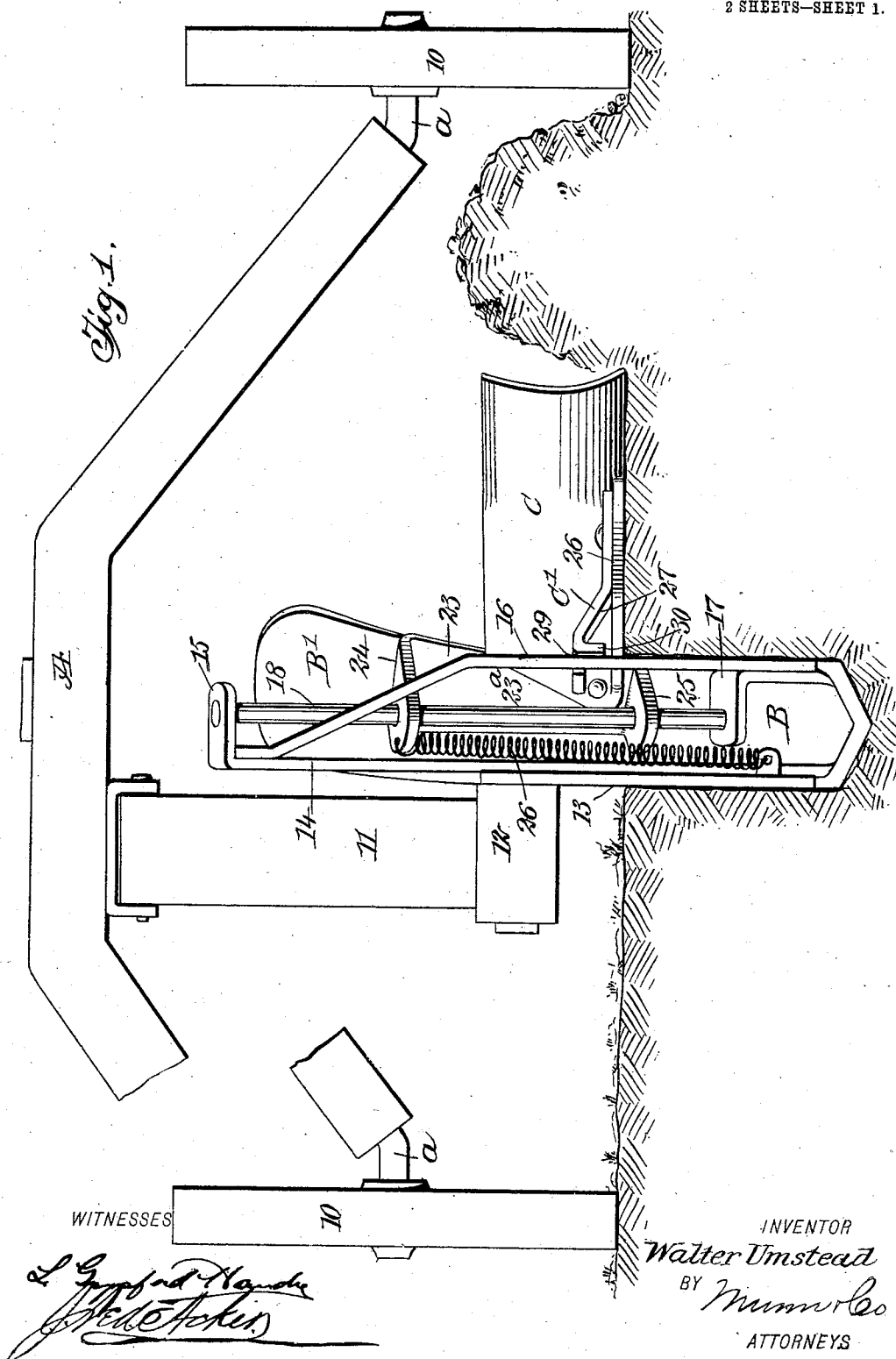
PATENTED OCT. 22, 1907.

W. UMSTEAD.

CLEARING WING FOR DITCHING MACHINES.

APPLIOATION FILED JAN. 26, 1907.

2 SHEETS—SHEET 1.



WITNESSES

INVENTOR

Walter Umstead

BY *Mumolo*

ATTORNEYS

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Fig. 2.

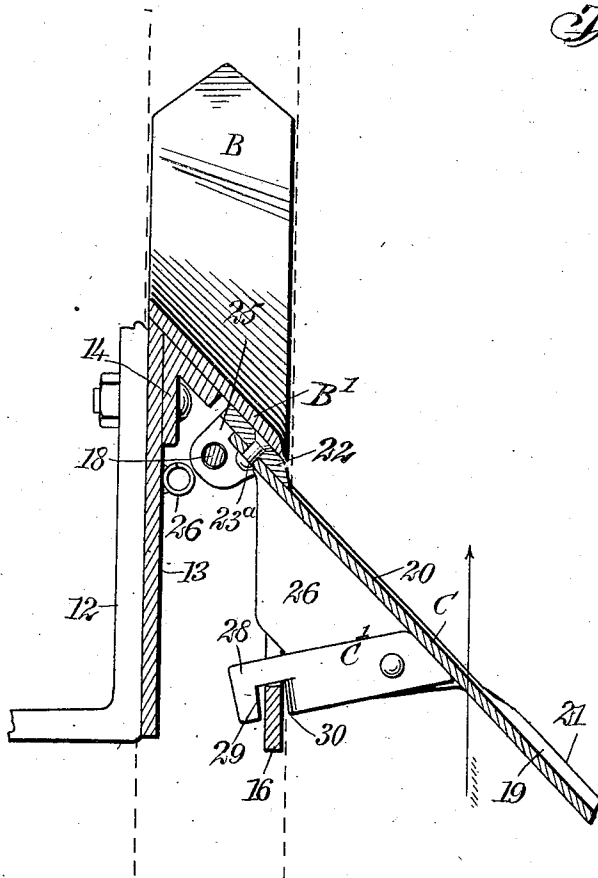
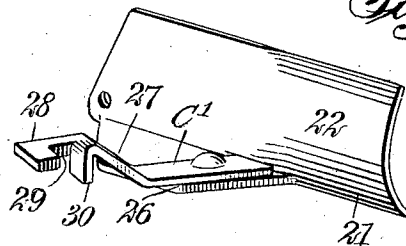


Fig. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

WALTER UMSTEAD, OF JERSEYTOWN, PENNSYLVANIA.

CLEARING-WING FOR DITCHING-MACHINES.

No. 869,115.

Specification of Letters Patent.

Patented Oct. 22, 1907.

Application filed January 26, 1907. Serial No. 354,196.

To all whom it may concern:

Be it known that I, WALTER UMSTEAD, a citizen of the United States, and a resident of Jerseytown, in the county of Columbia and State of Pennsylvania, have
5 invented a new and useful Improvement in Clearing-Wings for Ditching-Machines, of which the following is a full, clear, and exact description.

The purpose of the invention is to provide a clearing wing particularly adapted for the ditching machine for
10 which an application for patent was filed by me February 21, 1905, Serial No. 302,305, and which was allowed November 5, 1906. The object being to provide a wing of simple, durable and economic construction capable of attachment to most every type of ditcher,
15 and by reason of its shape and peculiar construction will move under the loose earth, being held down to its work by the weight of the gathered earth, and which will not dig into or otherwise destroy the bank. And furthermore, to provide a simple guide for the wing and
20 means whereby it will automatically accommodate itself to the surface of the ground at the bank no matter what the depth of the ditch may be, and also accom-

modate itself to any pitch of the plow.
The invention consists in the novel construction and
25 combination of the several parts as will be hereinafter fully set forth and pointed out in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar
30 all the figures.

Figure 1 is a rear elevation of a portion of a ditching machine, and a perspective view of the improved wing applied; Fig. 2 is a horizontal section through the wing and parts of the machine connected therewith and ad-
35 jacent thereto; and Fig. 3 is a perspective of the improved wing viewed from the rear.

A represents an arched axle of a ditching machine provided with the customary spindles *a*, upon which the supporting wheels 10 of the machine are mounted
40 to turn. A hanger 11 is shown extending down from the arched axle A at a point to one side of its center, being pivotally attached to the said axle, and this hanger is shown terminating in an arm 12 having a downward extension 13 that engages with one side of
45 the ditch as the ditch is made by the plow B. This downward extension or arm 13 is attached to a standard 14, in fact the downward extension 13 may be termed a support for said standard. This standard is provided at its upper end with horizontal bearings 15 and a
50 second standard 16 is attached to the first-named standard 14 at its upper portion, and extends therefrom downward and outward, and it is parallel with the lower portion of the standard 14, and the said standard 16 at its
55 lower portion engages with the opposite side of the ditch, as is shown in Fig. 1.

An angular bracket 17 is attached to the inner face of the lower portion of the standard 16, as is also shown in Fig. 1, and a rod 18 is secured at its upper end to the ear 15 of the standard 14, and at its lower end is secured to the said angular bracket 17, as is also shown in Fig. 60
1. This rod 18 is adapted as the prime guide for the wing C. This wing is provided at its outer end with a decided concavity 19 in its upward face. The inner end of the said wing and that point at or about the center, is also provided with a concavity 20, but much less in
65 depth than the concavity 19, in fact the concave forward face of the said wing C may be made to gradually diminish from the point near its center to its inner end. A lip 21 is formed at the lower edge of the decidedly
70 outer concavity portion 19, and the said lip is inclined or is beveled off at its inner end where it connects with the lesser inclined face 20 of the said wing, as is particularly shown in Fig. 2, and by reference to Fig. 3, it will be observed that the rear face 22 of the said
75 wing at its outer end is as decidedly convexed as is its correspondingly inner face 19 concaved.

A bracket 23 is used in connection with the wing C, and the inner end of the wing C is pivoted to the lower body portion of the bracket 23, as is best shown at 23^a in Fig. 1. This bracket 23 is provided with an upper
80 ear 24 and a corresponding lower ear 25, and both of these ears are provided with corresponding apertures through which the guide rod 18 heretofore mentioned, freely passes, so that the wing C is capable of vertical
85 guided movement to accommodate itself to the bank of a ditch irrespective of its depth, but the wing C is held down to its work at the brink of the bank by means of a spring 26 which is preferably attached to the upper ear 24 of the bracket 23, and to the lower portion
90 of the standard 14, as is best shown in Fig. 1. The lip 21 extending with its decided forward curve, yet with a smooth and unbroken rear lower edge portion, passes beneath the earth thrown up by the machine, and the weight of the earth thereon keeps it from rising and
95 riding over the same, thus producing a perfect clearance of the earth in advance of the wing.

The wing has a second guide, which is in the nature of a rearwardly extending arm C' that is located diagonally with reference to the rear of the wing, and this arm C' is secured to the bottom horizontal plate 26 that
100 moves smoothly over the ground as the wing C advances. This guide arm C' is provided with an upward and rearwardly inclined section 27 intermediate of its ends, and a horizontal rear terminal portion 28, in which a recess 29 is made adapted to receive the
105 straight portion of the standard 16, and a downwardly extending lip 30 for guided engagement with said standard, as is clearly shown in Fig. 1. The support 13, as is shown in Fig. 2, serves to hold the plow point B in proper position for work, and its accompanying
110

mold board B', the plow point being located between the lower end portions of the standards 16 and 26, as is clearly shown in Fig. 1.

It is evident that a wing of the character described is readily applicable to almost every type of a ditching machine. It is very simple and is economic in its construction, as has been stated, and is automatic in its action.

Having thus described my invention, I claim as new and desire to secure by Letters Patent,—

1. A clearing wing for ditching machines, having a decided concavity at its outer end and a lesser concavity at its central and inner end portion, a standard to which the wing is pivoted, and a guide arm extending from the rear of the wing.

2. A clearing wing for ditching machines, having its outer front surface decidedly concaved, the remaining portion of its forward surface having a lesser concavity, and a lip at the lower edge of the forward portion of the said wing constituting a continuation of the concaved surface at such point.

3. A clearing wing for ditching machines, having its outer front surface decidedly concaved, the remaining portion of its forward surface having a lesser concavity, and a lip at the lower edge of the forward portion of the said wing constituting a continuation of the concaved surface at such point, a rearwardly extending flat member at the lower inner edge portion of the wing, a guide member se-

cured to said flat portion, and a slidable bracket to which the inner lower end portion of the wing is pivoted.

4. A clearing wing for ditching machines, having its outer front surface decidedly concaved, the remaining portion of its forward surface having a lesser concavity, and a lip at the lower edge of the forward portion of the said wing constituting a continuation of the concaved surface at such point, a rearwardly extending flat member at the lower inner edge portion of the wing, a guide member secured to said flat portion, a slidable bracket to which the inner lower end portion of the wing is pivoted, a support upon which the said bracket has sliding movement, a standard with which the rear guide arm engages, and means for tensionally holding the wing to its work.

5. A clearing wing for ditching machines, having a concaved forward face, the concavity diminishing in pronouncedness from its outer end in direction of its inner end, being least pronounced at the latter point.

6. A clearing wing for ditching machines, having a concaved forward face, the concavity diminishing in pronouncedness from its outer end in direction of its inner end, being least pronounced at the latter point, and guide devices connected with the rear of the wing.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WALTER UMSTEAD.

Witnesses:

POHATTRAN V. MOWRER,
GEORGE D. VOQUETZ.