No. 615,945. Patented Dec. 13, 1898.

W. C. F. ZIMMERMAN.

GRUBBING MACHINE.

(Application filed Mar. 29. 1898.)

(No Model.)

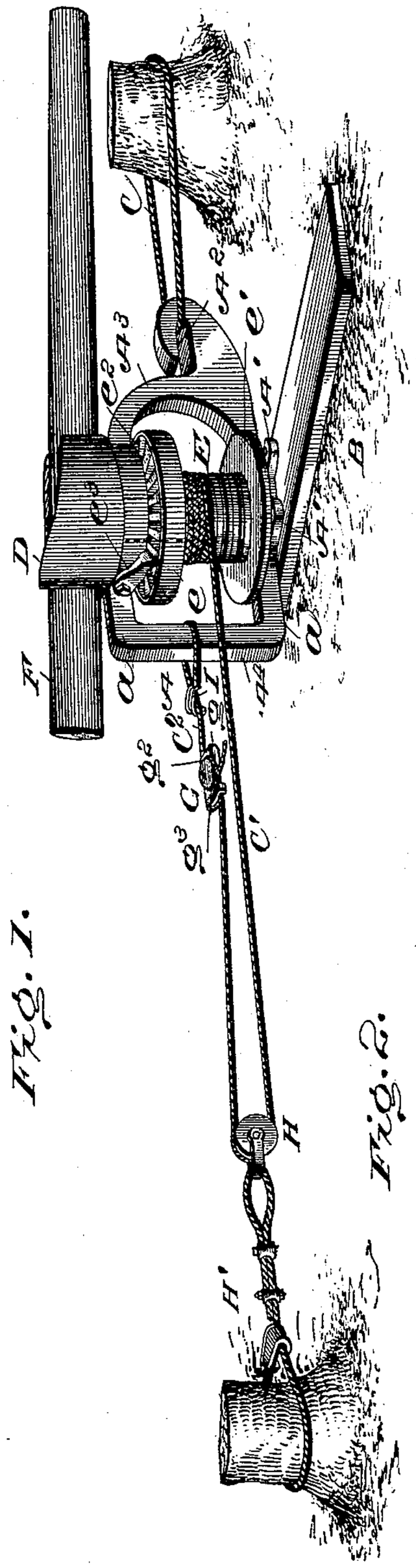

Fig. 1.

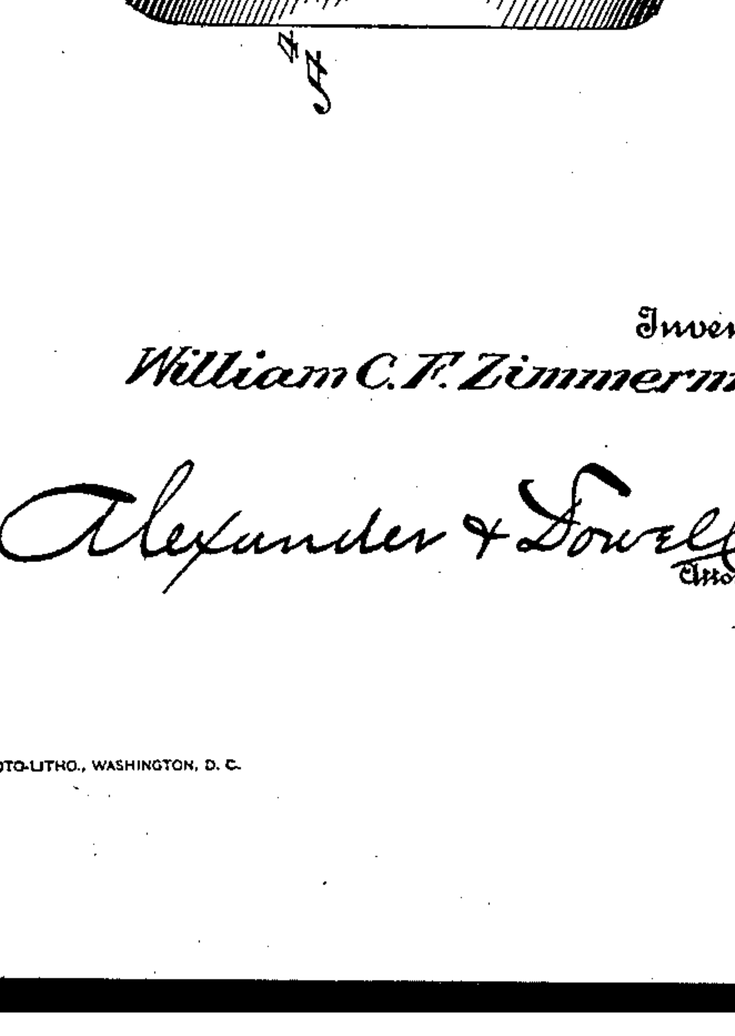

Fig. 2.

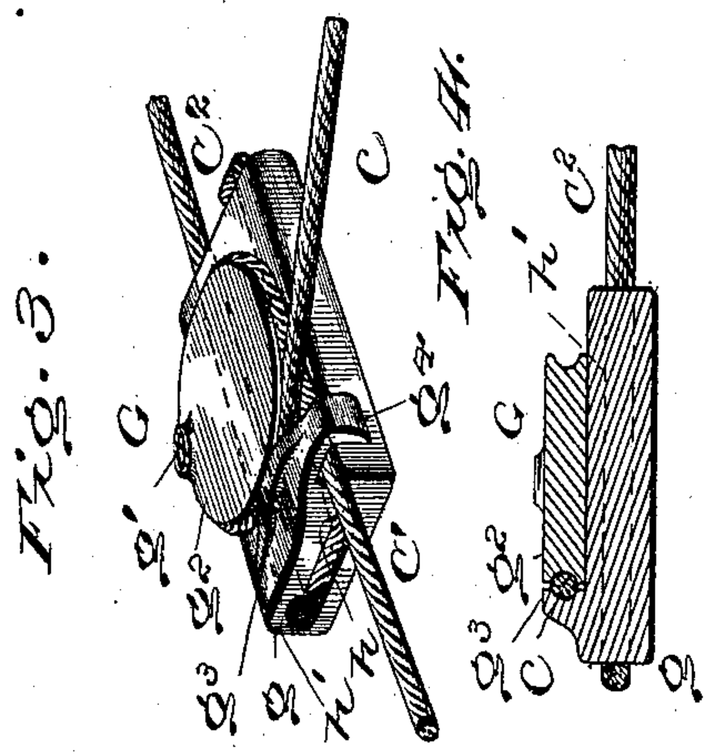

Fig. 3.

Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM C. F. ZIMMERMAN, OF LONE TREE, IOWA.

GRUBBING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 615,945, dated December 13, 1898.

Application filed March 29, 1898. Serial No. 675,604. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. F. ZIMMERMAN, of Lone Tree, in the county of Johnson and State of Iowa, have invented certain new and useful Improvements in Grubbing-Machines; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form part of this specification.

This invention is an improvement in grubbing-machines, and as such will readily be recognized by any one the least familiar with the art.

It relates especially to that character of machines shown and described in Letters Patent No. 599,214, granted February 15, 1898, jointly to Miles Bateman and myself.

The object of this invention is to overcome certain well-known defects in machines of this nature and also to provide a novel means of taking up the slack in the cable.

The invention therefore consists in certain novel details of construction and combinations of parts, as will be hereinafter more fully described, and set forth in the claims.

In the accompanying drawings, Figure 1 is a perspective view showing the application of the invention. Fig. 2 is an enlarged perspective view of the windlass-frame. Fig. 3 is an enlarged detail perspective view of my improved take-up. Fig. 4 is a longitudinal section through the take-up.

The frame A of the windlass is formed of one casting and is provided with lateral lugs A′ at its base, having holes therein whereby it may be secured to a timber or ground-plate B, and on the base of the frame is formed a chain-hook A^2, adapted to receive an anchor chain or rope C. Rising from the base is a curved arm A^3, the upper end of which embraces a portion of a stub-shaft (not shown) upon which a drum E, hereinafter described, is mounted. At the opposite side of frame A of the windlass is formed an extension A^4. This extension connects the upper and lower arms $a\ a'$, respectively, of the frame together, the aforesaid parts being cast integral, thereby giving strength and solidity to the same and at the same time furnishing a place on the windlass for the attachment of the end of the cable C′ when it is desired to use the double-power pulley. It has been found by experience, however, in the use of the double-power pulley that there being no convenient stump to fasten the cable, or, if there be one, it being too far to either the right or left, as the case may be, it makes the angle too great to get all the power applied to the stump to be pulled exerted by the machine, and very frequently making it necessary to dispense with the double-power pulley on heavy work when its use is required. By the cable running straight back to the machine instead of at an angle the full power is obtained.

Arranged within the frame and journaled upon the stub-shaft (not shown) is the drum E. To the upper end of said shaft is formed, integral therewith, the head D, in which is securely fastened the sweep F. The drum E is grooved, as shown, for the accommodation of the cable C′, and is provided with upper and lower flanges $e\ e'$, respectively, and the former flange is provided with a ratchet e^2 on its upper surface, in which a dog e^3, attached to the arm a of the frame, works.

The take-up G is applied, as shown, midway between the power-pulley and the frame of the windlass and consists of a base portion g, and at about its central point is secured a short stub-shaft g', on which is loosely journaled a grooved cam g^2, as shown, for the accommodation of the cable C′. The base portion of the take-up has formed on one end an enlarged stationary grooved flange g^3, also for the accommodation of the cable C′. The outer end of the stationary flange g^3 projects beyond the base g and is bent down at right angles thereto to form a guide g^4 for the cable C′. The base portion of the take-up G is also provided with longitudinal passages $h\ h'$, respectively, for the purpose of retaining one end of a cable or rope C^2. This cable passes through the passage h' of the casting and is returned back through the passage h, and has its end soldered or otherwise suitably secured at the opening of this latter passage, as shown, thereby obviating the necessity of using clips to fasten the cable and making it stronger and more secure. The other end of the cable passes around the extension A^4 and is clamped to itself by means of a hook I. The main cable C′ from the drum E extends to and through the power-pulley H and returns to

and encircles the grooved cam g^2 and between it and the grooved flange g^3, and by pulling on the free end c of the cable C′ the latter is drawn taut. When power is applied to the cable upon the drum E, the cam g^2 will bind the cable together in the groove against the flange g^3, as is evident, thereby holding the cable securely without the slightest injury to it. The simplicity of this take-up will save much time and work, and the manner of using it will be readily understood from the foregoing description, taken in connection with the drawings.

The power-pulley H may be attached to a stump or the object to be pulled by means of a chain or rope H′ in the usual manner.

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

1. For a grubbing-machine, a take-up having longitudinal parallel passages in its base portion, and a flange as g^3 on one end, said flange having a projecting guide g^4 at one end, a cable having one end securely fastened in said passages, and a cam eccentrically pivoted on the base beside the flange, substantially as described.

2. In a grubbing-machine, the combination of the frame and a drum mounted thereon substantially as described, a power-pulley attached to the object to be pulled; of a take-up having a base provided with a flange g^3 a guide g^4 and a cam g^2 eccentrically pivoted to the base, and a cable securely fastened by one end to the drum, and passed through the power-pulley and back under the guide to and encircling the grooved cam g^2 of the take-up, for the purpose and substantially as described.

3. In a take-up for grubbing-machines, the combination of the base having a grooved flange as g^3 near one end, and a guide as g^4 formed at one end of said stationary flange and at right angles thereto; with a grooved cam as g^2 mounted upon and eccentrically pivoted to said base portion, all constructed and arranged to operate substantially as described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

WILLIAM C. F. ZIMMERMAN.

Witnesses:
JOHN W. JAYNE,
FRED. C. JAHNKE.