A. D. HULBURT.

WINDLASS.

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907,803.

Patented Dec. 29, 1908.

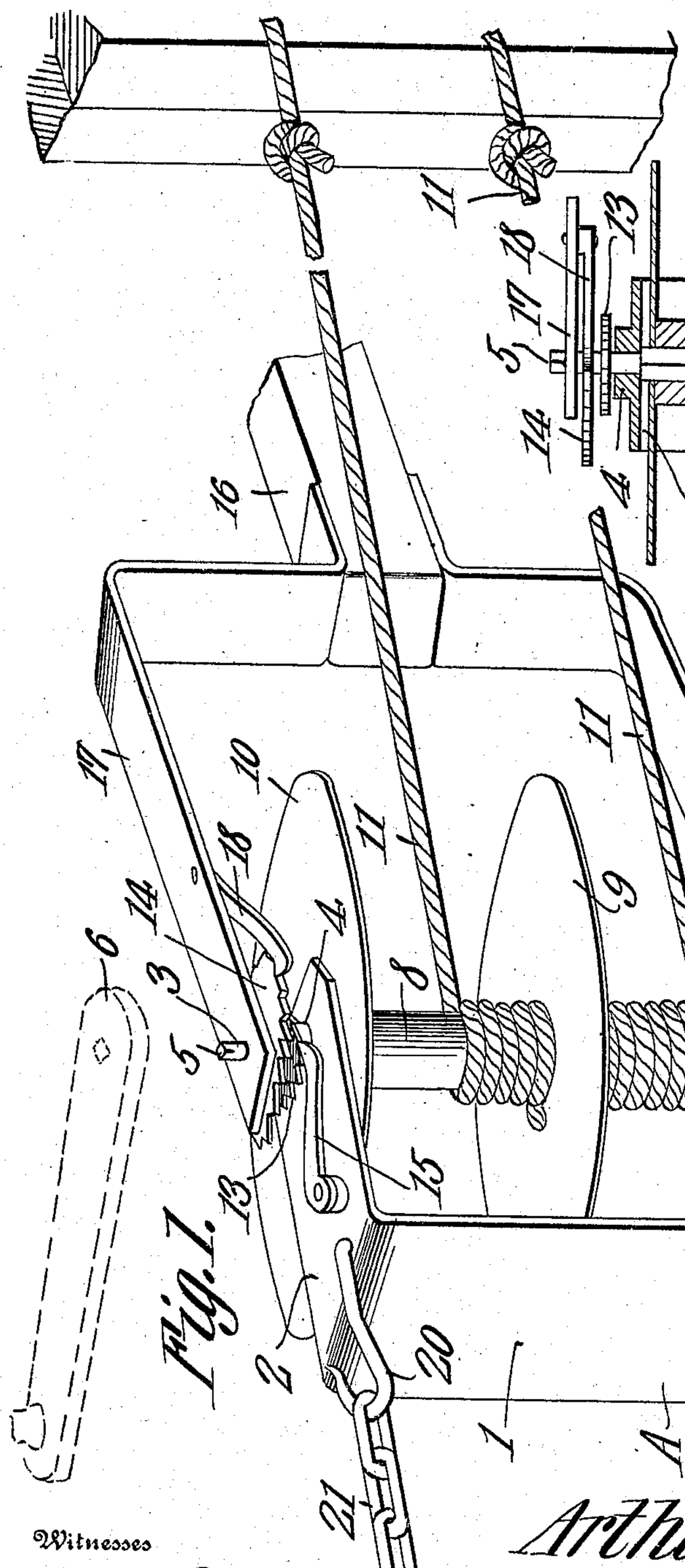

Fig. 1.

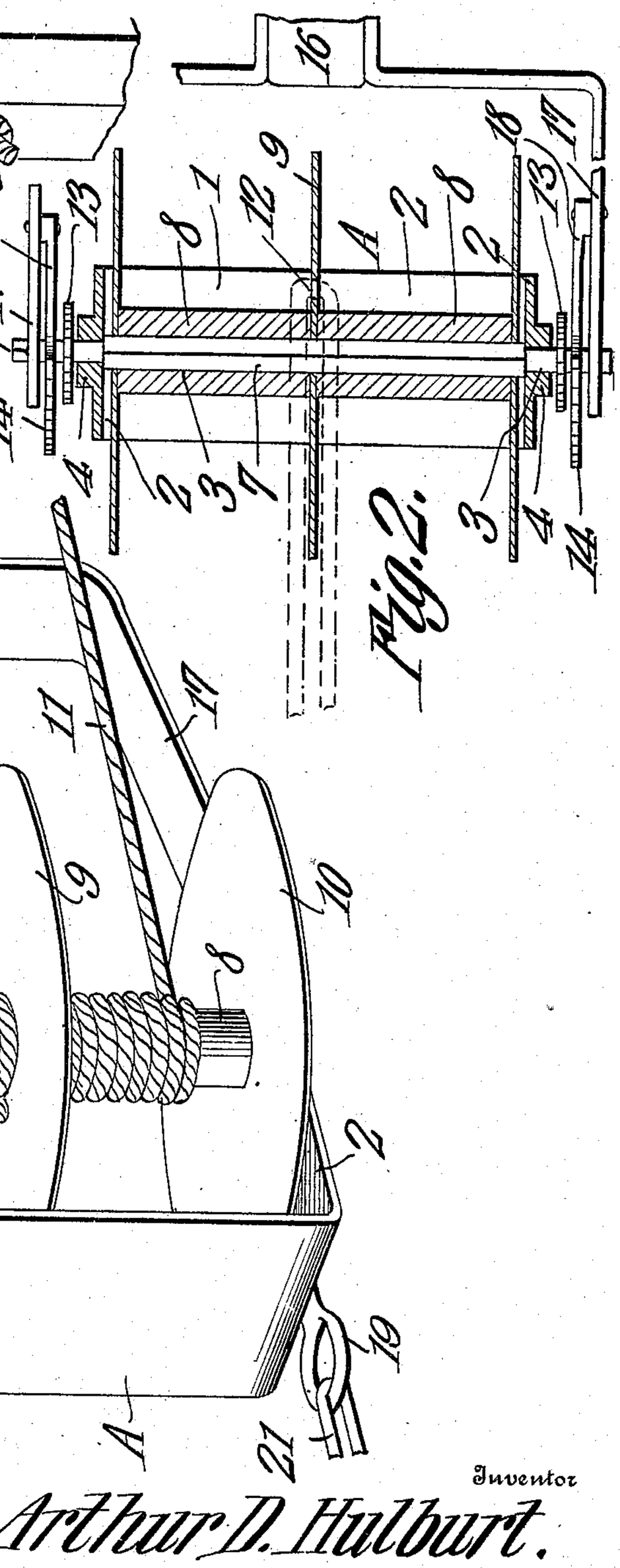

Fig. 2.

Witnesses

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UNITED STATES PATENT OFFICE.

ARTHUR D. HULBURT, OF WHEELING, MISSOURI.

WINDLASS.

No. 907,803. Specification of Letters Patent. Patented Dec. 29, 1908.

Application filed June 11, 1908. Serial No. 437,968.

To all whom it may concern:

Be it known that I, ARTHUR D. HULBURT, a citizen of the United States, residing at Wheeling, in the county of Livingston and State of Missouri, have invented a new and useful Windlass, of which the following is a specification.

This invention relates to that class of mechanical structures for exerting tension on ropes, cables and the like, and for raising heavy weights by the expenditure of little force in comparison with the results accomplished.

The invention has for its object to provide a windlass easily carried from place to place by one man if the distance is short, or by a light vehicle for long distances. The windlass is simple and strong and of great use on a farm where wires and fences are to be stretched, and numerous objects to be moved or lifted which require greater power than can be developed unassisted by one or two men.

To this end the windlass consists, broadly speaking of a frame in which is mounted a through shaft on which are fixed two drums separated by a central disk around which drums the draft ropes or cables wind. Suitable means are employed for fastening the frame to a fixed object. The drums are rotated by an oscillating lever pivoted on the ends of the through shaft, and in connection with ratchet wheels fixed on said shafts the drums are intermittently turned as the lever is oscillated. If desired a crank handle may be applied to one or both ends of the through shaft and the lever dispensed with for the time being.

For a more definite understanding of the invention, reference is called to the following detailed description and claims, and to the accompanying drawing forming a part of this specification in which:—

Figure 1 is a perspective view of the windlass in operative position, and Fig. 2 a cross sectional view of the same through the frame and winding drums.

Similar reference characters are used for the same parts in both figures.

In the drawing A indicates the frame which is, for illustration, shown as formed of a straight plate 1 of suitable length provided at each end with a plate 2, the latter plates projecting perpendicularly from the same side of the connecting plate 1. Through the outer end of each plate 2 is made an opening to serve as a bearing for a through shaft 3 preferably made square or of other polygonal shape between the inner faces of the end plates 2, beyond which plates the ends of the shaft are round to rotate in the bearings in the outer ends of said side plates 2. A boss 4 may be attached to the ends of the plates 2 or the latter may be thickened to provide broader bearing surfaces for the shaft ends. The extremities 5 of the shaft 3 are squared to receive a crank handle 6 when it is desired to rotate the shaft by this means.

Mounted against rotation on the polygonal portion 7 of the shaft 3 are two drums 8 preferably of equal length and diameter and separated by a partition disk 9 also mounted against rotation on the polygonal portion 7 of the shaft. While it is desirable to have the drums 8 of equal length and diameter for the purpose shown, that is stretching fences, there are numerous uses to which the invention may be applied wherein drums of unequal length or diameter or both will be needed, and therefore, the invention is not restricted to drums of equal size. The outer ends of the drums 8 have each a disk or flange 10 in close proximity to the projecting plates 2 of the frame A. Around the drums 8 the draft ropes or cables 11 are wound, their ends attached to the partition disk 9 in any manner desired. One means of securing the cables to the disk 9 is clearly illustrated in Fig. 2. By this method a cable double the length required for either drum is threaded through a hole 12 made in the intermediate disk 9 near the drums and drawn through said hole until the two ends of the cable are of equal length.

Out side the plates 2 of the frame two ratchet wheels 13 and 14 are fixed on both ends of the shaft 3 or if desired, the ratchet wheels may be omitted from one side. In place of the ratchet wheel or wheels 13, the periphery of the partition disk may be toothed and a suitable pawl hinged on the frame to engage said teeth. The drums 8 are prevented from backward rotation when the cables are under tension by pawls 15 pivoted on the frame A and held in engagement with the ratchets 13. A hand lever 16 is divided at one end into two arms 17 which embrace the drums 8 and have their ends pivoted on the ends of the shaft 3 just below the squared portions 5. Pivoted on each arm 17

is a pawl 18 adapted to engage the outer ratchets 14 and intermittently rotate the shaft and the drums thereon when oscillated.

Fastened to one end of the plate 1 is an eye 19 and on the other end a hook 20. A chain 21 is fastened to the eye and when the windlass is to be operated the chain is wrapped around some fixed object and then connected with the hook 20. The windlass is then ready for operation. If, now, the pawls 15 and 18 be disengaged from their coöperating ratchet wheels 13 and 14, the cables 11 can be drawn to the object to be stretched, as a fence or moved, and there fastened. The pawls are then to be thrown into engagement with their respective ratchet wheels and the hand lever 16 or the crank 6 operated. This will wind the cables on the drum and stretch or move that to which the cables are fastened.

What is claimed is:—

1. A windlass comprising a holding frame, means thereon for removably attaching it to a fixed object, a pair of drums secured against rotation only on a polygonal shaft and separated by a partition disk secured in the same manner to said shaft, a circular ratchet and pawl designed to prevent backward rotation of the shaft, an oscillating lever fulcrumed on the projecting ends of the shaft and adapted to rotate the drums by a second pawl and ratchet mechanism, and a cable adapted to be wound on each of said drums.

2. A windlass comprising a holding frame for a pair of drums mounted on a polygonal shaft journaled in said frame a central disk separating said drums and rotatable therewith, a cable for each drum fastened to said central disk, a disk on the outer end of each drum, two ratchet wheels secured on a projecting end of said shaft the extreme end of which is squared, a hand crank fitted to said squared end, an oscillating lever fulcrumed on the shaft, and pawls for engaging said ratchet wheels, one pawl pivoted on said frame and the other on said oscillating lever.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

ARTHUR D. HULBURT.

Witnesses:
J. R. Wright,
J. O. Brigman.