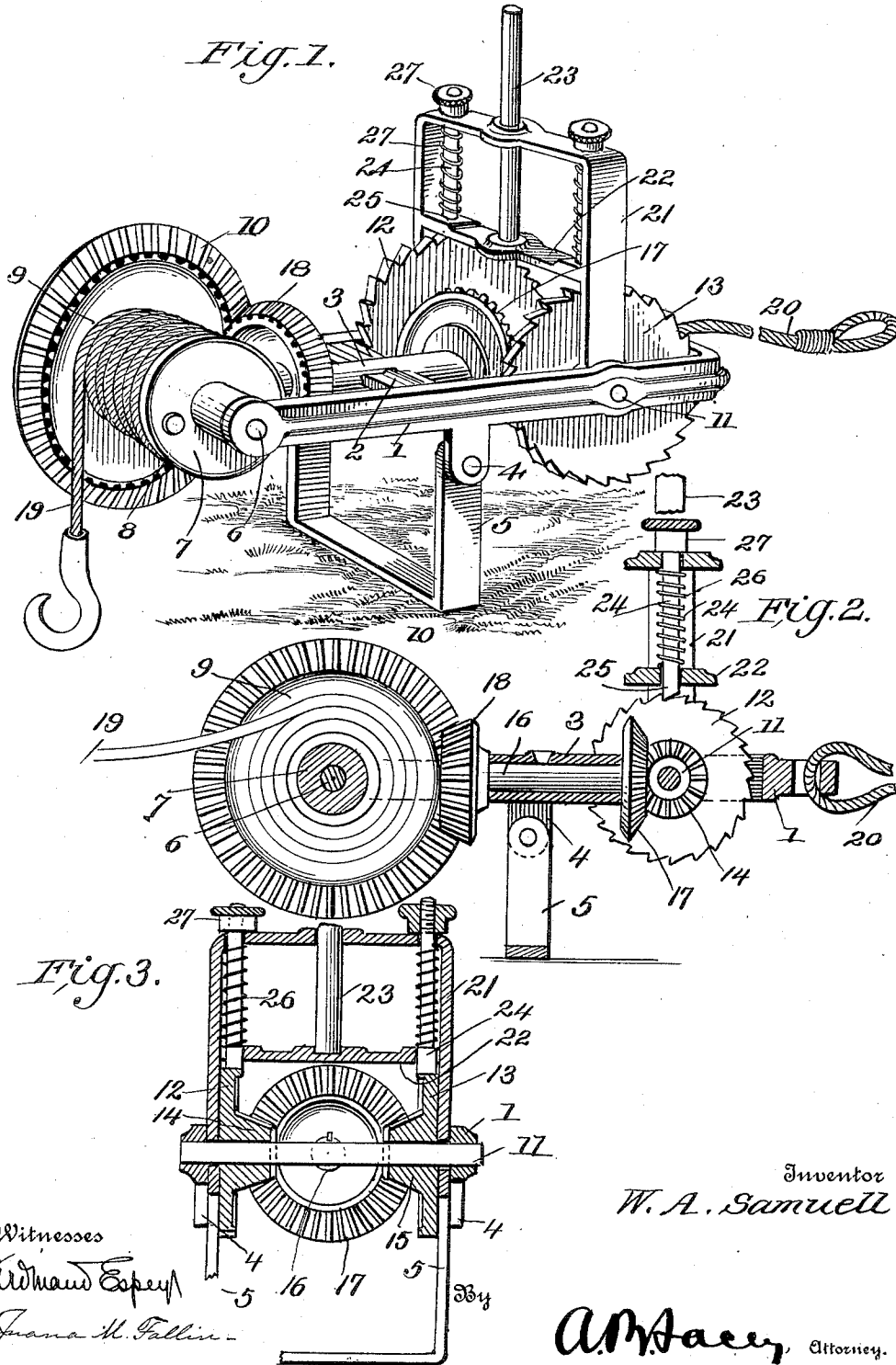


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WINDLASS.
APPLICATION FILED DEC. 14, 1911.

1,051,272.

Patented Jan. 21, 1913.



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WINDLASS.

1,051,272.

Specification of Letters Patent.

Patented Jan. 21, 1913.

Application filed December 14, 1911. Serial No. 665,774.

To all whom it may concern:

Be it known that I, WALTER A. SAMUELL, citizen of the United States, residing at Shipshewana, in the county of Lagrange and State of Indiana, have invented certain new and useful Improvements in Windlasses, of which the following is a specification.

This invention has relation to a windlass, and has for its object to provide a simple, durable and efficient structure especially adapted to be used for pulling automobiles out of mud-holes, ditches, or wherever the vehicle itself cannot proceed by using its own power solely, although the device is also applicable for other uses generally.

For a full understanding of the invention reference is to be had to the following description and accompanying drawing, in which:

Figure 1 is a perspective view of the windlass; Fig. 2 is a longitudinal sectional view of the same; Fig. 3 is a transverse sectional view of the same.

Corresponding and like parts are referred to in the following description and indicated in all the views of the accompanying drawing by the same reference characters.

The windlass includes a frame 1 which is approximately U shaped in plan and which has its opposite side portions connected together by a cross bar 2. The bar 2 is provided at a point intermediate its ends with a bearing 3 which is disposed longitudinally with relation to the frame 1. The side portions of the frame 1 are provided at intermediate points with depending lugs 4 to which is pivotally attached the ends of a bail 5. A shaft 6 is secured at its ends to the ends of the side portions of the frame 1 and a drum 7 is journaled upon the shaft 6. The said drum 7 is provided at one end with an annular flange 8 and at its opposite end with a wheel 9 having upon its inner face a set of beveled gear teeth 10. A shaft 11 is carried at that end portion of the frame 1 opposite the end portion thereof at which the shaft 6 is located and ratchet wheels 12 and 13 are loosely mounted upon the shaft 11 but are restrained against movement longitudinally of the said shaft. The teeth of the ratchet wheel 12 are disposed in the opposite direction from that in which the teeth of the ratchet wheel 13 are disposed. Ratchet wheels 12 and 13 are provided upon their inner faces with sets of beveled gear

teeth 14 and 15 respectively. A shaft 16 is journaled in the bearing 3 and carries at its rear end a beveled pinion 17 which meshes with the sets of beveled gear teeth 14 and 15. At its forward end the shaft 16 carries a beveled pinion 18 which meshes with the gear teeth 10 upon the wheel 9. A cable 19 is arranged to wind upon the drum 7, and a retaining cable 20 is connected with that end of the frame 1 opposite the end thereof at which the drum 7 is located. Any suitable means may be provided for confining the cable 20, as for instance a stake or spike (not shown). A yoke 21 is pivotally mounted at its ends upon the shaft 11 with its ends within the side portions of the frame 1 and against the outer sides of the ratchet wheels 12 and 13. The side portions of the yoke 21 are connected together by a cross bar 22 which is adapted when swung to pass over the beveled pinion 17. That is to say, no part of the said beveled pinion lies in the path of movement of the cross bar 22 of the yoke 21, and therefore the presence of the said pinion between the ratchet wheels 12 and 13 does not limit the swinging movement of the yoke. A detachable handle 23 is slidably received in an opening provided at the intermediate portion of the yoke 21 and at its lower end rests upon the cross bar 22. Pawls 24 are slidably received in the side portions of the yoke 21 and pass through openings provided in the end portions of the cross bar 22 and are adapted to engage the teeth of the ratchet wheels 12 and 13. The said pawls 24 are provided at their lower ends with heads 25 and coiled springs 26 are interposed between the said heads and the intermediate portion of the yoke 21 and serve as means for resiliently holding the heads 25 of the said pawls 24 in engagement with the teeth of the ratchet wheels 12 and 13. The pawls 24 are provided at their upper ends with knobs 27 which may be grasped for the purpose of drawing either one or both of the said pawls out of engagement with the teeth of the ratchet wheels when it is desired to move the yoke 21 without turning the said ratchet wheels.

When the windlass is in operation the frame 1 is supported upon the bail 5 which is swung in a downward position, and by swinging the handle 23 the yoke 21 is oscillated upon its pivotal support and the pawls engage the teeth of the ratchet wheels 12 and 13 and rotate the said wheels alternately

in opposite directions. As the said wheels rotate the beveled pinion 17 rotates the shaft 16 which in turn rotates the beveled pinion 18 and the wheel and drum 7. Thus the
5 cable 19 is wound upon the said drum and the object attached to the said cable is pulled. When the device is not in use the bail 5 can be folded toward the frame 1 and the handle 23 may be detached from the yoke 21 so that
10 the parts are compactly assembled.

Having thus described the invention, what is claimed as new is:

A windlass comprising a frame, a drum journaled thereon, a shaft carried by the
15 frame, ratchet wheels journaled upon the shaft and having their teeth disposed in op-

posite directions, a yoke having side portions pivoted upon the shaft and disposed at one side of the frame, pawls carried by the yoke and engaging the ratchet wheels, means op- 20
eratively connecting the ratchet wheels with the drum, lugs located at the intermediate portion of the frame and disposed at the side thereof opposite the side at which the yoke is disposed, and a bail pivotally con- 25
nected with the lugs.

In testimony whereof I affix my signature in presence of two witnesses.

WALTER A. SAMUELL. [L. S.]

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
