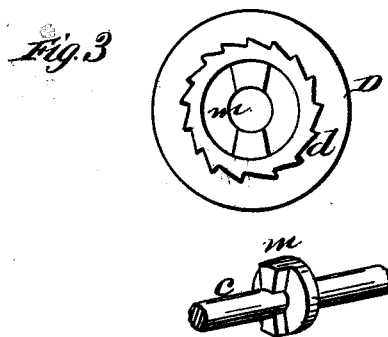
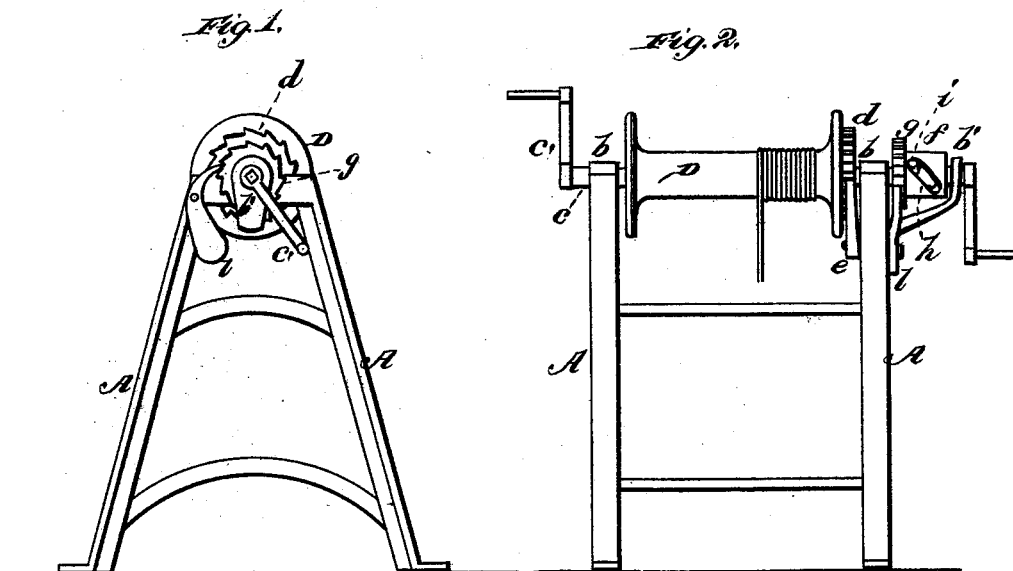


C. C. GREEN.
Dredge-Winder.

No. 220,827.

Patented Oct. 21, 1879.



WITNESSES
Robert Everett
James J. Smith

INVENTOR -
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UNITED STATES PATENT OFFICE.

CHARLES C. GREEN, OF CRISFIELD, MARYLAND.

IMPROVEMENT IN DREDGE-WINDERS.

Specification forming part of Letters Patent No. **220,827**, dated October 21, 1879; application filed August 18, 1879.

To all whom it may concern:

Be it known that I, CHARLES C. GREEN, of Crisfield, in the county of Somerset and State of Maryland, have invented certain new and useful Improvements in Dredge-Winders; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of an end of my dredge-winder. Fig. 2 is a face view of the same; and Fig. 3 is a detail view.

My invention relates to dredge-winders, which are employed in connection with boats for the purpose of hauling in oyster-dredges.

My invention relates to dredge-winders, and consists of a roller adapted to engage with the shaft upon which it is mounted, for the purpose of winding up the rope connected with a dredge, and also adapted to be automatically disengaged from the shaft, so as to turn loosely upon the same, and unwind the rope when subjected to a strain arising from the sudden and undue tension of the rope, as will be hereinafter fully described, and particularly pointed out in the claims.

In the annexed drawings, A A designate the standards of a frame, which supports the dredge-winding mechanism, and *b b'* bearings for a shaft, *c*, which is provided with suitable handles *c'*. D represents a roller, which is mounted loosely upon shaft *c*, and which is employed as a winder for the rope of the dredge.

During the process of dredging it is sometimes desirable to vary the length of the rope, and this is usually accomplished by making what is commonly termed a "becket," which consists in unwinding the rope to the required extent, and then forming a sort of loop-tie upon the roller.

In order to prevent the rotation of this roller, and the further unwinding of the rope while this loop is being formed, I provide the roller with a ratchet, *d*, and arrange upon one of the standards a pawl, *e*, for engagement therewith. During the operation of the machine, however, this pawl is not to be used, and hence is swung

round out of the way. Upon the shaft *c*, between the bearing *b'* and one of the bearings *b*, is a loosely-fitting sleeve, *f*, having a ratchet, *g*, and a slot, *h*, formed diagonally to its length, as herein shown. A stud or pin, *i*, is arranged upon shaft *c*, so as to work in the slot *h*, and a weighted pawl, *l*, is pivoted to one of the standards, so as to engage with the ratchet *g* of the sleeve *f*.

The shaft *c* is arranged to have a lateral movement, so that a clutch, *m*, or equivalent device, may be either engaged with or disengaged from suitable stops or teeth formed within the roller D.

The operation is as follows: When it is desired to haul in the dredge and wind up the rope on roller D, the shaft is connected with the said roller by the above-described clutch, and operated, as usual, by its handles. During this operation the pin *i* will be at that end of the slot *h* which is nearest to the roller, the sleeve *f*, as a matter of course, rotating with the shaft. If, now, the dredge catches upon some obstruction at the bed of the water, there will be a sudden and severe jerk and strain upon the roller, which, if the boat is sailing fast, would be sufficient, in ordinary devices of this class, to cause such a sudden backward rotation of the shaft that the life of the operator or operators would be endangered by the simultaneous reversal of the movement of the handle. Under my improvement, however, this sudden strain upon the operative parts causes an immediate disengagement of the shaft-clutch *m* from the roller, whereby the roller is left to rotate freely upon the shaft, and hence unwind or play out the rope. This disengagement of the clutch is due to the pin *i*, which will be forced to the other end of slot *h*, and thereby shift the shaft, the sleeve *f* being prevented from rotating backward by means of the ratchet and pawl *g l*, and hence the tendency of the shaft to rotate with the roller will necessarily cause the pin to travel along the diagonal slot.

By the above it will be seen that the reverse movement of the shaft, which is requisite to uncouple or disengage it from the roller, is limited, and that this movement will not be sufficient to cause any danger to the operator

from the handle of the shaft. After a sufficient length of the rope has been let out, the shaft may be engaged or clutched with the roller by shifting it into the position first above described.

What I claim is—

1. The sleeve *f*, formed with a slot, *h*, and having a ratchet, *g*, in combination with the shaft *c*, pin *i*, pawl *l*, and roller *D*, substantially as set forth.

2. The roller *D*, mounted loosely upon shaft *c*, and adapted to engage therewith by means of a clutch, in combination with the sleeve *f*,

provided with a slot, *h*, and the shaft *c*, provided with a pin, *i*, arranged to work in said slot, the sleeve being adapted to rotate in one direction with the shaft, and to be held against rotation in a reverse direction, by a pawl and ratchet, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

CHARLES C. GREEN.

Witnesses:

ROBERT M. BARR,
JAMES J. SHEEHY.