No. 821,708. PATENTED MAY 29, 1906.

W. S. EDWARD.

WINDING DRUM.

APPLICATION FILED MAR. 20, 1905.

Fig. 1.

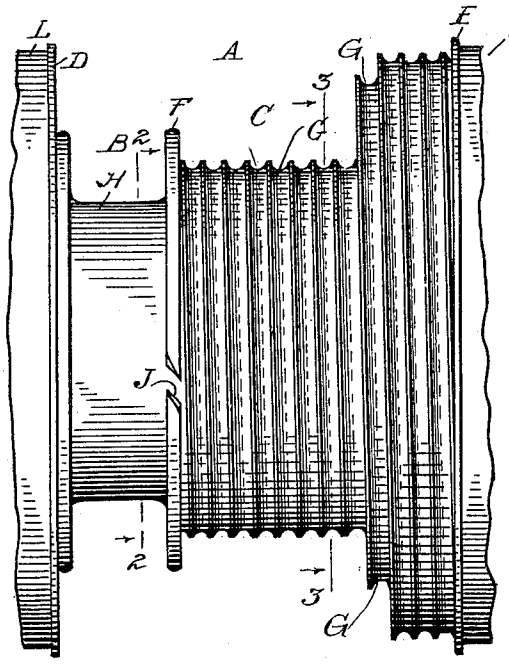


Fig. 2.

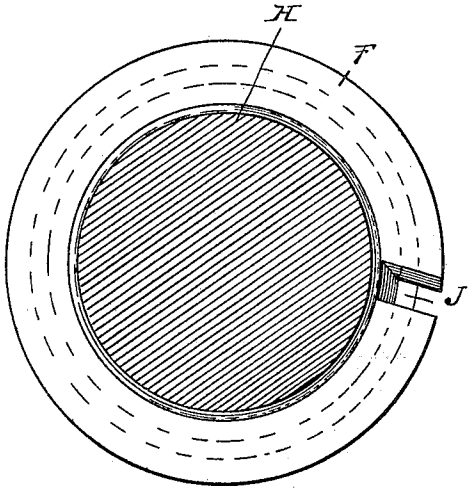
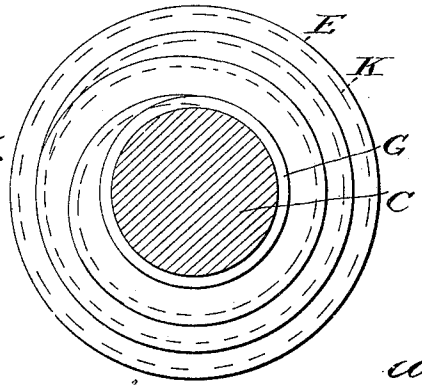


Fig. 3.



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UNITED STATES PATENT OFFICE.

WILLIAM S. EDWARD, OF SAULT STE. MARIE, MICHIGAN.

WINDING-DRUM.

No. 821,708. Specification of Letters Patent. Patented May 29, 1906.

Application filed March 20, 1905. Serial No. 251,053.

To all whom it may concern:

Be it known that I, WILLIAM S. EDWARD, a citizen of the United States, residing at Sault Ste. Marie, in the county of Chippewa and State of Michigan, have invented certain new and useful Improvements in Winding-Drums, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to a winding-drum especially designed for use in connection with hoisting and dredging machinery or analogous mechanism; and it consists in the peculiar construction of a drum of this character having, among other novel features of construction, means for receiving and storing a quantity of cable greatly in excess of the amount required for actual use, whereby worn and defective portions in the working section may be removed without sacrificing sound cable and readily replaced from the storage-supply.

Heretofore it has been the practice in the present construction of drums to wind thereon a length of cable sufficient merely for actual use in the operation of hoisting and dredging, with the result that after a short period of use the outer end of the cable constituting the actual working section or portion, usually twenty-five to thirty per cent. of the entire cable length, becomes worn and defective, necessitating the discarding of the entire cable and consequent loss of a major portion of the cable that might be further used.

To avoid waste of cable, I construct my drum with a storage-section adapted to receive a quantity of cable greatly in excess of that required for actual use, and with a working section upon which the working portion of the cable is wound. In this manner when the outer end of the cable becomes weakened and unfit for further use it is merely necessary to remove the defective portion and replace it from the storage-section of the drum.

In the drawings illustrating my invention, Figure 1 is a view in front elevation thereof, and Fig. 2 is a sectional end view on lines 2 2 of Fig. 1. Fig. 3 is a sectional end view on lines 3 3 of Fig. 1.

A represents the drum, which is divided into two sections B and C, the former for receiving surplus cable, and the latter to have wound upon it a length of cable sufficient for actual use.

D and E represent annular flanges at the ends of the drum, serving to retain the cable thereon, and F is an intermediate flange dividing the drum into the compartments or sections referred to. The surface of the drum between the flanges F and E is scored, as indicated at G, and formed in two cylindrical sections of different diameters, connected by a helix G'. The remaining portion of the drum-surface H between the flanges D and F is unbroken, preferably concaved, and of less diameter than the scored sections.

J represents an opening formed in the divisional flange F to permit the passage of the cable from one of the drum-sections to the other, and K and L are the usual brake-drums at the opposite ends of the winding-drum, usually employed in connection with the winding-drum when the latter is used in dredging.

In practice a quantity of cable is wound upon the storage-section B of the drum greatly in excess of the amount required for actual operation, while a sufficient length of cable for use is wound upon the scored section, the cable passing through the opening J in the division-wall. When the cable upon the working section becomes worn and defective, merely the weakened portion is removed, and a corresponding amount of cable is then placed upon the scored section from the storage-compartment B.

It will be obvious from the construction of drum described that the same is simple, permitting the ready replacement of the worn cable, and by reason of preventing waste of sound cable a considerable saving of expense is obtained.

While I have shown and described a construction of winding-drum which I deem preferable in use, I do not wish to be limited to the same, as it will be obvious that the drum is susceptible of many modifications without in any manner departing from the spirit of my invention, which consists, essentially, of a drum of the character described and having complementary sections upon which cable sufficient for actual use may be placed and a surplus amount greatly in excess of the working length, for the reasons set forth.

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

1. A winding-drum provided with retaining devices at its ends, and intermediate means dividing the drum into complemen-

tary cable-receiving sections, one of said sections comprising cylindrical subsections of different diameter and a helical section connecting the subsections.

2. A winding-drum consisting of a working section formed of two cylindrical and scored subsections of different diameter, and a connecting helical section, and a storage-section for surplus cable of less diameter than either of the subsections.

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

WILLIAM S. EDWARD.

Witnesses:
JOHN W. SHINE,
A. G. OLD.