

J. R. Taylor,

Canstun.

N^o 20,131.

Patented Apr. 27, 1858.

Fig. 1.

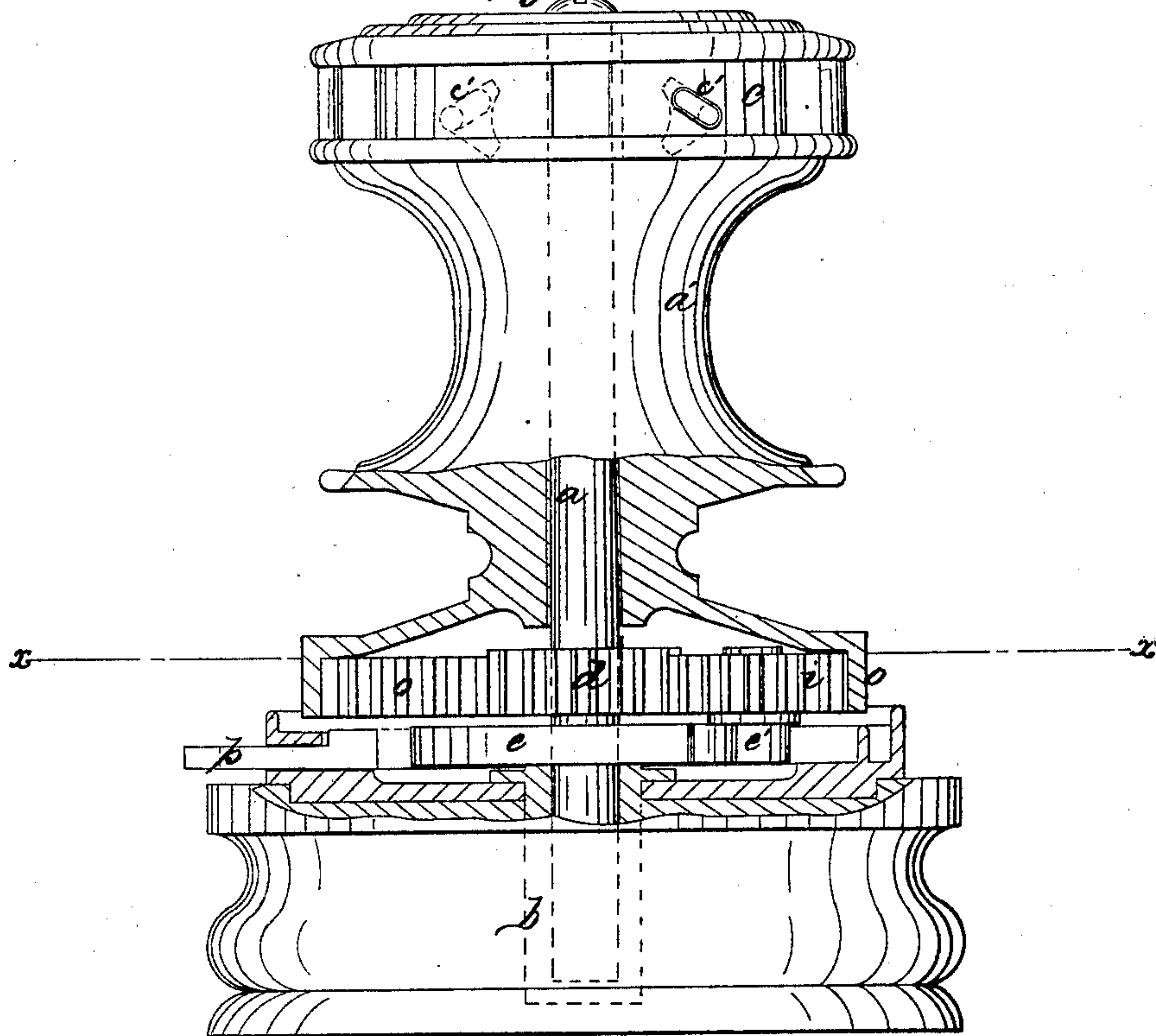
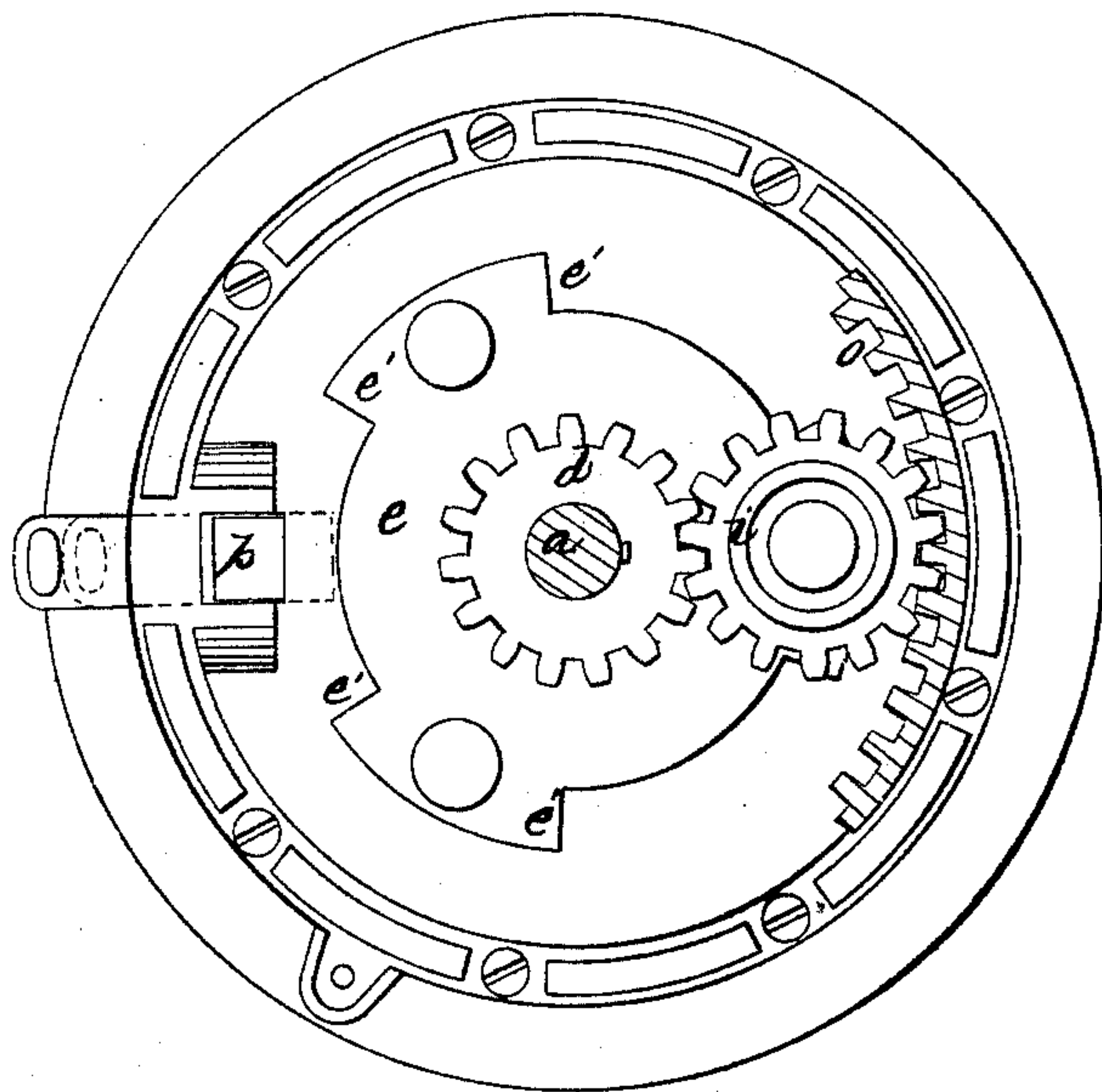


Fig. 2.



UNITED STATES PATENT OFFICE.

JAMES R. TAYLOR, OF NEW YORK, N. Y., ASSIGNOR TO WILLIAM SKIDDY, OF SAME PLACE.

SHIP'S CAPSTAN.

Specification of Letters Patent No. 20,131, dated April 27, 1858.

To all whom it may concern:

Be it known that I, JAMES R. TAYLOR, of New York, county of New York, and State of New York, have invented a certain new and useful Improvement in Ships' Capstans; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being made to the annexed drawing, making a part of this specification, in which—

Figure I is a central vertical section of the working parts. Fig. II is a horizontal section on line X X of Fig. I.

Similar letters indicate similar parts throughout.

My improvements have reference to geared capstans, and the object sought to be accomplished by these is to render such capstans capable of being geared and ungeared in a ready manner and also to render them capable of being revolved in either direction when the reducing motions or cog-wheels are in gear.

My improvement lies in having the gear wheels for increasing the power supported and carried upon a separate or detached plate, located at the base of the capstan, and maintained in position by the passage of the spindle through it, but to which said spindle is not attached. By means of this arrangement the wheels are put in and thrown out of gear in a ready manner, by stops, and whereby also the taking up or hauling in may be done in either direction indifferently.

Fig. I is a side view of the capstan, with a portion in section, at the bottom. A spindle passes down through the center, as seen at (a), its lower end being stepped in the base, in a strong socket at (b). The capstan head (c) is attached to this by a key or bolt so that when the latter is revolved the spindle will be carried around with it. On the spindle, and in line with the base of the capstan-groove, is a pinion (d) keyed fast, and underneath this lies the gear-carrier. This is a flat plate of metal of the shape shown in the top view Fig. II at (e); in its center there is a hole large enough for the spindle (a) to pass through freely, and near its rim there are three cog wheels, like (i), placed equidistant apart. These wheels gear into the pinion (d), on the one hand, and on the

other into the interior cogged rim of the capstan body, at (o). The edge of the plate (e) is furthermore notched to form catching places for the stops, as at (e'), and the plate is supported upon the projecting flange of the socket (b) so that it is clear of all obstruction.

At (c') are the pawls, shown in dotted lines under the capstan-head, for connecting said head with the body (a'), when both are intended to revolve together, being the usual fixture for that purpose. When these pawls are engaged and the capstan operated, the body (a') will revolve at the same rate as the head and the power will then be proportionate to the speed and number of men at the bars, the gear-wheels merely revolving without acting, because it will be seen that the intermediate wheels (i) being supported on the loose plate (e) the latter will be carried around in the general motion of the capstan. When therefore the power is to be increased by bringing said wheels into action, the revolution of this plate must be arrested. This is readily done by means of stops in the form of slide-bolts placed in the permanent base of the capstan, and shown at (p). Push (p) in until its end strikes against the edge of the plate (e) between the catches (e'); the moment therefore that one of those bears against the bolt all further motion is arrested, and consequently the pinion (d) takes effect. The motion of the capstan body being now reversed, the pawls (c') must also be reversed, so that they will glide over the ratchet-teeth on the body (a'). It will be seen that the capstan while operating with the gear wheels can revolve in either direction, which is not the case with the old kind wherein the intermediate wheels are fixed to a permanent bed-piece.

I claim as of my invention—

The freely revolving plate (e) for carrying the intermediate gear-wheels, in combination with the capstan-head and with the shifting stop (p), substantially as described.

In testimony whereof I have hereunto set my hand.

JAMES R. TAYLOR.

Witnesses:

J. P. PIRSSON,
S. H. MAYNARD.