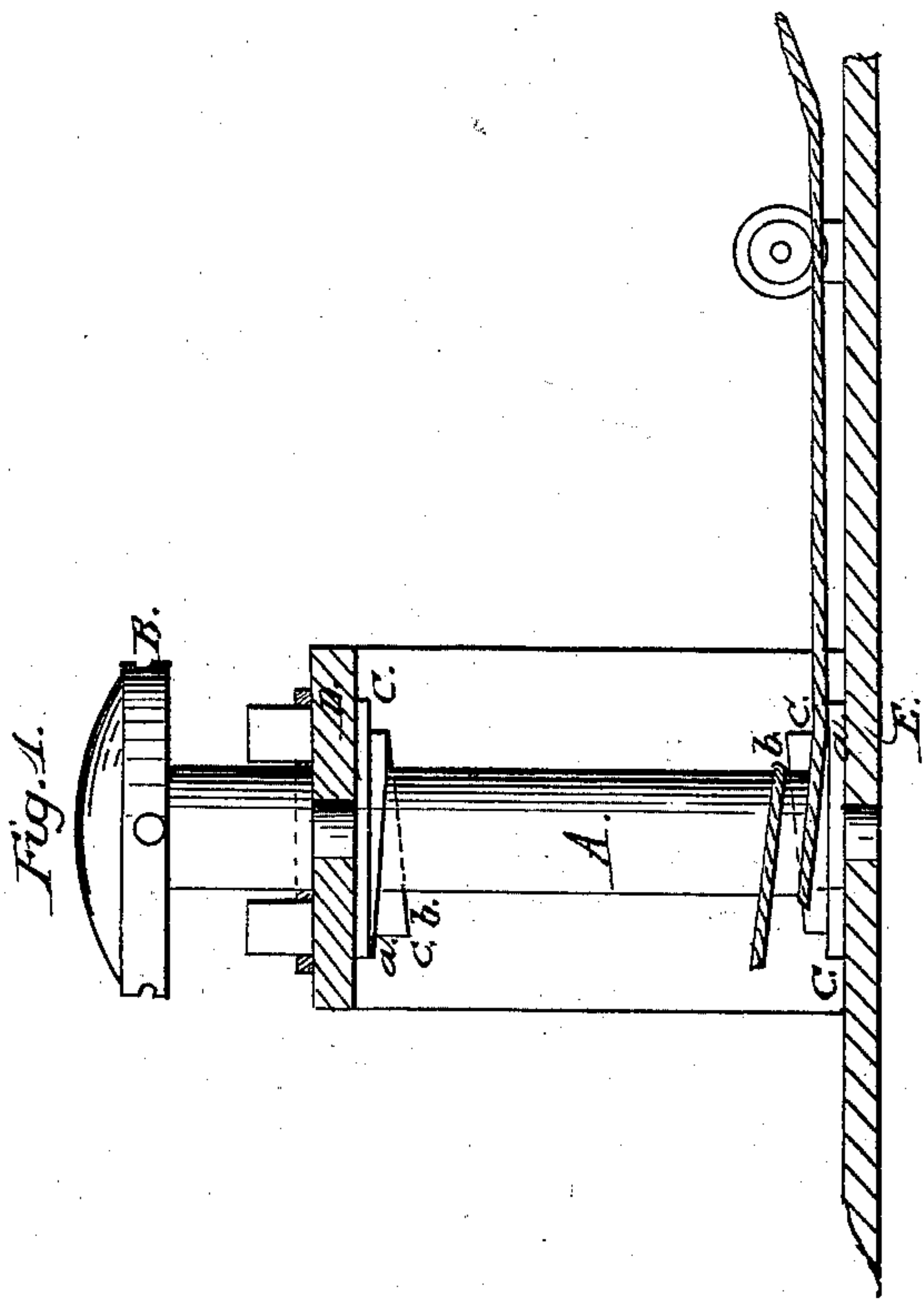
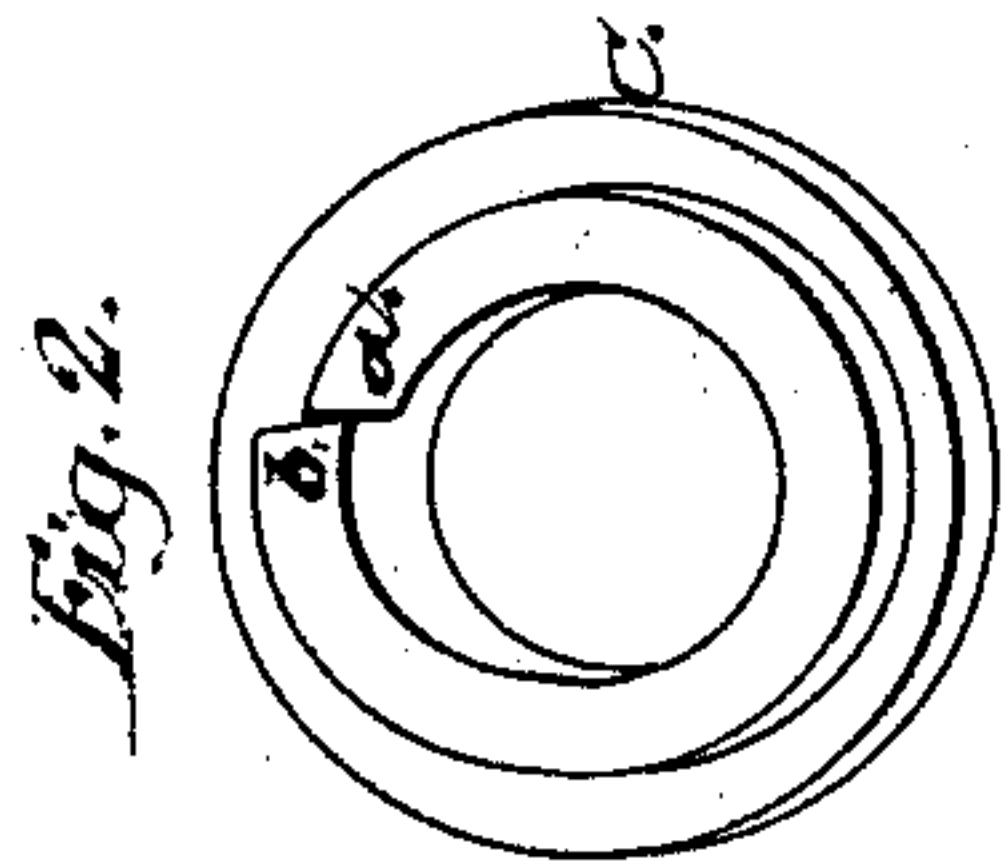


C. L. Willis,

Carstan.

No. 88,761.

Patented Apr. 6. 1869.



Witnesses:
Geo. D. Rothwell.
Phil. F. Larmer.

Inventor,
Cornelius L. Willis
by Frederick H. H. H.
Att'y

United States Patent Office.

CORNELIUS L. WILLIS, OF WASHINGTON, DISTRICT OF COLUMBIA,
ASSIGNOR TO HIMSELF AND GEORGE P. GOFF, OF SAME PLACE.

Letters Patent No. 88,761, dated April 6, 1869.

IMPROVEMENT IN CAPSTAN.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, CORNELIUS L. WILLIS, of the city and county of Washington, and District of Columbia, have invented a new and useful Improvement in Capstans; and I do hereby declare that the following is a full, clear, and exact description thereof, sufficient to enable others skilled in the art to which my invention appertains, to make and use the same, reference being had to the accompanying drawings, making a part of this specification, and in which—

Figure 1 is a side view of the capstan.

Figure 2 is a perspective view of one of the collars detached.

With ordinary capstans, the cable, when it reaches the upper or lower part of the drum, catches there by coiling unevenly, so that one coil rides up on another, thus causing delay, and requiring constant attention and adjustment.

The object of my invention is to avoid this difficulty; and

It consists in the employment of a collar, or collars, having helical flanges, and encircling the drum, said collars being attached, one at the top and one at the bottom of the winding surfaces of the drum, as will be hereinafter described.

Similar letters of reference indicate like parts in the two figures.

In the drawings—

A represents the drum, mounted in a suitable frame,

on a platform, and provided with the usual capstan-head B.

C C are collars, encircling the drum A, and secured, respectively, to the part D of the frame, and to the bed E, or to the deck. Each collar is formed with a helical flange on one side. This flange begins at *a*, and gradually increases to the point *b*, immediately over the point *a*, where it ends abruptly in a shoulder, *c*. The flanges of the collars face each other, and are arranged as shown.

The operation will be readily understood. When either the upper or lower collar is reached during the turning of the capstan, the cable will rest on top of the inclined surface *a b*, and will thereby be prevented from catching, coiling unevenly, or riding.

The advantages of this device will be at once seen and appreciated by those acquainted with capstans, as heretofore constructed.

Having thus described my invention,

I claim as new, and desire to secure by Letters Patent—

The collar, or collars, having a helical flange, or flanges, as applied to the drum A, for the purpose described.

The above signed by me, this 19th day of March, 1869.

Witnesses:

DAVID R. SMITH,
JAMES KIPP.

C. L. WILLIS.