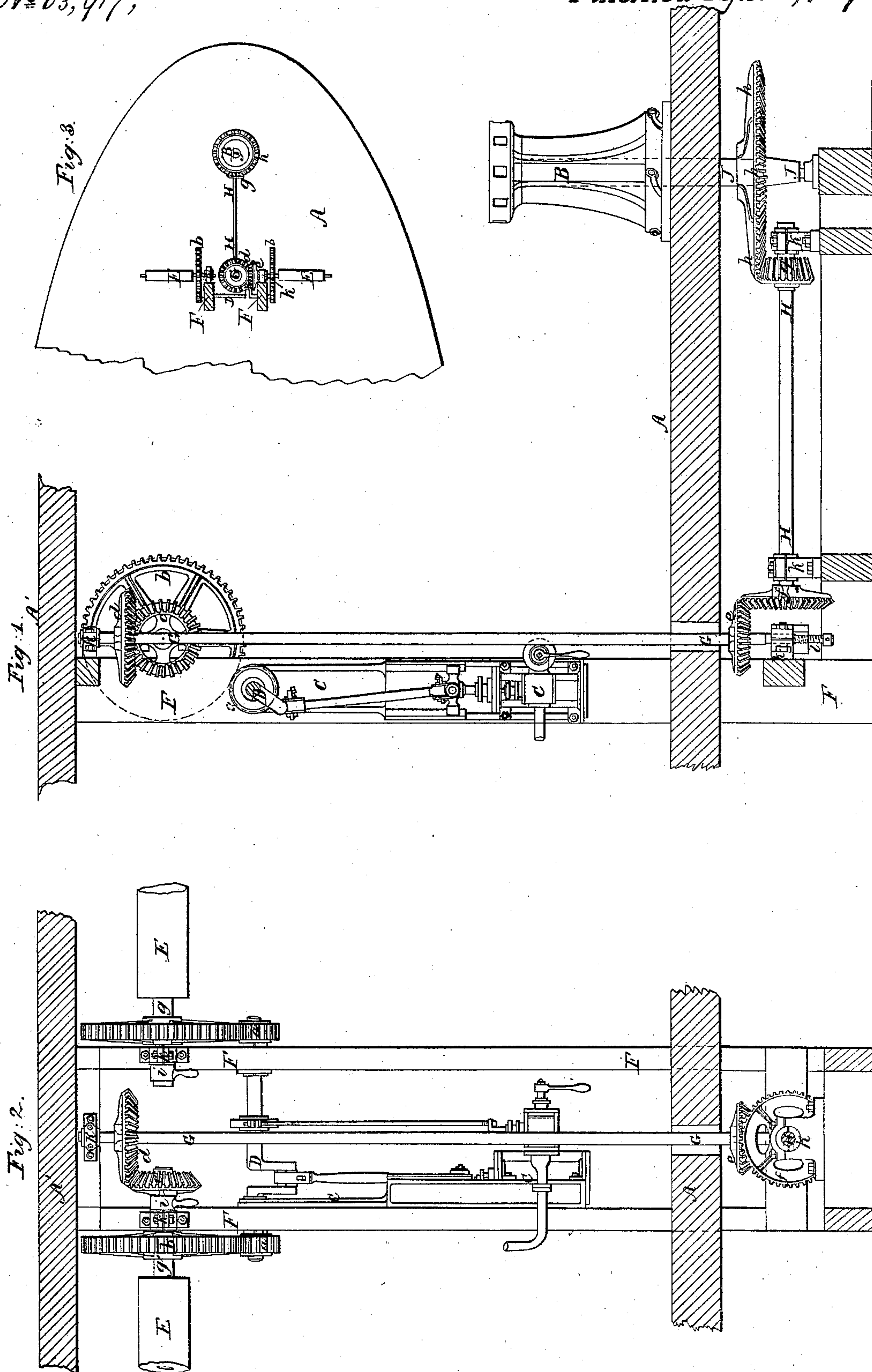


J. S. McMillan,

Applying Steam Power to the Capstans of Vessels.

No 63,917,

Patented Apr. 16, 1867.



UNITED STATES PATENT OFFICE

JOHN S. McMILLIN, OF PITTSBURG, PENNSYLVANIA.

IMPROVED APPLICATION OF STEAM-POWER TO THE CAPSTANS OF VESSELS.

Specification forming part of Letters Patent No. 63,917, dated April 16, 1867.

To all whom it may concern:

Be it known that I, JOHN S. McMILLIN, of the city of Pittsburg, county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Applying Steam-Power to the Capstans of Steamboats and other crafts; and I do hereby declare that the following is a full and exact description of the same.

The nature of my invention consists in connecting the capstan with the freight-hoisting engine or other engine of steamboats and other crafts by means of shafts and cog-wheels, so as to operate the capstan by steam-power instead of hand-power as has been generally used heretofore.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation, reference being had to the annexed drawings forming part of this specification, in which—

Figure 1 is a side elevation of the capstan, hoisting-engine, and the shaft and wheel connection between them; Fig. 2, a front view of the hoisting-engine and connecting-shafts; Fig. 3, a plan of situation of the capstan, engine, and connecting-shafts at the fore-castle of the boat.

In all the figures the same letters refer to the like parts in each.

A is the deck; A', the boiler-deck; B, the capstan; C, the hoisting-engine; F, the wooden frame-work of the engine; D, the engine-shaft; E E, the hoisting-rollers connected with the engine-shaft by the cog-wheels *a* and *b*. G is a vertical shaft extending from the hold of the boat to the cargo wheel-shaft *g*; with the latter it is connected by the bevel-wheels *c d*. H is a horizontal shaft in the hold of the boat,

at the middle bulk-head, extending from the vertical shaft G to the capstan B. With the former it is connected by the bevel-wheels *e f*, and with the latter by the bevel-wheels *g h*. The capstan is permanently fastened to its shaft J. The vertical shaft G is arranged so that it can be lifted or lowered by means of the set-screw *l*, whereby the bevel-wheels *c d* and *e f* can be set out or in gear at leisure, interrupting or establishing the connection with the engine. K K are the bearings of the shaft. *i i* are hooks, which can be taken off and the cargo wheel-shaft shifted aside so that any of the hoisting-rollers may be disengaged.

The operation is as follows, viz: When the engine is set in motion the same is communicated by the described shafts and wheels to the capstan. The line is thrown over the capstan as usual, and one man to pay off the line and another to attend to the engine are all the hands necessary in the operation.

The advantage in the above-described arrangement is that two men in one hour can do with it the labor of more than six under the old plan where hand-power is used. It works steadily and regularly, and the lives of the men are not endangered as in the old plan.

What I claim herein as my invention, and desire to secure by Letters Patent, is—

Rotating a capstan placed on deck of a boat by means of an auxiliary engine, when said engine and capstan are placed forward of the steam-boilers of said boat, substantially as hereinbefore described, and for the purposes set forth.

JOHN S. McMILLIN.

Witnesses:

W. O. LESLIE,
H. MOESER.