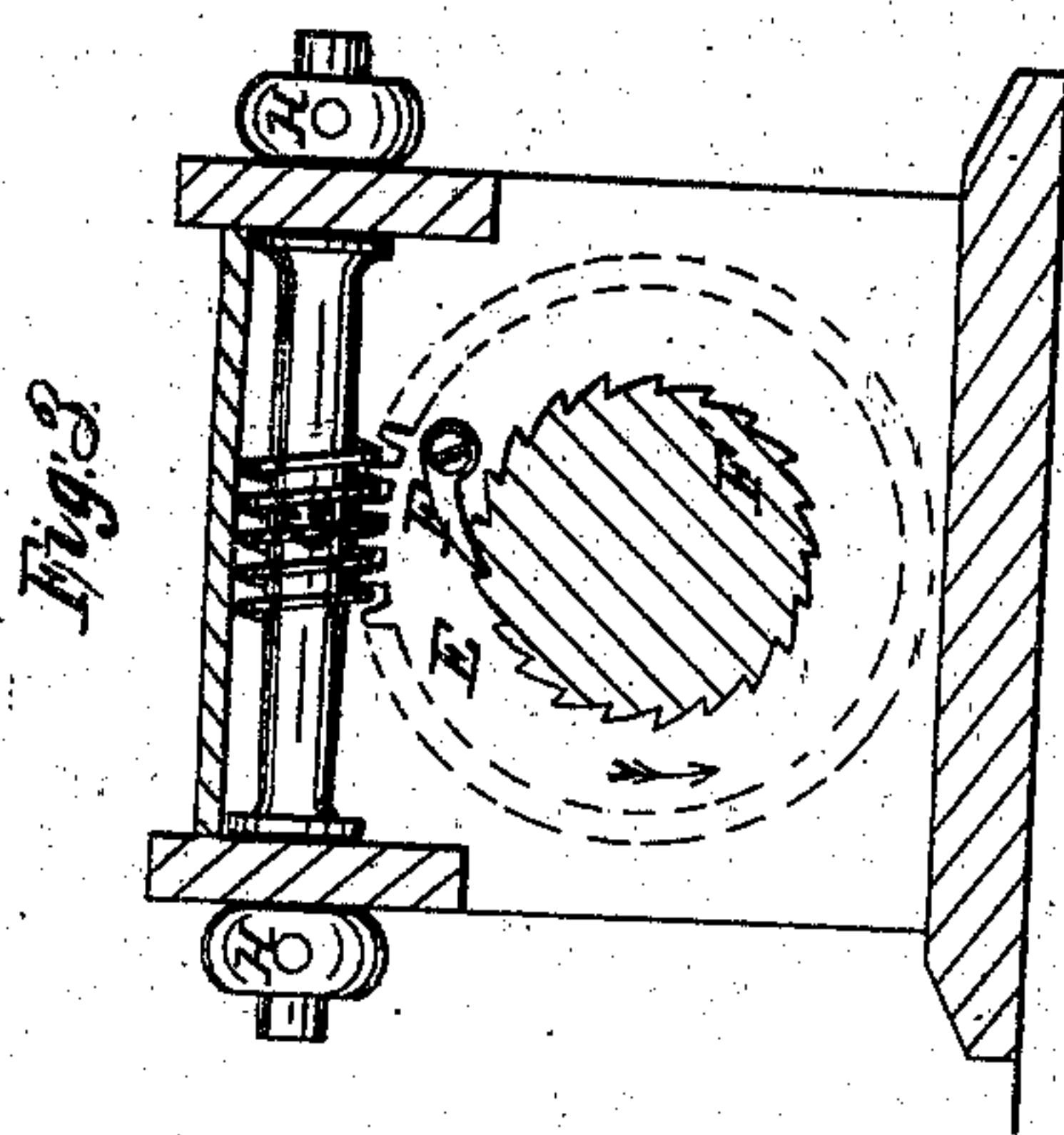
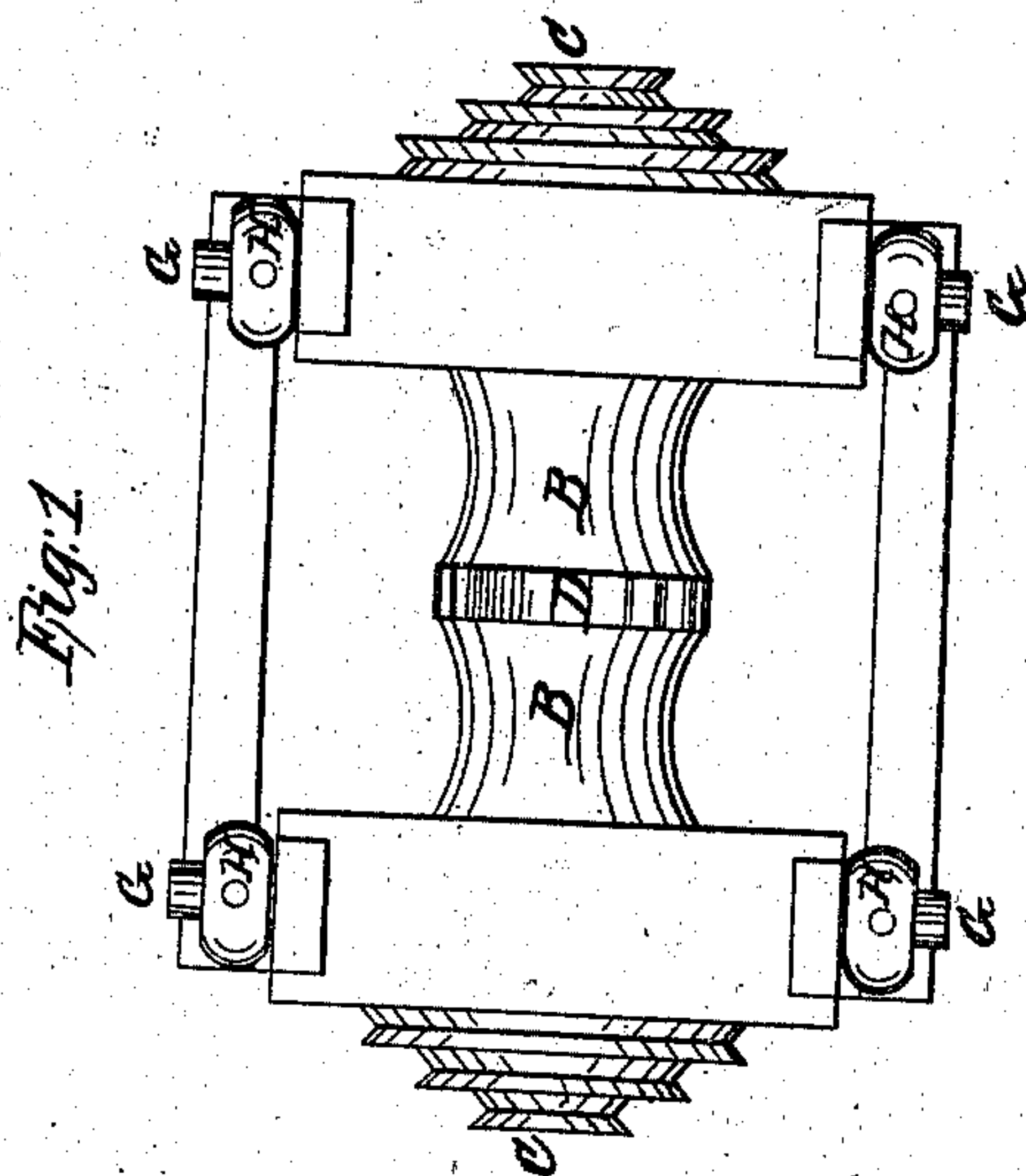
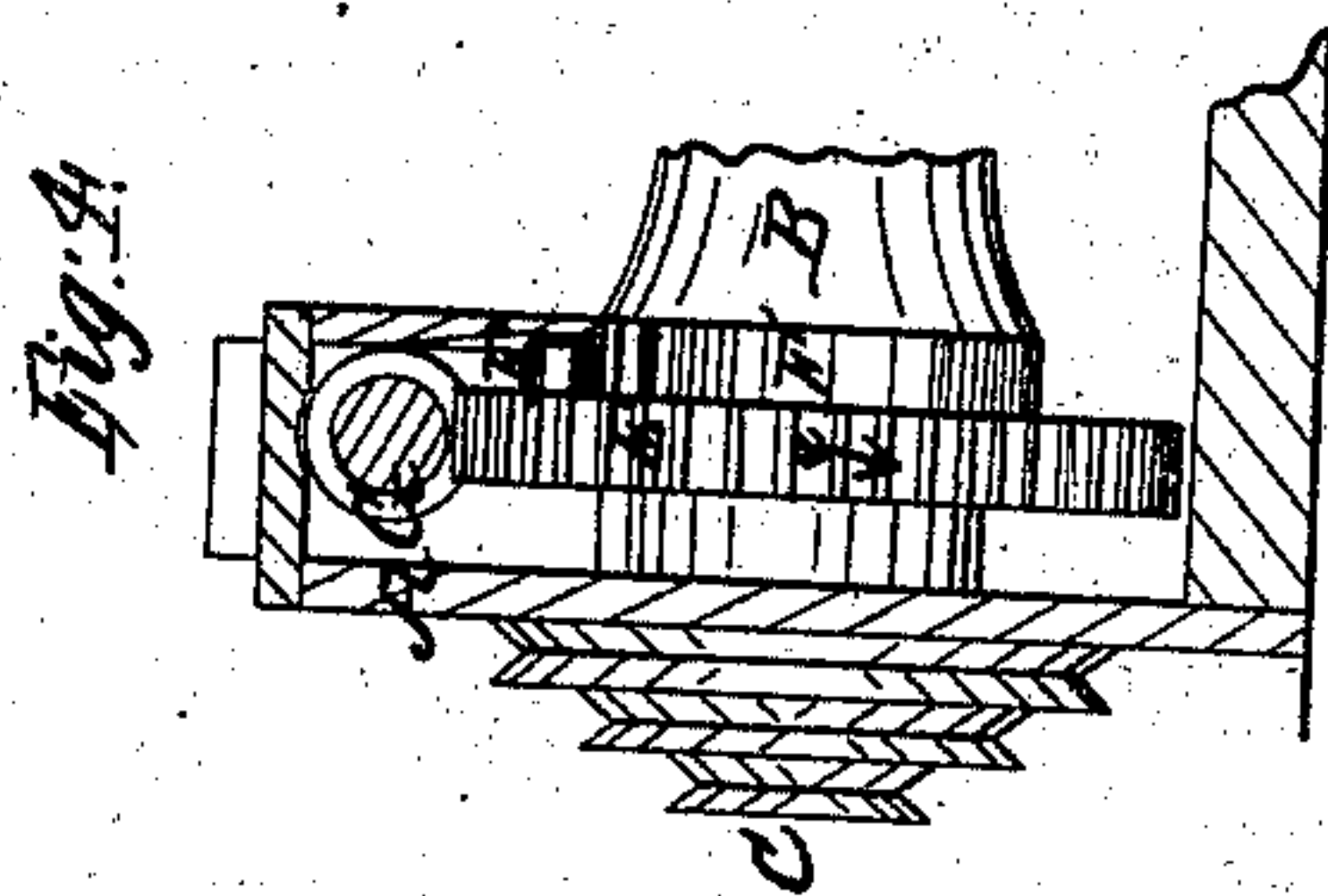
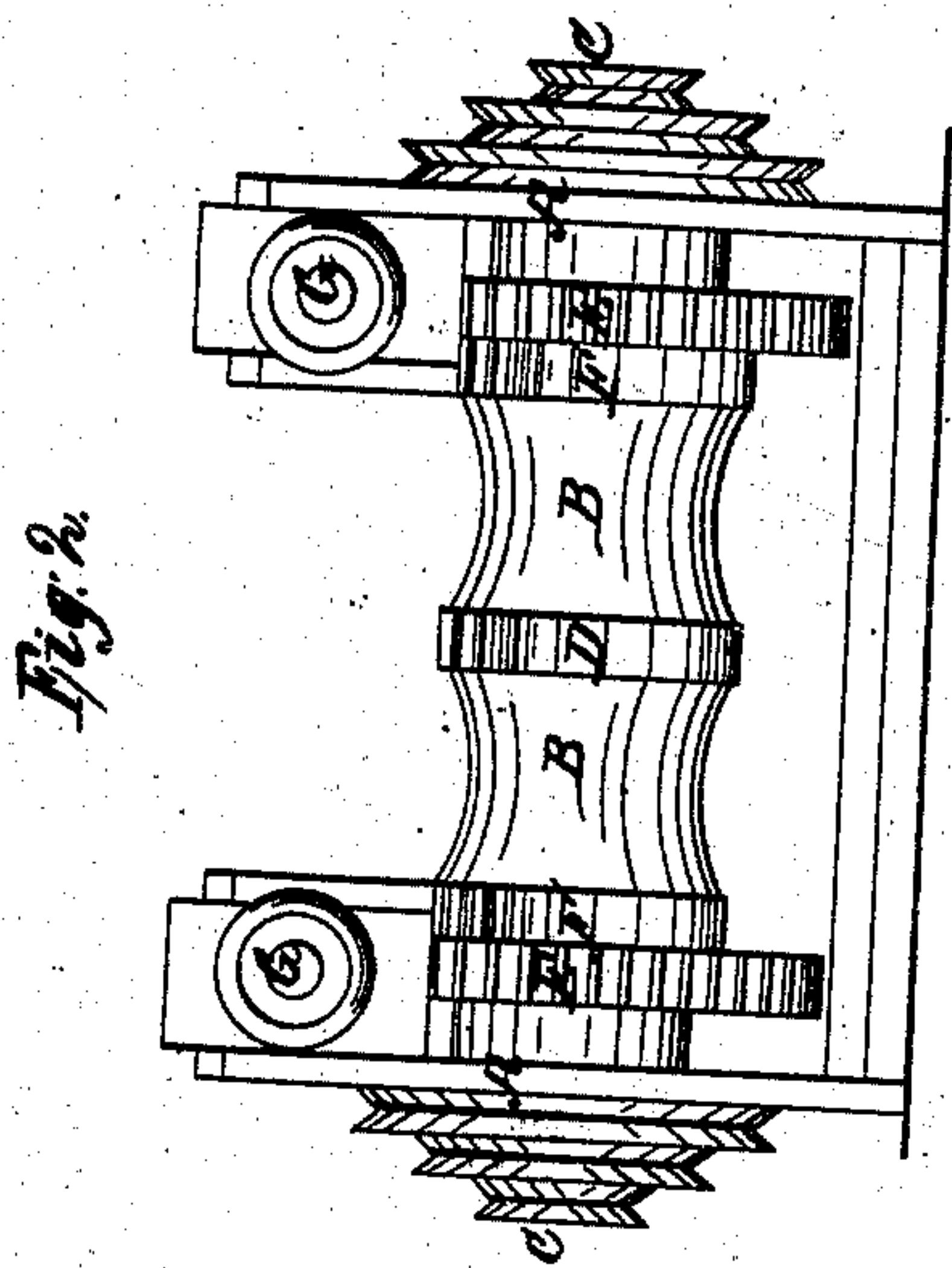


*J. Stone,  
Windlass.*

*No. 36,870.*

*Patented Nov. 4, 1862.*



*Witnesses.*

*W. H. Burdick  
Henry Roth*

*Inventor  
Joel Stone*



# UNITED STATES PATENT OFFICE.

JOEL STONE, OF CLEVELAND, OHIO.

## IMPROVED WINDLASS.

Specification forming part of Letters Patent No. 36,870, dated November 4, 1862.

*To all whom it may concern:*

Be it known that I, JOEL STONE, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented new and useful Improvements in Windlasses for General Purposes; and I do hereby declare that the following is a full and complete description of the construction and operation of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a top view. Fig. 2 is an end view. Fig. 3 is a cross section, and Fig. 4 is vertical section.

My invention relates to the construction of a windlass for general purposes, whether on shipboard, in warehouses, on buildings, or on farms.

The windlass as a whole consists of a drum, two gear-wheels, one near each end, two endless screws, pawls and ratchet, and a suitable frame-work.

The posts that support the windlass-drum are shown at A. These may consist of a single plank or a frame-work in the form of a panel.

B represents the windlass-drum or horizontal capstan. Upon the shaft of the drum B, and outside of the frame on both ends, is a set of pulleys, C C, for raising light weights in warehouses, &c. In the middle of the drum B is a ratchet, D, which may be supplied with a pawl, to prevent the drum from turning backward in raising light weights.

E E, Figs. 2, 3, and 4, represent gear-wheels, which run loosely upon the shaft of the windlass-drum, and are connected with the drum by a pawl, F, attached to the wheels E, and a ratchet-wheel, F', upon the windlass-shaft; consequently the windlass-shaft can always be

turned in one direction independent of the movement of the gear-wheels.

G G represent endless screws, which work in the cog-gears, as seen in Fig. 3. These screws are placed at right angles to the shaft of the windlass and above the cog-gear wheels E E. The endless screws are turned by means of pins or arms placed in the holes H, at each end of the screws and outside of the frame-work.

In raising heavy weights the cable or rope to which it is attached can have two or three turns around the drum B and kept taut by a man pulling upon the free end. Now, by turning either or both the screws in such a direction that the wheels E will be caused to turn in the direction of the arrow in Fig. 3, the pawl F will take hold of the teeth of the ratchet F' and slowly but powerfully rotate the windlass.

Either one or both screws may be caused to act at the same time, which will be necessary in raising very heavy weights; but for ordinary purposes one screw will be sufficient. The movement of each is independent of the other, and as long as the pawl is in contact with the teeth of the ratchet the shaft of the windlass cannot turn backward.

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

The use of the two horizontal screws G G, constructed and actuating the windlass B, substantially as described, the windlass having at its extremities a succession of pulleys or groove, C, as set forth.

JOEL STONE.

Witnesses:

W. H. BURRIDGE,  
HENRY VOTH.