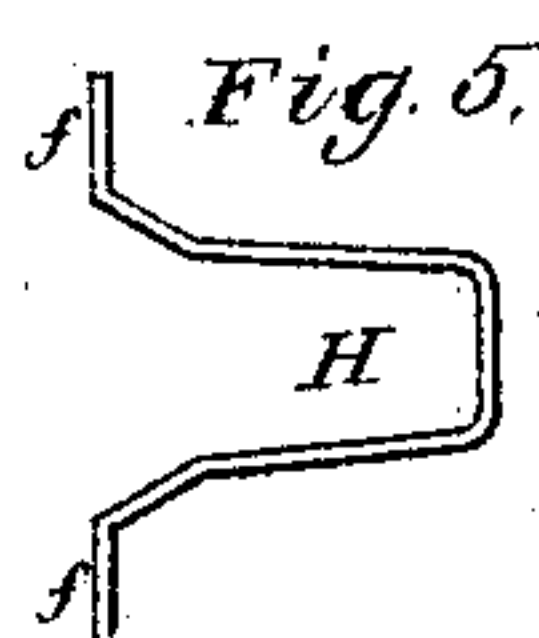
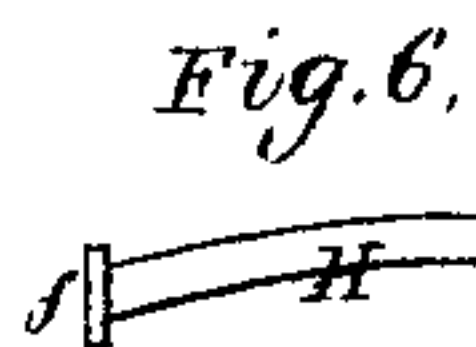
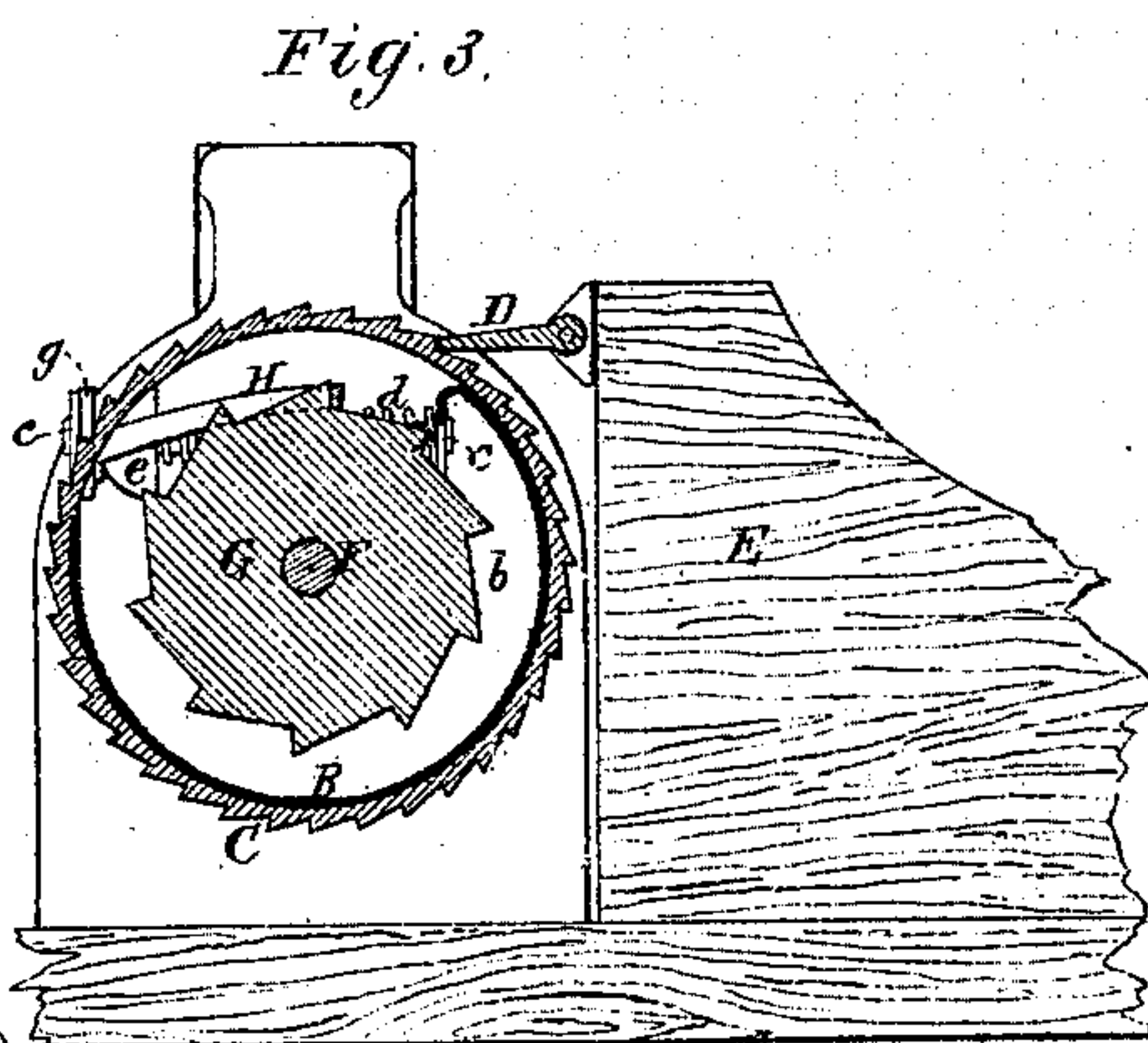
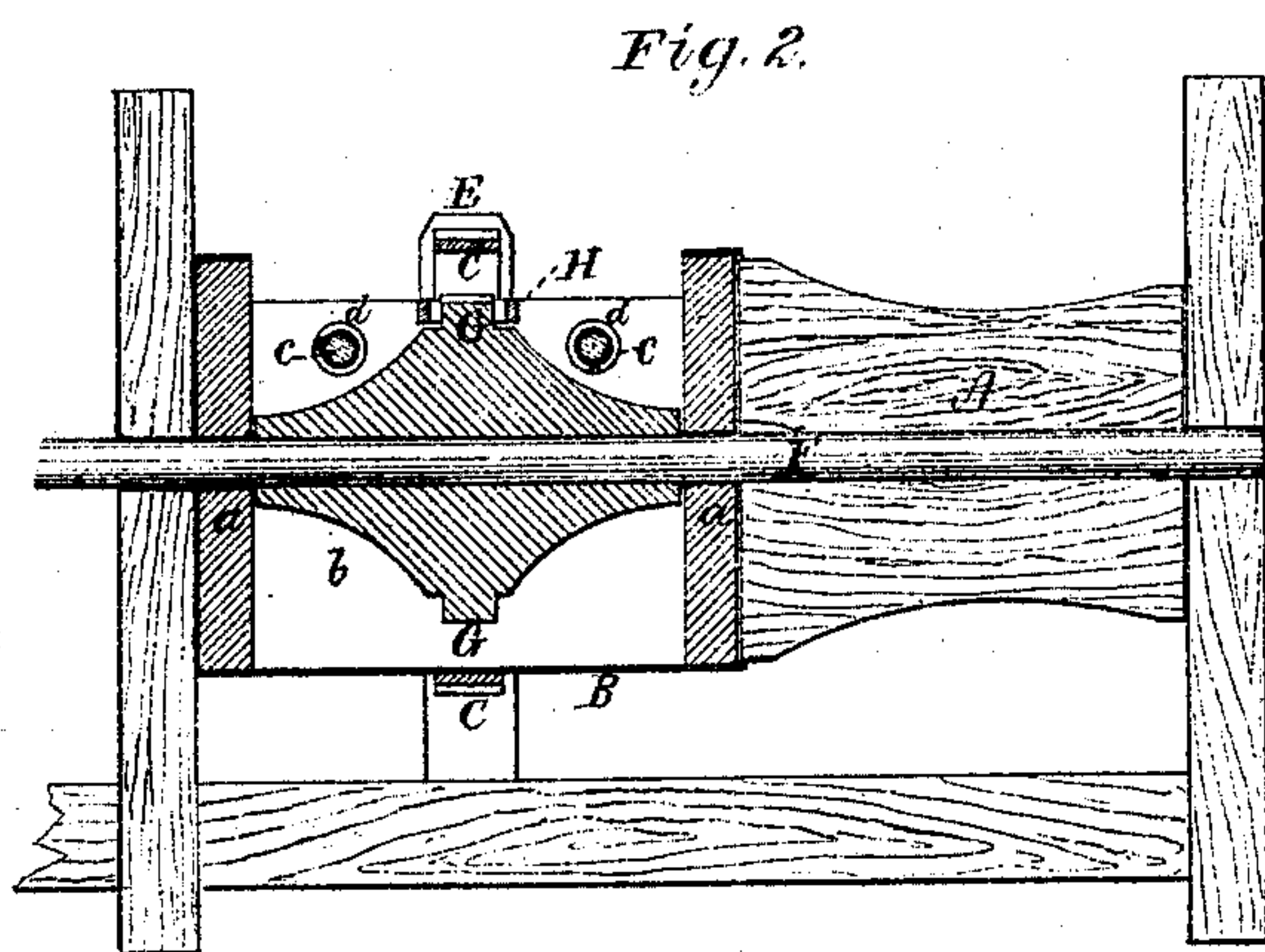
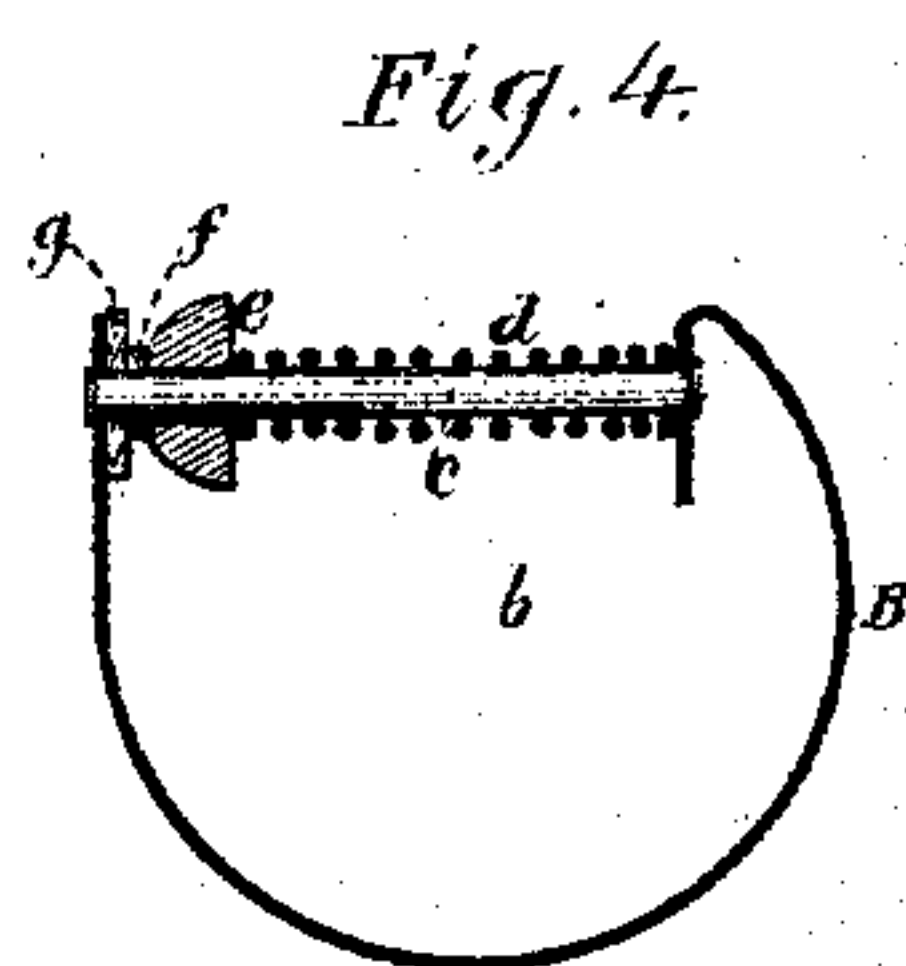
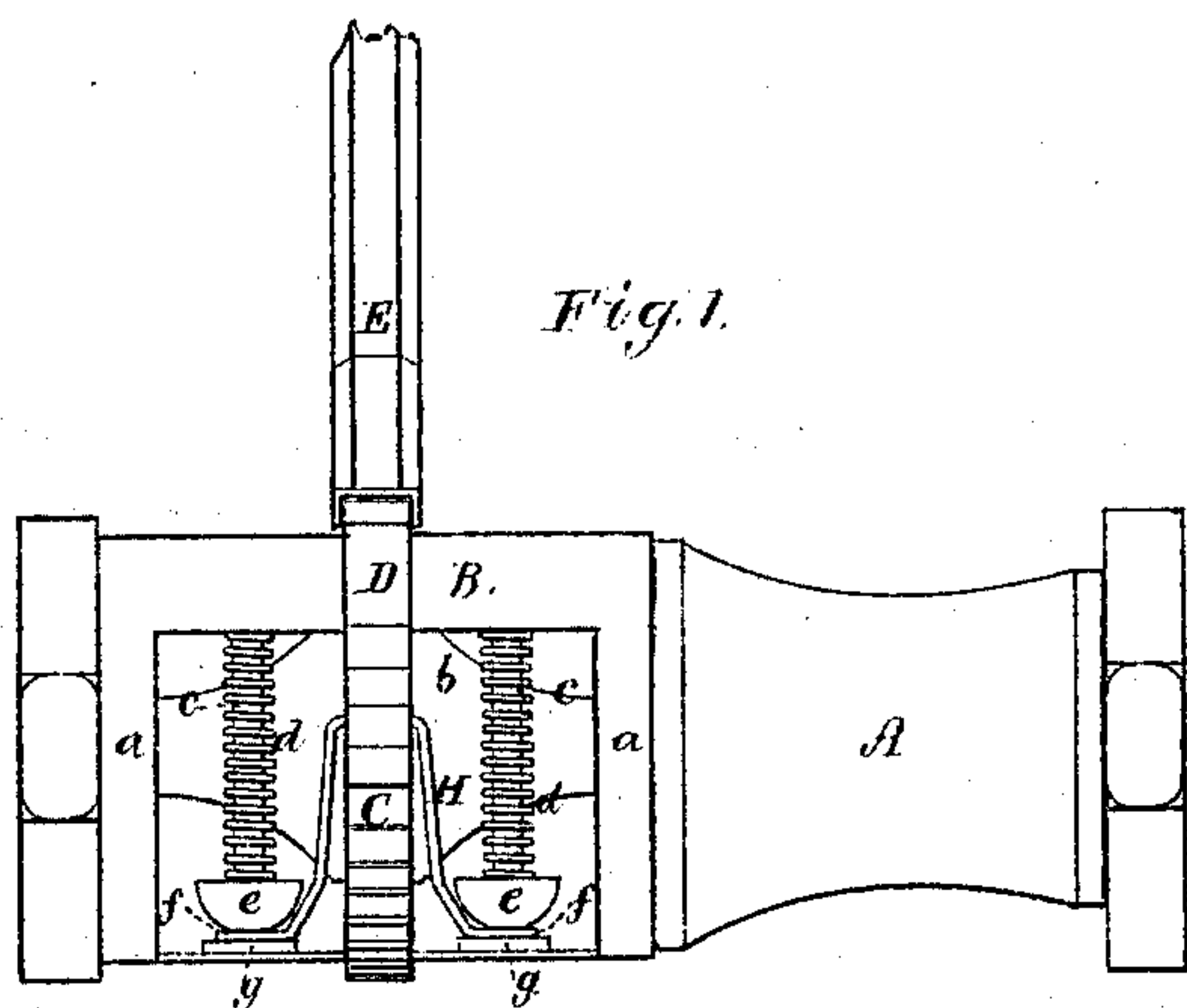


Improvement in Windlasses for Vessels.

No. 122,831.

Patented Jan. 16, 1872.



Witnesses
L. N. Mceller
J. R. Snow

Oliver P. Hix
by his attorney
R. E. Ledy

UNITED STATES PATENT OFFICE.

OLIVER P. HIX, OF ROCKLAND, MAINE.

IMPROVEMENT IN WINDLASSES FOR VESSELS.

Specification forming part of Letters Patent No. 122,831, dated January 16, 1872.

To all persons to whom these presents may come:

Be it known that I, OLIVER P. HIX, of Rockland, of the county of Knox and State of Maine, have invented a new and useful Improvement in Windlasses for Navigable Vessels; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawing, of which—

Figure 1 is a top view, Fig. 2 a longitudinal section, and Fig. 3 a transverse section of a windlass or one-half thereof provided with my invention.

In this windlass the portion or barrel A on which the rope or chain is to wind is separate from the part B which carries the circular ratchet or toothed rack C to operate with the stop-pawl D pivoted to a post or standard, E. The portion B is cylindrical and chambered to receive the windlass-shaft F which, fastened to the part A, goes axially through the portion B, and revolves freely in the heads *a a* of such part B. Within the chamber *b* of the portion B, and fixed upon the shaft F concentrically therewith, is a ratchet-wheel, G, on which a bow or yoke, H, is hitched. This bow, near its ends, slides freely upon two rods, *c c*, and against the slides *e e* of two helical springs, *d d*, which encompass the said rods, extended transversely across the chamber *b*, all being arranged as shown. Between the feet *f f* of the yoke and the inner curved surface of the chamber *b* are elastic abutments, cushions, or springs *g g*.

Fig. 4 is a transverse section of the part B taken through one of the rails and its springs. Fig. 5 is a top view, and Fig. 6 an edge view of the yoke.

It is to the part B that the pawl-case and

its ratchet-wheel are to be applied for revolving the windlass, the power for turning the part A thereof operating through the springs and the yoke upon the ratchet-wheel of the windlass-shaft, and, as a consequence, against the elastic force of the springs, which thus prevent any sudden movements of the pawl-case from breaking the chain or cable or any sudden draft on the said chain or cable from breaking it, the springs operating as "surge relievers."

This construction of windlass has advantages over that for which Letters Patent No. 117,073, dated July 18, 1871, have been granted to me, for it admits of the barrel or part A being revolved (to wind up the cable) independently of the part B, and by means of a hand-spike or other suitable power applied to such part A in which case the ratchet-wheel of the shaft will slip under the open pawl or yoke. By reason of the action of the springs against the feet of the yoke the said yoke will be kept in engagement with the ratchet-wheel while such yoke may be passing through the lower half of its path of revolution.

I claim—

The combination of the yoke H, the springs *d d*, and their supporting-rods *c c* with the chambered part B, and with the ratchet G, the shaft F, and the part or barrel A, the said part B being provided with the annular ratchet or rack C and stop-pawl D, and all being arranged and applied together substantially in manner and to operate as described.

OLIVER P. HIX.

Witnesses:

R. H. EDDY,
S. N. PIPER.

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