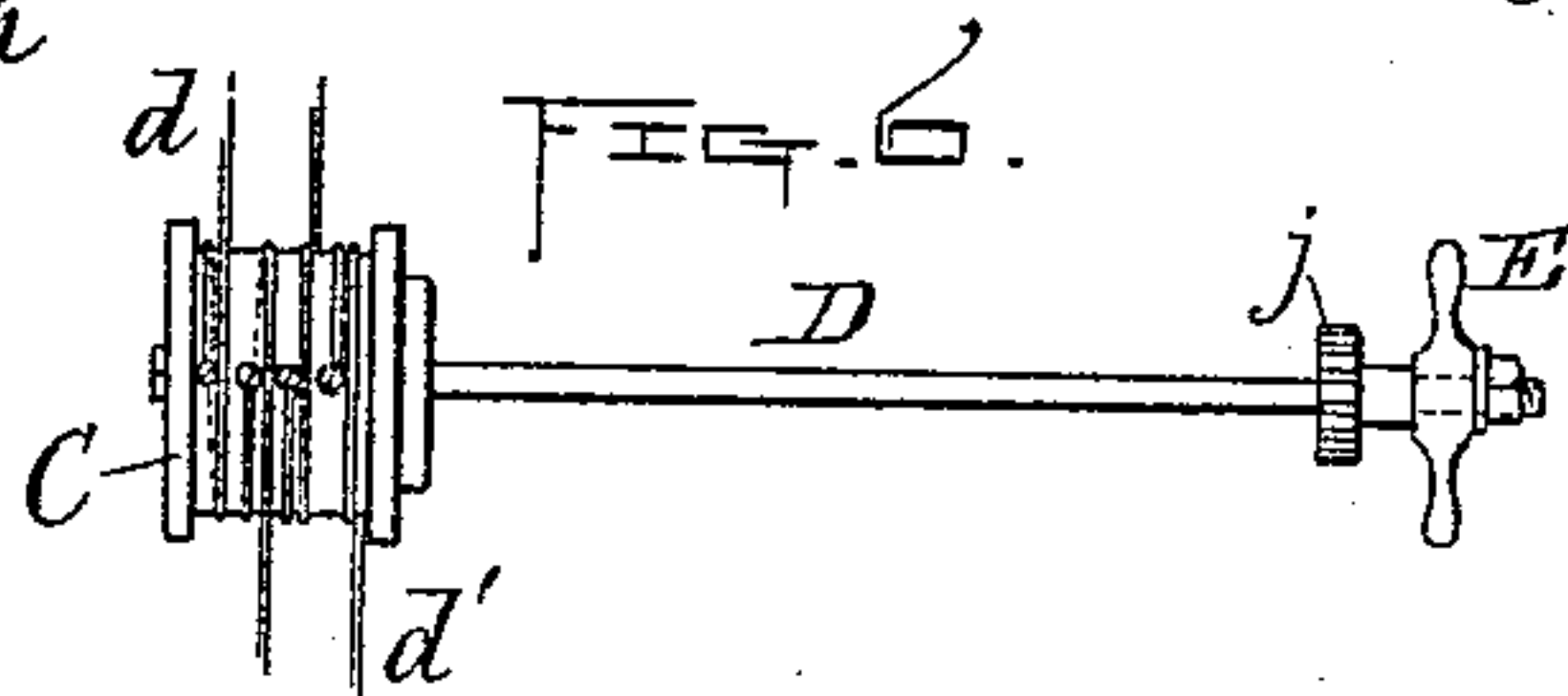
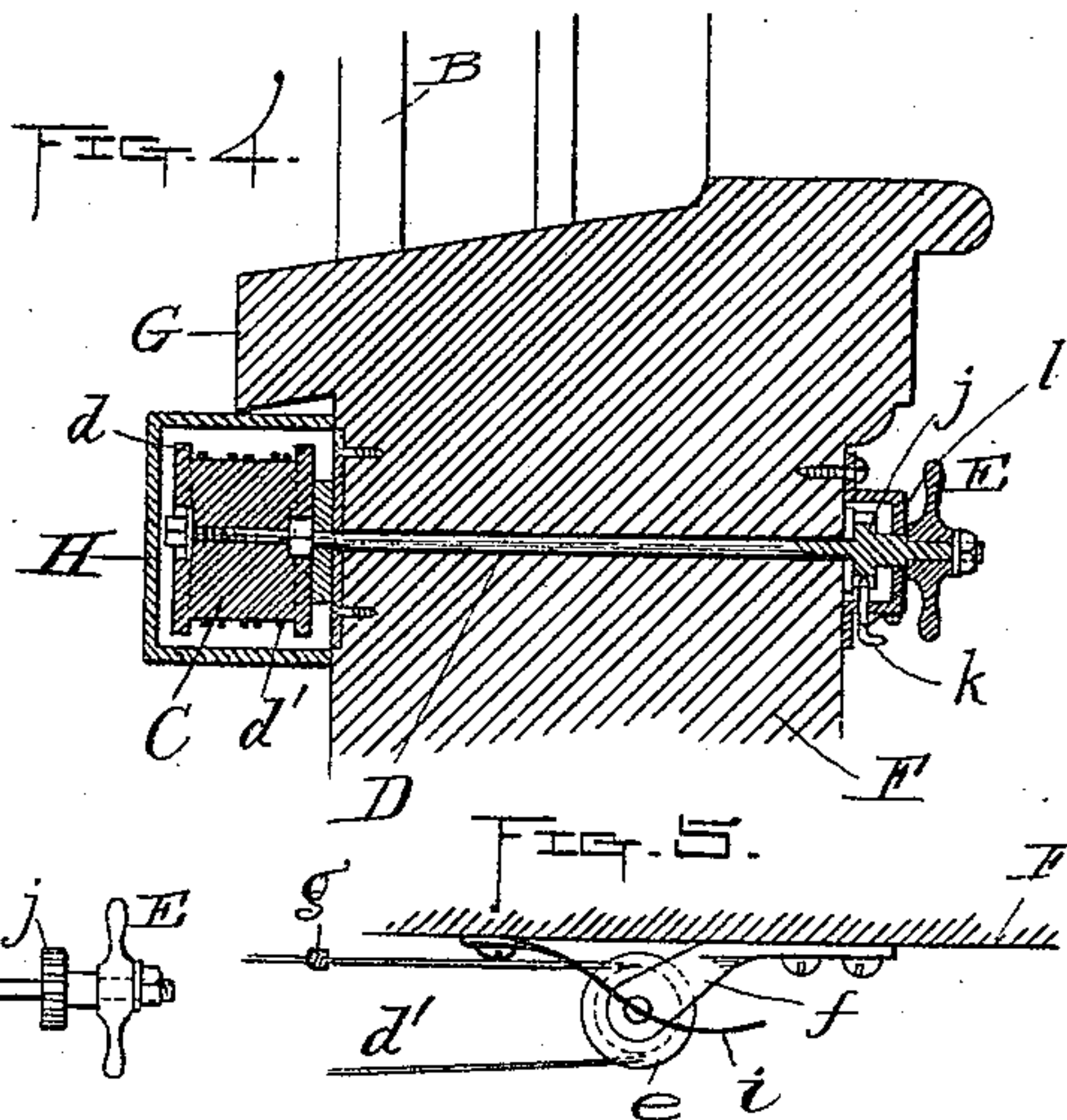
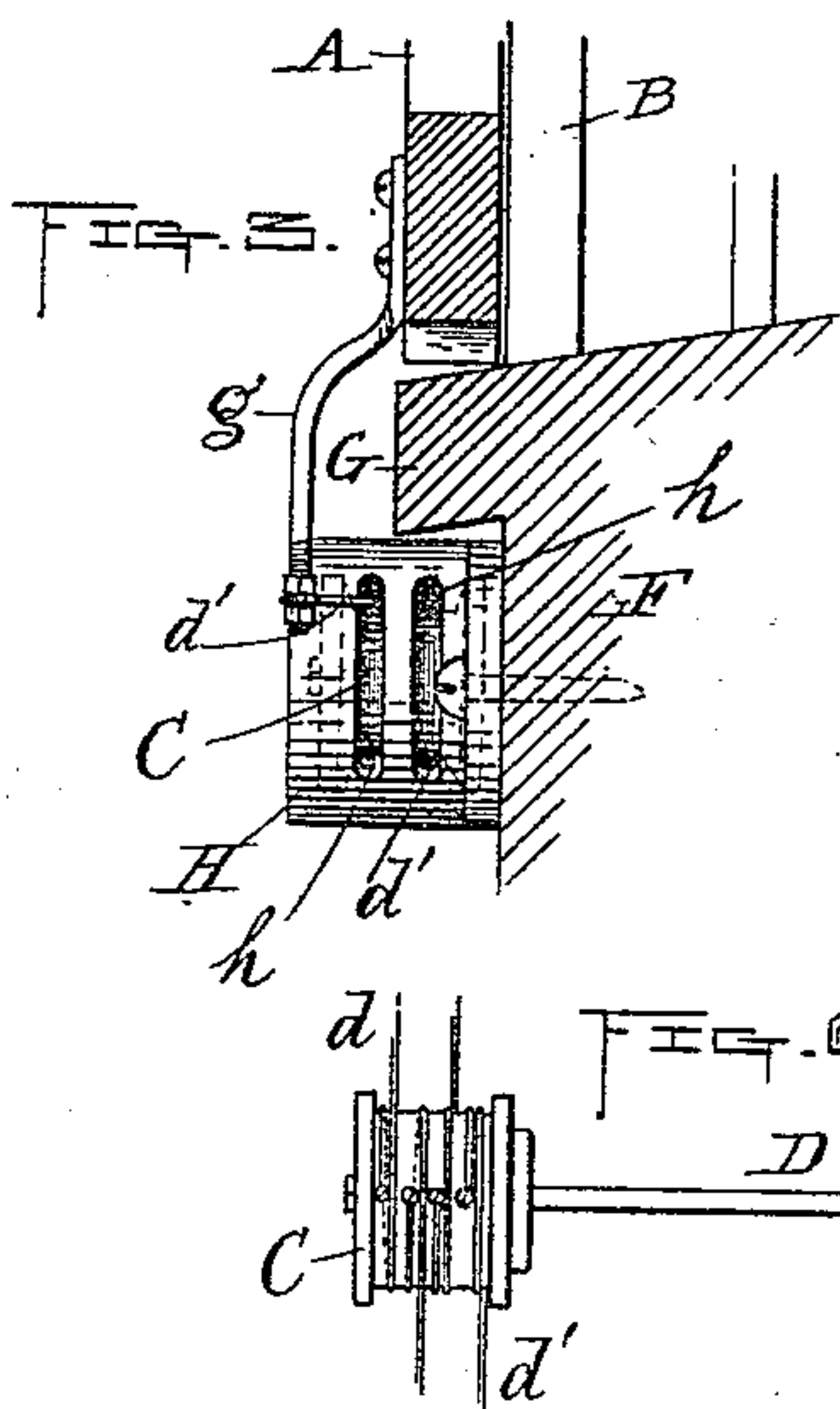
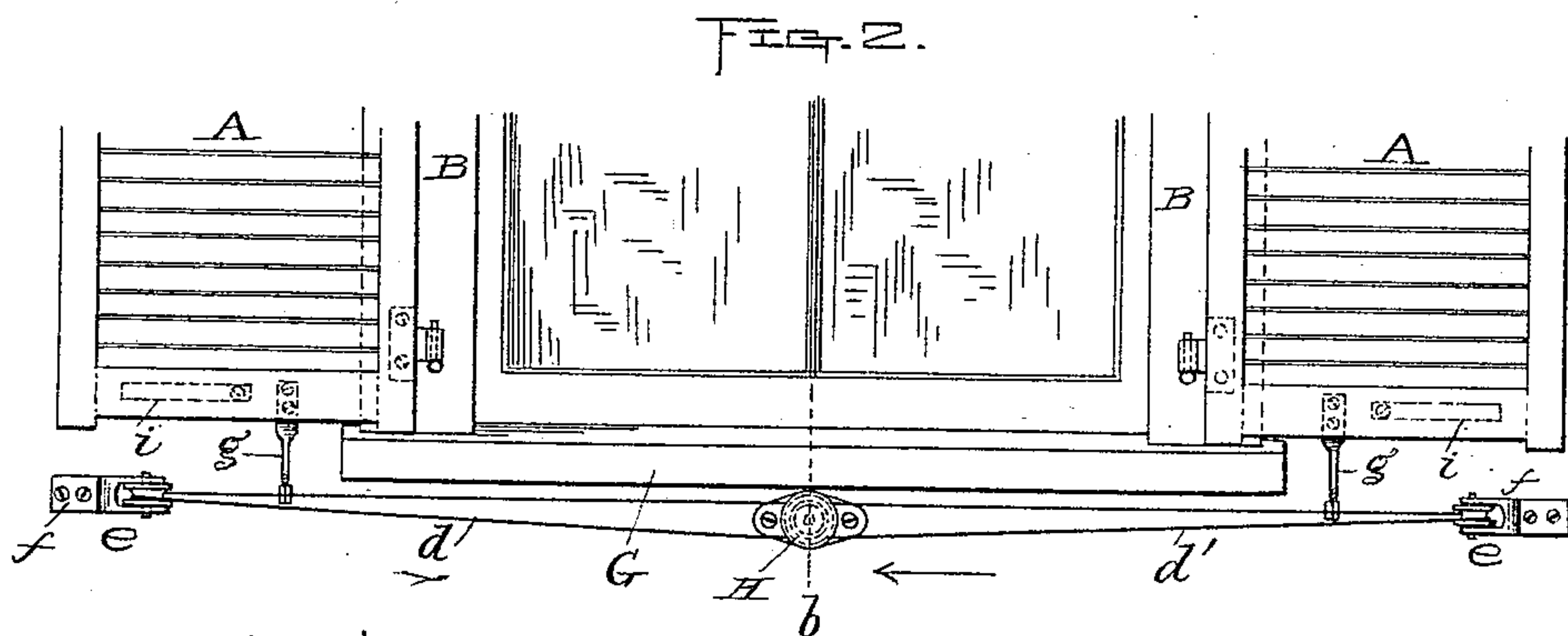
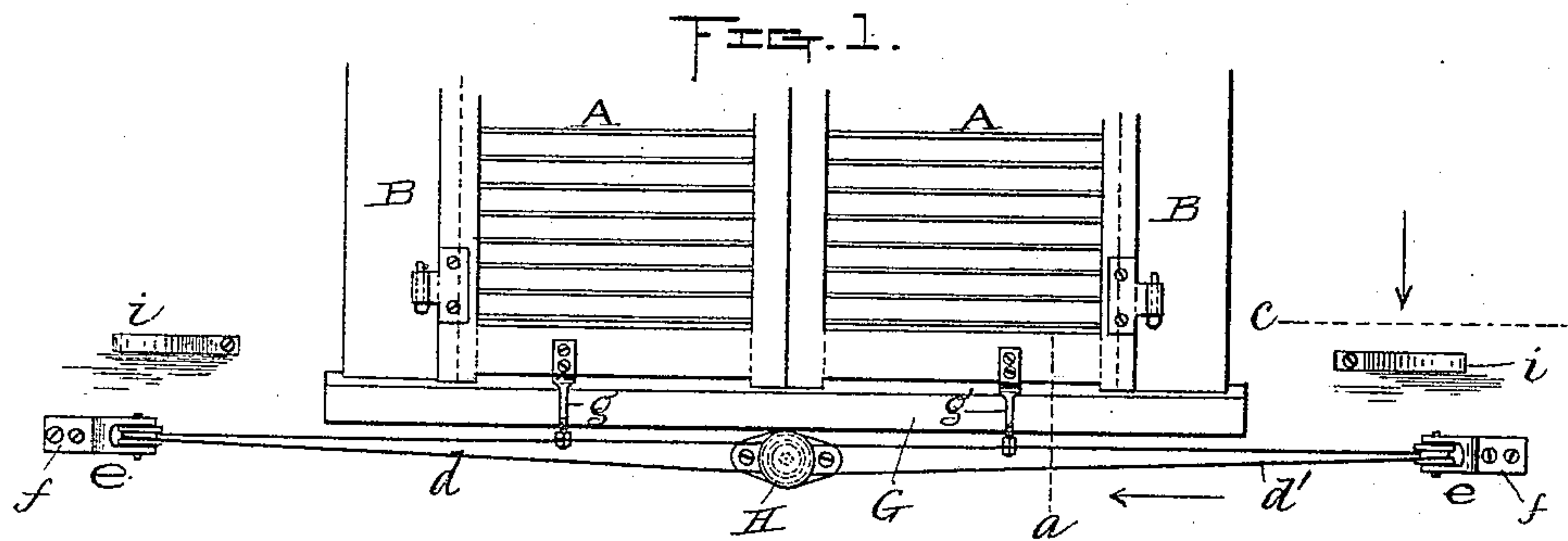


(No Model.)

E. M. PETERSON.
SHUTTER WORKER.

No. 438,240.

Patented Oct. 14, 1890.



Witnesses;

Walter B. Nourse,
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UNITED STATES PATENT OFFICE.

ERIC M. PETERSON, OF WORCESTER, MASSACHUSETTS.

SHUTTER-WORKER.

SPECIFICATION forming part of Letters Patent No. 438,240, dated October 14, 1890.

Application filed May 23, 1890. Serial No. 352,875. (No model.)

To all whom it may concern:

Be it known that I, ERIC M. PETERSON, of the city and county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Shutter-Workers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 represents a front view of the lower part of the outside of a window with shutters or blinds closed and my improved shutter-worker applied thereto. Fig. 2 is a similar view to Fig. 1, with shutters or blinds opened. Figs. 3, 4, and 5 are sections on lines *a*, *b*, and *c*, respectively, looking in the directions indicated by the arrows; and Fig. 6 is a detached view of part of the worker, hereinafter more fully described.

The object of my invention is to provide a shutter-worker which may be operated from one point inside of the building instead of two, as ordinarily, that is simple and inexpensive in construction, and effective in use.

It consists of a central pulley device operated from the inside and having cords or chains properly guided and connecting the same with the shutters or blinds in such a manner that when said pulley is turned in one direction said shutters are closed simultaneously, and opened by reversing the operation, as will be hereinafter more fully set forth.

To enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe it more in detail.

In the drawings, *A A* represent the shutters or blinds, which are hinged, as usual, to the outside window-casings *B B*.

The part *C* represents the pulley of my device, previously alluded to, which is detachably secured to a screw-rod *D*, to whose opposite end the operating-handle *E* is also detachably secured. Although I thus prefer to secure said handle, if desired it may be fitted so as to be temporarily applied, and then removed each time the worker is operated in a similar manner to applying a "shaker" to the grate of a furnace or stove. As this modi-

fication is simple and well known, the illustration thereof in the drawings is unnecessary.

The pulley may be attached to the opposite end of the rod, so as to be turned thereby, in any well-known way. The rod *D* is passed horizontally through the wall *F* under the center of the window, and at the proper distance below the same to bring the pulley *C* just under the sill *G* thereof, as is shown in the various drawings. To said pulley are attached the ends of cords or chains *d d'*, which are passed around small guide-wheels *e e*, fitted to turn in suitable bearings *f f*, secured to the wall of the building at a short distance beyond the ends of the window-sill about upon a level with the central pulley *C*. Said cords or chains are each secured at one point in their length to the lower end of an arm *g*, extending down from the bottom of each shutter or blind *A*, and the ends thereof for each shutter which are fastened to the pulley *C* are passed around said pulley one or more times, as desired, in opposite directions, (see Fig. 6,) so that when the pulley is turned one-half of each cord or chain will be made to travel in one direction and the other half in the opposite direction, or toward and from the pulley, according to which way it is turned. Therefore, as each shutter is connected at one point with its respective cord or chain, it is obvious that said shutters must in consequence be opened or closed by the above-described operation, both shutters being thus opened and closed simultaneously, owing to the ends of the cords or chains being passed around the pulley in the proper directions to effect said result, as previously specified.

The pulley *C* is preferably provided with a hood *H* for protecting the same from the weather. Said hood is secured over said pulley to the wall of the building, and not only serves the above purpose, but also to guide the cords or chains to properly wind and unwind the same to and from the pulley, being provided with lateral slots *h*, through which said cords or chains pass, as is shown in Fig. 3. In order that an inward draft may be imparted to hold the shutters closed tight, the arms *g*, extending down from said shutters, are curved outward a little, as also shown in

Fig. 3, so as to bring the bottoms thereof a short distance outside of the vertical line of the openings in hood H when the shutters are closed. This provision is also necessary, as
 5 will be apparent, to bring the point of draft on said shutters outside of the vertical line of their fulcrums in order to start the same in swinging them open. Provision is made for automatically swinging the shutters out a
 10 short distance from the wall of the building for a like purpose in closing the same by means of a suitable spring. In this instance I have shown a flat spring *i* at each side, secured to the wall at the proper point to bring
 15 the shutter against it when pulled back. They are sufficiently strong to force out the shutters, but not to hold against the draft of the device for operating said shutters.

The shutter-worker may be held in any adjusted position by means of an ordinary
 20 ratchet-wheel *j* and spring-pawl *k*, connected with the rod D and adapted to be easily operated from the inside of the building in connection with the operating-handle E, as is
 25 shown in Fig. 4. Said ratchet-wheel is preferably covered by a suitable cap *l*, secured to the wall. I prefer in practice to use light chains or cable-wire for the strands *d d'*, but do not limit myself thereto or to the special
 30 construction of the other parts adopted in this instance.

My improved shutter-worker not only embodies all the advantages of the old style of

workers, but also, in addition thereto, the advantage of requiring only one opening in the wall, as well as the operation of but one device to simultaneously open or close both shutters, while at the same time the device is simple, durable, and effective in use, as previously stated.

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

1. A shutter-worker having only one device for operating both shutters or blinds together, consisting of a central pulley arranged
 45 under the window-sill on a rod arranged to turn in the wall of the building, said rod extending transversely through the wall, means for turning and holding the rod upon the inside of the building, and suitable cords or
 50 chains connected with the central pulley, as well as with suitable stationary guide-wheels and the shutters, substantially as set forth.

2. The combination of shutters A A with a shutter-worker consisting of the arms *g g*,
 55 cords or chains *d d'*, stationary guide-wheels *ee*, stationary hood H, pulley C, to which said cords or chains are secured, rod D, fitted to turn in wall F, ratchet-wheel and spring-pawl
 60 *j k*, and operating-handle E, substantially as set forth.

ERIC M. PETERSON.

Witnesses:

A. A. BARKER,
 W. B. NOURSE.