

No. 884,103.

PATENTED APR. 7, 1908.

J. NORTON.
SHUTTER WORKER.
APPLICATION FILED JUNE 4, 1907.

Fig. 2.

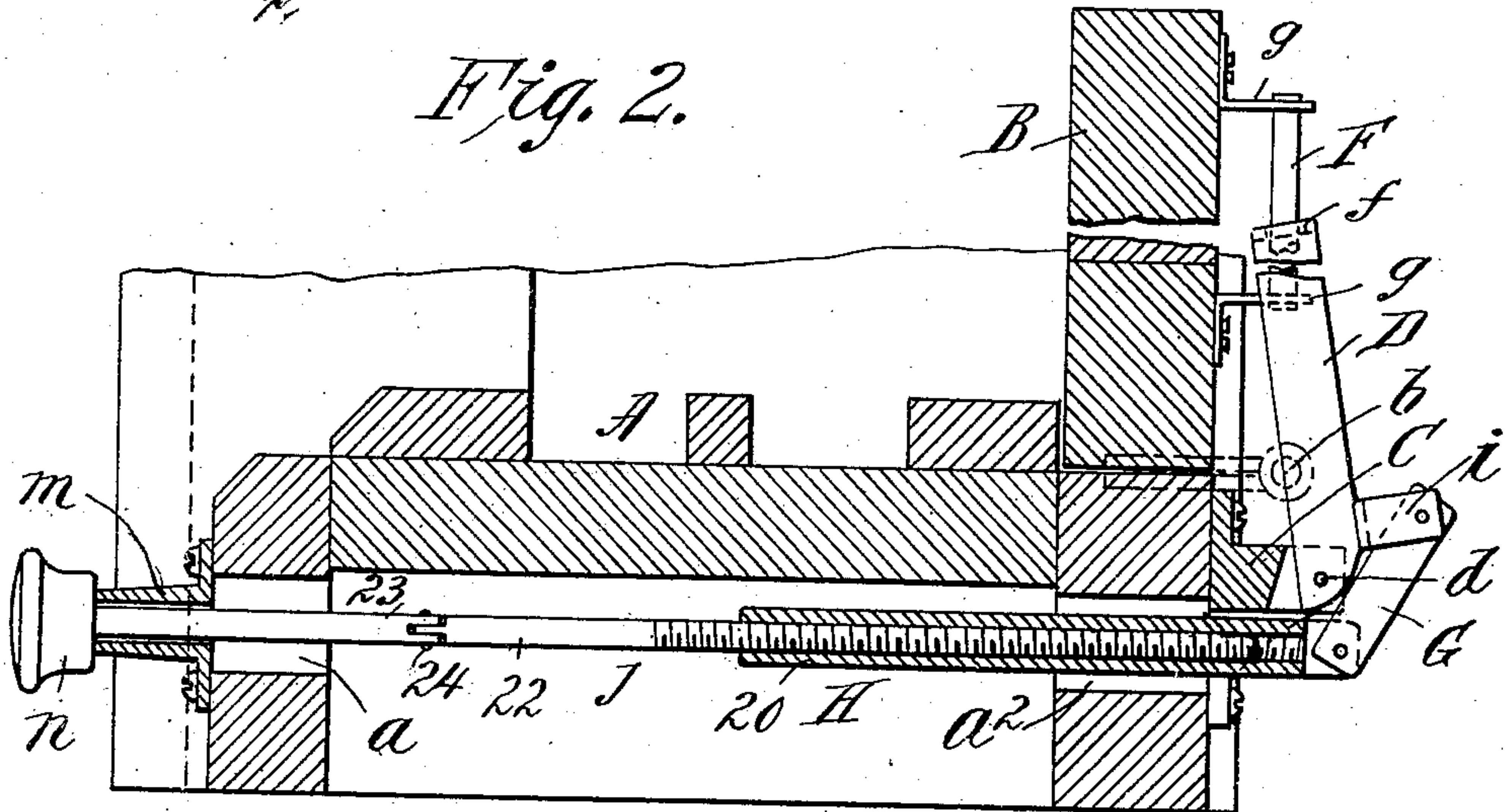


Fig. 3.

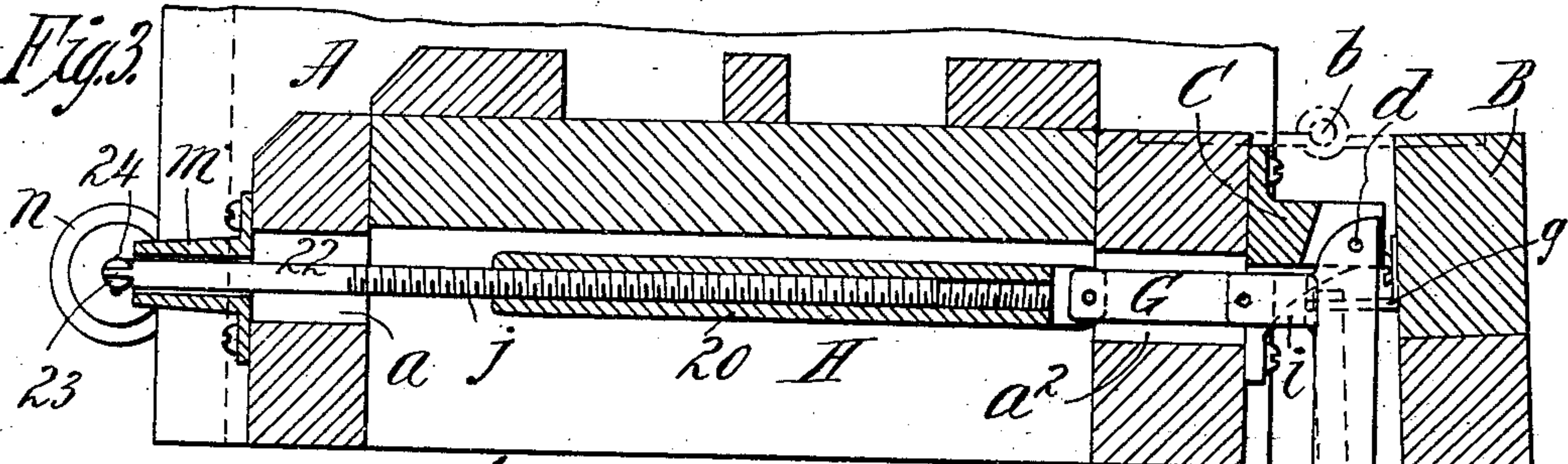


Fig. 4.

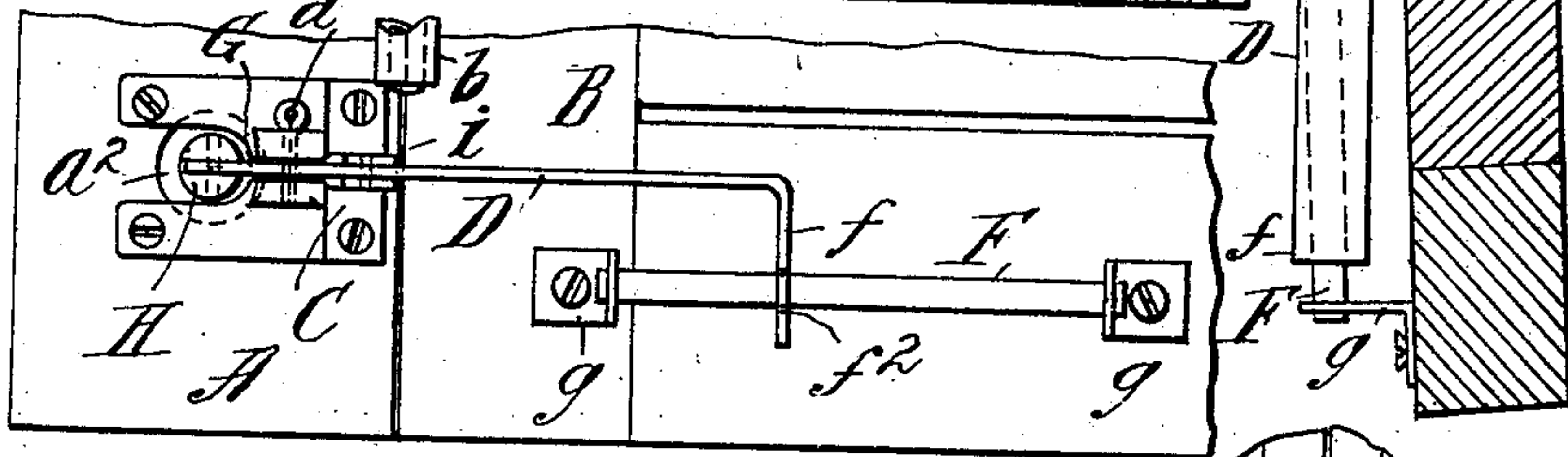
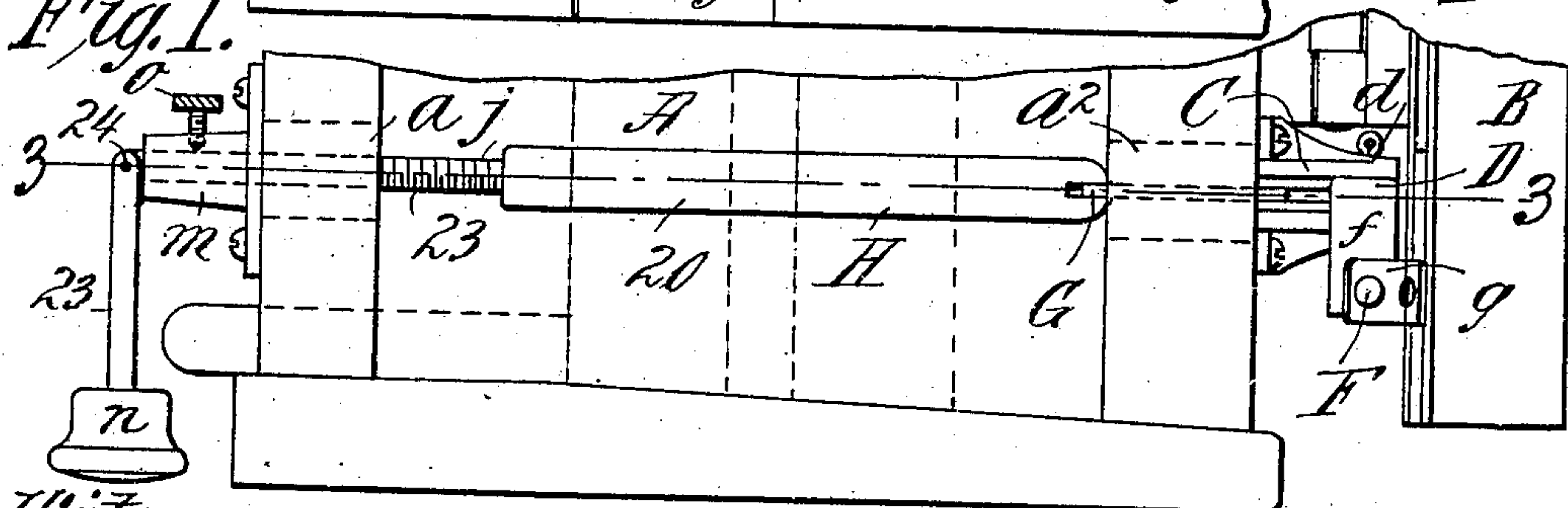


Fig. 1.



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UNITED STATES PATENT OFFICE.

JAMES NORTON, OF SPRINGFIELD, MASSACHUSETTS.

SHUTTER-WORKER.

No. 884,103.

Specification of Letters Patent.

Patented April 7, 1908.

Application filed June 4, 1907. Serial No. 377,139.

To all whom it may concern:

Be it known that I, JAMES NORTON, a citizen of the United States of America, and resident of Springfield, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Shutter-Workers, of which the following is a full, clear, and exact description.

This invention relates to that general class of devices for operating window shutters or blinds, and the like, which comprises an operating rod, accessible at the inner side of the window casing or frame, and having connections with the hinged shutter, whereby the latter may be placed, and held, either in its open, closed, or intermediate, positions without the necessity of opening the window.

The object of this invention is to provide a device of the character indicated which is susceptible of operation for fully or partially opening and closing the shutter with extreme ease, smoothness, and quickness of motion, and which as to construction, is simple, inexpensive, practicable, and adaptable for employment on window casings of varying widths or sizes.

The invention essentially includes in combination with a runner bar horizontally mounted on the blind or shutter, a lever pivotally mounted at the outer side of the window casing to swing in a horizontal plane, having its outer extremity in slidable engagement with said runner bar, and provided with an arm or crank-like extension to which is connected, by a link, the operating rod which is horizontally movable outwardly and inwardly through a passage therefor in the window casing. And the invention is hereinafter fully and particularly described in conjunction with the accompanying drawings and is definitely set forth in the claims.

In the drawings:—Figure 1 is an elevation of the device as seen at the interior and transversely of the window casing, the shutter being indicated as opened. Fig. 2 and 3 are horizontal sectional views taken on line 3—3 Fig. 1 with the operating device in its most extremely different positions corresponding to the blind closed and opened respectively. Fig. 4 is an elevation as taken at right angles to Fig. 1 showing a portion of the outer side of the casing, a portion of the closed blind and in conjunction therewith the operating device.

Similar characters of reference indicate corresponding parts in all of the views.

In the drawings,—A represents the window casing having a hole indicated at a , a^2 horizontally therethrough, preferably near the lower portion thereof; and B represents the blind or shutter constructed and hinged at b , as usual.

C represents a bracket, of bifurcated formation secured on the outer side of the casing adjacent the passage a^2 to which bracket by the pivot d is jointed a lever D to swing in a horizontal plane,—said lever having a downturned right angular extension with a circular hole f^2 therein, by which slidable engagement is made with a runner bar F mounted on the outer side of the shutter, the same being supported in its horizontal position slightly separated from the face of the shutter by the L shaped brackets g .

The end of the lever D, at which it is pivoted, is of quadrantal form, and adjacent its so formed end the lever is provided with a horizontal right angularly extended crank like member or arm i which, by link G, is pivotally jointed to the outer extremity of the horizontally movable operating rod H which plays through the window casing. The said operating rod is constructed in sections, the one 20 being tubular and internally screw threaded while the other section j is externally threaded and screw engaged in the tubular section 20; and the said section j is guided through a tubular metallic bushing m which is secured on the inner side of the window casing in alinement with the holes a , a^2 .

The second mentioned section j of the operating rod is constructed in two portions 22 and 23 endwise adjoined and pivotally jointed as indicated at 24; and the free end of the portion 23 is provided with a handle n of any convenient form.

A set screw o , Fig. 1, has a thread engagement transversely through the wall of the tubular bushing m and is adapted to be set against the adjacent portion of the operating rod for the purpose of locking such rod against any endwise movement and thereby preventing undue swinging of the shutter.

Assuming that the shutter is closed and the parts of the operating device have the positions and relations represented in Fig. 2, an inward straight horizontal draft on the operating rod (the set screw o being loosened to permit,) will through the link G exerting a leverage on the lever arm i , cause a swinging of the lever D from the position of Fig. 2

to the position of Fig. 3, during which movement or any portion thereof the depending angular extension of the lever will have more or less of a sliding movement relatively
 5 to the runner bar of the shutter, which latter, however, is pulled or swung half a revolution or any portion thereof according to the desired position.

When the device is operated to fully open
 10 the shutter, as represented in Figs. 1 and 3, the handle carrying portion of the operating rod is, as permitted by the joint 24 swung to the depending position shown for a compact disposition alongside the casing, and
 15 the said downturned portion in extending across the end of the tubular bushing serves as a lock for preventing movement of the opened blind, and without the necessity of tightening the set screw. It is, however,
 20 understood that the set screw is of importance for locking the parts when the blind is in any of its positions other than the fully opened one.

By making the operating rod in screw engaged sections as shown and described, such
 25 rod may be easily lengthened and shortened to accommodate the shutter operating device to window casings of varying dimensions,—it being well known that the casings
 30 commonly vary in thickness as much as two inches in different houses.

The device or "motion", essentially comprising the lever D, having the slidable engagement with the runner bar on the shutter,
 35 pivotally supported at its end to the exterior

of the casing and provided with the angularly extended arm *i* adjacent the pivot and link connected to the outer end of the operating rod which is constrained for a horizontal
 40 rectilinear movement, is very sensitive in action and is most easily operated with entire steadiness by the exertion of very slight force; and because of its ease of application, and of its simplicity and cheapness of construction, it is, as believed, an appliance
 45 which will be regarded as acceptable and highly desirable.

I claim:—

In a shutter worker, the combination with a casing having a horizontal passage there-
 50 through, and a shutter hinged to the casing and carrying a horizontal runner-bar, of a lever pivotally hung by one end thereof at the outer side of the casing, provided at its opposite end with a member having a sliding en-
 55 gagement with said runner bar and having near its pivoted end a right angularly extending member, an operating rod horizontally and endwise movable through the passage in the casing, having an operating han-
 60 dle at its inner end, and a link pivotally connected to the outer end of said rod and to said right angularly extending member of said lever.

Signed by me at Springfield, Mass., in presence of two subscribing witnesses.

JAMES NORTON.

Witnesses:

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