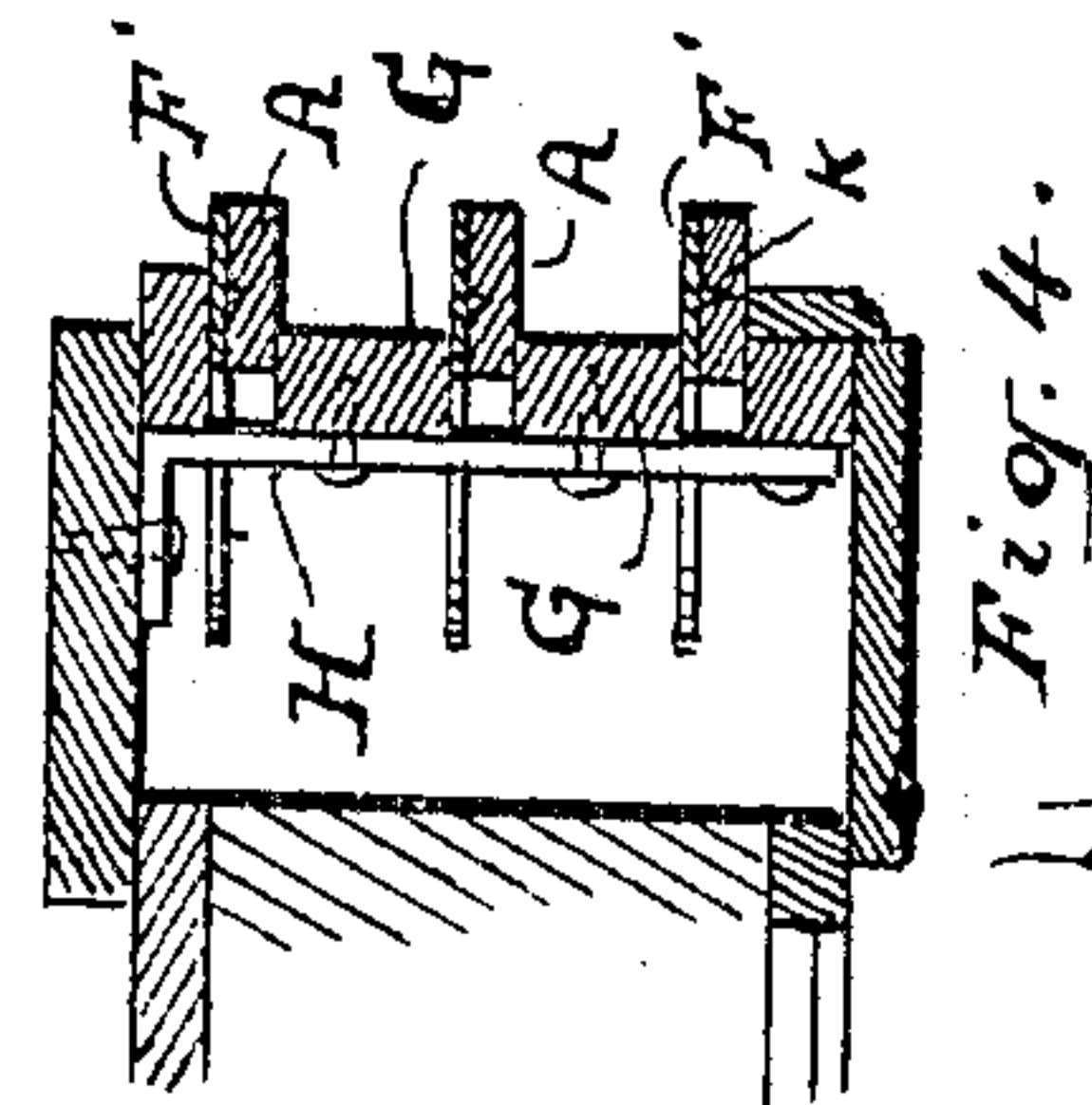
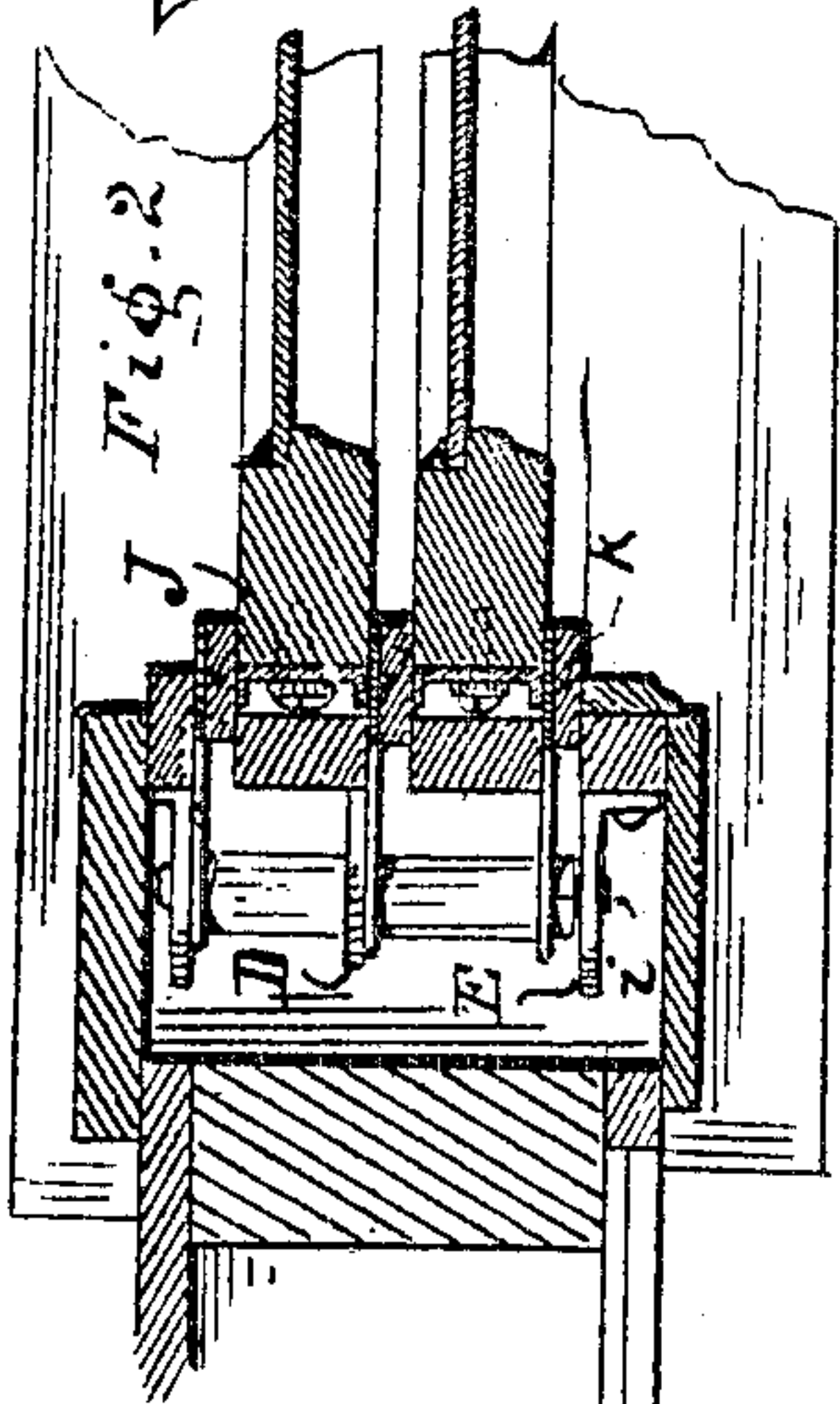
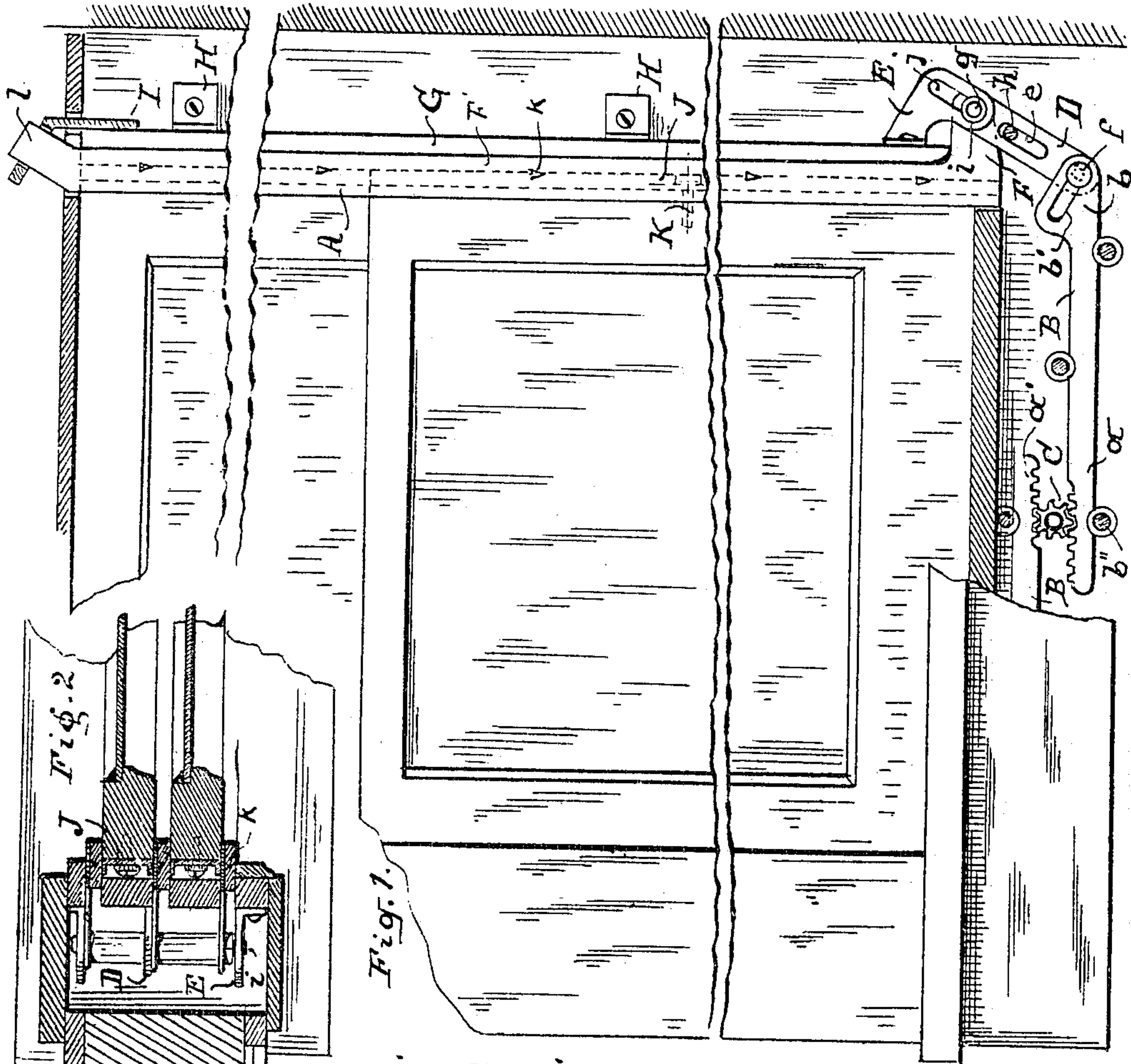
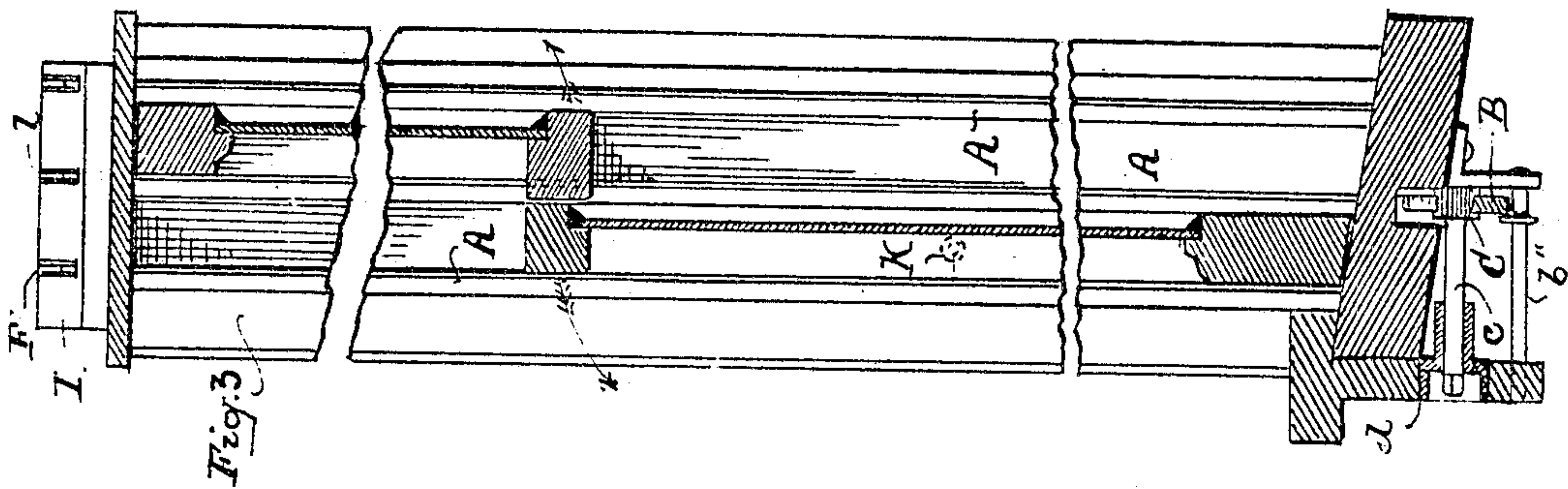


No. 801,506.

PATENTED OCT. 10, 1905.

G. W. BLANCHARD.
REVERSIBLE WINDOW.
APPLICATION FILED NOV. 15, 1904.



WITNESSES

Willie Garvey
L. C. Thompson

INVENTOR

George W. Blanchard
B. F. Eibler Atty

UNITED STATES PATENT OFFICE.

GEORGE W. BLANCHARD, OF CLEVELAND, OHIO.

REVERSIBLE WINDOW.

No. 801,506.

Specification of Letters Patent.

Patented Oct. 10, 1905.

Application filed November 15, 1904. Serial No. 232,889.

To all whom it may concern:

Be it known that I, GEORGE W. BLANCHARD, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, (with a post-office address at 110 Oregon street,) have invented new and useful Improvements in Reversible Windows, of which the following is a specification.

My invention relates to improvements of that class of windows wherein the sashes are rendered reversible for the purpose of facilitating cleaning and of increasing the ventilating capacity of windows. I attain this object in a window of which the sashes are constructed, arranged, and equipped substantially as shown in the accompanying drawings, in which—

Figure 1 represents a partial face and partial sectional view of a window of the kind as above alluded to. Fig. 2 is a horizontal sectional view of same. Fig. 3 is a vertical sectional view of same, and Fig. 4 represents another horizontal sectional view thereof.

Like letters of reference denote like parts in the drawings and specification.

The main feature of my invention consists in the mechanism by which the parting-strips A are moved laterally for the purpose of admitting swinging of the sashes. Ordinarily the sashes slide between said parting-strips—that is, the latter project over the rails of said sashes in the construction, as illustrated in the accompanying drawings. For moving said strips I employ a shifting mechanism which comprises the rack-slides B, the pinion C, which engages said slides, links D, guides E, and brackets F'. The rack-slides B consist of a tail part *a* and head-piece *b*. In the tail or rack part there are teeth *a*, while in the head part there is a slot *b'*, which assumes an angular position for the purpose of effecting an up and outward movement of the links, which in turn cause an up and outward movement of the parting-strips A for the purpose of affording clearance for the sashes, so that they may be swung or tilted, as may be necessary or desirable. Any suitable means may be employed for guiding the rack-slides, as shown. Rolls *b''*, applied between or upon the slides are guided and allowed to move out and inwardly. The pinion C is secured upon a shaft *c*, which extends through the so-called "apron" of the window-casing, there being a suitable metallic bushing provided for said shaft, wherein it is journaled and retained in proper position for the purpose of moving

the rack-slides to and from each other to either arrange the sashes in a condition free to swing or to confine them between the parting-strips, so that they can only be raised up and down the same as ordinary windows. Preferably the inner end of the shaft is adapted for reception of a key, and said end is not extended beyond the face of plate *d*, so that the shaft can only be turned by the use of a key specially designed therefor. The links D represent flat, slotted, and perforated bars. The slot *e* affords guiding of the link or links, while the perforations at *f* and *g* enable connection with the rack-slides B and brackets F'. The pin *h* is a fixed one and conjointly with the pin *i* serves as a medium of maintaining the link in a prefixed angular relation to the slot *b'* of slide B. The pin or rod *i* connects the links and brackets and also engages the guides for the purpose of establishing operative connection with and between said parts. As shown, the slot *b'* is inclined at an angle of about thirty degrees, and the link is connected and maintained at right angle thereto. Also the slot *j* of guides E appears in alignment with the slot *e* or at right angle to slot *b'*. Thus upon movement of the slides motion can also be imparted to said parting-strips A in upward-outward or downward-inward direction attendant with the least possible frictional resistance and under the conditions, as shown. A movement of the slide or slides of, say, one inch will result in a movement of the parting-strips of one-half inch vertically and one-quarter inch laterally, it being presupposed that the brackets F are securely connected with said strips. In fact, it is preferred that said brackets form an integral part of the metallic liners F', which serve as a reinforcement of said strips. In such event prongs *k* are formed upon one side of the liners, which are driven into the parting-strips proper in lieu of nails or screws. The prongs *k* are formed simply by driving a pointed tool into said liners F'. The guides E remain stationary and are fastened to the jambs G, and the jambs in turn are connected with each other and fastened to the outside casing by means of the straps H. On top the angular extension *l* of the liners F' is guided through the bracket I, which state of affairs assures a parallel movement of the parting-strips. Simply upon turning of the pinion C the parting-strips to each side of the window can simultaneously be moved out and inwardly to enable swinging of the sashes or to arrange

them under conditions which only admit of vertical movement of the sashes in like manner, as in ordinary windows.

To the rails of the sashes are attached the
5 gledes J, for which I prefer flanged sheet-metal strips which are connected with the sashes by means of ordinary screws K, which form the pivots for the sashes and also afford opportunity for attachment of the sash-cords.
10 (The sash-cords and weights for balancing the sashes are not shown.)

From the foregoing it can readily be seen and understood that upon withdrawing of the parting-strips either one or both of the
15 sashes may readily be swung in direction of the arrows for the purpose of affording increased ventilation or to enable the cleaning of the outside window-panes from the inside of the building.

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

1. In a reversible window the combination between the sashes of laterally-movable parting-strips, fixed guides, rack-slides, a pinion
25 and links, suitable means for guiding said slides and links and suitable means establishing operative connection of said strips, links, guides and rack-slides all constructed and arranged substantially as and for the purpose
30 set forth.

2. In a reversible window the combination of movable parting-strips and fixed jambs arranged to each side of the sashes, a pair of oppositely-movable rack-slides, a pinion be-

tween the rack ends of same, all located under the window-sill, there being brackets, guides and links arranged at or near the lower corners of the sashes equipped and connected for moving said strips upon turning of said pinion in the manner as and for the
40 purpose set forth.

3. In a reversible window a pair of slotted rack-slides and a pinion therefor arranged underneath the window-sill, a link operatively connected with the slotted end of each of said
45 slides, parting-strips between the window-sashes having fixed connection with said links and guides for the connecting-pins of said links and strips, all arranged and equipped to effect a simultaneous movement of the
50 parting-strips in the manner as and for the purpose set forth.

4. In a reversible window the parting-strips for the sashes having metallic liners secured to said strips by means of penetrating prongs
55 and there being brackets at the lower terminal of said strips arranged in connection with the operating mechanism and guides for said strips for the purpose of enabling lateral movement of said strips in the manner as set
60 forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE W. BLANCHARD.

Witnesses:

J. H. OLIVER,

Mrs. J. H. OLIVER.