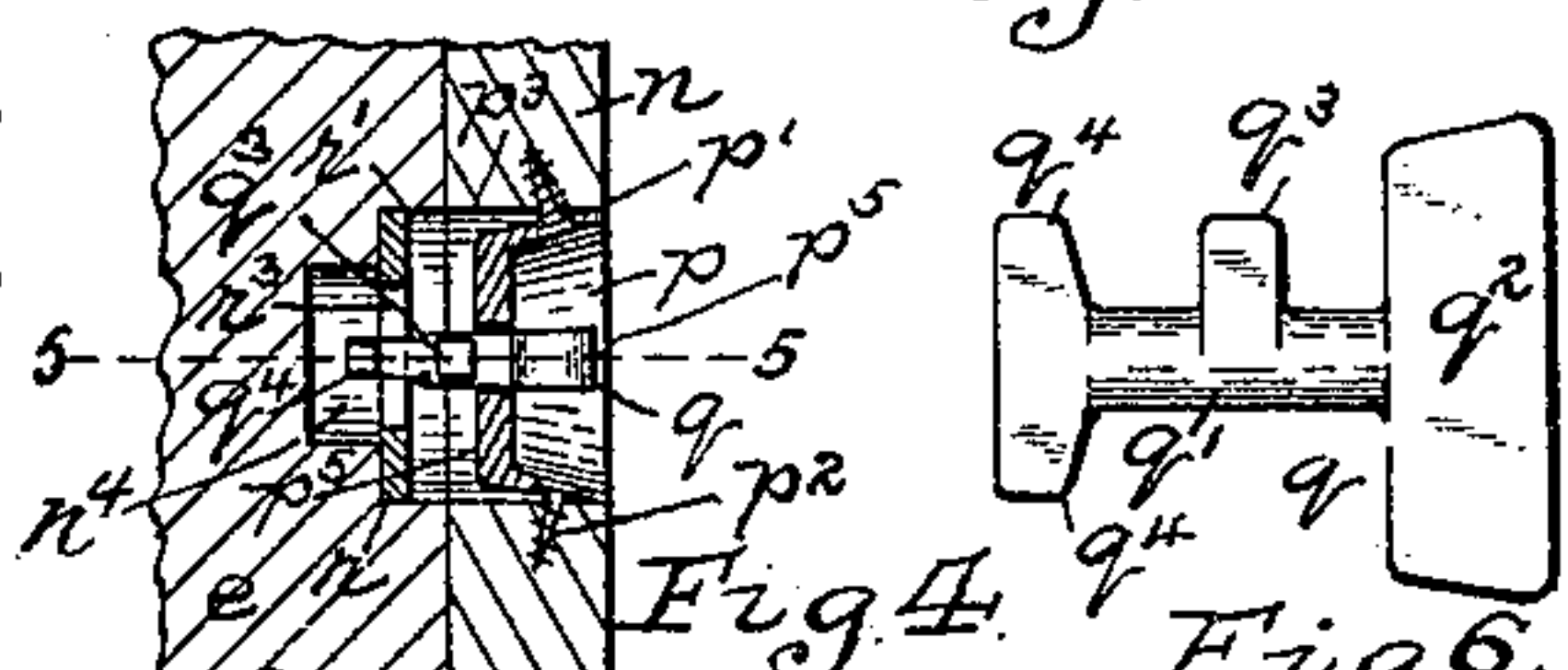
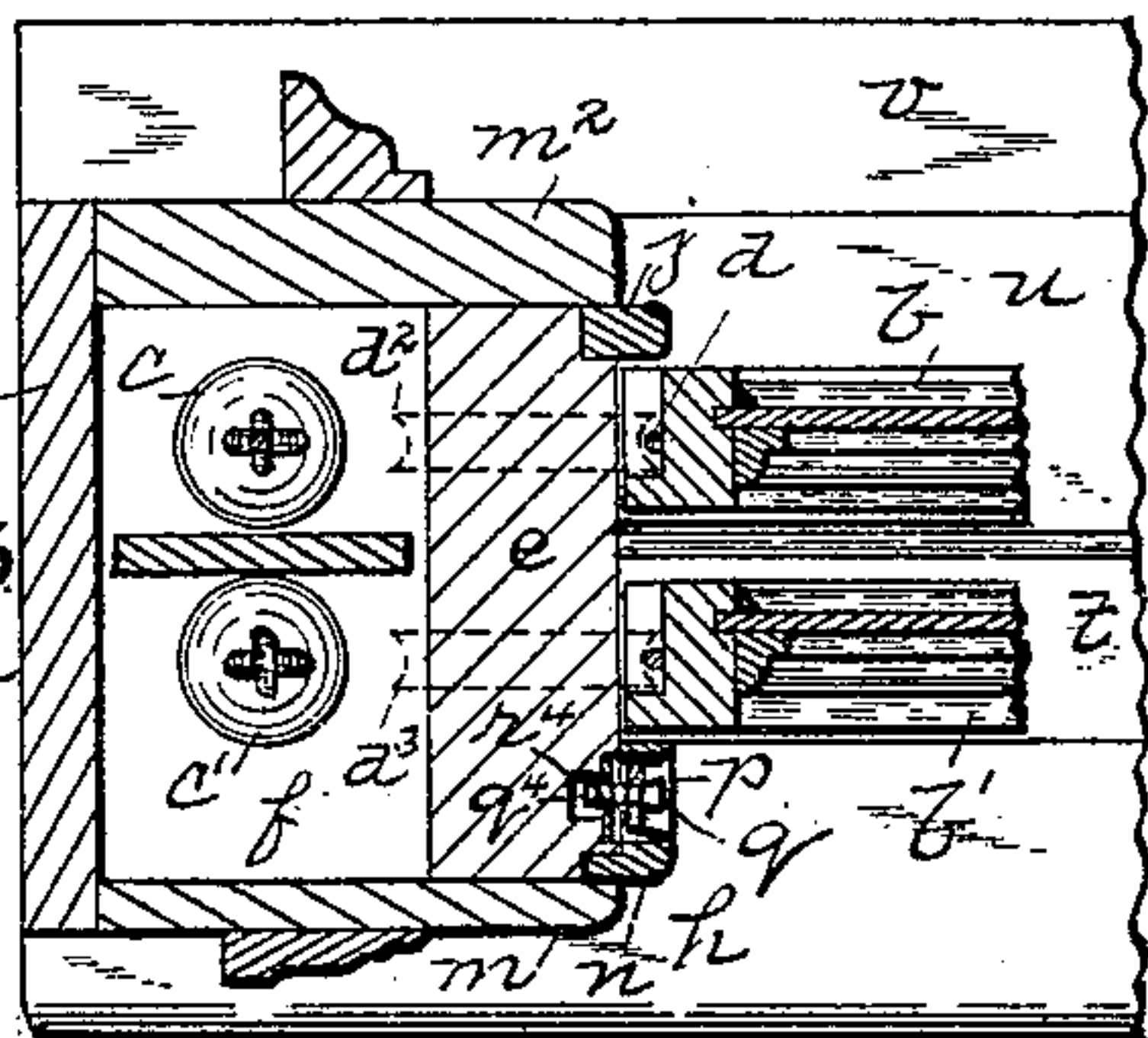
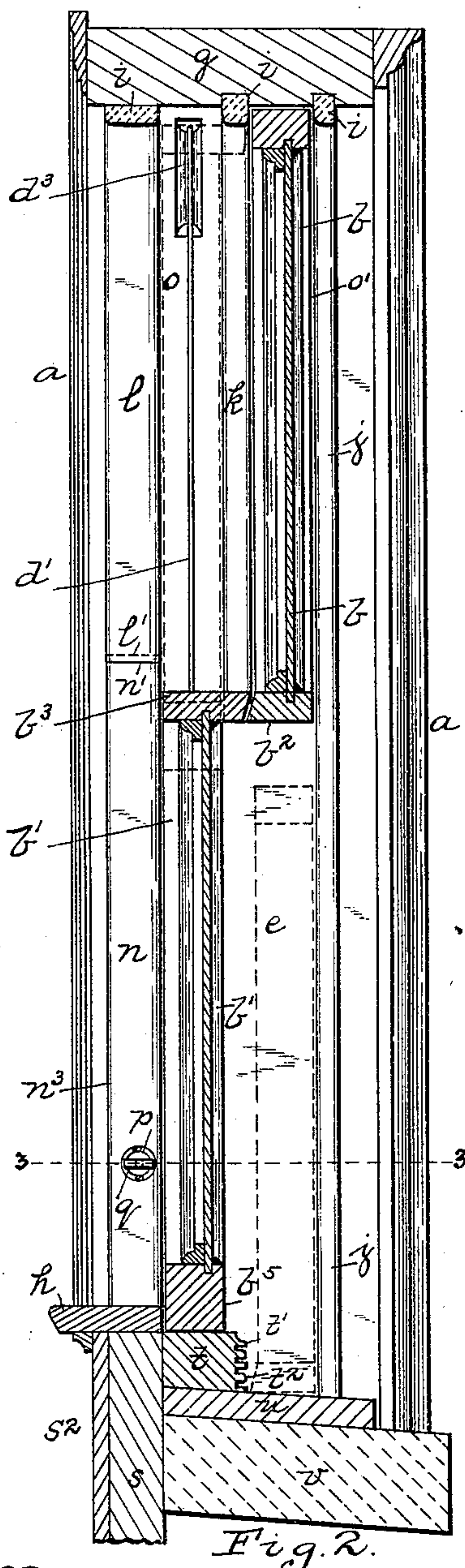


2 Sheets—Sheet 1.

No. 585,080.

Patented June 22, 1897.



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Jos. P. Vlk.
May S. Martin.

Inventors
Nicholas Carter.
By J. M. Cooke
Attorney.

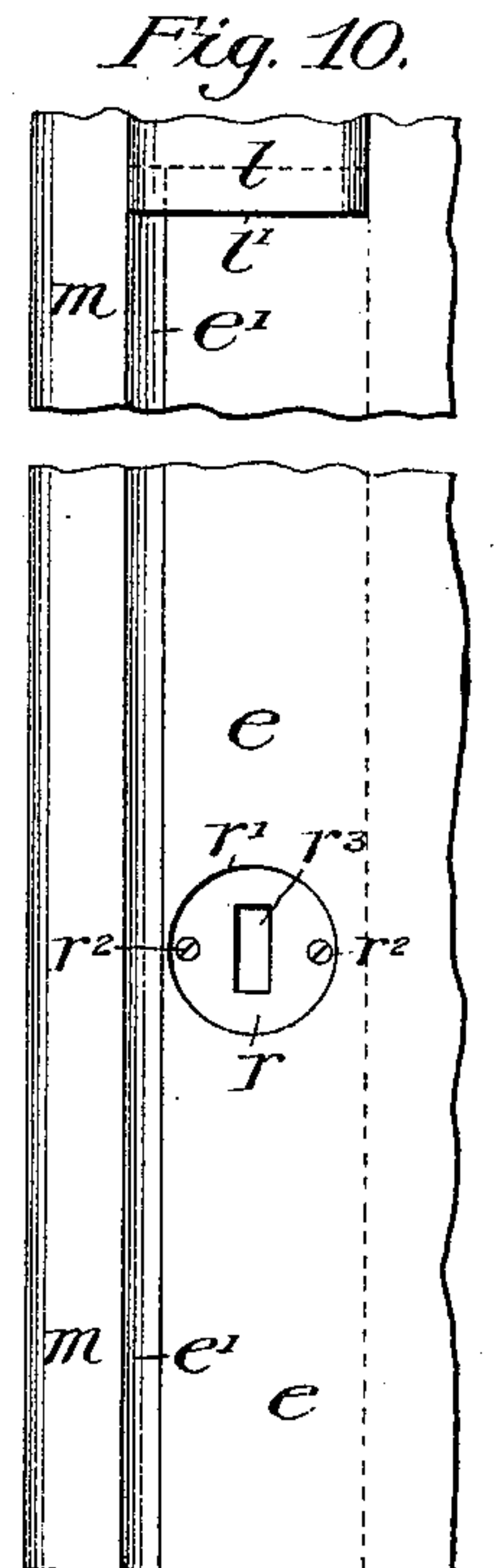
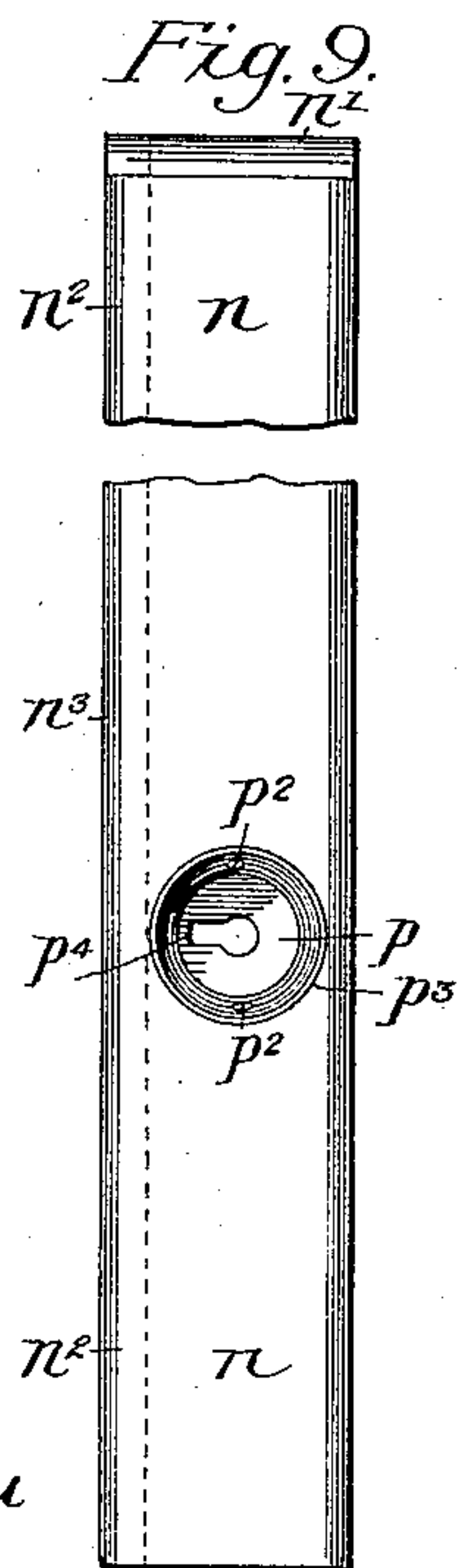
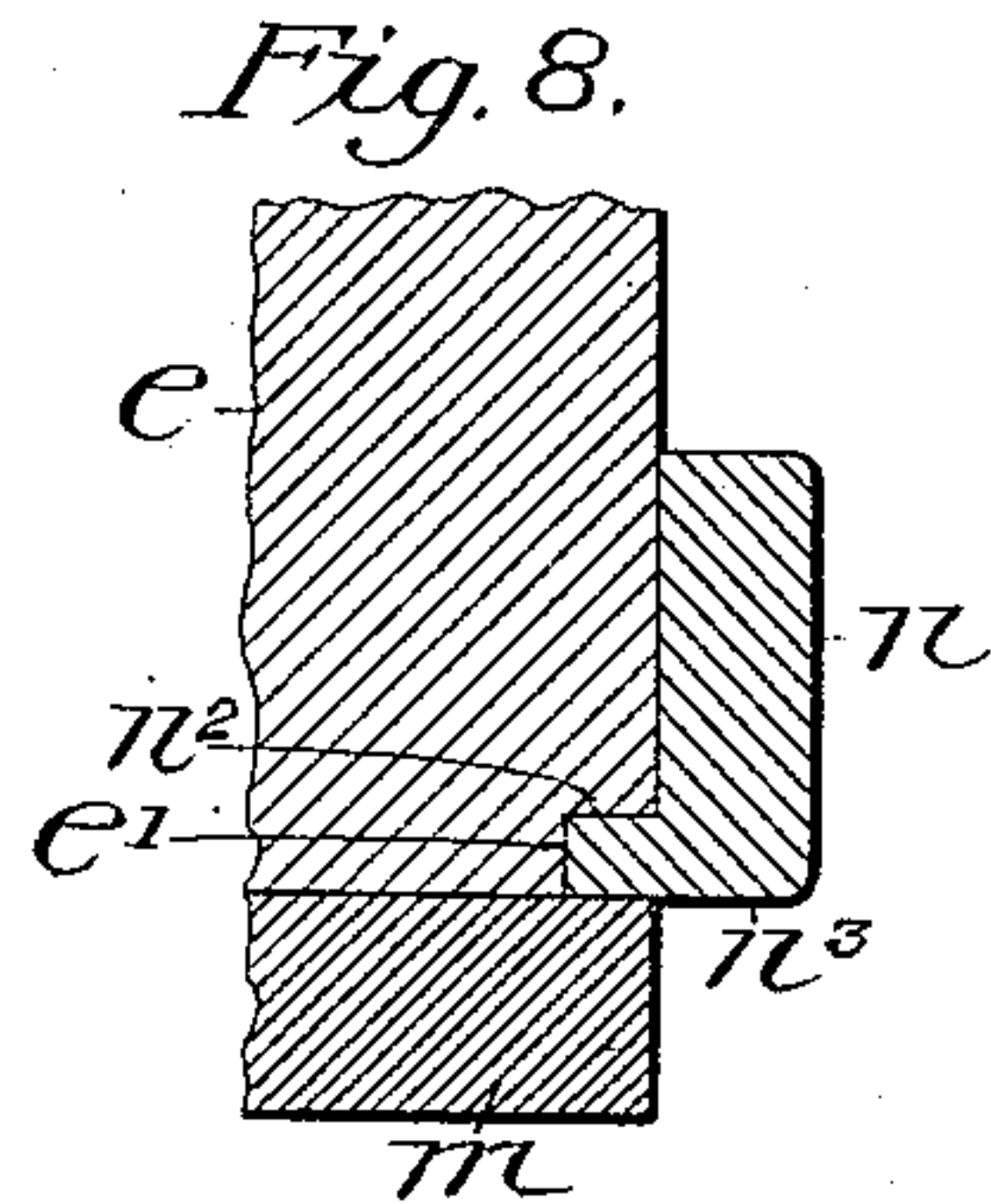
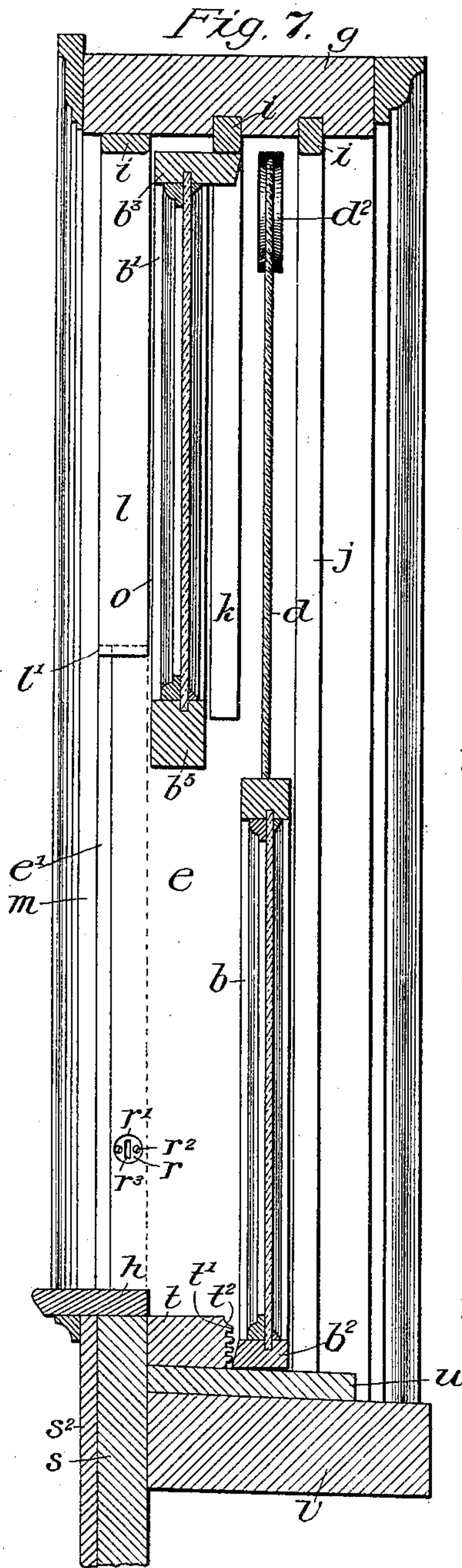
(No Model.)

2 Sheets—Sheet 2.

N. CARTUS.
WINDOW FRAME.

No. 585,080.

Patented June 22, 1897.



Witnesses.

W. A. Stanley

May S. Martin

Inventor.

Nicholas Cartus

By *J. M. Cooke*
Attorney.

UNITED STATES PATENT OFFICE.

NICHOLAS CARTUS, OF PITTSBURG, PENNSYLVANIA.

WINDOW-FRAME.

SPECIFICATION forming part of Letters Patent No. 585,080, dated June 22, 1897.

Application filed May 1, 1896. Serial No. 589,840. (No model.)

To all whom it may concern:

Be it known that I, NICHOLAS CARTUS, a resident of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Window-Frames; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to window-frames.

10 The object of my invention is to provide a window-frame in which the upper sash can be lowered, tilted, or taken out without the lower sash being in the way or having to be tilted or taken out at the same time.

15 Another object of my invention is to provide a simple form of a bead-fastener for attaching to the inside bead for the purpose of removing the same.

20 Another object of my invention is to provide a removable inside bead which will be practically air-tight.

25 My invention consists, generally stated, in the novel construction, arrangement, and combination of parts, all of which are hereinafter specifically set forth and described, and particularly pointed out in the claims.

30 To enable others skilled in the art to make and use my invention, I will describe the same more fully, referring to the accompanying drawings, in which—

Figure 1 is an outside plan view of a window-frame embodying my invention. Fig. 2 is a vertical central section thereof, showing the sash therein in their closed positions. 35 Fig. 3 is a cross-section on the line 3 3, Fig. 2, through the bead-fastener. Fig. 4 is an enlarged detail sectional view of the bead-fastener. Fig. 5 is a like view at right angles to Fig. 4. Fig. 6 is a view of the key or 40 catch employed. Fig. 7 is a vertical central section of the window-frame, showing the inside bead removed, the lower sash raised, and the upper sash lowered upon the subsill. Fig. 8 is an enlarged cross-sectional view of the removable bead, showing the tongue on 45 the same in its seat. Fig. 9 is an enlarged plan view of the removable inside bead and fastener therefor with the key or catch removed therefrom. Fig. 10 is an enlarged 50 plan view of one side of the window-frame, showing the groove for the tongue on the re-

movable inside bead and the plate for the reception of the key or catch.

Like letters here indicate like parts in each of the figures of the drawings.

55 The window-frame preferred by me to use in connection with my invention is of the form shown at *a* and has the upper and lower sash *b b'* therein, which are counterbalanced by the weights *c c'*, attached to the cords *d d'*, 60 traveling over the pulleys *d² d³*, connected within the sash *b b'* in the ordinary manner. The window-frame *a* is provided with the jambs *e e* on each side thereof, against which the sash *b b'* bear, these jambs *e e* forming, 65 with the balance of the window-frame *a*, the chambers *f f'* for the reception of the weights *c c'*. At the top of the window-frame *a* is the top or head piece *g*, and at the bottom is the apron-cap *h*, the head-piece *g* having the upper beads *i* secured thereto. Secured to the 70 jambs *e e* are the outside beads *j* and the parting-beads *k*. These parting-beads *k* extend down from the head-piece *g* only to about the meeting-rails *b² b³* of the sash *b b'*. 75 The inside beads *l* are secured to the jambs *e e* and extend down on each side of the window-frame *a* from the upper beads *i* to about the meeting-rails *b² b³* of the sash *b b'* and are provided with the upwardly-inclined 80 lower edges *l'*.

The window-frame *a* is provided with the inside casing *m* on each side thereof, which, with the back frames *m'*, side frames *m²*, and jambs *e e*, forms the chambers *f f'* for contain- 85 ing the weights *c c'*, which move up and down therein, according to the position of the sash *b b'*. Below the inside beads *l* are the removable inside beads *n*, which are provided with the upwardly-inclined upper edges *n'* for 90 engaging with the upwardly-inclined lower edges *l'* of the stationary inside beads *l*. A groove or rabbet *e'* is formed in the jambs *e e*, below the inside beads *l*, within which fits a tongue *n²* on the inside edge *n³* of the remov- 95 able inside bead *n*. The strips *i, j, k, l*, and *n* form the guides *o o'* for the sash *b b'* to move up and down therein when placed in position within the window-frame *a*.

100 In order to attach and release the removable inside beads *n* to and from the jambs *e e*, there is provided the mechanism shown on

each side and at the lower part of the window-frame *a*, which consists in forming a circular opening *p'* through the removable inside beads *n*, within which is secured, by means of
 5 screws *p²*, engaging with the sides *p³* thereof, the circular cup-shaped plate *p*, said screws *p²* entering through the sides *p³* of the cup-shaped plate *p* at an angle into the jambs *e e*.
 The cup-shaped plate *p* is provided with a
 10 horizontal opening *p⁴* therein for the insertion of a key or catch *q*, as hereinafter described. A circular seat *r'* is formed within the jambs *e e* for the reception of the circular plate *r*, which is held therein by means of
 15 the screws *r²* and is provided with a vertical opening *r³* therein for the insertion of the key or catch *q*. A recess *r⁴* is formed in the jambs *e e* beyond the plate *r*. The key or catch *q* is formed of the bar *q'* and has a thumb-piece
 20 *q²* on its front or outer end, which is preferably made oblong, so as to fit snugly within the hollow portion *p⁵* of the cup-shaped plate *p*. The bar *q'* of the key *q* is preferably formed circular in cross-section and has the
 25 lug *q³* projecting out therefrom between the rear face *p⁵* of the cup-shaped plate *p* and the front face *r⁵* of the plate *r*. The bar *q'* of the key *q* rests or turns within the horizontal opening *p⁴* and the vertical opening *r³* and is
 30 provided with the lugs *q⁴* on its inner end, which project on each side of the bar *q'*, beyond the plate *r*, within the recess *r⁴* in the jambs *e e*.

At the lower end of the window-frame *a* is
 35 the apron-cap *h*, which extends horizontally across the window-frame *a* in the ordinary manner and has the studding *s* and panel back *s²*, fitting under the same. Fitting against the studding *s*, on the outside there-
 40 of and below the apron-cap *h*, is the extra sill *t*, which is adapted to have the bottom rail *b⁵* of the lower sash *b'* rest thereon in its lowest position, as shown in Figs. 1 and 2. The out-
 45 side face *t'* of the extra sill *t* is preferably provided with a molding *t²* thereon, in order to give it a finished appearance from the outside of the window-frame. Fitting under the ex-
 50 tra sill *t* and against the studding *s* is the subsill *u*, which extends out beyond the sill *t* and rests upon the main sill *v*. The sill *u* is
 adapted to have the meeting-rail *b²* of the out-
 side or upper sash *b* rest thereon, as shown in
 Fig. 7, the extra sill *t* extending out some-
 55 what beyond the lower sash *b'*, so as to close the space when the upper sash *b* is lowered.

The operation of my improved window-frame is as follows: After the parts are all in position, with the sash *b b'* within the window-frame *a*, attached to the weights *c c'*, and it
 60 is necessary to remove the inside beads *n* for any purpose, all that is required is to turn one of the thumb-pieces *q²* on the key *q* to a vertical position from that shown in Fig. 5, which
 65 allows the lugs *q⁴* on the inner end of the bar *q'* on the key *q* to be brought to a vertical position and passed through the opening *r³* in the plate *r* from the recess *r⁴* in one of the

jambs *e* as the inside bead *n*, with the tongue
n², is lifted out of the groove *e'*, the up-
 70 wardly-inclined upper edge *n'* of the inside bead *n*, connecting with the upwardly-in-
 clined lower edge *l'* on the stationary inside
 bead *l*, acting very materially to assist the in-
 side bead *n* to be removed quickly and con-
 75 veniently therefrom. The opposite remov-
 able inside bead *n* can be removed from the
 stationary inside bead *l* in like manner, and
 the lower sash *b'* can be lowered down onto
 the extra sill *t* and tilted or taken out of the
 80 window-frame for the purpose of cleaning it
 or removing it entirely therefrom, as desired.
 If it is desired to lower, tilt, or take out the
 upper sash *b* while the lower sash *b'* is within
 the frame *a*, all that is necessary is to raise
 the lower sash *b'* to the top of the window-
 85 frame *a* against the head-piece *g* and beads *i*
 and lower the upper sash *b* down past the ex-
 tra sill *t*, allowing it to rest upon the subsill *u*,
 when the operator can insert the hand in the
 space between the bottom rail *b⁵* of the lower
 90 sash *b'* and the meeting-rail *b³* of the upper
 sash *b* and catch the sash *b* to withdraw it from
 the window-frame *a* for the purpose of clean-
 ing the same or removing it entirely there-
 95 from. The upper sash *b'* can also be with-
 drawn or taken out of the window-frame *a*,
 while the lower sash *b'* is lowered and tilted
 or taken out by the same operation. The key
q in the removable inside bead *n* is prevented
 100 from dropping out of the opening *p⁴* in the
 cup-shaped plate *p* by the lug *q³* on the bar
q' thereof engaging with the rear face *p⁵* on
 the cup-shaped plate *p*, and the key *q* can be
 taken out of the cup-shaped plate *p* at any
 105 time by bringing the lugs *q³ q⁴* on the bar *q'*
 opposite the horizontal opening *p⁴* and with-
 drawing the key *q*. When it is desired to re-
 place the parts, all that is necessary is to put
 the sash *b b'* into position within the window-
 frame *a*, lift the removable inside bead *n* into
 110 position by putting its inclined upper edge *n'*
 under the inclined lower edge *l'* of the sta-
 tionary inside bead *l*, and inserting the rabbet
n² of the bead *n* into the groove *e'* in the jamb
e, lugs *q⁴* on the bar *q'* of the key *q* being in
 115 a vertical position and opposite the opening
r³ in the plate *r*, and after the lugs *q⁴* are
 passed through said opening *r³* into the recess
r⁴ the key *q* can be turned, so locking the in-
 side bead *n* in position. The opposite inside
 120 bead *n* can be replaced in like manner, and
 when the sash *b b'* are in their normal posi-
 tion in the frame the window-frame *a* can be
 used in the ordinary manner.

It will thus be seen that my improved win-
 125 dow-frame can be used with only one sash,
 if desired, with but slight change, and that
 the parts composing the same can be easily
 adjusted in the frame and operated by any
 unskilled person and are not liable to get out
 130 of order. The outside of the frame presents
 a finished appearance and the whole frame is
 practically air-tight. The parts can be easily
 repaired, are positive in their movement, are

not expensive, can be applied to any window-frame, and are not in the way of shutters, &c. The sash can easily be taken out when necessary and without any inconvenience, thereby saving time and possible injury to the house-keeper in cleaning or repairing the windows.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

10 1. A window-frame provided with a parting-bead extending down to about the meeting-rails of the sash, an extra sill for the lower or inside sash, and a subsill for the upper or outside sash, said extra sill extending
15 out and closing the space below the parting-bead between the inside and outside sash, substantially as and for the purposes set forth.

2. A window-frame having the inside bead removable, a hollow cap fitting within said
20 removable inside bead having an elongated opening therein, a plate within the frame having an elongated opening therein, a recess in the frame beyond the plate, a key or catch fitting within the opening in the cap having
25 lugs thereon adapted to enter the opening in the plate into the recess to hold the inside bead, and a lug on the key or catch between the hollow cap and plate, substantially as and for the purposes set forth.

3. A window-frame having the inside bead 30 removable, a hollow cap secured within the removable inside bead having an elongated opening therein, a plate secured within the frame having an elongated opening therein, a recess in the frame beyond the plate, a key 35 or catch fitting within the opening in the cap having lugs thereon adapted to enter the opening in the plate into the recess to hold the inside bead, a lug on the key or catch between the hollow cap and plate, and a thumb-piece 40 on the outer end of the key or catch fitting within the hollow cap, substantially as and for the purposes set forth.

4. A fastener formed of a hollow cap, a key or catch fitting within an elongated opening 45 in said cap and provided with a thumb-piece fitting within the hollow cap, lugs on the inner end of said key or catch adapted to enter an opening in a plate into a recess, and a lug on said key or catch between the hollow cap 50 and the plate, substantially as described.

In testimony whereof I, the said NICHOLAS CARTUS, have hereunto set my hand.

NICHOLAS CARTUS.

Witnesses:

R. W. LIDDELL,
J. N. COOKE.