

No. 719,625.

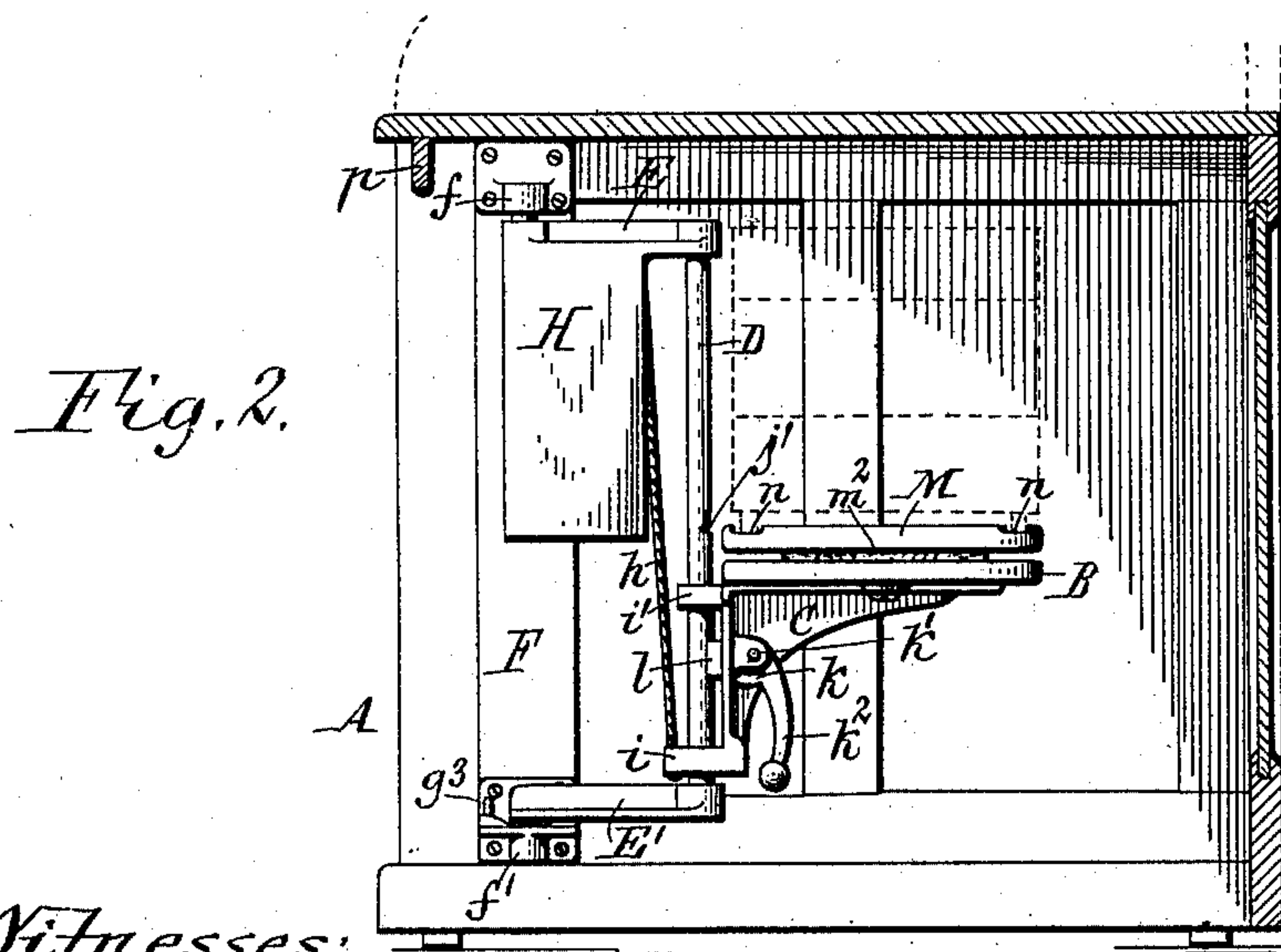
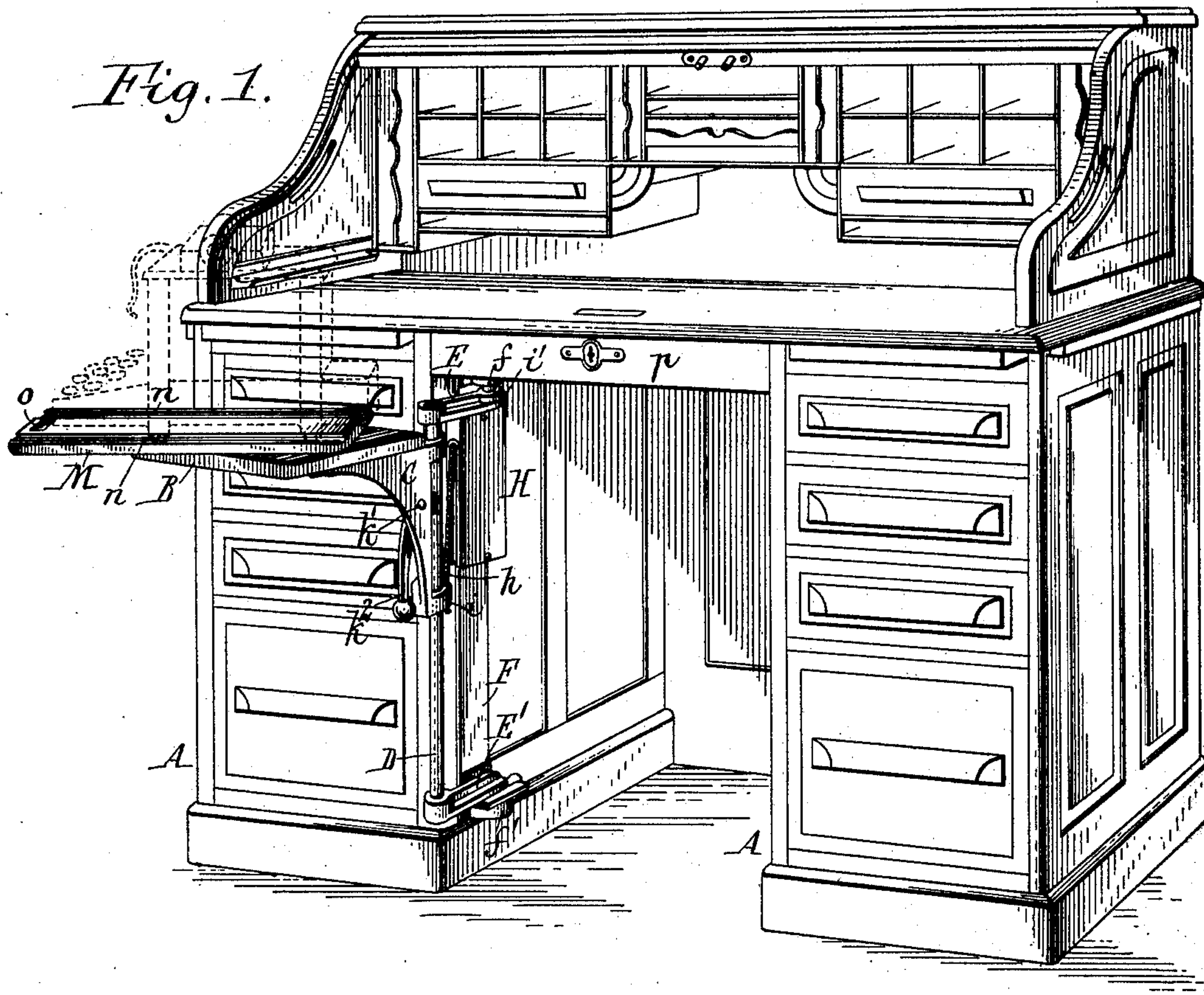
PATENTED FEB. 3, 1903.

A. J. THROM.
SHELF ATTACHMENT FOR DESKS.

APPLICATION FILED MAY 31, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses: f'
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2 SHEETS—SHEET 2.

Fig. 3.

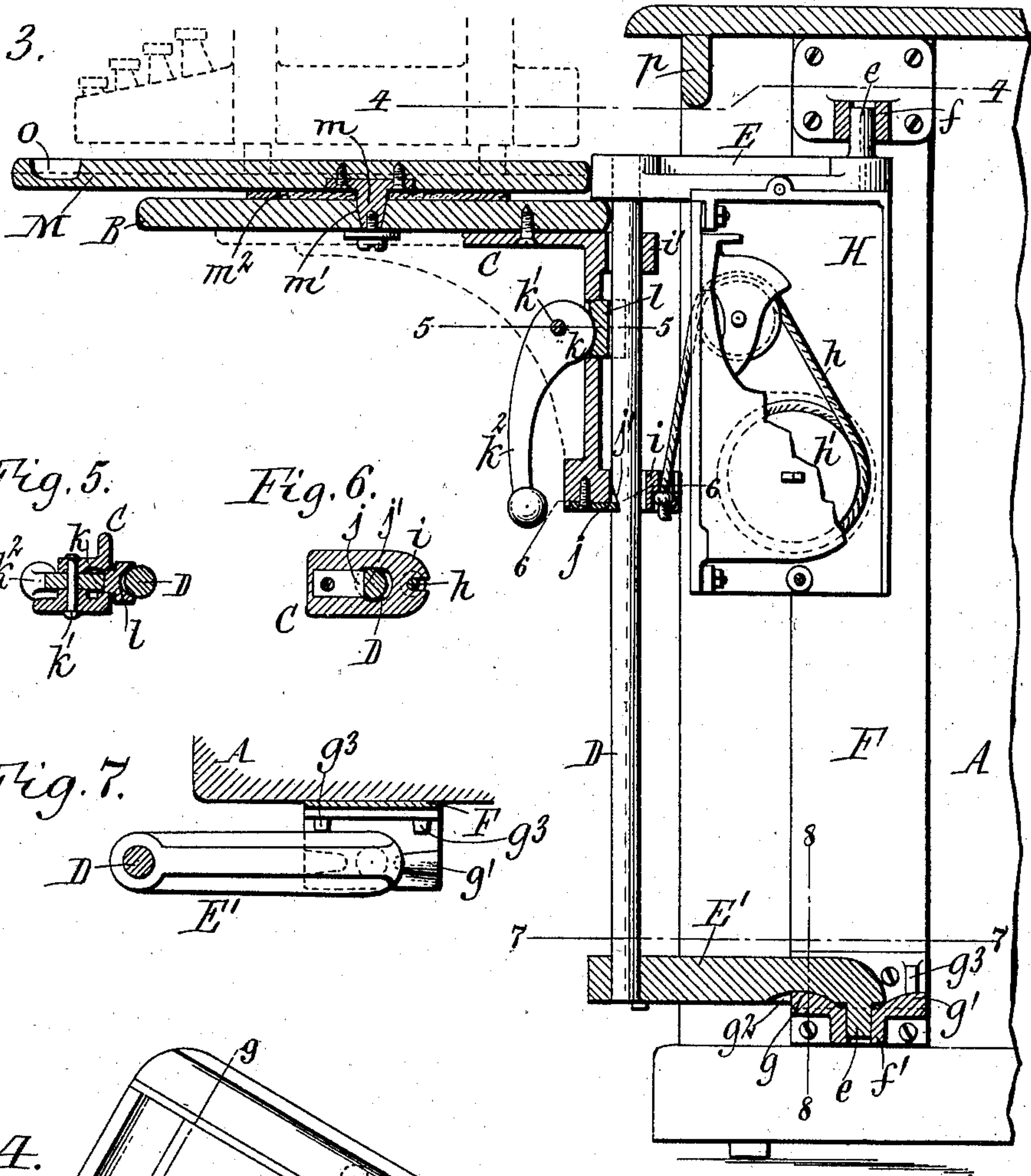


Fig. 5.

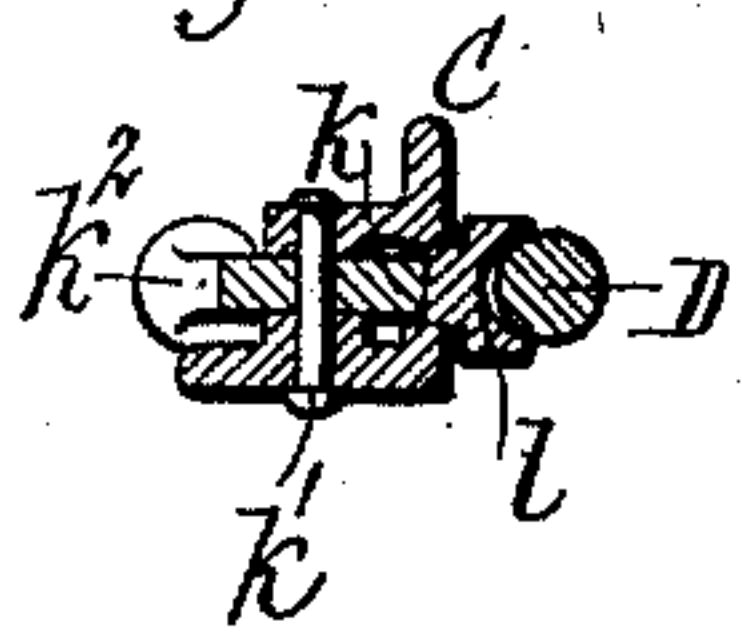


Fig. 6.

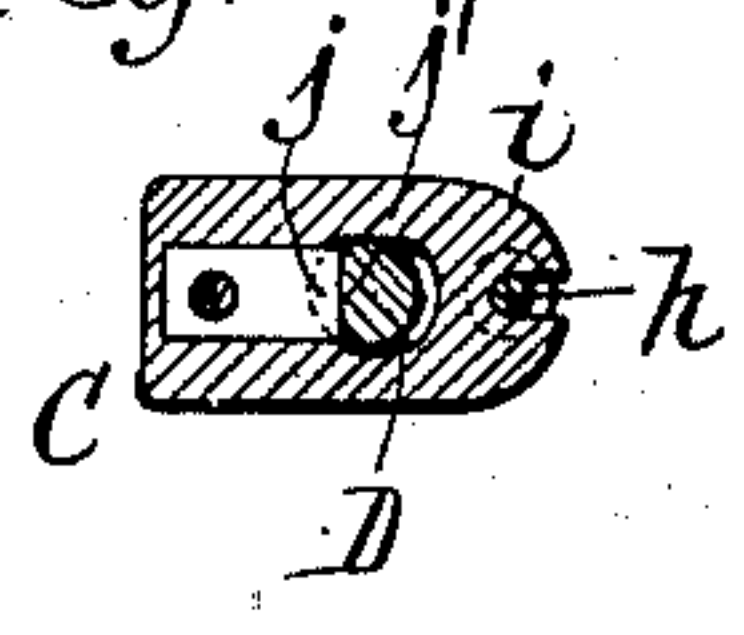


Fig. 7.

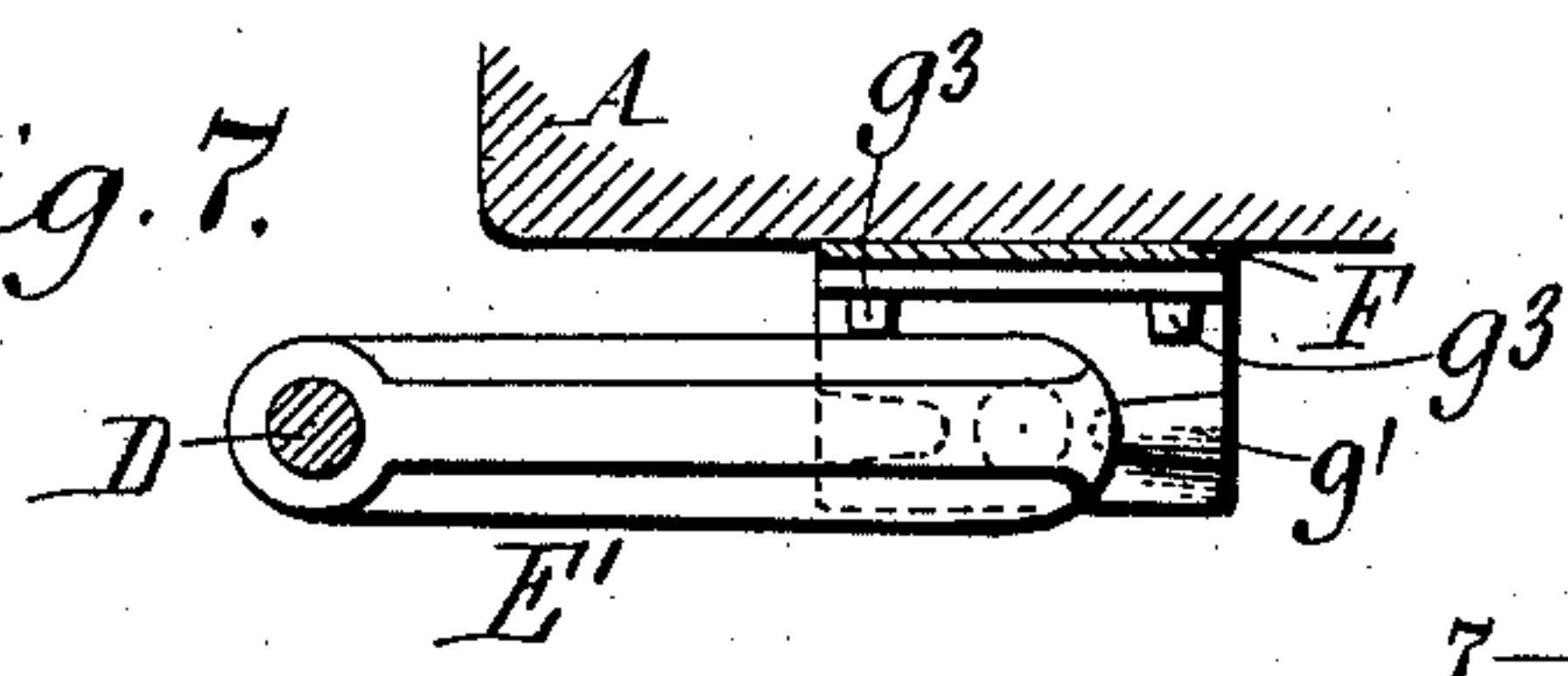


Fig. 4.

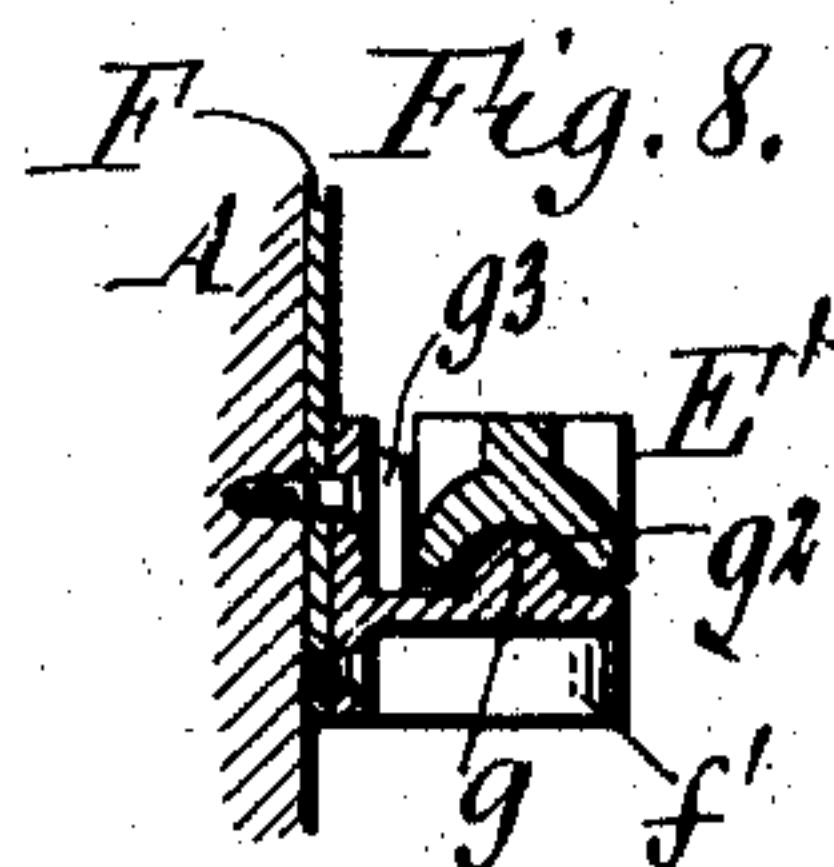
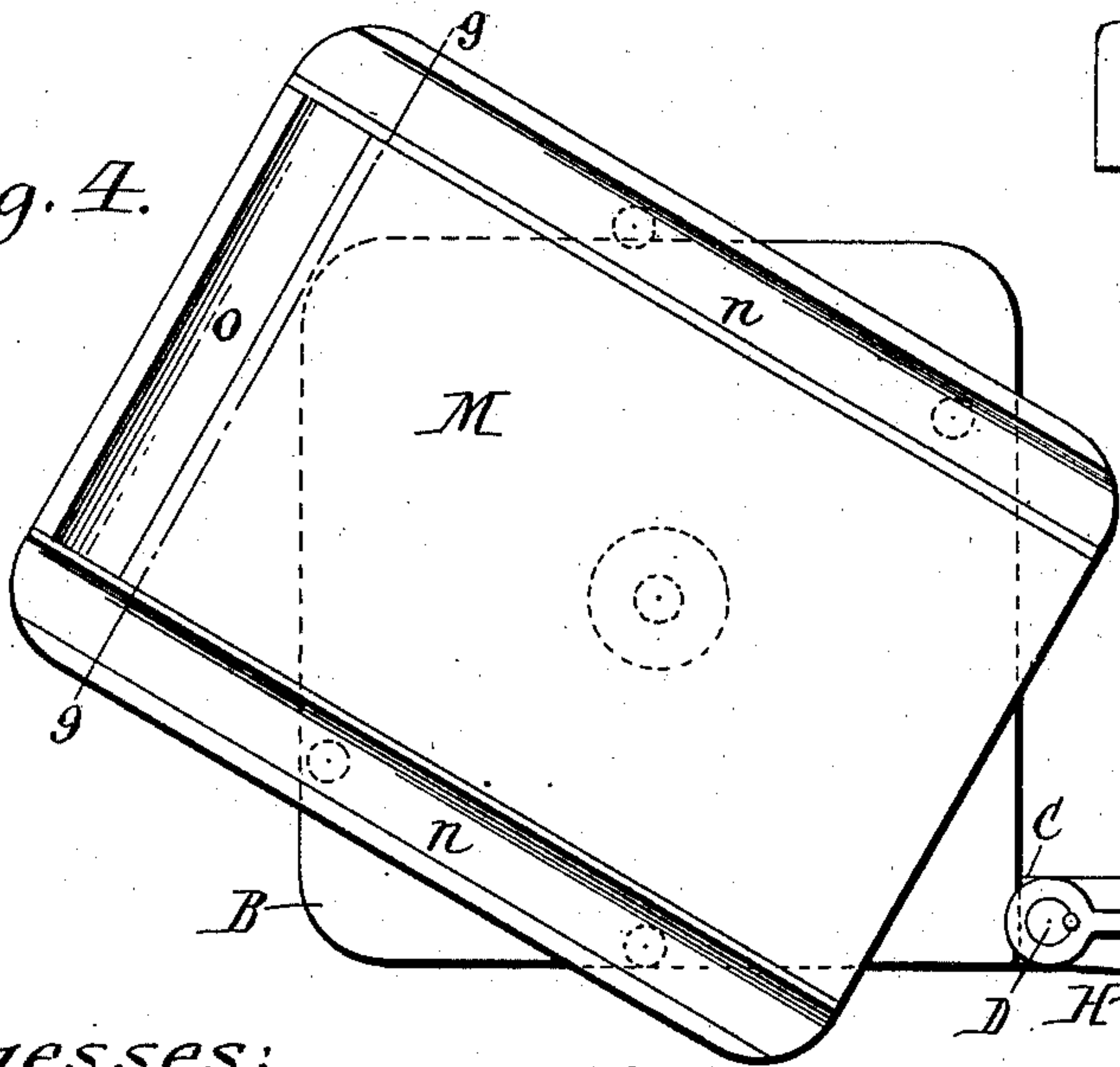


Fig. 9.



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UNITED STATES PATENT OFFICE.

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SHELF ATTACHMENT FOR DESKS.

SPECIFICATION forming part of Letters Patent No. 719,625, dated February 3, 1903.

Application filed May 31, 1902. Serial No. 109,662. (No model.)

To all whom it may concern:

Be it known that I, ANTHONY J. THROM, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Shelf Attachments for Desks, of which the following is a specification.

This invention relates to the swinging shelves or table attachments which are applied to office-desks and intended more especially for supporting a type-writing machine, my invention having particular reference to a shelf of this character which is adapted to be swung into the space under the desk-top and between the pedestals when not in use.

In ordinary roll-top and flat-top desks of standard size the space between the pedestals is comparatively narrow, the same not exceeding nineteen or twenty inches.

It is the principal object of my invention to provide a swinging or folding shelf of this kind which can be applied to any ordinary desk and which can be conveniently lowered and folded into such a limited space and at the same time swung back far enough to amply clear the legs of the occupant of the desk.

My invention has the further objects to lock the shelf in position by simple and convenient devices and to provide the same with inexpensive means for preventing lateral displacement of the type-writing machine.

In the accompanying drawings, consisting of two sheets, Figure 1 is a perspective view of an open roll-top desk provided with my improved shelf attachment, showing the shelf and type-writing machine swung out and elevated into position for use. Fig. 2 is a transverse vertical section of the desk, showing the shelf and the machine lowered and swung back under the desk. Fig. 3 is an enlarged sectional elevation of the shelf attachment applied to the desk. Fig. 4 is a horizontal section in line 4 4, Fig. 3. Figs. 5, 6, and 7 are similar sections in the correspondingly-numbered lines in Fig. 3. Fig. 8 is a transverse vertical section in line 8 8, Fig. 3. Fig. 9 is a transverse section of the turn-table in line 9 9, Fig. 4.

Like letters of reference refer to like parts in the several figures.

A indicates the pedestals of an ordinary or standard roll-top desk.

B indicates the shelf of my attachment, which is secured to the top of a bracket C. This bracket is capable of sliding vertically and swinging horizontally on an upright guide-rod D, carried by horizontally-swinging arms E E', which are hinged to the inner side of one of the desk-pedestals A, so that the carrying-frame formed by said rod and arms can be swung forward to a position in which the shelf and the type-writing machine project beyond the front of the desk, as shown in Fig. 1, or backward to a reversed position, in which the shelf and the machine occupy the space between the pedestals, as shown in Fig. 2.

The arms E E' may be pivoted directly to the desk-pedestal; but they are preferably hinged to a supporting-plate F, which carries the shelf attachment and is secured to the desk by screws, as shown, or by other suitable fastenings. This plate is provided at its upper and lower ends with sockets or bearings $f f'$, which receive vertical pintles e at the inner ends of the arms E E'. The ends of the guide-rod D are rigidly secured in openings in the outer ends of these arms. The horizontally-swinging carrying-frame formed by the rod D and arms E E' is locked in either of its extreme positions by a pair of rounded or cam-like ribs $g g'$, arranged on the upper side of the lower bearing f' on the front and rear sides of the adjacent pintle e and adapted to interlock with a correspondingly-shaped recess g^2 , formed in the under side of the lower arm E', as shown in Figs. 3, 7, and 8. Upon swinging the carrying-frame to its extreme outer position the recessed lower arm E' rides upon the front locking-rib g and is caused to automatically interlock therewith by the weight of the frame and the parts carried thereby, while upon swinging the frame to its extreme inner position the recessed arm interlocks in like manner with the rear rib g' . In swinging this frame from one extreme position to the other the recessed lower arm is obviously unlocked by the cam action of the ribs, which latter cause the arm to be lifted clear of the same. This duplex arrangement

of the locking-ribs also adapts the device for attachment to either the right or the left pedestal of the desk.

g^3 , Figs. 3, 7, and 8, indicates stops which are arranged on the supporting-plate F on opposite sides of the lower bearing f' and which serve to limit the movement of the shelf-carrying frame toward the desk-pedestal, thereby preventing the frame from coming in contact with the pedestal and defacing the same.

In order to require comparatively little effort in raising the shelf and the type-writing machine from their depressed to their elevated position, a suitable counterbalance is connected with the shelf, a counterbalance of the spring-drum type being preferably employed for this purpose. In the construction shown in the drawings the casing H of the counterbalance is secured in a pendent position to the upper arm E of the carrying-frame, and the outer end of the cord h , which is wound upon the spring-drum h' , is attached to the lower hinge-knuckle i of the shelf-bracket, as shown in Fig. 3. The spring of the counterbalance is of the proper strength to balance the vertically-sliding shelf and an ordinary type-writing machine. By attaching the counterbalance to the horizontally-swinging carrying-frame it follows the movements thereof and maintains the proper relative position to the same, insuring a free action of the counterbalance in all adjustments of the shelf attachment.

The shelf is positively locked in its elevated position by a horizontal tongue or bar j , secured to the lower hinge-knuckle i of the shelf-bracket and interlocking with the abrupt lower end of a notch or recess j' , formed in the front side of the guide-rod D. This locking-tongue extends into the eye or bore of said hinge-knuckle, and this bore is elongated or of elliptical cross-section to permit the lower end of the bracket to be tilted on the guide-rod sufficiently to withdraw the tongue from the notch of the rod. The upper hinge-knuckle i' is fitted on the rod with sufficient looseness to permit this action. The overhanging shelf, with the machine thereon, tends to tilt the lower end of the shelf-bracket rearwardly or toward the rod, and upon raising the shelf to its normal height the tongue automatically interlocks with the notch of the rod as soon as it rises above the abrupt lower end of the notch. To release the shelf, it is only necessary to tilt its outer end upward slightly, when the locking-tongue will leave the notch and permit the shelf to be lowered on the rod.

The notch preferably extends around about one-third of the circumference of the rod, as shown, so that the shelf can be swung from the position shown in Fig. 1 to a position in which the machine faces the occupant of the desk without disengaging the tongue from the notch of the rod. Upon swinging the shelf beyond the range of the locking-notch it can be lowered without tilting the shelf.

The shelf may be provided with a suitable clamping device for preventing it from turning on the guide-rod in operating the type-writing machine. I prefer to employ for this purpose a cam k , pivoted to the shelf-bracket by a transverse pin k' and operating against a shoe l , which in turn bears against the rod and affords an extensive and reliable clamping-surface. This cam has an operating-arm k^2 , which is preferably arranged to extend downward in the clamped position of the cam, so as to have a tendency to keep the cam in that position. The rear portion of the shoe l is reduced and guided in an opening formed in the shelf-bracket in line with the clamping-cam k . It has a concave bearing-face, which is preferably curved to a smaller radius than the guide-rod, so that the shoe bites against the rod only at its edges, as shown in Fig. 5, thus insuring a reliable grip. It is obvious that the cam k will also clamp the shelf-bracket against vertical movement on the rod, and, if desired, the positive lock formed by the tongue j and the notch j' of the rod may be dispensed with.

M indicates a rotary platform or turn-table mounted on the shelf B and upon which the type-writing machine rests, this table permitting the machine to be turned to the most convenient position for operating it after raising and adjusting the swinging shelf. This turn-table is provided on its under side with a stud m , which turns in an opening or bearing m' of the shelf and in which it is confined by a screw and a washer, as shown in Fig. 3. A felt washer m^2 of suitable size is preferably interposed between the shelf and the turn-table for keeping the same apart and insuring the easy turning of the table and also for deadening the noise incident to operating the type-writing machine.

In order to prevent the type-writing machine from being shifted laterally off the turn-table, the latter is provided in its upper side with longitudinal grooves n , which are adapted to receive the usual rubber feet of the machine. These grooves are arranged at the proper distance apart for this purpose and preferably extend from end to end of the table. The bases of different type-writing machines vary only to a slight extent in their transverse dimension; but in their longitudinal dimension the variation is several inches. By providing the turn-table with such continuous depressions or grooves the same table is adapted to receive and retain different styles of type-writing machines in which the distance between the front and rear feet varies, thus avoiding the necessity of providing different turn-tables for different machines or of providing the table with several sets of differently-spaced sockets for the feet.

For the convenience of the operator the turn-table may be provided in its upper side near its front end with a transverse pocket or cavity o for a pencil, an eraser, &c.

In applying the shelf attachment to a desk

the supporting-plate F is placed at such a distance from the front of the desk that the guide-rod D stands slightly in front of the adjacent pedestal when projected, as shown in Figs. 1 and 3.

When it is desired to move the machine out of the way, the shelf B is released by pulling the cam-arm k^2 upward and tilting the shelf slightly in the same direction to withdraw the locking-tongue j from the notch of the guide-rod, and the shelf, with the machine remaining thereon, is then lowered on the rod sufficiently to allow the machine to clear the middle or lock rail p , which extends across the space between the pedestals. The carrying-frame is then reversed or swung back into this space closely to the pedestal, thus bringing the shelf and the machine into the retracted position shown in Fig. 2. As the arms E E' of the carrying-frame extend rearward from their pivots in this position, the shelf and the machine recede some distance from the front of the desk, leaving ample room for the legs of the occupant of the desk and affording the same comfort as a desk without such an attachment.

Before swinging the type-writing machine under the desk it may be protected from dust by a cloth cover or hood of the kind in common use.

When the machine is to be used, the carrying-frame D E E' is simply swung forward and the shelf is raised to the proper height. Before clamping the shelf in position it may be turned to face the occupant of the desk if he wishes to operate the machine himself or it may be turned away from him to face a type-writer operator for taking dictation directly upon the machine.

Owing to the double joint obtained by hinging the carrying-frame to the desk and the shelf-bracket to the carrying-frame, the shelf, with the superposed machine, is not only swung back a considerable distance from the front of the desk upon folding the attachment, but the same is capable of freely entering the comparatively narrow space between the pedestals of standard desks. In order to permit of such a close folding of the attachment, the shelf is secured at one corner to its bracket C, as shown, so that one or the other of the adjacent right-angle edges of the shelf may be brought substantially in line with the swinging arms E E' in folding and unfolding the attachment.

As the shelf and its supporting parts are all carried by the plate F, they constitute a complete attachment which can be readily applied to any ordinary flat-top or roll-top desk by simply screwing this plate to one or the other pedestal, according as a right or left hand shelf is desired, this feature being especially advantageous to dealers, who can quickly apply the attachment to any desired size or style of desk. By reason of this self-contained character of the attachment the

same does not require the ordinary desk to be reconstructed or its top to be cut away or otherwise altered to receive the attachment.

While the attachment is designed more especially for supporting a type-writer, it is also serviceable as a support for record-books, letter-files, &c. It may also be applied to a table as well as an office-desk.

I claim as my invention—

1. The combination of a desk having a pedestal, a horizontally-swinging frame pivoted to the inner side of the pedestal and having an upright guide-rod at its free end, a shelf capable of swinging and sliding on said guide-rod, and means for retaining the shelf in position on the rod, substantially as set forth.

2. The combination of a desk having a pedestal, a horizontally-swinging frame comprising horizontal arms pivoted to the inner side of the pedestal and an upright guide-rod attached to the outer ends of the arms, a bracket mounted on said guide-rod between its carrying-arms and capable of swinging and sliding thereon, a shelf carried by said bracket, and means for retaining the shelf-bracket in position on said guide-rod, substantially as set forth.

3. The combination of a desk having a pedestal, a horizontally-swinging frame pivoted to the inner side of the pedestal and having an upright guide-rod at its free end, a shelf capable of swinging and sliding on said guide-rod, and a counterbalance mounted on said horizontally-swinging frame and connected with said shelf, substantially as set forth.

4. A shelf attachment for a desk or table comprising a plate or support, a horizontally-swinging frame pivoted to said support and having an upright guide-rod at its free end, and a shelf capable of swinging and sliding on said guide-rod, substantially as set forth.

5. A shelf attachment for a desk or table, comprising a plate or support, a horizontally-swinging frame pivoted to said support and having an upright guide-rod at its free end, a shelf capable of swinging and sliding on said guide-rod, and a counterbalance carried by said swinging frame and connected with said shelf, substantially as set forth.

6. A shelf attachment for a desk or table, comprising a plate or support, a horizontally-swinging frame pivoted to said support and having an upright guide-rod at its free end, an automatic lock for retaining said frame in position, and a shelf mounted on said guide-rod, substantially as set forth.

7. A shelf attachment for a desk or table, comprising a plate or support having upper and lower bearings and a cam-rib arranged adjacent to the lower bearing, a horizontally-swinging frame comprising upper and lower arms pivoted in said bearings and a vertical rod connecting the free ends of said arms, the lower arm having a recess arranged to interlock with said cam-rib, and a shelf mounted on said rod, substantially as set forth.

8. A shelf attachment for a desk or table, comprising a plate or support, a horizontally-
swinging frame pivoted to said support and
carrying an upright guide-rod, a shelf capa-
5 ble of swinging and sliding on said guide-rod,
a counterbalance connected with the shelf,
and a clamping device for retaining the shelf

in position on the guide-rod, substantially as
set forth.

Witness my hand this 27th day of May, 1902. 10
ANTHONY J. THROM.

Witnesses:

CARL F. GEYER,
THEO. L. POPP.