(No Model.)

5 Sheets—Sheet 1.

B. BROWER.

DESK.

No. 323,271. Patented July 28, 1885.

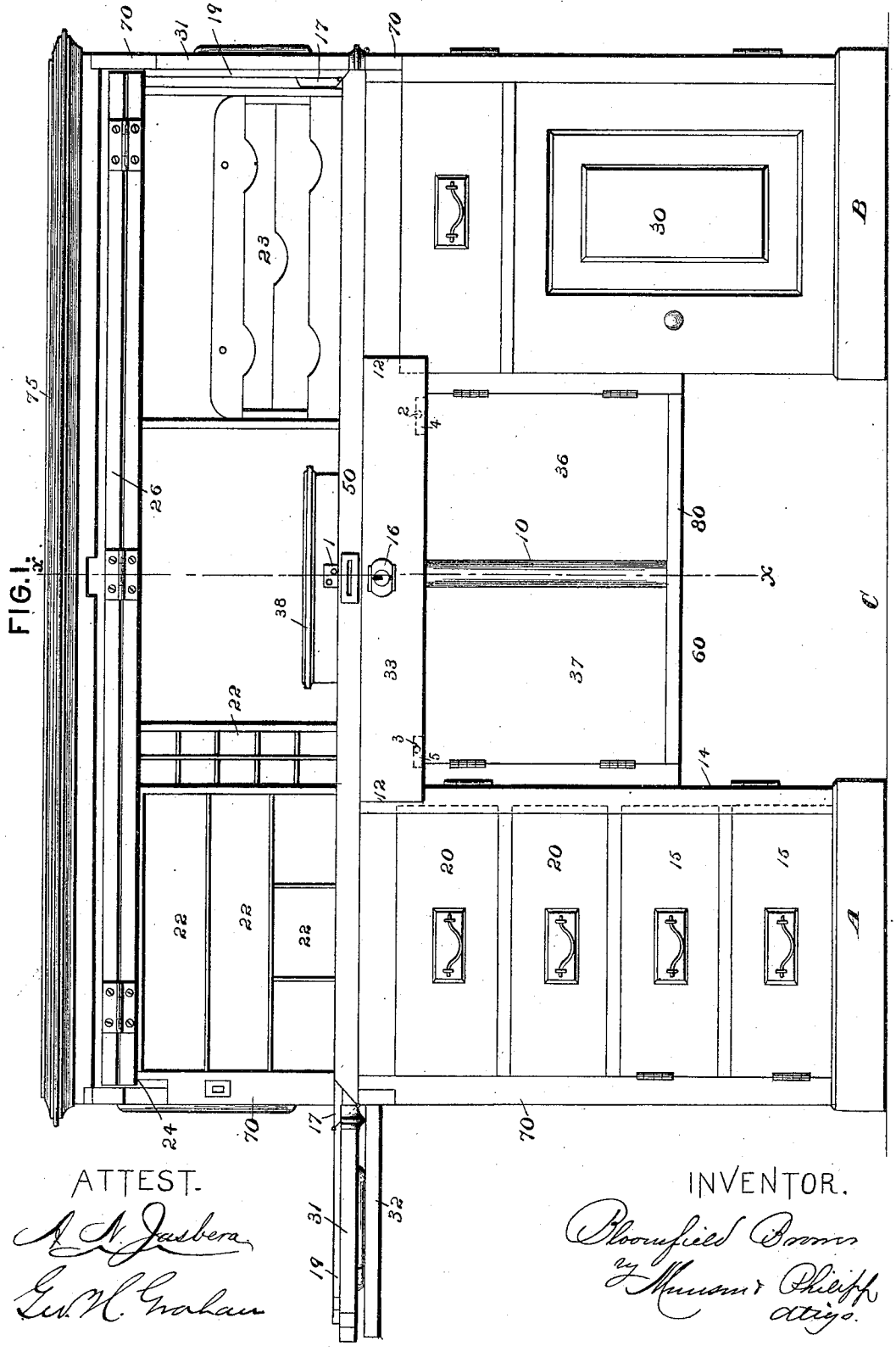


FIG. 1.

ATTEST.

A. N. Jasbera

Geo. H. Graham

INVENTOR.

Bloomfield Brower

by Munson & Philipp

attys.

N. PETERS, Photo-Lithographer, Washington, D. C.

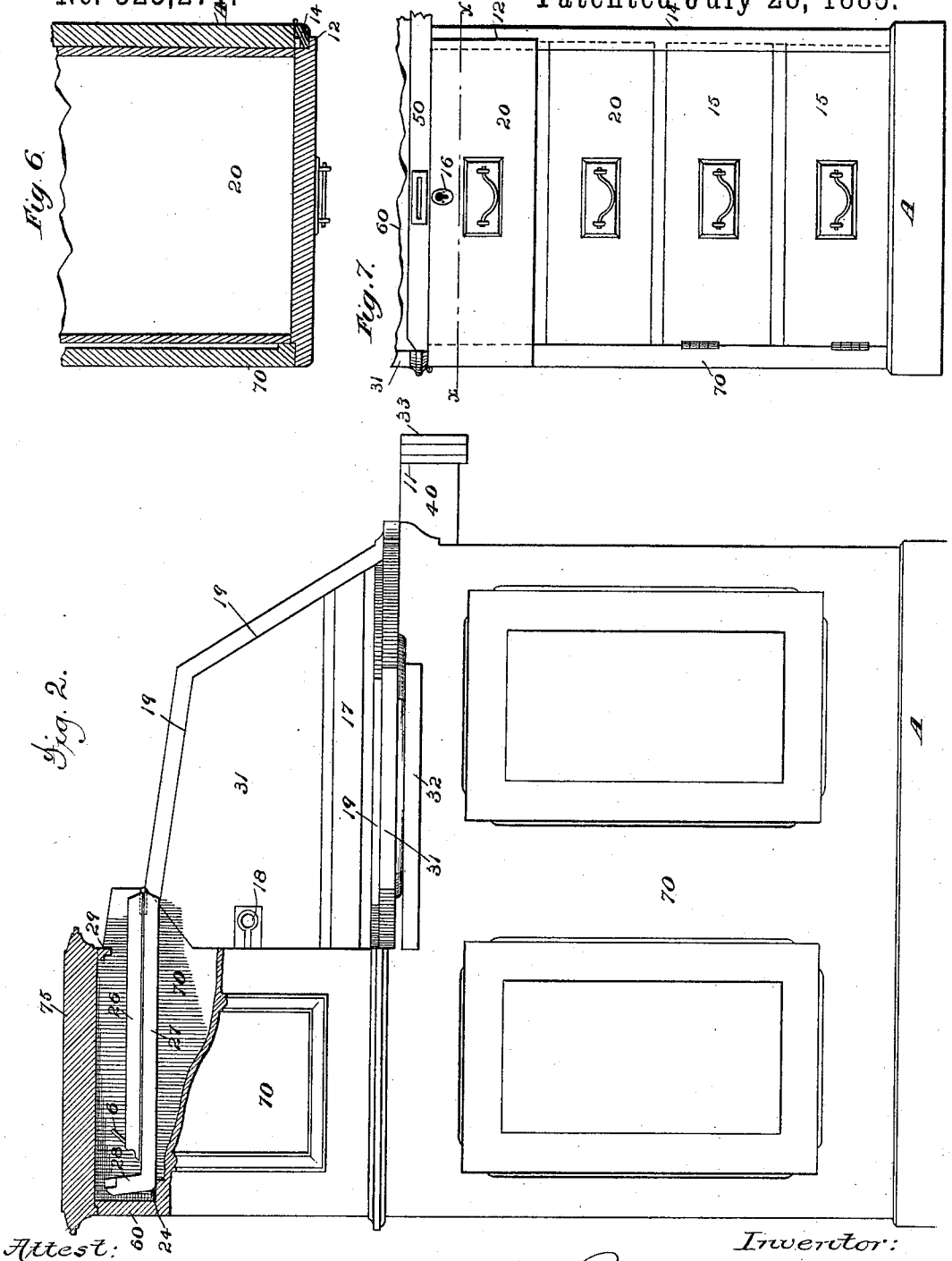
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B. BROWER.

DESK.

No. 323,271. Patented July 28, 1885.



Attest:

Geo. H. Graham

A. N. Jaskera

Inventor:

Bloomfield Brower.

by Munn & Philipp

Attys.

N. PETERS, Photo-Lithographer, Washington, D. C.

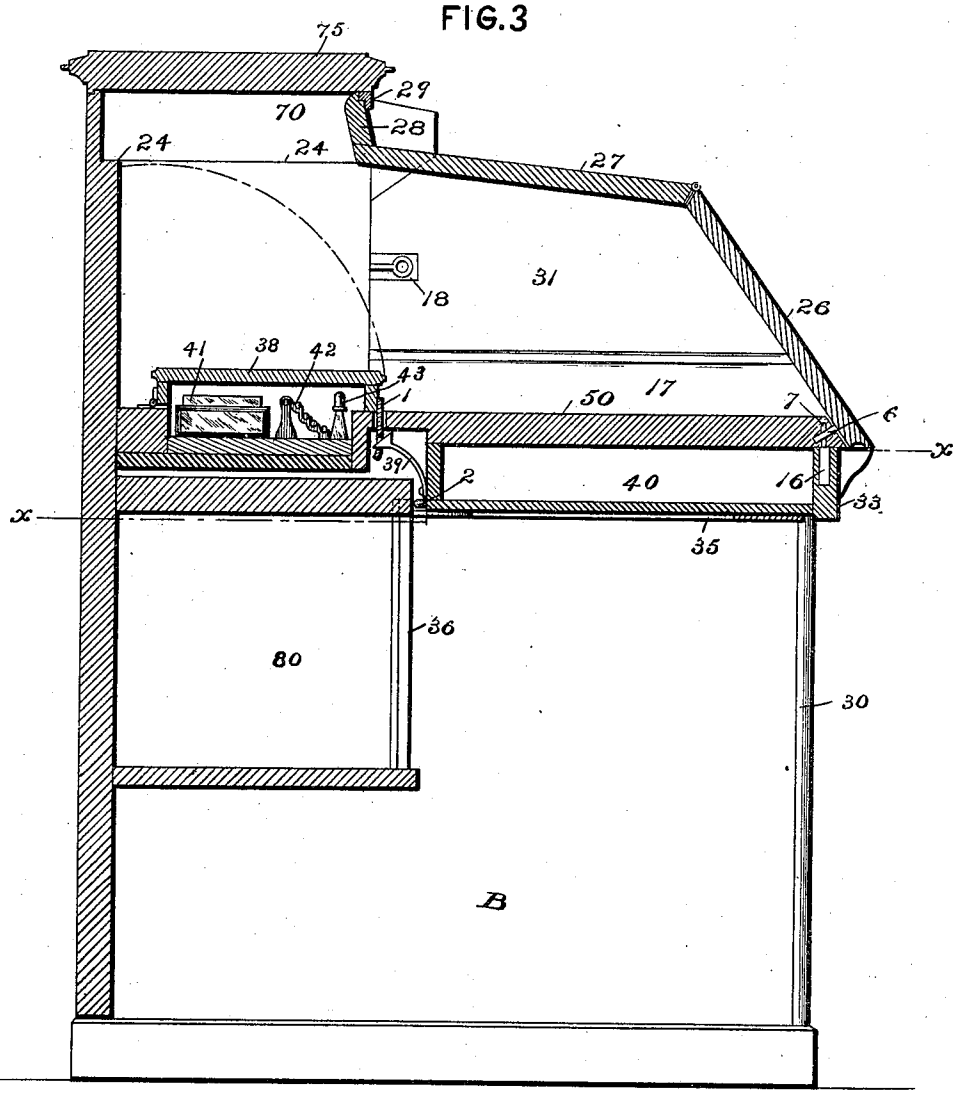
(No Model.) 5 Sheets—Sheet 3.

B. BROWER.

DESK.

No. 323,271. Patented July 28, 1885.

FIG. 3



ATTEST.

A. N. Jasbera.

Geo. H. Graham

INVENTOR.

Bloomfield Brower

by Munson & Philipp

attys.

N. PETERS. Photo-Lithographer. Washington, D. C.

(No Model.)

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B. BROWER.

DESK.

No. 323,271. Patented July 28, 1885.

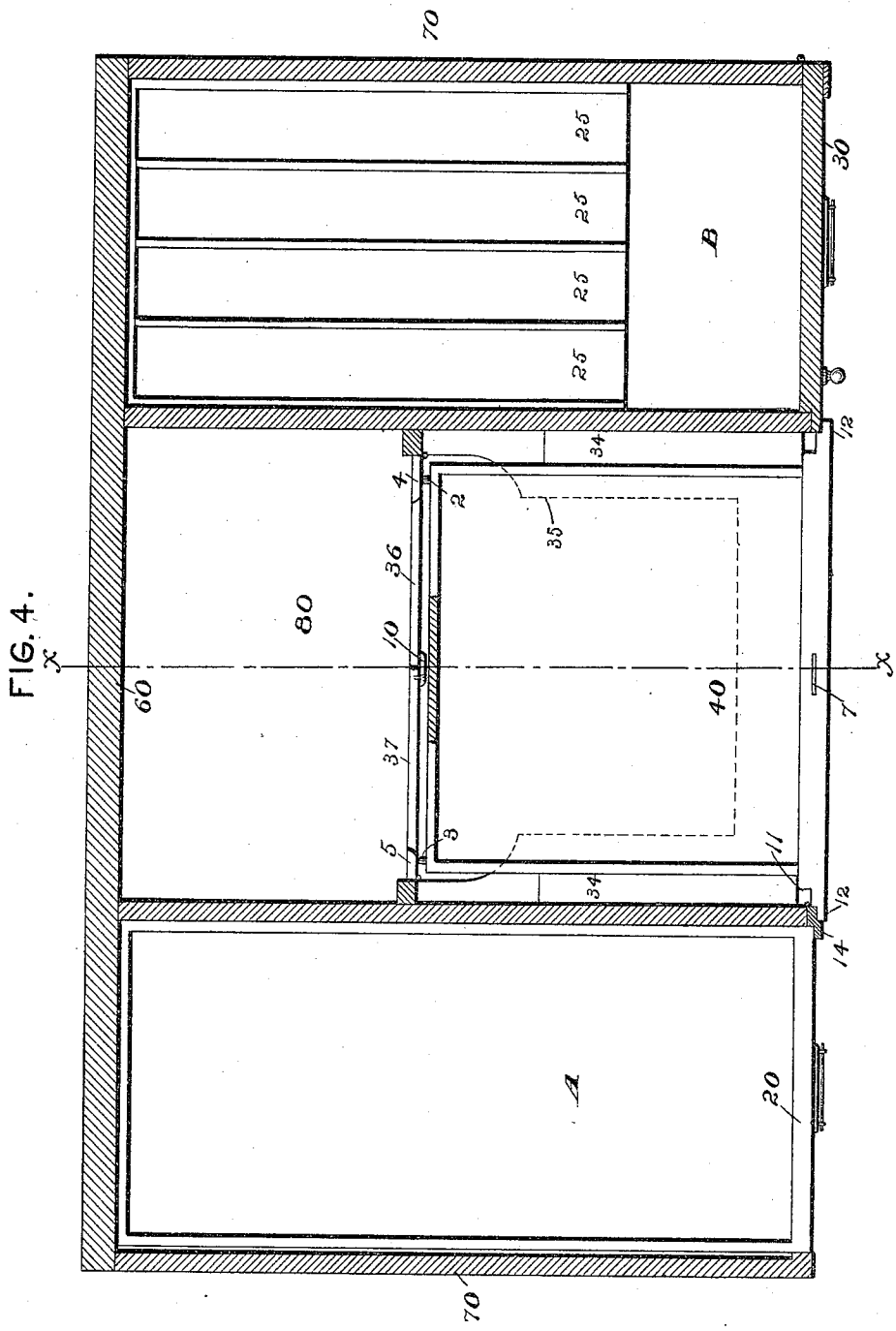


FIG. 4.

ATTEST.

A. N. Jasbeim

Geo. H. Graham

INVENTOR.

Blomfield Brower

by Munson & Philipp

attys.

N. PETERS. Photo-Lithographer, Washington, D. C.

(No Model.)

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B. BROWER.

DESK.

No. 323,271. Patented July 28, 1885.

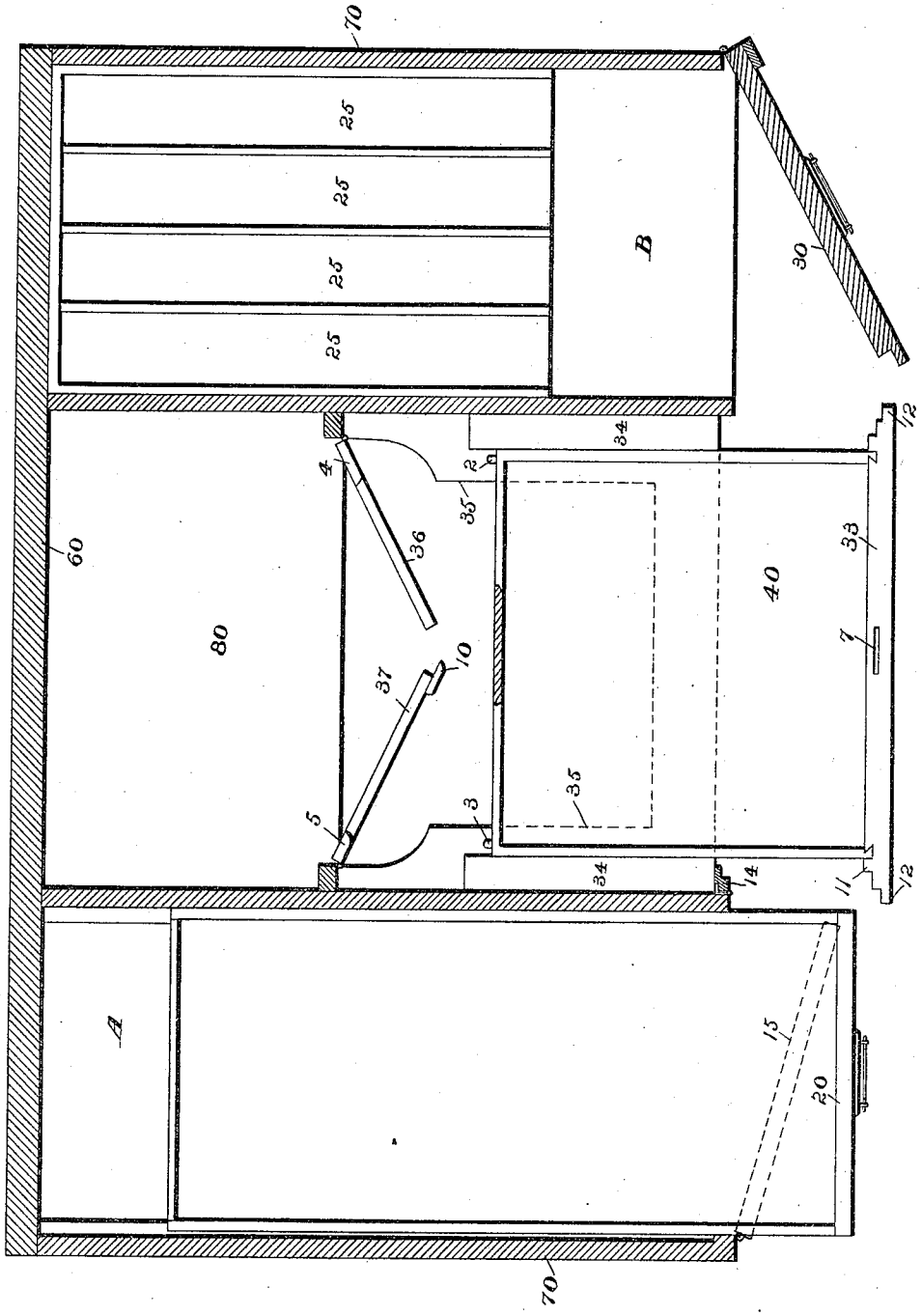


FIG. 5.

ATTEST.

A. D. Jasbera

Geo. H. Graham

INVENTOR.

Bloomfield Brower

by Munn & Philipp

attys

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

BLOOMFIELD BROWER, OF NEW YORK, N. Y.

DESK.

SPECIFICATION forming part of Letters Patent No. 323,271, dated July 28, 1885.

Application filed July 21, 1884. (No model.)

To all whom it may concern:

Be it known that I, BLOOMFIELD BROWER, a citizen of the United States, residing in the city of New York, county of New York, and State of New York, have invented certain new and useful Improvements in Desks, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

This invention relates to office and counting-house desks generally, but more particularly to that class of these desks which are provided with rolling or sliding covers, by which, when the desk is not in use, its top can be entirely inclosed and protected. These desks as commonly constructed are provided beneath the top with one or more casings, in which are arranged series of drawers, or which are constructed to form cupboards for the reception of books or papers, and also in many cases with a large shallow drawer which is arranged directly beneath the central portion of the desk-top and above the open space which is usually left to accommodate the feet and legs of the person sitting at the desk. It is of course desirable that means should be provided by which all of these drawers or compartments beneath the top, and also the cover which incloses the top, can be securely locked when the desk is not in use; and it is furthermore desirable that this locking apparatus should be so constructed and arranged that a single lock and key will serve to fasten all of the parts in their closed position.

It is the object of the present invention, among other things, to provide means by which a single lock is made to secure all of the parts in their closed position, thereby dispensing with the use of more than a single key, and making a single operation all that is necessary to lock and unlock all of the parts of the desk.

The invention also has for its object to improve and simplify the construction of both the desk and locking mechanism in certain particulars.

To these ends the invention consists in various features of construction and organization both in the desk and locking mechanism, singly and in various combinations, all of which will now be fully described, and particularly pointed out in connection with the accompanying drawings, in which—

Figure 1 is a front elevation of a desk embodying the present invention, the cover being shown in its open position. Fig. 2 is an end elevation, partly in section, of the same, showing also the large shallow drawer above the open space at the center of the desk partly withdrawn. Fig. 3 is a sectional elevation taken upon the line *x x* of Figs. 1 and 4, showing the parts in their closed position. Fig. 4 is a horizontal section taken upon the line *x x* of Fig. 3, the parts being shown in their closed position. Fig. 5 is a similar view showing the parts in their open position; and Figs. 6 and 7 illustrate a modification, which will be hereinafter referred to.

Referring to said drawings, it is to be understood that as to its general construction and arrangement the desk therein shown is similar to many of the ordinary desks of the class to which it belongs. It is provided with a plain top, 50, beneath one end of which is arranged a casing, A, containing two or more drawers, 20, and a small cupboard, the door 15 of which is located beneath said drawers, while beneath the other end is arranged a similar casing, B, which is provided with a hinged door, 30, and is divided into a number of compartments, 25, for the reception of books or papers. Between the casings A B there is left the usual open space, C, to accommodate the feet and legs of the person sitting at the desk. Above the space C and beneath the center of the top 50 there is arranged the usual large shallow drawer, 40, which extends across or nearly across the entire space C, and is supported upon a frame, 35, which is constructed and arranged as shown in Figs. 3, 4, and 5.

The back 60 and ends 70 of the desk extend above the top 50 so as to inclose it upon three sides, and are provided with a narrow roof portion, 75, which extends forward over a portion of the top in the usual manner. The space thus inclosed may be divided in any desired manner into compartments for the reception of books or papers, or may be provided with drawers. As shown in the present case, one of the end portions of this space is divided into a number of pigeon-holes, 22, while the other end portion is provided with a rack, 23, for

the reception of paper and envelopes. The space between the pigeon-holes 22 and the paper-rack 23 affords sufficient room for the ink-stand 41, pen-rack 42, mucilage-holder 43, and such other articles as are usually kept permanently upon the top of the desk. A sufficient space is left between the pigeon-holes 22 and the roof 75 to receive the sliding cover when the same is moved backward so as to expose the top 50.

The sliding cover is composed of two parts, 26 27, which are hinged together so that the part 26 can be folded over onto the part 27 and the whole then slid back beneath the roof portion 75 to open the desk, as shown in Fig. 2, or withdrawn from beneath the roof portion and unfolded so as to join with the front edge of the top 50 to close the desk, as shown in Fig. 3. The part 27 is provided at its rear edge with a cleat, 28, which projects upward, so as to abut against a similar cleat, 29, secured to the under side of the roof portion 75 when the cover is drawn forward to close the desk, as also shown in Fig. 3. The back 60 and ends 70 of the desk are rabbeted at their upper edges, so as to provide a ledge, 24, upon which the cover rests when it has been folded and slid back beneath the roof 75, and the portions 31 of the ends 70, which extend forward beyond the roof 75, are likewise rabbeted, so as to provide ledges 19, upon which the parts 26 27 rest when they are drawn forward and unfolded to close the desk.

By making the cover in two parts, which are so arranged that they can be folded together in the manner just described, a very simple and inexpensive cover is provided which can be housed in a small space when the desk is opened for use.

By providing the cleats 28 29 this cover is held securely in position to close the top of the desk; but is made capable of being readily removed if for the purpose of making repairs, or for any other reason, it becomes necessary to do so.

To remove the cover, it is only necessary to withdraw the same from beneath the roof portion 75 until the cleat 28 is nearly in contact with the cleat 29, and then raise the parts 26 27 until the upper edge of the cleat 28 is sufficiently lowered to pass beneath the cleat 29. The cover can at any time be restored by simply reversing the operation.

The portions 31, instead of being made integral with the remaining portions of the ends 70, are formed of separate pieces, and are hinged at their lower edges, so that when the cover is folded and slid back to open the desk they can be turned down to the position shown at the left of Fig. 1, thereby not only preventing their casting a shadow upon the top of the desk, but extending the top so as to greatly increase its capacity. The portions 31, when turned down, are supported upon sliding rests 32, which are arranged to be drawn out from beneath the top 50 in the usual manner.

Instead of the rests 32 to support the portions 31, the ends 70 may be provided with pivoted brackets, which can be turned out from said ends to support the portions 31. The portions 31 are provided with ordinary locking-bolts, 18, by which they can be locked in their upright position.

In order to cover the V-shaped spaces which are left between the top 50 and the portions 31 when the latter are turned down, the portions 31 are provided upon their inner sides with hinged flaps 17, which are arranged to be turned up to the position shown at the right of Fig. 1 when the portions 31 are raised, and to be turned down to the position shown at the left of said figure, so as to make a perfectly smooth joint between the top 50 and the portions 31, when the latter are turned down.

It will be observed that the arrangement of the portions 31 is very different from that heretofore devised for extending or enlarging the tops of cabinets and the like. In such case the end portions did not extend above the flat top, but the top was provided with folding hinged portions which extended entirely across its ends, and could be turned down to extend the top or be folded together and turned up against the ends of an upright portion when not in use. In the present case, however, the portions 31 extend only a part of the distance across the ends of the top of the desk, and are so arranged that when turned up they close the spaces between the sliding cover and the desk-top.

The front 33 of the central drawer, 40, is provided with a lock, 16, of any suitable construction, the bolt 7 of which enters a recess formed in the under side of the top 50 in the usual manner so as to lock the drawer.

The part 26 of the cover is provided with a catch, 6, which enters a recess formed in the front edge of the top in such position as to be engaged by the bolt 7 of the lock 16, thus causing both the drawer 40 and the cover to be fastened by the same lock, as shown in Fig. 3.

In order to effect the locking of all the parts of the desk which are located beneath the top by means of the same lock which locks the drawer 40 and the top, and thus avoid the expense and annoyance of providing and using a number of separate locks, I provide the inside front corner of the casing A with a hinged piece, 14, which is arranged to swing outward and overlap the edges of the drawers 20 and the edge of the door 15, while the front 33 of the drawer 40 is made to project beyond the side of the drawer, so as to overlap the piece 14 and hold it in position to prevent the withdrawal of the drawers or the opening of the door, as shown in Figs. 1 and 4. In order to lock the door 30, the opposite end of the front 33 of the drawer 40 is extended so as to overlap the edge of the door when the same is closed, as also shown in Fig. 4, and thus prevent the door from being opened until the drawer 40 is partially withdrawn. The drawer 40 is arranged to slide between a pair of blocks, 34, which are secured to the inner sides of the

casings A B, and are of sufficient thickness to permit the piece 14 to swing inward and lie at the side of the drawer when the same is partially withdrawn, as shown in Fig. 5. By this arrangement the single lock 16 is made to lock not only the drawer 40 and the top of the desk, but also the drawers 20 and the doors 15 30.

In desks of this class it is sometimes desirable to utilize the rear portion of the space C between the casings A B by locating a cupboard, as 80, therein. When this is done, the doors 36 37 of this cupboard may also, as shown in the present case, be fastened by the lock 16. To effect this, the doors may be provided upon their upper ends at the edges next to the hinges with projections 4 5, which extend upward far enough to be engaged by studs 2 3, projecting from the back of the drawer 40 when the drawer is in its closed position, as shown in Fig. 4; or the same result may be effected by omitting the projections 4 5 and studs 2 3 and providing the drawer 40, at or near the middle of its back, with a downwardly and rearwardly extending stud or projection, which abuts against one or both of the doors when the drawer and doors are closed.

To lock or unlock all parts of the desk just described, all that is necessary is to operate the single lock 16. As soon as the bolt 7 of the lock is retracted the part 26 of the cover can be raised and folded over onto the part 27, and both parts can then be slid back beneath the roof portion 75, as shown in Fig. 2. By then withdrawing the bolts 18 and drawing outward the rests 32 the portions 31 can be turned down and supported on a level with the top 50, so as to extend the top and also admit the light more fully thereto. The flaps 17 can then be turned over so as to cover the V-shaped recesses between the top and the portions 31.

To open all the portions of the desk which are located beneath the top 50, it is only necessary to withdraw the drawer 40 for a short distance. The door 30 can then be swung past the end of the front 33 of the drawer, and the piece 14 can then be swung to the position shown in Fig 5, so as to release the door 15 and drawers 20. The partial withdrawal of the drawer 40 will also remove the studs 2 3 away from the projections 4 5, so that the doors 36 37 can be opened.

To lock all the parts of the desk, the operation will be reversed. The doors 36, 37, 15, and 30 and the drawers 20 will be closed, and the piece 14 swung back to its original position, so as to overlap the edges of the drawers 20 and door 15. The extensions 31 will then be turned up to their vertical position and locked by the bolts 18, after which the cover will be drawn out until the cleat 28 is arrested by the cleat 29, and the portion 26 will be turned down to the position shown in Fig. 3. By then closing and locking the drawer 40 all of the parts will be held in their closed position.

It will be observed that that end of the front 33 of the drawer 40 which overlaps the piece 14 is provided with a shoulder, 11, which is so arranged as to come into contact with the piece 14 and arrest the drawer before it is entirely closed in case an attempt is made to close it when said piece is in the position shown in Fig. 5, and also that said piece cannot be turned to the position shown in Fig. 4 until the drawers 20 are entirely closed. By this arrangement it becomes impossible to close the drawer 40 until the piece 14 is in position to lock the drawers 20, and thus all danger of inadvertently leaving either of these drawers unlocked is avoided.

It is of course to be understood that the casing B, instead of being provided with a cupboard, may, if preferred, be provided with a series of drawers similar to the drawers 20, which will be locked by a hinged piece, which will be acted upon by the end of the front 33 in the same manner as the piece 14, and that the space beneath the drawers 20 may be occupied by drawers instead of by a cupboard, or that both of the casings A B may be formed into cupboards and provided with doors similar to the door 30. In the latter case the doors of both cupboards will be locked in the same manner as the door 30.

The cupboard 80 may be omitted, if preferred. In some cases also it may be found desirable to omit one of the casings, A B, entirely, and support that end of the desk by means of suitable legs.

In some cases where the desk is of small size it may be found desirable to omit not only one of the casings, A B, but also the central drawer, 40. When this is done, the lock 16 will be placed upon the upper one of the series of drawers 20, the front of said drawer being provided with an extension, 12, which laps over the hinged piece 14, as shown in Figs. 6 and 7. In this case the catch 6, instead of being placed at the middle of the portion 26, will be placed near the end, so as to be in line with the lock 16. When this form of locking apparatus is used, the upper drawer may be closed and locked without locking the other drawer, and the door 15, by simply leaving the piece 14, swung outward so that it will not be caught under the end 12 of the front of the upper drawer.

This form of locking apparatus can be applied to chiffoniers and bureaus equally as well as to desks.

If in any case it should be desired to dispense with the drawer 40, a simple sliding piece provided with the projections 12 may be employed, instead of the drawer, to carry the lock 16 and perform the function of the front 33 of the drawer, and such a piece is to be considered as the equivalent of the drawer for these purposes.

It will of course be seen that the locking apparatus herein shown and described may be employed in connection with any of the common forms of sliding or rolling covers; and also that a cover constructed and ar-

ranged as shown in the present case can be usefully employed in connection with any form of locking apparatus. It will also, of course, be seen that either or both the cover and the locking apparatus herein shown may be successfully employed in desks in which the parts 31 are not hinged, so as to be capable of being turned down to form extensions to the top, and also that the advantages due to the hinging of the parts 31 may be realized where the cover and locking apparatus are of a different construction from that shown, and also that the apparatus herein shown for locking those parts of the desk which are located beneath the top may be successfully used in connection with those desks which are not provided with covers, or which are provided with covers of other than the sliding or rolling form.

When the desk is not provided with a cover by which its whole top is inclosed, it is desirable to provide means by which those articles which are kept permanently upon the top of the desk—such as the inkstand, penrack, &c.—can be inclosed, so as to be protected from dust and prevented from being removed or upset. For this purpose a box-shaped cover, 38, is provided, which is hinged to the top 50 and arranged to be turned down, as shown in Fig. 3, so as to cover and protect the inkstand, &c., when they are not in use. In order that the cover 38 may, when closed down, rise but little above the top 50, that portion of the top upon which the inkstand, &c., are to stand will preferably be depressed or sunk, so that these articles will stand below the other portions of the top. The cover 38 may also, if desired, be locked in its closed position by means of the same lock that fastens the other parts of the desk. For this purpose the cover will be provided upon its front edge with a catch, I, which, when the cover is closed, will pass through a slot in the top 50 and be engaged by a catch, 39, upon the back of the drawer 40 when the drawer is closed, as shown in Fig. 3. The catch 39 will be made of spring metal, so that the cover 38 can be turned down and caught when the drawer 40 is closed.

This cover 38, although especially adapted for open-top desks, will be found useful upon desks which are provided with covers by which the entire top can be inclosed, as it will afford a convenient means for temporarily inclosing the inkstand, &c., when it is not desired to close the entire top.

In order to provide sufficient room between the rack 23 and the cover to permit the sheets of paper and envelopes to be readily lifted out of the rack, the portion of the top 50 upon which the rack rests will preferably be depressed the same as the portion upon which the inkstand, &c., rests.

What I claim is—

1. The combination, with the desk-top and the stationary roof portion 75, of a sliding cover arranged to be drawn forward to cover the desk-top and to be slid back beneath the roof portion to expose the top, and the portions 31, hinged to the desk-top and arranged to be turned up to close the space between the cover and top when the cover is closed and to be turned down to extend the top when the cover is opened, substantially as described.

2. The combination, with the desk-top and the stationary roof portion 75, of a sliding cover arranged to be drawn forward to cover the desk-top and to be slid back beneath the roof portion to expose the top, the portions 31, hinged to the desk-top and arranged to be turned up to close the space between the cover and top when the cover is closed and to be turned down to extend the top when the cover is opened, and the hinged flaps 17, substantially as described.

3. The combination, with the desk-top, of the sliding cover composed of the two parts 26 27, hinged to each other and arranged to be folded together, and the portions 31, hinged to the desk-top and arranged to be turned up to close the space between the cover and top when the cover is closed and to be turned down to extend the top when the cover is opened, substantially as described.

4. The combination, with the desk-top and the roof portion 75, of the sliding cover composed of the two parts 26 27, hinged to each other and arranged to be folded together and then slid back beneath the roof portion, substantially as described.

5. The combination, with the top 50, back 60, ends 70 31, and the roof portion 75, provided with the cleat 29, of the sliding cover composed of the two parts 26 27, hinged to each other and arranged to be folded together, and provided with the cleat 28, for engagement with the cleat 29, substantially as described.

6. The combination, with the top 50, provided with the hinged cover 38, having the catch 1, of the drawer 40, having the catch 39 and lock 16, substantially as described.

7. The combination, with the top 50, of the cover 26 27, having the catch 6, and the drawer or slide 40, having the lock 16, substantially as described.

8. The combination, with the door 30, of the drawer or slide 40, having the lock 16 and a projection, 12, upon the end of its front, which overlaps said door, substantially as described.

9. The combination, with one or more drawers, 20, of a hinged piece, 14, arranged to overlap said drawer or drawers, and a drawer or slide having a projection, 12, upon the end of its front, which engages with said hinged piece, substantially as described.

10. The combination, with a hinged door, 15, of a hinged piece, 14, arranged to overlap the edge of said door, and a drawer or slide having a projection, 12, upon the end of its front, which engages with said hinged piece, substantially as described.

11. The combination, with the door 30 and one or more drawers, 20, of the hinged piece

14 and the drawer or slide 40, having the lock 16 and the projections 12 upon the ends of its front, substantially as described.

12. The combination, with the drawer or slide 40, having the lock 16, of the cupboard 80, the doors 36 37 of which are engaged by the back of said drawer, substantially as described.

13. The combination, with the top 50, of a cover for said top, the door 30, and the drawer or slide 40, having the lock 16 and the projection 12 upon the end of its front, which overlaps said door, substantially as described.

14. The combination, with the top 50, of a cover for said top, one or more drawers, 20, the hinged piece 14, and a drawer or slide having the lock 16 and projection 12, which engages with said hinged piece, substantially as described.

15. The combination, with the top 50, of a cover for said top, the door 15, the hinged piece 14, and a drawer or slide having the lock 16 and a projection, 12, which engages with said hinged piece, substantially as described.

16. The combination, with the top 50, of the cover 26 27, door 30, one or more drawers, 20, the hinged piece 14, and the drawer or slide 40, having the lock 16 and projections 12, which engage with said door and hinged piece, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

BLOOMFIELD BROWER.

Witnesses:
J. A. HOVEY,
T. H. PALMER.