May 28, 1940. J. C. SIEGEL 2,202,539

FURNITURE LOCK

Filed Sept. 2, 1937 2 Sheets-Sheet 1

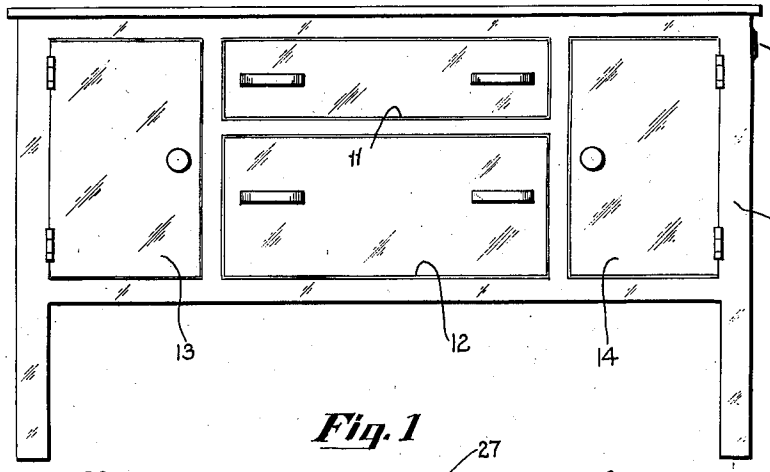



Fig. 1

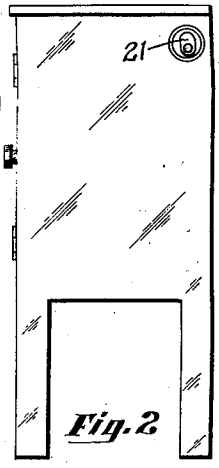



Fig. 2

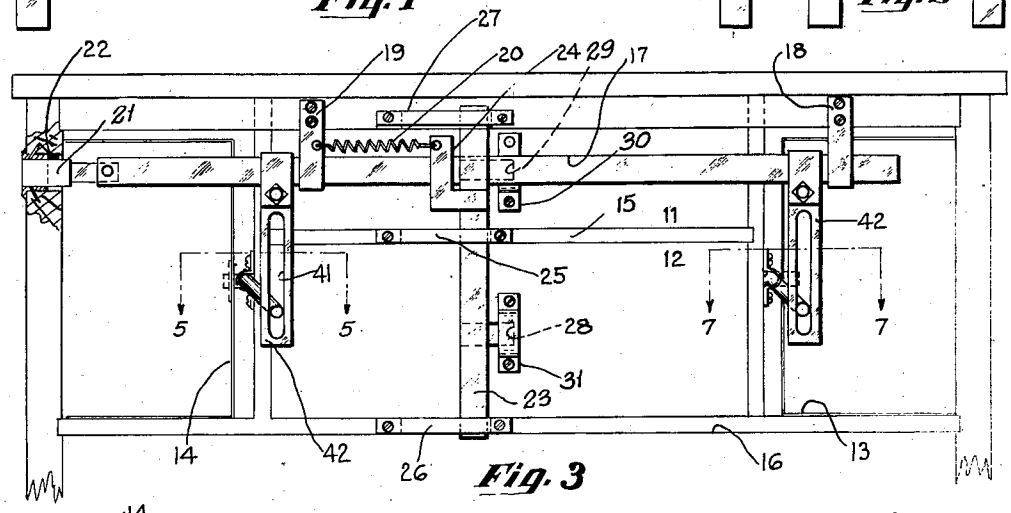



Fig. 3

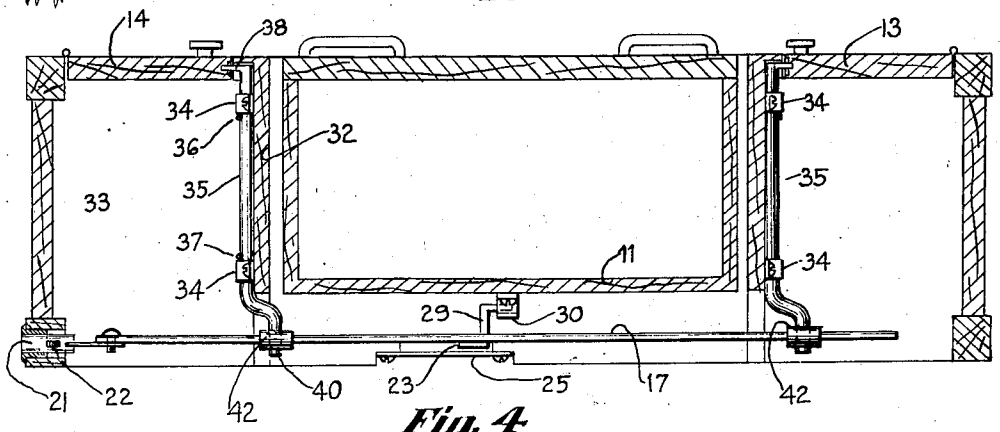



Fig. 4

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FURNITURE LOCK

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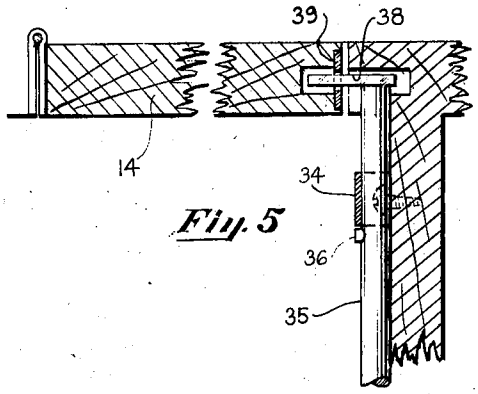



Fig. 5

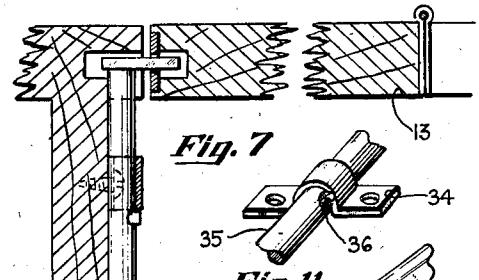
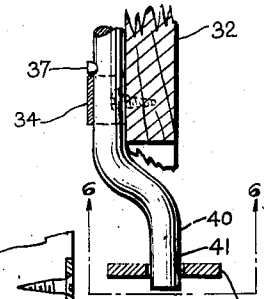
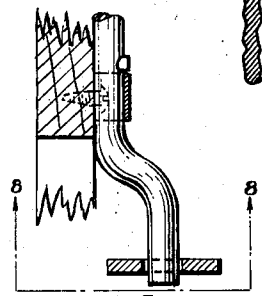



Fig. 7




Fig. 11



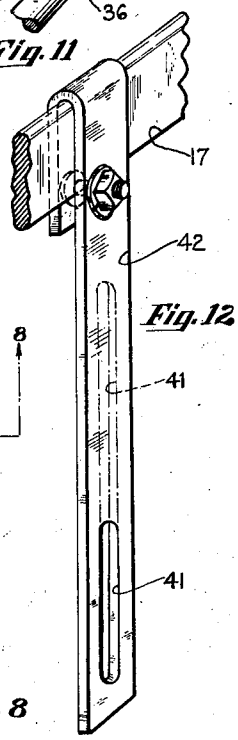




Fig. 12

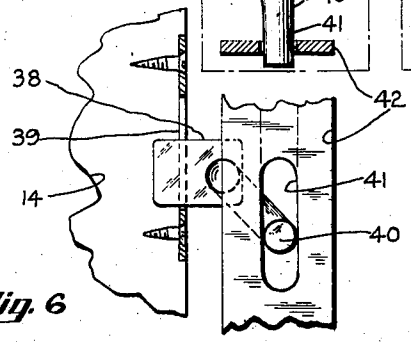



Fig. 6

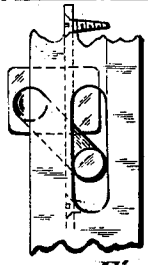


Fig. 8

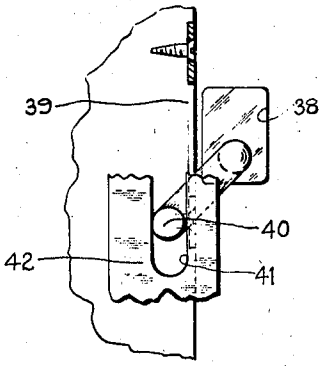



Fig. 9

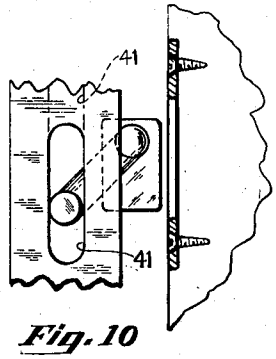



Fig. 10

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Patented May 28, 1940 2,202,539

# UNITED STATES PATENT OFFICE

2,202,539

## FURNITURE LOCK

James C. Siegel, New York, N. Y.

Application September 2, 1937, Serial No. 162,129

9 Claims. (Cl. 312—193)

This invention relates to mechanism for locking the drawers and doors of a piece of furniture, such as a sideboard, buffet or secretary. In many respects, the invention disclosed in this application resembles and forms a further development of the structure set forth in my patent for a Furniture drawer lock, No. 2,182,504, dated December 5, 1939.

As I indicated in the specification of the aforesaid patent, there has always been a demand for a good lock for furniture drawers and doors. In my said patent, I disclosed a very compact, simple and relatively inexpensive manner of locking a series of drawers of a cabinet. In many articles of furniture, especially secretaries, buffets and sideboards, there are not only drawers to lock, but there are also doors to lock.

My invention contemplates the use of a single lock of good design for controlling a structure to be used for locking not only the drawers, but the doors of a piece of furniture having both drawers and doors. Those skilled in the art will readily appreciate that many problems arise in developing such a locking structure.

Thus, there are many hundreds of furniture manufacturers making literally thousands of different models of furniture, all of different dimensions and different arrangements. To design an individual locking system for each of the different pieces of furniture manufactured today, would be an impossible task and would result in such a high cost that it would be impossible to successfully market locking devices of the type contemplated by me. It is essential, therefore, that locking devices of the type I have invented be readily adaptable to many different types, sizes, and styles of furniture, without requiring special fittings and other costly features. Only in that way can mass production and low price be assured.

I have devised locking mechanism for an article of furniture having drawers and doors whereby the drawers and doors may be locked under the control of a single cylinder lock. My arrangement is such that the parts of the locking mechanism I use may be readily adapted by a simple change, for many pieces of furniture, regardless of their construction and design. Because of this arrangement, I am able to place on the market a locking mechanism which will function adequately, while selling at a price which will make it commercially possible to apply it to furniture of medium and low price.

In general, I utilize preferably, a sliding member mounted on the back of the furniture, and adapted when moved into a particular position to lock a series of drawers, all this being substantially the same as contemplated in my patent supra. Each door closed compartment is equipped with a rodlike member which may, if desired, be housed on one of the panels outlining the said compartment, and preferably, I mount the rods on the inner side of each of the panels in a very unobtrusive manner.

Preferably, also, each of these rods is mounted for rotation, and its outer end has a bell crank connection with the previously mentioned sliding member so that as the sliding member slides, it rotates each of the rods. The rods carry at their outer ends locking lugs which through this said rotation move into position to lock up each of the doors.

For compartments of varying lengths, it is only necessary to vary the lengths of these rods and to apply the locking lugs in the proper places. For this reason, my system is readily adaptable to compartments of varying sizes and depths. Also, these rods may be secured to any of the panels outlining the door closed compartments, and the bell crank operated ends thereof may be readily controlled by simple parts readily secured in any desired position, as by welding or bolting, to the drawer locking sliding member.

Now that I have described the general principles of my invention and the desirability thereof, I should like to describe a detailed and preferred form of my invention. In describing this detailed and preferred form, I shall refer to the drawings in which Fig. 1 is a front elevation of a sideboard or buffet incorporating my invention. Fig. 2 is a side view of Fig. 1. Fig. 3 is a view of the back of the sideboard or buffet of Fig. 1 with the back cover plate removed, and showing the arrangement of my locking system. Fig. 4 is a view taken along lines 4—4 of Fig. 3. Fig. 5 is a view taken along lines 5—5 of Fig. 3. Fig. 6 is a view taken along lines 6—6 of Fig. 5. Fig. 7 is a view taken along lines 7—7 of Fig. 3, while Fig. 8 is a view taken along lines 8—8 of Fig. 7. Fig. 9 is a view similar to Fig. 6 showing the parts of Fig. 6 in a different position. Fig. 10 is a view of the parts of Fig. 8 showing the said parts in a different position. Fig. 11 is a view showing the mounting of the rotating locking rods, while Fig. 12 shows the attachment of means for operating the locking rods.

Referring now more particularly to the drawings, a sideboard or buffet to which my invention is applied is designated by reference numeral 10 and contains drawers 11 and 12 and compart-

ments closed by doors 13 and 14. Referring now to Fig. 3, a partition 15 is shown separating the drawers 11 and 12, while a further partition 16 is shown supporting the drawer 12.

A sliding locking bar 17 is supported for sliding movement by brackets 18 and 19 and is spring pressed to the left by a spring 20, being controlled against movement to the left by a cylinder lock 21 having a bolt 22 and operating in a manner set forth in my patent supra. The bolt 22 prevents movement of the bar and cylinder lock, as is shown also in my patent supra. When the key plug of the cylinder lock is rotated as is well known in this art, it retracts the bolt 22 in the usual way, and when the bolt 22 is thus retracted, the locking bar 17 moves to the left from its locked position in Fig. 3 to a release position under the influence of spring 20. In this position, the end of the cylinder lock 21 will of course protrude somewhat relatively to the end furniture panel.

The locking bar 17 is integrally secured as by welding or other means to a vertical bar 23, and is braced thereto as by welding or otherwise by an angular bar 24. A bracket 25 secured to the partition 15, a further bracket 26 secured to the supporting portion 16, and an upper bracket 27, guide the vertical bar 23 and therefore guide the bar 17 for horizontal sliding movement.

Secured to the vertical bar 23 is a locking lug 28 and a further locking lug 29 which cooperate with brackets 30 and 31 secured respectively to the drawers 11 and 12 for locking those drawers, as is well set forth in my patent supra. In so far as I have now described my invention, it embodies only those features of the construction which are incorporated in my said patent.

I shall now describe the means for locking the doors 13 and 14. Secured to partition 32 defining the compartment 33 controlled by the door 14 are a pair of bearing members 34, best illustrated in Figs. 5 and 11. A locking rod 35 is mounted for rotation in these bearing members 34 and is swedged out at 36 and 37 to prevent endwise movement of the said rod relatively to said bearing members. At its outer end, the rod 35 carries a locking lug 38 which is adapted to enter a slot 39 in the door 14 for locking the door, as is quite well illustrated in Fig. 5. Naturally, the length of the rod 35 may readily be changed to adapt it to furniture of varying depth.

The inner end of the rod 35 is equipped with a bell crank portion 40 which cooperates with the slot 41 of a cam plate 42. This cam plate 42 is secured, as is best shown in Figs. 3 and 12, to the locking rod 17, it being understood that the securing means illustrated in Fig. 12 are only one of many types. This type of securing means is selected because it is adjustable, the cam plate 42 being secured to the bar 17 in any one of many positions, limited only by the length of the bar 17. Similarly, the slot 41 may be made quite long and may, as a matter of fact, extend for the full length of the cam plate 42, so as to cooperate readily with the bell crank portion of the rod 35, regardless of where the rod 35 is mounted with respect to the vertical dimensions of the buffet 10.

Because of this construction, it is readily seen that my cam plate 42 is readily capable of operating a locking rod 35, regardless of where that locking rod may be placed relatively to the horizontal or vertical dimensions of my piece of furniture.

Fig. 6 illustrates what happens when the cam plate 42 moves from the locked position of Fig. 6 to the release position of Fig. 9; that is, when the locking bar moves from its locking position of Fig. 3 to the left to a release position. Such movement will naturally cause the rod 35 to rotate, bringing the locking lug 38 from the position of Fig. 6 to the position of Fig. 9 and out of the slot 39 in the door, 14, as is well illustrated.

Figs. 7, 8 and 10 are similar to Figs. 5, 6 and 9, except that they illustrate the action with regard to the unlocking and locking of the door 13. It is thought unnecessary to describe in detail at this time the action of the parts with regard to the door 13. For convenience, in those figures the same reference numerals are used as for like parts in Figs. 5, 6 and 9.

I believe that the advantages and merits of my construction will now be readily appreciated by those skilled in the art. I should like to have it understood, however, that I feel myself entitled to rather broad claims covering the contribution I have made to the art, in order that I may be protected against the utilization by others of the basic principles of my invention while incorporating the said principles in a specific form not shown by me.

I now claim:

1. An article of furniture having a series of sliding drawers and a series of compartments closed by swinging front doors, a horizontally sliding locking member secured in juxtaposed relation to the backs of the drawers, means whereby said locking member locks said drawers when said locking member slides horizontally, a rod for locking each of said front doors, said rods extending from substantially the plane of the said sliding locking member to said front doors, means supporting said rods in position, cam plates secured in adjustable horizontal relation to said sliding locking member, and portions on said cam plates cooperable with end portions of said rods for moving the rods relatively to said supporting means and into door locking position.

2. An article of furniture having a series of sliding drawers and a series of compartments closed by swinging front doors, a horizontally sliding locking bar secured in juxtaposed relation to the backs of the drawers, means whereby said bar locks said drawers when said bar slides horizontally into locking position, a rotating rod extending from substantially the plane of said bar to each of said front doors and having portions for locking said doors when rotated into locking position, the ends of said rods terminating in the plane of said bar being in the form of cranks, vertical cam plates secured to said bar in positions corresponding to those occupied by the crank ends of said rods, and vertical slots in said cam plates into which said crank ends enter whereby horizontal sliding of said bar and cam plates rotates said rods into and out of locking position.

3. An article of furniture having a series of sliding drawers and a series of compartments closed by swinging front doors, a sliding locking member secured in juxtaposed relation to the backs of the drawers, means whereby said locking member locks said drawers when said locking member slides horizontally, additional locking means extending from said sliding locking member to the front doors of said compartments, and means whereby said additional locking means are actuated to lock said doors by the sliding of said sliding locking member.

4. An article of furniture having a series of sliding drawers and a series of compartments closed by swinging doors at the front of said furniture, a sliding locking member secured in juxtaposed relation to the backs of said drawers, lugs on said locking member, detents on the backs of said drawers into which said lugs enter to lock said drawers shut when said locking member slides into locking position, a rotatable locking bar for each of said compartments extending from substantially the plane of said sliding locking member to said swinging doors for locking said swinging doors, means supporting said locking rod for rotation, and a pin and slot connection between each of said rotatable rods and said sliding locking member whereby sliding movement of said sliding locking member rotates said rods into door locking position.

5. An article of furniture having a series of compartments closed by swinging doors, a rotatable rod housed on one surface of each of said compartments and extending from the back of said article of furniture to substantially the plane of the door, means supporting each of said rods for rotation on its own longitudinal axis, lock controlled devices movable at the back of said furniture, means on said devices adapted to make connection with each of said rods in any one of a plurality of vertical positions for rotating said rods as said lock controlled devices move, and means whereby the rotation of said rods locks said swinging doors in shut position.

6. An article of furniture having a series of sliding drawers and a series of compartments closed by swinging front doors, a horizontally sliding locking member secured in juxtaposed relation to the backs of the drawers, means whereby said locking member locks said drawers when said locking member slides horizontally, a rod for locking each of said front doors, said rods extending from substantially the plane of the said sliding locking member to said front doors, means supporting said rods for rotation into door locking position, cam plates secured in adjustable horizontal relation to said sliding locking member, and means on said cam plates for connection with each of said rods in any one of a plurality of vertical positions, whereby horizontal movement of said cam plates rotates said rods relatively to said supporting means and into door locking position.

7. An article of furniture having a series of sliding drawers and a series of compartments closed by swinging front doors, a horizontally sliding locking member secured in juxtaposed relation to the backs of the drawers, means whereby said locking member locks said drawers when said locking member slides horizontally, a rod for locking each of said front doors, said rods extending from substantially the plane of the said sliding locking member to said front doors, means supporting said rods in position, cam plates secured in adjustable horizontal relation to said sliding locking member, and means on said cam plates for connection with each of said rods in any one of a plurality of vertical positions, whereby horizontal movement of said cam plates moves said rods relatively to said supporting means and into door locking position.

8. An article of furniture having a series of sliding drawers and a series of compartments closed by swinging front doors, a horizontally sliding locking member, means whereby said locking member locks said drawers when said locking member slides horizontally, a rod for locking each of said front doors, means supporting said rods in position, cam plates secured in adjustable horizontal relation to said sliding locking member, and means on said cam plates for connection with each of said rods in any one of a plurality of vertical positions, whereby horizontal movement of said cam plates moves said rods relatively to said supporting means and into door locking position.

9. An article of furniture having a series of sliding drawers and a series of compartments closed by swinging front doors, a horizontally sliding locking member, means whereby said locking member locks said drawers when said locking member slides horizontally, a rod for locking each of said front doors, means supporting said rods in position, cam plates secured to said sliding locking member, and means on said cam plates for connection with each of said rods in any one of a plurality of vertical positions, whereby horizontal movement of said cam plates moves said rods relatively to said supporting means and into door locking position.

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