Jan. 18, 1938. W. GERSTEN 2,105,783

CABINET

Original Filed June 28, 1937

Fig. 1.

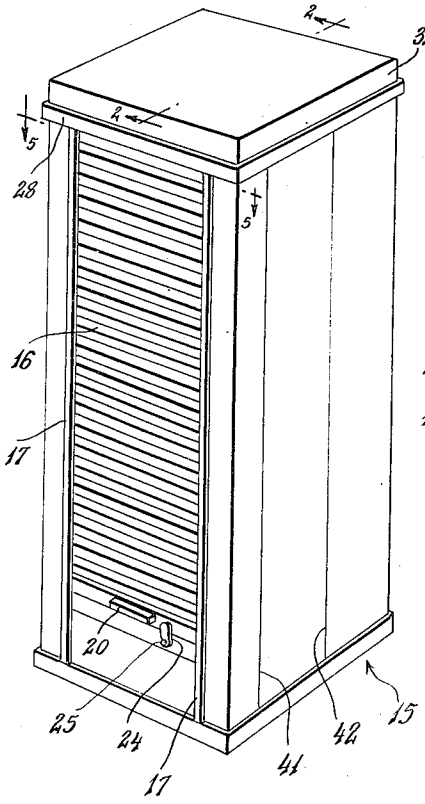


Fig. 2.

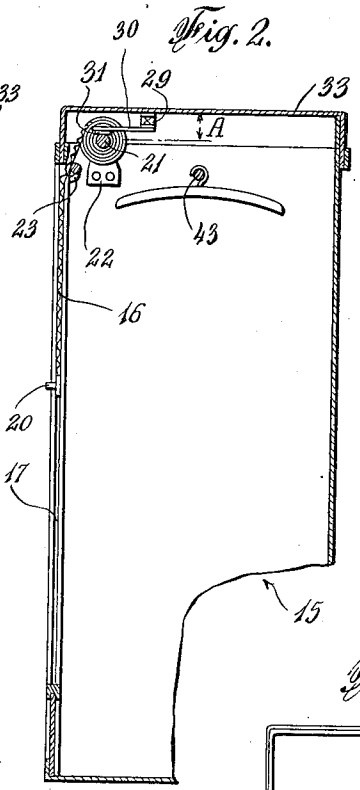


Fig. 3.

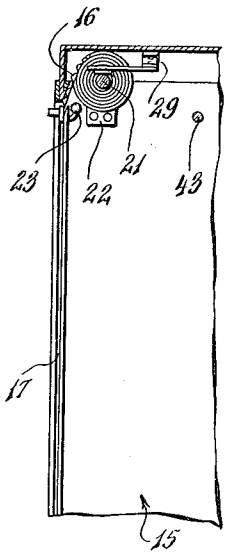


Fig. 4.

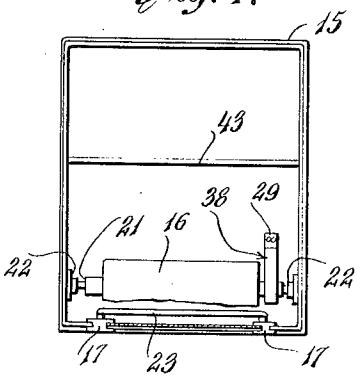


Fig. 6.

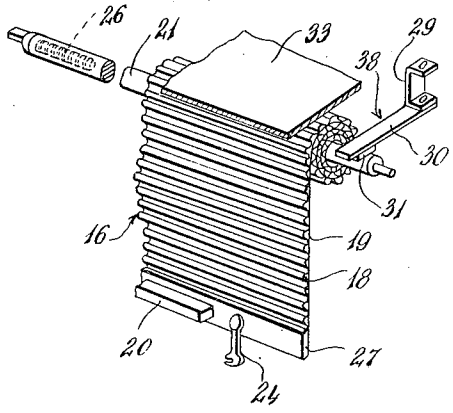
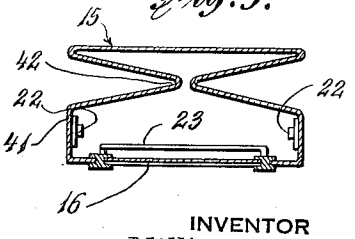


Fig. 5.



INVENTOR
William Gersten
BY
ATTORNEY

Patented Jan. 18, 1938

2,105,783

UNITED STATES PATENT OFFICE

2,105,783

CABINET

William Gersten, Brooklyn, N. Y.

Original application June 28, 1937, Serial No. 150,724. Divided and this application October 28, 1937, Serial No. 171,546

2 Claims. (Cl. 312—190)

This invention relates to cabinets, wardrobes, containers and the like, and particularly to the type having a flexible curtain as a slidable closure therefor.

The principal object of this invention is to provide a novel and improved cabinet of the type described wherein the curtain movement is automatically controlled during its travel to uncover the opening in the cabinet.

Another object hereof is to provide a novel and improved cabinet of the class set forth, wherein the curtain is manually slid in one direction to cover the opening in the cabinet, and upon release, will automatically move in reverse direction to uncover said opening at a slow rate of speed.

Another object of the present invention is to provide a novel and improved cabinet of the type mentioned, wherein the curtain, in its travel to uncover the opening in the cabinet, will automatically slow up in its movement near the end of its travel.

A further object of this invention is to provide a novel and improved cabinet of the character mentioned, wherein the curtain, in its movement to uncover the opening in the cabinet, will move slowly, and before the entire opening is uncovered, its rate of movement will be continually decreased automatically.

A further object hereof is to provide a novel and improved cabinet of the "knock down" type embodying the foregoing features, which when in collapsed condition, the curtain is wholly carried either on the foldable body, or on one of the detachable walls of said cabinet.

Another object hereof is to provide a cabinet of the character aforementioned which is cheap to manufacture, easy to assemble or knock down to collapsed condition, simple to use and efficient in the accomplishment of its functions of its various components.

Other objects will become manifest as the disclosure proceeds herein.

In the accompanying drawing, forming part of this application, similar characters of reference indicate corresponding parts in all the views.

Fig. 1 is a perspective view showing a cabinet embodying the teachings of my present invention, with the curtain fully drawn to completely cover the front opening.

Fig. 2 is a segmental section taken at line 2—2 in Fig. 1, showing the curtain partly raised.

Fig. 3 is a similar view showing the curtain fully raised to completely uncover the front opening.

Fig. 4 is a plan view of Fig. 1, minus the top end.

Fig. 5 is a section taken at line 5—5 in Fig. 1, showing the manner of collapsing the walls of the cabinet after the top and bottom ends are removed.

Fig. 6 is a fragmentary diagrammatic representation of the spring shade roller employed, on which the flexible curtain is wound, and particularly showing the several means included to control curtain movement.

This is a divisional application of applicant's co-pending application designated as Serial No. 150,724, filed June 28th, 1937.

In the drawing, the numeral 15 designates generally a cabinet or box structure which may be made of paper board or any other material and which may be of either the knock down or rigid types. This cabinet has a front opening shown covered by a flexible compressibly resilient curtain 16, the edges of which are slidably mounted in the channel guides 17, mounted along the side edges of said opening. This curtain 16, for the paper board cabinet, in the drawing, to be compressibly resilient, is made of a corrugated sheet 18, pasted onto a flat sheet 19, or it may be of any other suitable construction. The free end of this curtain is provided with a handle 20, while the other end thereof, is secured to a spring shade roller 21, mounted interior the cabinet on suitable brackets 22. Spaced from the inner face of the front wall of the cabinet structure 15, is secured the rod 23, to act as a guide for the curtain 16, while the latter is either being wound on the shade roller 21, or unwound therefrom.

A hook 24 on the free end of the curtain is adapted to engage a fixed pin 25, to hold the curtain 16, whereby the cabinet opening is fully closed. In this position, the torsion spring 26, of the shade roller 21, is stressed. It is evident that upon release of the hook 24, from off pin 25, the curtain 16 will slide up by itself very rapidly and become wound up on roller 21, due to the action of spring 26, and will come to rest when bar 27 at the free end of the curtain 16, reaches the reinforcement frame 28. Any other suitable final stop means may of course be provided to limit the extent of travel of the curtain 16.

I have also provided a bracket 29, secured to the ceiling of the cabinet structure 15, to carry a spring arm 30, having a friction element 31, of rubber or the like, at its end to rest with pressure against the roller 21; thus acting as a brake means to materially retard the curtain speed during its

entire travel while being wound up on the roller 21.

Also, I have provided that a fixed member of the structure or a member mounted thereon, shall be positioned a fixed distance "A" from the axis of the roller 21, which distance shall be a little less than the radius of the rolled up curtain. For such fixed member, in the embodiment shown in Fig. 2, I find it convenient to employ the ceiling 32 of the cabinet 15. Of course, the inner side of the front wall of the cabinet, or of the front flange of the top end 33, may be used for such purpose although not illustrated.

It is evident that as the curtain 16 winds up on the spring roller 21, the radius of its wound up portion increases, then finally contact is made by such wound up portion of the curtain with the member described herein as fixed in relation to the axis of the roller 21, whereupon the speed of curtain travel will decrease for the last portion of curtain winding movement, due to brake action resulting upon such contact mentioned. But it is to be noted that the force of the torsion spring 26, will yet be sufficient to further wind up the curtain 16, even against the continuously increasing brake action between said curtain which is of slightly yielding compressibly resilient structure, and the fixed member explained.

The top and bottom ends 33 and 40, may be removed and the cabinet knocked down by folding along the juncture of the walls and the crease lines 41 and 42. In the embodiment of Fig. 2, when the cabinet is knocked down, the roller 21 carrying the curtain 16, would remain mounted on the body of the cabinet structure. A removable rod 43 is provided, on which coat hangers 44, carrying clothes, may be hung.

Regardless of all retarding action playing against the roller 21 and the curtain 16, the latter will be manually slid to cover the cabinet opening at such a speed as the force applied at the handle 20 will produce. It is evident, that the torsion spring 26 is stressed when such opening is fully covered by the unwound curtain 16. Now, upon release of the hook 24 from its retaining pin 25, the curtain 16 will automatically wind up on roller 21, due to action of the torsion spring 26, and brake 38 will cause the curtain 16 to move slowly to uncover the cabinet opening, and when said curtain 16 is nearly full wound, and its radius having grown to equal distance "A", the curtain speed will slow up further until the curtain 16 has reached the limit of winding up on roller 21, as previously explained.

Because the curtain material is compressibly resilient, it may be subjected for a longer period of its upward travel to the impeding action of the member described herein as fixed with respect to the axis of the roller 21, than would be possible if the curtain material was not compressible. Said material being compressibly resilient it would assume its original cross section upon being relieved from the compressing action of said fixed member.

This invention is capable of numerous forms and various applications without departing from the essential features herein disclosed. It is therefore intended and desired that the embodiments shown herein be deemed illustrative and not restrictive, and that the patent shall cover whatever features of patentable novelty exist in the invention disclosed; reference being had to the appended claims rather than to the specific description herein to indicate the scope of the invention.

I claim:—

1. In an article of the character described, the combination of a box structure having an opening, a curtain guide means mounted along said opening, a flexible resiliently compressible curtain adapted to cover said opening, slidably mounted in the guide means, a roller journalled on the box structure; one end of the curtain being secured to the roller whereby upon rotation of the roller, the curtain will be wound thereon to uncover said opening, means to retain the curtain over the opening, a means adapted upon release of said curtain retaining means to automatically rotate the roller to wind up the curtain, and further adapted to return to operative condition upon manual sliding of the curtain to cover the opening, a brake mounted on the article, adapted to retard movement of the curtain while the latter is being wound up on the roller, and an auxiliary braking means comprising a member fixed from the axis of the roller, a distance less than the radius of the fully wound up curtain, whereby said member shall cause the individual coil layers of the wound up portion of the curtain to be compressed and further retard further movement of the curtain during the last portion of the travel of the curtain.

2. In an article of the character described, the combination of a box structure having an opening, a curtain guide means mounted along said opening, a flexible resiliently compressible curtain adapted to cover said opening, slidably mounted in the guide means, a roller journalled on the box structure; one end of the curtain being secured to the roller whereby upon rotation of the roller, the curtain will be wound thereon to uncover said opening, a brake mounted on the article adapted to retard the movement of the curtain while the latter is wound up on said roller; the axis of the roller being at a distance from a part of the article, less than the radius of the fully wound up curtain whereby said part of the article shall cause the individual coil layers of the wound up portion of the curtain to be compressed and further retard further movement of the curtain during the last portion of the travel of said curtain, means to retain the curtain over the opening, and a means adapted upon release of said curtain retaining means to automatically rotate the roller to wind up the curtain, and further adapted to return to operative condition upon manual sliding of the curtain to cover the opening.

WILLIAM GERSTEN.