

(No Model.)

P. J. PAULY, Jr.
FLEXIBLE COVER FOR FILE CASES.

No. 500,419.

Patented June 27, 1893.

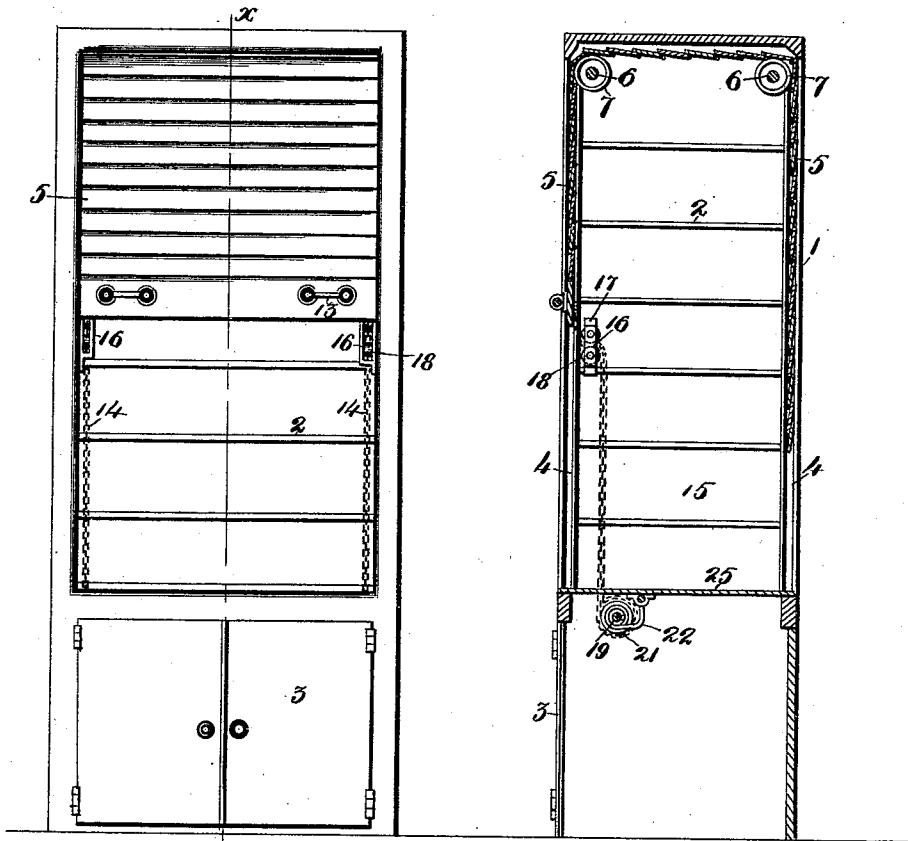


Fig. 1.

Fig. 2.

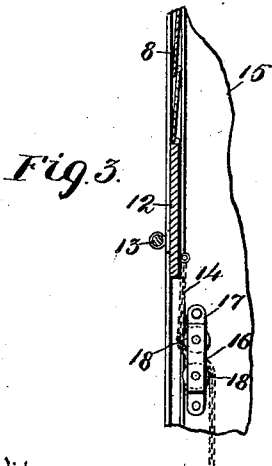


Fig. 3.

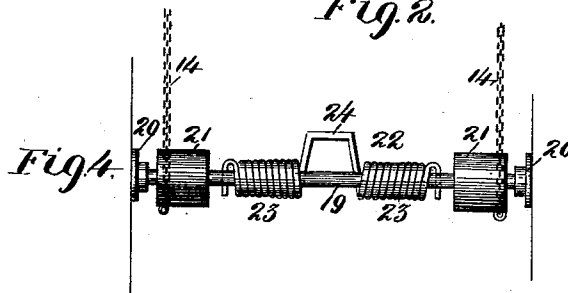


Fig. 4.

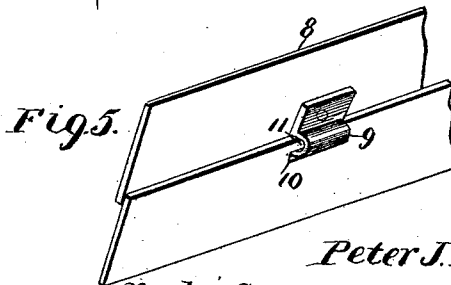


Fig. 5.

Witnesses
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UNITED STATES PATENT OFFICE.

PETER J. PAULY, JR., OF ST. LOUIS, MISSOURI.

FLEXIBLE COVER FOR FILE-CASES.

SPECIFICATION forming part of Letters Patent No. 500,419, dated June 27, 1892.

Application filed December 5, 1892. Serial No. 454,046. (No model.)

To all whom it may concern:

Be it known that I, PETER J. PAULY, JR., of the city of St. Louis, State of Missouri, have invented certain new and useful Improvements in Flexible Covers for File-Cases, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention has relation to improvements in flexible covers for file cases and consists in the novel arrangement and combination of parts more particularly specified in the description and pointed out in the claims.

In the drawings Figure 1, is a front elevation of my complete invention with the flexible curtain thereof partially elevated. Fig. 2 is a vertical transverse section taken on the line $x-x$ of Fig. 1. Fig. 3 is a detailed view in section showing the lower end of the flexible curtain, and the oppositely placed rollers between which passes the chain, &c., for holding the curtain. Fig. 4 is a detailed view in plan showing the spring take up mechanism for holding the curtain, and Fig. 5 is a perspective view of two slats forming a part of the curtain showing the manner in which the same are movably united.

My invention has reference particularly to that class of cases having a flexible curtain which may be elevated to any desired position thereby economizing space; it also consists of means for holding the said curtain automatically after adjustment is had and also in means for movably uniting the slats comprising the curtain, all of which will be more fully described in the specification and pointed out in the claims.

Referring to the drawings, 1 represents a rectangular metallic frame within which is located shelving 2 of any suitable design or ornamentation. The lower portion of said frame may be used as a closet and provided with doors 3 of the well known construction. The said frame is provided with four grooves 4 which are oppositely arranged and are located at the four corners of the same in which the flexible curtain 5 is held and is free to move as best shown in Fig. 2. Located in the upper portion of the said frame are two shafts 6 upon which are mounted pulleys 7 over which the flexible belt passes and is sup-

ported by the same. The flexible curtain which I employ is especially constructed for the purpose, and consists of a series of metallic slats 8 made preferably from sheet metal, the lower edges of one slat overlapping the upper edge of the adjacent one, and the said slats movably united in a manner hereinafter described.

The curtain 5 is of such a length that when the same is completely lowered it will not pass off the pulleys 7 and prevent the same from working when the curtain is again elevated or partially so. In order to attach the slats movably to one another I employ metallic loops 9 which are attached to the same near the lower edges thereof, and formed in said slats adjacent to the upper edges of the same are elongated openings 10 the metal 11 left by the said openings adapted to be received by the said loops in a manner as best shown in Fig. 5. The lower front slat 12 is made a little heavier and is provided with handles 13 for manipulating the curtain. Attached to the rear surface of the lower slat 12 of the curtain, are the ends of two chains 14, and fixed to the opposite inner surfaces of the walls 15 of the case are two brackets 16 through which the said chains pass. The said brackets are each composed of bearings 17 within which are movably mounted two friction rollers 18 arranged in pairs over which the said chains pass in a manner as best shown in Fig. 3.

Located in the space forming the closet of the case, or in the lower portion of the same are spring actuated drums over which the said chains are wound as the curtain is operated.

19 represents a shaft which is transversely arranged within the case the ends of which are mounted in suitable bearings 20 fixed to the opposite sides of the said case. Keyed to the said shaft adjacent to the bearings are two drums 21 to which the lower ends of the chains 14 are respectively attached.

22 represents a volute spring having two sets of coils 23 which are united by the U-shaped portion 24 made of the same wire which composes the springs. The ends of the wire are suitably bent and passed through openings formed in the said shaft 19 and the U-shaped portion of said spring 23 is attached

to the case or stationary part of the same in any desirable manner.

From the foregoing description it will be seen that when the curtain 5 is in its lowest position a greater portion of the length of the chains 14 will be unwound from the drums 21, and likewise when the said curtain is in its highest position; but when the curtain is adjusted midway between these extreme positions, as shown in Fig. 2, then about one half of the chain length is wound upon the drums. After the curtain is adjusted below the brackets 16, the upper rollers of the same have no function as the chains pass entirely from the same and move entirely upon the lower rollers of said brackets. When the curtain is adjusted midway there is comparatively no tension brought to bear upon the spring 22 as the weight of the curtain is approximately balanced upon the pulleys 7, but when the said curtain is adjusted in either direction from said medium position, tension is brought to bear upon said spring the resistance of which operates to hold the curtain in any adjusted position. This is due to the fact that as the curtain is moved in either direction from the central or medium position, the weight of the hanging portion of the curtain, or that portion which is left hanging from the top rollers, together with whatever friction there may be between the curtain and the top rollers, always operates to just about balance the resilient action of the spring, the elasticity of which is properly adjusted for this specific purpose.

Of course it will be understood that the chains 14 pass through suitable openings formed in the lower plate 25 of the case on passing to the drums 21.

It will be noted that the curtain and the means for holding the same in any desired elevation may be applied to cases used for various purposes, or in such places wherein the same can be practically applied.

I do not limit myself to the construction and arrangement of parts as shown and described, as the same may be varied without departing from the nature of my invention.

Having fully described my invention, what I claim is—

1. The combination with a suitable case, of a flexible curtain sliding therein, a spring take-up device, and a flexible connection secured to the said device and to the curtain, the said

connection being led to the latter from a point between the ends of path of movement thereof, substantially as described.

2. The combination with a suitable case, of a flexible curtain composed of a series of flexibly connected strips sliding therein, a spring take-up roller, a pair of opposite rollers pivoted on the said case, between the ends of the path of movement of the said curtain therein, and a flexible connection having its opposite ends secured to the said take-up roller and to the curtain, and passing between the said rollers, substantially as described.

3. The combination with a suitable case, having grooves in the front and rear thereof, of a flexible curtain sliding in the said grooves; a spring take-up device, and a flexible connection secured to the said take-up device and to the curtain, the said connection being led to the latter from a point between the ends of the path of movement of the forward end of the said curtain, substantially as described.

4. The combination with a suitable case having grooves in the front and rear thereof, of a flexible curtain composed of a series of flexibly connected strips sliding in the said grooves, a spring take-up roller, a pair of opposite rollers pivoted near the front of the casing, between the ends of the path of movement of the said curtain, and a flexible connection having its opposite ends secured to the said take-up roller and to the curtain, and passing between the said rollers, substantially as described.

5. The combination with a suitable case, having grooves in the front and rear, and having an open front, of a flexible curtain composed of a series of flexibly connected strips, sliding in the said grooves and in the top of the said casing, a take-up roller secured in the base of the said casing, a pair of opposite rollers pivoted near the front of the casing, between the ends of the path of movement of the said curtain and a flexible connection having its opposite ends secured to the said take-up roller and to the curtain, and passing between the said rollers, substantially as described.

In testimony whereof I affix my signature in the presence of two witnesses.

PETER J. PAULY, JR.

Witnesses:

JAMES J. O'DONOHUE,
C. F. KELLER.