Jan. 29, 1929. 1,700,637

D. C. LAMB

PORTABLE ADJUSTABLE SCREEN

Original Filed Jan. 26. 1928 2 Sheets-Sheet 1

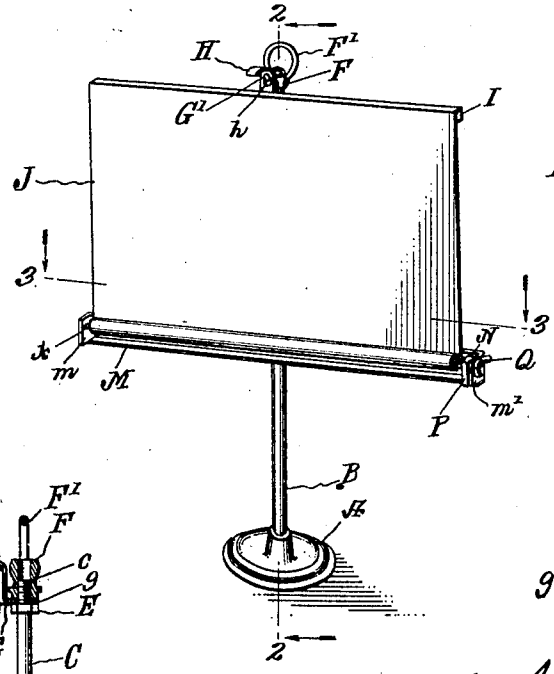


Fig. 1.

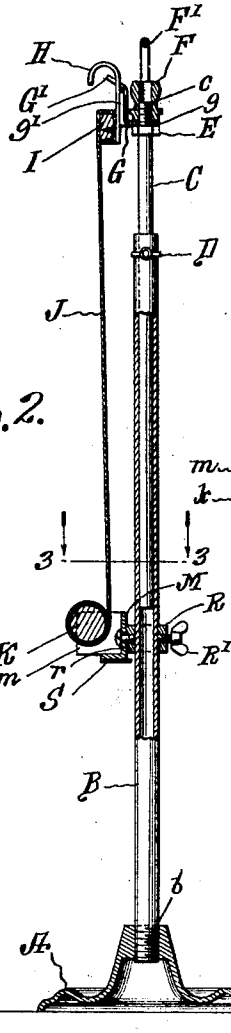


Fig. 2.

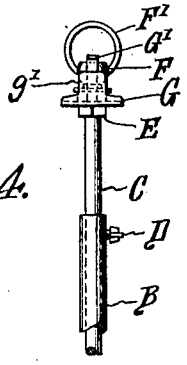


Fig. 4.

Fig. 3.

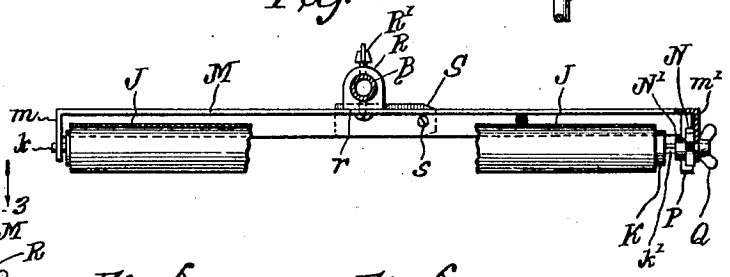


Fig. 5.

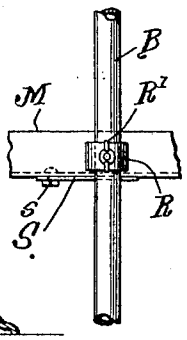
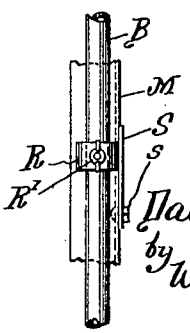


Fig. 6.



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PORTABLE ADJUSTABLE SCREEN

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Fig. 7.

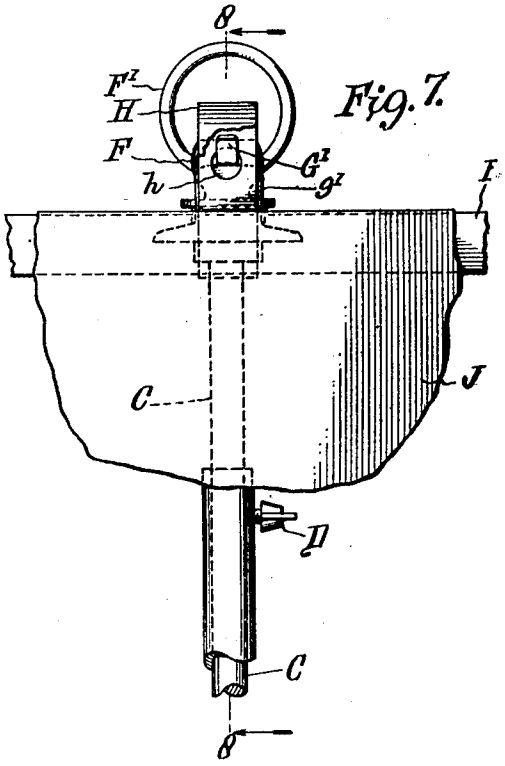


Fig. 8.

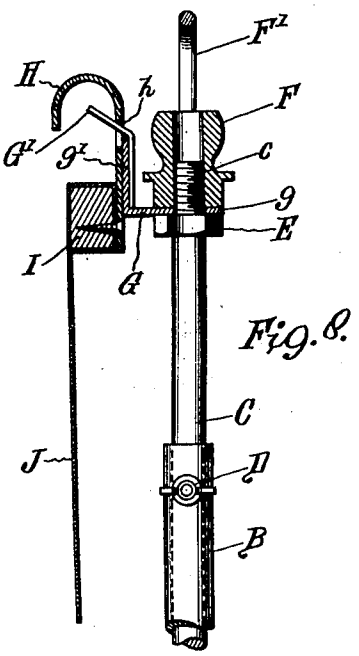


Fig. 9.

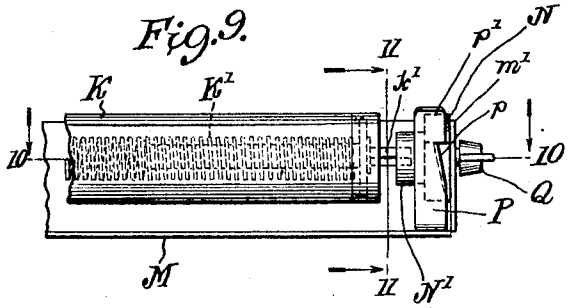


Fig. 11.

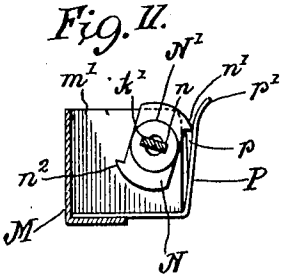


Fig. 12.

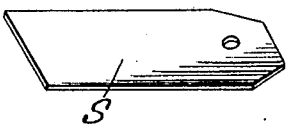
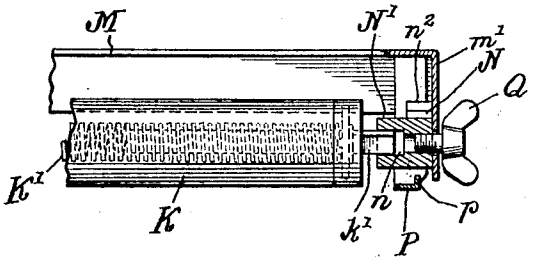


Fig. 10.



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Patented Jan. 29, 1929. 1,700,637

UNITED STATES PATENT OFFICE.

DAVID C. LAMB, OF NAPPANEE, INDIANA, ASSIGNOR OF ONE-HALF TO CHARLES MUTSCHLER, OF NAPPANEE, INDIANA.

PORTABLE ADJUSTABLE SCREEN.

Application filed January 26, 1928, Serial No. 249,731. Renewed December 7, 1928.

My present invention relates to improvements in portable adjustable screens adapted for home or office use, the structure being devised so that it may be stored out of the way and may be readily moved to the desired position, and adjusted to suit the needs of the occasion. Amongst the many uses for which the screen is intended may be mentioned its use to protect individuals from drafts, to protect the eyes of a reader from glaring lights, for use in displaying maps or advertising data, or for use as adjustable screens for moving pictures in the home. These are some of the many uses to which the device may be applied, or for which it is suitable.

My invention will be more fully understood after reference to the accompanying drawings, in which like parts are indicated by similar reference symbols throughout the several views, and in which,

Figure 1 is a perspective view, showing the screen in use mounted on the standard and partly unrolled.

Figure 2 shows a section along the line 2—2 of Figure 1, and looking in the direction of the arrows, parts being shown in elevation.

Figure 3 shows a section along the line 3—3 of Figures 1 and 2, and looking in the direction of the arrows.

Figure 4 is a detail view, showing the upper portion of the adjustable standard with the ring for transportation of same.

Figure 5 is a detail view, showing a portion of the roller frame and standard as seen from the rear, and showing the roller frame in the horizontal position.

Figure 6 is a similar view to Figure 5, but shows the roller frame in the vertical position, as when the screen is not in use, and in the most compact form.

Figure 7 is an enlarged detail view, showing the method of attaching the upper end of the screen to the vertically adjustable rod, parts being broken away.

Figure 8 shows a section along the line 8—8 of Figure 7, and looking in the direction of the arrows.

Figure 9 is a front view showing the lower frame of the screen with the roller mounted thereon, the screen sheet being omitted for the sake of clearness in the drawings.

Figure 10 shows a section along the line 10—10 of Figure 9, the roller being shown in elevation.

Figure 11 shows a section along the line 11—11 of Figure 9, looking in the direction of the arrows, and showing the locking arrangement for holding the screen sheet to the desired degree of extension, and,

Figure 12 is a perspective of the leaf spring, which is used in holding the roller frame in the vertical or housed position.

A represents the heavy base piece or pedestal, which should be of sufficient weight to prevent the screen from toppling over in ordinary use. Pivotally attached to this base, as by the screw threaded end *b*, and preferably screwed therein is the tubular standard B, into which telescopes the rod C, which rod may be adjusted vertically by means of the clamp screw D. The rod C is threaded at its upper end as at *c*, and on this screw threaded portion is mounted the supporting nut E and the clamp nut F, which latter may be of ornamental design and carries the ring or handle F′, by which the screen and its supports may be conveniently transported from place to place.

G represents a bracket in the form of an angle iron, having one arm *g* clamped between the nuts E and F, and the other arm *g′* carries the finger G′, which may be made part of the bracket G, or a separate piece welded thereto, as shown in Figure 8. This finger G′ forms a hook, which passes through the hole *h* in the handle H carried by the upper frame I of the sheet J, which constitutes the screen proper.

The lower end of the screen sheet J is rolled on the roller K, which is generally similar to the curtain rollers commonly in use for shades. This roller is hollow, and carries the coil spring K′ on its interior, which normally tends to roll the screen sheet up when the roller is released, as occurs with window shades, and as will be more fully herein described.

This roller is mounted in the lower frame or roller frame of the screen, which is shown in Figures 2, 3 and 9 to 11. This frame comprises an angle beam M, which has the two ends bent at right angles, as shown at *m* and *m′* in Figure 3. In the bent over end *m*, the stud pin *k* of the roller K is free to rotate, and the other end of the roller is journaled in the roller frame, as will be hereinafter described.

At the other end of the roller from *k*, the roller is provided with the angular stud pin *k′*, which fits in a socket *n* of the sleeve N′,

preferably integral with the cam piece N (see Figures 9 to 11).

This cam piece is provided with two toes n' and n^2 adapted to engage the latch lug p carried by the spring P, so that this latch will catch in the cam piece, unless the spring is thrown out of engagement, which may be done by pressing out on the arm p' of the spring P, (see Figure 11).

The cam piece N is rigidly attached to the handle piece Q, so that the roller K may be rotated by hand as may be required in adjusting the tension of the roller spring K'.

The beam M of the lower frame carries a collar R, which slides freely on the standard B, and may be clamped at the desired height on said standard by the clamp screw R'. Thus the lower frame may be raised or lowered, as desired, and the screen drawn out against the roller spring, or automatically wound up thereby like an ordinary roller shade. The collar R is swivelled to the beam M, as shown at r in Figure 2.

In mounting the screen in the operative position, the hole h of the hand hook H is caused to engage the finger G', as shown in Figures 7 and 8, and the lower frame of the screen is moved down to the desired position, such as indicated in Figure 2. When in this position, the screen sheet J will be distended, and the amount of distension may be varied, as desired.

For convenience in transportation, or for locating out of the way, so as to occupy a minimum of space, I provide an arrangement by which the screen may be rolled up and held in a position parallel to the standard, such position being indicated in Figure 6. In order to automatically hold the rolled up screen in such a position, I provide the leaf spring S, (see Figures 3, 5, 6 and 12).

The edge of this leaf spring S projects slightly beyond the beam M, as shown in Figure 3, but clears the standard when the beam is at right angles to the standard, as shown in said figure; and thus it does not interfere with the free vertical movement of the beam M. In this position, the screen is also clear of the collar R, carrying the clamp screw R', as shown in Figure 5, but when the beam M is turned to the vertical position, the protruding edge of this spring S will bind against the outer face of the collar R', as shown in Figure 6, and this engagement of the spring and collar will cause the beam M to remain in the vertical position, unless swung down by hand.

The leaf spring S is held in place at one end by the screw of rivet s, so that it has the limited play desired.

In order to mount the screen in the vertical position, just described, disengage the hook handle H from the finger G', and allow the sheet J to roll up under the action of the roller spring, and when it is rolled up, and the collar R' clamped at the desired position on the standard, the simple swinging of the rolled up screen in either direction will cause the screen to assume the vertical position, shown in Figure 6, and the spring S will automatically hold it in this position until released.

The screen sheet J may be made of canvas, white cotton, cotton duck, or paper, or any suitable material, which may be rolled or unrolled, and the screen sheet may be left plain, as for use with motion pictures, or it may bear any design printed or otherwise delineated thereon.

Obviously the length of the curtain may be varied to suit the requirements of the occasion by loosening up on the clamp nut D and raising the rod E to the desired height.

Moreover, the lower frame may be brought down by loosening the screw clamp R', and lowering the frame M; thus providing for a greater vertical depth of the curtain.

In adjusting the screen, the upper and lower frames should preferably be made parallel, and both clamped at the desired position on the standard, and then should it be desirable to turn the whole distended screen to any desired angle longitudinally, this may be done by turning the standard B in the pedestal A, the screw threads b affording a swivel connection which renders this feasible.

While I have shown one embodiment of the invention in its preferred form, it will be obvious that various changes might be made in the construction, combination, and arrangement of parts, which could be used without departing from the spirit of my invention, and I do not mean to limit the invention to such details except as particularly pointed out in the claims.

Having thus described my invention, what I claim and desire to secure by Letters Patent of the United States is:—

1. A portable adjustable screen comprising a heavy pedestal, a hollow standard mounted thereon, a rod telescoping in said hollow standard, a clamp screw carried by said standard for holding said rod at the desired position a head piece provided with a handle mounted on the upper end of said rod, an upper screen frame, means for attaching said frame to said head piece, a lower screen frame, a collar slidably connected to said standard, and pivotally connected to said lower frame, a leaf spring carried by said lower frame normally clear of said collar, but adapted to bind against said collar when the lower frame is swung to the vertical position, a roller journalled in said lower frame, and a curtain roller spring arrangement cooperating with said roller, for automatically turning said roller in one direction, when released, and a flexible screen sheet secured at one end to said upper frame and having its lower end wound on said roller.

2. A portable adjustable screen comprising

a heavy pedestal, a hollow standard mounted thereon, a rod screw threaded at its upper end and telescoping in said hollow standard, a set screw carried by said standard for holding said rod at the desired position, a head piece provided with a handle and an internally screw threaded socket adapted to screw on the upper end of said rod, an upper screen frame, having an attaching device extending upwardly therefrom, a bracket fitted on said rod directly beneath said head piece, the said attaching device having an aperture in its free end through which said bracket projects, a lower screen frame adjustably connected to said standard, a spring roller journalled in said lower frame, for automatically turning said roller in one direction, when released, and a flexible screen sheet secured at one end to said upper frame and having its lower end wound on said roller.

DAVID C. LAMB.