Nov. 4, 1930. W. E. KALLIN ET AL 1,780,556

METAL SLAT FOR WINDOW SHADES

Filed March 8, 1929

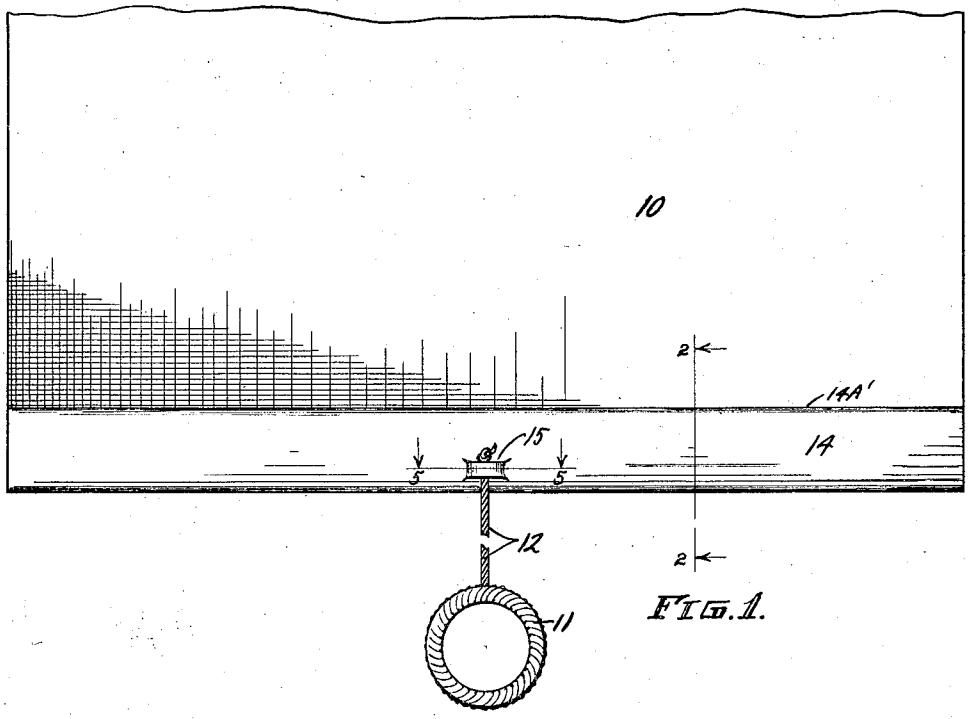


FIG. 1.

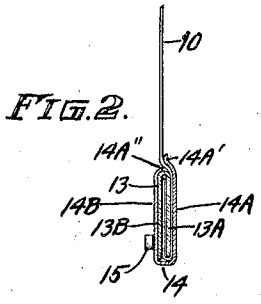


FIG. 2.

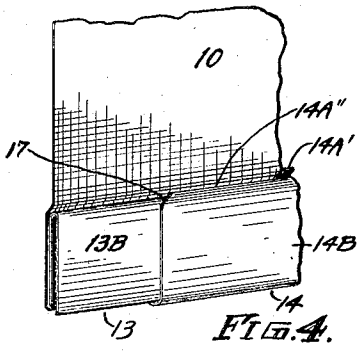


FIG. 4.

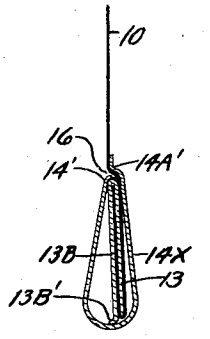


FIG. 3.

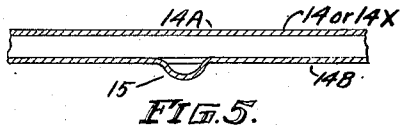


FIG. 5.

INVENTORS:
Lysle G. Boynton
Wallace E. Kallin
BY David E. Carlsen
ATTORNEY.

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UNITED STATES PATENT OFFICE

WALLACE E. KALLIN, OF ST. PAUL, AND LYSLE G. BOYNTON, OF MINNEAPOLIS, MINNESOTA

METAL SLAT FOR WINDOW SHADES

Application filed March 8, 1929. Serial No. 345,522.

Our invention relates to an all-metal shade slat or so-called roller-shade stick used on the free end of a fabric window shade of the kind which normally is wound on a shade roller and rotatably mounted at the upper end of a window frame. The main object of this invention is to provide a simple, efficient and inexpensive shade stick or slat all of metal and adapted to be readily secured to the free end of a shade as hereinafter fully set forth, reference being had to the accompanying drawing in which,—

Fig. 1 is a face view of the lower free end of a cloth window shade and our improved metal slat attached thereto, the view being taken as looking toward the interior of a house through the window opening.

Fig. 2 is a vertical cross sectional view as on line 2—2 in Fig. 1 and Fig. 3 is an enlarged modification of Fig. 2.

Fig. 4 is a perspective view of one end of our improved slat partially telescoped and a portion of the shade held by the slat members.

Fig. 5 is an enlarged longitudinal section on a horizontal plane, of the shell of our device only, as on line 5—5 in Fig. 1.

Referring to the drawing by reference numerals, 10 designates the free end part of a cloth window shade, the other end of which is attached to a shade roller (not shown) in any suitable manner, said free end of the shade adapted to be pulled down in a vertical plane parallel with a window by means of a pull ring 11 with a cord 12 or directly engaging the shade slat.

Our improved shade slat comprises two sheet metal telescope members of which 13 is the inner member and 14 the outer member or shell which in a modified form is designated 14X in Fig. 3, both being provided in lengths corresponding to the width of the shade to which they are to be attached. The inner slat member 13 is of sheet metal and folded to provide two parallel flanges, opening downwardly the inner flange 13A normally slightly narrower than the outer one 13B, both flanges being normally close together so as to allow insertion of the transverse free edge of the shade 10 between them, the shade being folded upwardly on the edge of the narrow flange 13A and extending upwardly therefrom (see Fig. 2). The outer member 14 hereinafter designated the shell is also sheet metal and bent to form an elongated U-shape in cross section, the inner and outer flanges thereof designated respectively 14A and 14B, parallel to each other and spaced so that the inner slat member and the cloth it holds are insertible endwise into the shell and frictionally retained, the cloth protruding upwardly therefrom. Flange 14A is formed at its upper edge with a flange 14A′ curved forward thence up and in, in a curvature as shown in Figs. 2 and 4, causing the cloth to be engaged frictionally between the upper edge of inner member 13 and said curved flange 14A′. The outer flange 14B of the shell is curved or bent inwardly along its upper edge, as 14A″ in Figs. 3 and 4, to engage and retain the top portion of the inner channel member. Thus the cloth of the shade protrudes from the open, upper end of the shell 14 about centrally which of course causes the shell to hang in proper vertical plane.

The shell 14 may be provided at its center, on the outside wall with a punch-out half-loop 15 providing holding means for the pull cord 12, as best shown in Figs. 1 and 5.

In the forms of our device illustrated in Figs. 1, 2, 4 and 5 the telescoped members are comparatively flat as shown, whereas in Fig. 3 the shell 14X is widened out at the bottom, this latter construction being to provide a larger slat resembling in transverse section a standard shade stick of the kind commonly used. In this latter case also the inner member is made about the same as previously described, to retain the shade, but its outer flange 13B may have its lower edge curved outwardly as at 13B′ to frictionally engage the bottom curvature of shell 14X and prevent rattling of the telescoped device.

In either form of the shell it is slitted or open for outlet of the shade between its upper curved flange or edge 14A′ and the adjacent lower and inwardly directed edge 14A″, said opening being designated 16 in Fig. 3. Said inwardly flanged parts 14A′

and 14A'' cause a frictional engagement of the upper edge of the inner slide member 13 and the shade material cannot slip or slide out of place when a downward pull is exerted on the device. It is obvious that in the use of our device there is no sewing of the shade material to make a pocket, a seam thus made causing a weakness and being an undesirable condition which is entirely eliminated in the use of our device. The inner member 13 is merely a sheet metal strip bent to form two parallel walls and opening downwardly, said strip retaining the edge of the shade as described and the material of said shade extending upwardly from said opening and through the slitted part of the shell. The lower flange 14A'' of the shell is preferably beveled at the ends, as 17 in Fig. 4 to prevent tearing of the shade material when the inner strip is inserted endways into the shell.

We claim:

1. In a slat for window shades of the class described normally movable in a vertical plane from a roller mounting, the free edge of said shade adapted to be folded to provide a transverse upwardly directed flap parallel to the main shade; a metal strip member detachably engaging said flap comprising an elongated folded sheet metal strip opening downwardly and adapted to frictionally embrace said flap between its walls, the main shade arranged to be passed upwardly outside of one of its walls, an elongated shell member adapted to be telescoped longitudinally over said strip and the part of the shade exteriorly of said strip to frictionally embrace said strip member and shade part, said shell comprising an elongated folded sheet metal strip opening upwardly and the edges of said shell flanged inwardly.

2. The structure specified in claim 1, in which said flanged edges are flanged inwardly one in a lower plane than the other, the lower flange adapted to directly engage the upper edge of the shade retaining strip and the upper flange directed inwardly over said strip edge, thence upwardly, the shade material extending upwardly from the strip arranged to be frictionally engaged by said upper flange to press it angularly over the top of the strip described.

In testimony whereof we affix our signatures.

WALLACE E. KALLIN.
LYSLE G. BOYNTON.