July 14, 1931. A. WILLIAMS 1,813,980

DETACHABLE WINDOW SHADE

Filed July 29, 1927

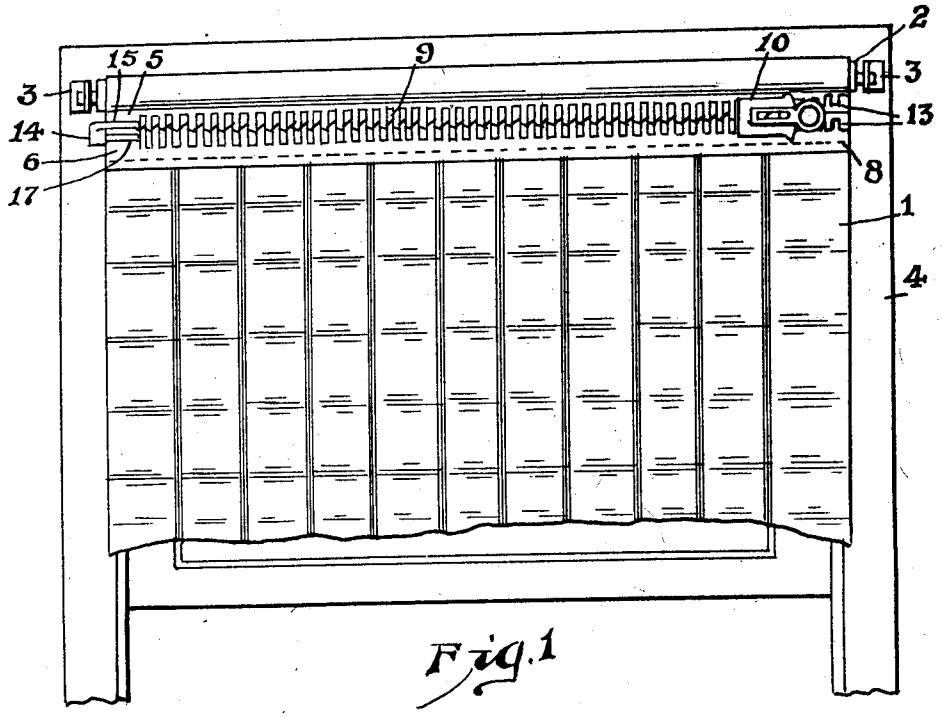


Fig. 1

Fig. 2

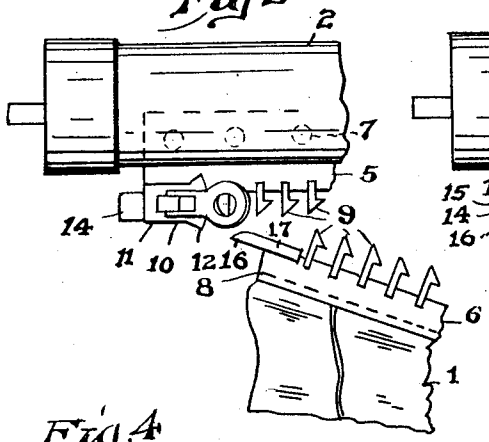


Fig. 3

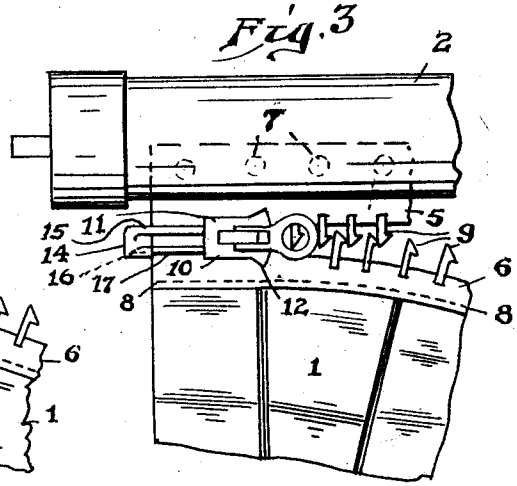


Fig. 4

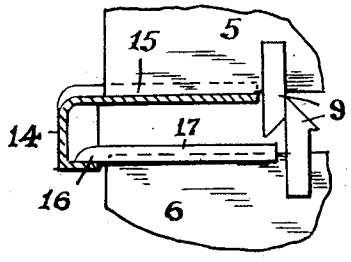
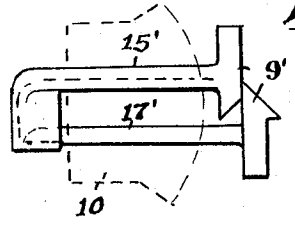


Fig. 5



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UNITED STATES PATENT OFFICE

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DETACHABLE WINDOW SHADE

Application filed July 29, 1927. Serial No. 209,344.

My invention relates to certain new and useful improvements in window shades, particularly to window shades that are constructed from washable material, and consequently requiring their frequent removal and replacement.

The primary object of the invention is to provide a window shade of the type stated, which is detachably connected to its supporting roller, thereby facilitating its removal from the supporting roller and its convenient attachment and replacement to the latter, for any purposes desired.

Further objects of the invention are to provide a device of the character described which is simple in its construction and arrangement, strong, durable and efficient in its use, and comparatively inexpensive to manufacture.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of the claims hereunto appended without departing from the spirit of the invention.

In the drawings wherein like numerals of reference designate corresponding parts throughout the several views:—

Figure 1 is a fragmentary front view of a detachable window shade, constructed in accordance with the invention, and attached in position to a window, a portion of the latter being broken away.

Figures 2 and 3 are enlarged framentary front views of my improved window shade in the completely and partially detached positions, respectively.

Figure 4 is an enlarged front view, partly in section, of the detachable end members of the shade connecting elements.

Figure 5 is an enlarged front view of a modified form thereof.

Referring in detail to the drawings 1 denotes a window shade which is carried by a supporting roller 2. The latter is mounted in a pair of supporting brackets 3, which are fixed in the window frame 4. The construction and operation of the roller 2, together with its connection in roller brackets 3 is identical to devices now commonly employed for such purposes.

The feature of the present invention is the provision of a detachable connection for securing the shade 1 to the roller 2, to permit of the convenient removal of the shade 1 for the purpose of cleaning and laundering the latter or for any other purposes desired. It is now the common practice to secure the window shade to the associated roller by means of tacks, brads, staples, or analogous devices. The removal of the shade from the roller, when so attached, necessitates the removal of such fastening devices, which is usually very difficult, and frequently the shade is badly torn or otherwise damaged, as a result of its frequent attachment and removal in such manner.

The embodiment of the present invention, includes two strips of fabric tape, respectively indicated at 5 and 6. The lengths of the tapes 5 and 6 are approximately commensurate to the width of the shade 1 or to the length of the roller 2 associated with the latter.

The tape 5 is permanently attached to the roller 2 in any suitable manner preferably by the means of brads 7, which are driven through the top marginal edge of the tape 5 and into the roller 2. The tape 6 has its lower marginal edge stitched, as at 8. to the marginal top edge of the shade 1.

A plurality of closely positioned, but regularly spaced clasp hooks 9 are permanently fixed to the lower marginal edge of the tape 5 and to the top marginal edge of the tape 6.

The clasp hooks 9 extend in rows throughout nearly the entire lengths of the tapes 5 and 6, and the clasp hooks 9, carried by the tape 5, are identical in construction to the clasp hooks 9, carried by the tape 6. The clasp hook 9, carried by the tape 5 has their hook ends disposed downwardly while the clasp hooks 9, carried by the tape 6, have their hook ends disposed upwardly.

The clasp hooks 9, of respective tapes 5 and 6, are adapted for inter-fitting engagement and disengagement, with each other, by means of a locking slide 10. The latter normally overlaps the clasp hooks 9 of respective tapes 5 and 6 and has a reduced rearward portion 11 and an enlarged flaring forward portion 12. The forward movement of the locking slide 10, over the clasp hooks 9, will cause the inter-connecting engagement of the clasp hooks 9 of respective tapes 5 and 6 and the rearward movement of the locking slide 10 will effect the disengagement of the clasp hooks 9. The forward end of each of the tapes 5 and 6 is provided with fixed stop clips 13, which prevents the disengagement of the locking slide 10 from the tapes 5 and 6 at the forward ends of the latter.

It will here be noted that the construction and arrangement of the clasp hooks 9, together with the operation of the associated locking slide 10, constitute connecting elements now commonly employed for various closure purposes, only, for in the prior use of the said connecting elements, the members, joined together thereby, could not be completely separated from each other.

In utilizing the well known clasp hooks 9 and associated locking slide 10 for detachably securing a window shade 1 to the roller 2, it is, of course, essential that the window shade 1 be entirely removable from the roller 2, and the present invention provides novel and efficient means for establishing this detachable feature.

The rear end of the tape 5 is provided with a projecting connecting socket 14, which is permanently connected to the marginal lower edge of the tape 5, by means of an integrally formed elongated connecting arm 15. The socket 11 is open on its inner end and is intended for the reception of the projecting end 16, of the elongated connecting arm 17. The latter is permanently fixed to the rear end of the tape 6 and engages the marginal top edge of the latter.

The size and length of the arms 15 and 17 are such as to allow the locking slide 10 to shift and rest thereon, and clear the clasp hooks 9, of respective tapes 5 and 6. The formation of the socket 14 prevents the removal of the locking slide 10 from the tape 5, but when the locking slide 10 is positioned on the arm 15, after having cleared the clasp hooks 9, the connecting arm 17 may be withdrawn from its engagement in the socket 14 and through the locking slide 10, thereby permitting of the complete separation of the shade 1 from the associated supporting roller 2.

In connecting the shade 1 to the roller 2, the locking slide 10 is positioned on the arm 15, and the other arm 17 is then inserted through the locking slide 10. The relative lengths of the arms 15 and 17 is such that when the arm end 13 engages in the socket 14, the clasp hooks 9 will be properly positioned for interconnecting engagement with each other when the locking slide 10 is drawn over the clasp hooks 9 in the usual well known manner. The engagement of the connecting arm 14 in the socket 11 will further serve as a connection for the rear ends of the tapes 5 and 6.

The modified form of the device, illustrated in Figure 5, of the drawings, is identical in operation to that described relatively to the preferred form, but its construction differs in that the socket arm 15′ thereof is formed integral with the most rearwardly disposed clasp hook 9′, of the tape that is attached to the roller, and that the arm 17′ is formed integrally with the most rearwardly disposed clasp hook 9′ of the tape that is attached to the window shade.

The modified form of the device provides a more rigid and accurate arrangement, than the preferred form, but is obviously more expensive to manufacture.

What I claim is:

1. In combination, a connecting device of the character described comprising a pair of supporting strips, a row of clasp hooks being permanently fixed to an edge margin of each of said pair of supporting strips, a slide element mounted on said rows of clasp hooks and shiftable on the latter in opposite directions for respectively inter-engaging and releasing the clasp hooks of said rows, and elongated connecting arms carried by the adjacent ends of said supporting strips and being longitudinally aligned with the respective rows of clasp hooks for receiving said slide element when the latter is disengaged from said rows of clasp hooks and further for reengaging said slide element with the latter, one of said connecting arms being detachable from said slide element for separating said pair of supporting strips.

2. In combination, a connecting device of the character described comprising a pair of supporting strips, a row of clasp hooks being permanently fixed to an edge margin of each of said pair of supporting strips, a slide element mounted on said rows of clasp hooks and shiftable on the latter in opposite directions for respectively inter-engaging and releasing the clasp hooks of said rows, elongated connecting arms carried by the adjacent ends of said supporting strips and being longitudinally aligned with the respective

rows of clasp hooks for receiving said slide element when the latter is disengaged from said rows of clasp hooks and further for re-engaging said slide element with the latter, one of said connecting arms being detachable from said slide element for separating said pair of supporting strips, and a socket member carried at the outer end of one of said connecting arms and detachably engaging the outer end of the other of said connecting arms for maintaining the proper alignment of the latter relatively to each other.

In testimony whereof I affix my signature.

ANNA WILLIAMS.