

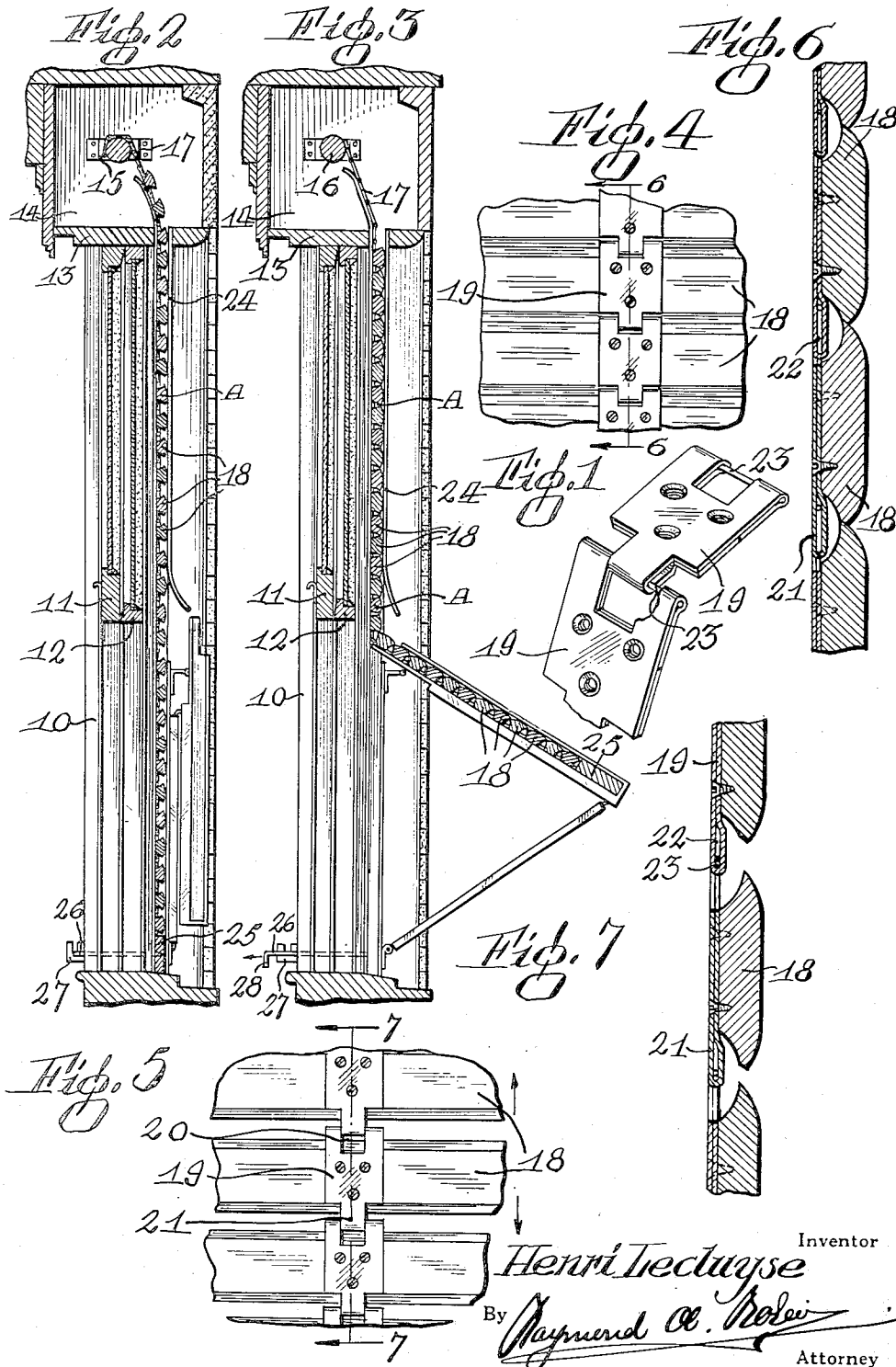
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SLAT LINK FOR ROLLING SHUTTERS

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SLAT LINK FOR ROLLING SHUTTERS

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1 Claim. (Cl. 156—16)

The present invention relates to improved flexible shutter construction for windows and the like and more particularly to a slat link therefor.

5 The main object of the invention is the provision of an improved slat link construction whereby a rolling shutter for windows and the like may be effectively assembled from a number of suitable slats, said link being arranged from the inside and non-removable from the outside.

10 An important object of the invention is the provision of a novel rolling shutter for windows which is adapted to be conveniently operated from the interior of a building.

15 Another object of the invention is the provision of a rolling shutter of the above type designed so that the constituent slats may be disposed in separated positions to provide interstices permitting air and diffused light to enter a room, while preventing the direct rays of sunlight from fading fabrics and the like, whereby a room is kept cool and comfortable in summer time.

20 Other objects and advantages of the invention will become apparent as the description progresses.

In the accompanying drawing forming a part of this specification and in which like reference characters are employed to designate corresponding parts throughout the same:

30 Figure 1 is a perspective view of the slat link,

Figure 2 is a vertical section through a window showing the shutter slats in separated arrangement,

35 Figure 3 is a similar view showing the lower portion of the shutter disposed in awning forming arrangement and the shutter slats in closed relation,

40 Figure 4 is a fragmentary interior elevation of the shutter in fully closed position,

Figure 5 is a similar view showing the shutter slats in separated relation,

45 Figure 6 is an enlarged vertical section taken on the line 6—6 of Figure 4,

Figure 7 is a similar view taken on the line 7—7 of Figure 5,

50 With particular reference to Figures 1 to 7 inclusive wherein is shown an embodiment of the invention, the numeral 10 generally designates a conventional form of rectangular shaped window frame structure provided at the sides with the usual pulley boxes and having mounted therein a pair of double hung sliding sashes 11 and 12.

55 The upper portion of the window frame structure

is especially designed to provide, above a head bar 13, a head box 14 adapted to provide therein a curtain roller chamber.

60 Extending horizontally within the head box chamber and journaled on bearing brackets 15 is a shutter rolling shaft 16 and connected to the shaft 16, through the medium of chains 17, and adapted to be rolled thereon, is a shutter generally designated by the letter A and consisting of a plurality of horizontally extending slats 18. The shutter forming slats 18 are of elongated, approximately flat, shape tapering at their longitudinal edges as shown to advantage at Figure 6. The slats 18 are flexibly joined by connecting elements in the form of slat links 19. At one end each of the links 19 is recessed to form a notch 20. At the opposed end each of said links is formed with an outwardly projecting tongue 21 formed so that the doubled material thereof is separated to form a slot 22 through which is extended a hinge pin 23 attached to the opposed notched end of the link. In order to provide a durable joining structure, I preferably provide three rows of connecting links 19. As will be noted from Figures 4 to 7 inclusive, this joint construction enables convenient rolling of the shutter forming slats and also affords a sliding connection, so that the slats may be disposed in vertically spaced arrangement to provide ventilating or light admitting interstices therebetween. Obviously, the shaft 16 may be provided with any suitable actuating means (not shown) for the purpose of rolling or unrolling the shutter over said shaft. Manifestly, these means may be arranged to suit particular conditions and are apparent to any one versed in this art.

When in extended or window closing position the shutter structure travels in a defined vertical plane exteriorly of the window sashes and moves in a guide structure provided for this purpose. This guide structure embodies a pair of channel-shaped main guide sections 24 permanently fastened in vertical positions against the opposed stiles of the window frame. The channels 24 extend from the head bar 13 downwardly to a position close to or projecting into the sill of the frame. As will be noted from Figure 2, the lowermost bar of the shutter, indicated at 25, is of substantially greater width than the remaining slats and may be provided at the ends with suitable bolt receiving means wherein a locking bolt 26 extended horizontally through the window frame at each end is adapted to enter for shutter locking purposes, as shown in Figures 2 and 3. The inner end of each of the bolts 26 is disposed in-

wardly of the window casing and is provided with an operating knob 28 engageable with a notched fastening bracket 27.

When the shutter is completely lowered, it may be securely locked by sliding the bolts 26 outwardly from the interior side of the window, whereby the outer ends will project into bolt receiving means (not shown) in the bottom bar of the shutter.

Thus, and due to the construction of the connecting slat links insuring flexibility, the shutter is adapted to be conveniently rolled out of the way, or lowered at will. Furthermore, the slot construction enables relative separation of the slats to admit air and light while permitting locking of the shutter at the bottom to prevent unauthorized access from without. Finally, when completely closed, the outer surface of the shutter is practically free of all projections or depressions of unsightly appearance, due to the arrangement of the links from the inside of the building.

This construction has the other advantages of rendering the screen practically burglar-proof due to the slight possible separation between the slats

and the impossibility of reaching the links there-through.

It is to be understood that the form of my invention herein shown and described is to be taken as a preferred example of the same, and that various changes as to the shape, size and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claim.

Having thus described my invention, I claim:—

Connecting means for the slats of a rolling shutter, comprising a member attached to each of said slats and formed of a metal sheet folded flat to provide two superposed sheets, said sheets being spaced in parallel relationship at one end of the member and having a cut out portion at the other end, a projection formed at the spaced end of the sheets, and a pin secured between said sheets transversely across the cut-out portion, the projection of a member entering the cut-out portion of another member secured to an adjacent slat and the pin slidably entering the extension of said other member.

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