Nov. 18, 1924. 1,515,929

M. BRETOS Y CLAVERIA

FOLDING BLIND WINDOW

Filed April 5, 1924

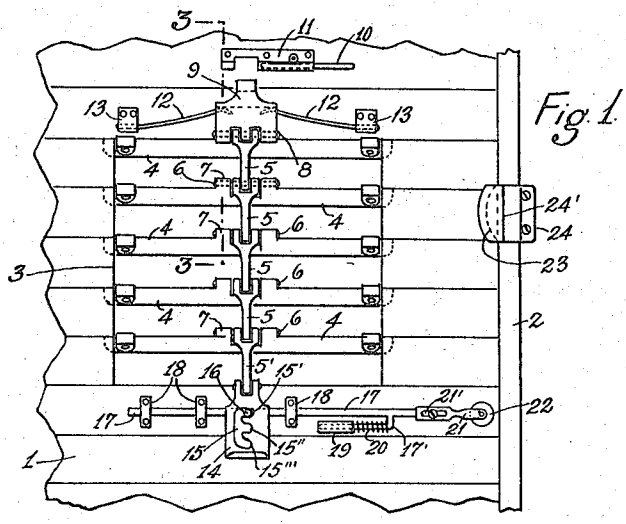

Fig. 1.

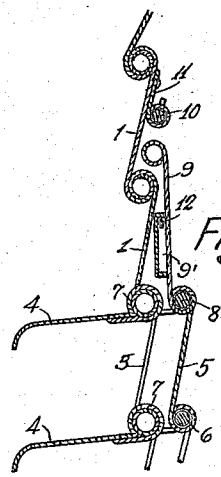

Fig. 3.

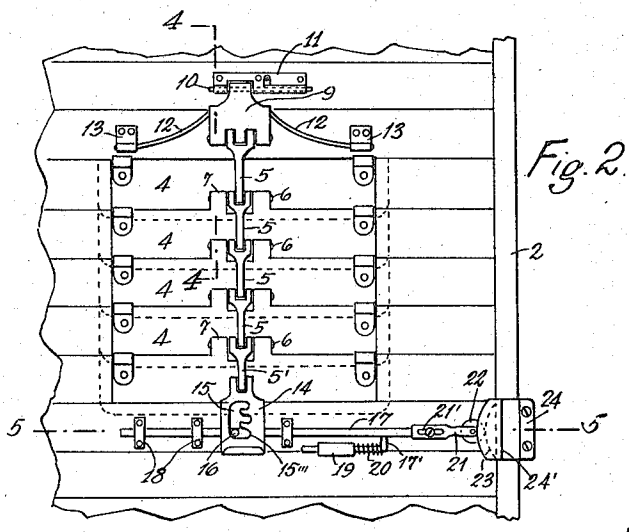

Fig. 2.

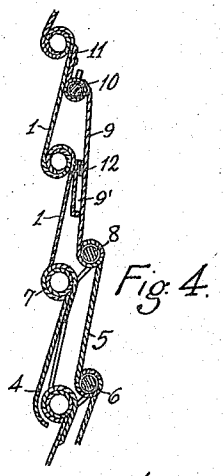

Fig. 4.

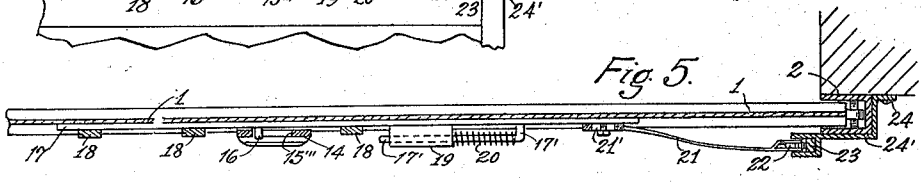

Fig. 5.

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Patented Nov. 18, 1924. 1,515,929

UNITED STATES PATENT OFFICE.

MANUEL BRETOS Y CLAVERIA, OF SANTIAGO, CUBA.

FOLDING-BLIND WINDOW.

Application filed April 5, 1924. Serial No. 704,436.

To all whom it may concern:

Be it known that I, MANUEL BRETOS Y CLAVERIA, a subject of the King of Spain, residing at Santiago de Cuba, Republic of Cuba, have invented certain new and useful Improvements in Folding-Blind Windows, of which the following is a specification.

This invention relates to folding blinds and has for its principal object to furnish a construction of blinds, which, besides being able to remain stationary in any one of three positions, that is to say, open, closed or half-open, in the case of being open with its slats extended, is automatically closed, upon folding of a door containing it, thus permitting operation of the same.

The invention is disclosed herein, reference being had to the accompanying drawings, in which similar characters of reference designate similar parts, wherein,

Fig. 1 is a front fragmentary elevation of a blind provided with the improvement which is the object of this invention, and installed in a folding door.

Fig. 2 represents, in the same manner, one operative position of the blind,

Fig. 3 is a vertical section, on an enlarged scale, on line 3—3 of Fig. 1,

Fig. 4 is a vertical section, on an enlarged scale, on line 4—4 of Fig. 2, and

Fig. 5 is a horizontal section, on an enlarged scale, on line 5—5 of Fig. 2.

In the drawing is shown a portion of a folding door 1, slidable in guides 2, of which only one is illustrated, the door having an opening 3, which is covered by a blind formed by slats 4, mounted to turn relative to the sides of the opening 3, and connected together by link elements 5, the upper ends of which are forked and engaged in short horizontal shafts 6, mounted between brackets 7, formed by beaded extensions projecting from the center of each of the upper borders of the slats.

To the shaft of the uppermost link 5 designated by 8, is connected a member 9 ending, at the upper portion in a beaded ear to constitute a socket for a bolt 10, sliding in a brace 11, secured to the front side of the door and at the upper edge of the opening 3.

In the upper part of piece 9, and on the inner side of the same, is a socket piece 9′, used as a stop to the free ends of two leaf springs 12 which are fastened at their opposite ends to braces 13, fastened at each side of hook 9, which springs 12 tend to force the slats of the blind 4 downwardly in the direction of closing of the same.

The lowermost link, designated as 5 engages a hook 14 which has an opening 15, one inner side of which has notches 15′, 15″ and 15‴ to receive a button 16 extending out from a horizontal bolt 17, sliding between braces 16 secured to the front side of the door under the opening 3. This bolt, on the lower side, has an angular extension 17′ which passes through a horizontal tubular guide 19 secured to the door under the bolt 17. The extension 17′ has sleeved on it, a spring 20, which urges the bolt to unlocking position, and also holds the bolt 17 to keep the button 16 in engagement in any one of the notches 15′, 15″ and 15‴. The bolt 17 is connected, at its outer end, to a bracket 21 in alignment therewith by a slot and screw connection 21′.

The outer end of the bracket 21, is forked, and loosely carries a roller 22, which as shown in Fig. 5, engages, at a given moment, with a cam 23 in a guide 24′, integral with an angular bracket 24 which is secured to one of the guides 2 of the folding door, in a higher plane above that which the blind occupies when the door is unfolded.

The operation of the construction shown, is as follows:—

To operate the blind, the bolt 10 is drawn to the right and the hook 14 is pulled downwardly, overcoming the tension of the spring 12 which tends to force the blind to its closed position. The button 16 of the bolt 7 is engaged in any one of the notches 15′, 15″ and 15‴ according to the desired blind opening.

Assuming the button 16 engaged in the notch 15′, that is, with the slats 4 open as in Figures 1 and 3, if, by any oversight, the blind be left open when the folding door 1 is to be folded, on pushing the door upwardly between the guides 2, the roller 22 will slide over the cam surface 23, thus pushing the bolt 17 against the tension of spring 20, and thus disconnecting the button 16 from the slot 15′, all as clearly shown in Figs. 2 and 5. Thereupon the blind, due to the upward tension of the springs 12, will close automatically.

Having described one embodiment of my invention, I now claim:

1. An apertured folding closure member, a folding blind covering the aperture in the closure member and cooperating mechanism on the blind and the closure member for

folding the blind upon the folding of the closure member.

2. An apertured folding closure member, a folding blind covering the aperture in the closure member, means biasing the blind to closed position, a catch for holding the blind in various open positions against the biasing means, and means, operable upon the folding of the closure member to make the catch ineffective against the biasing means.

3. Apparatus according to claim 2, said blind including a plurality of rockable slats, links interconnecting the slats, said biasing means comprising a leaf spring, said catch including, a hook connected to one of the links, a slidable bolt, a button on the bolt, a toothed slot in the hook for receiving the button, to hold the blind in various open positions, resilient means urging the button into engagement with the toothed slot, a roller on one end of the bolt, and a cam at the edge of said closure, the cam operating the roller upon folding of the closure, to release the catch and permit the biasing means to close the slats of the blind.

In testimony whereof I have signed my name to this specification.

MANUEL BRETOS Y CLAVERIA