

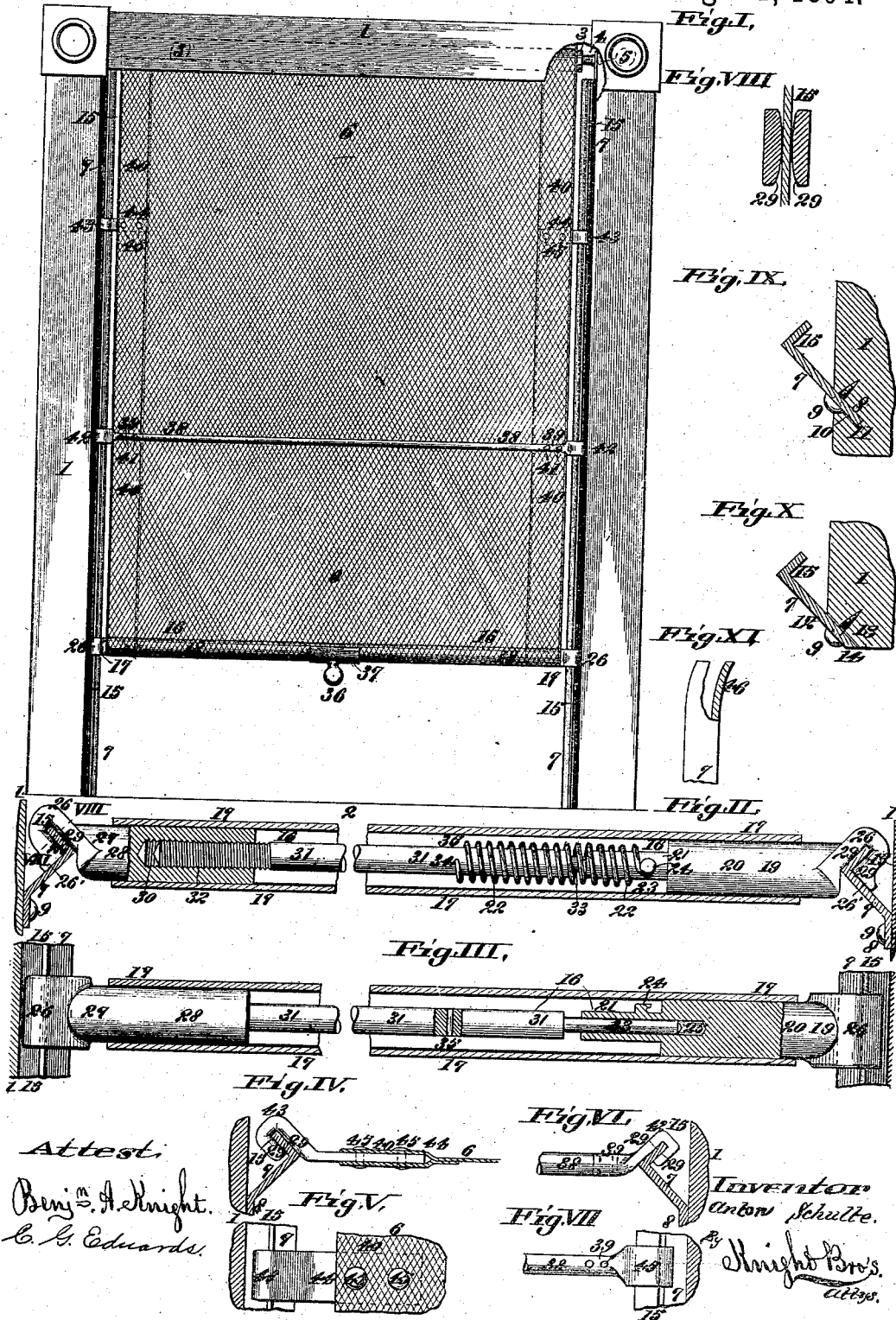
(No Model.)

A. SCHULTE.

CAR CURTAIN STRETCHER ROD AND GUIDE ATTACHMENT HOOK.

No. 524,972.

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Attest.

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UNITED STATES PATENT OFFICE.

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CAR-CURTAIN STRETCHER-ROD AND GUIDE ATTACHMENT-HOOK.

SPECIFICATION forming part of Letters Patent No. 524,972, dated August 21, 1894.

Application filed March 24, 1894. Serial No. 505,029. (No model.)

To all whom it may concern:

Be it known that I, ANTON SCHULTE, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Car-Curtain Stretcher-Rods and Guide Attachment-Hooks, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to devices for the secure attachment, outward stretching and free movement of car curtains, in combination with a spring tension dual rod; and the invention consists in features of novelty hereinafter fully described and pointed out in the claims.

Figure I is a front or inside elevation of the curtain frame, and shows the curtain with its stretcher attachment therein. Fig. II is an enlarged, horizontal section of the telescopic tube, that incloses the dual spring tension rod that constitutes a spring extension stretcher at the foot of the curtain, and shows the coil spring that also actuates the longitudinal tension of said dual telescopic rod; it also shows the self adjusting rocker seat of the attachment hooks to the guide holder bar on the frame. Fig. III is an enlarged, vertical section of said telescopic tube, and shows the dual tension rod, minus the coil spring that is dismounted therefrom. Fig. IV is an enlarged, horizontal, detailed section, and shows the curtain, its attachment stretcher hook, the guide holder bar and the frame to which said bar is secured. Fig. V is an enlarged, vertical section of the same parts. Fig. VI is an enlarged, horizontal, detail section of the intermediate stringent stretcher rod, with its hook and its guide holder bar. Fig. VII is an enlarged, vertical section of the same parts. Fig. VIII is an enlarged angle section, taken on line VIII-VIII, Fig. II, and shows the self-adjusting rocker bearings of the attachment hooks in engagement with the guide holder bar. Fig. IX is an enlarged, horizontal section, and shows a modification of the means for securing said guide holder bar to the frame. Fig. X is an enlarged, horizontal section, and shows a second modification of the means for securing said guide holder bar to the frame;

and Fig. XI is an enlarged, detail view of the curved top of the guide holder bar with part broken away to show its facile form for the attachment and detachment of the hooks from said guide holder bar.

Referring to the drawings:—1 represents the inclosing window and curtain frame, and 2 is the sill of said frame.

3 is the usual spring actuated curtain roller, the journal pivots 4 of which are usually pivotally seated in said frame at 5, and spring actuated by the usual means, (in which no novelty is claimed or shown) to spring elevate the curtain as usual after its initial start.

6 represents the curtain, the top of which is secured to said roller, and which during its ascent rolls around the same.

7 represents the vertical metallic guide holder bars, the perforate attachable flange ends 8 of which, as shown in the preferred form in Fig. II, are secured to the inside faces of the sides of the combined curtain and window frame by the screws 9.

10 represents a modification of the attachable ends of the guide holder bars, in which modification straight perforate attachment ends 8' are seated in box slots 11 in said frame, to reinforce the hold of said guide holder bars where they are also held by the aforesaid attachment screws 9.

12 represents a second modification of the attachable ends of the guide holder bars, in which the perforate attachable ends 8² are also straight, as in the first modification, and are seated on the bevel corners 13 of said frame, the said corners being thus prepared to effect said seats for said modified perforate attachment ends of said guide holder bars, which are there secured by the aforesaid screws 9. The said modified attachment end is preferably beveled off at 14, as shown in Fig. X, to line with the front of the side piece of the curtain inclosure frame 1, to which it is secured. 15 are the inwardly turned angle clutch holds of said guide holder bars 7.

16 represents the dual sectional tension spring and telescopic curtain stay rod, the outer telescopic tube 17 loosely embracing which, is inclosed within the skirt fold 18 of

the curtain 6. For brevity's sake, in numerous references, said part 16 may be referred to as the "telescopic stay rod." 19 represents the major or large end of the primary section 20 of said dual spring actuated tension sections of the telescopic stay rod, which major end 19 fits and works freely within said outer telescopic case 17. 21 is a minor central extension of said major part of said rod, and integral therewith, but of considerably reduced diameter, to allow room for the mounting and work of one end of the actuating tension coil-spring 22, the said end being secured by its clutch loop 23 to the hook lug 24 that projects from said central extension 21 of said primary section 20 of said telescopic stay rod 16. 25 is a center tube piston bore that passes through said minor center extension 21 of said rod and for a certain distance into said major part 19; 26 is the clutch hook, integral with the outer end of said major end 19 of said telescopic stay rod, which hook is mounted on and clutches the angle hold 15 of the guide holder bar 7, and 26' is the broad terminal of said hook that runs on line with the inside of said guide bar, and braces itself against the same. 27 represents the major or large end of the secondary member 28 of said dual spring tension sections of said telescopic stay rod, and integral with said secondary major end 27 is a like clutch hook alike numbered 26 with a like broad brace-terminal 26', to its exact counterpart on the reverse end and for the like purpose above described. 29 are the dual inner and outer convex rocker seats of said clutch hooks, which rocker seats are self-adjusting on the inside and outside of said angle clutch holds 15, of said guide holder bars 7, so as largely to facilitate the adjustment of the curtain as it is elevated and lowered, preventing its cramping clutch of said guide holder bar 7, and constituting an anti-friction device. The said major part 27, as in its counterpart 19, is alike fitted to work freely within the outer telescopic case 17.

30 represents an internal, central screw bore in the secondary major end 27 of the dual telescopic stay rod 16. 31 is a minor extension of said secondary section of said telescopic stay rod, the screw tip 32 of which is adjustably seated in said internal screw 30, to regulate the required length of said rod, to adjust its stay tension. 33 represents a piston rod extension of said secondary minor extension 31, of still further reduced diameter, which piston works in the center tube bore 25, within the primary section 20 of said telescopic stay rod. The reverse end of the actuating coil spring 22 to that mounted and secured on the primary minor extension rod 21, is mounted on the secondary minor extension rod 31, to which it is secured by the seating and fastening of its terminal hook 34 in the lock seat bore 35 in said rod 31.

36 is the hand knob, that is secured by the clamp holder flange 37, to the middle of the

outer telescopic tube 17, from which said hand knob hangs pendent.

38 represents the stiffening rod, which rod has perforate shoulders 39 adjacent to its ends, in which and in the selvage 40 on each side of the curtain, the rivets 41 are seated and secured, stretching the curtain outward to its extreme width. Clutch hooks 42 are integral with the terminal ends of said stiffening rod, and said hooks have substantially similar dual convex rocker faces 29, as have the aforesaid hooks 26, of the telescopic stay rod 16, and for the same reason that as said hooks clutch and travel on the angle holds 15 of the guide holder bar 7, the said rocker faces inside and out of said guide hold constitute self adjusting rocker bearings that prevent the cramping of the hold and consequent adverse derangement of the curtain as it travels up and down.

43 represent stretcher clutch hooks, that work and run on the angle holds 15 of the guide holder bars 7, the perforate attachment stems 44 of which hooks are secured to the selvage 40 of the curtain by rivets 45, and in combination with the other previously described curtain hook mounted on the same guide bars keep the curtain stretched. The said stretcher clutch hooks like the hooks 26 and 42, have substantially the same form of dual convex rocker seats or bearings 29, previously described in relation to said hooks, as shown in section in Fig. VIII, that prevent the cramping of any of said hooks on their combined inside and outside bearings on said guide bars. Only one pair of said stretcher hooks 43, are shown in Fig. I, as the curtain being partly elevated, the upper pair is rolled around the roller out of sight. Also only one stiffening rod is shown, but I do not confine myself to the number of said rods and stretcher hooks, for it is evident that the number can be increased of exactly the same specified construction, without any departure from the essential features of the invention.

46 represent the curved, surmounting ends of the guide holder bars 7, part being broken away, to better show its construction. The said surmounting curve to said guide bar, facilitates the passage of the stretcher hooks, the stiffening bar and its hooks, &c., from said guide bar to the curtain roller around which they are wound.

The operation of the device has been partly, but not fully indicated during the introduction of the several parts, and it may be further stated that the guide holder bars 7, with their inwardly turned angle clutch holds 15, present an effective double guide and hold for the traveling stay hooks 26, stiffening hooks 42 and stretcher hooks 43, and the curvilinear summits 46 of said guide holder bars, direct, and facilitate the passage of said hooks and of the stiffening bar 38, from said guide bar to the curtain roller around which they are wound. Also the dual inside and

outside convex, rocker bearings 29 of all said hooks, makes them self-adjusting, when there is any tendency to stick or cramp in the travels of said hooks, and the broad extension ends 26' of said hooks 26 braces the same in main line with the guide bar 7, so as to steady said hook on its travels. Also the piston jointed double telescopic stay rod 16, (telescoping within itself and within the outer telescopic tube 17,) with its self actuating (not manipulated) spring 22. The said spring, with its connections, constituting a self adjusting elastic stay tension of said hooks 26 on the angle clutch holds 15 of the guide holder bars 7 when the curtain is at rest, and also on the other hand when the balance of power is turned in favor of either an upward or downward movement of the curtain by simply respectively pushing or pulling on the knob 36, the elastic spring gives way, as it were, under protest until said balance of power ceases to be exerted. Also all the hooks act as stretcher hooks, to laterally stretch and retain the curtain in its taut position, while at the same time the convex double (inside and outside) rocker bearings 29 of said hooks on the inwardly turned angle guides 15 of the guide holder bars 7, constitute self-adjusting anti-cramping bearings, that facilitate the movement of said hooks. Also said stiffening rod or rods 38, movable with the curtain as it adjusts, both stretch said curtain laterally and likewise constitutes a safety bar or bars, that arrests any object that accidentally falls against it, whether it be a child that falls from the arms of its nurse, or a passenger that may accidentally stumble; thus preventing a precipitation through the window, and also preventing any injury to either curtain or window from said falling object.

I claim as my invention—

1. In car curtain attachments, the combination of the curtain 6 suspended from the usual spring actuated roller, the guide holder bars 7, having the inwardly turned angle clutch holds 15, the sectional telescopic stay rod 16, having the piston rod extension 33 and provided with the piston bore 25, the clutch stay hooks 26, and the outer telescopic tube 17; substantially as shown and described.

2. In car curtain attachments, the combination of the inclosing frame, the curtain 6 suspended from the usual spring actuated roller, the guide holder bars 7, having the inwardly turned angle clutch holds 15, and the perforate attachable flange ends 8, the attachment screws 9, the sectional telescopic stay rod 16, and the stay hooks 26; said hooks having the dual inside and outside convex rocker bearings 29, that self adjustably engage and travel on the inside and outside of said clutch seats 15; substantially as shown and described.

3. In car curtain attachments, the combination of the curtain 6 suspended from the usual spring actuated roller, the guide holder bars 7, having the inwardly angle turned clutch

holds 15, and the curved surmounting guide ends 46, the sectional telescopic stay rod 16, the primary section 20 of said rod, having the major enlarged end 19, the inwardly projecting central extension 21, and the spring holder hook lug 24, and said extension provided with the center piston tube bore 25, the secondary section 23, of said sectional stay rod, said section having the major end 27, provided with the internal screw adjusting bore 30, and having the adjustable screw tipped minor extension rod 31, provided with the spring lock holder bore 35, and having the telescopic piston rod 33, that works in said tube bore 25 of the adjacent section, the actuating coil spring 22, having the clutch loop 23, and the terminal hook 34, the outer telescopic tube 17, and the stay hooks 26 mounted on said clutch holds 15 of said guide bar 7; substantially as shown and described.

4. In car curtain attachments, the combination of the curtain suspended from the usual spring actuated roller, the guide holder bars 7, having the inwardly angle turned clutch holds 15, the sectional telescopic stay rod 16, the actuating spring mounted on and secured to mutual sections of said rod, and the stay hooks 26, having the double convex rocker bearings 29, and having the broad terminal 26' that braces in contact line with said guide holder bar 7; substantially as shown and described.

5. In car curtain attachments, the combination of the curtain suspended from the usual spring actuated roller, the guide holder bars 7, having the inwardly turned angle clutch holds 15, the sectional telescopic stay rod 16, the automatic actuating spring 22, the stay hooks 26, the stiffening rod 38 having the mounting hooks 42 said hooks having the dual convex rocker bearings 29, the perforate shoulders 39 of said stiffening rod, and the rivets 41 that attach said rod to the curtain; substantially as shown and described.

6. In car curtain attachments, the combination of the curtain suspended from the usual spring actuated roller, the guide holder bars 7, having the inwardly turned angle clutch holds 15, the sectional telescopic stay rod 16, the self-actuating spring, mounted on and secured to diverse sections of said rod, the stay and the stretcher hooks 43, having the dual convex rocker bearings 29, and the rivets 45 that secure said hooks to said curtain; substantially as shown and described.

7. In car curtain attachments, the combination of the curtain suspended from the usual spring actuated roller, the guide holder bars 7, having the inwardly turned angle clutch holds 15, the sectional telescopic stay rod 16, having the stay hooks 26, said stay hooks having the dual convex rocker bearings 29, the self adjusting actuating spring 22, the stiffening rod 38, the rivets that secure said rod to the curtain, the hooks 42 that secure said rod to said clutch holds 15, the said hooks having the dual convex rocker bearings 29,

of said guide holder bars 7, and the stretcher hooks 43, having the perforate attachment stems 44, and having the dual convex rocker bearings 29, and the rivets 45, that secure
5 said attachment stems to said curtain; substantially as shown and described.

8. In car curtain attachments, the combination of the curtain suspended from the usual spring actuated roller, the inclosing frame 1,
10 the side bars of said frame having the bevel attachment corners 13, the guide holder bars 7, having the inwardly turned angle clutch holds 15, the straight perforate attachment

ends 8², having the bevel end 14, which attachment ends are seated on said bevel corners 13, the screws 9 that secure said perforate ends to said corners, the sectional telescopic stay rod 16, the self-actuating spring mounted on and secured to diverse sections of said telescopic rod, and the outer telescopic tube 17; substantially as shown and described.

ANTON SCHULTE.

In presence of—

BENJN. A. KNIGHT,
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