

No. 618,824.

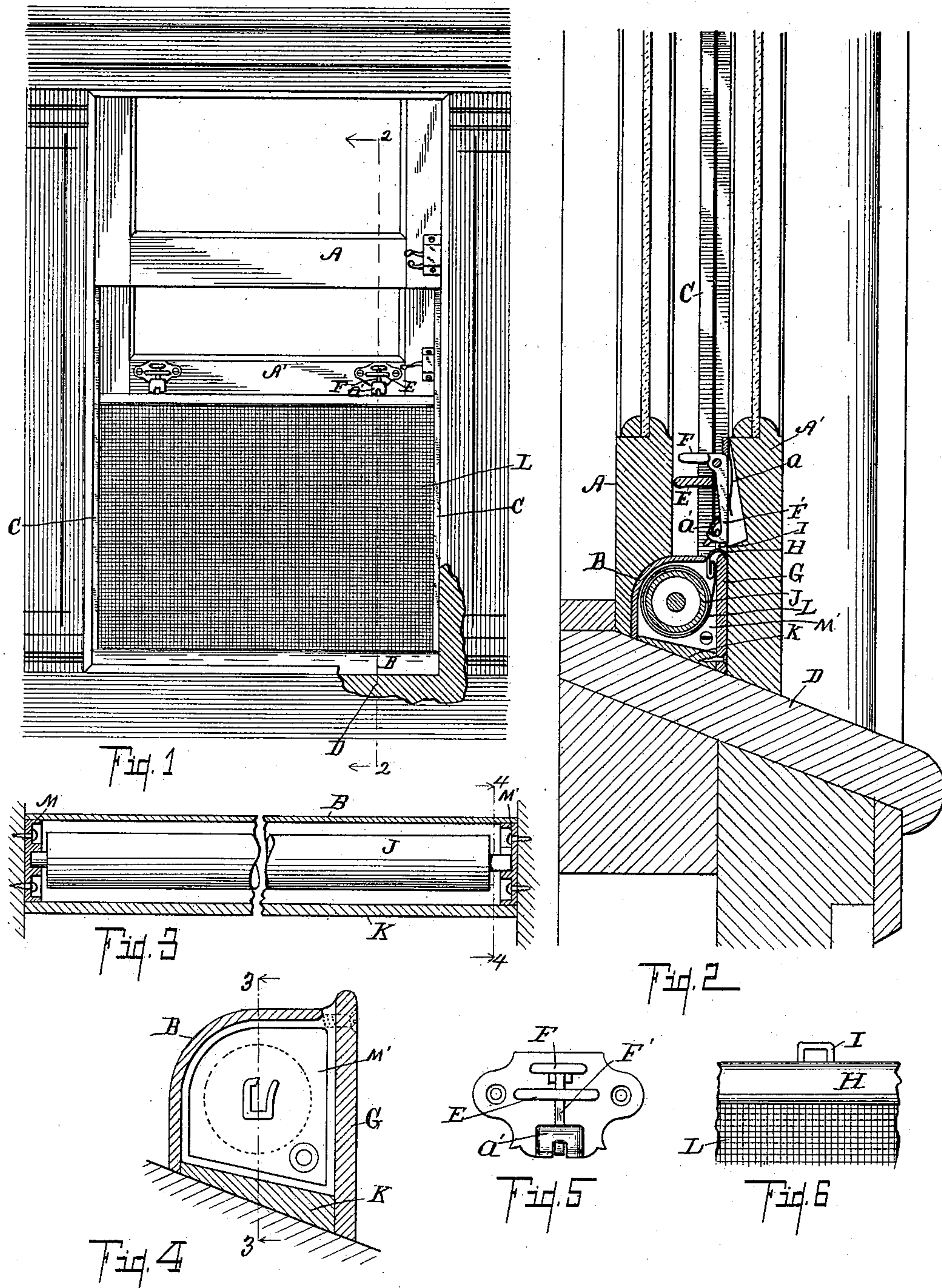
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T. E. BARR.

ROLLER WINDOW SCREEN FOR CAR WINDOWS.

(Application filed July 27, 1896. Renewed June 18, 1898.)

(No Model.)



Witnesses:

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UNITED STATES PATENT OFFICE.

THOMAS E. BARR, OF KALAMAZOO, MICHIGAN.

ROLLER WINDOW-SCREEN FOR CAR-WINDOWS.

SPECIFICATION forming part of Letters Patent No. 618,824, dated February 7, 1899.

Application filed July 27, 1896. Renewed June 18, 1898. Serial No. 683,869. (No model.)

To all whom it may concern:

Be it known that I, THOMAS E. BARR, a citizen of the United States, residing at the city of Kalamazoo, in the county of Kalamazoo and State of Michigan, have invented a certain new and useful Roller Window-Screen for Car-Windows, of which the following is a specification.

My invention relates to improvements in roller window-screens, and more particularly to improvements in roller window-screens for car-windows.

The objects of my invention are, first, to provide a window-screen particularly adapted for use in a double glass car-window; second, to provide a roller window-screen apparatus so constructed that it can be easily removed for repair or opened for the purpose of cleaning; third, to provide a roller screen apparatus for a car-window which shall assist in the exclusion of water and dust from the car; fourth, to provide an improved means of detachably attaching the window-screen to the rail of the sash, and further objects appearing definitely in the detailed description. I accomplish these objects of my invention by the mechanism and means described in the following specification and illustrated in the accompanying drawings, in which—

Figure 1 is an interior view of a car-window with one of my improved window-screens in place. Fig. 2 is an enlarged detail sectional view on line 2 2 of Fig. 1, looking in the direction of the little arrows at the end of the section-lines. Fig. 3 is a longitudinal sectional view through the roller-casing, showing the roller complete inside, taken on line 3 3 of Fig. 4. Fig. 4 is an enlarged detail sectional view taken on line 4 4 of Fig. 3, looking in the direction of the little arrows at the end of the section-line. Fig. 5 is an enlarged detail elevation view of one of the clasp devices for taking hold of the top of the window-screen. Fig. 6 is an enlarged detail view of one of the loops on the upper edge of the window-screen.

Similar letters of reference refer to similar parts throughout the several views.

Referring to the lettered parts of the drawings, A represents the inside window-sash; A', the outside window-sash. The roller J is supported in a casing between the bottom

rails of the sash, the inner bottom rail being hollowed out to receive the casing-wall B. The casing-wall B can be of metal covered with veneer to give it the appearance of the finish of the inside of the car, or it can be of any suitable material painted to secure that effect.

On top of the window-sill D is placed a strip K, which extends underneath the roller J. On the outside of the roller the casing is completed by a flat strip of wood or metal G, which is detachably secured, preferably by wood-screws, to the bottom strip K and to the brackets M M' at each end. The roller is a spring-roller having a round journal in the bracket M at one end and a square shank to fit into the bracket at the other end. The socket in the bracket M' has an opening on one side, which permits of the easy removing of the roller.

The screen or wire net L is secured by one end to the roller and projects out between the casing-wall B and G at the top. The upper end of the wire screen is secured by a metal binding H by seaming it into the same. The binding extends outwardly and forms a cap which closes down over the upper edge of the strip G, forming a finished joint, which is very smooth and practically closes the opening into the roller-casing. On this binding H, I place upwardly-extending loops I, by which means the screen is attached to the bottom rail of the outer sash A'. On the inside of the base-rail of the outer sash I secure an attaching device for securing the upper end of the screen through the bottom rail. There are a number of these attaching devices, varying according to the width of the sash. For the ordinary car-window, as shown in the drawings, two will be found to be sufficient. These fastening devices are clearly illustrated in Figs. 2 and 5. A plate something like an escutcheon is secured to the sash-rail. Projecting out from this plate is a sash-plate E. In a suitable recess in the back of the plate is supported a lever having a downwardly-extending hook portion F' and an outwardly-extending broadened portion F to serve as a thumb-piece for actuating the same. The point of the hook projects outwardly from the base-rail and is held normally in that position by the spring a. A guiding-loop a' is

formed in the plate, into which the hook F' extends, while it serves as a keeper for the hook and a guide for the loop I, which is on the upper edge of the screen. The edge of the screen passes up in the slotted tube C on each side when the screen is operated. From this description the relation and operation of the parts will be apparent. When the window-sash is lowered, the hooks F' engage the loops I on the top of the screen and when the window is raised carry the screen up to cover the open space. When it is desired to open the window without the screen, the operator presses his thumb on ends F F' of the lever, and the hooks disengage the loops, and the window is raised without the screen. The screen remains in the lower position within its casing, where it presents a very neat and finished appearance.

I desire to state that my improved car-window screen can be considerably varied in its details without departing from my invention. While the parts here shown coact together in a very satisfactory manner and form a very desirable combination, the parts can be considerably varied. The casing for the roller at the bottom could easily be made entirely removable. The engaging hooks F' on the sash could also be modified, and while the formation of the binding into the cap for the upper edge of the outer roller-casing is very desirable on account of the strength and finished appearance it gives to the whole I am aware that other constructions could be used instead and still make a very practicable car-window screen. Other variations would no doubt suggest themselves to those skilled in the art to which my invention pertains.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a window-screen apparatus, the combination of the window-frame; the roller; a casing for the roller upon the window-sill; the bottom rail of the inner sash hollowed out to fit over the casing; the outer sash-rail positioned to pass by the side of the casing; a window-screening secured to the roller within the casing projecting outwardly and upwardly therefrom; a binding on the edge of the screen formed into a cap for the outer portion of the casing; loops I, on the upper edge of the binding; plates secured to the inside of the outer sash-rail bearing suitable sash-

hold E; a lever with a hook portion F'; extending down therefrom and an outwardly-projecting flattened portion F', above the sash-hold for actuating the same, all coacting together substantially as described for the purpose specified.

2. In a window-screen apparatus for double glass windows the combination of the roller J, supported on a suitable shaft; a casing-wall B, to the inside of the roller and between the sashes of the window; a removable casing-wall G, outside of the roller; a screen secured to said roller projecting outwardly between the two casings; a binding for the free edge of the screen formed into a cap to shut down over the outer casing to protect the same and support the outer edge of the screen; and suitable means of attaching the free edge of the screen to the rail of the outer sash, all coacting as described for the purpose specified.

3. In a window-screen apparatus, the combination of a suitable roller; screen attached to said roller; a binding on the free edge of said screen; loops on said binding; the sash-rail; a plate on said sash-rail bearing a sash-hold; a lever with a hook portion pivoted to the said plate having a flattened portion in the proximity to the sash-hold, all coacting for the purpose specified.

4. In a window-screen apparatus, the combination of a suitable roller; screen attached to said roller; a binding on the free edge of said screen; loops on said binding; the sash-rail; a plate on said sash-rail bearing a sash-hold; a lever with hook portion to engage said loops; a keeper and guide over said hook portion to guide the loops to place; all coacting for the purpose specified.

5. In a roller window-screen apparatus the combination of a roller; a casing supported on the window for the roller with one side removable; a shaft to carry the roller; brackets within the casing containing open bearings to receive the shaft to permit the shaft and roller to be easily removed without disturbing the remainder of the casing, as specified.

In witness whereof I have hereunto set my hand and seal in the presence of two witnesses.

THOMAS E. BARR. [L. S.]

Witnesses:

VERNE E. CHAPPELL,
WALTER S. WOOD.