

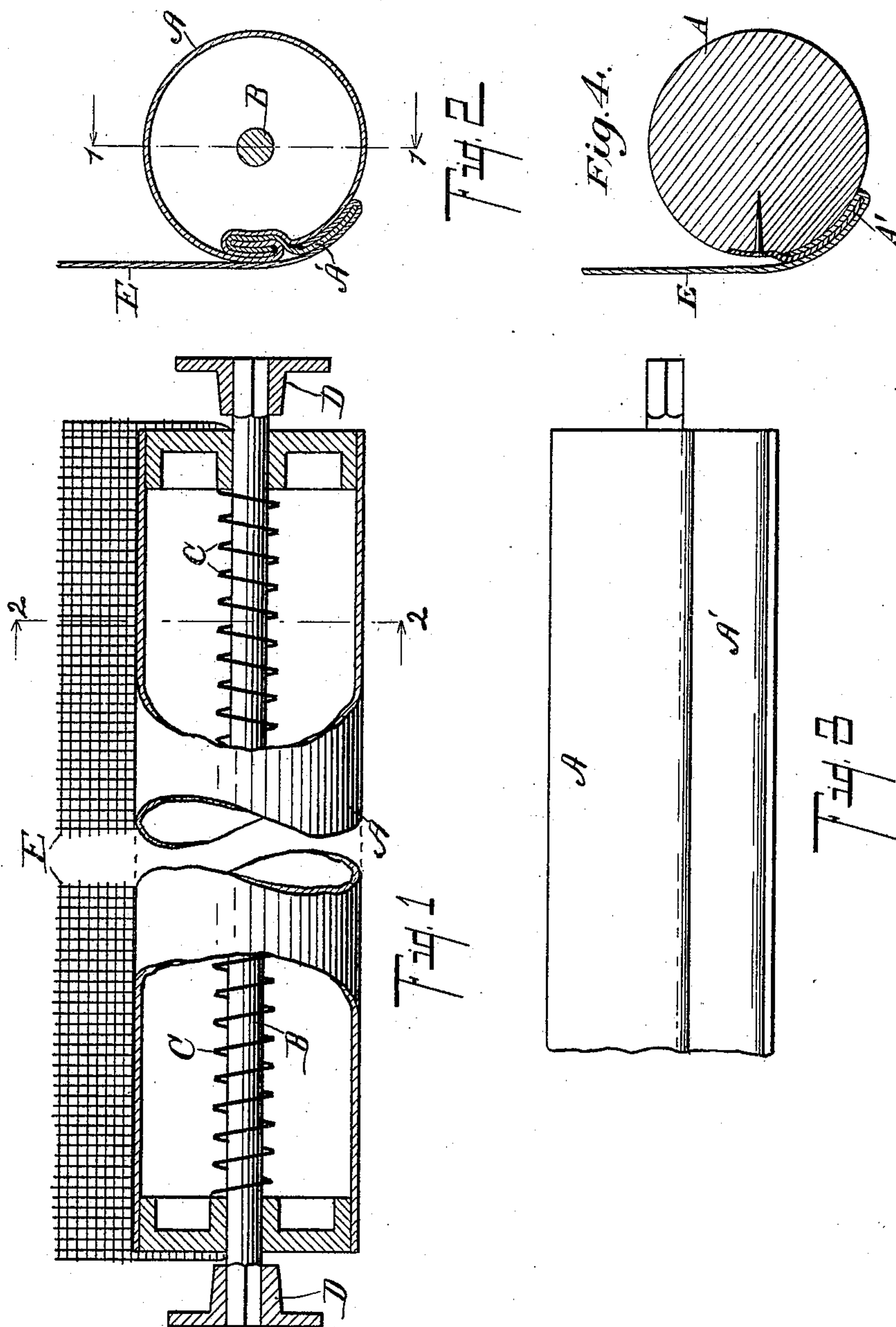
No. 618,828.

Patented Feb. 7, 1899.

T. E. BARR.  
WINDOW SCREEN.

(Application filed Aug. 3, 1897. Renewed June 18, 1898.)

(No Model.)



Witnesses.

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# UNITED STATES PATENT OFFICE.

THOMAS E. BARR, OF KALAMAZOO, MICHIGAN.

## WINDOW-SCREEN.

SPECIFICATION forming part of Letters Patent No. 618,828, dated February 7, 1899.

Application filed August 3, 1897. Renewed June 18, 1898. Serial No. 683,873. (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 certain new and useful Improvements in Window-Screens, of which the following is a specification.

My invention relates to improvements in window-screens, and more particularly to improvements in roller window-screens, and especially to the means for attaching wire screens to rollers, though I am aware that my invention is applicable to other uses, such as the attachment of window-shades to rollers or maps to rollers or any flexible material to rollers that may be required where the material is of sufficient firmness of texture.

As heretofore constructed wire window-screens operated by a roller have been difficult to attach and replace, requiring the use of claws or tacks or some clamping devices. It has also been a matter of considerable difficulty to properly secure a screen or like device to a roller in any way so that it would operate satisfactorily.

The objects of my invention are therefore, first, to provide in a roller window-screen improved means for securing the screen to the roller which shall dispense with clamps, claws, or nails and hold the screen securely thereto its entire length.

A further object is to provide improved means of attaching certain flexible materials possessing a firm texture to a roller.

Further objects will definitely appear in the detailed description to follow.

I accomplish these objects of my invention by the devices and means described in the specification, pointed out in the claims, and illustrated in the accompanying drawings, in which—

Figure 1 is a detail view of a window-screen and roller broken in sections, partially in section on line 1 1 of Fig. 2. Fig. 2 is a detail sectional view on line 2 2 of Fig. 1. Fig. 3 is a detail side view of one end of the roller, showing the position of the attaching-flap. Fig. 4 is a detail sectional view of a modified construction, the view being similar to Fig. 2.

In the drawings similar letters of reference

refer to similar parts throughout the several views.

Referring to the lettered parts of the drawings, A is a roller, which is preferably made of a piece of sheet metal seamed together at one side, having a projecting longitudinal lip or flap A' overlying the same and conformed thereto. The roller is supported on a shaft B by suitable journals in its heads, and the shaft is supported by brackets D at each end. Coiled springs C are supported on the shaft and connected with the roller for actuating the same. The screen E is secured to the roller by folding the end of the same back upon itself to form a hook transverse to the length of the same. The free end of the hook is then inserted under the flap A' and the screen is wrapped back around the same. The screen locks over the flap, and as it is conformed to the exterior of the roller it is securely retained in place. This is of great advantage, as the screen can be detached or attached to the roller almost instantly, making it a matter of great convenience in the removal of the screen in such places as in car-windows or where they are subjected to great strain and are soon worn out and need to be renewed. The screen is held more securely than when tacks or claws are depended upon to accomplish the purpose, because each longitudinal strand is held securely by its hooked end which is necessarily formed by the bending of the screen.

I am aware that the structure of my improved roll can be considerably varied without departing from my invention. The roll can be made of a block of wood or of other suitable material and the flap A' secured to the outside of it by any suitable means, and the roller can be a spring-actuated roll or not, as that has nothing to do with the attaching means employed. This is illustrated in Fig. 4.

I am also aware, as I have intimated above, that my improved attaching device can be utilized in attaching window-shades to rollers, maps to rollers, or wherever such an attaching means may be needed for securing a flexible material to a roller where the material is possessed of sufficient firmness of texture to form a retaining-hook at the end.

I desire to state that a great variety of



attaching means have been produced in attempts to successfully and practically solve this difficult problem of securing screens and shades to rollers securely, so that they are easily and quickly removable and operative and so that the material need not be injured or broken. This has been attempted by ring-like clasps partially surrounding the roll at intervals. These are unsuccessful because of the difficulty of securing an even adjustment and because they hold only at intervals, allowing the shade to sag and putting unnecessary local strain on the same. Other means have consisted of shells open at one side and embracing the shade. These are difficult to properly apply over the screen or shade and lack strength on account of their want of attachment to the roll. Other means have consisted of a roll formed of a scroll of sheet metal the edges of which overlap and come in contact with each other, the one outside and the other inside, the shade being secured by a hem arranged inside the shell to engage the inner edge and the shade projecting between the edges. This might be effective for light shades. However, it is awkward to attach and not more effective than other means. The roll is very weak and liable to injury and if put to heavy work will be pulled apart. None of these structures are like my invention and I do not claim them.

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

1. A roller provided with a longitudinal flap overlying the body portion thereof, in combination with a material capable of being

rolled, of sufficient firmness of texture to form a hook, bent back upon itself at one edge to form a hook, which hook is interlocked with the longitudinal flap of the roller to attach the two together.

2. A roller provided with a longitudinal flap overlying the body portion thereof, in combination with a material capable of being rolled, of sufficient firmness of texture to form a hook, having one edge thereof arranged under the flap and the remainder folded back over the free edge of the same to secure it in place.

3. A roller for a window-screen consisting of the combination of the sheet-metal shell A, with a flap portion extended to form a lip A' thereon, the outer edge of which is free and the wire screen inserted under the flap and folded back, as specified.

4. In a window-screen apparatus, the combination of a suitable roller; a flap secured at one side to the roller with the other side projecting therefrom; a wire screen with one edge arranged under the flap and the remainder folded back over the free edge of the same to secure it in place, as specified.

5. A roller for window-screens, shades or like articles, formed of sheet metal the edges of which are seamed together in combination with an overlying flap embraced in the seam.

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

THOMAS E. BARR. [L. S.]

Witnesses:

WALTER BURTIN,  
WM. H. DE LACY.