

I. W. JONES.
WINDOW SCREEN.

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Patented Sept. 24, 1912.

2 SHEETS—SHEET 1.

1,039,411.

Fig. 1.

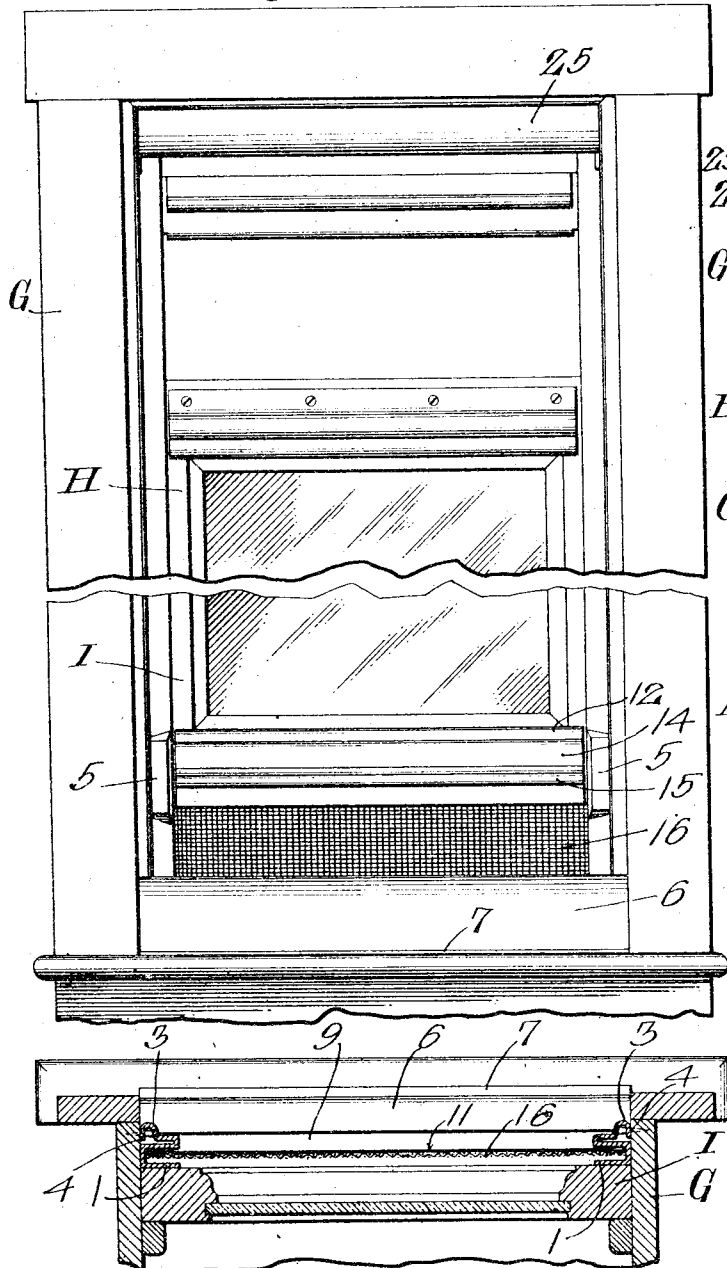
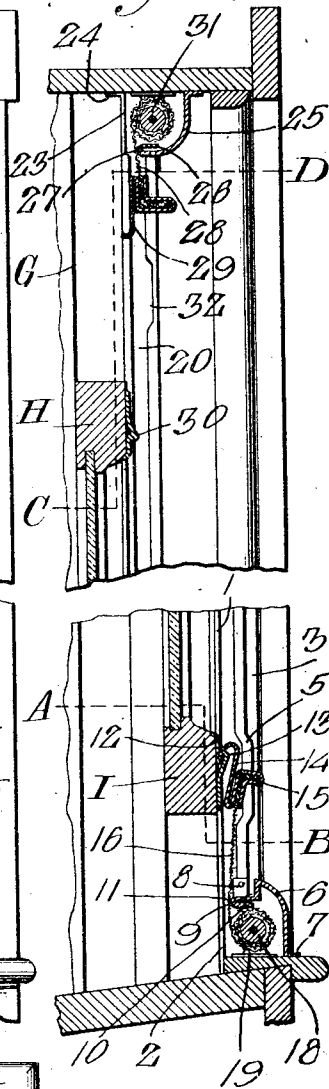


Fig. 2.



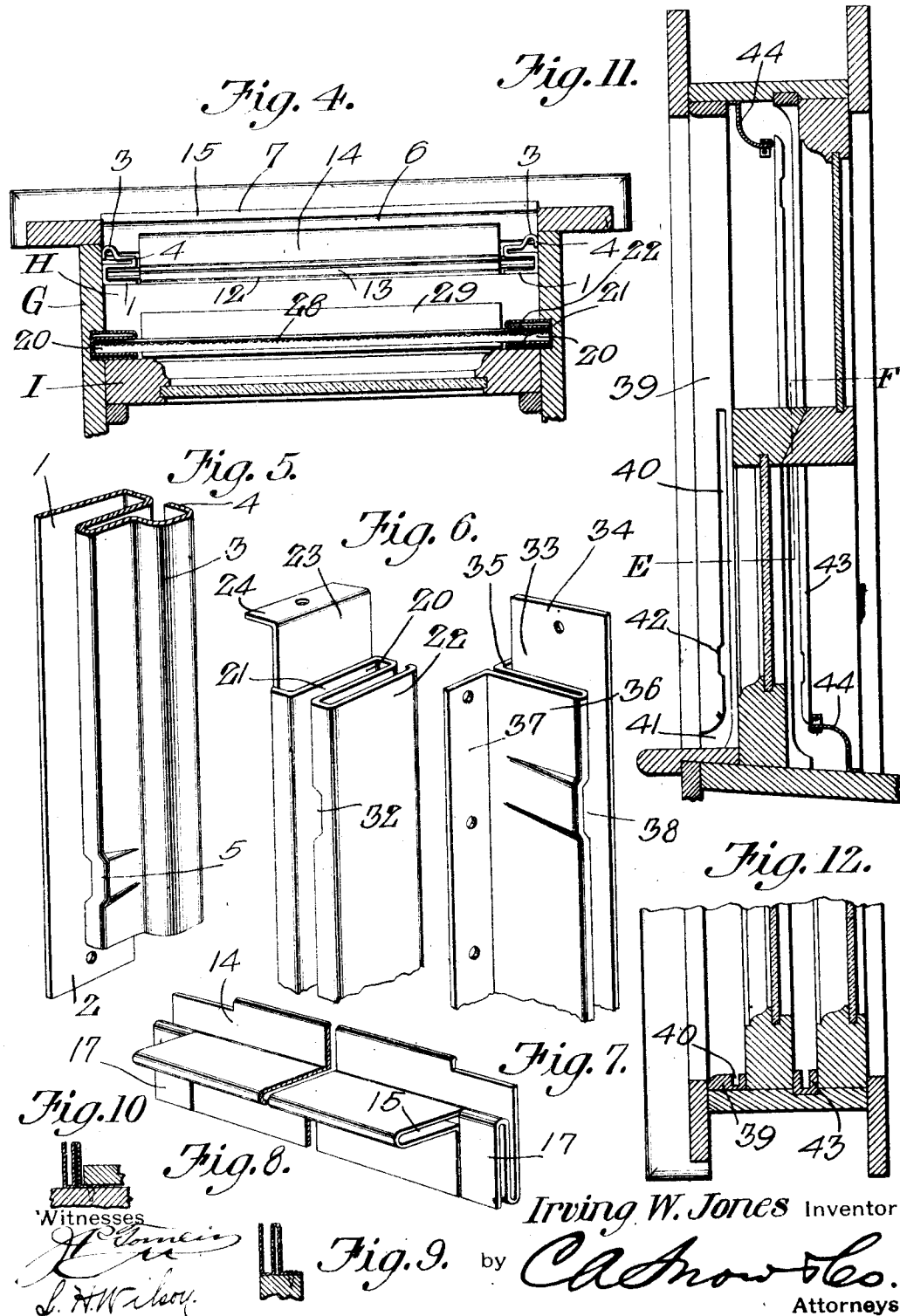
Witnesses

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WINDOW-SCREEN.

1,039,411.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, IRVING W. JONES, a citizen of the United States, residing at Ogden, in the county of Weber and State of Utah, have invented a new and useful Window-Screen, of which the following is a specification.

This invention relates to window screens, its object being to provide a structure of this character including a normally rolled screen fabric having means adapted to engage a sash so that, when the sash is opened, the screen fabric is unrolled and moves therewith, means being employed whereby the fabric can be readily disengaged from the sash.

Another object is to provide means for automatically winding the screen fabric when released, there being cooperating means upon the fabric and sash for automatically coupling the fabric to the sash when said sash is moved to closed position.

A still further object is to provide improved means for guiding the fabric during its movement with the sash and to hold its edges against displacement relative to the window casing.

Another object is to provide a screen all of the parts of which can be cheaply made and are durable in construction, said parts being easily applied to the window casing and sash.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed, without departing from the spirit of the invention.

In the accompanying drawings the preferred forms of the invention have been shown.

In said drawings:—Figure 1 is a front elevation of a window having the present improvements combined therewith, the upper screen being shown disengaged from the upper sash while the lower screen is at the point of release from the lower sash. Fig. 2 is a central vertical section through the parts shown in Fig. 1. Fig. 3 is a section on line A—B Fig. 2. Fig. 4 is a section on line A—B Fig. 2. Fig. 5 is a perspective view of one end portion of a stop strip or rib to be used in connection with the screen. Fig. 6

is a similar view of a portion of the parting strip. Fig. 7 is a perspective view of a portion of a screen guide which may be used in connection with the ordinary stop strip or parting strip. Fig. 8 is a perspective view of the slide or head of the screen. Fig. 9 is a section through the modified form of guide shown in Fig. 7 and applied to a parting strip. Fig. 10 is a similar view showing said guide connected to a stop strip. Fig. 11 is a central vertical section through a window having a modified form of screen guide combined therewith. Fig. 12 is a section on line E—F Fig. 11.

Referring to the figures by characters of reference G designates a window casing in which are arranged upper and lower sashes II and I respectively. The stop strips used in connection with the lower sash I are preferably formed of metal, each of these strips, as shown in Fig. 5 consisting of an elongated attaching strip 1 which is channeled longitudinally, there being a tongue 2 projecting from one or both ends of the strip 1 and these tongues are designed to receive fastening devices whereby the said strip can be securely attached to the window casing. A longitudinally extending wing 3 is formed along one side of the channeled strip and may be bent so as to have any desired transverse contour, that portion of the wing abutting against the casing being preferably flanged, as indicated at 4, so as to present a broad surface to the casing. One wall of the channeled strip is offset at a desired distance from the lower end thereof, as indicated at 5, this offset portion being for the purpose hereinafter set forth.

The channeled strips 1 are adapted to be secured to the casing G and with the tongue abutting against the sill of the casing. The space in front of and between the tongues receives a hood 6 having a base flange 7 secured in any suitable manner to the sill and provided at its ends with ears 8 adapted to be fastened to the sides of the window casing. The top of the hood 6 has an angular inset portion 9 extending throughout the length thereof and provided with a tongue 10 which is folded thereunder, a rounded edge 11 being thus produced along the inner portion of the hood and which constitutes a bearing for the screen fabric.

A plate 12 is secured to the inner face of the lower cross rail or bar of the sash I and has a longitudinal fold 13 inclined upwardly

therefrom and forming a catch for engaging the head of the screen. Said head consists of a hooked plate 14 extending throughout the width of the sash and having a
 5 channelled extension 15 arranged along one side thereof and adapted to receive the folded free end portion of the screen fabric 16. This channelled extension, after receiving the fabric, is bent longitudinally so that
 10 one portion thereof will extend perpendicularly to the plate 14, thus constituting an efficient grip or handle and, at the same time, serving to securely fasten the fabric within the head. The channelled portion 15 does
 15 not extend throughout the length of the plate 14 but terminates close to the channelled stop strips 1, those portions of the head beyond the channelled portion 15 being flattened, as indicated at 17 so as to constitute
 20 runners adapted to travel within the channelled strips 1. The screen fabric 16 has its edges movably mounted within the channelled strips 1 and said fabric is secured to and wrapped about a spring roller 18 similar
 25 to an ordinary shade roller and which is journaled within brackets 19 fastened to the sill and under the hood 6.

It is to be understood that under normal conditions the head of the screen is seated
 30 within the inset portion 9 of the hood 6 and with the hooked terminal of plate 14 in the path of the catch 13. When, therefore, the sash is lowered, said catch 13 will move against and spring past the hooked end of
 35 plate 14 and finally assume a position under said hooked end whereupon said end will spring back into engagement with the catch 13 so that, when the catch is raised, the head will be elevated therewith and thus
 40 cause the screen fabric to unwind from roller 18 and travel upwardly at its edges within the channelled strips 1. Should it be desired, at any time, to disengage the screen from the sash, it is merely necessary
 45 to adjust the sash so as to bring the screen head opposite the offset portions 5 whereupon said head can be shifted inwardly out of engagement with the catch 13. By then releasing the head it will move downwardly
 50 into the inset portion 9, the roller 18 serving to automatically wind the screen fabric so as to cause such movement of the head.

It is to be understood that the structure hereinbefore described can be inverted and
 55 placed outside of the upper sash H. It is preferable, however, to arrange the screen, provided for the upper sash, so as to travel along the parting strips. For this purpose parting strips of special design are utilized,
 60 a portion of one of these strips being shown in detail in Fig. 6. Said parting strip is formed preferably of spring metal bent to form a central channelled guide 20 having its sides folded back to form side plates 21
 65 and 22. The plates 21 are provided at one

or both ends with tongues 23 the ends of which are bent laterally as at 24 so, as to receive fastening means whereby the tongues can be secured to the window casing. Plates 21 and 22 are spaced from the channelled
 70 member 20 and can therefore be sprung together or spread apart so as to fit snugly within the grooves ordinarily provided for the parting strips. In Fig. 4 the parting strips have been shown seated within the
 75 grooves in the casing. Tongues 23 extend back of the hood 25 which is attached to the top of the casing and can be similar to the hood 6 hereinbefore described or can be made without the inset portion, the lower
 80 longitudinal edge of the hood being merely folded inwardly, as at 26, so as to form a rounded bearing edge 27 for the screen fabric 28. The head 29 to which the fabric is secured is the same as the head hereinbefore described and the ends of the head ride
 85 within the channelled guide 20 while the hook upon the head is adapted to engage a catch 30 carried by the upper rail of the sash H. It will be apparent that when the sash is raised, the catch 30 will snap into engagement with the hook on head 29, and therefore, when the sash is lowered, it will move
 90 the head therewith and cause the spring drawn fabric 28 to unwind from its roller 31. The guide members 20 have offset portions 32 similar to those heretofore described and which have been indicated at 5, so that, should it be desired to disengage the head from the catch 30, it is merely necessary to
 100 move the head so that its ends will be seated within the offset portions 32.

Instead of substituting metallic strips for the ordinary stop and parting strips of a window casing, supplemental metallic guides
 105 can be attached to the ordinary stop and parting strips, a portion of one of these guides being illustrated in Fig. 7. Said guide consists of a plate 33 adapted to abut against and to guide the sash, said plate
 110 having one or more tongues 34 similar to the tongues 2 and 23 heretofore described. A longitudinal flange 35 extends from one edge of the plate 33 and merges into a longitudinal fold 36 parallel with the plate 33
 115 and cooperating therewith to form a guide channel. A longitudinal flange 37 extends from the fold 36 and is disposed in the same plane with flange 35, this flange 37 having openings for the reception of fastening
 120 means whereby it can be securely attached to the stop strip or to the parting strip of the window casing. When attached to the parting strip, the flange is secured directly thereon, it being understood that the width
 125 of the guide shown in Fig. 7 is equal to or less than the width of the parting strip to which it is to be attached. When the said guide strip is to be attached to the stop strip of a sash, a flange 37 is inserted between the
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casing and the stop strip and fastening devices extended through both the stop strip and the flange and thence into the casing. The fold 36 of the guide shown in Fig. 7 has an offset portion such as indicated at 38 and which is for the same purpose as are the offset portions 5 and 32 heretofore described.

It is to be understood that the parting strips shown in Fig. 6 can be extended throughout the length of the opening within the window casing and, if desired, the modified form of guide shown in Fig. 7 can also be extended throughout the length of the window opening. If preferred, and as shown in Fig. 11, instead of utilizing metallic stop and parting strips such as heretofore described, the stop strips 39 can be formed with a guide groove 40 for the reception of the ends or runners of the screen head, the lower ends of these grooves being enlarged, as at 41, so as to enable the head to move into the hood provided therefor. Where the stop strip is grooved in this manner it is formed with a recess 42 in one wall thereof corresponding with the offset portions 5, 32 and 38. The parting strip 43 can be similarly grooved, said groove extending either partly or entirely along the full length of the window opening. One or more hoods 44 similar to the hoods 6 may be used in connection with the grooved parting strip and the screen, when used in connection with this modified structure, will operate in the same manner as heretofore described.

It will be apparent that a screen such as herein described is advantageous because, when not in use, it is completely housed and protected. The screen is furthermore advantageous because it can be readily disengaged from the sash so as to leave an unobstructed opening when the sash is opened, importance being attached to the fact that the sash, when closed, will be automatically coupled to the screen so that, when the sash is subsequently raised the screen will be moved therewith. The structure is very simple in construction and can be readily applied to an ordinary window casing and sash without requiring the services of a skilled mechanic.

What is claimed is:—

1. The combination with a normally rolled screen fabric, and a head connected to one

end thereof, of channeled guides for the reception of the side edges of the fabric and of the ends of the head, said channels having offset portions, means adapted to be attached to a window sash, and movable in one direction to automatically engage the head and in the opposite direction to shift the head and the fabric with the sash, said head being movable into the offset portions of the channels to become disengaged from said means.

2. The combination with a window casing, a sash, and channeled guide member connected to the casing, said members having offset portions, of a hood secured to the casing, a normally rolled screen fabric adapted to be housed within the hood, a head connected to the fabric and movable against the hood, said head being connected to one end of the fabric, the ends of the head and the side edges of the fabric being movable within the channeled guide members, and means upon the sash for automatically engaging the head when the sash is closed and for shifting the head and fabric with the sash when said sash is opened, said head being movable into the offset portions to disengage the said means on the sash.

3. In a device of the class described a hood comprising a housing and having an inset portion, a normally rolled screen fabric within and adapted to extend beyond the hood, a head upon one end of said fabric and adapted to be seated within the inset portion, said head including a handle portion and a resilient hooked portion, and means adapted to move with the sash for automatically engaging said hooked portion when the sash is closed and for shifting said hooked portion and the screen fabric when the sash is opened, channeled guides for the reception of the side edges of the fabric, each of the channels within the guides having an offset portion, said head being shiftable into the offset portions to disengage the hooked portion from said means on the sash.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

IRVING W. JONES.

Witnesses:

ROBT. G. AGEE,
E. A. STRATFORD.