

Feb. 14, 1933.

O. G. JOHNSON

1,897,127

WEATHER STRIP

Filed Feb. 28, 1931

Fig. 2.

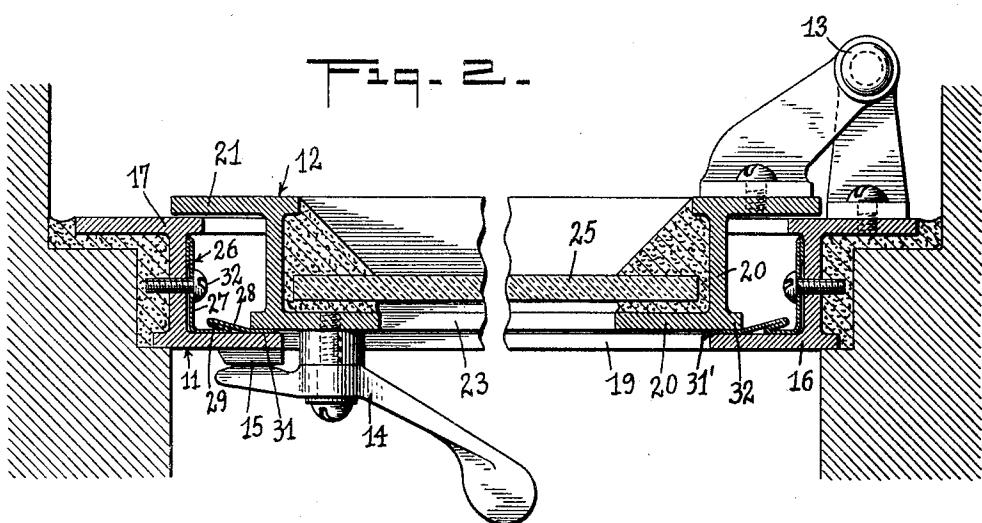


Fig. 3.

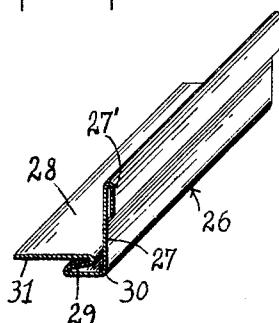


Fig. 1.

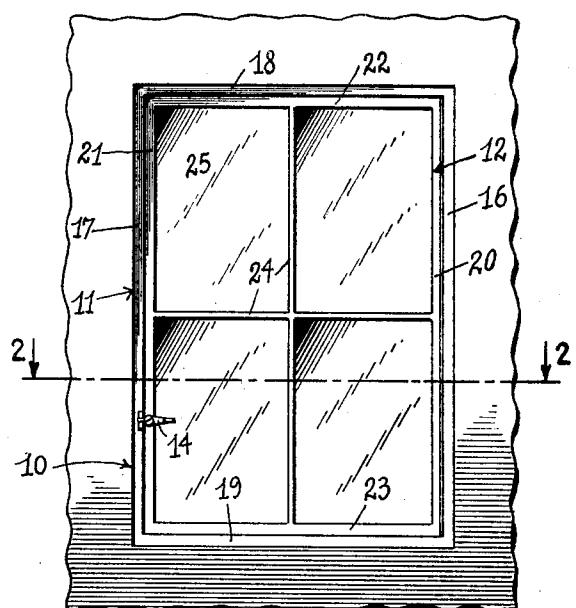
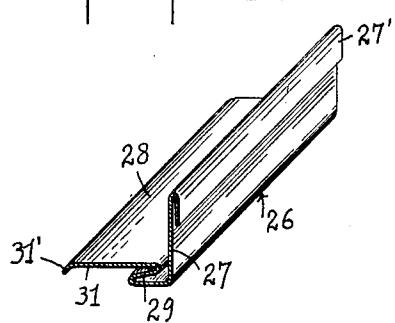


Fig. 4.



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## UNITED STATES PATENT OFFICE

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## WEATHER-STRIP

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This invention relates to weather-strips for windows and the like and particularly for hinged sash casement windows and has for its main object to provide a weather-strip which will have improved sealing and wearing qualities as against the weather-strips used at present and which will be adapted to retain its sealing qualities for a much longer time than the weather-strips used at present.

Other objects of this invention are: To provide a weather-strip as characterized hereinbefore which will seal the space between the frame and the sash of the window by resilient action, which will be secure against breakage or loss of resiliency through repeated use, which will retain its resiliency, will have multiple means to insure its permanent resiliency and which will be simple, inexpensive, easily applied and will be concealed from view.

Other objects of the invention will be apparent as the specification of the same proceeds.

In the drawing forming a part of this specification and being attached hereto:

Fig. 1 is a front elevation of a window for the use on which my invention is designed, the elevation being from the inside of the premises.

Fig. 2 is a sectional elevation on an enlarged scale, the section being taken on the line 2-2 of Fig. 1;

Fig. 3 is a perspective view of a portion of my improved weather-strip as used on the side of the window frame opposite to the hinge for the sash thereon, and also on the top and bottom sides;

Fig. 4 is a similar perspective of a section of my weather-strip in the modified form which preferably will be used on the side where the hinges for the sash are applied.

Referring now to the drawing more closely by characters of reference, the numeral 10 indicates a window in general, preferably of metal construction and of the casement or hinged sash type, having a metal frame 11 secured in the respective opening in the wall, and the sash 12 hingedly connected thereto, as at 13, and as it is well known in the art.

A rockable locking device 14 may be secured on the inside of the sash to tightly close the same on the frame 11 when desired by the wedge action indicated at 15 and also well known in the art. 55

The frame is composed of hinge side 16, outer or locking side 17, upper side 18 and bottom side 19, while the sash has a hinge or inner rail 20, the outer or closing rail 21, the upper rail 22, the lower rail 23 and the usual cross dividing rails or rods 24, according to the design and size of the window, which hold the glass panes 25.

My improved weather-strip preferably consists of an angularly bent cooperative piece of sheet metal 26 having a base or securing plate 27 and the free or sealing branch 28. The outer end of the securing branch is preferably doubled for a distance upon itself, as at 27', while the joint or connection between the two branches shows a plurality of such folds, as at 29, preferably being made out of the material of the sealing branch proper 28 and being formed by folding its material upon itself several times adjacent to the meeting corner 30 of the two branches, thereby making a plurality of spaced apart loops in its material, said loops being shorter than the width of said sealing branch 28 so that its outer portion 31 will be left free and will show considerable resiliency on account of said loops 29. 75 80

In use the weather-strip 26 will be secured on the outer or closing side 17 of the frame 11 in the manner indicated in Fig. 2 by the screw 32 or by any other suitable means, its securing side 27 being laid flat on an appropriate member of the frame 11, while its sealing branch 28 is left free, substantially transverse to the securing side 27 and will be pressed against an appropriate portion of the window frame at its outer free edge when the sash 12 is forced home. It will be obvious that the loops 29 will give a reliable increased resiliency to said free or sealing branch 28 and particularly to its outer edge 31 which upon the locking of the sash will take up and securely close and seal any free space possibly left between the frame and the sash. 95

In Fig. 4 I show a somewhat modified form 100

of my invention in which the outer free edge 31' is rounded and this so modified form is designed particularly for the hinged side 16 of the window frame, its rounded end 31' being designed to prevent a possible catching of the respective corner 32 of the inner rail 20 of the sash when the same is closed.

It will be seen by inspecting the drawing that the loops 29 will give a materially increased resiliency to the sealing branch 28 and will also prevent an early wearing out or breaking of the parts by repeated use and finally it will also insure a permanency in my weather-strip even after numerous repeated constant uses.

The folded portion 27' of the free end of the securing branch 27 will aid in the adaptation of the same to the window frame and in the fastening of it thereon.

20. It will be understood that changes and variations may be made in the parts and combinations of my invention and I hereby reserve my rights to any and all such changes as are within the spirit of the invention and 25 the scope of the appended claims.

What I claim as new, is:

1. A weather-strip for hinged windows and the like, comprising an angularly bent strip of sheet material including a base 30 branch with means to secure the same on the frame of the window, a resilient sealing branch substantially transverse to said base branch, and a resilient loop formed at the joint of said two branches by doubling the 35 material of the sealing branch upon itself adjacent to the meeting corner of said two branches.

2. In a weather-strip as set forth in claim 1, said loop being narrower than the width of 40 the sealing branch and the sash engaging the free portion only of said sealing branch outside of said loop.

3. A weather-strip for hinged windows and the like, comprising an angularly bent 45 strip of sheet material, including a base branch with means to secure the same on the frame of the window, a resilient sealing branch substantially transverse to said base branch, and a resilient connection formed at 50 the joint of said two branches, said resilient connection at the joint of the two branches being formed by multiple loops.

4. In a weather strip as set forth in claim 3, said multiple loops being provided by repeated spaced apart folds in the material of one of the branches.

Signed at New York, in the county of New York, and State of New York this 21st day of February, 1931.

60 OSCAR G. JOHNSON.