

No. 890,904.

PATENTED JUNE 16, 1908.

P. L. HEDBERG.
WEATHER STRIP.
APPLICATION FILED DEC. 7, 1907.

Fig. 1.

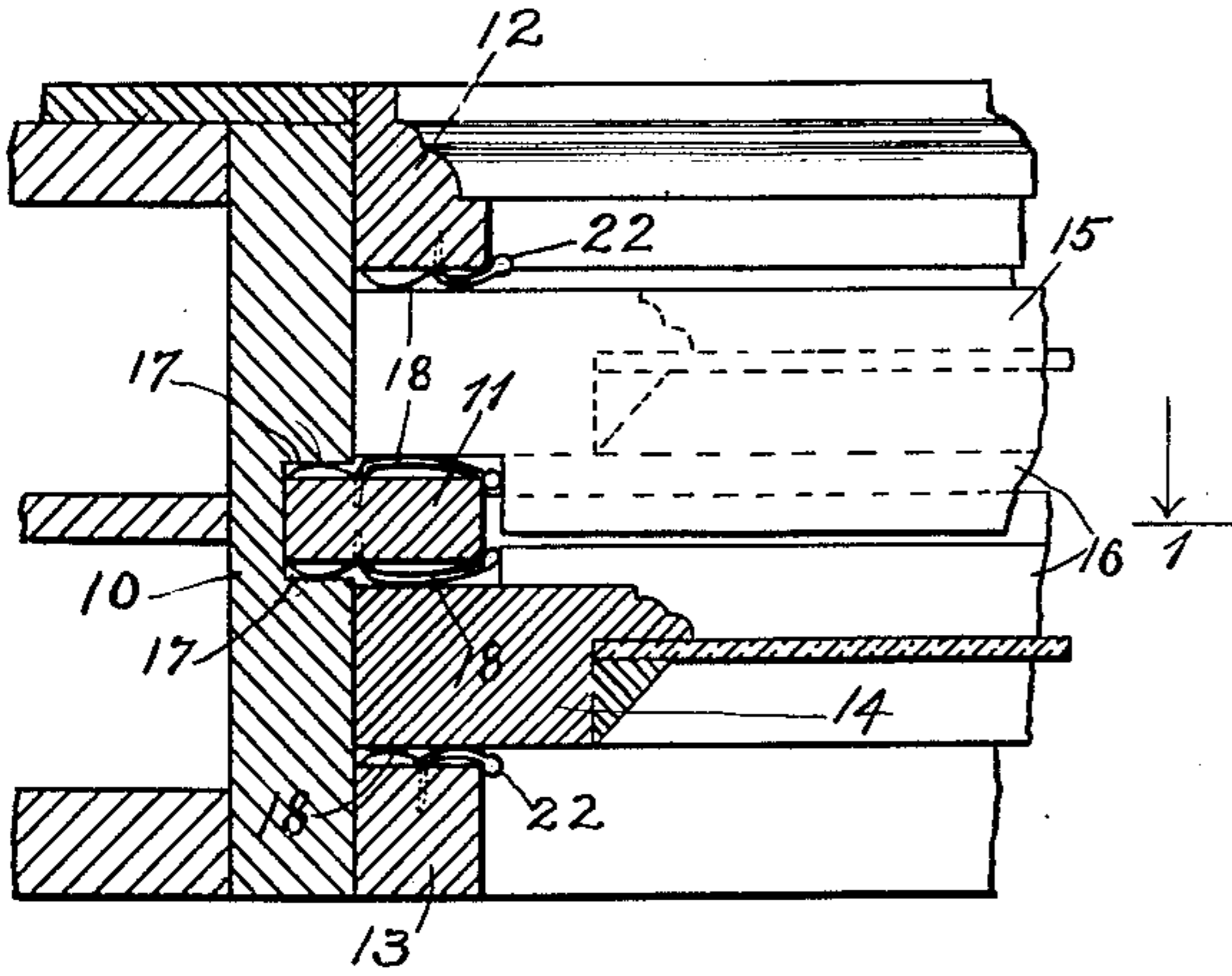


Fig. 2.

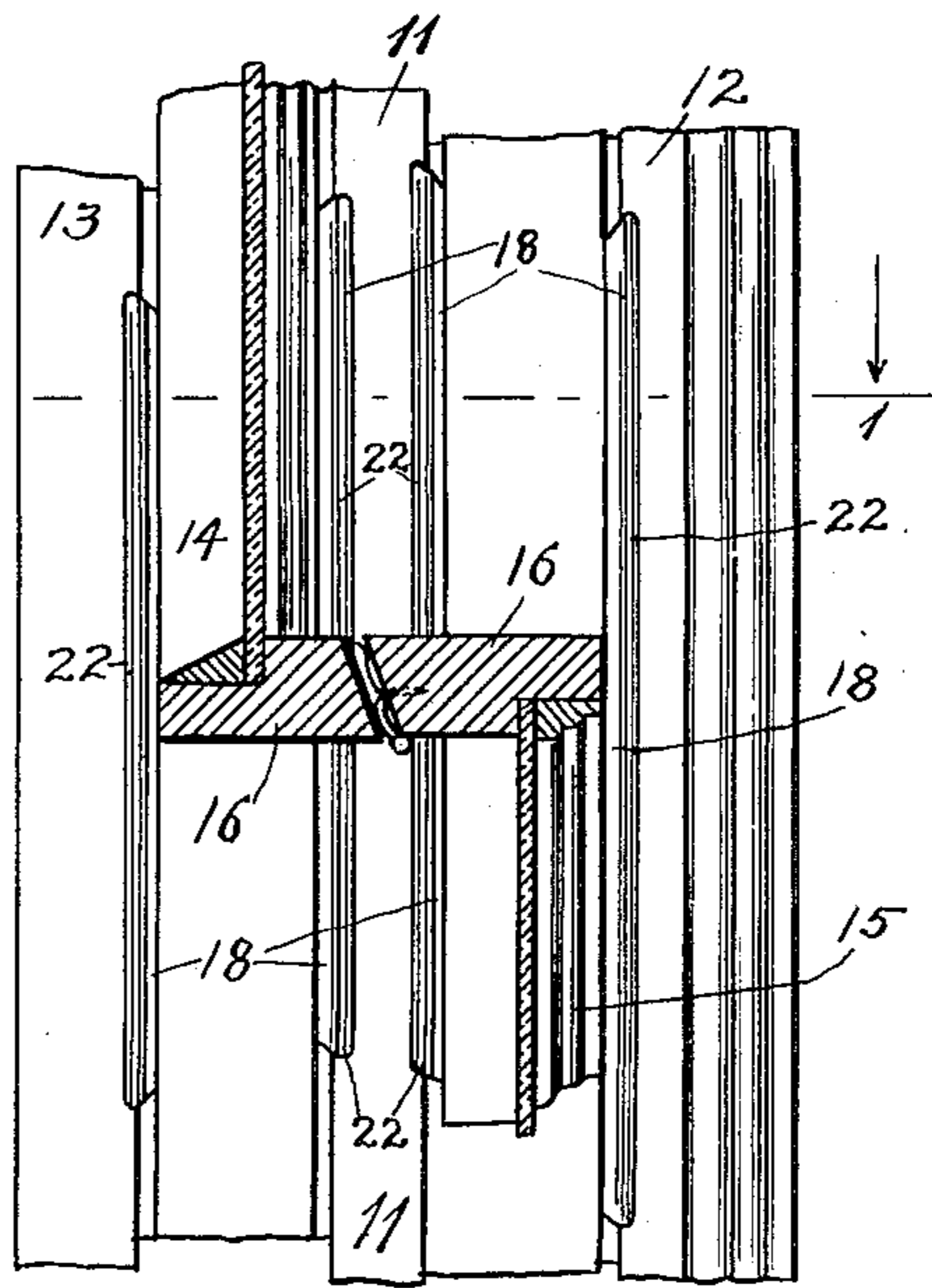


Fig. 3.

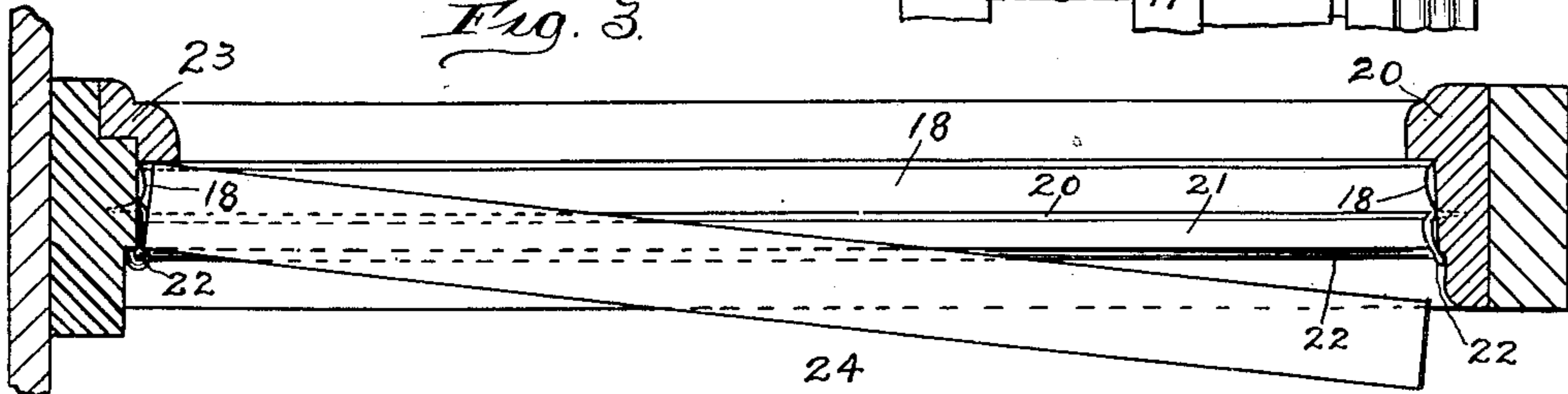


Fig. 5.

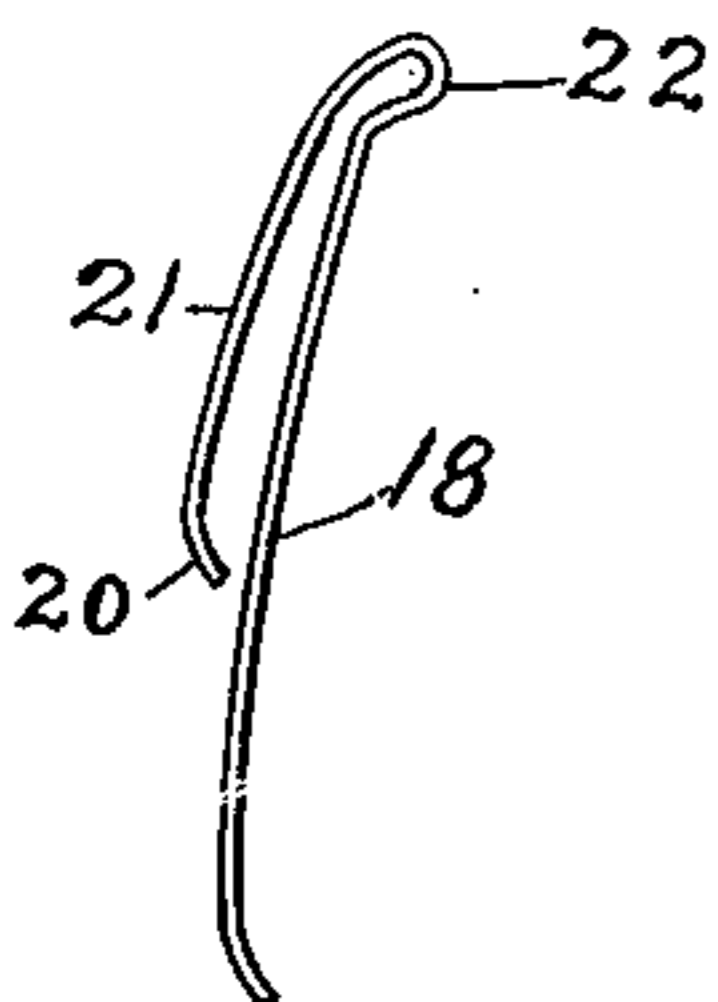


Fig. 8.

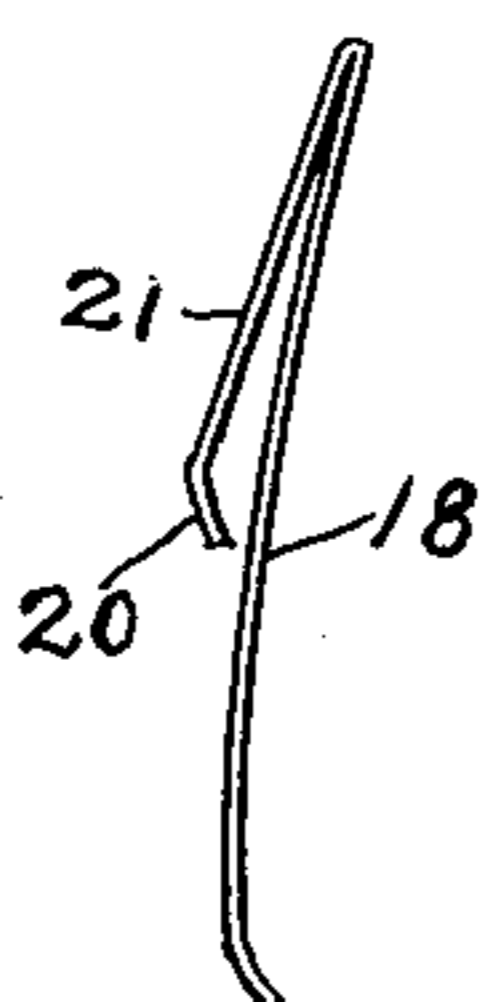


Fig. 4.

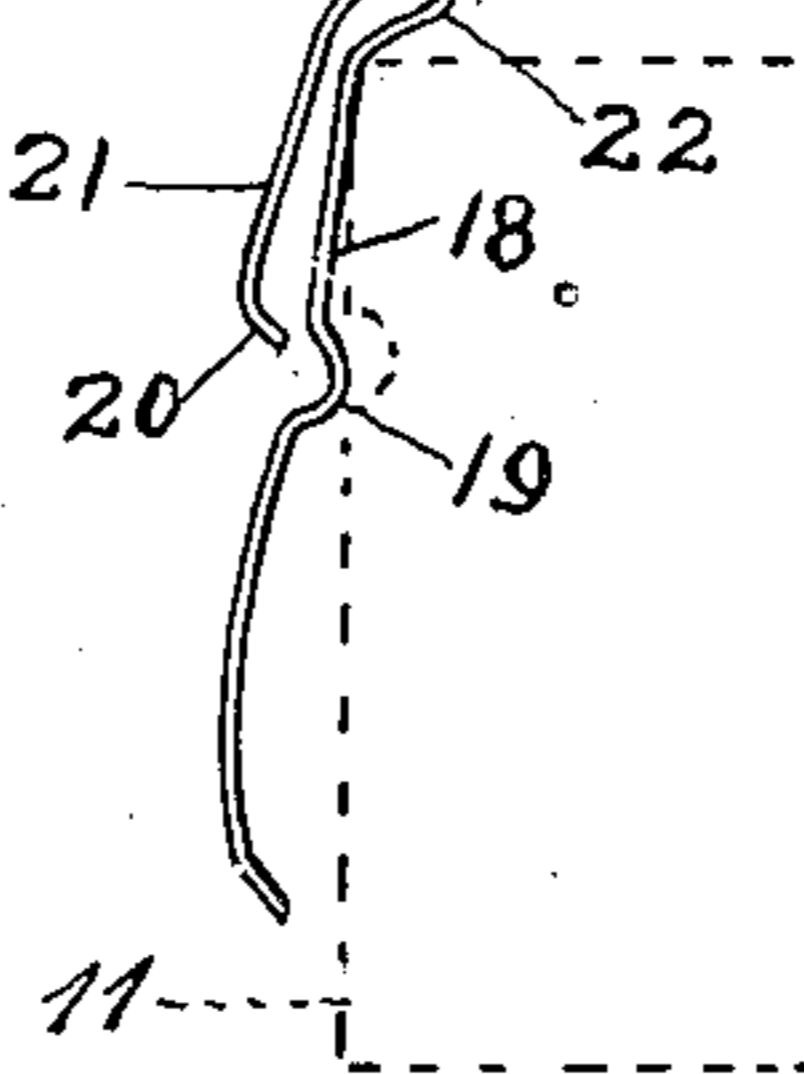


Fig. 7.

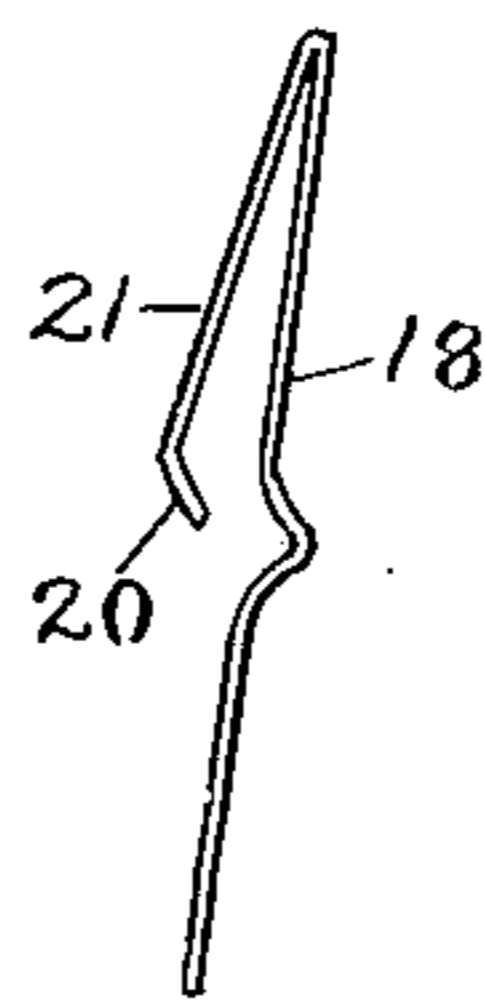
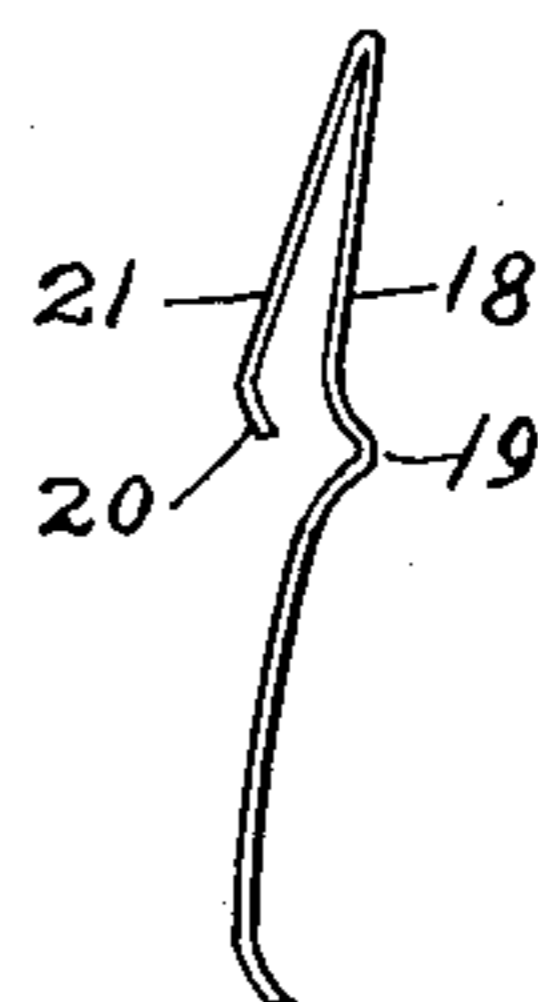


Fig. 6.



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UNITED STATES PATENT OFFICE.

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WEATHER-STRIP.

No. 890,904.

Specification of Letters Patent.

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Application filed December 7, 1907. Serial No. 405,502.

To all whom it may concern:

Be it known that I, PETER L. HEDBERG, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Weather-Strips, of which the following is a specification.

This invention relates generally to metallic weather strips, and while it is more particularly intended to be used in connection with the parting stops of window-sashes yet it is applicable for use on other parts of window-frames on the meeting rails of the upper and lower sashes and on door-cases or frames; and it consists in certain peculiarities of the construction, novel arrangement, and operation of the various parts thereof, as will be hereinafter more fully set forth and specifically claimed.

One of the objects of the invention is to provide a strip of the above-named character that will be simple and inexpensive in construction, strong, durable and effective in operation, and of such peculiar formation as will allow of being readily and quickly applied to the structure so as to prevent rattle and afford means to shut out dust, rain or wind.

Other objects and advantages of the invention will be disclosed in the subjoined description and explanation.

In order to enable others skilled in the art to which my invention pertains, to make and use the same, I will now proceed to describe it, referring to the accompanying drawing, in which—

Figure 1 is a plan view partly in section and partly in elevation taken on line 1—1 of Fig. 2 of a portion of a window-frame and the sashes thereof, showing weather strips embodying one form of the invention in place thereon; Fig. 2 is an inner side view partly in section and partly in elevation, showing the application of the weather strip to the meeting rails of the sashes, as well as to other parts thereof; Fig. 3 is a plan sectional view of a door-casing, showing the weather strip applied to its sides and base or sill; Figs. 4 to 8, inclusive, are enlarged end views of different forms of the strip.

Like numerals of reference, refer to corresponding parts throughout the different views of the drawing.

The reference numeral 10 designates, as a whole, the window-frame or casing which is

provided, as usual, on each of its sides with parting stops 11 and inner and outer stops 12 and 13, respectively, for the upper and lower sashes 14 and 15, respectively, which latter have the inner surfaces of the meeting rails 16 correspondingly beveled, as usual, and as is shown in Fig. 2 of the drawing.

As is well-known and as is shown in Fig. 1 the sides of the window-frame are usually provided with vertical grooves 17 in which the parting stops 11 are located, and it is a well-known fact that by reason of the shrinkage of the wood these stops are often spaced a slight distance from the walls of the grooves 17 sometimes on one of their sides only and again on both sides. At any rate, they rarely ever fit between the walls of the grooves very closely or so snugly as to prevent the insertion between one of said walls and the adjacent surface of the parting stop of a portion of my improved weather strip, which consists of a strip of resilient material 18, usually metal of any suitable length, which is preferably slightly bowed in cross-section and is adapted to be placed between one of the surfaces of the parting stop and the adjacent wall of the groove 17 in the side of the window-casing where it will be held preferably by frictional contact and on account of the resiliency afforded by the curved or bowed shape of the strip. At a suitable distance from one of its edges the strip is formed with a longitudinal groove 19 adapted to receive a deflected longitudinal flange 20 on the lower portion of the leaf-spring 21 which extends the full length of the strip and which lies between the sash and parting stop. That portion of the leaf-spring 21 opposite the flange 20 thereon is connected to the body 18 of the strip by means of a loop shaped portion or bead 22 which is so formed as to be located at one side of the plane of the body 18 of the strip, thus affording greater resiliency to the leaf 21 as will be apparent.

By reference to the drawing and especially to Figs. 1, 3 and 4 thereof it will be seen and understood that the bent or bow of the body 18 extends outwardly from the parting stop 11 so that when the portion of the strip 18 opposite the part 22 is placed in the groove 17 of the window-frame the parting stop may be forced in place, thus causing the strip to be firmly held between the stop and one of the walls of said groove. The inner stop 12, as well as the outer stop 13, may be

provided on their surfaces adjacent to the sashes with one of the strips, which can be secured thereto in any suitable manner, but so that their springs 21 will rest against the sashes while the body portion 18 of each of the strips will rest against the said stops, in which arrangement it will be observed that the beads or loops 22 will be located to one side of the plane of the bodies of the strips and at the outer edges of the stops. One of the strips may be secured with its body portion 18 to the beveled surface of one of the meeting rails 16 so that the spring-leaf 21 will press against the adjacent and beveled surface of the other meeting rail when in their normal positions as shown in Fig. 2 of the drawing, thus closing the space between said rails and preventing the passage of dust, rain and wind.

In Fig. 3 of the drawing I have shown a door-casing 23 with weather strips embodying my invention secured to its sides and bottom, in which the body portions of the strips are secured to the desired portions of the casing in such a way that the looped or beaded portions of the strips will be presented towards the door 24 so that when it is closed the springs 21 will contact with the edges of the door thereby closing the spaces between it and its frame or casing.

In Figs. 5, 6, 7 and 8 are shown modified forms of the strip which I may sometimes use and any one form of which may be employed for the parting stops, inner and outer stops of the window-casing, the meeting rails of the sashes, or for door-frames, in substantially the same manner as the construction above-described and illustrated in detail in Fig. 4 of the drawing. In the modification shown in Fig. 5 the body portion 18 is slightly bowed as in the other construction, but the groove 19 is omitted therefrom, and in the construction shown in Fig. 6 the loop or bead is omitted, but with this exception the construction is the same as that shown in Fig. 4 and first above-described. In the construction shown in Fig. 7 the body portion is formed straight or without the bow or curve, and the loop or bead which connects the spring 21 to the body portion is omitted. In Fig. 8 both the loop or bead and groove are omitted, as well as the bowed or curved shape to the body portion.

While I have shown in Fig. 1 of the drawing a weather strip constructed as illustrated in detail in Fig. 4 and as applied to each side of the parting stop, as well as to each of the inner and outer stops of the window-casing, yet I do not desire to be limited to this construction or arrangement, as I may use a

strip on one side only of the parting stop, and said strip may be of any of the modified forms herein shown. And, it is apparent that I may or may not use any of the weather strips embodying my invention on the inner and outer stops of the window-casing. It is further obvious that any one of the constructions disclosed may be employed on the meeting rails of the window-sashes or on the door-frame, and that in some instances the longitudinal flange 20 on the free edge of the leaf-spring 21 may be omitted without departing from the spirit of the invention. By constructing the body of the strip with the longitudinal groove 19, which may sometimes be embedded in a suitable groove in the parting or other stop as shown in Fig. 4, it is evident that said construction and arrangement will permit of the strip being used in quite a narrow space and that the groove 19 will receive the flange 20 when the same is employed.

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

1. A weather strip consisting of a narrow piece of resilient material comprising a body portion having at one of its edges a loop provided with a leaf-spring extending from said loop outwardly and toward the other edge of the body portion and provided at its free edge with a deflected flange.

2. A weather strip consisting of a narrow piece of resilient material comprising a body portion having a longitudinal groove and a leaf-spring extending from one of the edges of the body portion and outwardly therefrom and toward its other edge, said leaf-spring having at its free edge a deflected flange to fit in said groove.

3. A weather strip consisting of a narrow piece of resilient material comprising a bowed body portion having a longitudinally extending groove and a leaf-spring extending from one of the edges of the body portion outwardly and toward its other edge, said spring having at its free edge a deflected flange to fit in said groove.

4. A weather strip consisting of a narrow piece of resilient material comprising a bowed body portion having a longitudinal groove and a loop at one of its edges extending to one side of the plane of the body portion, said loop having a leaf-spring provided at its free edge with a deflected flange to fit in said groove.

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