This invention relates to saddle constructions especially adapted for use in conjunction with weather strips, and has as its primary object the provision of an improved saddle construction adaptable for use either with inswinging or outswinging doors or casement windows or like closures.

Another very important object of this invention is to provide an improved saddle construction of the character above mentioned which will cooperate in a neat and efficient manner with the weather strip so as to effectively exclude dust, dirt, and water under all conditions, of working and weather.

The attainment of the above and numerous other objects as will become more readily apparent as the description proceeds, will be readily appreciated from a study of the following description taken in connection with the accompanying drawings, wherein:

Figure 1 is a sectional view of the device as applied to an inswinging door.

Figure 2 is a sectional view of a modified form of the device especially adaptable, and as shown applied to an inswing casement window.

Figure 3 is a fragmentary detail sectional view of the device constructed somewhat similar to that illustrated in Figure 2, especially adaptable for outwards swinging doors with theweep holes in a reverse direction and extending through the device at the juncture of the body plate and trough section of the device.

With reference more in detail to the drawings, it will be seen that the reference character A designates a door of conventional construction, and with reference more in particular to Figure 1 it is to be noted that the door is adapted to swing inwardly. B designates the base or bottom of the opening that is to be closed by the door A.

The water proofing device comprehends the provision of a suitable weather stripping comprising a member 5 arranged to be attached to the outer face of the door, and this member 5 includes a substantially flat web portion 6 adapted to be secured tightly along the lower edge portion of the door. For tightly securing the member 5 to the door the upper longitudinal edge of the web portion 6 is bent inwardly as at 7 to be embedded within the body of the door. The lower portion of the web 6 extends downwardly a sufficient distance and is bent along the opposite or lower edge upon itself slightly upwardly to provide a longitudinally extending horizontally disposed channel 8. Thus it will be seen that this member 5 is somewhat in the nature of a hook and is preferably formed of copper or similar strong and durable material. Adapted to extend inwardly of the lower portion of the door A is a second member designated generally by the reference character 9. The member 9 is provided with a relatively flat longitudinally extending intermediate portion 10 adapted to extend between the door and saddle member and extending longitudinally of that portion of the door which will be directly above the trough formed in the saddle member as shown in Figure 1. The saddle member and trough will be explained in detail as the description proceeds. The flat body portion 11 of the member 9 merges adjacent one edge thereof into a substantially inverted U-shaped structure, the material forming the said member 9 being bent upwardly and then downwardly, the outer flange 11 of the inverted U-shaped structure adapted to engage with the groove 8 defining a somewhat tongue and groove connection between the said members 5 and 9. At the opposite longitudinal edge of the body portion 10 the material forming the member 9 is bent downwardly and inwardly upon itself to provide a hook-like engaging portion 12. The said hook-like portion 13 of the member 9 having the material at the extremity thereof bent inwardly and upon itself to provide a somewhat inwardly directed contact flange 13. In this connection it is to be noted that the weather strip construction just described is adaptable either to a door A as illustrated in Figure 1 or to the sash of a casement window W as illustrated in Figure 2.

In the embodiment illustrated in Figure 1, the saddle designated generally by the reference character S comprises the relatively flat central longitudinal body portion 14.
material forming the saddle $S$ being bent downwardly and outwardly from opposite longitudinal sides of the body portion 14 to provide the longitudinally extending supporting portions 15 and 16, respectively.

It is to be noted that the supporting members 15 and 16 at their free edges are provided with depending sharp edged ribs 17, constituting a gripping medium between the saddle and the base or bottom $B$. In forming the supporting member 16 it is to be noted that the material is so shaped as to provide the shouldered portion 18, the centrally disposed sloping portion 19, and the upwardly directed flange portion 20 which extends substantially in spaced parallelism with the shoulder 18 and defining therewith a trough 21. The flange 20 merges into an inwardly directed substantially horizontally disposed tongue portion 22, said tongue portion overlying the trough 21 and as is illustrated in Figure 1 is adapted to project into the hook like portion 12 of the weather strip member 9, thus forming what may be termed a tongue and groove connection between the weather stripping and the saddle and consequently providing a stop for the door $A$ when the same is swung to a closed position. Forming a continuation of the tongue 22 and extending downwardly and laterally with respect to the outer face of the flange 20 is a water drain or guide portion 23, said portion 23 terminating in a downwardly directed flange like portion 24 engageable with the base $B$ remote from the supporting portion or member 16 as is apparent. As a further means of maintaining the saddle in fixed operative position suitable securing elements such as the screws 25 and 26 are adapted to pass through the body portion 14 of the saddle the sloping drain portion 23 respectively for threaded engagement with the base $B$. From the foregoing then it will be seen that a saddle constructed in this manner and adapted to engage with the weather stripping of an inwardly swinging door provides a highly efficient and water proof construction since it is apparent that any water that may find its way between the bottom of the door and the saddle will be directed into the trough 21 and thence drained from the trough through the medium of a plurality of outlet openings 27 which extend diagonally through the flange 20 at the junction of the trough bottom 19 and said flange and forming an unrestricted passage leading from the trough 21 for directing the water outwardly from the trough and beneath the water guide or drain 23. The purpose of the water guide 25 is obvious, since it is apparent that the water not finding its way into the trough 21 will of course drain down over the inclined surface of the member 23.

Attention is now directed to Figure 2 wherein is provided a modified form of saddle especially adapted for casement windows of the inwardly swinging or opening type.

In this connection it is to be noted that the saddle $S'$ is in its construction in many respects similar to the saddle $S$ above described. The saddle $S'$ comprises the relatively flat longitudinal body portion 27 merging at one longitudinal edge thereof into the downwardly bent flange or supporting portion 28 terminating in the depending sharpened rib 29. At the opposite longitudinal edge of the body portion 27 the material forming the saddle $S'$ is shouldered as at 30 and merges into the inclined trough bottom 31, said portion 31 being at a lower plane than the body 27 and at its outer edge merging into the upstanding flange 32, which in turn merges into the inwardly directed tongue portion 33. Thus is provided the water receiving trough 34. The water receiving trough 34 is also provided with a plurality of outlet openings 35 which extend diagonally through the flange 32 and in communication with the bottom of the trough. The portion 31 of the saddle $S'$ has its under surface roughened or corrugated to provide the sharpened rib 36 which cooperates with the rib 39 and the screw 37 for holding said saddle in place upon the sill $W$.

The embodiment of the invention as illustrated in Figure 3 is for use in conjunction with outwardly swinging or opening doors, and since the saddle as herein illustrated is similar in construction and in every respect to the saddle $S$ with the exception that the trough has its outer opening 38 extending diagonally through the material forming the trough and at the juncture of the body portion 31 of the trough and the body 27 of the saddle, it is believed that a more detailed description thereof is unnecessary.

From the foregoing then it will be seen that I have provided a very efficient saddle for use in conjunction with the weather stripping of doors and casement windows and like closures, and which is very simple in construction, may be readily and quickly applied and is otherwise well adapted for the purpose designed.

It is also to be understood that the present embodiments have been illustrated and described somewhat in detail merely by way of example, since it is obvious that the invention is susceptible to certain changes fully comprehended by the spirit of the same, and the scope of the appended claims.

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

1. A weather strip device comprising a sill plate for doors, windows and the like, an upwardly directed flange projecting from said sill plate, and a weather strip carried by the
door or window, said weather strip comprising a sheet metal member, channel-shaped in cross sectional form, and a rolled portion formed by turning inwardly of the weather strip the free edge thereof, said rolled portion being adapted to be received beneath the flange of the sill plate, and placed under tension by engagement therewith to form a weather tight joint between the weather strip and the flange.

2. A weather strip device comprising a sill-plate for doors, windows and the like, an upwardly directed flange projecting from said sill-plate, and a weather strip carried by the door or window, said weather strip comprising a sheet metal member channel-shaped in cross sectional form, and a rolled portion formed by turning inwardly of the weather strip, the free edge thereof, said rolled portion being adapted to be received beneath the flange of the sill-plate, that face of the flange engaged by the rolled portion of the weather strip being inclined whereby to place the rolled portion under tension when engaged thereby to form a weather tight joint between the weather strip and flange of the sill-plate.

In testimony whereof I affix my signature.

BOOKER HUGHE GLASS.