Sept. 18, 1928. 1,685,002

V. J. MATRANGA

WEATHERPROOF HINGE

Filed Sept. 29, 1927

Fig. 1.

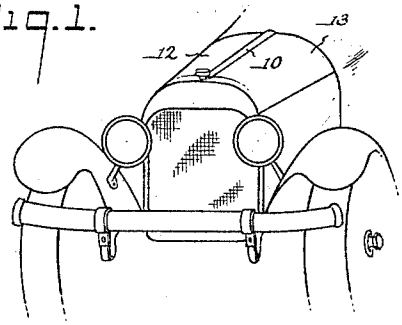


Fig. 2.

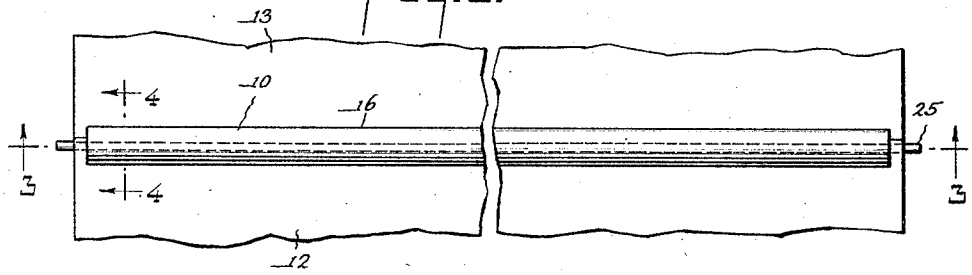


Fig. 3.

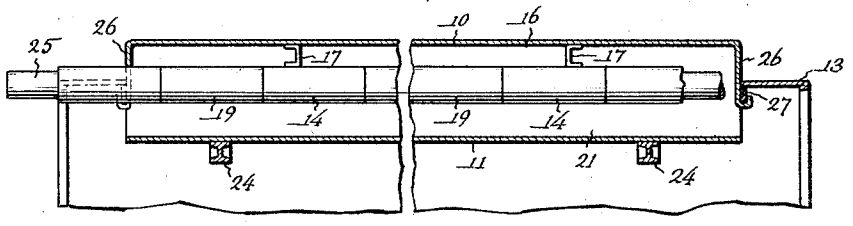


Fig. 4.

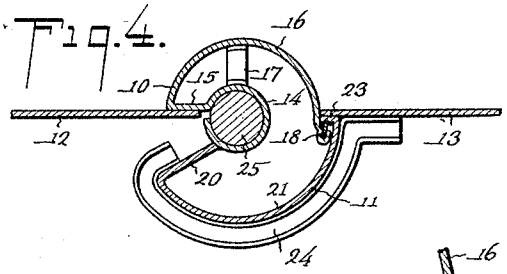


Fig. 5.

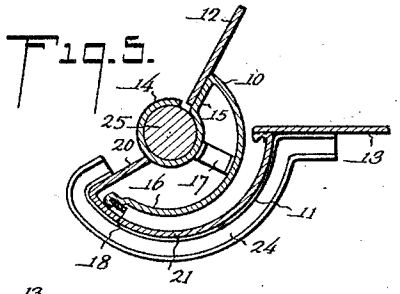
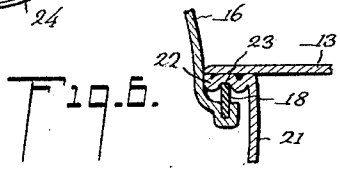


Fig. 6.



WITNESSES

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UNITED STATES PATENT OFFICE.

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WEATHERPROOF HINGE.

Application filed September 29, 1927. Serial No 222,923.

This invention relates to a weatherproof hinge construction.

The principal object of the present invention is a construction adapted to be utilized in conjunction with two parts, one or both of which may have swinging movement, to provide a hinge connection or joint between the parts, and means for covering or enclosing the hinge connection in such a manner as to conceal and protect it from the detrimental effects of the elements of weather and to prevent the elements of weather from passing into the hinge connection or joint formed.

The nature of the invention and its distinguishing features and advantages will appear when the following specification is read in connection with the accompanying drawing, in which—

Figure 1 is a view illustrating the hinge construction applied to the hood portions of an automobile.

Fig. 2 is a fragmentary plan view.

Fig. 3 is an enlarged fragmentary longitudinal sectional view taken on the line 3—3 of Fig. 2.

Fig. 4 is an enlarged sectional view taken on the line 4—4 of Fig. 2.

Fig. 5 is a view similar to Fig. 4, showing one of the parts or members in an opened position.

Fig. 6 is an enlarged sectional view of one of the details.

While the hinge construction of the present invention is illustrated and hereinafter described in conjunction with the hood sections of an automobile, this is not to be deemed a limitation as the present invention may be diversely formulated for a wide range of application, as will be apparent when the nature and distinguishing features of the invention are understood.

In the illustrated embodiment, the hinge construction comprises a pair of cooperating or coacting parts or members 10 and 11. In the present instance the parts or members 10 and 11 have connected therewith respectively hood sections 12 and 13, one or both of which may have swinging movement. The parts 10 and 11 and sections 12 and 13 are of sheet metal. The part 10 and section 12 may be made of a single piece of sheet metal, and the part 11 and section 13 may also be made from a single piece of metal.

The part or member 10 is bent and formed to provide a plurality of knuckle or pintle eyes 14, a portion 15 to which the section 12 is attached, and a cover or channel portion 16. The cover or channel portion 16 is of continuous formation, and is arcuate in cross section of a draft struck from two different radii. Suitable braces 17 are secured in place between certain of the eyes 14 and the channel portion 16 to preserve the cross sectional shape thereof. The cover or channel portion 16 on one longitudinal edge thereof has a weather strip 18 of any preferred material and secured in any suitable manner for a purpose to appear hereinafter. In the present instance the weather strip 18 is secured in place by rebending the longitudinal edge of the portion 16 which serves to securely plant the strip 18 in place.

The part or member 11 is bent and formed to provide knuckle or pintle eyes 19 of the same sizes as the eyes 14 of the part 10, a radial portion 20 and a cover or channel portion 21. The portion 21 is of continuous formation and is arcuate in cross section being concentric with the axis of the eyes 19, and a corrugated rebent portion 22 which provides a longitudinal crevice 23. The cover or channel portion 21 at intervals in its length is reinforced by I members 24 which also preserve the shape of the portion 21.

The parts or members 10 and 11 so constructed may be brought to a relationship in which the eyes 14 and 19 will be aligned for the reception of a suitable rod or pintle 25 which provides a hinge or pivotal connection between the parts 10 and 11. The opposite ends of the pintle 25 will be supported in suitable bearings. The channel portion 16 is smaller cross sectionally than the channel portion 21 and said portion 16 will be the outside channel portion whereas the channel portion 21 will be the inside channel portion. It will be apparent that the part 10 may be moved relatively to the part 11 in which the channel portion 16 of the part 10 will move into the channel portion 21 of the part 11, as shown in Fig. 5. It will also be apparent that the part 11 may be moved relatively to the part 10, in which case the channel portion 21 will move over the channel portion 16 of the part 10. When the parts 10 and 11 are in what is to be considered a closed relationship as shown in Fig. 4, the weather strip 18 will enter the crevice 23 and will form an effective seal at this point to exclude the elements of weather. The portion 22 will touch or contact with the channel portion 16 when the parts 10 and 11 are in the closed relation-

ship. In the movement of either of the parts 10 and 11 the rebent portion 22 will be clear of the channel portion 16 due to the fact that the arc of the portion 16 is not concentric to the axis of the pintle 25.

The opposite ends of the outside channel portion 16 are closed by ends 26 respectively, and each end 26 has a weather strip 27 engageable with the under side of the adjacent hood section 13. The ends 26 and strips 27 prevent elements of weather from passing into the hinge connection formed.

I claim:

1. A weatherproof construction comprising a pair of cooperating members so formed as to provide a pintle roll, and channel portions which serve to cover said pintle roll; and a weather strip on one member engageable with the other member to provide a tight joint between the members at the outside line of separation.

2. A hinge forming member consisting of a single piece of sheet metal stamped, bent and formed to provide a series of knuckle eyes, and a continuous longitudinal channel portion spaced from said knuckle eyes; and braces between the channel portion and certain of the knuckle eyes.

3. A hinge forming member consisting of a single piece of sheet metal stamped, bent and formed to provide a series of knuckle eyes, and a continuous longitudinal channel portion spaced from said knuckle eyes; braces between the channel portion and certain of the knuckle eyes, and a weather strip secured along one of the longitudinal edges of said channel portion.

4. A construction of the character described comprising closure members, a hinge connection between the members, one of said members having an outside channel, said channel being spaced from the hinge connection and extending longitudinally thereof, and a weather strip on said channel engageable with the other closure member which serves to exclude elements of weather when the members are in a closed relationship.

5. A construction of the character described comprising closure members so formed as to provide a hinge roll, and channels; a hinge rod extending through said roll to form a hinge connection between said members, said channels serving to enclose the hinge connection, and weather strips on one channel serving to exclude elements of weather when said member is in a closed position.

Signed at Elizabeth, in the county of Union and State of New Jersey, this 26th day of September, A. D. 1927.

VINCENT J. MATRANGA.