

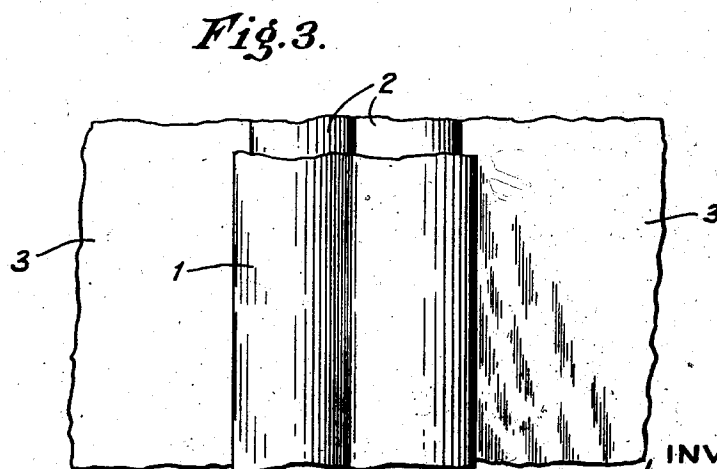
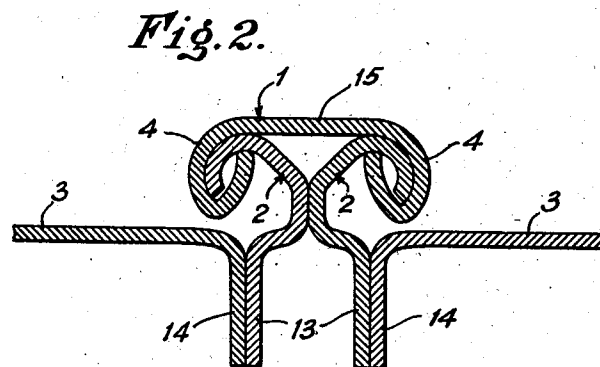
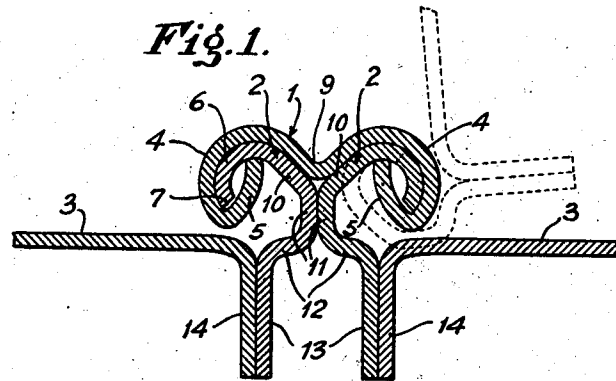
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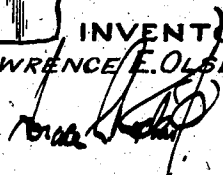
L. E. OLSEN

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HINGE

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INVENTOR
LAWRENCE E. OLSEN
BY 
ATTORNEY.

UNITED STATES PATENT OFFICE

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HINGE

Lawrence E. Olsen, Bristol, Conn., assignor to
Veeder-Root Incorporated, a corporation of
Connecticut

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My invention relates to hinges.

It has for its object to provide an improved hinge, and more particularly such a hinge of a type adapted to be used on hood covers for automobiles or the like. Further objects of my invention are to provide such a hinge which, while adapted to function readily over a wide range, is of such a construction as to minimize noise resulting from vibration, and, further, of attractive appearance and adapted to be inexpensively manufactured. Other objects of my invention are to provide an improved hinge construction including a relatively stationary cover strip having spaced depending sides and improved inwardly and upwardly extending edge portions terminating in upturned edges, and cooperating movable hinge members having improved outwardly and downwardly extending edge portions hooked over the upturned edge portions of said cover strip and supported thereby in an improved manner and also cooperating therewith and with one another in positioning the parts in an improved manner in open and closed positions. These and other objects and advantages of my improved construction will, however, hereinafter more fully appear.

In the accompanying drawing, I have shown for purposes of illustration, two embodiments which my invention may assume in practice.

In the drawing,—

Figure 1 is an enlarged transverse vertical section through a hood equipped with one form of my invention;

Figure 2 is a similar view of a modified construction, and

Figure 3 is a fragmentary plan view of the construction shown in Figure 1.

Considering first the construction shown in Figures 1 and 3, it will be noted that the hinge comprises a cover strip 1 and co-operating hinge portions 2 hinged in the opposite edges of the strip 1 and herein each carrying a hood cover 3.

More particularly, considering the structure of the cover strip 1, it will be noted that the same is herein provided at each side with an arcuate portion 4 extending from the top thereof through an arc of approximately one hundred and eighty degrees and forming a depending curved side. It will also be noted that at the lower end of this portion 4 an upwardly extending lip 5 is provided which is herein also curved, but reversely and on a more flat arc than the portion 4, its arc having its center disposed outside the latter portion. It will also be noted that this portion 5, while extending up toward the bottom

of the member 1 at a point near the upper end of the arcuate portion 4, is spaced from the member 1 and provided with an end curved to correspond with the portion 4. Attention is also directed to the fact that the center of the arc on which the portion 4 is disposed is located in this portion 5, slightly more than half way between the top and bottom thereof.

Co-operating with each of the portions 4 and 5 of the member 1 is a member 2. Herein each member 2 has an arcuate portion 6 corresponding to the portion 4 and journaled on the arcuate surface thereof and extending substantially throughout the length of the same, although it will be noted that the end 7 of this portion 6 terminates short of the member 5. It will also be noted that the curved upper end of the member 5 engages the inside of this portion 6. Attention is also directed to the fact that in this construction a depression or trough 9 is provided between the portions 4 on the member 1, and that this trough portion 9 engages correspondingly inclined portions 10 on the members 2. It will also be observed that the members 2 are provided with vertical abutting portions 11 abutting one another along the center line of the cover strip 1 and below the latter, while the portions 2 are also provided with short oppositely extending lateral shoulders 12 and depending portions 13 to which are suitably attached corresponding depending portions 14 on the hood covers 3.

In use, it will be understood that the members 1 and 2 each preferably extend along the entire length of the hood while the cover member 1 is suitably supported at its ends upon the cowl and radiator. With the parts in the closed position illustrated in Figure 1, it will be evident that the members 2 will be securely held in the closed position illustrated therein due to the co-operation of their several portions with the corresponding portions of the member 1 previously described, and the engagement of the members 2 with one another. More particularly, it will be observed that the elongated arcuate portions 6 co-operate with the portions 4 and 5, while portions 9 and 10 co-operate, and the portions 11 on the members 2 engage each other. When, however, it is desired to raise either of the hood covers 3, it will be noted that the arcuate portion 6 of its member 2 will travel around in the journal provided between it and the portion 4 to the dotted line position indicated, while the portions 10 and 11 on each member 2 will move away from their co-operating portions 10 and 11. Moreover, due to the spacing of the portions 10, 11 and 12 from

the member 5 and the bottom of the portion 4, there will be ample clearance to enable each cover 3 to be raised through a wide range, the abutting portions 11, which are substantially spaced laterally from the portions 5 in closed position, being movable into contact with the lower ends of the portions 4, 5 in the open position of the parts. It will also be noted that either member 2 is entirely free to be moved independently of the other member 2 without binding thereon. Also, in the raised position of a hood cover, the portion 6 of its member 2 still overlaps the portion 5 on the member 1 in such manner as effectually to prevent separation of the parts 1 and 2, and the portion 11 also coming into engagement with the underside of the portion 4, 5 before such separation can take place.

In Figure 2 it will be noted that the construction is essentially the same as that previously described, save that the member 1 instead of having a trough 9 is provided with a bridge portion 15. In this structure obviously the mechanism will function substantially as previously described.

As a result of my improvement, it will be noted that at the same time that an effective journal is provided, it is made possible to provide a structure having a wide range of use, complete freedom from noise or rattling during car vibration, and an attractive appearance with the connections to the hood covers shrouded by the member 1.

Moreover it will be noted that the movable hinge members cooperate with each other and with the hinge supports provided by the spaced depending sides of the cover strip in a wholly new manner to support the movable hinge members. More particularly, in the open position of the parts, the hooked edge portion 6 of each movable hinge strip overlies and is vertically supported on the upturned edge of an upwardly extending edge portion 5 of the cover strip, while the angularly related portions 10 and 12 thereof are disposed on opposite sides of the depending sides of the cover strip to prevent lateral separation of the stationary and movable hinge members. In the closing movement of the parts, it will also be noted that portions 11 of the movable hinge members abut and force the arcuate edge portions 6 of the latter firmly into engagement with the depending arcuate sides 4 of the cover strip and thus lock the hinge members rigidly in place. Moreover the cooperating parts of my improved hinge are free from small grooves, which are difficult to make, thus eliminating certain difficulties in manufacture and resulting in an inexpensive and commercially practical construction. These and other advantages of my improvement will, however, be clearly apparent to those skilled in the art.

While I have in this application specifically described two embodiments of my invention, it will be understood that the same are shown for illustrative purposes, and that my invention may be modified and embodied in other forms without departing from its spirit or the scope of the appended claims.

What I claim as new and desire to secure by Letters Patent is:—

1. In combination, a cover member having depending sides each providing a journal within the same and co-operating hinge members each having a journaled portion, an abutting portion abutting the other hinge member, and a depending portion below said abutting portion disposed in

a plane extending between said journaled and abutting portions.

2. In combination, a cover member having depending sides each providing a journal within the same, and co-operating hinge members between said sides and each having a portion journaled on one of the same and a flat portion abutting the other hinge member.

3. In a hinge, a cover member having oppositely disposed depending sides each providing an inner bearing portion, co-operating hinge members having between said depending sides corresponding portions co-operating with said bearing portions in the closed position of the parts, and means within said cover member and on the edges of said depending sides and the edges of said hinge members for supporting the latter edges within said cover member and in engagement with the top of the latter in the open position of the parts.

4. In combination, a cover member having depending inturned sides terminating in upturned edge portions, co-operating hinge member portions supported by said inturned portions when in open position and engageable with and movable about the insides of said inturned sides into open position, and hinge member abutment portions integral with said engageable portions and spaced from said upturned edge portions and between the same in mutually abutting relation in the closed position of the parts, said abutment portions being movable into contacting relation with the underside of said inturned sides in the open position of the parts while said hinge members remain supported on said upturned edge portions out of contact with the outer surface of said cover strip above said underside thereof.

5. In combination, a cover member having spaced depending sides each providing a hinge support including an upwardly extending portion spaced within one of said sides, and cooperating hinge members each having a hooked edge portion movable between an upwardly extending portion and an adjacent depending side and an abutting portion abutting the other hinge member.

6. In combination, a cover member having spaced depending sides each providing an inwardly and upwardly extending hinge member support within one of said sides, and cooperating movable hinge members each having a downwardly extending portion hooked over the upwardly extending portion of said stationary support and movable inside said support to open or closed positions and a portion abutting the other hinge member substantially midway between said depending sides of said cover member.

7. In combination, a cover member having depending arcuate sides and upwardly disposed portions terminating in upturned edges spaced below said cover member between said sides, and cooperating hinge members each having an arcuate portion engaging one of said arcuate sides in the closed position of the parts and an edge portion adjacent its extremity engaging and overlying an upturned edge of said cover member and supported vertically thereby in the open position of the parts with the edge of said edge portion free from supporting engagement with said cover strip.

8. In combination, a cover member having depending arcuate sides and upwardly disposed portions terminating in upturned edges thereon extending toward the top of said cover member, and cooperating hinge members each having an arcuate portion engageable with one of said arcuate

sides and one of said upturned edge portions in the closed position of the parts and having an edge portion adjacent its extremity supported on one of said upturned edges in the open position of the parts.

9. In combination, a cover member having depending arcuate sides and upwardly disposed portions terminating in upturned edges thereon, and cooperating hinge members having an arcuate portion engaging an arcuate side in the closed position of the parts and supported by one of said upturned edge portions in the open position of the parts, and means on said cooperating members having portions located between and laterally spaced from said upwardly disposed portions of said cover member and abutting in the closed position of the parts for pressing the arcuate portions of said hinge members firmly into engagement with the arcuate sides of said cover member.

10. In combination, a cover member having depending arcuate sides and upwardly disposed edges thereon, and cooperating hinge members having arcuate portions passing between said edges and said first mentioned arcuate portions and journaled on the latter, said cooperating members having mutually abutting portions abutting substantially midway between said depending sides.

11. In combination, a cover member having depending arcuate sides and upwardly disposed edges thereon, and cooperating hinge members having arcuate portions engaging with said arcuate portions in the closed position of the parts and having edge portions supported by said upturned edges in the open position of the parts and mutually abutting portions substantially spaced laterally from said upwardly disposed edges and abutting in the closed position of the parts.

12. In combination, a cover member having depending sides each providing an inner arcuate portion and having an upwardly disposed edge portion terminating in an upturned edge, and cooperating hinge members between said sides each having an arcuate portion engageable with one of said inner arcuate portions, an abutting portion abutting the other hinge member in the closed position of the parts, and an edge portion supported on one of said upturned edges with the edge of said edge portion free from supporting engagement with said cover strip in the open position of the parts.

13. In combination, a cover member having depending sides each providing an inner arcuate portion and an upturned portion terminating in an edge spaced from said cover member between the sides thereof, and cooperating hinge members between said sides each having an arcuate portion engageable with the inside of one of said first mentioned arcuate portions, said hinge members having edge portions adjacent the edges thereof engaging and being supported on the edges of the upturned portions of said depending portions in the open position of the parts and said hinge members having the edges thereof free from supporting engagement with said cover member, and also having means other than the supporting edge portions thereof for holding the same against lateral separation from said cover member in the open position of the parts.

14. In combination, a cover member having depending sides each providing an inner arcuate portion, and cooperating hinge members between

said sides and each having an arcuate portion engageable with the inside one of said first mentioned arcuate portions, the edges of said hinge members being supported on the edges of said depending portions and held against lateral separation therefrom in the open position of the parts and said hinge members abutting substantially midway between said depending sides in the closed position of the parts.

15. In a hinge, a cover member having oppositely disposed depending sides each providing an inner arcuate portion forming a journal, and cooperating hinge members within said cover member having portions movable over said journals and reversely disposed portions carrying said portions and abutting the other hinge member substantially midway between said depending sides of said cover member beneath the latter.

16. In a hinge, a cover member having oppositely disposed depending sides each providing an inner pivot forming portion, cooperating hinge members having between said depending sides portions movable free from frictional engagement toward and away from mutually abutting relation below said cover strip as the hinge members are moved into and out of closed position, and also having, within said depending sides, portions cooperating with said pivot forming portions in the closed position of the parts and movable about the same into open position, said depending sides and said hinge members having said hinge members supported within said cover member in the open position of the parts while inhibiting lateral separation thereof and permitting free movement of said abutting portions into and out of abutting position.

17. In combination, a cover member having depending sides provided with inturned edge portions, and cooperating hinge members supported by said inturned portions when in open position and each having a portion engageable with and movable about the inside of one of said depending sides into open position and an external portion, said external portions being engageable with one another substantially midway between the depending sides of said cover member when between and spaced laterally from said depending sides in the closed position of the parts and movable toward and into adjacency to the under side of said depending sides during opening without rubbing contact therewith and disposed beneath the latter in the open position of the parts while said hinge members remain supported on said edge portions.

18. In combination, a cover member having depending inturned sides and upturned portions on the latter terminating in upturned edges, and cooperating hinge members having portions adjacent their extremities supported by said upturned portions when in open position and engageable with and movable about the insides of said inturned sides into open position, and adjacently disposed hinge member portions integral with said first mentioned portions and facing said upturned portions between and in laterally spaced relation thereto in the closed position of the parts, said last mentioned portions being movable into contacting relation with the underside of said inturned sides in the open position of the parts to limit relative movement therebetween while said hinge members remain supported on said upturned edges.