

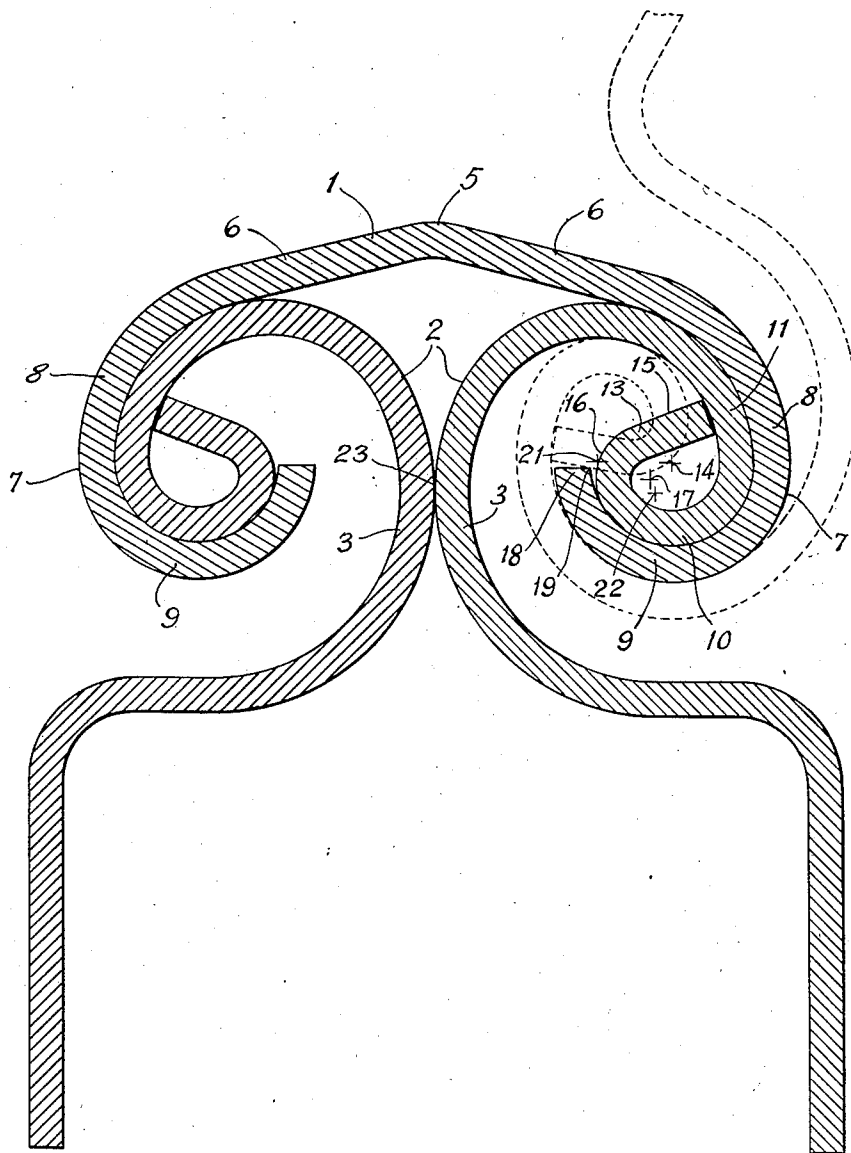
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HINGE

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HINGE

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12 Claims. (Cl. 16-128)

My invention relates to hinges.

It has been for its object to provide an improved hinge, and more particularly an improved hinge adapted to use on hoods for automobiles or the like. Further objects of my invention are to provide a hinge of an improved and simplified structure and one adapted to have a wide range of movement and to be free from rattling or binding, and also to be definitely positioned in closed position and have its movable member maintained in the desired position when open. These and other advantages of my improved construction will, however, hereinafter more fully appear.

In the accompanying drawing, which for purposes of illustration shows one embodiment which my invention may assume in practice, I have illustrated an enlarged partial transverse vertical sectional view through a hood equipped with my improvement, the raised or open position of one part being indicated in dotted lines.

In this illustrative construction, it will be noted that I have shown a structure including a narrow cover strip 1 adapted to be supported over an engine and oppositely beaded on its edges to form depending journals for co-operating hinge members 2 having their upper edges inside the cover member and seated on these journals and their lower edges 3 suitably connected to hood covers.

More particularly, it will be noted that in this construction, the member 1 is provided with a central peak 5 and slopes downward therefrom in relatively angularly disposed straight portions 6. These portions 6 in turn are each connected with a bead 7 each of which comprises a portion 8 and a portion 9. Of these, each portion 9 forms a journal for a correspondingly shaped journal portion 10 on the member 2, while each portion 8 forms an abutment for a correspondingly shaped abutment portion 11 on the member 2. It will also be noted that each bead on the member 2, comprising the portions 11 and 10, is provided with a reversed edge 13 bent back over the portion 10 and herein, as preferably, into engagement with the inner surface of the portion 11 at a point slightly above and herein an angle of 20 degrees to a horizontal line extending through the axis 14 from which the arcs of the journal portions 9 and 10 are struck. It will also be observed that each portion 13 has a flat outer surface 15 and a rounded portion 16 between the portions 10 and 15 and struck on an axis 17, which portion 16 in that closed position of the hinge illustrated in full lines, slopes away from the upper extremity 18 of the journal portion 9 as indicated. As shown, each end 18 is also flat and adapted to have its

inner corner 19 engage the surface 15 of the portion 13 and support the member 2 when the latter is in the raised position indicated in dotted lines. Attention is also directed to the fact that the portion 11 is struck from a center 21, as is also the portion 8 of the bead 7, while the portion 3 is struck from a center 22. Attention is here also directed to the fact that of the various centers, 14, 17 and 22 are disposed in the space enclosed by the portions 11, 10 and 13 on the member 2 in closed position of the parts, with the center 14 above and to one side of the centers 17 and 22, and the center 17 above the center 22, while the center 21 is located just outside the surface 16 and to one side of the end 18. Attention is also directed to the fact that in closed position the portions 3 on each member 2 abut at 23 in the center line of the member 1 directly under the peak 5 while these portions 3 are substantially spaced from the adjacent portions of the beads 7 and the portions 11 slope away from the member 1.

As a result of my improved construction, it will be observed that a journal surface of substantial length is provided between the portions 9 and 10, while the portions 8 and 11 form abutment surfaces tending to position the parts in the closed position of the hinge. It will also be observed that through the engagement of the portions 3 at 23, the members 2 are also further definitely positioned in the closed position of the hinge. When, however, it is desired to raise either cover member, it will be evident that the portion 10 will move freely in the journal provided by the portion 9 from the full line position indicated in Figure 1 to the dotted line position illustrated therein, with the portion 11 then moving away from the portion 8 as the member 2 is swung, and the portion 3 moving downward and to the right until the portions 11 come into engagement with the outside of the portion 9 as illustrated, and the portion 13 moving to the left until its surface 15 engages the end 18 of the portion 9 and then moves about the shoulder 19 thereon, as illustrated. Thus it will be observed that the hinge, while having its parts definitely positioned in closed position is freely movable into open position without resistance or binding, and is furthermore definitely held up in that position by the support of the portion 15 on the end of the journal portion 9. It will also be noted that the members 2 do not rest upon the top of the member 1 so as to engage the top of the latter, and that the only contact between the members 2 and the outside of the member 1 occurs at a point under the head on the latter member in such

manner as to eliminate visible wear on the members 1 and 2. These and other advantages of my improved construction will, however, be clearly apparent to those skilled in the art.

5 While I have in this application specifically described one embodiment which my invention may assume in practice, it will be understood that the same has been shown herein for illustrative purposes, and that the invention may be
10 modified and embodied in various 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:—

15 1. A hinge comprising a member having a depending bead provided with an upturned inner edge, and a co-operating member having a portion movable in said bead and also having an edge portion overlying the inside of said movable
20 portion in the closed position of the hinge and having the upper face of said edge portion in said closed position supported on the extremity of the upturned edge of said first mentioned bead in the open position of the hinge.

25 2. A hinge comprising a member having a depending journal bead provided with an upturned inner arcuate edge portion, and a co-operating member having a co-operating movable journal portion adjacent its edge engaging the journal
30 portion of said bead in the closed position of the hinge, and also having an edge portion overlying the inside of said co-operating movable journal portion in said closed position and underlying said movable journal portion and engaging the
35 extremity of said upturned edge portion in the open position of the hinge.

3. A hinge comprising a member having a depending journal bead provided with an upturned inner edge, and a co-operating member having
40 a portion adjacent its edge journaled in said bead and a reversely bent edge portion supported on the extremity of said upturned edge of said bead in the open position of the hinge, said reversely bent edge being disposed in one direction above
45 the journal portions in the closed position of the hinge and in the opposite direction between the journal portions and supported on the extremity of said upturned edge of said bead in the open position of the hinge.

50 4. A hinge comprising a member having a depending journal bead provided with an upturned inner edge, and a co-operating member having a portion adjacent its edge journaled in said bead and a reversely bent edge portion supported
55 on the extremity of said upturned edge of said bead in the open position of the hinge, said reversely bent edge being disposed in one direction above the journal portions in the closed position of the hinge and in the opposite direction between the
60 journal portions and supported on the extremity of said upturned edge of said bead in the open position of the hinge, and said reversely bent edge also having a curved connecting portion between the same and its journal portion sloping away
65 from the upturned edge of said bead.

5. A hinge comprising an external member having a bead forming an internal journal surface along the edge thereof and having an abutment surface substantially spaced from said edge,
70 and a co-operating internal member having a journal portion spaced from its edge and journaled on said journal surface, an abutment portion engaging said abutment portion, and an edge portion leading from the opposite extremity of
75 its journal portion from said abutment portion

toward the latter and supportable on the extremity of the edge of said bead in the open position of the hinge.

6. A hinge comprising an external member having a bead forming an internal journal surface along the edge thereof and having an abutment surface substantially spaced from said edge, and a co-operating internal member having a
80 journal portion spaced from its edge and journaled on said journal surface, an abutment portion engaging said abutment portion, and an edge portion leading from the opposite extremity of its journal portion from said abutment portion toward the latter and supportable on the extremity
85 of the edge of said bead in the open position of the hinge, said edge portion on the inner member having a flat surface engageable with the edge of said bead in the open position of the hinge, and a curved portion connecting said edge and journal portion of the inner member. 95

7. In a hinge, a cover member having oppositely disposed depending beaded edges providing arcuate journals extending out to said edges, and co-operating hinge members within said cover member having portions journaled in said journals
100 and reversely disposed portions carrying said portions and abutting along the center line of said cover member beneath the latter.

8. In a hinge, a cover member having oppositely disposed depending beaded edges providing arcuate journals extending out to said edges, and co-operating hinge members within said cover member having portions journaled in said journals
105 and reversely disposed portions carrying said portions and abutting along the center line of said cover member beneath the latter, said abutting portions being substantially spaced from the edges of said oppositely disposed beads and each disposed in an arc. 110

9. In a hinge, a cover member having oppositely disposed depending beaded portions providing journals and upturned edges, and cooperating hinge members within said cover member having portions journaled in said journals and reversely
115 disposed portions carrying said portions and extending upwardly between the adjacent edges of said beaded portions, and also having supporting means on the edges of said internal members extending across the inside of said journaled portions and supportable on the extremities of the
120 edges of said beaded portions in the open position of the parts. 125

10. In a hinge, a cover member having oppositely disposed depending beaded portions providing journals and upturned edges, and cooperating hinge members within said cover member having portions journaled in said journals and reversely
130 disposed portions carrying said portions and extending upwardly between the adjacent edges of said beaded portions, and also having supporting means on the edges of said internal members extending across the inside of said journaled portions and disposable laterally in opposite directions above said journal portions in the closed position of the parts, and laterally in reverse
135 directions above the extremities of the edges of said beaded portions in the open position of the parts. 140

11. In a hinge, a cover member having oppositely disposed depending edges providing journals and co-operating hinge members within said cover member having portions journaled in said journals and reversely disposed portions carrying said portions and extending upwardly between the adjacent edges of said journals, said hinge members
145 150

having supporting means on the edges of the same extending across the inside of said journaled portions and disposable laterally in opposite directions above said journal portions in the closed position of the parts and laterally in reverse directions above and engaging the edges of said journals in the open position of the parts, and said upwardly extending portions each being engageable with the other along the center line of said cover in the closed position of the parts.

12. In a hinge, a cover member having oppositely disposed depending edges providing journals and co-operating hinge members within said cover member having portions journaled in said journals and reversely disposed portions carrying said portions and extending upwardly between the adjacent edges of said journals, said hinge mem-

bers having supporting means on the edges of the same extending across the inside of said journaled portions and disposable laterally in opposite directions above said journal portions in the closed position of the parts and laterally in reverse directions above and engaging the edges of said journals in the open position of the parts, and said upwardly extending portions each having an arcuate portion having one face engageable with a like portion on the other along the center line of said cover in the closed position of the parts and the opposite face of said arcuate portion fitting the under side of one of said journals in the open position of the parts.

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