Aug. 8, 1939. J. SOSS ET AL 2,169,059

HINGE

Filed March 24, 1937

Fig. 1.

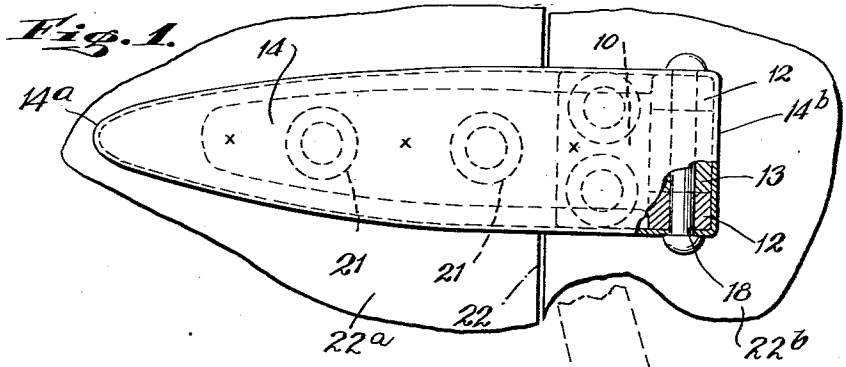


Fig. 2.

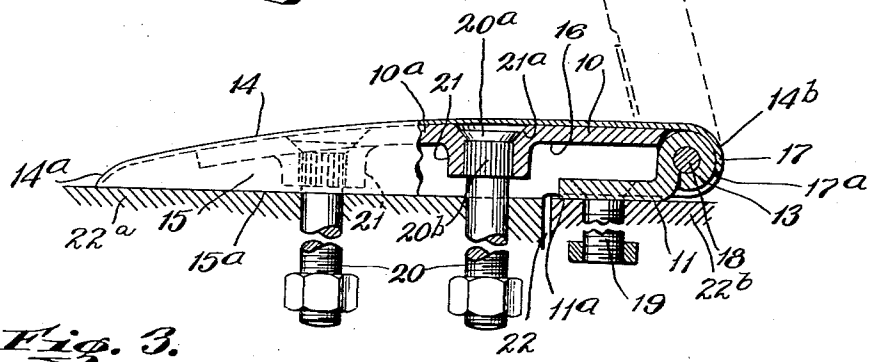


Fig. 3.

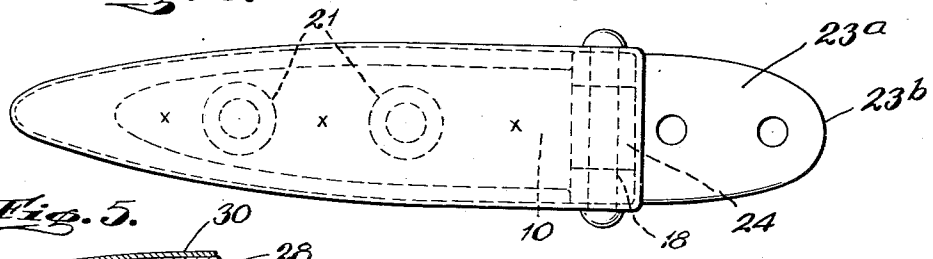


Fig. 5.

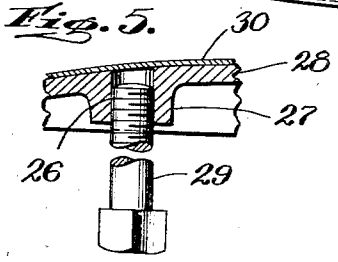
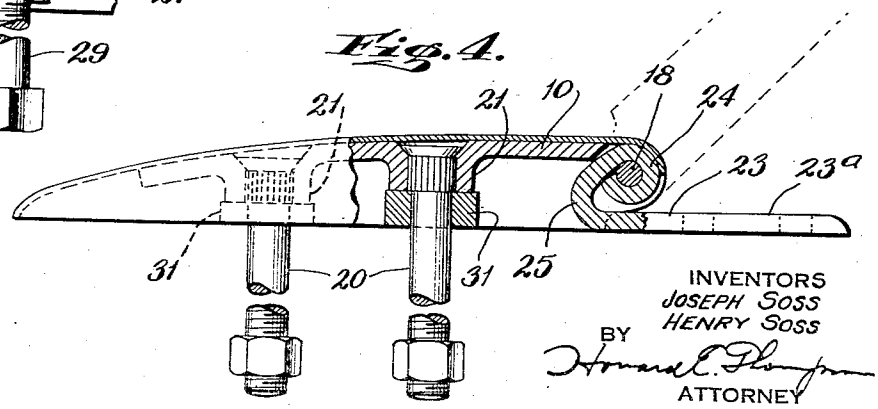


Fig. 4.



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HINGE

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6 Claims. (Cl. 16—148)

This invention relates to hinges and particularly to hinges of the kind adapted for attachment upon the outer surface of a door or swinging member and the door frame or other support and especially in the provision of means of so mounting the hinge, or at least one of the butts thereof, as to provide for the use of a cover plate or closure to form a neat and ornamental appearance to the butt or the entire hinge; a further object being to provide a cover or hood portion of the class described which includes a curved knuckle concealing hood part for concealing or substantially concealing the joint of the hinge; a further object being to provide a hinge of the class described wherein one of the butts, or the attaching plate portion thereof, is adapted to be arranged within the other butt part and the hood portion thereof, when the hinge is in closed position; a still further object being to provide a hinge of the character described wherein the pintle bearing or pivot of the butt of the hinge is enclosed at one side of the adjacent surfaces of the stationary support and swinging member so as to disclose the attaching plate portion of one of the butt parts in an overlapped relationship with respect to the adjacent surfaces of said support and swinging member; and with these and other objects in view the invention consists in a hinge of the class and for the purpose specified which is simple in construction, efficient in use and which is constructed as hereinafter described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawing forms a part, in which the separate parts of our invention are designated by suitable reference characters in each of the views, and in which—

Fig. 1 is a face view of one form of hinge showing the butt thereof in closed position.

Fig. 2 is a side and sectional view of the structure shown in Fig. 1 indicating the open position of the hinge in dotted lines.

Fig. 3 is a view similar to Fig. 1 but showing a modification.

Fig. 4 is a side and sectional view of the structure shown in Fig. 3; and,

Fig. 5 is a view similar to Figs. 2 and 4 showing another modification.

In Figs. 1 and 2 of the drawing we have shown one form of hinge made according to the invention and, in these figures, 10 and 11 represent the two butt parts which, in the construction shown, are made from sheet metal but which may be made in any desired manner. In the construction shown, the butt 10 is curled at one end to form two cylindrical pintle bearings or knuckles 12, whereas the butt 11 is curled to form a cylindrical bearing or knuckle 13 arranged intermediate the knuckles 12. The attaching plate 10a of the butt 10 is considerably longer than the attaching plate 11a of the butt 11, and arranged upon and covering the plate 10a is a cover plate or hood 14 preferably composed of thin sheet metal, and which may be shaped and ornamented in any desired manner to produce any desired design or contour to the finished hinge.

In the present construction, the cover 14, which may also be termed a housing, tapers to a substantial point at its free end, as indicated at 14a, to give what might be termed a stream line effect. The cover 14 is concavo-convex in cross sectional form to provide depending side walls 15 which overlap the side edges of the entire butt 10 and extend beyond the inner surface 16 of the attaching plate portion 10a of the butt, and the free edges 15a of the side walls 15 will be fashioned to conform with the contour of the article or member upon which the hinge is attached, for example, the door of a rear compartment or enclosure of a motor vehicle. The wide and thicker end 14b of the cover 14 has the side walls 15 thereof extending over the surfaces of the bearings 12, and said cover is curved around the bearing 12 as well as the bearings 13 to form a hood portion 17, which conceals or partially conceals the joint of the hinge. This hood portion 17 is continuous with the side walls 15 in addition to being an integral extension to the cover 14 proper. A pintle pin or rivet 18 is stamped through the bearings 12 and 13 as well as through the walls 15 in connecting the butts 10 and 11.

Bolts, screws or similar devices 19 are passed through the attaching plate 11a securing the butt 11 to a stationary support 22b, whereas similar fasteners 20 are mounted in the drawn tubular portions 21 in the attaching plate 10a and are used to secure the butt 10 to the swinging member or door 22a, the stationary support and swinging member having their adjacent surfaces meeting substantially on the dotted line, indicated at 22 in Fig. 1 of the drawing. It will thus be seen that the pivot 18 of the hinge is disposed in an offset or spaced relation to the intersecting line 22.

In connection with the mounting of the butts on their respective supports, it will be apparent that the butt part 11 attached to the stationary support may be arranged in any angular posi-

tion from that shown in Fig. 2 to the position of the similar butt part shown in Fig. 4, and in some of these latter cases the attaching plate portion may be disposed between the adjacent surfaces of the stationary support and swinging member.

With the construction shown in Fig. 2 of the drawing, the heads 20a of the bolts are beveled and sunk in countersunk recesses 21a in the attaching plate 10a. It is also preferred that the shanks of the bolts adjacent the heads 20a will be provided with teeth or nurlings 20b to key the bolts against rotation in the drawn tube 21 as will be apparent. It will also be understood, however, that any type of construction may be employed for securing the bolts or coupling pins against rotation in the attaching plate 10a.

The cover or hood 14, in the construction shown, is spot welded to the attaching plate to constitute a permanent part thereof as indicated for example by the X marks appearing in Figs. 1 and 3 of the drawing but, other means of attachment may be provided.

It will be understood that the free edge portion 17a of the hood 17 will be so positioned as to provide the desired swing or throw of the butt 10 so as to provide the greatest amount of cover or concealment of the joint of the hinge.

In Figs. 3 and 4 of the drawing is shown a modification of the structure shown in Figs. 1 and 2, wherein the butt part 10 is identical or substantially identical with the part shown in Figs. 1 and 2, and substituted for the butt 11 is a butt 23, the attaching plate portion 23a of which extends outwardly beyond the pintle 18 and joins the curled cylindrical bearing 24 in a curved portion 25. In other words, the primary difference between the butts 11 and 23 is simply in the arrangement and contour of the attaching plate, the free end 23b of which is preferably pointed or rounded to be concentric with the general contour of the hinge as may be seen in Fig. 3 of the drawing.

In Fig. 5 of the drawing, another modification is shown which consists simply in threading the bore 26 of the drawn tube 27 of the attaching plate 28 to receive the threaded ends of the coupling screws 29, and to eliminate the necessity of employing bolts as shown in Figs. 2 and 4 of the drawing. This construction may be used where the cover plate or hood 30 constitutes a part permanently attached to the plate 28.

Referring to the various designs and contours of the hood of the hinge, it will be apparent that this will mean any kind of ornamentation that may be applied thereto especially in the shaping of the metal, the attaching plate of the butt will be made to conform with, or substantially conform with the hood outline or vice versa.

If desired suitable washers or bushings may be employed between the inner surfaces of the drawn tube 21 and the surface of the support to which the butt is attached, as indicated at 31 in Fig. 4 of the drawing.

It will be understood that by employing a shell of the type described, the coupling means for attaching the hinge butt to its support, in the manner illustrated, will be covered and concealed, thus producing a neat and finished appearance which will permit of the plating of the outer surface of the shell or provide for the painting or enameling thereof, or the application of any other coating to such surface. Another feature consists in providing, on the shell, a hood protecting the joint or pintle bearing of the hinge which will maintain a better appearance for the hinge in the many uses to which a hinge of this type and kind may be applied.

Having fully described our invention, what we claim as new and desire to secure by Letters Patent, is:

1. A hinge of the class described comprising hingedly coupled butt parts having interengaging pintle bearings with a pintle passed therethrough in coupling the butt parts together, one butt part having a short attaching plate portion adapted to be arranged upon and secured to the surface of one support, the other butt part having a long attaching plate portion arranged in spaced relation to the support to which said butt is attached, means spaced longitudinally of the long attaching plate for supporting coupling devices for mounting said plate in connection with its support, an elongated hood of channel cross-sectional form arranged upon and concealing the entire attaching plate portion of the second mentioned butt and including depending side walls projecting below the attaching plate to engage the surface of the support to which said butt is attached, one end of said hood including a curved portion seating on and concealing substantially the entire pintle bearing portion of the hinge, the outer wall of said hood being arranged directly upon and secured to the attaching plate portion of the second named butt, said hood at the free end of said last mentioned attaching plate being closed, and the short attaching plate of the first mentioned butt being concealed within the hood when the hinge is in closed position.

2. A hinge of the class described comprising two butts having interengaging pintle bearings with a pintle pin therein for hingedly coupling said butts, each butt having an attaching plate portion, the attaching plate of one butt being shorter than the attaching plate of the other butt and arranged in spaced parallel relation to the longer attaching plate portion in the closed position, the short attaching plate being arranged directly upon its support and secured thereto, and the long attaching plate being arranged in spaced relation to its support and having means for coupling the same with its support, said long attaching plate extending over the support to which the short plate is attached and overlapping said short attaching plate when the hinge is in closed position, a supplemental butt part in the form of an elongated hood arranged upon said long attaching plate and secured thereto and comprising top and depending side walls, the lower edges of the side walls of said hood being adapted to seat upon the surface of the support to which the long attaching plate is secured, said hood concealing substantially the entire hinge when the respective butts are in closed position and arranged upon their supports, one end of the hood including a curved portion concealing the pintle bearings of the hinge, and the side walls of said hood being of predetermined contour and arranged in spaced relation to the side edges of said long attaching plate portion.

3. A hinge for mounting upon outer surfaces of stationary and swinging supports comprising two butts having interengaging knuckles with a pintle passed through said knuckles, one butt having a short attaching plate portion and the other a long attaching plate portion, the attaching plate portion of the last mentioned butt having spaced tubular parts projecting from the inner surface of said plate for receiving fastening devices in attaching the butt to its support, a hood arranged

upon and secured to the second named butt and concealing substantially the entirety of said butt including the attaching devices when the butt is secured to its support and in closed position, and said hood having a curved portion encircling and substantially concealing the knuckles of both butts when the hinge is in closed position.

4. A hinge for mounting upon outer surfaces of stationary and swinging supports comprising two butts having interengaging knuckles with a pintle passed through said knuckles, one butt having a short attaching plate portion and the other a long attaching plate portion, the attaching plate portion of the last mentioned butt having spaced tubular parts projecting from the inner surface of said plate for receiving fastening devices in attaching the butt to its support, a hood arranged upon and secured to the second named butt and concealing substantially the entirety of said butt including the attaching devices when the butt is secured to its support and in closed position, said hood having a curved portion encircling and substantially concealing the knuckles of both butts when the hinge is in closed position, said hood having side walls, the free edges of said side walls being adapted to be arranged upon the surface of the support to which the second named butt is secured, and the free end of said hood being closed.

5. A hinge for mounting upon outer surfaces of swinging and stationary supports, said hinge comprising two hingedly coupled butts having interengaging bearings joined by a pintle, one of said butts having a short attaching plate secured to the outer surface of the stationary support with the pintle bearing on said butt arranged over the surface of the stationary support and in spaced relation to the intersection between the stationary and swinging supports, the other butt having a long attaching plate portion part of which is adapted to be arranged over and in spaced relation to the outer surface of the stationary support, means for securing the long attaching plate of the second named butt to the swinging support with said attaching plate arranged over and in spaced relation to the outer surface thereof, a hood U-shaped in cross-sectional form arranged upon and secured to the long attaching plate and engaging outer surfaces of the swinging support and concealing the entirety of the second named butt when the hinge is in use and in closed position, and said hood including at one end a curved portion substantially concealing the interengaging bearings of both butts.

6. A hinge for mounting upon outer surfaces of swinging and stationary supports, said hinge comprising two hingedly coupled butts having interengaging bearings joined by a pintle, one of said butts having a short attaching plate secured to the outer surface of the stationary support with the pintle bearing on said butt arranged over the surface of the stationary support and in spaced relation to the intersection between the stationary and swinging supports, the other butt having a long attaching plate portion part of which is adapted to be arranged over and in spaced relation to the outer surface of the stationary support, means for securing the long attaching plate of the second named butt to the swinging support with said attaching plate arranged over and in spaced relation to the outer surface thereof, a hood U-shaped in cross-sectional form arranged upon and secured to the long attaching plate and engaging outer surfaces of the swinging support and concealing the entirety of the second named butt when the hinge is in use and in closed position, said hood including at one end a curved portion substantially concealing the interengaging bearings of both butts, said hood having top and side walls, the side walls overlapping the ends of the pintle bearings with the pintle extending through said side walls, and the long attaching plate portion being arranged upon the inner surface of the top wall of said hood.

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