Dec. 13, 1927. 1,652,965

A. W. WAY

AUTOMOBILE DOOR HINGE

Filed March 5, 1925. 2 Sheets-Sheet 1

Fig. 1.

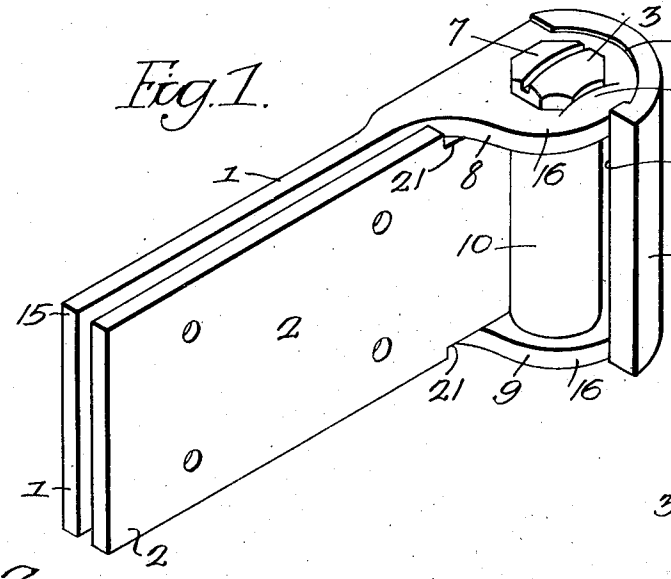


Fig. 11.

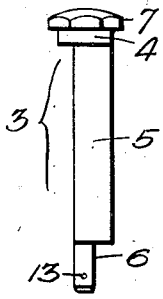


Fig. 2.

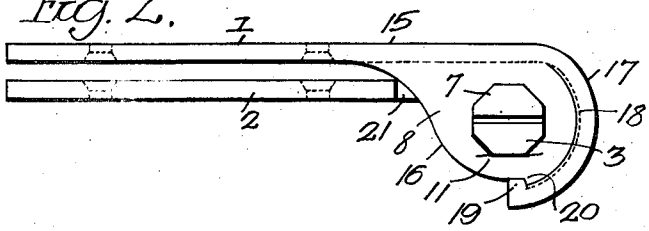


Fig. 12.

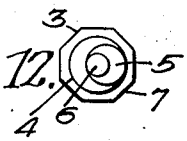


Fig. 3.

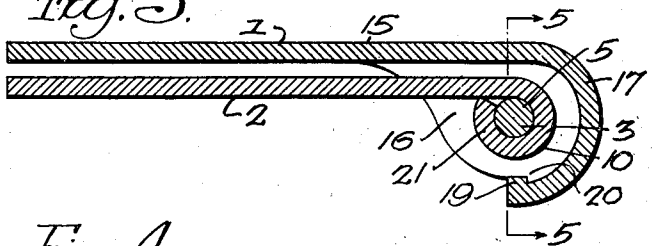


Fig. 5.

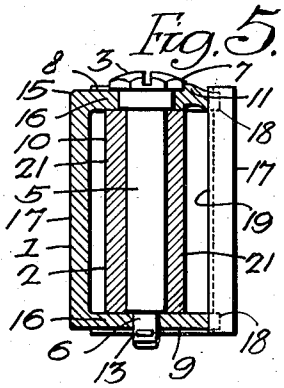
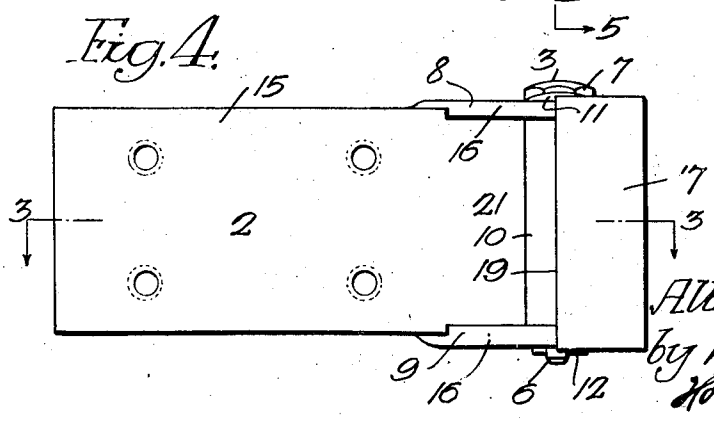


Fig. 4.



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Dec. 13, 1927. 1,652,965

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AUTOMOBILE DOOR HINGE

Filed March 5, 1925 2 Sheets-Sheet 2

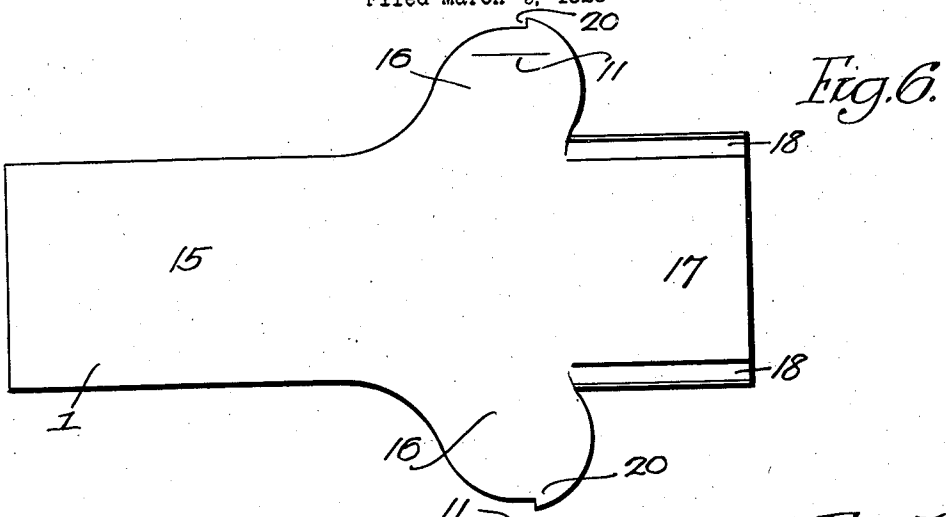


Fig. 6.

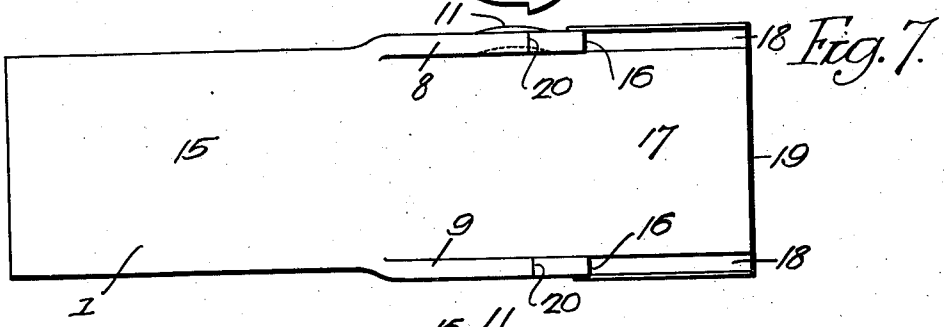


Fig. 7.

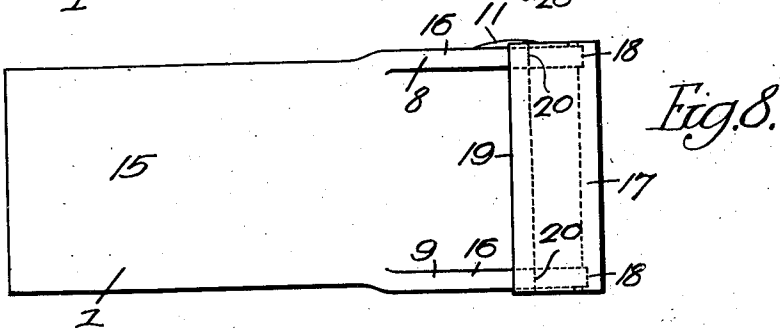


Fig. 8.

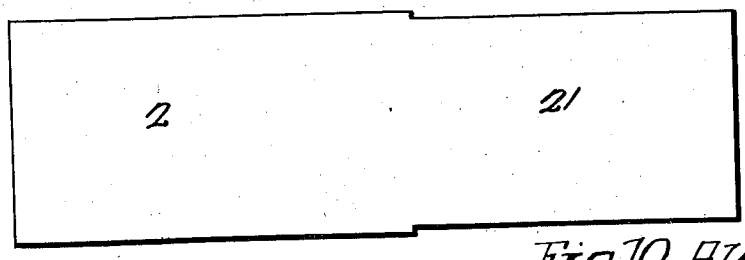


Fig. 9.

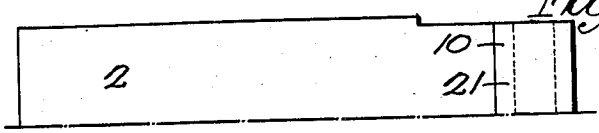


Fig. 10.

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Patented Dec. 13, 1927. 1,652,965

UNITED STATES PATENT OFFICE.

ALBEN WARREN WAY, OF PHILADELPHIA, PENNSYLVANIA.

AUTOMOBILE DOOR HINGE.

Application filed March 5, 1925. Serial No. 13,193.

My invention relates to certain improvements in hinges, which are capable of being adjusted laterally. The invention is especially adapted for use in connection with the doors of automobiles.

One object of the invention is to design the hinge so that the bearing is concealed and enclosed, the bearing surface being protected from the weather.

A further object of the invention is to manufacture the hinge leaves from cold, rolled steel, or other metal, blanking out each leaf and bending and pressing it into shape so that the protecting covering is locked in position by the side members.

The invention also relates to certain details, which will be fully described hereinafter, reference being had to the accompanying drawings, in which:

Fig. 1 is a perspective view of my improved hinge;

Fig. 2 is a plan view;

Fig. 3 is a sectional plan view on the line 3—3, Fig. 4;

Fig. 4 is a side view;

Fig. 5 is a sectional view on the line 5—5, Fig. 3;

Fig. 6 is a plan view of the blank of one of the leaves before bending;

Fig. 7 illustrates the first step of the bending operation of the blank illustrated in Fig. 6;

Fig. 8 is a view showing the blank bent into final shape;

Fig. 9 is a view of the blank of the other leaf;

Fig. 10 is a view showing said leaf bent into final shape;

Fig. 11 is a side view of the pintle; and

Fig. 12 is an inverted plan view of the pintle.

Referring to the drawings, 1 is one leaf of the hinge. 2 is the other leaf. 3 is the pintle, which connects the two leaves. The pintle has a concentric portion 4, an eccentric portion 5, and a reduced, concentric portion 6. The pintle has a head 7, which is octagonal in the present instance, and is slotted to receive a screw driver. The concentric portion 4 is mounted in the knuckle 8 of the leaf 1 and the concentric portion 6 is mounted in the knuckle 9 of said leaf. The eccentric portion 5 is mounted in the knuckle 10 of the leaf 2. A rib 11, formed in the knuckle 8 in the present instance, engages the head and prevents its turning in the knuckle after adjustment. The pintle is held from raising by means of a cotter pin 12 or other feastening, which passes through an opening 13 in the portion 6 of the pintle.

When the hinge is applied to the door of an automobile, the door may not fit the door opening accurately. By the use of my improved hinge, all that is necessary is to remove the cotter pin 12, raise the pintle so that the head 7 is clear of the rib 11. By turning the pintle, one leaf of the hinge can be shifted laterally in respect to the other leaf in order to bring the door in proper alignment with the door jamb. When the leaf is adjusted, the pintle is depressed so that the head rests back of the rib 11, which locks the pintle to the leaf 1. By inserting the cotter pin 12, the pintle is prevented from lifting.

The leaf 1 is made from cold, rolled steel, the blank being formed, as shown in Fig. 6, in which 15 is the body of the blank, which has lateral extensions 16 that form the knuckles 8 and 9 of the hinge, and a portion 17 that forms the enclosing member of the hinge. This portion has two longitudinal grooves 18, which, when the portions 16 are bent at right angles, as in Fig. 7, are in line with the edges of the portion 16 so that, when the portion 17 is bent, as in Fig. 1, the edges of the portion 16 enter the grooves and are locked firmly in position. The end 19 of the portion 17 is then bent over the shoulders 20 of the portion 16, as shown clearly in Figs. 1 and 2, firmly locking the parts in position. The edge of the portion 17 forms a stop for the leaf 2 of the hinge, and the portion 17 protects the joints of the hinge and makes a neat finish.

The leaf 2 is made as shown in Figs. 9 and 10. The blank is cut, as shown in Fig. 9, and the reduced portion 21 is bent to form the knuckle 10.

The abutting parts of the leaf 1, as well as the abutting parts of the leaf 2, may be welded, if found desirable. The rib 11 is formed by the punching, or pressing operation, when the blank is cut, as illustrated in Fig. 6.

I claim:

1. A leaf of a hinge made from sheet metal and having upper and lower integral knuckles bent up from the edges of the body of the leaf, and having an integral enclosing member forming an extension of the body portion and bent around the

knuckles, said enclosing member having means which interlocking with the knuckles holding the parts in position.

2. The combination in a hinge, of a leaf made of pressed sheet metal, having knuckles bent at right angles to the body of the leaf each of said knuckles having a shoulder and the leaf having a rounded, enclosing member extending the full width of the hinge and interlocking with the shoulders of the knuckles of the leaf; a second leaf; and a pintle connecting the two leaves.

3. The combination in a hinge, of a leaf made of sheet metal punched to form notched, lateral projections; a grooved extension beyond the projections, the knuckles of the leaf being bent at right angles to the body thereof and the grooved extension being bent around the knuckles, the edges of the knuckles extending into the grooves; a second leaf located between the two knuckles of the hinge; and a pintle connecting the two leaves.

ALBEN WARREN WAY.