

Jan. 25, 1944.

G. D. CLOUTIER

2,339,980

STAMPED METAL OUTSIDE DOOR HANDLE

Filed Sept. 11, 1941

2 Sheets-Sheet 1

Fig. 1.

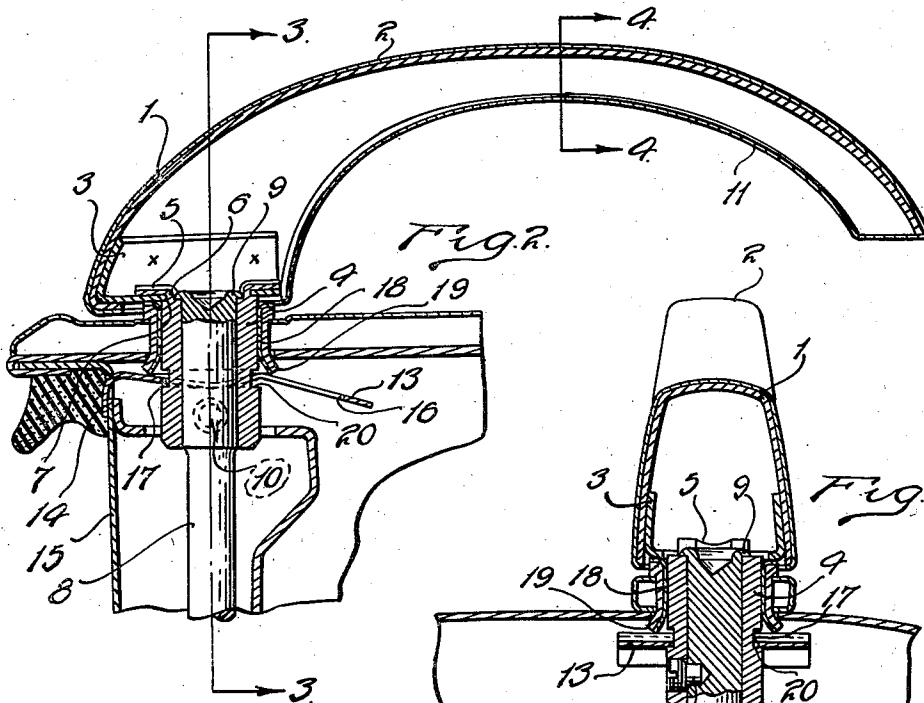
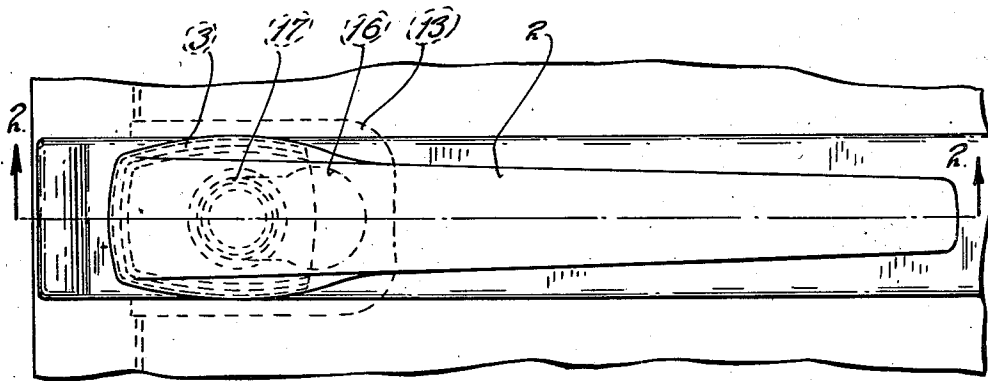


Fig. 2.

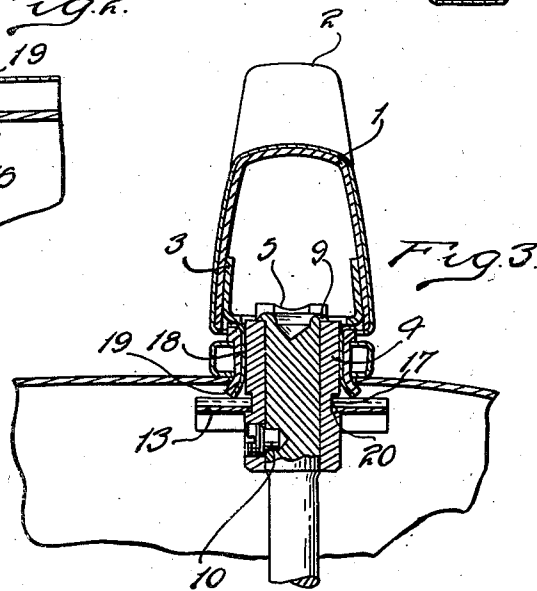


Fig. 3.

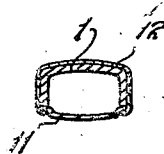


Fig. 4.

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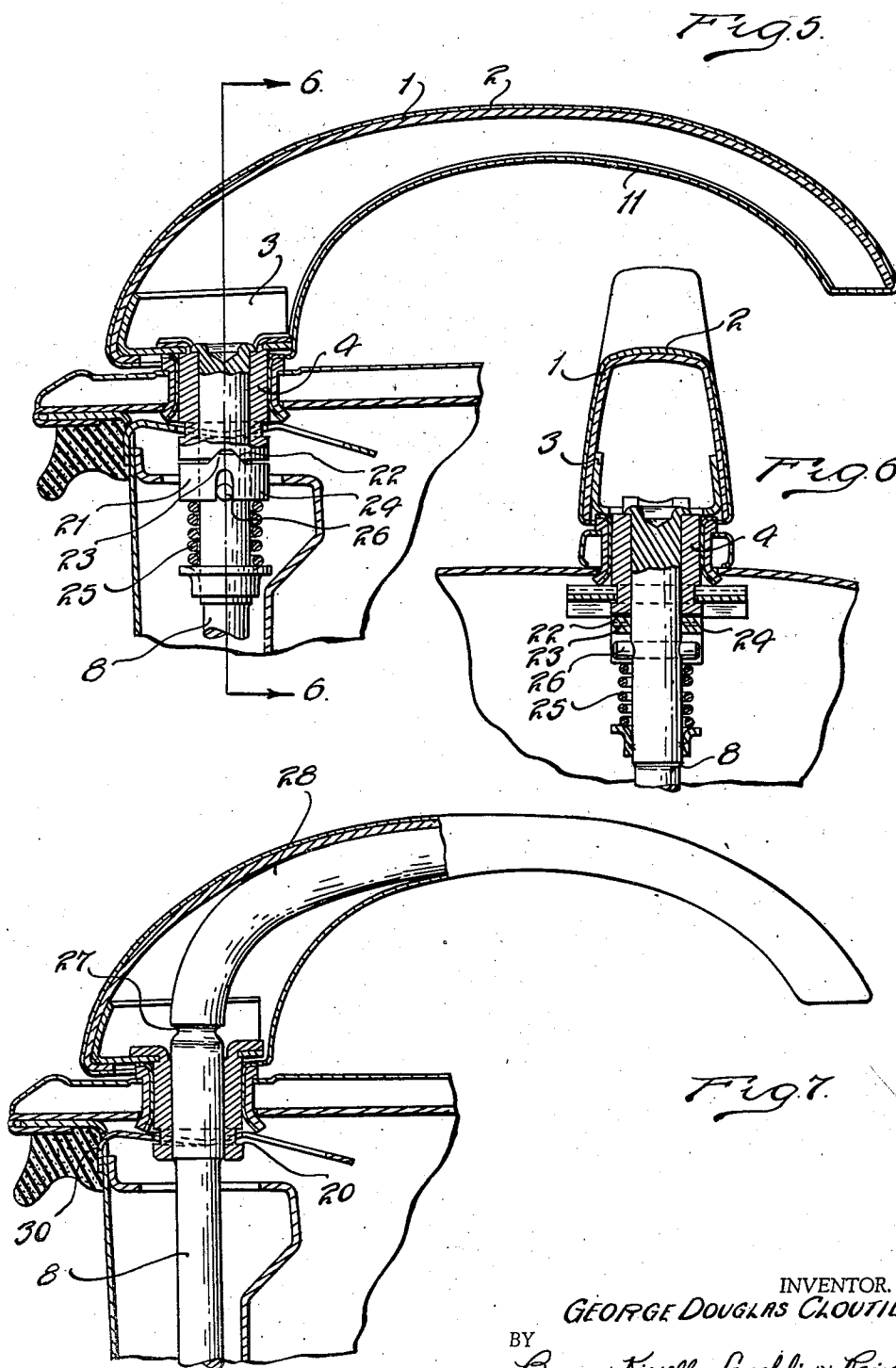
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2,339,980

STAMPED METAL OUTSIDE DOOR HANDLE

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Application September 11, 1941, Serial No. 410,425

3 Claims. (Cl. 292—347)

This invention relates to stamped metal door handles.

It is an object of the invention to afford a cheap handle, particularly an outside door handle for an automobile. Outside door handles have been made of late years chiefly as die castings. The present invention consists of a handle which is largely made of stampings with a small steel hub.

In the drawings:

Fig. 1 is a fragmentary view of a door showing the handle in elevation.

Fig. 2 is a section on the line 2—2 of Fig. 1.

Figs. 3 and 4 are sections on the corresponding section lines of Fig. 2.

Fig. 5 is a sectional view of a modified form of the invention.

Fig. 6 is a cross section of the same.

Fig. 7 is a sectional view of a still further modified form.

The grip portion of the handle is formed by a channel stamping 1 over which is fitted an ornamental scalp 2. This scalp may be stainless steel or may be a thin chrome-plated or nickel-plated metal. Welded to the end of the channel stamping 1 is a sheet metal cap piece 3 which closes the end of the channel arm. A steel ferrule 4 has tangs 5 which can be turned over and against the inside of the cap piece 3 when the ferrule is passed through the opening 6 in the cap piece before that member is welded to the channel member 1. These tangs can be spot welded to the cap piece 3. The cap piece rests against the shoulder 7 of the ferrule. The handle spindle 8 has an enlarged end 9 which prevents the spindle from dropping through the central opening in the ferrule 4. The spindle can be tied to the ferrule by a shear pin or screw 10. When the handle is forced in attempting to break the lock and get into the car, this shear pin will break as described and claimed in the Fox Patent No. 1,744,957.

The ferrule is assembled to the cap piece and the spindle assembled in the ferrule before the cap piece is spot welded to the channel arm 1. Then the thin metal backing plate 11 and the scalp 12 are assembled over the channel arm 1 to complete the grip portion and the handle assembly.

A retainer clip 13 is then inserted through the opening 14 in the jamb face of the door. It is only inserted part way at first so that the ferrule will be able to pass through the enlarged portion 16 of the bayonet slot 17. This clip is made of spring metal and has a double bow or reversed

curve so that when it is pressed into its seat it will be under stress by reason of the bowed portions bearing against the inner end of the bushing and the wall of the annular groove 20, and the turned over end 30 of the clip also bears against the jamb face of the door. This keeps the clip securely in place and also prevents rattling.

The ferrule portion of the handle is rotatably retained in a metal bushing 18 backed up by a rubber sleeve 19 as described and claimed in the Barnes Patent No. 2,104,217. After the handle assembly has been pushed through the bushing 18 and the large opening 16 of the bayonet slot of the clip and the annular groove 20 registers with the clip, the clip 13 may be pushed in the slot 14 as far as this will go. This brings the narrowed portions of the clip in engagement with the annular slot 20 and holds the assembly in place.

The modification shown in Figs. 5 and 6 is the same as that already described, except in place of a shear pin a yieldable clutch 21 is used. The ferrule is provided with a recess 22 in which the tooth 23 of the clutch collar 24 is normally engaged by the pressure of spring 25. This pressure is ordinarily sufficient to cause the ferrule and the clutch collar to revolve together. The clutch collar has a pin and slot connection 26 with the spindle 8, but when the handle is forced, the tooth 23 with its inclined sides will be forced out of the recess and the handle will rotate without carrying the spindle 8 with it.

The modification shown in Fig. 7 is the same as that shown in Figs. 1 to 4, except here the spindle 8 has a weakened or reduced portion 27 and the end of the spindle is bent over as shown at 28. No shear pin is used, but when the handle is forced, the spindle will break at the weakened portion 27.

What I claim is:

1. A handle assembly, having in combination a grip formed by a curved arm of channel cross-section and gradually enlarging in cross-section toward the inner end of the arm, which end is open, a perforated cap piece having flanges adapted to fit into the inner end of the arm and anchored therein and a ferrule having a shoulder and tangs at one end, the perforated cap piece being fitted over the tangs and resting on said shoulder and the tangs securing the cap piece to anchor the cap piece to the ferrule.

2. A handle assembly, having in combination a grip formed by a curved arm of channel cross-section and gradually enlarging in cross-section

toward the inner end of the arm, which end is open, a perforated cap piece having flanges adapted to fit into the inner end of the arm and anchored therein, a ferrule having a shoulder and tangs at one end, the perforated cap piece being fitted over the tangs and resting on said shoulder and the tangs securing the cap piece to anchor the cap piece to the ferrule and an ornamental metal scalp fitted over said curved arm.

3. A handle assembly, having in combination a grip formed by a curved arm of channel cross-section and gradually enlarging in cross-section toward the inner end of the arm, which end is open, a perforated cap piece having flanges

adapted to fit into the inner end of the arm and anchored therein, a ferrule having a shoulder and tangs at one end, the perforated cap piece being fitted over the tangs and resting on said shoulder and the tangs securing the cap piece to anchor the cap piece to the ferrule and an ornamental metal scalp fitted over said curved arm, a backing plate fitted over the opening in the channelled arm, said scalp having edges engaging the channelled arm for holding the same in place and also holding the backing plate over the opening in the channelled arm.

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