(No Model.)

F. ECAUBERT.

WATCH CASE.

No. 457,147. Patented Aug. 4, 1891.

Fig. 1.

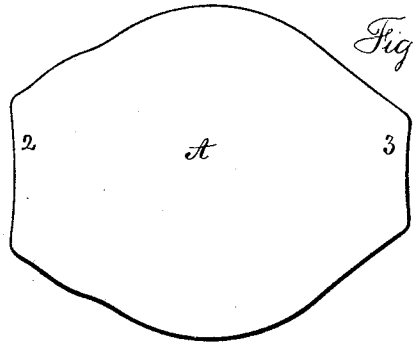


Fig. 5.

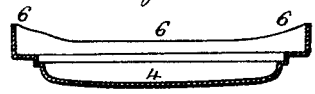


Fig. 4.

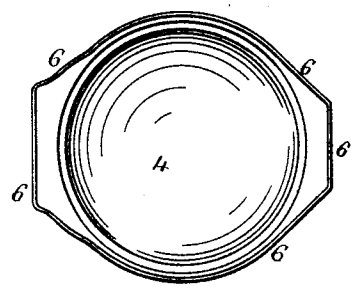


Fig. 3.

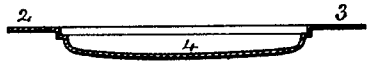


Fig. 2.

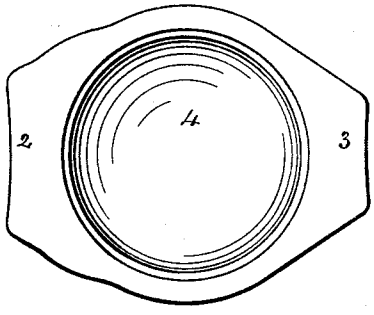


Fig. 6.

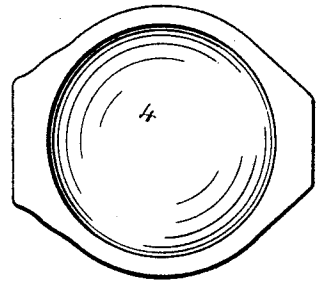
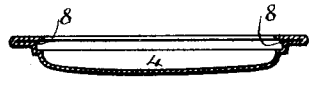


Fig. 7.



Witnesses:
J. Stahl
Chas. H. Smith

Inventor:
Frederic Ecaubert
per Lemuel W. Serrell
Atty

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

FREDERIC ECAUBERT, OF BROOKLYN, NEW YORK.

WATCH-CASE.

SPECIFICATION forming part of Letters Patent No. 457,147, dated August 4, 1891.

Application filed March 18, 1887. Serial No. 231,361. (No model.)

To all whom it may concern:

Be it known that I, FREDERIC ECAUBERT, of Brooklyn, in the county of Kings and State of New York, have invented an Improvement in Watch-Cases, of which the following is a specification.

Watch-cases have heretofore been made with a ring or center having box-shaped projections at the shank and sometimes at the portion opposite to the shank, and in my application Serial No. 219,250, filed November 18, 1886, I have shown a means for making such box-shaped centers out of one piece of sheet metal. The lids of the case that are used with these box-shaped centers have heretofore been made with projections corresponding generally in shape to the configuration of the box-shaped projections upon the watch-case center or ring. These projections have been soldered onto the lids or cases; but they are objectionable, because they are liable to break off, and also because the line of solder necessarily occupies a position where it is noticeable. Hence the appearance of the watch-case is injured thereby.

My present invention relates to improvements by which the lid or case with the box-shaped projections thereon are formed in one piece, without soldering, to attach the parts together, and with the visible portions of the case composed of the plated or polished surface of the metallic sheet.

It is to be understood that my present improvements may be used in the manufacture of watch-cases made from solid gold or silver sheets or their alloys; but it is mostly made use of in the manufacture of watch-cases from rolled plate, in which the surface is either gold or silver and the body of an inferior metal, such as brass.

In the drawings the figures represent the successive stages in the manufacture of the case.

The sheet-metal blank A, Figure 1, is not circular, but it has at one side a projection 2, extending sufficiently beyond the circle, for the purposes hereinafter named, and if the case is to have a box-shaped projection at opposite sides the blank will have a second portion 3 projecting beyond the otherwise circular blank. This blank is subjected to the action of circular dies which press into the same, a circular recess 4, as shown in side view in Fig. 2 and section in Fig. 3, which recess forms the hollow portion of the watch case or lid, and the dies are to be made in such a manner that the sheet metal around the recess 4, including the portions 2 and 3 of the blank, is kept flat or level. The next operation is performed by suitable dies, which turn up a rim all around the edge of the sheet-metal blank, as seen at 6 in the side view, Fig. 4, and section, Fig. 5. The outline of this rim corresponds to the outline of the complete case or lid, including the box-shaped projection or projections. The third operation performed on the blank is to fold this rim down flat all around, and it will be apparent that as this rim is wider at the box-shaped projections than it is at the circular portion when the rim is folded down flat the inner edge thereof will be circular, or nearly so. In folding down this rim flat either one or more operations may be made use of—that is to say, it may be folded down part way by a die upon an internal sectional plate that is afterward to be removed, thereby preventing the development of folds or creases in the metal, or else the rim is folded down at one operation and pressed flat against the other portion of the sheet metal that projects around the recess in the case. Under any circumstances the inturned sheet metal forms a double rim to the case, as shown in a side view in Fig. 6 and section in Fig. 7, and the inner edge of this rim is to be turned off true to snap over the annular undercut rib on the watch-case center.

The hinge uniting the case to the watch-case center is to be made in the usual manner.

It will now be apparent that the line of the case is made complete without the use of solder, and that there are no joints in such case, and that the surface of the plate of metal is not cut away, so as to expose the body when roll-plate is made use of, except at the undercut portion forming the snap, and practically there is no objection to this part of the case being turned, because it is always more or less scored or scratched in snapping the case upon the head of the watch-case center.

The folded rim may be strengthened, if de-

sired, by solder run in between the surfaces, as at 8, and this solder being at the angle around the recessed portion of the case is invisible, or nearly so, under ordinary circumstances.

I have used the term "lid" as applying to either the front or back cover of the case.

I claim as my invention—

The watch-case cover or lid of one piece of sheet metal without seam having a circular concavity, a flat rim extending outside such circular concavity and wider at some portions than at other portions and folded double for the edge to correspond with the box-shaped projections on the center and the inner edge of the sheet metal turned off circular to correspond to the snaps upon the watch-case center, substantially as specified.

Signed by me this 16th day of March, 1887.

F. ECAUBERT.

Witnesses:
GEO. T. PINCKNEY,
W. L. SERRELL.