May 11, 1937. H. M. HART ET AL 2,080,174

DOOR HANDLE AND THE LIKE

Filed Jan. 22, 1936

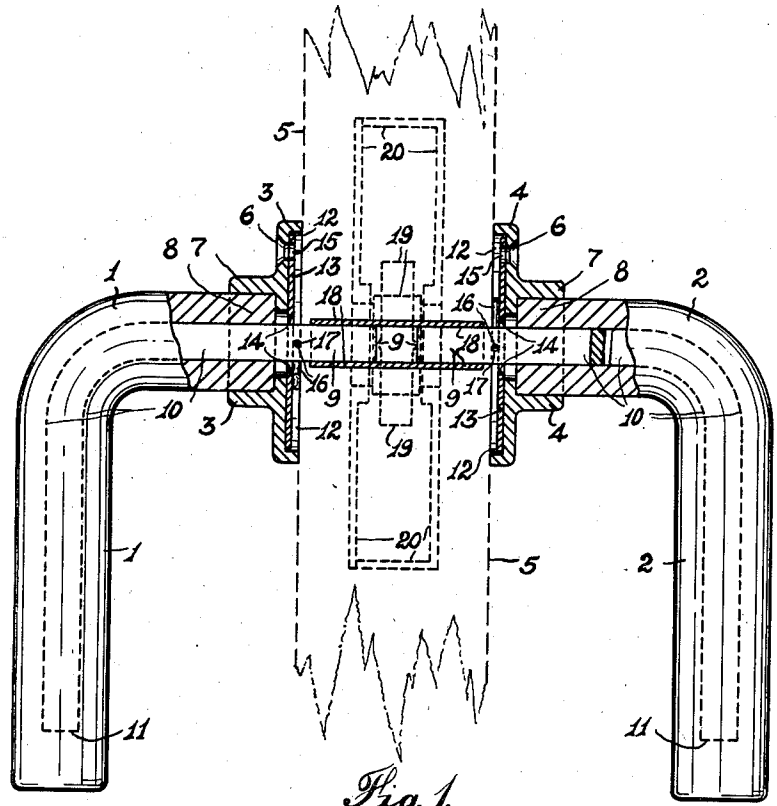


Fig. 1.

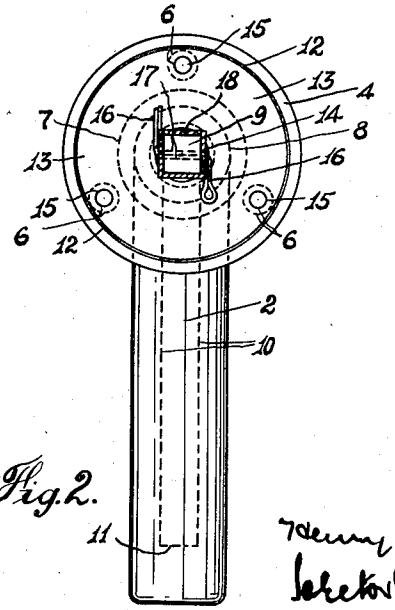


Fig. 2.

Witness:
Arthur Thompson

Inventors:
Henry Morris Hart
Hector Raymond Hart
Edmund Hector Lonsdale Hart

Patented May 11, 1937 2,080,174

UNITED STATES PATENT OFFICE

2,080,174

DOOR HANDLE AND THE LIKE

Henry Morris Hart and Hector Raymond Hart, Durban, and Edward Hector Lonsdale Hart, Johannesburg, Union of South Africa

Application January 22, 1936, Serial No. 60,298
In the Union of South Africa November 13, 1935

2 Claims. (Cl. 292—348)

This invention relates to door handles and the like.

The object of the invention is to produce door handles having means for securing the same in position to the door, which will allow of such handles being used with varying thicknesses of doors, and to accomplish this purpose by a simple, efficient and comparatively inexpensive construction which can be easily and quickly arranged and secured in operative position.

This object is attained by means which obviate the necessity for providing the spindle on which the handles are operatively arranged with a screw-thread or threads, or with grooves, or holes or recesses for fixing screws, thereby avoiding the difficulty in adjusting existing handles by such means, and the other drawbacks appertaining thereto.

The handle for each side of the door may be made of any desired shape, and of any suitable metal or material, such as reinforced bakelite or synthetic resin. Each handle portion is rotatably arranged in a rose or relatively stationary part, which is fixed to the door. For this purpose said rose may be provided with a suitable number of holes for the screws fixing it to the door, and be provided with a boss to afford sufficient bearing for the handle to rotate in. The rose may be constructed on the side next the door with a recess, and if made of bakelite or similar material, a suitable metal washer or plate will be seated within said recess and formed with holes coincident with the holes for the fixing screws in the rose, so that said screws will serve for non-rotatably retaining the washer or plate in position.

According to the invention each handle portion is provided with a spindle projecting for a suitable short distance beyond the inner face of the rose. These spindles are of square or any other non-circular shape in cross-section, and are secured in position and rotatably retained in the rose by any suitable means, such as a split pin. The inwardly projecting non-circular spindle portions of the handles in the door are rotatably connected together by means of a sleeve or ferrule of corresponding non-circular shape, or otherwise shaped interiorly non-rotatably to receive the inwardly projecting spindle portions of the handles. The sleeve or ferrule is shaped exteriorly operatively to engage with the means for operating the catch, latch, bolt, or other door-retaining or locking means or device.

Instead of constructing the sleeve or ferrule of square or other non-circular internal shape to fit over the correspondingly shaped ends of the projecting spindle portions, as above described, the latter may be made hollow and of square or other non-circular shape in cross-section internally, and the sleeve or connecting piece be shaped to project into and fit the spindle ends.

The handles may, if required, be reinforced by constructing the spindle portions of suitable length to extend into and be embedded in the bakelite or similar handle for any suitable distance.

The invention will be further explained with the aid of the accompanying sheet of drawing, wherein

Fig. 1 is a part-sectional elevation of the two handles and the sleeve or connecting means; portion of the door frame, the lock casing, and that element of the lock which is mounted on the sleeve or connecting means and functions to operate the catch or retaining means, being shown in dotted lines, and

Fig. 2 is a section through the sleeve or connecting means, showing the rose and one handle as seen from the inside.

In Fig. 1, the numerals 1, 2, denote the handles which may be constructed of bakelite or any other suitable material, and be of the shape shown or any other suitable shape.

3 and 4 are the roses, which are secured to the door 5 by means of screws screwed through countersunk holes 6 in the roses into the door 5. The roses 3, 4, as usual, are constructed with hollow bosses 7 in which are rotatably arranged the inner cylindrical end portions 8 of the handles 1, 2.

9 are the short projecting spindles. Each projecting spindle 9 is a portion of a bar 10, which extends into the handle to a point 11 near the outer end thereof, and serves as the means for reinforcing the bakelite or similar material of the handle.

Each rose 3 or 4, in the inside, is recessed as indicated at 12, and in said recess 12 is arranged a metal washer or plate 13, which is fashioned with a hole 14 the diameter of which is sufficient to allow the spindle 9 to rotate therein whilst affording it a bearing at the corners. The washer or plate 13 is provided with holes 15 which coincide with the holes 6 in the rose, and it is secured to the rose by means of the screws which are placed in said holes 6.

Each handle is rotatably retained in position by means of a split pin 16 which projects through a hole 17 in the squared spindle portion 9 and engages with the inner face of the washer or

plate 13. As shown in Fig. 2 the split pin 16 is bent so as to prevent its disengagement from the spindle portion 9.

18 is the sleeve, ferrule or connecting piece which is shown made of internal and external square shape in cross-section. The spindles 9, when the handles 1, 2, are in position, project for some distance into the sleeve 18, so that they cannot rotate therein, and so that the rotary movement of either handle is communicated to the other through the sleeve 18.

19 represents the lever or that part of the catch operating means which is arranged on the sleeve 18 and is of square internal shape to fit the latter. 20 is the lock casing fitted in the door 5.

It will be evident that by connecting the spindle portions 9 of the handles 1, 2, by means of the sleeve 18, the arrangement can be adopted for doors of different thickness, and that the necessity for any careful adjustment of the parts in fixing the handles 1, 2, to the door 5 is obviated.

What we claim as our invention and desire to protect by Letters Patent is:

1. In door handles, in combination, a pair of handles each constructed with an inwardly projecting spindle portion of non-circular shape in cross-section, means for rotatably attaching said handles to opposite sides of the door, and a hollow connecting piece of the same shape internally as the spindles are externally, which is positioned between the handles and is slidably and non-rotatably engaged by the inwardly projecting spindle portions, as set forth.

2. In door handles, in combination, a pair of handles each constructed with an inwardly projecting spindle portion of square shape in cross-section, means for rotatably attaching said handles to opposite sides of the door, and a loose sleeve of square shape internally positioned between the handles and non-rotatably and slidably engaged by the inwardly projecting spindle portions, as set forth.

HENRY MORRIS HART.
HECTOR RAYMOND HART.
EDWARD HECTOR LONSDALE HART.