Feb. 11, 1941. G. L. EBER 2,231,060

HANDLE

Filed March 21, 1939

Fig. 1.

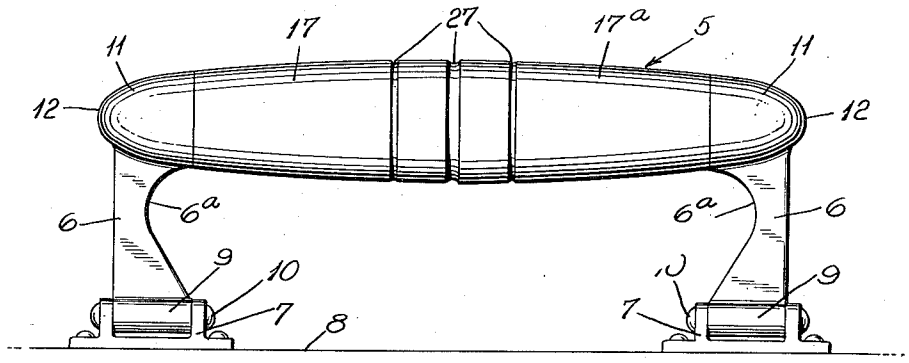


Fig. 2.

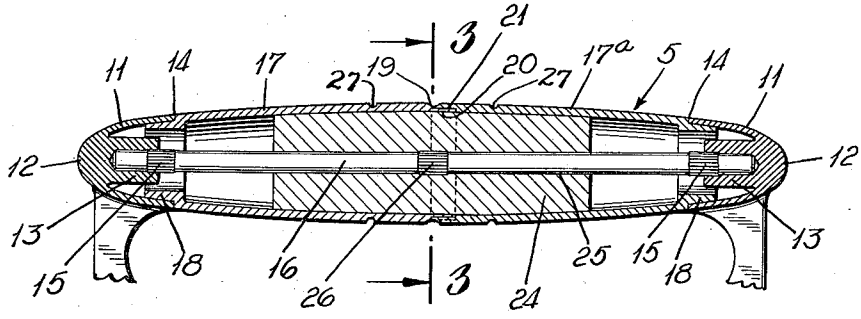
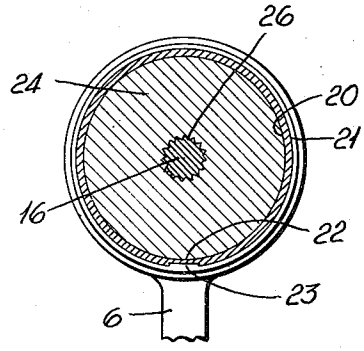


Fig. 3.



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HANDLE

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5 Claims. (Cl. 16—112)

This invention relates to handles adapted for use in connection with various types and kinds of devices, and particularly handles for luggage; and the object of the invention is to provide a strong and durable handle structure of the kind under consideration which can be economically constructed by virtue of the simplicity of the parts, and produce, in the finished product, a neat and comfortable hand-grip or handle member; a still further object being to provide a device of the character described wherein no exposed screws, nuts, bolts or other devices are exposed at the hand-grip portion of the device, and still further in providing a device wherein the separate parts are so assembled as to prevent relative movement or displacement of the parts in the use of the device; and with these and other objects in view, the invention consists in a device of the class and for the purpose specified which is simple in construction 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 my improvement are designated by suitable reference characters in each of the views, and in which:

Fig. 1 is a side view of a handle member made according to my invention illustrating one method of mounting the same.

Fig. 2 is a longitudinal sectional view through a part of the device shown in Fig. 1; and

Fig. 3 is a cross-section on the line 3—3 of Fig. 2 on an enlarged scale.

In the drawing is illustrated one arrangement of handle construction made according to my invention, which consists of a hand-gripping portion 5 with supporting arms 6 for pivotally mounting the handle in connection with U-shaped brackets 7 secured to any suitable support indicated by the line 8 in Fig. 1 of the drawing. In dealing with luggage, this support 8 may constitute one outer wall of a suitcase or other piece of luggage.

The free ends of the arms 6 have cylindrical bearings 9 which fit snugly within the U-shaped brackets 7 and are pivoted thereto by rivet pins or other pivots 10. The other ends of the arms 6 terminate in conical cups 11 which might also be described as bullet ends for the hand-gripping portion 5 of the handle member. The cups 11 are tubular in form except that the outer rounded and more or less pointed ends 12 thereof are closed. These ends include inwardly projecting tubular bearings 13 which terminate short of the open ends 14 of said cups and receive the knurled end portions 15 of a coupling rod 16 which serves to join both of the cups 11, as clearly seen in Fig. 2 of the drawing.

The hand-group portion 5 consists of two substantially similar sleeves 17, 17a each terminating at its outer end in a reduced sleeve extension 18 fashioned to fit snugly in the open end 14 of the cups 11 and so that the outer surfaces of the sleeves 17, 17a are flush with the outer surface of the cups 11. In other words, in the construction shown, the sleeves 17, 17a are contracted and tapered from the adjacent coupled ends 19 thereof to the sleeve ends 18, thus producing a very comfortable form of hand-grip, or in other words, one which will provide a more comfortable carrying of a heavy piece of luggage and at the same time producing a neat and finished appearance to the entire handle member.

The sleeve 17 where it joins the sleeve 17a at 19, has a reduced coupling portion 20 which extends into a recessed portion 21 in the part 17a. At one position in the circumference, the part 17 has a key recess 22 receiving a projecting key member 23 in the part 17a. This construction serves to key the sleeves 17, 17a against rotation one upon the other.

In the construction of very strong handle members, it is also desirable to employ within the parts 17, 17a at the coupled portions 19 thereof, a reinforcing block 24 of wood or any other suitable material, having a bore 25 extending therethrough for the reception of the rod 16. It is also preferred that at least part of the rod be knurled as seen at 26 to secure the block 24 against rotation on the rod. The outer contour of the block 24 is made to fit snugly within and conform with the inner surfaces of the sleeve parts 17, 17a. It will be apparent that the block 24 will maintain the parts 17, 17a against any possible spreading at the coupling 19 when subjected to excessive stresses or strains as might be the case when used upon large or heavy luggage, but as above indicated, the block 24 is not absolutely essential.

It will also appear that the arms 6 are recessed as seen at 6a so as to comfortably receive the fingers of a large hand and to provide comfortable end walls on the handle in comparison with a straight wall which might have some cutting effect upon the hand, especially if the entire luggage or other article were strained in a direction longitudinally of the handle when the latter was grasped in the hand; for exam-

ple, in striking a piece of luggage against an object in the process of carrying the same.

From the foregoing description it will appear that there is no exposure whatsoever on the handle member, and particularly the hand-grip portion 5 thereof including the end caps or cups 11, of screws, bolts, rivets, or other forms of fastenings, thus producing not only a neat and finished appearance, but also produces a substantially moisture-proof construction omitting all crevices that would be objectionable from this standpoint, although the outer surface of the parts 17, 17a may be grooved slightly as seen at 27, note Fig. 1 of the drawing, simply to give a more attractive appearance of the resulting product. However, these grooves are of course not essential.

In the construction of the device, any suitable materials may be used for the parts 6 including the integral cups 11 and bearings 9 thereof. It is preferred in the better grade of handles to use a non-corrosive metal, or metals of any kind could be used and then plated for protection against the elements, or these parts may simply be enamelled; whereas the parts 17, 17a may be composed of various composition materials or of metal. In using metal, the same may be painted, lacquered, enamelled or plated, as will be apparent, it being preferred to color the parts 17, 17a contrasting to the colors of the parts 11 to provide a more attractive appearance in the finished product. The colors may be simply the contrasting colors of materials employed, or in the plating or finishing thereof.

In assembling the device, this operation may be performed in many ways. One procedure will be to first mount the rod 16 in the block 24, after which the parts 17, 17a could be firmly pressed one upon the other to couple the same together as at 19. It will be understood that tight fits will be provided between these parts, but not necessarily drive fits. After this, the end caps with the integral arms 6 may be placed in position, and these caps will fit tightly upon the extensions 18. It is preferred that the ends 15 of the rod be forcibly moved into the sleeves 13. Here, pressure may be necessary which would be more or less equivalent to a drive fit. In the latter operation, care will be taken to properly aline the arms 6 one with respect to the other so that the axes of the bearings 9 will be in common alinement. In the last named operation, the knurled portions 15 of the rod ends will cut their way into the tubular bearings 13, not only in forming secure couplings with these bearings, but also in retaining the caps 11 against rotation on the rod which will produce a very firm and rigid or non-yielding hand-grip portion. The overlapping of the couplings as at 14 and 19 will prevent moisture from entering the handle, thus assuring long life in the use thereof.

By constructing the various parts in the manner described, it will appear that the operation of assembling the parts is simplified and can be handled automatically rather than by requiring hand assemblage as is usually the case with the average form of handle construction.

It will also be apparent that handles of the type and kind under consideration can be used for many purposes and in fact for any purpose where a handle may be desired. In this connection it will be apparent that the free ends of the arms 6 may be modified in structure to adapt them to different uses or mountings. This is especially so when the pivotal or swivel mounting is not desirable.

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

1. A handle of the character described comprising a hand-grip portion terminating in mounting ends formed independently of the hand-grip portion and secured thereto, said mounting ends being of similar construction and each having offset arms forming means for coupling the handle with a suitable support, said mounting ends having outer surfaces continuous and flush with the surfaces of said hand-grip portion, means extending through the hand-grip portion and forcibly imbedded in said mounting ends for coupling said mounting ends one with the other and keying the same against relative rotation, said means comprising a rod having knurled portions at the ends thereof.

2. A handle of the character described comprising a hand-grip portion terminating in mounting ends formed independently of the hand-grip portion and secured thereto, said mounting ends being of similar construction and each having offset arms, forming means for coupling the handle with a suitable support, said mounting ends having outer surfaces continuous and flush with the surfaces of said hand-grip portion, means extending through the hand-grip portion coupling said mounting ends one with the other, said hand-grip portion being tubular in form and composed of separate parts joined centrally of said hand-grip, and a reinforcing block arranged centrally of said last named coupling means and contacting inner surfaces of said hand grip portion adjacent the joined portions thereof.

3. A handle of the class described comprising an elongated tubular body forming the hand-grip of said handle member, caps arranged upon and closing the ends of said tubular body, said caps having transversely extending arms forming mounting members for said handle, a rod arranged longitudinally of said tubular body and secured to said caps for coupling said caps together with the tubular body therebetween, and said rod slidably engaging said caps in a manner to prevent relative rotary movement thereof.

4. A handle of the class described comprising an elongated tubular body forming the hand-grip of said handle member, caps arranged upon and closing the ends of said tubular body, said caps having radially extending supporting arms, a rod arranged longitudinally of said tubular body and secured to said caps for coupling said caps together with the tubular body therebetween, said tubular body being composed of two substantially similar parts, adjacent ends of which are overlapped, means on the overlapped portions of said parts for keying the same against relative movement, the inner ends of said caps being tubular in form, the outer ends of the separate parts of said tubular body having reduced tubular extensions fitting snugly in the tubular portions of said caps in a manner to dispose the outer surfaces of said tubular body and caps in common alinement, means for keying the caps against rotation on said rod, and a reinforcing block arranged centrally of said rod and fitting snugly within adjacent end portions of said tubular parts for reinforcing said parts.

5. A handle of the class described comprising a hand grip of substantially ellipsoidal form and means involving a pair of protruding members

extending in common alinement from one side of said hand grip at opposed ends thereof for attaching the handle to a support, said handle grip including a thin wall hollow body portion and substantially dome shaped end members interfitting with the opposed ends of said body portion, said protruding members being integral with said dome shaped members, said end members being united by a rigid reenforcing and joining member extending longitudinally of said body portion, means centrally of said hollow body and circumferentially engaging said joining member for reenforcing the thin wall structure of said body, cooperating means on said joining member and end members for keying the same against rotary movement one with respect to the other, and said last named means comprising knurled portions on said joining member adapted to be imbedded in internal socket portions of said end members in the force mounting of said end members on said joining member.

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