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H. E. EVANS

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ASH TRAY AND BEVERAGE CUP HOLDER

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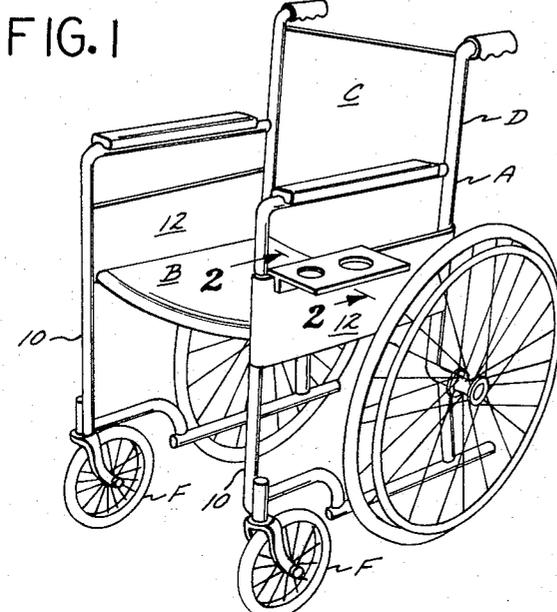


FIG. 1

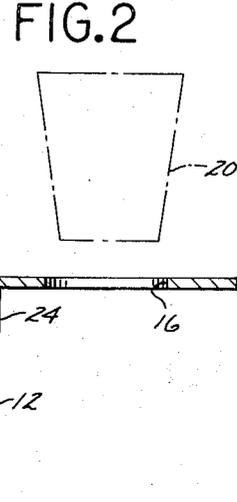


FIG. 2

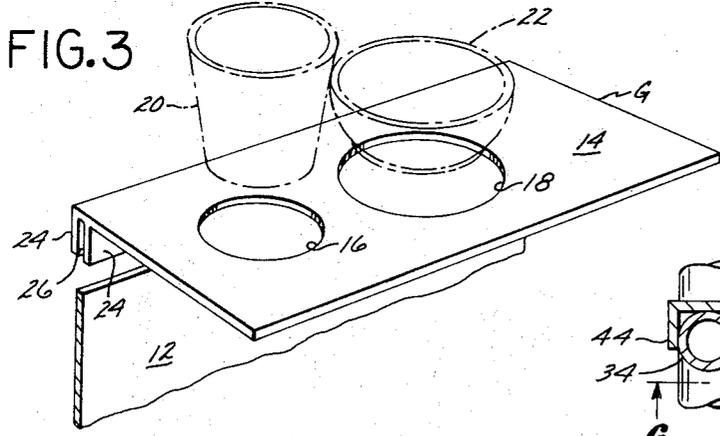


FIG. 3

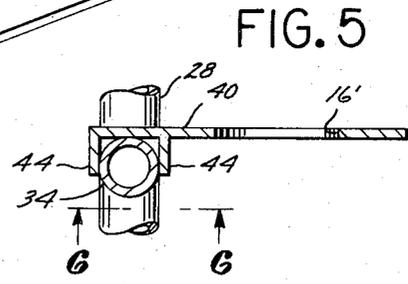


FIG. 5

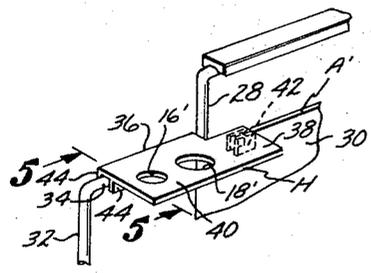


FIG. 4

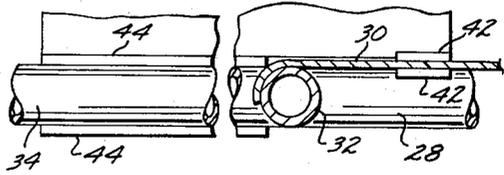


FIG. 6

INVENTOR
HELEN E. EVANS
BY
William C. Babcock
ATTORNEY

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ASH TRAY AND BEVERAGE CUP HOLDER

Helen E. Evans, 125 E. Neece,
Long Beach, Calif. 90805

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Invalids using wheelchairs are, of course, restricted in their movements and subject to serious danger in the handling of hot beverages such as coffee, tea, chocolate, or the like, and for the same reason the safe and convenient positioning of an ash tray is difficult.

A major object of the present invention is to provide a combined holder for an ash tray and glasses or cups which is so designed that it may be easily and conveniently mounted on a conventional wheelchair without the use of tools, and when not required, can be readily removed therefrom.

Another object of the invention is to supply a holder for beverage container and ash tray of a simple structure, which can be fabricated from standard, commercially available materials, requires no elaborate plant facilities for the production thereof, and can be manufactured and retailed at a sufficiently low cost as to encourage its widespread use.

A still further object of the invention is to furnish a holder for glasses, cups and an ash tray, that is particularly adapted to manufacture as an integral unit from a suitable lightweight rigid material, such as one of the numerous polymerizable resins available for such purposes, or from a lightweight metal, such as magnesium, aluminum, or an alloy thereof.

These and other objects and advantages of the invention will become apparent from the following description of several forms thereof, and from the accompanying drawing illustrating the same, in which:

FIGURE 1 is a perspective view of a conventional wheelchair with the first form of the invention removably supported thereon and so supported as to be capable of holding a glass, or cup, and ash tray in positions where these articles may be conveniently reached by the occupant of the wheelchair;

FIGURE 2 is a transverse cross-sectional view of the device shown in FIGURE 1, taken on the line 2-2 thereof;

FIGURE 3 is an enlarged perspective view of the invention shown in FIGURE 1, with the holder being situated just above the wall portion of the wheelchair that it will removably engage when in supporting position;

FIGURE 4 is a perspective view of a second form of the invention removably mounted on a side portion of a second form of wheelchair;

FIGURE 5 is a transverse cross-sectional view of the device shown in FIGURE 4, taken on the line 5-5 thereof; and

FIGURE 6 is a combined transverse cross-sectional and a bottom plan view of the second form of the device.

A conventional form of invalid's wheelchair A is shown in FIGURE 1, which comprises a seat B, back C, and a tubular frame D and is movably supported by two laterally spaced large rubber-tired wheels E and two forwardly disposed wheels F of substantially smaller diameter than that of the rear wheels. The frame D includes two inverted L-shaped side members 10 having two thin walls 12 extending rearwardly therefrom to that portion of the frame D disposed on opposite sides of the back C. The wheelchair above described is conventional and forms no part of the present invention.

The first form G of the invention shown in detail in FIGURES 2 and 3, includes a rectangular plate 14 formed from a rigid lightweight material. At least two longitudinally spaced openings 16 and 18 are formed in plate 14,

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with the opening 16 being of such cross section that a cup or glass 20, shown in phantom line in FIGURE 3, may be so disposed as to extend partially below the plate 14 when positioned in the opening 16. The cup or glass 20 has downwardly and inwardly extending side walls, and is accordingly frusto-conical in shape. The circumferential edge of the plate 14 in which opening 16 is formed removably engages a circumferential section of the tapered side wall of the glass or cup 20, and removably supports the same from the plate 14. The opening 18 is normally of larger diameter than that of opening 16, and the opening 18 removably engages the tapered side wall of a bowl-like ash tray 22, which is shown in phantom line in FIGURE 3. It will be apparent that either the glass or cup 20, as well as the ash tray 22, will be securely held when disposed in openings 16 and 18 of plate 14, but may be easily removed from these openings.

Two parallel, laterally spaced ribs 24 extend downwardly from the longitudinal edge of plate 14, with the ribs being separated by a longitudinally extending space 26 that is but slightly wider than the width of one of the walls 12. As a result, the ribs 24 cooperatively provide means to removably support the plate 14 from the wall 12 when the upper longitudinal portion of the wall 12 is disposed within the confines of the space 26.

A partial perspective view of an alternate form of wheelchair A' is shown in FIGURE 4 in which each side is defined by an inverted L-shaped frame 28 from which a horizontal wall 30 extends rearwardly to the back of the chair (not shown). Each side also includes a second forwardly disposed inverted L-shaped frame piece 32 that has an upper horizontal leg 34 thereof joined to the inverted L-shaped side piece 28.

A second form of the invention H is provided for use on this alternate form of wheelchair. The second form H of holder includes a rigid plate 36. A rear rectangular portion 38 of plate 36 is narrower than a forwardly disposed portion 40 thereof. Two laterally spaced ribs 42 depend from the longitudinal edge of the plate portion 38 and slidably engage the upper part of wall 30 in the same manner as the ribs 24 previously described.

Two parallel rigid members 44 depend from a longitudinal edge of the plate portion 40, and are so spaced as to be disposed on opposite sides of the horizontal leg 34. The members 44 in cooperation with the ribs 42 serve to removably support the plate 36 on the wheelchair, as shown in FIGURE 4. Two openings 16' and 18' are formed in plate 36 that serve the same function as the openings 16 and 18 shown in FIGURE 3. The form of the device shown in FIGURE 4 serves the same function as that illustrated in FIGURES 1 to 3 inclusive.

The use and operation of the two forms of the invention will be obvious from the previous description thereof, and accordingly need not be repeated.

Although the present invention is fully capable of achieving the objects and providing the advantages hereinafore mentioned, it is to be understood that it is merely illustrative of the presently preferred embodiment thereof and I do not mean to be limited to the details of construction herein shown and described, other than as defined in the appended claims.

I claim:

1. In combination with an invalid's wheelchair which includes a tubular frame, a seat, two large rearwardly disposed wheels and two small forwardly disposed wheels that movably support said frame and seat, and two laterally spaced thin horizontal walls affixed to said frame which are partially situated between said large wheels and seat, a combination holder for a frusto-conical glass or cup and ash tray having a downwardly and inwardly tapering circular side wall, which holder comprises:

(a) two parallel, laterally spaced ribs for removably

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engaging an upper longitudinal edge portion of one of said walls forwardly of one of said large wheels; and

(b) a rigid plate having a longitudinal side to which said ribs are affixed, said plate supported by said ribs in a horizontal position forwardly of said large wheels, said plate being formed with longitudinally spaced first and second openings therein, with said first opening being of such cross section that said glass or cup may be removably supported by said plate when inserted therein, and said second opening being of such size that said ash tray is removably supported by said plate when disposed in said second opening.

2. A device as defined in claim 1 wherein said ribs extend the length of said plate.

3. A device as defined in claim 1 wherein said plate and ribs are formed as an integral unit from a rigid lightweight material.

4. A device as defined in claim 1 wherein said frame is provided with a horizontal tubular portion forwardly of each of said walls, with said holder further including:

(c) two laterally spaced members affixed to said plate and disposed forwardly of said ribs that removably engage said tubular portion and cooperate with said

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ribs to removably maintain said plate in a fixed position relative to said frame.

5. A device as defined in claim 4 wherein said plate has a rear rectangular portion of a first width from which said ribs extend, and a forward rectangular portion of a second width greater than that of said first width, with said laterally spaced members projecting downwardly from a longitudinal edge area of said forward portion.

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DAVID J. WILLIAMOWSKY, *Primary Examiner.*

JAMES T. McCALL, *Examiner.*