Aug. 9, 1966 N. J. LA BOMBARD ETAL 3,265,436

TRAY ATTACHMENT FOR CHAIRS

Filed Aug. 10, 1964 2 Sheets-Sheet 1

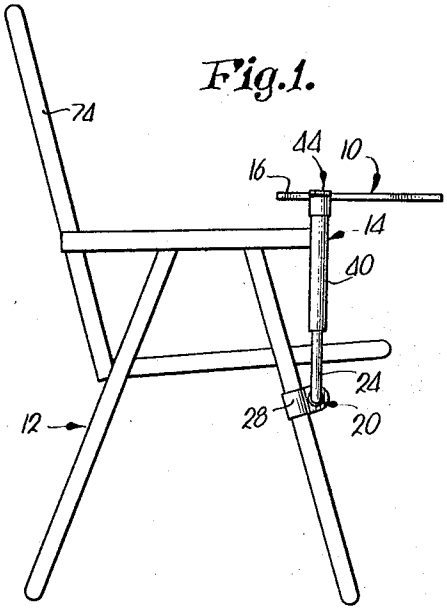


Fig.1.

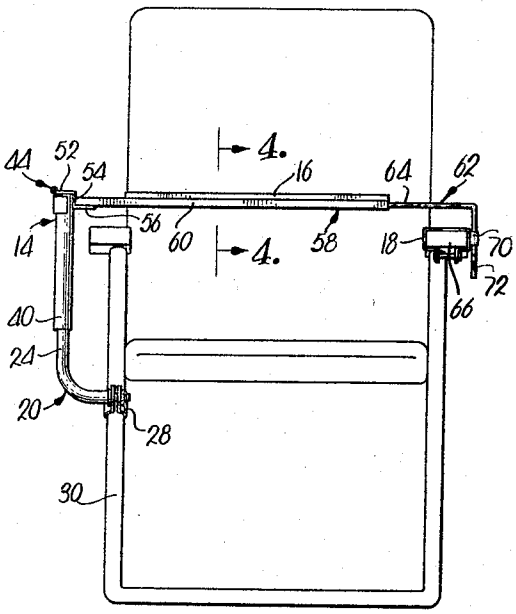


Fig.2.

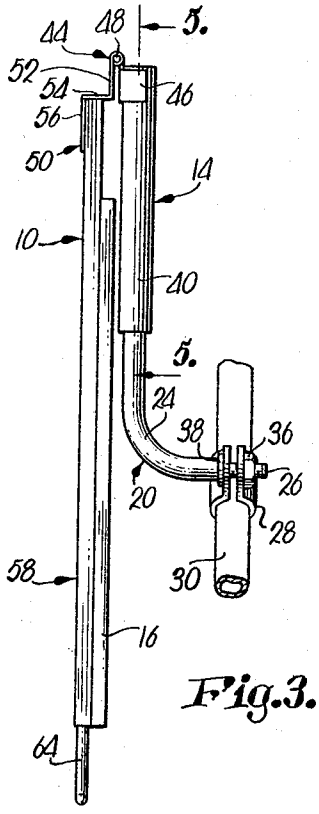


Fig.3.

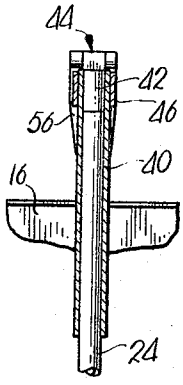


Fig.5.

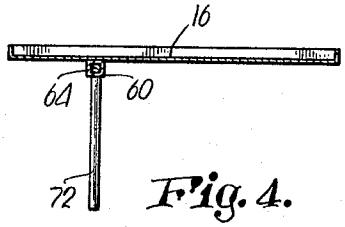


Fig. 4.

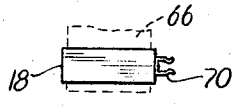


Fig.6.

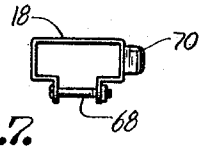


Fig.7.

INVENTORS.
Nelson J. LaBombard
William E. Haney
BY

Hovey, Schmidt, Johnson & Hovey
ATTORNEYS.

Aug. 9, 1966 N. J. LA BOMBARD ETAL 3,265,436

TRAY ATTACHMENT FOR CHAIRS

Filed Aug. 10, 1964

2 Sheets-Sheet 2

Fig. 8.

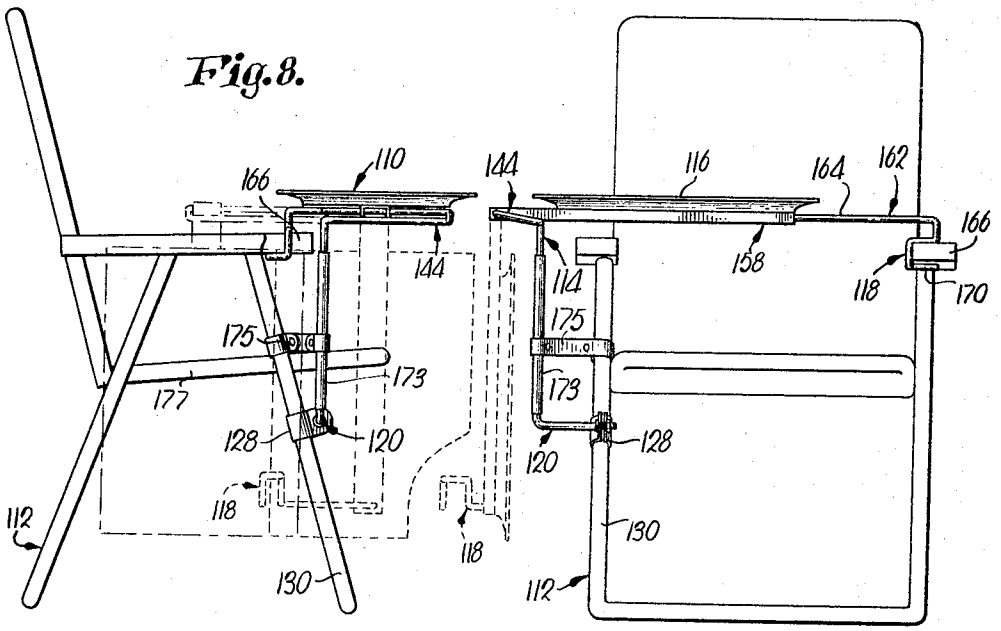


Fig. 9.

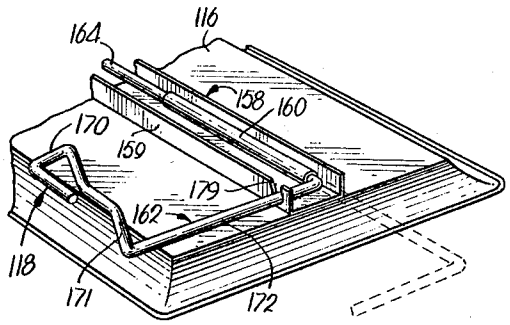


Fig. 10.

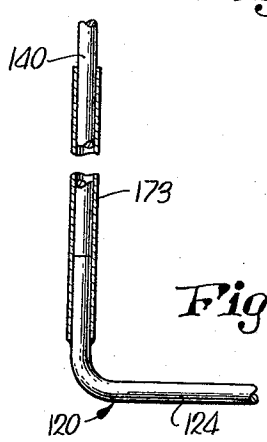


Fig. 11.

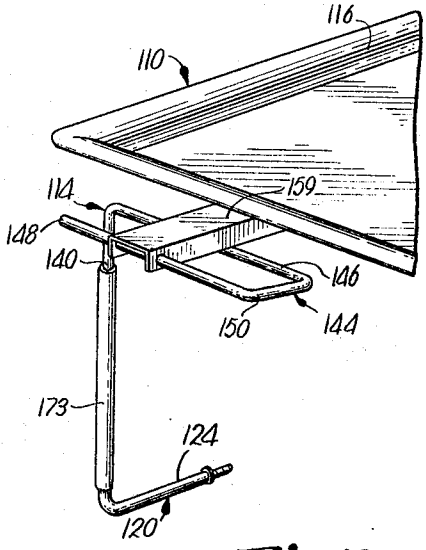


Fig. 12.

INVENTORS.
Nelson J. LaBombard
BY William E. Haney

Hovey, Schmidt, Johnson & Hovey
ATTORNEYS.

United States Patent Office

3,265,436

Patented August 9, 1966

3,265,436

TRAY ATTACHMENT FOR CHAIRS

Nelson J. La Bombard, 6625 Eby Place, Merriam, Kans., and William E. Haney, 608 Romany Road, Kansas City, Mo.

Filed Aug. 10, 1964, Ser. No. 388,380
3 Claims. (Cl. 297—162)

This invention relates to the provision of structure for permitting attachment of a tray to a chair so that it may be readily available for use simply by swinging the tray from a stored position out of use to a position above the lap of a person seated in the chair.

It is the primary object of the instant invention to not only eliminate storage problems for trays, but to provide an arrangement permitting the user to move toward and away from a seated position without need for carrying the tray itself.

Another important object of our present invention is to incorporate the aforesaid advantages in a tray attachment while at the same time providing for height adjustment and for readily releasable means to hold the tray against horizontal swinging movement toward or away from the occupant of the chair while the tray is in use.

Still another object of our invention is to provide a tray assembly that is universally adapted for attachment to various types of chairs having differing widths, heights and structural components.

A further object of the present invention is the provision of an attachment of the aforementioned character which may be readily removed and replaced for cleaning or for carrying food and other items to the chair as may be desired.

In the drawings:

FIG. 1 is a side elevational view of a tray attachment for chairs made pursuant to one form of our invention showing the same mounted on the chair;

FIG. 2 is a front elevational view thereof;

FIG. 3 is an enlarged, fragmentary, front elevational view illustrating the tray in its stored position;

FIG. 4 is a cross-sectional view taken along line 4—4 of FIG. 2;

FIG. 5 is a fragmentary, cross-sectional view taken along line 5—5 of FIG. 3;

FIG. 6 is an enlarged, fragmentary plan view of a releasable connecting means on one arm of the chair;

FIG. 7 is a front view of the connecting means shown in FIG. 6:

FIG. 8 is a view similar to FIG. 1 depicting the preferred form of our present invention, illustrating the tray in one of its stored positions by dotted lines and in another stored position by dashed lines;

FIG. 9 is a view similar to FIG. 2 illustrating the preferred form of our invention;

FIG. 10 is an enlarged, fragmentary, inverted perspective view at one end of the tray;

FIG. 11 is an enlarged, fragmentary view partially in section showing a portion of the tray support; and

FIG. 12 is a fragmentary, perspective view showing that end of the tray assembly opposite to FIG. 10.

As above indicated, the tray attachment of the embodiment of FIGS. 1–7 of our present invention, generally designated **10**, is adapted for connection to a chair **12**. The attachment **10** includes a support **14**, a tray **16**, a bracket **18**, and attaching structure **20**.

Structure **20** includes an L-shaped rod **24** having a reduced threaded portion **26** at its lowermost end, and a U-shaped clamp **28** which surrounds leg **30** of chair **12** and receives threaded portion **26**. The clamp **28** is received between a flange **38** on rod **24** and a nut **36** on portion **26**.

Support **14** includes a rotatable, upright, tubular member **40** in which rod **24** is telescoped, having a stop **42** resting on rod **24**. Support **14** has an element **58** beneath tray **16**, and a hinge **44** connecting it with member **40**. Hinge **44** includes a semicircular portion **46**, a pin **48**, and a Z-shaped portion **50**. Portion **46** is attached in partial surrounding relationship to member **40**. Portion **50** has legs **52**, **54** and **56**, leg **54** being in perpendicular relationship to legs **52** and **56**. Leg **52**, attached to portion **46** through hinge pin **48**, normally rests on the upper end of member **40**, while legs **54** and **56** are rigidly attached to sleeve part **60** of the supporting element **58**.

Tray **16** is rigidly attached to sleeve **60**. Element **58** also includes an L-shaped part **62**, one leg **64** of which is telescoped in sleeve **60**. Bracket **18**, essentially U-shaped, is looped over an arm **66** of chair **12** and is rigidly secured thereto by a bolt **68**. Bracket **18** has a laterally extending U-shaped spring clip **70** which receives a leg **72** of part **62**.

In use, attachment **10** is placed into service by securing clamp **28** to chair leg **30** in the proper position, this position (both in height and fore and aft relationship to chair back **74**) being dictated by the particular configuration of the chair. Bracket **18** is then secured to arm **66**. Member **14** may then be placed on rod **24**. Leg **64** is telescoped into sleeve **60** and leg **72** is snapped into clip **70**.

To place tray **16** into storage position, leg **72** is removed from clip **70** and element **58** is swung about hinge pin **48** to a vertical position alongside member **40** (FIG. 3). When a person is seated in chair **12** with tray **16** in its horizontal position, he may rise from the chair by merely releasing leg **72** and swinging tray **16** forwardly in a horizontal plane. Upon returning to the chair **12**, he may again place the tray into service by swinging it toward back **74** and connecting leg **72** with clip **70**.

Tray **16** may be removed from structure **20** by lifting member **40** from rod **24**. Tray **16** may then be taken to a serving table for filling with food or the like, and then returned to the chair **12** to be replaced on rod **24**. Tray **16** may then again be removed when it is desired to clear and wash the tray.

The attachment **10** may be placed on chairs of various types and sizes by proper placement of clamp **28** and bracket **18**, and part **62** may be shifted to accommodate various widths of chairs.

It can be seen from the foregoing that the holding means on arm **66** chosen for illustrating purposes functions primarily to keep tray **16** from swinging horizontally about the vertical axis of rod **24**. Other types may be selected which are capable also of supporting the tray **16** in cooperation with the rod **24**. For example, a U-shaped saddle rigid to the lower end of leg **72** may be made to straddle the arm **66**. Or, a suction cup rigid to the leg **72** for gripping the top surface of arm **66** might well be desirable. Still further, magnetic means between arm **66** and leg **72** would serve the desired functions.

All of the attributes of our invention as above described are incorporated also in the modification illustrated in FIGS. 8 to 12, together with certain additional features to be made clear.

Tray attachment **110** for chair **112** includes a support broadly designated by the numeral **114** for tray **116**. The bracket for holding the tray **116** against swinging movement toward and away from the occupant of the chair **112** and which is used in connection with arm **166** of chair **112** is broadly designated by the numeral **118**. The attaching structure for mounting the tray attachment **110** on leg **130** of chair **112** is broadly designated by the numeral **120**. It is in the nature of an L-shaped rod **124** as in FIGS. 1–7 and mounted in the same manner to the leg **130** by a clamp **128**.

The support **114** includes an upright member **140** that is rotatable about its vertical axis when the tray **116** is caused to swing toward and away from the occupant of the chair **112**. The hinge for swingably mounting the tray **116** on the rotatable member **140** is broadly designated by the numeral **144**. It includes a hinge pin **148** integrally connected with the member **140** through a horizontal portion **146**, and a bridge part or bight **150**, it being seen that the elements **146**, **148** and **150** present a U-shaped configuration with the member **140** depending from the outermost free end of the portion **146** remote from bight **150**.

Supporting element **158** for the tray **116** is made up of three elements in this modification of our invention, namely, an elongated channel element **159** rigid to the bottom of tray **116**, a sleeve **160** within the channel **159** and rigid thereto, and an L-shaped part **162**. One of the legs **164** of the L-shaped part **162** is slidably and rotatably telescoped within sleeve **160**, and the other leg **172** is bent at right angles to the leg **164** much the same as seen in FIG. 2.

Bracket **118** is in the nature of a loop **170** that is permanently attached to the leg **172** by a lateral extension **171** from the free end of leg **172**. Noteworthy in FIG. 9 is the way in which the loop **170** hooks over the innermost longitudinal edge of the arm **166**. It serves therefore, to not only hold the tray **116** against swinging movement about the vertical axis of the member **140**, but supports tray **116** from arm **166** in cooperation with the support that is provided by the member **140** and its associated parts.

FIG. 11 of the drawings illustrates also the way in which there is provided a tube **173** surrounding the upper end of rod **124** and the lower end of the member **140**. The lower end of member **140** rests directly on the upper end of rod **120** and member **140** is free to rotate in the tube **173**. Furthermore, a strap **175** interconects the leg **130** and the tube **173** to provide additional stability.

FIG. 12 of the drawings shows tray **116** in its normal horizontal operating position with the channel **159** resting on the portion **146** of the hinge structure **144**. This permits movement of tray **116** toward and away from the occupant of chair **112** as channel **159** slides along the hinge pin **148** and the loop **170** slides along the arm **166**.

In FIG. 9 of the drawings, tray **116** is shown by dotted lines in a stored position, i.e., that position which it assumes when initially swung about the horizontal axis of the hinge pin **148**; and, in such position, the top of tray **116** faces inwardly toward chair **112**. It is possible however, in this preferred embodiment of our invention, to thereafter again manipulate tray **116** from such stored position, swinging it about the axis of the tube **173**, thereby placing the upping face of the tray **116** where it faces outwardly away from chair **112**; and, as seen in FIG. 8, in the second stored position, the tray **116** is completely out of the way, farther back from the leading edge of the seat **177** of chair **112**.

Finally, there is included lock means to hold the L-shaped part **162** as illustrated by full lines in FIG. 10 when the tray **116** is stored vertically. This locking means is in the nature of a notch **179** in one leg of channel **159** remote from hinge pin **148** for releasably receiving the leg **172**.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. A tray attachment for chairs comprising:
structure for attachment to a leg of the chair;
an upright member rotatably carried by said structure;
a supporting element extending laterally from said upright member, said supporting element being U-shaped in configuration whereby to present a bight and a pair of legs, one leg thereof defining a hinge pin, the other leg thereof defining a brace;
a tray supporting element swingably carried by said hinge pin, said brace being in a plane below that of said hinge pin whereby when said tray supporting element is swung about said pin to a position of use said brace supports said tray supporting element;
a tray carried by said tray supporting element; and
a bracket carried by said tray for attachment to an arm of the chair.

2. A tray attachment for chairs as set forth in claim **1**, said bracket being shiftable with respect to said tray and having a loop at one end thereof for embracing said arm of the chair.

3. A tray attachment for chairs as set forth in claim **2**, there being a vertically disposed tube carried by said structure for attachment to a leg of the chair, one end of said upright member being rotatably received within said tube, the other end of said member defining said supporting element.

References Cited by the Examiner

UNITED STATES PATENTS

319,105	6/1885	McClure	297—170 X
598,895	2/1898	Bell	297—170 X
955,523	4/1910	Lytle	297—162
1,232,757	7/1917	Berkey	297—170 X
1,247,112	11/1917	Holmberg	297—170 X
2,491,465	12/1949	Johnson	297—150
2,767,774	10/1956	Derby	297—149
2,799,324	7/1957	Anderson	297—150 X
2,833,335	5/1958	Leclair	297—150 X
2,979,118	4/1961	Gelman	297—150
3,097,884	7/1963	Alford	297—153
3,099,479	7/1963	Banke	297—162 X
3,123,397	3/1964	Murcott	297—150
3,142,511	7/1964	Rehel	297—149
3,156,498	11/1964	Blodee	297—162

FRANK B. SHERRY, *Primary Examiner.*

J. T. McCALL, *Assistant Examiner.*