March 2, 1965 C. L. HERSHBERGER ET AL 3,171,685

BOOTH SEAT

Filed Oct. 4, 1963 2 Sheets-Sheet 1

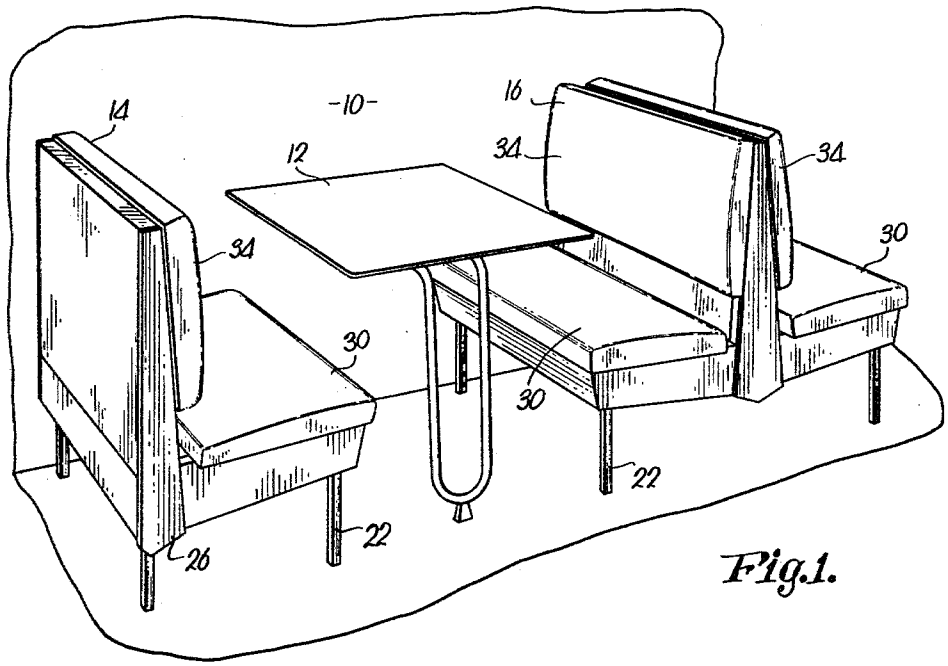

Fig.1.

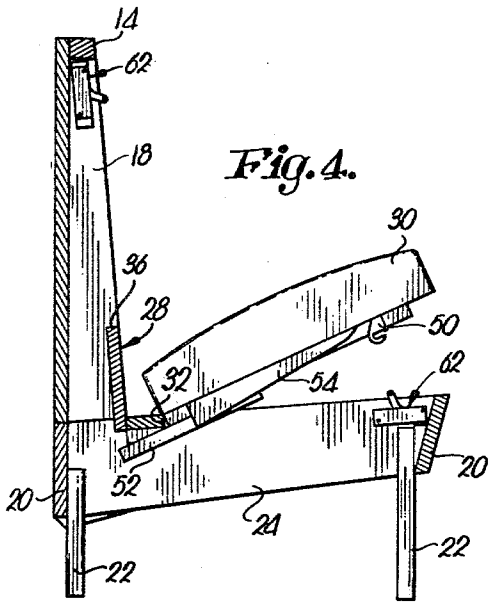

Fig.4.

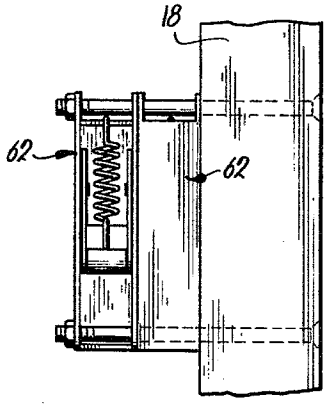

Fig.8.

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BOOTH SEAT

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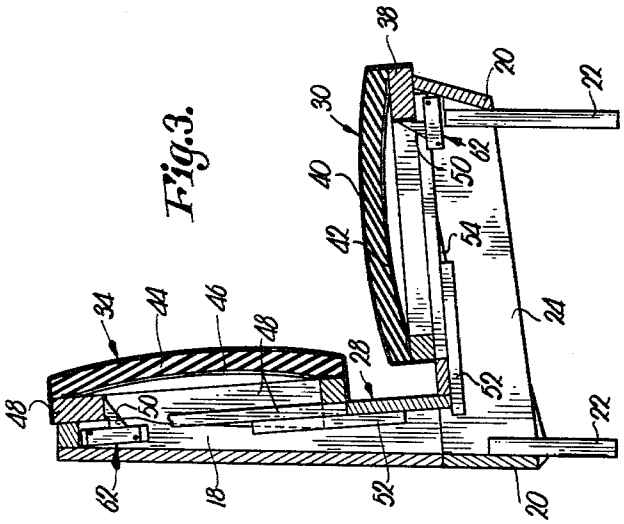

Fig. 3.

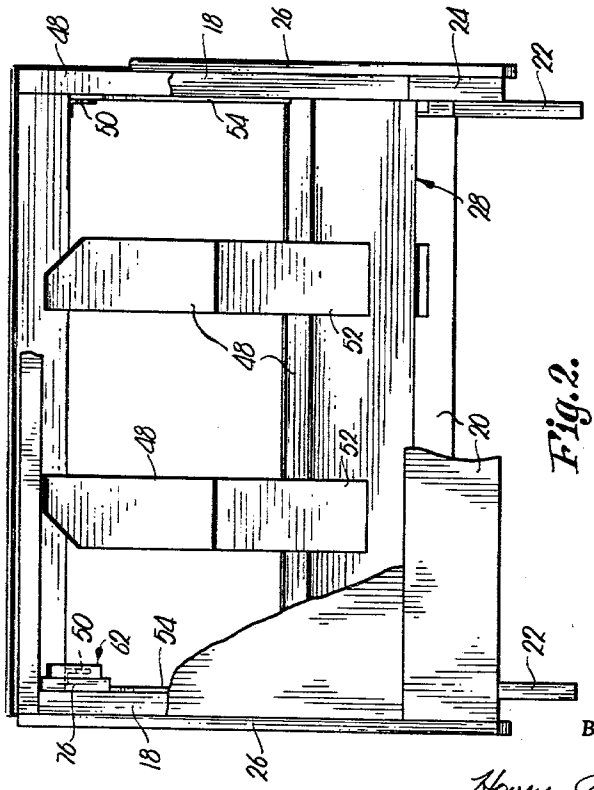

Fig. 2.

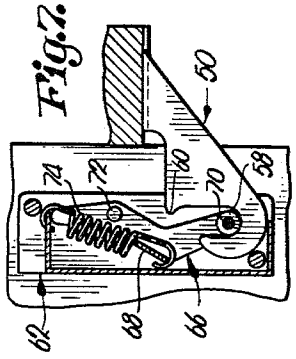

Fig. 7.

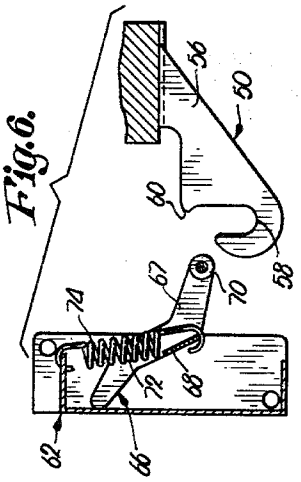

Fig. 6.

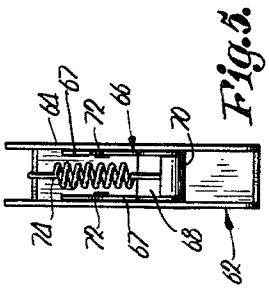

Fig. 5.

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BOOTH SEAT

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Filed Oct. 4, 1963, Ser. No. 313,950
7 Claims. (Cl. 297—92)

This invention relates to improvements in chair or booth construction and, more specifically, to apparatus for providing convenient interchangeability of the seat and back of a chair, booth, or the like.

Particularly in the bar and restaurant business, the chairs and booths used to seat customers are subject to a great deal of abuse. Manifestly, the seats of such furniture wear out faster than the backs thereof. It is evident, therefore, that a considerable increase in the usable life of bar and restaurant furniture could be realized if the seats and backs thereof were conveniently and rapidly interchangeable.

It is, therefore, the primary object of this invention to provide chair or booth structure wherein the seats and backs thereof are interchangeable.

Another important object of this invention is to provide chair or booth structure wherein the seats and backs thereof are releasably locked or coupled with the frame of the structure by apparatus operable in response to the mere placing of the seat or back on its appropriate portion of the frame.

Still another object of this invention is to provide releasable locking apparatus as aforesaid that will render the seat and back of the chair or booth structure interchangeable.

Yet another important object of this invention is to provide apparatus for releasably securing an occupant support, such as a seat or back, to the seat portion or back portion of a chair or booth frame, which apparatus is operable in response to engagement therewith of a coupling component on the occupant support to thereby provide a means of rapidly securing the support to the frame without the use of tools or the necessity of time-consuming adjustments.

Other objects will become apparent as the detailed description proceeds.

In the drawings:

FIG. 1 is a perspective view showing a bar or restaurant booth constructed in accordance with the teachings of the instant invention;

FIG. 2 is a rear elevational view of the single-back booth seat or chair shown in FIG. 1, parts being broken away to reveal details of construction;

FIG. 3 is a cross-sectional view of the single-back booth seat;

FIG. 4 is a cross-sectional view of the single-back booth seat showing the occupant-supporting seat portion thereof in elevation during installation thereof on the booth frame;

FIG. 5 is a fragmentary, detailed view looking into the hook-receiving channel of the locking device;

FIG. 6 is a fragmentary, detailed view partly in section and partly in elevation showing the hook and latch element disengaged;

FIG. 7 is a view similar to FIG. 6 showing the hook and latch element in their engaged, interlocked positions; and

FIG. 8 is a fragmentary, detailed, elevational view showing a pair of juxtaposed locking devices for use with the double-back booth shown in FIG. 1.

Referring to FIG. 1, the numeral **10** broadly designates booth structure incorporating the instant invention. Booth **10** includes a table **12**, a single-back booth

seat or chair **14**, and a double-back seat or chair **16**. Booth seat **14** is employed at the end of a series of booths, while booth seat **16** is used between adjacent booths.

In FIGS. 2–4 the construction of the single booth seat **14** is shown in detail. It should be understood at this juncture that conversion from a single booth seat to a double booth seat is achieved essentially by arranging single seats in back-to-back relationship; therefore, only the constructional details of the single booth seat will be set forth hereinafter.

Booth seat **14** comprises a rectangular back frame **18** rigid with a generally rectangular seat frame **20**. Seat frame **20** is provided with four legs **22**. Frame **20** includes a pair of side skirts **24** which define the side margins of the seat portion of the structure. Decorative side moldings **26** are mounted on each side of the back frame **18**.

The back frame **18** and the seat frame **20** are interconnected by a transversely L-shaped cross member **28**. A seat **30** is mounted on frame **20** in abutting relationship to a ledge **32** presented by cross member **28**. A back **34** is mounted on frame **18** in abutting relationship to the upper edge **36** of cross member **28**. Seat **30** and back **34** are of identical construction.

Seat **30** comprises a framework **38** which mounts thereon a cushion **40** of any suitable construction. The cushion illustrated in the drawings is composed of foam rubber backed by a plurality of leaf spring strips **42**. Manifestly, cushion **40** may be covered or upholstered to provide the desired aesthetic effect.

Back **34** is similarly constructed and includes a foam rubber cushion **44** and a plurality of leaf spring strips **46** mounted on a framework **48**. Both the seat **30** and the back **34** are provided with a pair of coupling components or hooks **50** rigid with respective frames **38** or **48** and a pair of frame extensions **52**. Also, both the seat and back are provided with a pair of wedge-shaped guides **54** which normally extend downwardly from the side margins of seat **30** and laterally outwardly from the side margins of back **34**.

Referring now particularly to FIGS. 5–8, it may be seen that hook **50** comprises a metal plate **56** having a slot **58** therein and provided with a lip **60** at the mouth of the slot. A locking device **62** for use in conjunction with hook **50** is shown comprising a transversely U-shaped channel **64** which receives an elongated latch element **66**. Element **66** is formed by a pair of parallel legs **67** interconnected intermediate the ends thereof by a web **68**. A roller **70** is journaled and spans the distance between the legs **67** at one end thereof. A pair of pins **72** pivotally mount element **66** within channel **64**.

A spring **74** has one end thereof secured to channel **64**, the other end of the spring being interconnected with web **68**. It may be seen by comparing FIGS. 6 and 7 that element **66** and spring **74** form an over-center toggle mechanism, element **66** being normally biased by spring **74** into the inoperative position shown in FIG. 6. However, as evidenced by FIG. 7, engagement of hook **50** with element **66** moves the latter into its operative position wherein the hook and element are releasably interlocked under the action of spring **74**.

FIGS. 2–4 reveal the locations of devices **62** on back frame **18** and seat frame **20**. It may be seen that the devices **62** are rigidly secured to the seat and back frames in disposition to receive respective hooks **50** to thereby releasably lock either the seat **30** or back **34** to frame **18** or frame **20**. In other words, seat **30** and back **34** may be interchanged, the seat becoming the back and the back then becoming the seat, to thus achieve the primary object of the invention.

In the utilization of the structure, it should be under-

stood that the mere positioning of the seat or back on the desired portion of the frame along with manual pressure, causes the seat or back to be secured in place. Frame extensions **52** along with guides **54** assist in positioning the seat or back on either the back frame **18** or the seat frame **20**. Once hooks **50** are aligned with corresponding devices **62**, the action of lip **60** of the hook, as the same engages roller **70** of the device, effects swinging movement of element **66** with application of manual pressure. Roller **70** is thereby forced into slot **58** and, upon continued swinging of element **66**, spring **74** moves over center and biases the element and hook toward the interlocked disposition shown in FIG. 7. In this manner the seat or back is releasably but securely maintained in place until subsequent interchanging thereof is desired, whereupon movement of hook **50** away from device **62** under sufficient force to overcome the action of spring **74** disengages the hook from the element.

It should be noted that, since FIG. 2 shows the single seat booth, a spacer block **76** is disposed between the left-hand device **62** and back frame **18**. The necessity of utilizing spacer block **76** will be appreciated by reference to FIG. 8 wherein juxtaposed, oppositely facing devices **62** are shown for use with the double seat booth **16**. The FIG. 8 arrangement is provided so that backs **34** of the various booths may also be interchanged. Thus, it is evident that spacer block **76** is employed in the single seat version since only one back **34** is employed.

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

1. In a chair or the like:
an occupant support member provided with a coupling component;
a frame having a seat portion and a back portion; and
a mechanical locking device on each of said portions respectively, each of said devices having a shiftable element movable from an inoperative position to a disposition in interlocking relationship with said coupling component in response to engagement by the latter, whereby the member may be secured to the seat portion or the back portion of the frame, alternatively.

2. In a chair or the like:
a frame having a seat portion and a back portion;
a pair of occupant support members; and
a pair of couplers each having first and second engageable components, each of said couplers being operable to releasably interlock its first component with any one of said second components upon engagement therewith the first component of each of the couplers being attached to a different one of said portions of the frame, the second component of each coupler being attached to a corresponding member, each of said couplers including means mounting one of the components thereof for movement from an uncoupled position to a disposition in interlocking relationship with any one of the other components of the devices in response to said engagement, whereby the members may be interchangeably secured to the seat and back portions of the frame.

3. The invention of claim 3, wherein each of said couplers includes yieldable means operably coupled with said one component thereof for biasing the latter toward said interlocking disposition during said movement of the one component.

4. Apparatus for releasably securing an occupant support to the seat portion or back portion of a chair frame or the like comprising:
a hook adapted to be mounted on said occupant support;
a latch element for engagement by said hook;
means for shiftably attaching the latch element to one of said portions of the frame, said element being movable by the hook from an inoperative position to a disposition in interlocking relationship therewith upon engagement of the element by the hook; and
yieldable means operably coupled with said element for biasing the latter toward said interlocking disposition during said movement of the element by the hook, whereby to releasably secure the occupant support to the seat or back portion of the frame.

5. The invention of claim 4, wherein said yieldable means normally biases the element toward said inoperative position, said movement of the element by the hook being initially against the action of the yieldable means, the latter shifting in response to said movement to a position biasing the element toward said interlocking disposition.

6. The invention of claim 4, wherein said attaching means is adapted to pivotally mount the element on said one portion of the frame, said element swinging from said inoperative position to said interlocking disposition in response to pressure contact by the hook.

7. The invention of claim 6, wherein said element is elongated and provided with a laterally extending part at one end thereof, said attaching means being adapted to pivotally mount the element at a point thereon spaced from said one end, the hook receiving said part when the element is in said interlocking disposition.

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