Oct. 21, 1941. J. E. BALES 2,259,722

LOCKER STRUCTURE

Filed Jan. 11, 1938 3 Sheets-Sheet 1

FIG. 1.

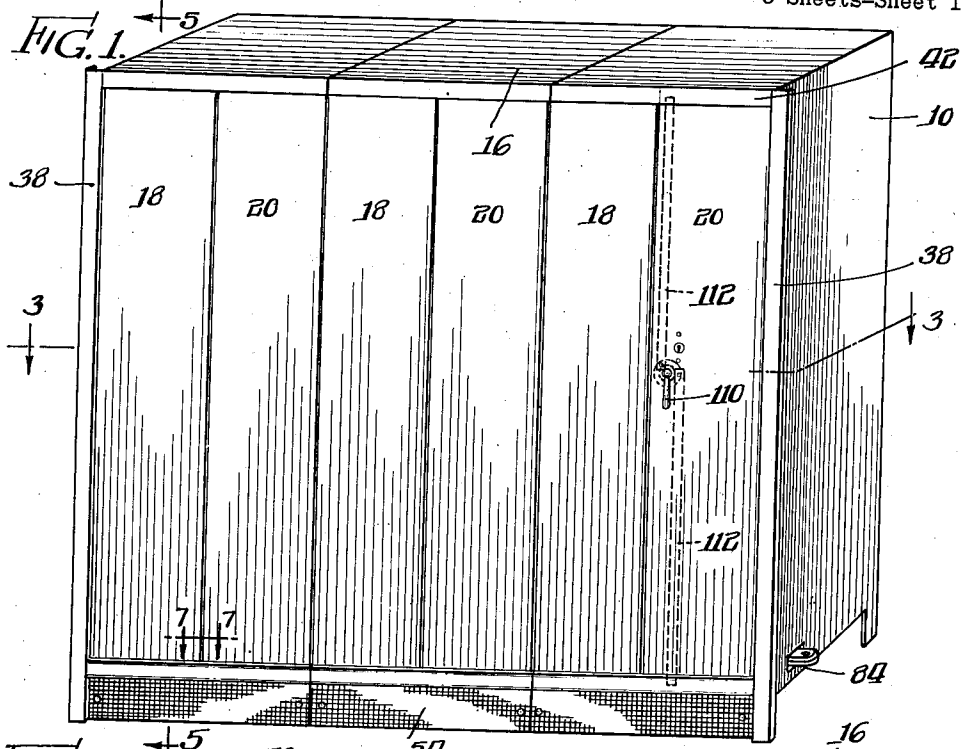
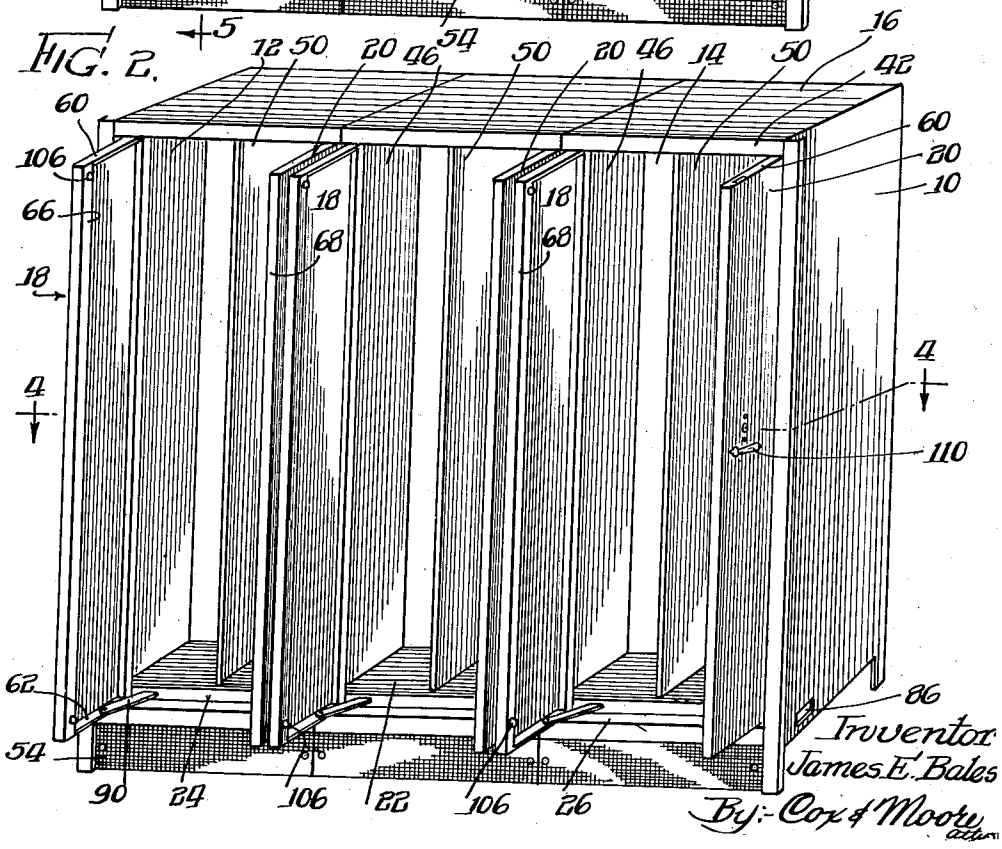


FIG. 2.



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Oct. 21, 1941. J. E. BALES 2,259,722

LOCKER STRUCTURE

Filed Jan. 11, 1938 3 Sheets-Sheet 2

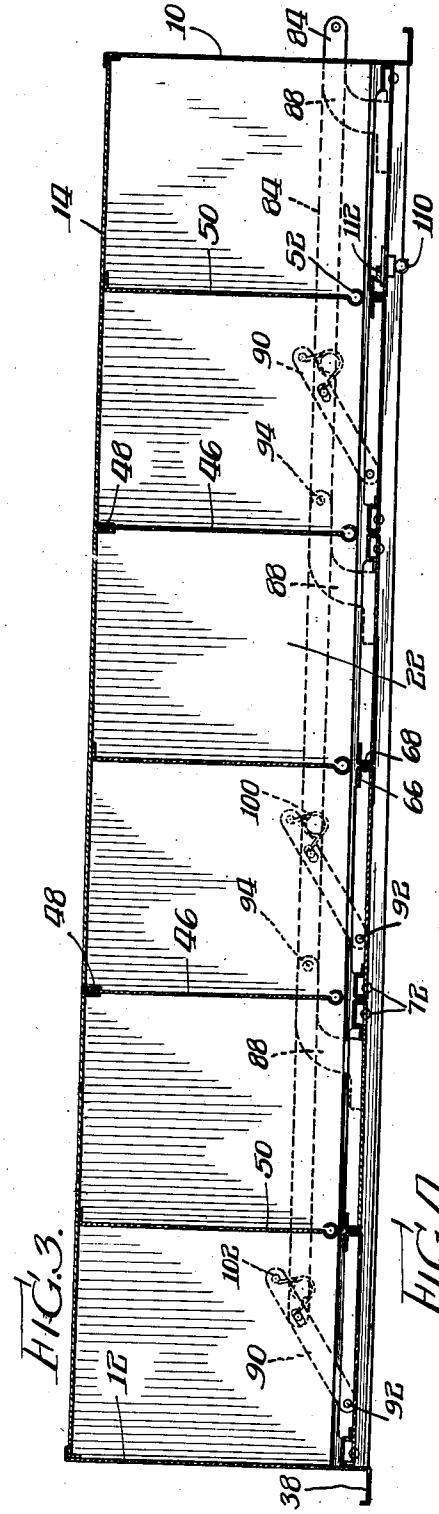


FIG. 3.

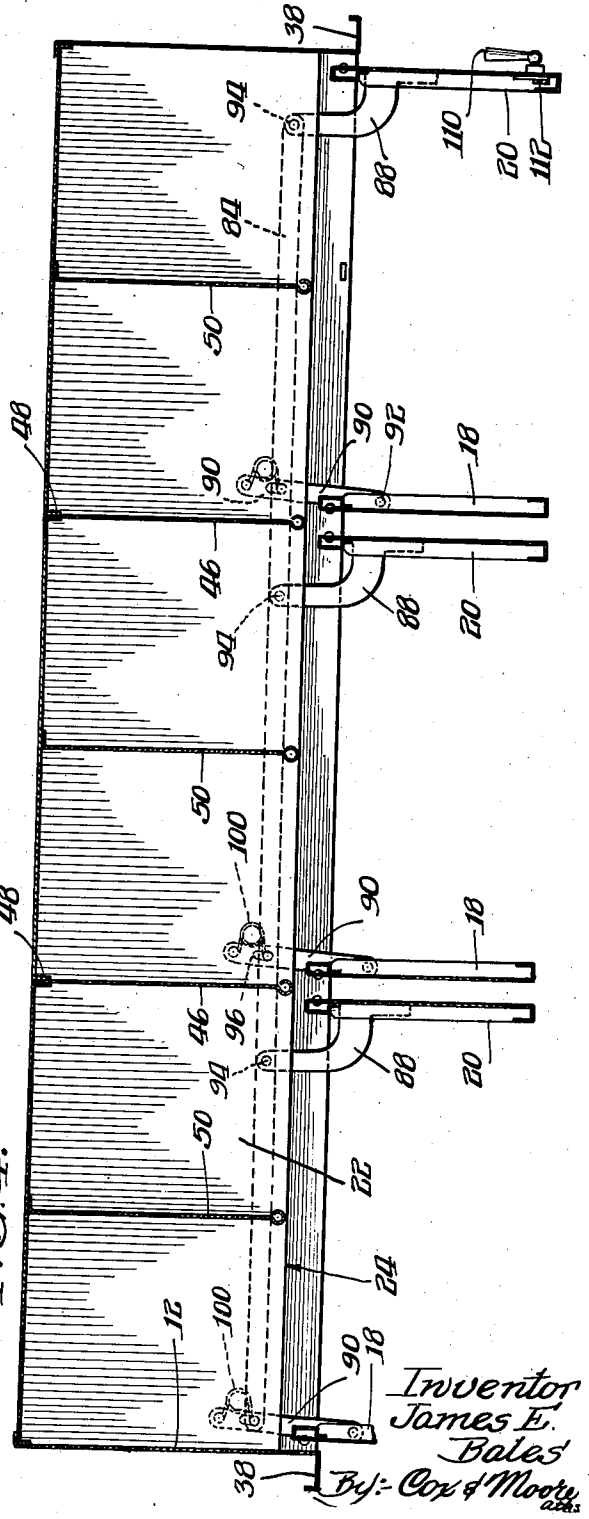


FIG. 4.

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Oct. 21, 1941. J. E. BALES 2,259,722

LOCKER STRUCTURE

Filed Jan. 11, 1938 3 Sheets-Sheet 3

FIG. 5.

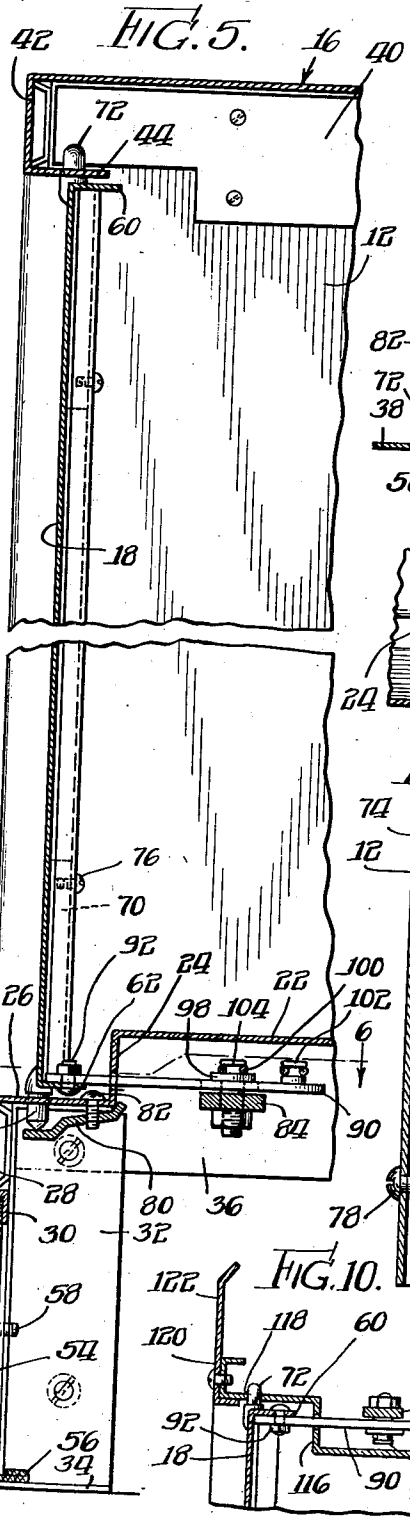


FIG. 6.

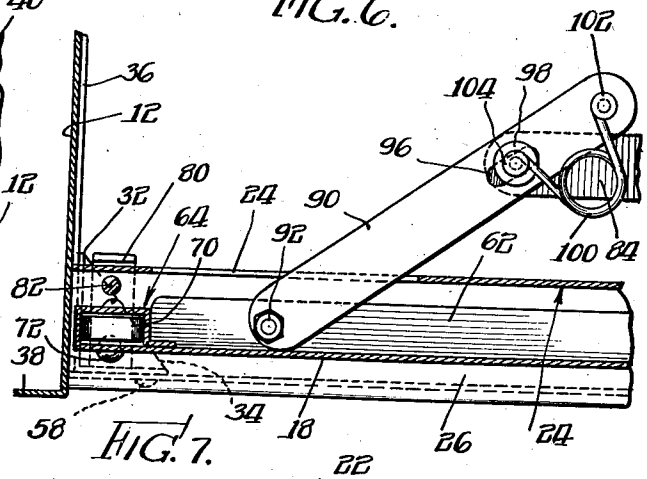


FIG. 7.

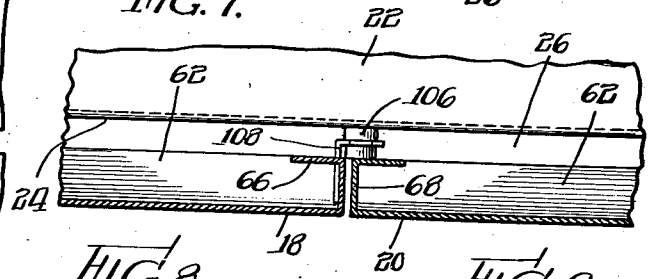


FIG. 8.

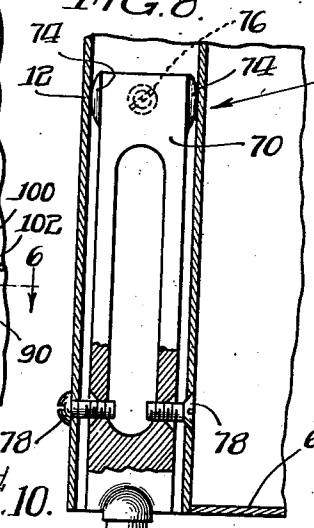


FIG. 9.

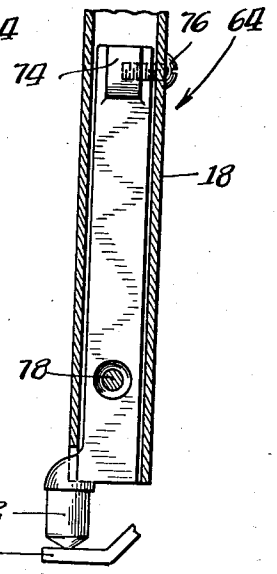


FIG. 10.

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Patented Oct. 21, 1941 2,259,722

UNITED STATES PATENT OFFICE

2,259,722

LOCKER STRUCTURE

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Application January 11, 1938, Serial No. 184,427

10 Claims. (Cl. 312—191)

The present invention relates to a locker and more particularly to a locker arrangement or assembly wherein a plurality of individual lockers are controlled from a master station.

It is an object of the present invention to provide a locker assembly having swinging doors and particularly a plurality of opposite swinging doors all controlled from a predetermined station and which are composed of a plurality of locker units so that any number of these units may be added or taken away from the assembly to provide a structure having any preferred number of lockers.

Locker assemblies in which a plurality of lockers are controlled from a predetermined one of the doors or from some other preselected station are normally characterized by the presence of a relatively complex control and locking mechanism which not only substantially increases the cost and difficulty of production but necessitates the design and manufacture of each assembly as an individual problem depending upon the desired size and arrangement demanded. In the present art there is a desire for lockers comprising more or less standard units but arranged together to provide the proper assembly for accommodation in a particular space which may be allotted in a locker room, school room or the like.

It is, therefore, an object of the present invention to provide an improved locker assembly comprising a plurality of lockers all controlled by a single master door and positively actuable therefrom to which additional locker units may be readily added or subtracted without great difficulty and which may be readily made up from the aforementioned more or less prefabricated units to any predetermined size.

An additional object of the present invention is to provide a new and improved locker assembly as above wherein the actuation of the doors is controlled by a single control bar which has associated therewith improved and simplified means for opening and closing one of the paired doors ahead of the other door of the pair for projecting a resilient stop member behind the last mentioned door, the control bar being operative to positively bring the last named door to closed position while maintaining the first door resiliently in said position.

Another object of the present invention is to provide a locker wherein the doors are supported for swinging movement upon a spring member which may be tensioned adjustably and particularly in the direction of the axis of the swinging movement.

Yet another object of the present invention is to provide a locker door structure comprising pintles which are mounted in operative relationship to the door but which may be adjustably tilted with respect to the door and which may be locked releasably in any of said positions for controllably adjusting the position of the pintles and thus properly positioning the door with respect to the door frame.

It is furthermore an object of the present invention to provide a locker assembly made up of a plurality of prefabricated locker units adapted to form a permanent part of a wall or building and which is so constructed and arranged as to give the appearance of a single unitary assembly.

Numerous other objects and advantages will more fully appear during the course and progress of the following specification.

Figure 1 is a perspective view of a locker constructed in accordance with the present invention.

Figure 2 is a view the same as Figure 1, but showing the doors in open position.

Figure 3 is a plan sectional view taken on the line 3—3 in Figure 1.

Figure 4 is a plan section taken on the line 4—4 in Figure 2, being thus substantially the same view as Figure 3 but with the doors in open position.

Figure 5 is a detail sectional elevation taken on the line 5—5 in Figure 1.

Figure 6 is a detail sectional view taken on the line 6—6 in Figure 5.

Figure 7 is a detail plan sectional view taken on the line 7—7 in Figure 1.

Figure 8 is a detail sectional elevation showing the pivot support and the adjusting means therefor.

Figure 9 is a sectional elevation of the door showing a side view of the pivot support member.

Figure 10 is a detail sectional elevation through an alternative embodiment.

The locker assembly shown herein for the purpose of illustrating the present invention, comprises a pair of opposed side walls 10 and 12, a rear wall 14 and a top wall 16. Attention is directed to the fact that the top wall 16 and the rear wall 14 are divided into three sections, each corresponding to a pair of doors 18 and 20 pivotally mounted at opposite sides so as to open outwardly as clearly shown in Figure 2. Each of the sections also is provided with a corresponding bottom wall 22, Figures 2 and 5. This bottom

wall is bent downwardly adjacent its forward portion to provide the downwardly extending wall 24 which, at its lower end, is bent outwardly as at 26 and provides the sill for the doors. This member is finally bent downwardly at 28 and inwardly again as at 30 in order to provide a finish molding for the front portion of the sill. Each of the sections is supported by four legs 32, such as shown in Figure 5, preferably formed of angle iron or the like having transversely extending foot portions 34 and fastened by welding or any other equivalent means to the molding portion 28 as well as to the downwardly extending flange 36 formed along the side of the bottom wall.

The side walls 10 and 12 are likewise secured by welding, rivets or any other suitable fastening means, to the flange 36 and have bottom portions co-extensive with the front and rear side legs 32, as clearly shown in Figures 1 and 2. The forward edges of the side walls 10 and 12 are formed with outwardly and then reversely extending flanges 38 for providing a finished molding-like appearance to the structure. The present device is designed for use in permanent installations and particularly those wherein it is to be built in a recess within a permanent wall or partition. When so arranged the flanges 38 will enclose a portion of the edge of the adjacent structure and confer a pleasing marginal appearance.

The top wall 16 of the end sections is secured to a rearwardly extending angle member 40 which in turn is secured to the side walls 10 and 12 shown in Figure 5. The forward portion of the top wall 16 is bent to form the downwardly projecting wall section 42 and the inwardly extending flange 44 directly above and co-extensive with the sill 26.

Similar angle members 40 are secured adjacent the side edge of the top wall 16 of each of the sections for supporting the adjacent interior side walls and dividing partitions. These interior side walls 46 may be attached to both sections. The present invention, however, comprehends the provision of sections or locking units which may be either partially or wholly prefabricated, which units or sections may then be made up according to the demands of the particular assembly which is desired. Thus, for example, the locker unit or section which is situated in the right-hand end of the locker assembly, as viewed in Figure 1, comprises the end wall 10 together with top, bottom and back walls 16, 22 and 14, respectively.

The adjacent interior side wall 12 may be assembled with this unit by welding, riveting or otherwise fastening to the adjacent flanges 40 and 36 on the top and bottom, respectively, of the unit and to the inwardly extending flange 48 on the rear wall. The central section or unit will, accordingly, be open along its righthand side, as viewed in Figures 3 and 4; that is, no wall will be provided. The same will be true of the lefthand section shown in the figures. These sections may be regularly stocked by the dealer or manufacturer. When an order is received for an assembly of any particular number of units, it is only necessary to arrange the sections or units as shown in the figures; that is, for example, the central section having no righthand wall will be arranged adjacent a righthand end section or unit of the type shown in the figures. It is then only necessary to bolt the units together through the adjacent flange portions to produce a finished unitary appearing assembly, as shown in the figures. In the structure shown, each section or unit is further subdivided by the vertical partition 50. All of the partitions 46 and 50 are provided with a rounded bead 52 along the forward edge.

After the units have been assembled, the sheet member 54 is situated in the space just below the molding flange 28 and the floor, as shown more clearly in Figures 1, 2 and 5. This member 54 is preferably formed of a piece of metal screening or other reticulated sheet material so that the under portions of the assembly will be in communication with the surrounding air for filtration purposes. The screening is formed with an inwardly extended beaded portion 56 at its bottom edge and is maintained in the position shown with its upper edge resting adjacent the flange 30 through the agency of fasteners 58 engaging in the respective front legs 32.

The doors 18 and 20 are formed of sheet material flanged at the top and bottom, as indicated by the reference numerals 60 and 62, respectively, and provided with a reversely extending box-like configuration 64 along vertical pivoted or hinged edges (see Figure 6). The meeting edges of the doors are provided with reversely extending flanges 66 and 68, as indicated in Figure 7. The longitudinally extending box-like configuration 64 on the hinged or pivoted edges encloses upper and lower pintle blocks 70 having cylindrical integrally formed pintles 72 extending from the ends thereof and engaged rotatably in suitable, alined apertures in the upper flange 44 and the lower sill 26 of the locker section or unit, as shown in Figure 5. It is to be noted that the pintle blocks 70 are, throughout most of their length, of substantially smaller transverse dimension than the width of the box-like configuration 64 which encloses them but are, adjacent their upper end, formed with opposite curved ears 74 which tend to position the member at this point centrally within their confining enclosure. The pintle blocks 70 are further positioned by the pivot 76. The pintle blocks and, accordingly, the pintles, are in this manner mounted for limited pivotal movement about the pivot 76. Machine screws 78 pass freely through opposite sides of the box-like marginal enclosure 64 and are threaded into the pintle blocks adjacent their lower portions. Accordingly, the pintles may at any time be adjusted by merely loosening one of the screws 78 and tightening the other until the pintles 72 are positioned in the desired relationship with respect to the door or the door frame. This feature provides a simple but very effective means for adjusting the doors so that they, at all times, register perfectly with the doorway or door frame so that the two doors are alined in closed position.

The weight of each of the doors is supported directly upon the abutment members 80 which may be a strap of metal configurated as shown in Figure 5 and preferably of some resiliency. Each of these supporting or abutment members 80 is supported by the machine screw 82 which passes through the sill 26 of the doorway and engages into the strap member. It will be obvious from this disclosure that, since tightening of the screw 82 increases the axial stress applied against the end of the lower pintle 72, this means may be employed to tension the movement of the doors as well as to accurately control their vertical positioning with respect to the sill.

Coincidental control of all of the doors is ef-

fected by means of the control bar 84 which extends longitudinally of the whole assembly through suitable apertures 86 provided in the various flanges 36 and side wall member 10. The control bar may be inserted after the sections or units have been assembled as hereinbefore described, in which case it will be necessary to provide a special control bar for each particular length of assembly. The present invention additionally comprehends the provision of control bars comprising a plurality of sections which may be readily interlocked or fastened together in accordance with the final length desired.

Each of the righthand doors 20, as viewed in the figures, has rigidly secured at its lower flange a curved arm 88. Links 90 are pivotally attached at 92 to the lower marginal flange 62 of the oppositely opening doors 18 of each pair. Both the links 90 and the arms 88 extend through suitable slots in the vertical wall 24 and are secured to the control bar 84. Pivotal connection between the arm 88 and the control bar 84 is effected by pivots 94. As shown more clearly in Figure 6, the links 90 are slotted as at 96 to engage the pivot pin 98 which is rigidly bolted to the control bar 84. A spring 100 fastened to the links 90 as at 102 and to the pivot pin 98 at 104 is arranged to bias the pin 98 in such a position in the slot 96 that the lefthand doors 18 of each pair will tend to close ahead of the other doors. When the locker constructed in accordance with this embodiment is so actuated as to close all of the doors, the lefthand doors will reach closed position first. While the control bar 84 is being further actuated to the right to complete the closing of the doors 20, the pin 98 will slide to the right in the slot 96 against the tension of the spring 100. The reverse action will occur when the doors are actuated to open position.

One of the prime purposes of the present door control arrangement is to permit the provision of the resilient door stop 106 shown more in detail in Figure 7 and having a preferably cylindrical configuration and mounted upon the L-shaped supporting lock 108 which in turn may be welded or otherwise fastened rigidly to the edge 66 of the doors 18. As shown in the figures, the resilient stop member is not only positioned inwardly of both of the doors when the locker is closed but extends beyond the periphery of the doors 18 so that the member 106 resides directly behind the door 20 and between it and the vertical wall section 24. This provides a buffer or resilient door stop for both of the doors of the pair. In other words, the member 106, not only stops the doors 18 in closed position but, in closing, is projected behind the other door of the pair.

The actuation of the door control mechanism in accordance with the present invention is preferably accomplished from a handle member 110 on one of the doors and, in the assembly disclosed in the figures, the handle member 110 is mounted upon the door 20 and is associated with any suitable locking mechanism not shown in detail. In order to lock the door 20 and, accordingly, the remainder of the doors of the entire assembly, in closed position the control handle 110 is operatively connected with the pair of longitudinally reciprocable bolts 112 which are slidably mounted on the interior surface of the door, as shown in Figure 1. The opposite ends of the bolt members 112 aline in closed position with suitable recesses on the upper and lower portions of the doorway in which they may be selectively engaged.

In the alternative preferred embodiment disclosed in Figure 10, the control bar and its associated door operating mechanism is located adjacent the top of the locker instead of beneath the bottom wall thereof, as illustrated in accordance with the previous embodiment. Accordingly, the top wall of the locker 16 is formed as shown in Figure 10, with an upwardly extending wall 116 which, at its upper edge, is bent outwardly as at 118 and terminates in the reversely extending flange 120. The configuration of these walls and flanges provides an enclosure for the control bar mechanism, as clearly shown in the figure, and the links and levers 90 and 88 extend through suitable slots in the wall 116 and connect with the upper flange members as at 92 for actuating and controlling the doors in substantially the same manner as hereinbefore described. A molding plate 122 is secured to the flange 120 by means of machine screws so as to be removable for adjusting or assembling the control bar structure. This molding plate 122 is shaped similarly to and has somewhat the function of the flanges 38 shown in the previous embodiment in that it may engage about the edge of the adjacent wall to lend the structure a "built-in" appearance.

The present invention provides an improved and simplified locker structure for coincidentally controlling the doors to a plurality of lockers which may be applied to units or assemblies of any desired size. While the illustrative embodiment described above comprises an assembly of three sections, nevertheless any additional number may be added thereto in the manner described above. The assembly of the various units involves substantially no difficulties and the various movable parts thereof may be readily alined and maintained in proper relative position at all times. While the actuation of the doors in the present embodiment is controlled by the actuation of one of the doors 20, nevertheless control may be had from any of the doors or from some further or remote station if desired. Moreover, the control bar and associated mechanism in the embodiment shown is enclosed in a space underneath the bottom wall 26 of the locker and thus separated from the contents of the locker. This arrangement obviates the danger of damage to or impingement upon any of the contents of the locker by the moving parts.

It is thought that the invention and numerous of its attendant advantages will be understood from the foregoing description and it is obvious that numerous changes may be made in the form, construction and arrangement of the several parts without departing from the spirit or scope of the invention, or sacrificing any of its attendant advantages, the form herein described being a preferred embodiment for the purpose of illustrating the invention.

The invention is hereby claimed as follows:

1. A locker assembly comprising a plurality of locker units, each of said locker units having a pair of doors opening in opposite directions, a longitudinally movable control bar, one of the doors of each pair being connected to said control bar for actuation to open and closed position, and means connecting said other doors to the control bar, said last named means comprising a spring biased to bring said second named doors initially to closed position and to resiliently

maintain them in said position while the first named doors are being fully closed.

2. A locker assembly comprising a plurality of locker units, each of said locker units having a pair of doors opening in opposite directions, a longitudinally movable control bar, one of the doors of each pair being connected to said control bar for actuation to open and closed position, and means connecting said other doors to the control bar, said last named means comprising a link, a pin and slot connection and a spring biased to bring said second named doors initially to closed position and to resiliently maintain them in said position while the first named doors are being fully closed.

3. A locker assembly comprising a plurality of lockers, each of said lockers comprising a preformed unit, said units being secured together and having a pair of doors opening in opposite directions, a longitudinally movable control bar extending through all of said units, one of the doors of each pair having an arm mounted thereon and pivoted to the control bar for actuation to open and closed position, and means connecting said other doors to the control bar, said last named means comprising a spring biased to bring said second named doors initially to closed position and to resiliently maintain them in said position while the first named doors are being fully closed.

4. A locker having a bottom wall of sheet material, a downwardly extending flange formed adjacent the front margin of said wall and supporting a forwardly extending sill flange at a downwardly spaced position, a door hingedly mounted with respect to said sill, a control bar mounted in the interior space defined by said bottom wall and said downwardly extending flange, and means operatively connecting said bar and said door including a control arm extending through said flange to control the position of the door.

5. A locker having a bottom wall of sheet material, a downwardly extending flange formed adjacent the front margin of said wall and supporting a forwardly extending sill flange at a downwardly spaced position, a pair of oppositely swingable doors mounted on said sill and closing against said downwardly extending flange, a control bar mounted in the interior space defined by said bottom wall and said downwardly extending flange, and means operatively connecting each of said doors to said bar including control arms extending through said flange to control the position of the doors.

6. A locker having a bottom wall of sheet material, a downwardly extending flange formed adjacent the front margin of said wall and supporting a forwardly extending sill flange at a downwardly spaced position, a pair of oppositely swingable doors mounted on said sill and closing against said downwardly extending flange, a control bar mounted in the interior space defined by said bottom wall and said downwardly extending flange, means operatively connecting each of said doors to said bar including control arms extending through said flange to control the position of the doors, and resilient stop means mounted adjacent the interior side of one of said doors and adapted to be projected between the other door and said downwardly extending flange when the doors are closed.

7. A locker having a bottom wall of sheet material, a downwardly extending flange formed adjacent the front margin of said wall and supporting a forwardly extending sill flange at a downwardly spaced position, a pair of oppositely swingable doors mounted on said sill and closing against said downwardly extending flange, and resilient stop means mounted on the interior side of one of said doors and adapted to be projected between the other door and said downwardly extending flange when the doors are closed.

8. A locker having sheet metal walls, a doorway formed in the locker, at least one of the walls contiguous with the doorway having a flange extending in a direction outwardly of the doorway and terminating in a flange member extending transversely thereof and spaced from the wall, a pair of oppositely swingable doors mounted in the doorway and closing against said outwardly directed flange, a control bar mounted in the interior space defined by the said wall and the outwardly extending flange, and means operatively connecting each of said doors to said bar including control arms extending through the said flange to control the position of the doors.

9. A locker assembly comprising a plurality of prefabricated locker sections, each of said sections having a pair of doors opening in opposite directions, said sections being secured releasably together to provide a unitary assembly, a longitudinally movable control bar extending transversely through all of said sections, one of the doors of each pair being releasably connected to said control bar for actuation to open and closed position, and releasable means connecting said other doors to the control bar, said last-named releasable means comprising a spring biased to bring said second-named doors initially to closed position and to resiliently maintain them in said position while the first-named doors are being fully closed.

10. A locker having a bottom wall of sheet material, a downwardly extending flange formed adjacent the front margin of said wall and supporting a forwardly extending sill flange at a downwardly spaced position, a door hingedly mounted with respect to said sill, a control bar mounted in the interior space defined by said bottom wall and said downwardly extending flange, and means operatively connecting said bar and said door including a control arm extending through said flange to control the position of the door, said control arm being secured to said door at a point remote from the hinge axis of said door.

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