

S. D. LELAND.

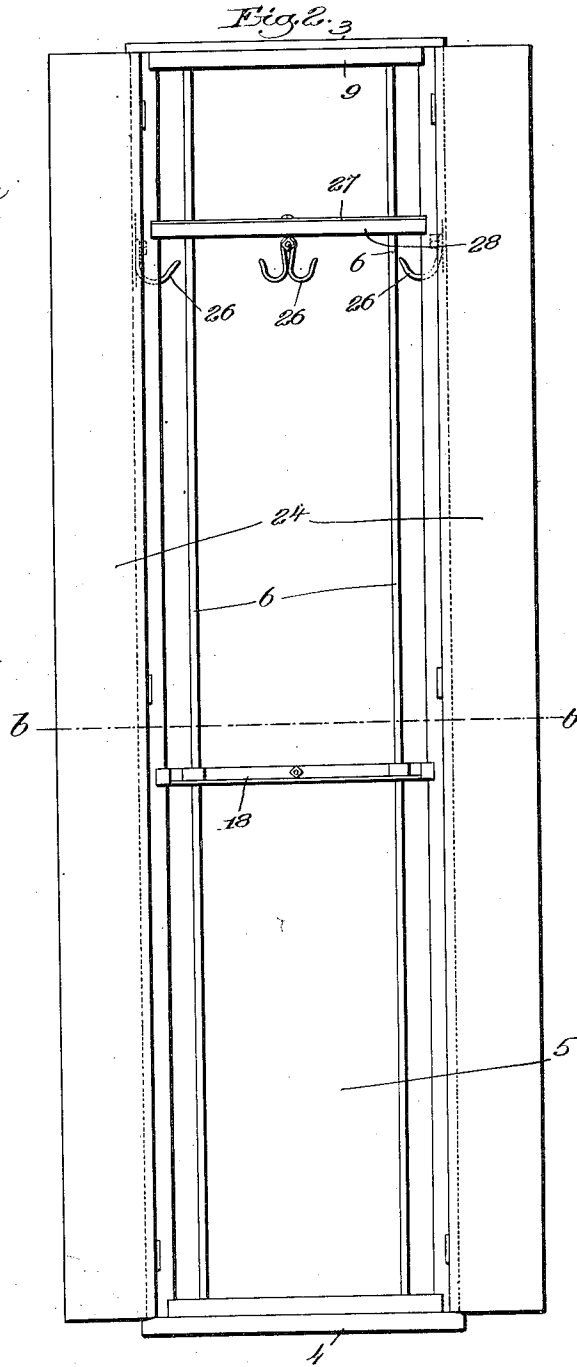
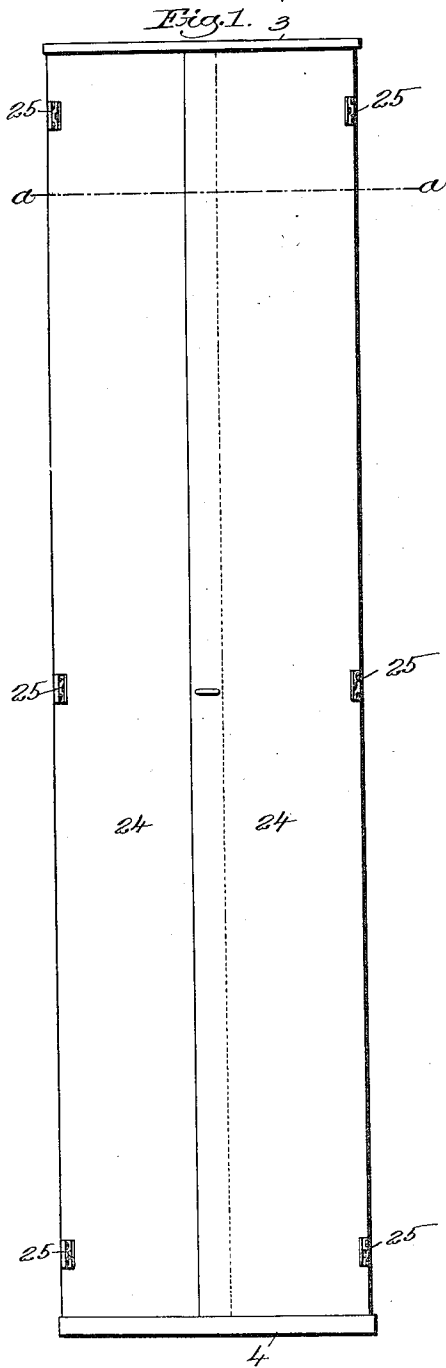
LOCKER.

APPLICATION FILED MAR. 2, 1907.

Patented July 23, 1912.

4 SHEETS-SHEET 1.

1,033,711.



Witnesses:  
Fred S. Greenhof  
Joseph M. Ward.

Inventor.  
Sargord D. Leland,  
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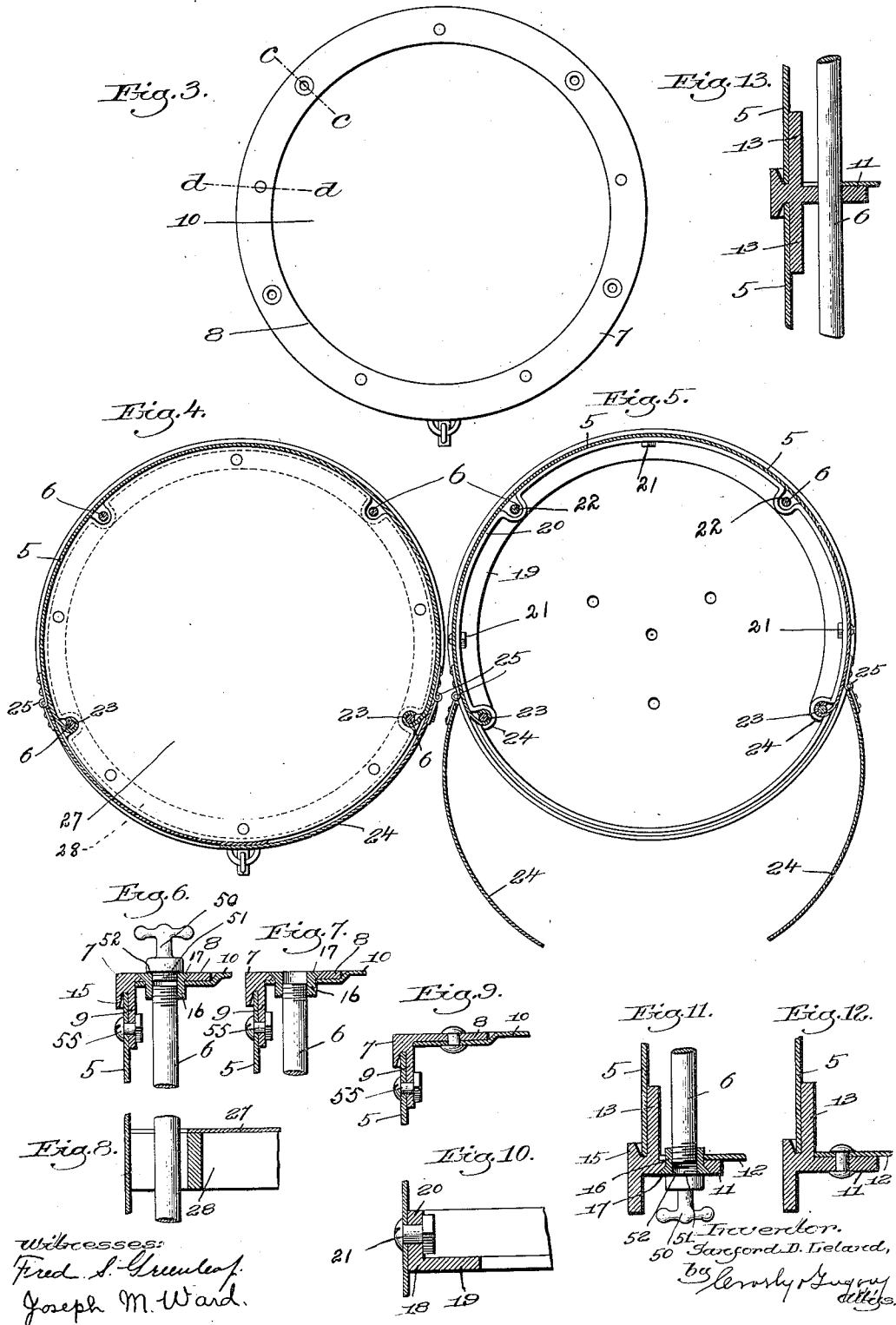
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4 SHEETS—SHEET 3.

1,033,711.

Fig. 14.

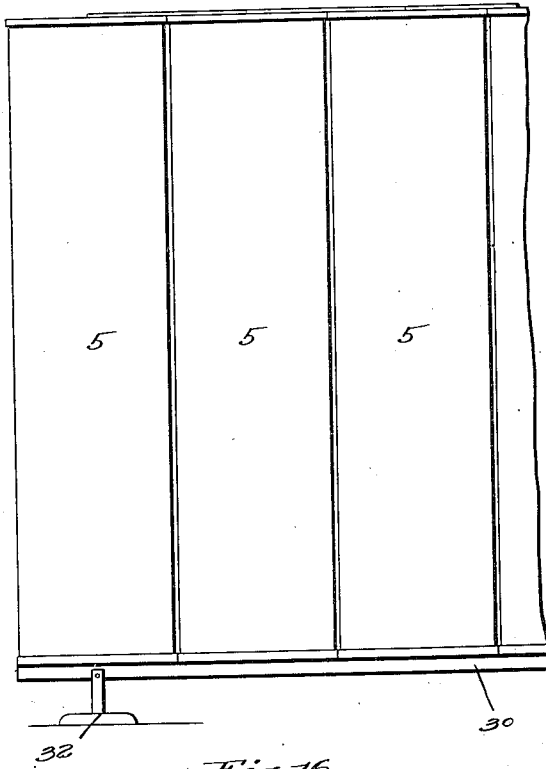


Fig. 15.

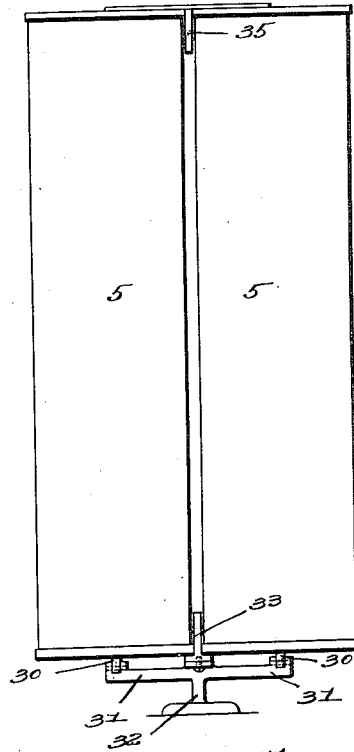


Fig. 16.

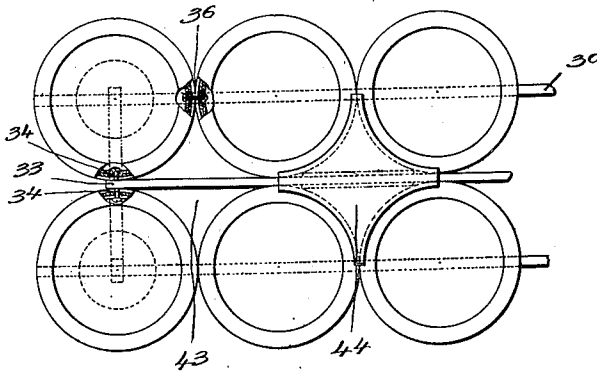


Fig. 17.

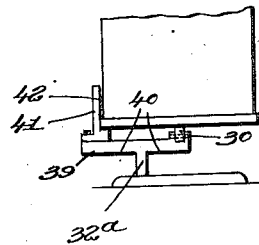
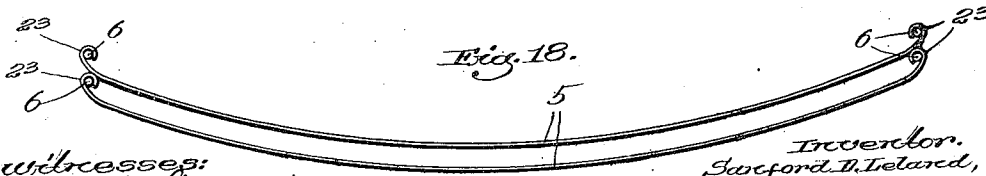


Fig. 18.



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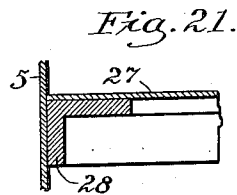
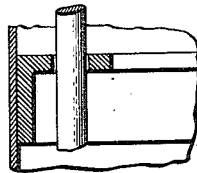
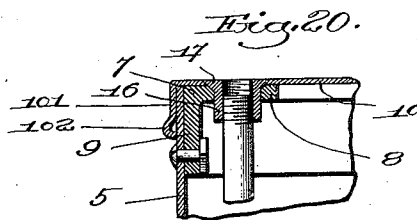
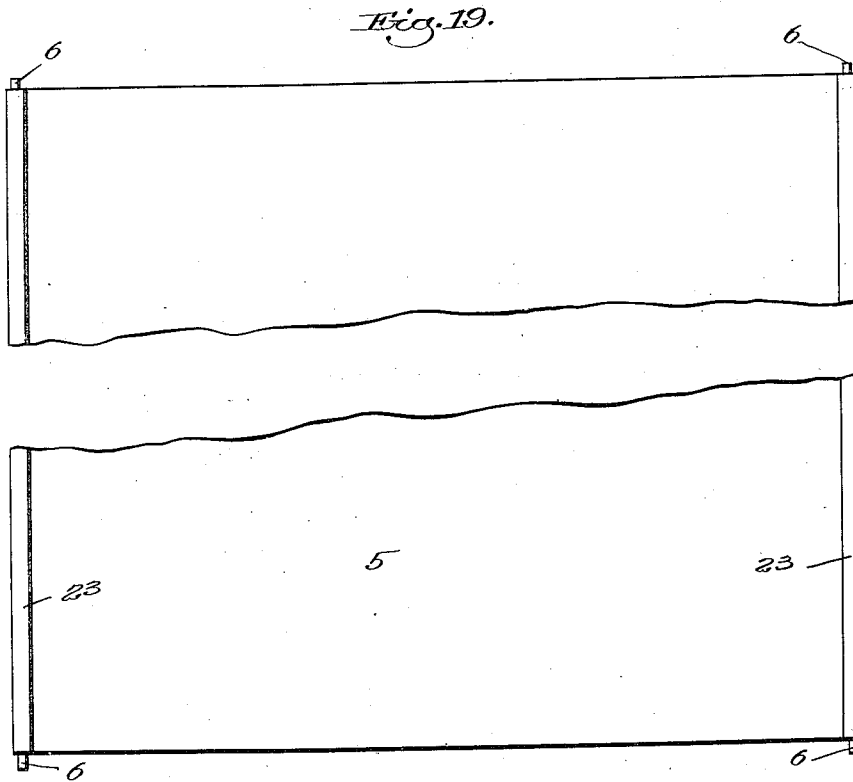
LOCKER.

APPLICATION FILED MAR. 2, 1907.

Patented July 23, 1912.

4 SHEETS-SHEET 4.

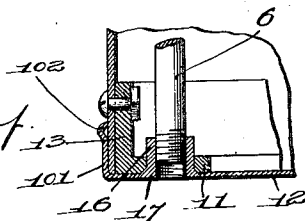
1,033,711.



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# UNITED STATES PATENT OFFICE.

SANFORD D. LELAND, OF WINCHESTER, MASSACHUSETTS, ASSIGNOR TO MANUFACTURING EQUIPMENT & ENGINEERING COMPANY, OF SOUTH FRAMINGHAM, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

## LOCKER.

1,033,711.

Specification of Letters Patent.

Patented July 23, 1912.

Application filed March 2, 1907. Serial No. 360,252.

*To all whom it may concern:*

Be it known that I, SANFORD D. LELAND, a citizen of the United States, and a resident of Winchester, in the county of Middlesex and State of Massachusetts, have invented an Improvement in Lockers, of which the following description, in connection with the accompanying drawing, is a specification, like letters on the drawing representing like parts.

This invention relates to lockers which are adapted for use generally in manufacturing plants, gymnasiums, on shipboard, and in any other place where lockers are used.

Wooden lockers, which were those most commonly used, have now been superseded by metal lockers, which are fire-proof, more sanitary and secure than wooden lockers.

One object of my present invention is to provide a metal locker which is simple in construction, economical in the use of floor space, portable and entirely secure.

In constructing my improved locker I have also attempted to provide a construction which can be readily set up or taken down by unskilled labor so that it is possible to ship the lockers in quantities in a knocked-down condition and then to assemble the parts of the lockers with facility and without the aid of skilled workmen.

For many reasons it is preferable to make the lockers of cylindrical form, for lockers of such shape are simpler in construction and more economical of floor space and I have herein embodied my invention in a locker of this shape.

My improved locker is provided with double-doors, thus making a radical saving in operating space required, and novel means of supporting the lockers are employed so that any space between them is readily accessible for the recovery of articles which may accidentally be dropped therein, and for cleaning the floor.

Other features of my invention will be more fully hereinafter described and then pointed out in the appended claims.

Referring to the drawings, Figure 1 is a front elevation of a locker embodying my invention with the doors closed; Fig. 2 is a similar view showing the doors open; Fig. 3

is a top plan view; Fig. 4 is a horizontal section on substantially the line *a-a*, Fig. 1; Fig. 5 is a horizontal section on substantially the line *b-b*, Fig. 2; Figs. 6 and 7 are sections through the upper head on the line *c-c*, Fig. 3; Fig. 8 is a section in the same vertical plane through the side of the locker; Fig. 9 is a section through the upper head on the line *d-d*, Fig. 3; Fig. 10 is a vertical section in the same plane as Fig. 9, but taken farther down on the side of the locker; Fig. 11 is a section through the lower head of the locker on the plane of the line *c-c*, Fig. 3; Fig. 12 is also a section through the lower head of the locker in the vertical plane of the line *d-d*, Fig. 3; Fig. 13 is a detail showing a construction of the double tier locker arrangement; Fig. 14 is a front view of a portion of batteries of lockers showing the manner of supporting them; Fig. 15 is an end view of Fig. 14; Fig. 16 is a top plan view of Fig. 14; Fig. 17 shows a supporting bracket for supporting a battery or a single row of lockers; Fig. 18 shows the manner in which the shells of the lockers may be packed for shipment; Fig. 19 is a side view of the casing of the locker with the two tie-rods inserted at the edges thereof; Fig. 20 is a section through the head showing a modification of the invention; Fig. 21 is a sectional detail view showing the rest for the shelf 27.

The locker herein shown comprises an upper head 3, a lower head 4, and a shell or casing 5 which is preferably of sheet metal and which encircles said heads and forms the side walls of the locker. The heads 3 and 4 are held together by tie-rods 6, and certain of these tie-rods are used as means for securing the shell 5 in place. Although the heads 3 and 4 may be made in various ways I prefer to construct each of an annular frame and a circular sheet metal plate.

The annular frame of the upper head 3 is herein shown at 7, and it is formed with the horizontally extending flange 8 to which the sheet metal cap 10 is secured and the vertical flange 9 which is overlapped by the sheet metal side 5. The frame of the lower head also includes a horizontally extending flange 11 to which the sheet metal bottom 12

is secured, and a vertically extending flange 13 which is encircled by the lower edge of the sheet metal casing 5. The tie-rods 6 as shown are adjustably secured to the horizontal flanges 8 and 11 of the heads.

In the embodiment of the invention shown in Figs. 6 and 11 the frame of each of the heads has the flange or lip 15 which overlies the edge of the shell 5, and the tie-rods 6 serve to hold the structure together with the upper and lower edges of the shell 5 confined in the grooves between the lips 15 and the vertical flanges 9 and 13.

In Fig. 20, I have shown a different form of head, wherein the sheet metal end 10 is formed with the flange 101, which fits around the vertical flange 9 of the frame 7.

The lower edge of the flange 101 is formed with a sort of bead 102 and is curved inwardly to lie snugly against the casing 5, which overlies the flange 9. This makes a rather simpler construction than that shown in Fig. 6, wherein the head 7 is provided with a lip 15. In this form of the invention, the space between the rim or flange 101 of the plate 10 and the vertical flange 9 of the frame 7, constitutes the groove in which the edge of the casing 5 is received, and such groove corresponds to the groove formed by the lip 15 as shown in Fig. 6.

It will be understood of course that the construction shown in Fig. 20 may be employed for both the top and bottom heads. If the tie-rods were held in place by ordinary nuts situated above the upper head it would be a comparatively simple matter to remove these nuts and then take off the upper head thus getting access to the interior of the locker. To prevent this from happening I have devised a special form of nut for the upper and lower ends of the tie-rods, which, when in place, is flush with the outer surface of the heads and is of such a construction that no unauthorized person can remove it. This nut is shown at 16 and it has a head 17 which sets in a recess or counterbore formed in the flange 8 or 11. The nut projects through the flange 8 or 11 and is long enough to engage the screw-threaded end of the tie-rod 6. When the locker is set up the nuts come flush with the outer surfaces of the heads 3 and 4, as shown in Figs. 7, 11 and 20, and since the nut has no projection or groove on its upper face it will be impossible for unauthorized persons to remove it and thus gain access to the locker.

The shell 5 does not extend entirely around the locker but a space is left between the edges of the shell sufficient to form a door opening. I have herein shown the edges 23 of the shell as curved around two of the tie-rods 6, said tie-rods serving to hold the shell in proper position. The door opening between the tie rods 6 is adapted to

be closed by a suitable door or doors 24 which are preferably hinged to the edges of the shell as at 25.

I prefer to use the two doors, as shown in Fig. 5, which are hinged to the locker on the sides thereof, for by using a circular locker with the doors thus secured thereto, a minimum amount of space is required for opening the doors, and a great saving of space is effected over what would be possible with a square locker.

I have herein shown a stiffening member which is secured to the inside of the shell at a point between the top and bottom for the purpose of stiffening the latter. This stiffening member is shown at 18, and it is arranged to extend from one vertical edge to the other of the shell 5. It is shown as having the vertical flange 20 which overlies and may be secured to the shell 5 by suitable bolts or screws 21 and the horizontal stiffening flange 19. It is preferably provided at its periphery with suitable recesses 22 through which the tie-rods 6 pass, and at its end may be made with curved lips 24 which embrace the edges 23 of the shell, see Fig. 5. One or more of these stiffening members may be employed.

The locker is preferably provided with a suitable shelf on which hats or small articles may be placed, and with hooks 26 on which garments may be hung. The shelf herein shown is designated by 27, and it is supported on a ring-shaped supporting member 28 which is provided with a horizontal flange on which the shelf rests and a vertical flange which overlies and is secured to the shell 5. In Figs. 4 and 8 the supporting member 28 is shown as provided in its outer periphery with recesses through which the tie rods 6 pass, while in Fig. 20 this supporting member is shown as having an aperture through its horizontal flange through which the tie-rods pass.

The lockers may be used singly or in batteries, and where they are used in batteries I prefer to arrange them so that the space between adjacent lockers is readily accessible from the bottom. In Figs. 14 and 16 I have shown one way of arranging these lockers in double batteries; the lockers in each row resting on a supporting bar 30 which runs substantially centrally of the lockers in the row. These bars 30 are supported on arms 31 of the stand 32, said bars 30 extending from one stand to the other. In case the battery is comparatively short only one stand at each end thereof will be necessary, in which case the space beneath all the intermediate lockers is perfectly open and accessible. To hold these lockers on these supporting bars 30 I preferably employ a central T-shaped bar 33 which is secured to the stands 32, and the web of which extends up between the two rows of lockers and is se-

cured to each locker by suitable bolts 34, see Figs. 15 and 16. I may also use a similar tie member 35 at the upper end of the lockers and to which each locker is bolted, and if desired the adjacent lockers of each row may be tied together by tie-bolts.

Where the lockers are arranged in single rows I prefer to use the stand 32<sup>a</sup>, shown in Fig. 17, said stand having two arms 40 on one of which rests a supporting bar 30 extending along underneath the locker and to the other of which is secured a bar 41, on which the edge of all the lockers rest, said bar having a vertical flange to which all the lockers may be secured by bolts 42.

Where the lockers are used in double rows, as shown in Fig. 16, an open space 43 exists between adjacent lockers, and to prevent articles from being dropped down into this space I may employ a suitable cover 44 of a proper shape to cover this opening; but even if articles do get dropped down between adjacent lockers they may be readily recovered because of the manner in which the lockers are supported.

In shipping the lockers I propose to pack the heads and the shell separately. The shells will each be made and the two tie-rods 6 be inserted at the edges 23 thereof, as shown in Fig. 19, and said shells with the tie-rods thus assembled may then be packed in a comparatively flat bundle, as shown in Fig. 18, the heads being packed separately.

In assembling the lockers, one end of each of the two tie-rods associated with each shell will be inserted into proper holes in the lower head, and then the upper head may be placed in position and the nuts 16 turned down to engage the upper ends of the tie-rods, it being understood of course that the sheet metal shell 5 may be easily bent into the circular shape by the person setting up the locker.

For tightening the nuts 16 on the tie-rods I propose to use an implement such as shown at 50, Fig. 6, which comprises a handle and a body having a screw-threaded projection 51 of a size to screw into the nut. This implement is screwed into the nut until the shoulder 52 thereon engages the top of the nut when the nut may be readily screwed onto the tie-rods 6, as will be obvious. When the nuts have been set tight the wrench 50 may be backed out of the nut thus leaving the nut flush with the head, as shown in Fig. 7, and entirely inaccessible. With this construction it will be impossible to remove the nut to gain access to the locker except by the use of the special implement herein shown.

The flanges 15 and 101 not only serve to make a groove to receive the edge of the shell but also act as a means to prevent a person from inserting an implement, such

as a screw-driver, between the edge of the shell and the vertical flange of the upper head for the purpose of prying said shell off from the head.

The shell may be secured to the vertical flanges of the heads by suitable bolts 55, although after the locker is entirely assembled such bolts are not needed. These bolts however are useful during the assembling operation as they assist to hold the shell in place.

It is sometimes desirable to build the lockers in tiers, one above the other, and with my invention this may be readily done by making the ring for the bottom of the locker of the cross sectional shape shown in Fig. 13, it having two vertical flanges 13, one extending upwardly and one extending downwardly to receive the two shells 5 of the upper and lower locker. The tie-rods 6 may extend from the bottom of the lower locker to the top of the upper locker, in which case they will pass through the horizontal flange 11, as seen in Fig. 13. In this case the tie-rods serve to tie together the two superimposed lockers as well as to hold the heads on each locker.

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

1. In a locker, the combination with two heads, of tie-rods connecting said heads, a sheet metal casing extending between said heads and having its edges secured to two adjacent tie-rods, and a door carried by the casing and adapted to close the opening between said tie-rods.

2. In a locker, the combination with two heads each having a groove extending partially thereabout adjacent its periphery, a sheet metal casing partially encircling said heads and having its edges occupying said grooves, tie-rods connecting said heads and clamping them to the casing, and a door to close the space between the side edges of the casing.

3. In a locker, the combination with two heads each having a groove extending partially thereabout adjacent its periphery, a sheet metal casing partially encircling said heads and having its edges occupying said grooves, tie-rods connecting said heads and clamping them to the casing, and a door extending from one head to the other and adapted to close the space between the side edges of the casing.

4. In a locker, the combination with two heads each having a groove, of tie-rods connecting said heads, and a sheet metal casing having its top and bottom edges received in said grooves, and having its vertical edges bent to inclose certain of the tie-rods.

5. In a locker, the combination with two heads each having a groove, of tie-rods connecting said heads, and a sheet metal casing

having its top and bottom edges received in said grooves and having its vertical edges bent to embrace certain of the tie-rods, and a door carried by the casing and adapted to close the opening between said tie-rods.

6. In a locker, the combination with two heads each having a vertical flange, of tie rods connecting said heads, a sheet metal casing partially encircling the heads and overlying said vertical flanges, each head having a lip extending from one side edge of the casing to the other and adapted to overlie the portion of the casing which lies against the flange.

7. In a locker, the combination with two heads, each comprising an annular frame having a horizontal and a vertical flange, and a sheet iron plate secured to the horizontal flange, of a casing overlying the vertical flange of the heads, and tie-rods connecting said heads and clamping them to the casing.

8. In a locker, the combination with two heads, of a casing between said heads, and tie-rods connecting the heads, one of said heads having nuts flush with the outer surface of said head and screw-threaded onto the tie-rods.

9. The combination with a plurality of lockers arranged in a row, of two supporting stands, two bars connecting said stands, one extending beneath the lockers and supporting the same and the other extending

along the side of the lockers, and means to secure the lockers to the latter bar.

10. The combination with two adjacent rows of circular lockers, of covers supported by the lockers and closing the openings therebetween.

11. The combination with two rows of circular lockers, means to tie the adjacent lockers together, and covers resting on the lockers and shaped to cover the openings therebetween.

12. In a locker, the combination with two heads of tie-rods connecting said heads, a casing having its edges secured to adjacent tie-rods and clamped between the heads, the space between said tie-rods constituting a door opening, and a door hinged to each edge of the casing.

13. In a locker, the combination with two circular heads of tie-rods connecting said heads, a casing extending between said heads and having its edges secured to two adjacent tie-rods, the space between said tie-rods forming a door opening and a door hinged to the casing near each edge.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

SANFORD D. LELAND.

Witnesses:

LOUIS C. SMITH,  
GEO. W. GREGORY.