

J. S. MERRITT, C. BLACK & S. MORRIS.
METAL LOCKER.

APPLICATION FILED NOV. 25, 1910.

Patented Dec. 8, 1914.

3 SHEETS-SHEET 1.

1,120,213.

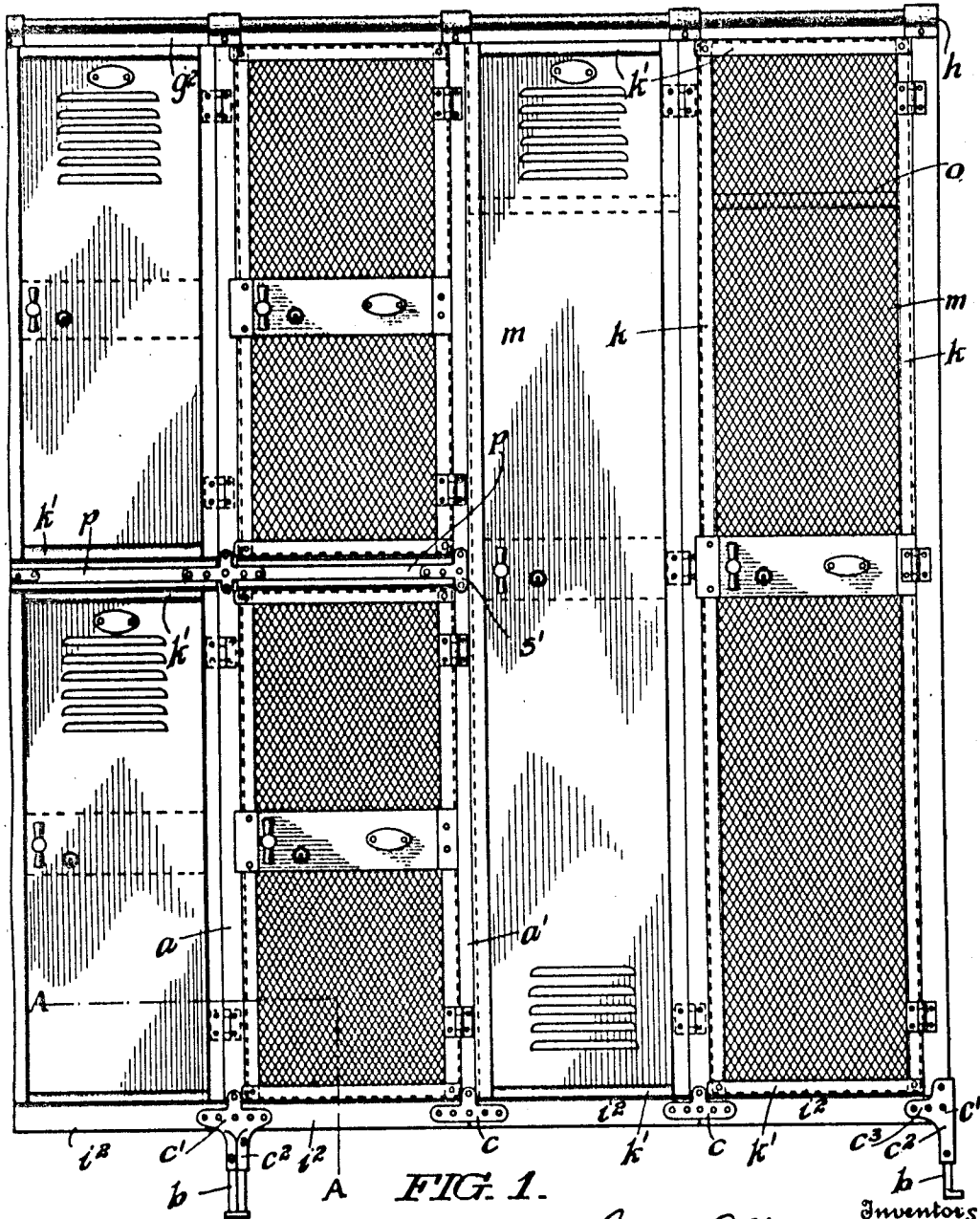


FIG. 1.

Witnesses
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A. M. Kelly.

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3 SHEETS-SHEET 2.

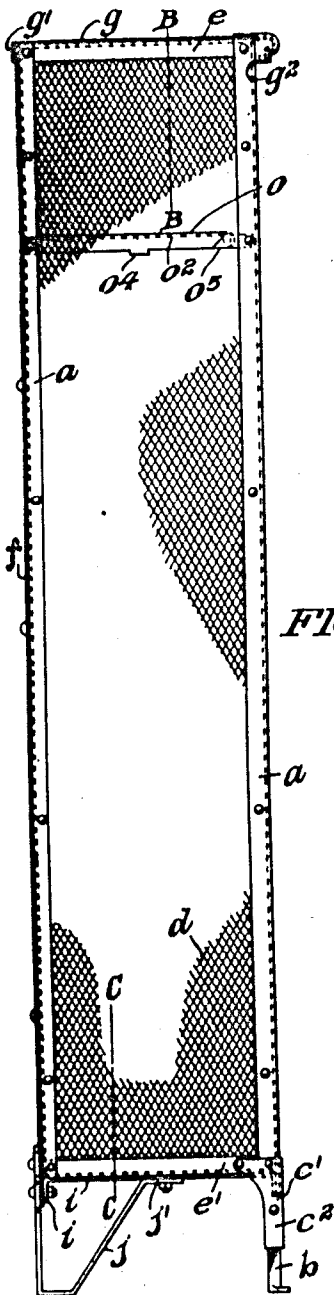


FIG. 2.

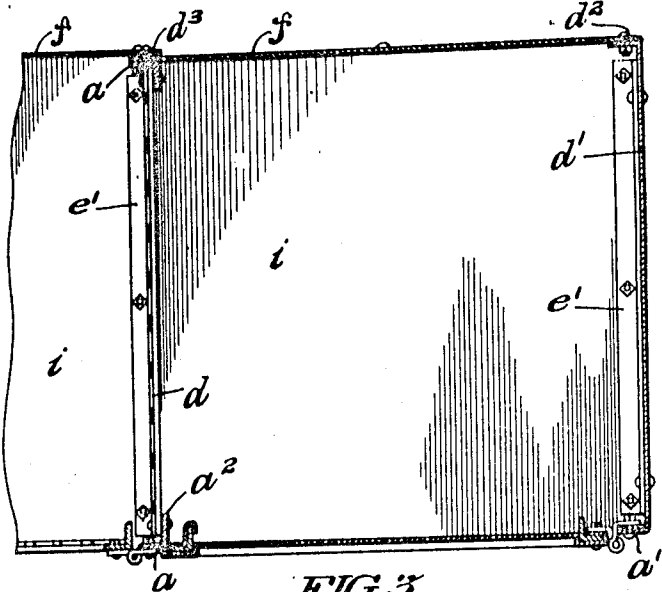


FIG. 3.

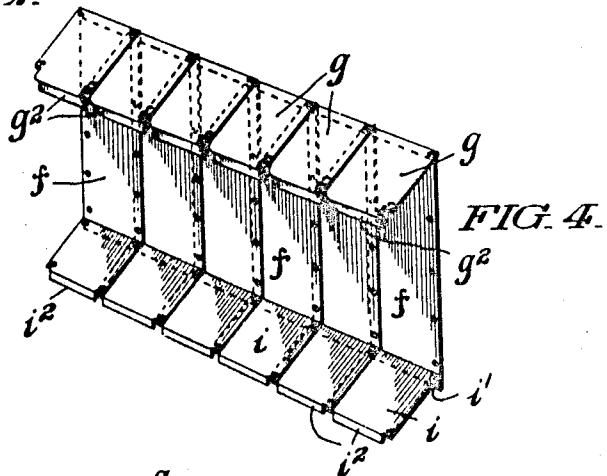


FIG. 4.

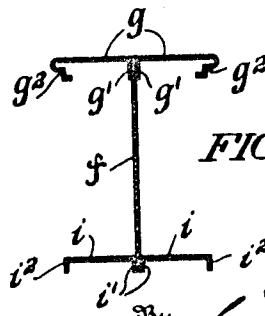


FIG. 5.

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3 SHEETS-SHEET 3.

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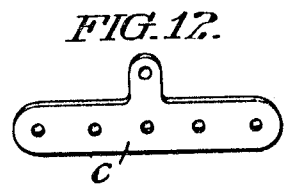
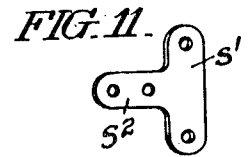
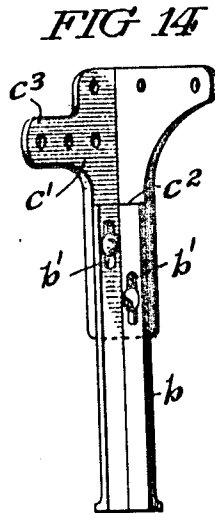
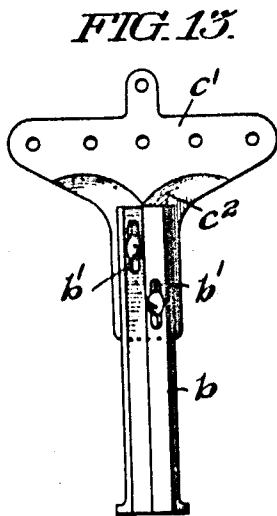
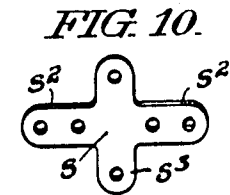
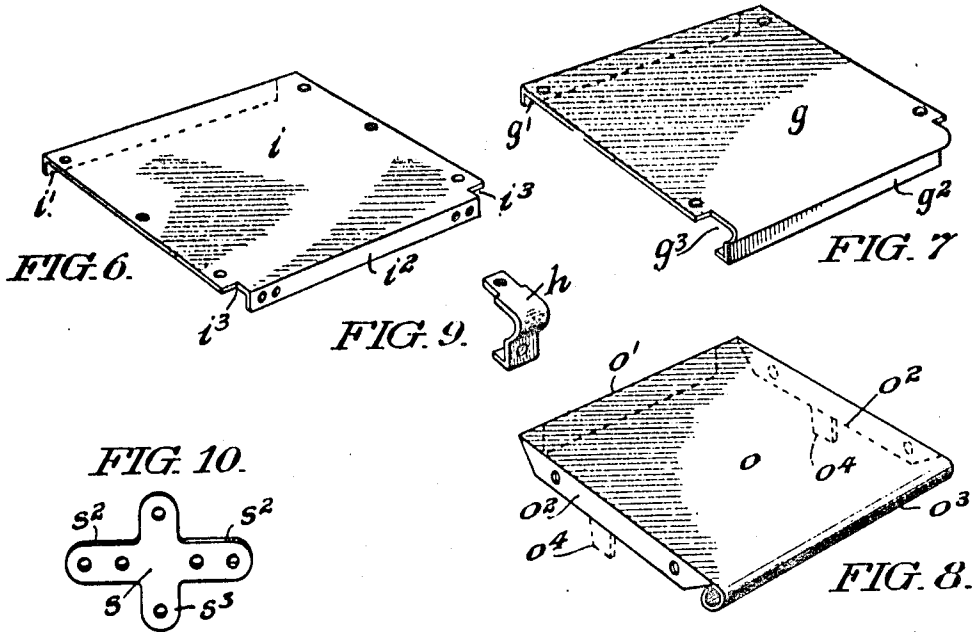
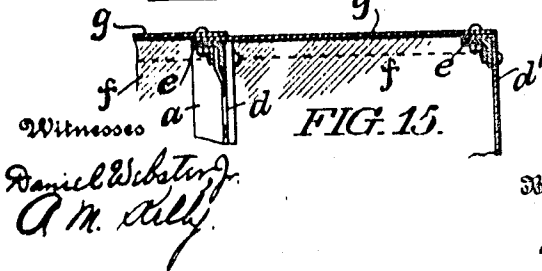
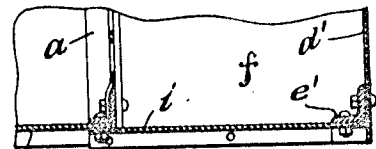


FIG. 16.



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UNITED STATES PATENT OFFICE.

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METAL LOCKER.

1,120,213.

Specification of Letters Patent.

Patented Dec. 8, 1914.

Continuation of application Serial No. 494,849, filed May 8, 1909. This application filed November 25, 1910.
Serial No. 594,025.

To all whom it may concern:

Be it known that we, JAMES S. MERRITT, of the city and county of Philadelphia, State of Pennsylvania, CHARLES BLACK, of Ardmore, Montgomery county, Pennsylvania, and STEPHEN MORRIS, of Haverford, Montgomery county, Pennsylvania, all citizens of the United States, have invented an Improvement in Metal Lockers, of which the following is a specification.

It is one of the objects of our invention to form a locker structure composed of a series of locker compartments, which may be assembled with facility and will have a maximum rigidity for the amount of metal used. In the preferred form the back, top and bottom are each composed of overlapping sheets, so cut and punched that they will line up properly and may be easily secured together. When the parts are assembled the structure constitutes substantially a plate girder, in which the backs form the main plate, the top sheets the top flange, the bottom sheets the bottom flange, and the dividing partitions and ends the braces.

Another part of our invention relates to the construction of the top and bottom sheets and their combination with the partitions so that their front flanges will form the top and bottom sills of the locker compartments.

Our invention also relates to the combination with the partitions of an intermediate horizontal partition dividing the locker space into compartments with the front flange of the partition forming the dividing sill.

The invention also includes improvements in construction and combinations of parts which are fully described and pointed out hereinafter.

In the drawings, Figure 1 is a front elevation of a set of lockers embodying the invention; Fig. 2 is side elevation of an end locker of a set, said end locker having a reticulated wall; Fig. 3 is a horizontal section, on an enlarged scale, on the line A—A of Fig. 1; Fig. 4 is a perspective view on a reduced scale of a set of assembled tops, backs and bottoms, but omitting the end walls and partitions; Fig. 5 is a vertical section on a reduced scale of a pair of lockers arranged

back to back; Figs. 6, 7, 8 and 9 are perspective views respectively of the bottom plate, top plate, shelf and top union piece; Figs. 10, 11 and 12 are perspective views of different forms of coupling pieces; Fig. 13 is a rear elevation of one of the feet and its coupling; and Fig. 14 is a similar view of a foot and coupling adapted for the corner of a set of lockers; and Figs. 15 and 16 are vertical sectional views enlarged on the line B—B and C—C respectively of Fig. 2.

The walls of the doors and partitions may be formed of sheet metal, or of reticulated material, such as woven wire or expanded metal, and the construction is such that a part of the lockers in a set may have walls and doors of material of one form and part of the other form. In Fig. 1 is shown a set of four lockers, of which two have doors of sheet metal and two of expanded metal. A sheet metal door may be combined with reticulated partitions, or a reticulated door with sheet metal partitions. The construction of the parts is such that the person assembling them may use either form that may be desired.

The expanded metal partition shown in Fig. 2 and at the left in Fig. 3 consists of top and back vertical angle-irons a , the expanded metal sheet d secured at its edge to the flanges a^2 of the irons a and the horizontal bracing irons e e' between the irons a a at the top and bottom respectively.

When a sheet metal partition d' is used, as shown in the right hand of Fig. 3, the rear vertical iron may be omitted. A flat unflanged iron a' is employed at the front, about which the front vertical edge of the sheet metal piece d' is folded, and the back edge of the metal sheet is bent into a flange and riveted to the back sheet f as shown at d^2 . The top and bottom brace-pieces are riveted to the sheet metal d' .

The back is composed of sheets f , each of which forms the back of one locker or space between two adjacent partitions. These sheets are laid with their edges overlapping, the overlapping edge of the sheets being bent over to form a reinforcement as shown at d^3 in Fig. 3. When the partitions have rear-irons a the overlapping edges of the back sheets f are riveted to such irons, as in the left hand of Fig. 3, and when the

rear-irons a are omitted the edges of the sheets f are riveted to the flanged or bent edge of the partition as at d^2 in Fig. 3. The top of the lockers is also formed of overlapping sheets g , each sheet extending between two adjacent partitions. The overlapping edges of these sheets are riveted to the top cross bars c , as shown in Fig. 15. These sheets g are provided at the back with flanges g^1 which fit over and are riveted to the tops of the back sheets f , f . The front edges of these top sheets are also provided with downturned flanges g^2 which extend down between adjacent front irons a a' of the panels and form the top sills of the lockers. These flanges g^2 are preferably extended outward and rounded to form a molding as shown. The front corners of the top plates are notched as at g^3 and over the spaces formed by these notches are fitted the pieces h which are secured to the tops of the front upright irons a or a' of the partitions. These pieces h are shaped to conform to the shape of the molding flanges g^2 . The bottom of the lockers is also formed of overlapping sheets i , each of which extends between two adjacent partitions. The overlapping edges of these sheets are riveted to the bottom cross bars e' as shown in Fig. 16. These sheets are provided at the back with flanges i^1 which are riveted to the lower edges of the back sheets f . The front edges are also provided with flanges i^2 which extend between adjacent irons a a' and form the bottom sills of the lockers. The front corners of these sheets i are notched as at i^3 to permit the overlapping. Adjacent sills i^2 are secured together and to the intermediate uprights a or a' by means of T-plates c . Some of these T-plates marked c' , are adapted to carry a foot, and for this purpose are provided with an extension c^2 extending down and formed with a guide socket for the foot b , which may be adjustably secured by means of slots and screws b' . In Fig. 14 is shown a T-plate and foot socket c' adapted for the corner of a set of lockers; in this case the arms c^3 c^3 are at an angle to one another and are secured respectively to the front sill i^2 and lower cross bar e' of the corner locker (see Figs. 1 and 2). The lockers may be supported at the rear by means of rods or bars j bent into U-shape, one arm being secured to the back of the locker, or to the flange i^1 of the bottom sheet, and the other arm terminating in a horizontal shoe j' and being secured to the bottom of the locker. The extremities of these arms which are attached to the locker are preferably slotted to permit adjustment, one arm being adjusted vertically and the other horizontally, and the bend of the bar j being changed according to the adjustment of the arms. The same bolt may

be used for securing the shoe j' that is employed for securing the bottom sheet i to the cross brace e' . Other means for supporting the lockers may, of course, be employed. The doors consist of a suitable outer frame k k , k' k' , carrying a sheet m of reticulated or sheet metal.

o is a shelf consisting of sheet metal having its edges provided with flanges o' , o^2 , o^2 , o^3 . The rear flange o' is riveted to the back sheet f . When the partitions are of sheet metal the side flanges o^2 , o^2 may be similarly riveted to such walls. When expanded metal partitions are employed the sides of the shelves may be secured by clips o^4 on the side flanges adapted to be bent up in engagement with cross bars o' extending between the front and back uprights a , a (see Fig. 2). The front flange o^3 may be rounded as shown.

In some cases the locker may be divided by an intermediate partition p into compartments as shown in the left hand portion of Fig. 1. Such partition may be generally similar to one of the base-pieces i , having a flange at the back, which is riveted to the back sheet, and the side edges secured to cross brace-pieces similar to the cross-pieces e' extending horizontally on the partition walls. The front flange of this partition p forms a sill between the upper and lower doors and may be secured to the front uprights a or a' by suitable plates s or s' . The plate s (Fig. 10) is in the form of a cross to be used where two partitions p p are employed in adjacent lockers, the horizontal arms s^2 being secured to the partitions p p and the vertical arms s^2 s^2 to the intermediate upright a . The plate s' (Fig. 11), with a single horizontal arm s^2 , is used when there is no partition in the adjacent locker, as on the right hand side of the second pair of lockers in Fig. 1, or at the end of a set of lockers.

A set of lockers composed of the parts described may be assembled with facility, and when assembled will have a maximum rigidity for the amount of material employed. The facility of assembly is largely due to the formation of the backs, tops and bottoms of overlapping sheets which are so cut and punched that they must line up properly. The great rigidity is due to the fact that a set of assembled lockers constitutes substantially a plate girder, in which the main plate is formed by the series of overlapping back sheets, the top flange by the overlapping top plate, the bottom flange by the overlapping bottom plates, and the stiffeners or braces by the partitions. The plate girder thus formed is illustrated in Fig. 4 which shows six sets of top, back and bottom pieces united together to form a set of six lockers. In this view the dividing partitions and end walls are omitted to

show more clearly how the united units form the plate girder. The partitions and end walls when applied correspond to the braces of the girder. It will be noted, however, that these partitions and end walls are carried by the plate girder formed by the overlapping units and are not side walls resting in the floor and supporting the top, back and bottom pieces as has been usual heretofore in locker constructions.

The connection of the plates by overlapping edges forms a plate almost as strong as if the top, back and bottom were each formed of a single continuous sheet, because the connecting bolts draw the overlapped edges closely and accurately together. Thus by this overlapping of the edges, the strength of the plate girder of any length is obtained in a structure made up of sets of units. The structure is so strong that supporting parts are required at long intervals only.

When two rows of lockers are to be assembled back to back, each back sheet may be used in common for both sets, the top and bottom plates being attached by their rear flanges on opposite sides to the top and bottom of the common back sheet. This construction is shown in Fig. 5.

What we claim is:—

1. A metal locker structure having the back, top and bottom each formed of a series of units consisting of overlapping sheets connected together at their overlapped edges and having the back, top and bottom units in each set connected together to form substantially a plate girder.

2. A metal locker structure having the back, top and bottom each formed of a series of units consisting of overlapping sheets connected together at their overlapped edges and having the back, top and bottom units in each set connected together to form substantially a plate girder, and a series of partitions, forming the ends and intermediate partition walls, secured to said back, top and bottom sheets respectively.

3. A locker structure having the top, back and bottom each formed of a series of overlapping units secured together and constituting substantially a plate girder, the units of the top each having a flange at the back secured to the top of the corresponding back unit and being provided at the front with a

down-turned flange forming alone the top sill, and vertical partitions secured to the edges of the top, back and bottom units.

4. A locker structure having the top, back and bottom each formed of a series of overlapping units secured together and constituting substantially a plate girder, the units of the bottom each having a flange at the back secured to the bottom of the corresponding back unit and being provided at the front with a flange forming alone the bottom sill, and vertical partitions secured to the edges of the top, back and bottom units.

5. A locker structure having the top, back and bottom each formed of a series of overlapping units secured together and constituting substantially a plate girder, the units of the top and bottom each having a flange at the back secured respectively to the top and bottom of the corresponding back unit, and each being provided at the front with a flange forming alone the sill, and vertical partitions secured to the edges of the top, back and bottom units.

6. A locker structure having the top and back each formed of a series of overlapping units secured together, the units of the top each having a flange at the back secured to the top of the corresponding back unit and being provided at the front with a flange forming alone the top sill, vertical partitions secured to the edges of the top and back units and a bottom formed of units secured to the lower edges of the partitions.

7. A locker structure having the bottom and back each formed of a series of overlapping units secured together the units of the bottom each having a flange at the back secured to the bottom of the corresponding back unit, and being provided at the front with a flange forming alone the bottom sill, vertical partitions secured to the edges of the bottom and back units, and a top formed of units secured to the upper edges of the partitions.

In testimony of which invention, we hereunto set our hands.

JAMES S. MERRITT.
CHARLES BLACK.
STEPHEN MORRIS.

Witnesses:

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ELIZABETH T. FRAME.