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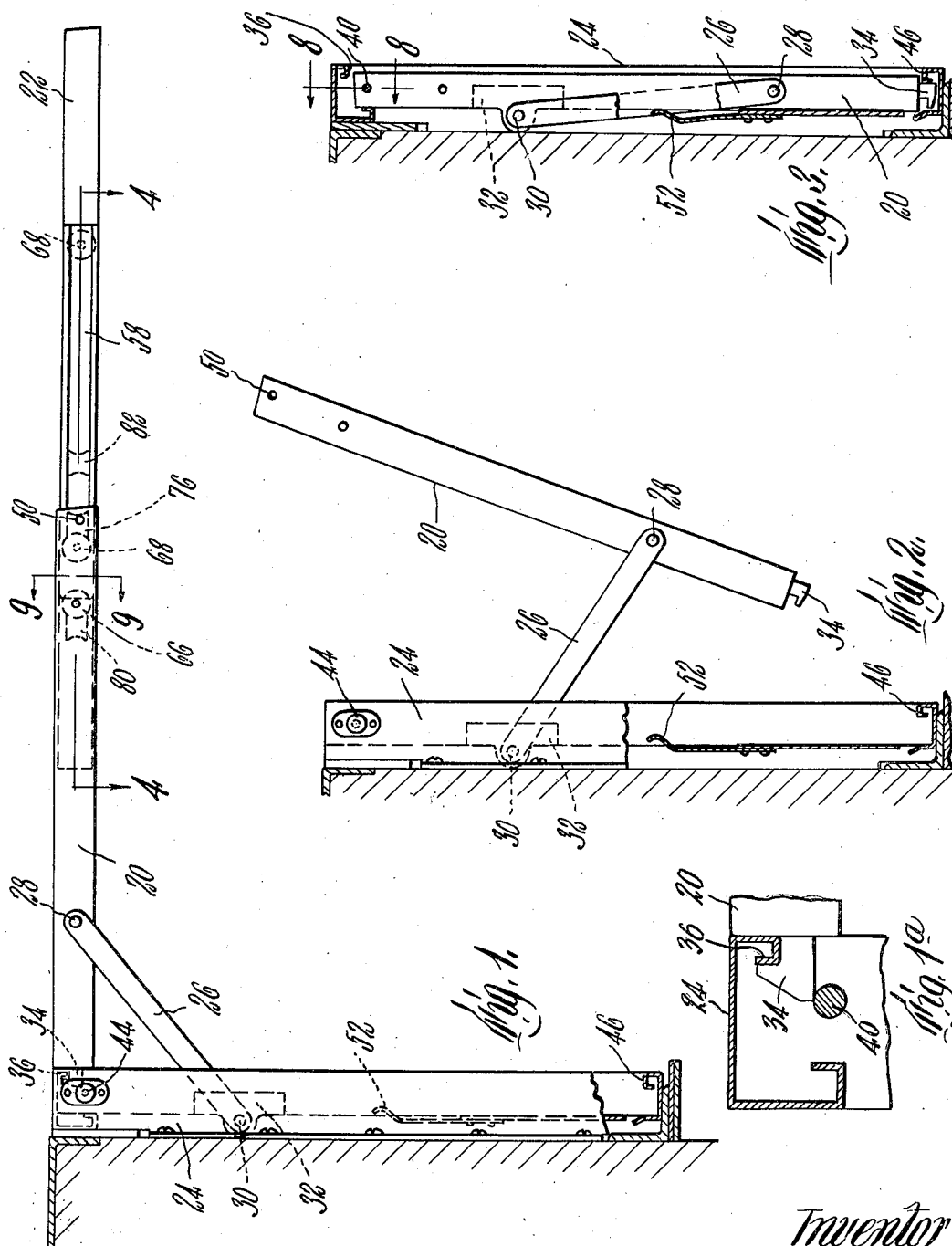
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2,199,981

WALL CABINET TABLE

Filed Nov. 23, 1936

4 Sheets-Sheet 1



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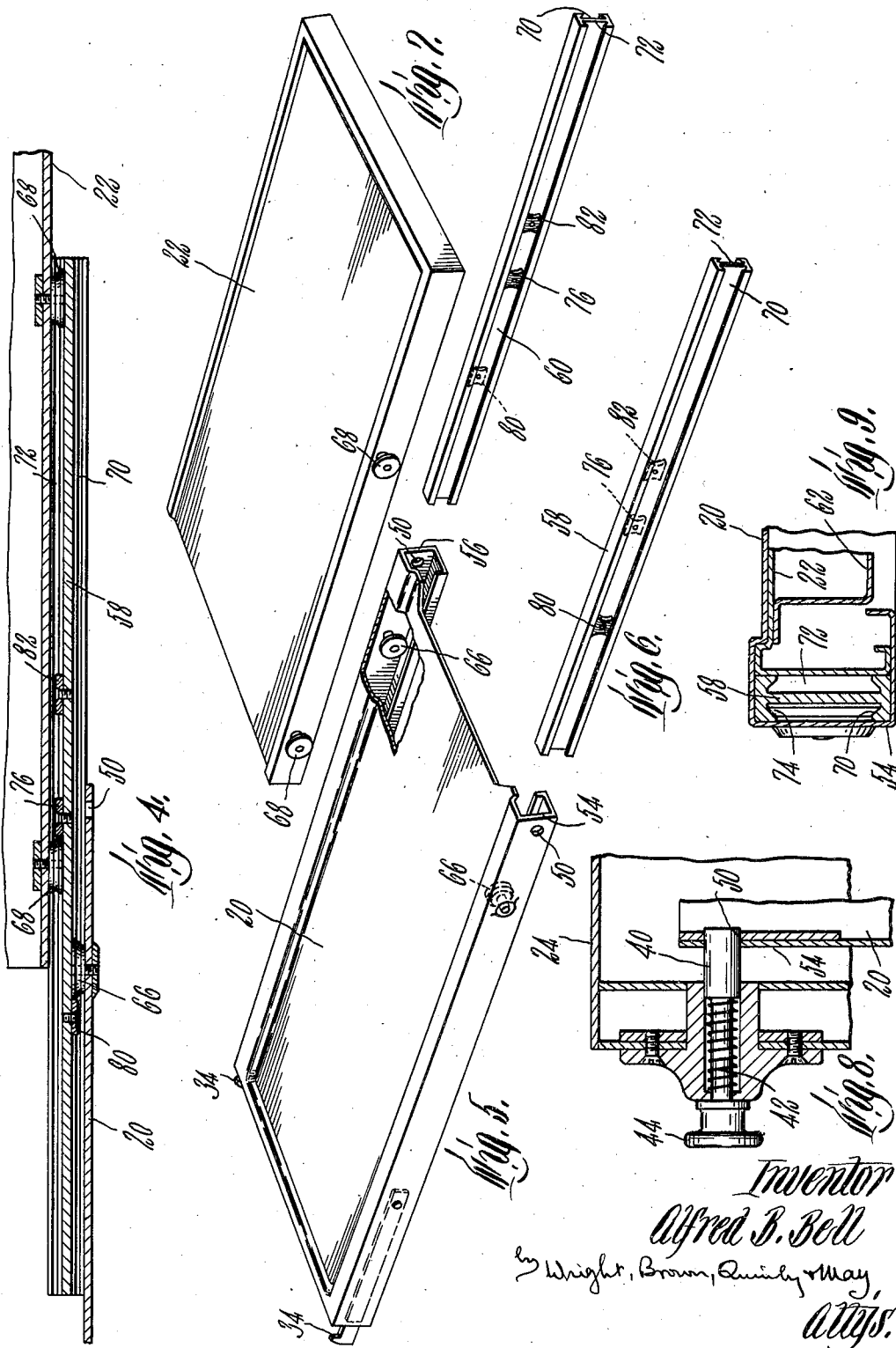
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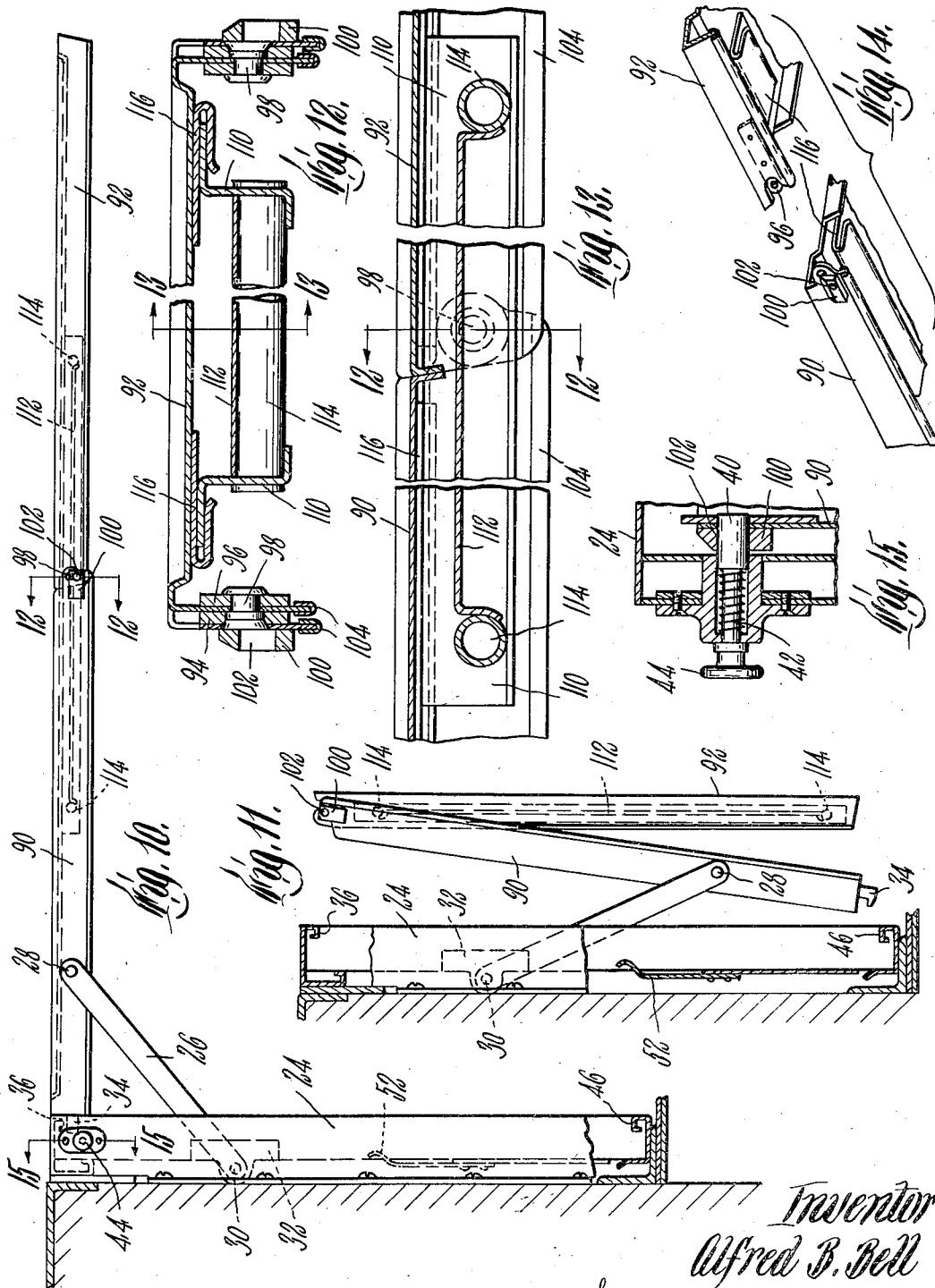
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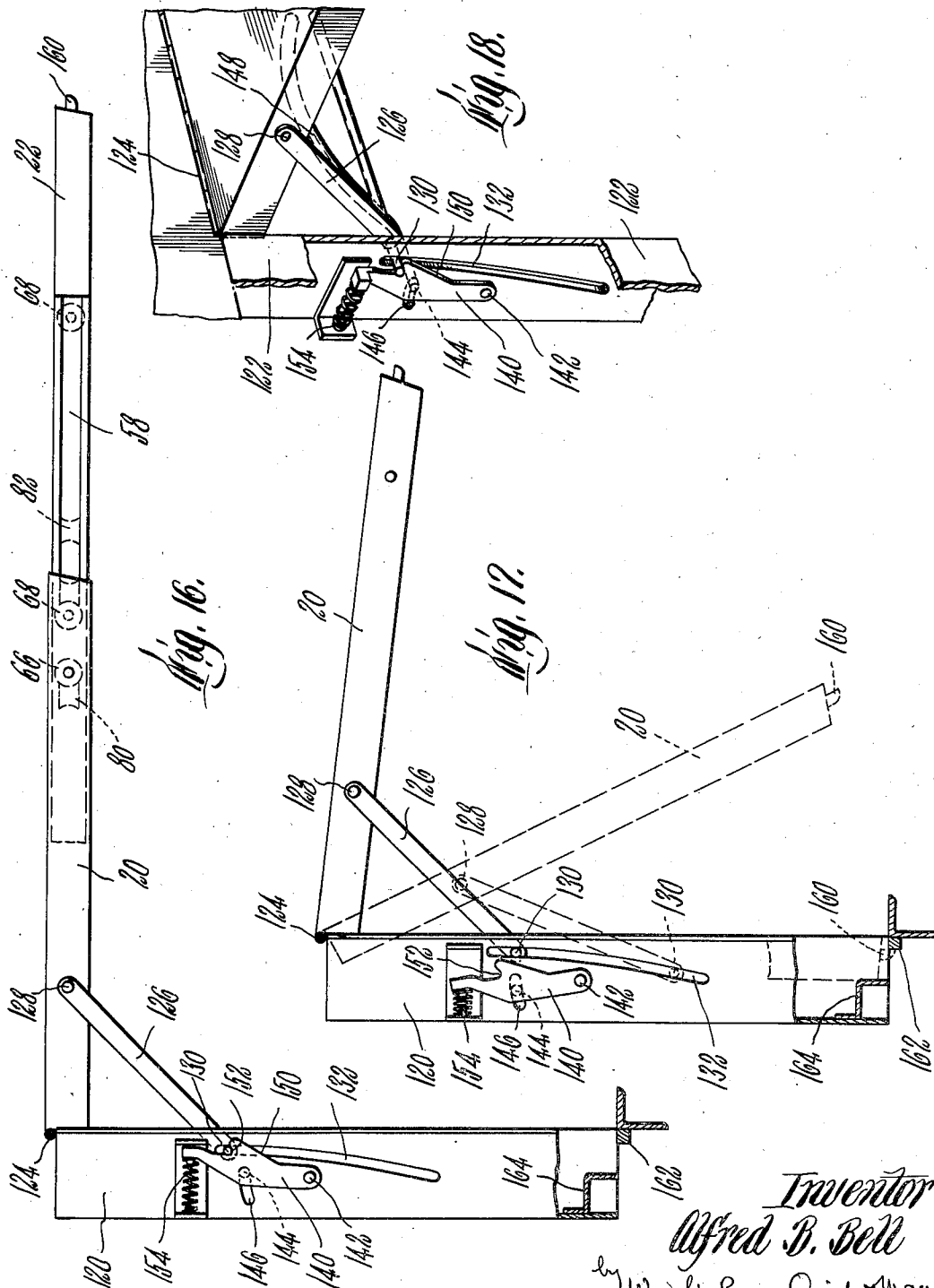
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WALL CABINET TABLE

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UNITED STATES PATENT OFFICE

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WALL CABINET TABLE

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4 Claims. (Cl. 311—19)

This invention relates to a table which is mounted for movement from a horizontal position of use in which it projects from a wall, and an idle position in which it is stowed vertically in a cabinet against the wall, the cabinet being either flush, semi-flush or extended, according to the nature of the wall itself. A table of this variety may be particularly useful in vehicles such as railway coaches and the like, and may also be employed in other structures such as houses.

It is an object of the present invention to provide a wall cabinet table which is permanently attached to the wall, but is readily movable from its idle position to its position for use. It is a further object of the invention to provide a table which is variable in length so that it can telescope, or be otherwise collapsed to enter a cabinet of convenient size. It is a further object of the invention to provide a table which is simple in structure but is relatively strong and strongly supported.

For a more complete disclosure of the invention, reference may be had to the description thereof which follows and to the illustration of certain embodiments thereof on the drawings of which

Figure 1 is a side elevation of a table embodying the invention, the table being shown in its position for use.

Figure 1a is a fragmentary sectional view showing the relation of securing elements indicated in Figure 1.

Figure 2 is a side elevation of the table in an intermediate position between its useful and idle positions.

Figure 3 is a side elevation of the table in its idle position within a wall cabinet.

Figure 4 is a fragmentary section on the line 4—4 of Figure 1.

Figures 5, 6 and 7 are perspective views of portions of a telescoping table, the members being shown apart from each other.

Figure 8 is a fragmentary section on the line 8—8 of Figure 3.

Figure 9 is a fragmentary section on the line 9—9 of Figure 1.

Figure 10 is a side elevation of a table of modified structure.

Figure 11 is a side elevation of the same table as it approaches its idle position.

Figure 12 is a section on the lines 12—12 of Figures 10 and 13.

Figure 13 is a fragmentary section on the line 13—13 of Figure 12.

Figure 14 is a fragmentary perspective view of a portion of the table shown in Figure 10.

Figure 15 is a section on the lines 15—15 of Figure 10.

Figure 16 is a side elevation of another modified form of the invention.

Figure 17 is a side elevation of the same, showing the parts in different positions.

Figure 18 is a fragmentary perspective view of the table-supporting means.

As indicated in Figure 1, the invention may be embodied in a table 20 which may be provided with a telescoping extension 22. The effective length of the table is thus variable. When in its telescoped condition, the table is adapted to swing into vertical position and to enter a vertical wall cabinet 24 which may be secured to the face of the wall or may be mounted in a flush or semi-flush position according to convenience. In order to support the table 20 in its horizontal position as shown in Figure 1, a pair of bracket links 26 may be provided, each link being pivotally attached as at 28 to a side edge of the table 20, and being pivotally attached at its other end as at 30 to a suitable ear 32 which may be secured to a side wall of the cabinet 26 or may be mounted directly on the wall itself. As the center of gravity of the table, even when in its telescoped condition, is beyond the pivot 28, the end of the table which abuts the wall must be suitably anchored to support the opposite outer end. For this purpose, one or more hook elements 34 are firmly mounted on the abutting end of the table 20, these hooks engaging behind an ear or flange 36 which itself is in the nature of a hook at the upper end of the cabinet 24 so that the table is held against outward movement as well as against tilting. In order to secure the table releasably in its horizontal position, locking means comprising a pair of suitable plungers 40 are mounted to project through the side walls of the cabinet 24 so as to engage under the hooks 34 and to prevent accidental disengagement of these hooks from the ear 36. These plungers are preferably spring-pressed by a suitable spring 42, as indicated in Figure 8, finger knobs 44 being provided to facilitate retraction of the plungers 40 to release the hook elements 34. When the plungers 44 are retracted, the table may be tilted up to disengage the hooks 34 from the ear 36. The outer end of the table is then swung upwardly as the bracket links 26 descend (Figure 2), so that the table swings into a vertical position with its top face toward the wall. This movement, which is indicated in

Figure 2, is particularly advantageous for tables mounted on the walls of railway cars between successive seats as the table can be moved from one position to the other without interfering with seated passengers adjacent thereto. The length of the links 26 and the location of the pivot points 28 and 30 are preferably determined in such a way that the table 20 enters and fits into the cabinet 24. It is also preferable, but not necessary, that the top of the table when in a horizontal position be substantially flush with the top of the cabinet 24, as illustrated in Figure 1. To this end, the table 20 is preferably of substantially the same length as the cabinet 24. Furthermore, the distance from the pivot 30 to the bottom of the wall cabinet 24 is preferably equal to the length of the bracket links 26 plus the distance between the pivots 28 and the extreme ends of the hooks 34. The length of the table 20 is also such that the distance from the pivot 28 to the outer end of the table is substantially equal to the length of the bracket 26 plus the distance from the pivots 30 to the top of the wall cabinet. When the foregoing conditions are fulfilled, the table 20 is adapted to fit into the wall cabinet when in its vertical position and is substantially flush with the top of the cabinet when in its horizontal position.

The bottom of the cabinet 24 is preferably provided with an upstanding ear or flange 46 behind which the hooks 34 can engage when the table is stowed within the cabinet. This prevents outward movement of the lower portion of the table until the upper portion has been swung out. The upper portion of the table may be releasably secured in the cabinet by any suitable means. As indicated in Figures 3 and 8, the upper end of the table, when in its vertical position, is provided with perforations 50 through its side walls, these perforations being located so as to register with and receive the plungers 40 when the table is in its idle position. In order to facilitate the removal of the table from the cabinet 24 one or more spring elements 52 may be mounted within the cabinet so as to project out a short distance from the rear wall thereof, two such elements being employed in the structure illustrated. As the table approaches its idle position within the cabinet, it comes in contact with the springs 52 and must be pushed against such springs into its vertical position. Thus, when the plungers 40 are retracted from the apertures 50, the springs 52 eject the table from the cabinet so that it can be readily grasped and swung to its horizontal position for use.

In order to increase the utility of the table without enlarging the wall cabinet, the table may be made in such a way as to be extensible. In Figures 4 to 9 inclusive, a telescoping structure is shown. The table 20 may be made of sheet metal suitably shaped with channels 54 and 56 along its side edges. These channels receive the side edge portions of the extension 22 and stiffening rails 58 and 60. As indicated in Figure 9, the extension 22 may be made of sheet metal bent into suitable shape, the lower portion 62 being secured thereto in order to stiffen the extension and also to provide a panel-like member to be exposed on the wall when the table is disposed in its idle position within the cabinet. In order to minimize frictional resistance to telescoping movement of the extension 22, suitable rollers 66 and 68 may be mounted within the channels 54 and 56 and on the side edges of the extension 22 respectively, these rollers being

formed to move in shallow longitudinal recesses or grooves 70 and 72 in the opposite faces of the rails 58 and 60. The rollers 66 and 68 may be formed with flared end portions as illustrated at 74 in Figure 9, the grooves 70 and 72 being preferably formed so as to receive these flared portions of the rollers 66 and 68 in fitted relation, thus strengthening the table structure as a whole. Stop elements are provided to prevent removal of the extension 22 or the rails 58 and 60 from the table portion 20. Such stops are illustrated in Figures 4 and 7 and may consist of small blocks secured in the grooves 70 and 72 of the stiffening rails 58 and 60. When the extension 22 is pulled out to increase the length of the table to its maximum, the inner pair of rollers 68, that is the pair of rollers nearest the wall, ultimately engage corresponding stop elements 76. This represents the maximum outward movement of the extension 22 with relation to the rails 58 and 60. These rails can move outward until the rollers, which are mounted within the channels of the table portion 20, engage the stop elements 80 which are mounted in the outer grooves of the rails 58 and 60. Thus further outward movement of the rails is prevented and the rails are retained in position in which they are approximately equally disposed within the table 20 and the extension 22. When the extension 22 is pushed in to telescope with the table 20, the rollers 68 which are remote from the wall about a pair of stop elements 82. Further inward movement of the extension carries with it the rails 58 and 60 so that the rails thereafter move with the extension until the parts are in their completely telescoped positions.

A modified form of collapsible table is illustrated in Figures 10 to 15 inclusive. The supporting means for this table may be identical with the supporting means described and illustrated hereinbefore as a part of the table structure illustrated in Figure 1. The collapsible table illustrated in Figure 10 may be provided with two or more sections, two sections 90 and 92 being illustrated in Figure 10. The section 92 is hinged to the section 90 so that it can be swung down into a position in which its bottom face is opposed to the bottom face of the section 90, as indicated in Figure 11. As the table members 90 and 92 are preferably made of sheet metal bent to shape, the side flanges of the table members may be reinforced as at 94 and 96 to receive a suitable pivot member 98 for the table sections. A metal piece 100 having an aperture 102 may be mounted on either side of the table section 90 near the outer end of this section, so that, when the table is swung to its idle vertical position, the apertures 102 will move into registry with and will receive the plungers 40.

The side edges of the table sections 90 and 92 may be sheathed along their lower edges as by channel members 104 which may be welded or otherwise secured to the edges of the metal sheets forming the table sections. These channels 104 present smooth rounded edges so as to avoid injury to the clothing when the table is in use.

Stiffening means between the two table sections is provided, such means comprising a pair of Z-shaped rails 110 having a stiffening plate 112 welded between them, a pair of transverse stiffening tubes 114 being secured to the ends of the plate 112 for additional stiffness. The members 110 slide in suitable U-shaped members 116 a pair of which are welded or otherwise secured to the bottom of the table section 90, an-

other pair being secured to the bottom of the table section 92. These pairs of rails are alined so that the stiffening members 110 can slide from one pair of channels to the other. When the table is in position for use, the stiffening member is about equally divided between the sections 90 and 92, as indicated in Figure 10. When the table is collapsed, the stiffening member telescopes in the outer section 92 of the table.

Another form of supporting means for the table is illustrated in Figures 16, 17 and 18. As therein shown, a wall cabinet 120 is provided having a top, rear wall and a pair of side walls. In the specific form illustrated, the cabinet is designed to be set into the wall so as to be flush with the surface thereof, the side walls of the cabinet being provided with flanges or trim 122. The table 20 is hinged to the top of the cabinet as at 124 and is supported in its horizontal position as by a pair of bracket members 126 the upper ends of which are hinged to the sides of the table as at 128. The lower ends of the bracket members 126 are disposed within the cabinet 120 and are each provided with a stud 130 which projects through a suitable slot 132 in the respective side wall of the cabinet. As indicated in Figure 18, the studs 130 may be the end portions of a single rod which extends across the cabinet and through the ends of the bracket members 126 to project through the respective slots 132. The studs 130 ride up and down in the slots 132 as the table 20 is rocked between its horizontal position for use and its vertical idle position. The hinge 124 is preferably arranged so that, when the table is swung to its vertical position, its surface will be substantially flush with the trim 122 and with the wall surface of the vehicle. The studs 130 are supported by a pair of latches 140 which are mounted on the side walls of the cabinet so as to rock about pivots 142. The range of such rocking movement is limited by studs 144 in the latches, these studs riding in slots 146 in the side walls of the cabinet. The studs 144 may be the end portions of a rod which extends from one latch to the other, this rod having its intermediate portion bowed upwardly as at 148 so as to be more readily accessible.

The latches 140 are each provided with a sloping cam portion 150 above which is a shoulder or notch 152 adapted to receive one of the studs 130. When the studs 130 rest in the notches 152, as indicated in Figures 16 and 18, the bracket members 126 are adequately supported at their lower ends. The cam portions 150 of the latches 140 normally extend across the slots 132, and are yieldingly held in such position by suitable spring means such as the springs 154 which bear against the upper ends of the latches 140. When the table 20 is swung from its vertical position up to its horizontal position, the studs 130 ride upwardly in the slots 132, eventually engaging the cam portions 150 of the latches 140 so as to swing them away from the slots 132 as the studs 130 move into position above the notches 152. The springs 154 thereupon rock the latches 140 back to operative position so that the notches 152 are in position to receive and support the studs 130. The table 20 is now in its position for use and is supported in such position until the rod 148 is manually pushed to rock the latches 140 back from the slots 132. This releases the studs 130 and permits the table 20 to swing down to its vertical position within the cabinet.

If a table of greater length than the height of the cabinet 120 is desired, an extension 22 may be provided, this extension being mounted on the main portion 20 of the table as illustrated in Figures 4 to 9 inclusive, or, if preferred, the table may be provided with a hinged extension as illustrated in Figure 10. In either case, the table in its collapsed or folded form is preferably of just sufficient length to fit within the cabinet 120. At the end of the table remote from the hinge 124 there may be provided a suitable latch 160 operable by a finger-piece or key, as well known in the art, this latch being adapted to engage behind a fixed element 162 when the table is in its vertical position so as to retain the table in its cabinet until the latch is released preparatory to swinging the table up to its position for use. An abutment element 164 may also be provided in the cabinet to be engaged by the outer end of the table when the table is in its idle position, the table then being held between the abutment member 164 and the fixed element 162 so that all looseness or rattling is eliminated.

It is evident that various modifications and changes may be made in the specific details of the embodiments of the invention herein shown and described, without departing from the spirit or scope thereof as defined in the following claims.

I claim:

1. A table adapted to project horizontally from a wall when in use, means releasably securing to said wall the abutting end of the table, a pair of bracket links pivotally attached at one end to the side edges of the table and at the other end to said wall, and means for holding said table in a vertical position with its top face toward the wall, said securing means comprising a pair of hooks at the corners of said abutting end of the table, a pair of lugs mounted on said wall and engageable from below by said hooks, and releasable means engaging said hooks from below when the table is in position for use to hold said hooks in engagement with the respective lugs.

2. A table adapted to project horizontally from a wall when in use, means releasably securing to said wall the abutting end of the table, a pair of bracket links pivotally attached at one end to the side edges of the table and at the other end to said wall, and means for holding said table in a vertical position with its top face toward the wall, said securing means comprising a pair of hooks at the corners of said abutting end of the table, a pair of lugs mounted on said wall and engageable from below by said hooks, and releasable means engaging said hooks from below when the table is in position for use to hold said hooks in engagement with the respective lugs, said releasable means being adapted to engage the sides of said table to hold the table in its vertical position.

3. A table adapted to project horizontally from a wall, a vertical cabinet secured to said wall to receive said table, said cabinet having a downwardly projecting ear at its upper end and an upwardly projecting ear at its lower end, hook means on the abutting end of the table adapted to catch behind the upper said ear when the table is in its horizontal position and to catch behind the lower end when the table is in its idle position, a pair of bracket links pivotally attached to the side edges of the table and to said cabinet, and latch means releasably engaging said hook to maintain the same in engagement with said upper ear when the table is in horizon-

tal position and releasably engaging the opposite end of the table to maintain the same within the cabinet when the table is in its idle position.

4. A table adapted to project horizontally from
5 a wall when in use and to be vertically against the wall when in idle position, a pair of supporting links pivoted at one end to said wall

and at the other end to said table, and locking means operatively engaging one end of the table to secure it when the table is in position for use, and operatively engaging the other end of the table to anchor it when the table is in its vertical idle position. 5

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