July 3, 1928. 1,675,953

D. E. NICHOL

BUILT-IN FOLDING TABLE

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Fig. 2.

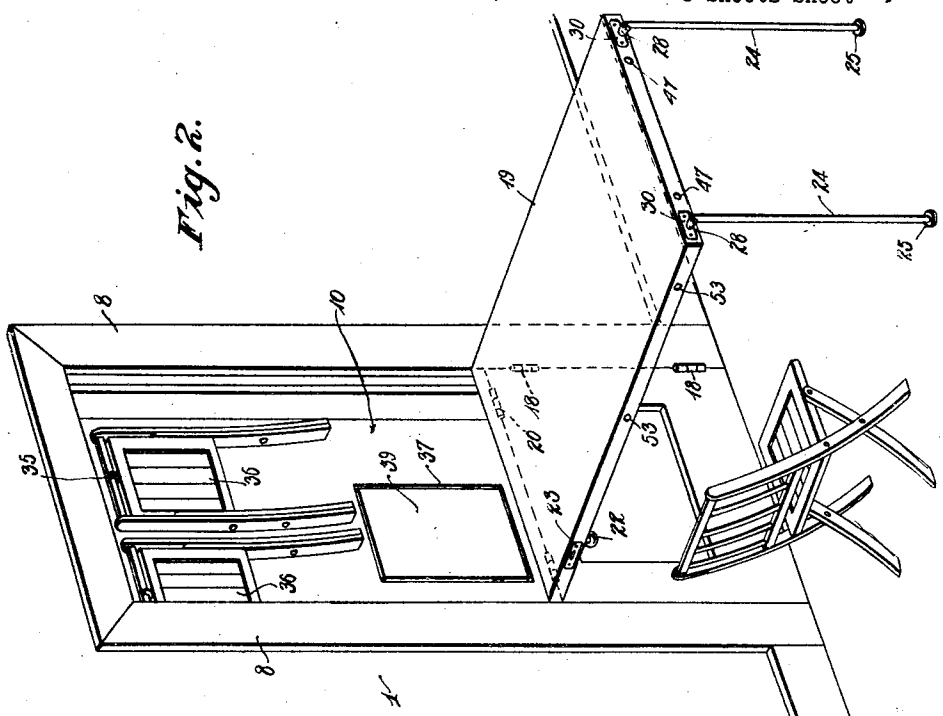


Fig. 1.

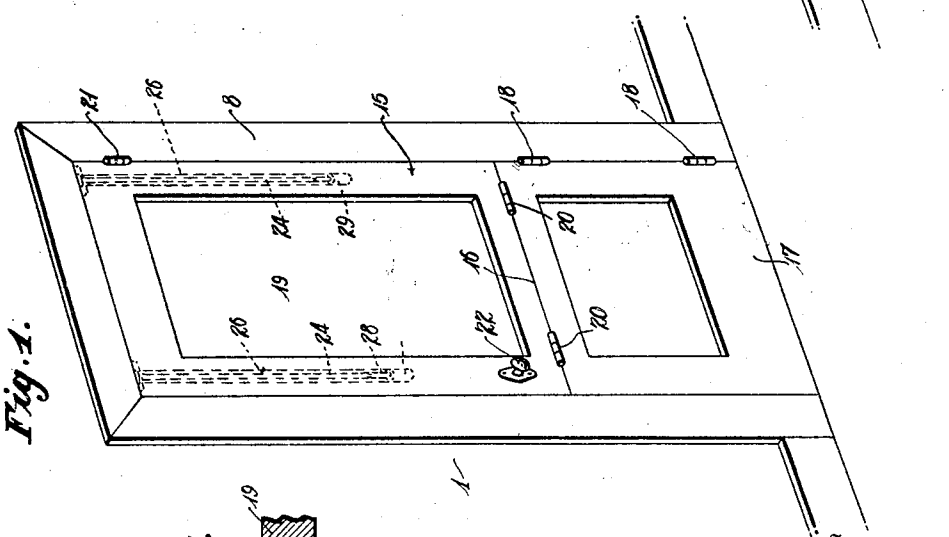
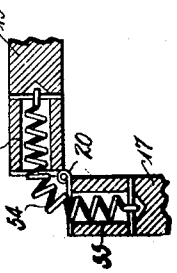


Fig. 4.



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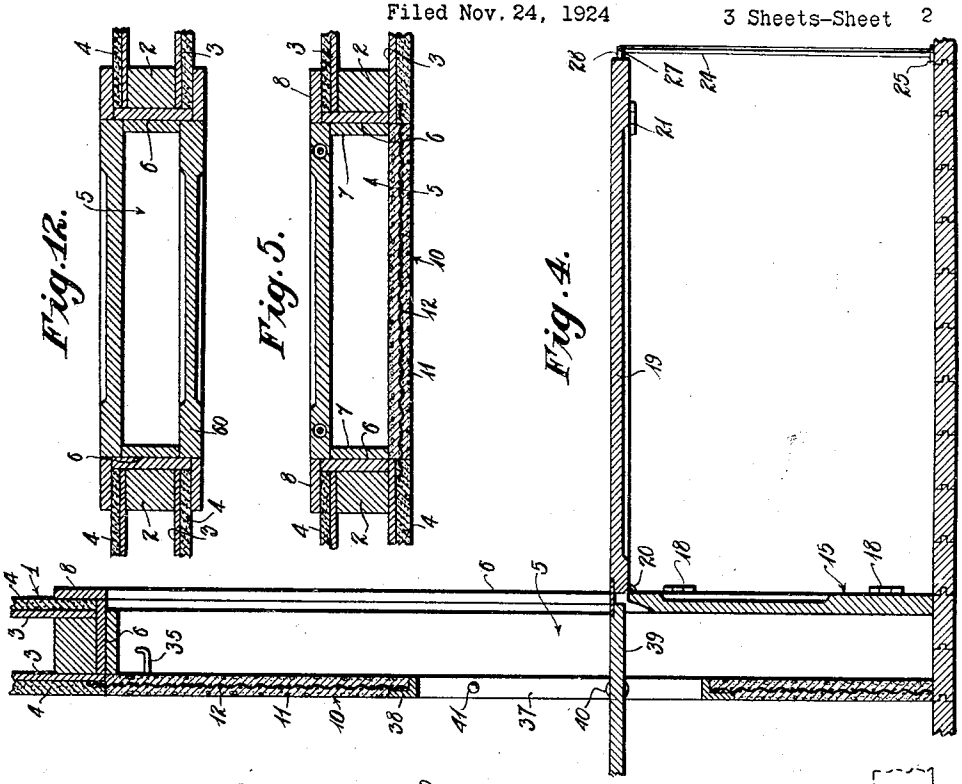


Fig. 12.

Fig. 5.

Fig. 4.

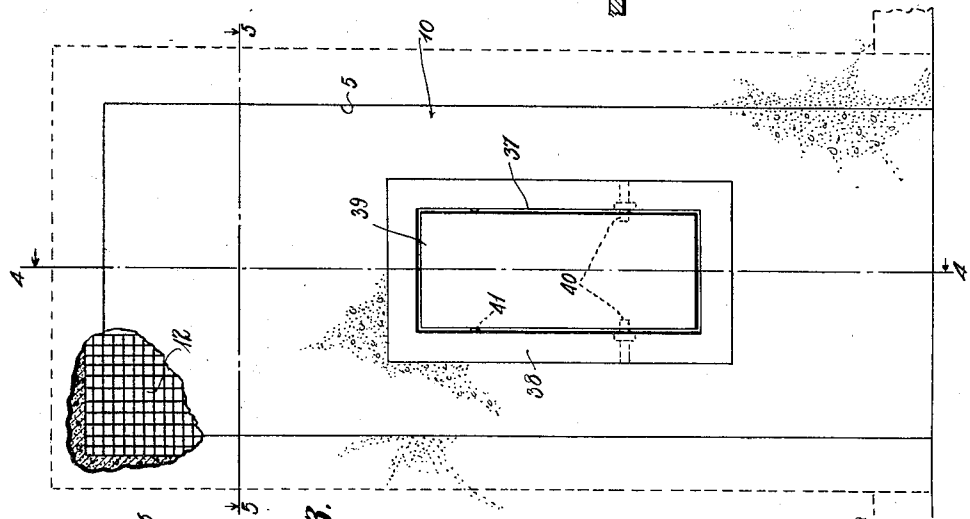


Fig. 3.

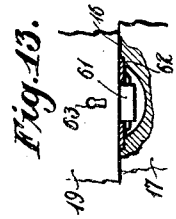


Fig. 13.

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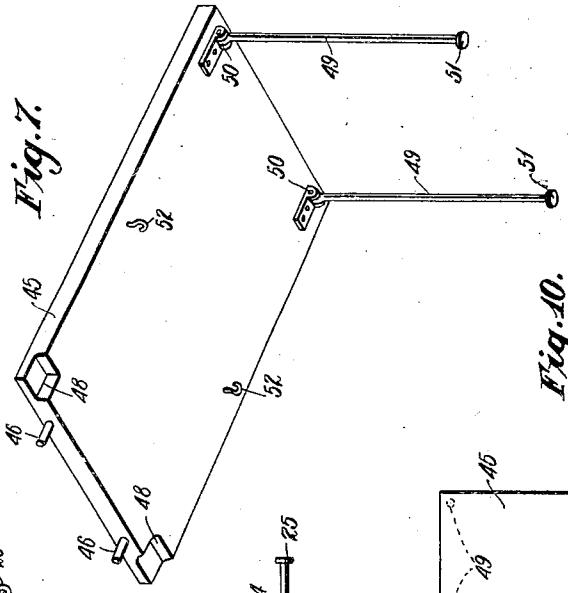


Fig. 7.

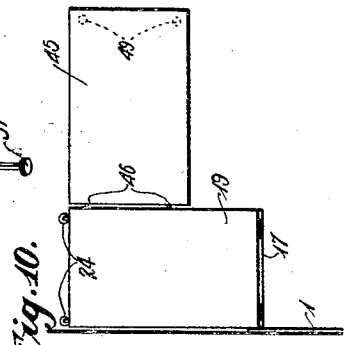


Fig. 10.

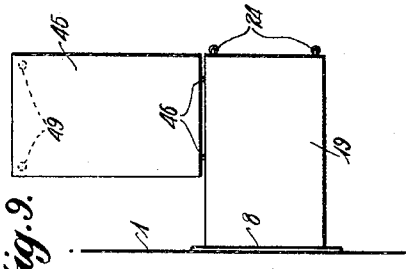


Fig. 9.

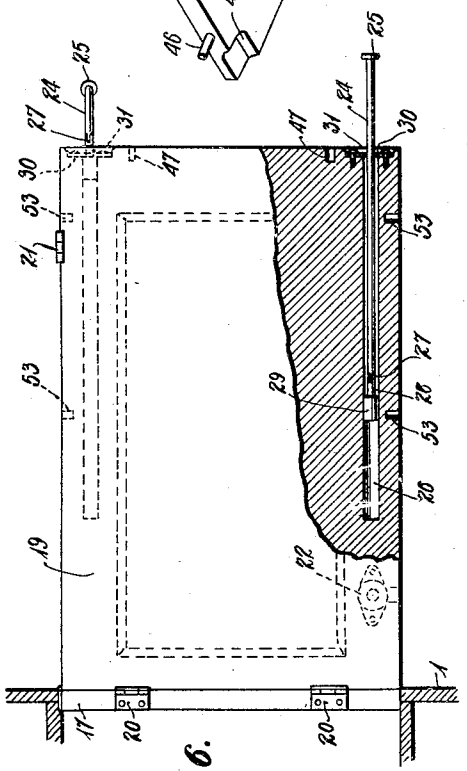


Fig. 6.

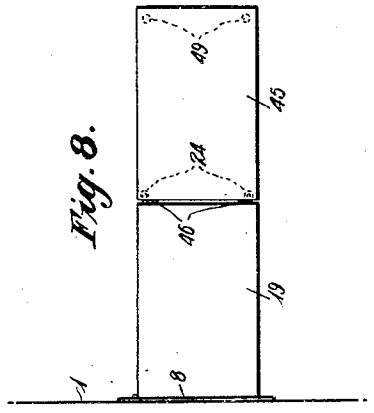


Fig. 8.

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UNITED STATES PATENT OFFICE.

DORSEY E. NICHOL, OF WASHINGTON, DISTRICT OF COLUMBIA.

BUILT-IN FOLDING TABLE.

Application filed November 24, 1924. Serial No. 751,907.

This invention relates to built in disappearing furniture and has for its primary object to provide a piece of furiture, such for example, as a table which is especially adapted for use in small apartments, dwellings and the like.

A further object of the invention is to provide a table or other similar piece of furniture which may be folded up, when not in use, to occupy a position in an opening in a standard partition wall and then so positioned, will have the appearance of an ordinary door.

A still further object of the invention is to provide a special slab for closing the opposite side of the opening in the partition wall, which slab, while being relatively thin, will have sufficient strength to support a plurality of folding chairs, which may be hung on hooks embedded in said slab behind the table door.

With the above and other objects in view, which will appear as the description proceeds, the invention consists in the novel details of construction and combinations and arrangements of parts, more fully hereinafter described and particularly pointed out in the appended claims.

Referring to the accompanying drawings, forming a part of this specification in which like numerals designate like parts in all the views.

Figure 1 is a diagrammatic perspective view of a portion of a wall showing a table constructed in accordance with the present invention in place therein, the parts being shown in their inoperative positions.

Figure 2 is a similar view showing the table in open or operative position.

Figure 3 is an elevational view, partly broken away of the wall as viewed from the opposite side to that shown in Figures 1 and 2, showing the metal reinforced ceramic slab which is employed to close the rear side of the opening through the partition.

Figure 4 is a transverse vertical sectional view taken approximately on the plane indicated by the line 4—4 of Figure 3, looking in the direction of the arrows.

Figure 5 is a horizontal cross sectional view taken approximately on the plane indicated by the line 5—5 of Figure 3, looking down.

Figure 6 is a top plan view partly in section of the table in its open position,

Figure 7 is a perspective view of a separate table member which may be used in conjunction with the main member, when a larger table is desired.

Figures 8, 9 and 10 are diagrammatic plan views showing different positions which the separate member, shown in Figure 7, may occupy relative to the main member.

Figure 11 is a fragramentary detail sectional view showing a spring arrangement which may be employed to partially counterbalance the weight of the main table section.

Figure 12 is a horizontal cross sectional view similar to Figure 5, showing a slightly modified form of the invention wherein an ordinary door is substituted for the ceramic slab for closing the rear side of the opening for the partition, and

Figure 13 is a fragmentary elevational view of the table members showing one form of lock which may be employed to fasten the parts together so that the device be used as an ordinary door, if desired.

In the said drawings, the numeral 1 indicates generally a partition wall, comprising the studding 2, lath 3 and plaster 4, which is constructed in the usual and well known manner. These partition walls are ordinarily built in standard thickness, such as 6 or 8 inches, and the present invention particularly contemplates the provision of a table which may be built into a wall of the 6 inch thickness at the same time, leaving a sufficient space behind the table when in its inoperative position to accommodate at least four folding chairs.

In the present instance, the opening in the partition is indicated by the numeral 5, within which is preferably located, a standard door frame 6, the said frame is preferably provided with the jambs 7 and with the facings 8, upon one face of the wall, while on the opposite face, the facings may be omitted.

Assuming that the partition wall is located between the dining room and the kitchen of an apartment or dwelling, the facings 8 will be located upon the dining room side, while upon the kitchen side, they will be omitted. Upon this latter, or kitchen side, the opening 5 through the partition, will be closed by a slab 10 of concrete or other similar plastic material, which slab is preferably formed separately and introduced into the opening as a unit. The said slab preferably comprises a layer of concrete 11 approxi-

mately one inch or slightly more in thickness, in which has been embedded a metallic reinforcing member 12, such for example as a section of the well known expanded metal lath. This said metallic reinforcing member preferably extends a slight distance, say approximately three inches, beyond the edges of the concrete material upon three sides thereof as is indicated in Figure 3, whereby it overlaps the edges of the opening 5 through the partition and may be secured to the studding, door frame or other supporting members surrounding the said opening as will be readily understood. The said slab 10 will be placed in position within the opening 5 before the plaster 4 is applied to the kitchen side of the partition and when this plaster is so applied, it will cover up the overlapping edges of the metallic reinforcing member, so as to produce a substantially flat continuous surface between the plaster portion of the slab 10 which may be painted, papered or otherwise ornamented as is desired.

On the dining room side of the partition, there is positioned within the door frame 6, a standard or stock door 15; which door however has been divided horizontally, as indicated at 16 and the lower portion 17 thereof is hingedly secured to the door frame 6 as by the hinges 18. The upper portion 19 of the said door is in turn hinged to the lower portion 17, as by the hinges 20 which if desired, may be of the well known concealed type. A dummy hinge 21 is preferably secured to the upper portion 19 of the door 15, adjacent the upper end thereof, in order to carry out the appearance of a standard door, when the parts are in their inoperative positions, as shown in Fig. 1. This dummy hinge is preferably secured to the member 19, but is not secured to the door frame so that it performs no actual function. A door knob 22 and a lock 23 (see Fig. 2) are provided to further carry out the appearance of an ordinary door and also to retain the member 19 in its raised position, as will be readily understood.

In order to support the outer end of the member 19, when in its lower or operative position, there is provided, a pair of legs 24 which are preferably slidably mounted in bores or recesses 26 formed in the member 19 and extend downwardly from its top as seen in Figure 1. These said legs, as best shown in Figure 6, preferably take the form of rods of metal or wood, at one end of which is provided with cushioned feet 25, while the other end is pivotally connected as at 27 to the short member 28 which is provided with the enlarged head or collar 29 fitting slidably within the bore 26. A metallic plate 30 is set into a recess 31, provided in the end of the door surrounding the bore 26 and serves as a stop to be engaged by the enlarged head or collar 29 to limit the outward movement of the legs, as will be clear from Figure 6.

The cement slab 10 is preferably provided on its inner face with a plurality of hooks 35 upon which may be supported the folding chairs 36 as shown in Figure 2. Inasmuch as the slab 10 is approximately one inch in thickness, and since the standard stock door, such as 15 is approximately only 1⅜ or 1½ inches in thickness, there is provided between the two, sufficient space to amply accommodate several of these chairs.

The mode of using the present invention will be clear from the foregoing, it being understood that when it is desired to use the table, the lock or latch 23 may be manipulated, by the knob 22 and the upper section 19 of the door easily pulled down on its hinges 20 from the position shown in Figure 1, to that shown in Figure 2. The legs 24 are withdrawn from their recesses 26 and the hinge joints 27 broken to extend to said legs at substantially right angles to the member 19, whereby their feet 25 may rest upon the floor and they are caused to support the outer end of the section 19. The chairs such as 36 may then be readily withdrawn from the interior of the recess behind the door and the table used as a dining table or for any other desired purpose.

When the invention is employed in the partition wall between the dining room and kitchen, it is desirable to provide in the slab 10 a serving window or opening, such as 37 (see Figures 2, 3 and 4). This opening may be formed in the slab at the time it is initially constructed and it may be surrounded by a suitable frame 38 in which is pivotally mounted the serving table or door 39. The said serving table is horizontally pivoted as indicated at 40, so that when lowered, it will occupy a horizontal position with one end flush with the end of the member 19, as shown in Figure 4. A suitable spring catch 41 may be provided for maintaining this door in its closed position when desired.

It may sometimes happen that it is desired to have a table of somewhat larger dimensions than it is possible to have with only the section 19 and with this in mind, I have provided an additional member 45 shown in detail in Figure 7. This section comprises a flat member, preferably of rectangular shape which is provided with any suitable means for engaging the member 10 as for example, the pins 46, which may be received in the holes or recesses 47, formed in the end of the said member 19. The recesses 48 are preferably formed in said section 45 to accommodate the projecting portions 28 of the leg 24 as will be readily understood and the said section is itself pro-

vided with a pair of legs 49 which are hinged thereto as at 50 and which are provided with the cushioned feet 51 as is shown in Figure 7. Suitable means, such as the hooks 52 have been provided for retaining the legs 49 in their folded positions, when this member is not in use.

It is contemplated that normally this additional section will be positioned at the end of the sections 19 as is diagrammatically indicated in Figure 8. However the dimensions of some rooms or the position of certain furniture therein may make it undesirable to so locate the section 45 and to overcome this, I provide recesses 53, in the sides of the section 19 for receiving the dowel pins 46, so that said section 45 may assume the positions diagrammatically illustrated in Figures 9 and 10, if so desired. It will be understood that when arranged as shown in Figure 10, that the lower portion 17 of the door 15 has been swung back on its hinges 18, so that the section 19 occupies a position adjacent the partition wall instead of at right angles thereto.

In order to partially counter-balance the weight of the section 19, there may be provided, if desired, suitable counter-balance springs, such as are illustrated in Figure 11. These springs 54 may be positioned in recesses 55 and 56, formed in sections 17 and 19 respectively and are preferably of the coiled tension type, so that when the section 19 is lowered, they will tend to pull it back to its raised position as will be readily understood.

In some instances, it may be desirable, instead of employing the slab 10, to permanently close one side of the opening 5 to use in lieu thereof, a standard stock door, such as 60, shown in Figure 12. This door will be hinged in the frame 6 in the usual manner and will be paneled on both sides, whereas the door 19 will of course be paneled only on one side, so as to provide a flat upper surface for table use.

In other instances, it may be wished to omit this door 60, as well as the slab 10, so as to provide a doorway of the usual size between the two adjacent rooms. In this event, the members 17 and 19 may be fastened together by suitable locks 61, (see Figure 13), similar to the well known desk locks, coacting with keepers 62, to the end that the two members may be swung as a unit on the hinges 18 and thereby serve as a door. It is obvious that when so constructed, they may also be used as a table by disengaging the locks 61 from the keepers 62 through the instrumentality of keys inserted in the keyholes 63, and the swinging the upper member 19 down to horizontal position, as above described.

It will thus be seen that the invention provides a construction whereby it is possible to have a folding table built into a standard 6 inch partition wall and which when not in use, will not project into the room to take up space, and be unsightly, but which on the other hand, will be flush with the wall, and will have substantially the appearance of an ordinary door. Furthermore, due to the saving in space accomplished by the peculiar construction, it is possible to conceal a plurality of folding chairs, benches, or the like within the partition behind the table; also that by employing the additional member 45 in any of its various described positions, it is possible to quickly double the area of the table top to accommodate additional persons.

It will also be noted that substantially all of the elements entering with the invention are of standard stock construction, thus enabling the device to be constructed and installed at a minimum cost, both as to labor and material.

It is obvious that those skilled in the art may vary the details of construction as well as the precise arrangement of parts, without departing from the spirit of the invention and it is therefore not wished to be limited to the above disclosure, except as may be required by the claims.

Having thus described my invention, what I claim as new is:—

1. The combination with a standard partition wall having an opening therethrough, of a door vertically hinged in said opening substantially flush with one face of said wall, said door being transversely divided to provide an upper section adapted to fold outwardly and downwardly to constitute a table; and a horizontally pivoted serving door mounted substantially flush with the other face of said wall and adapted to be swung to a horizontal position substantially flush with said table section when the latter is lowered.

2. The combination with a standard partition wall having an opening therethrough, of a door vertically hinged in said opening flush with one face of said wall, said door being transversely divided to provide an upper section adapted to fold outwardly and downwardly to constitute a table; a relatively thin plastic slab set in said opening flush with the other face of said wall; and a serving door horizontally pivoted in said slab, adapted to be swung to a horizontal position substantially in alignment with the table portion of said door, when the latter is in its horizontal position.

3. The combination with a standard partition wall having two spaced surfaces provided with registering openings, of a door vertically hinged in one of said openings, substantially flush with one of said surfaces, said door having hinged upper and lower sections, the former of which is adapted to

swing outwardly and downwardly to a substantially horizontal position to constitute a table; a relatively thin plastic slab set in the other of said openings, flush with the other surface of said wall, said slab having a serving opening therein; and a normally vertical serving door horizontally pivoted intermediate its ends in said serving opening, adapted to be swung to a horizontal position in alignment with the table portion of said first door, the portion of the serving door below its pivots serving, in the horizontal position of the parts, to bridge the space between the wall surfaces, and, with said table portion, to present an unbroken horizontal supporting surface.

In testimony whereof I affix my signature.

DORSEY E. NICHOL.