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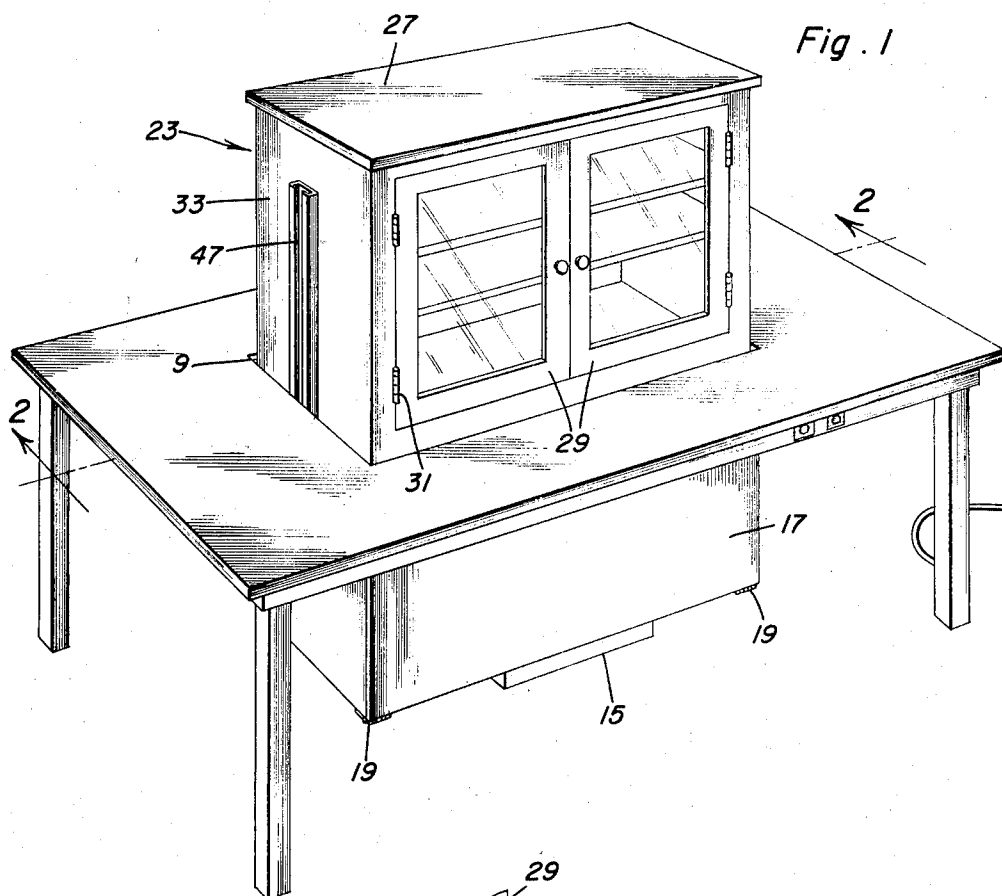
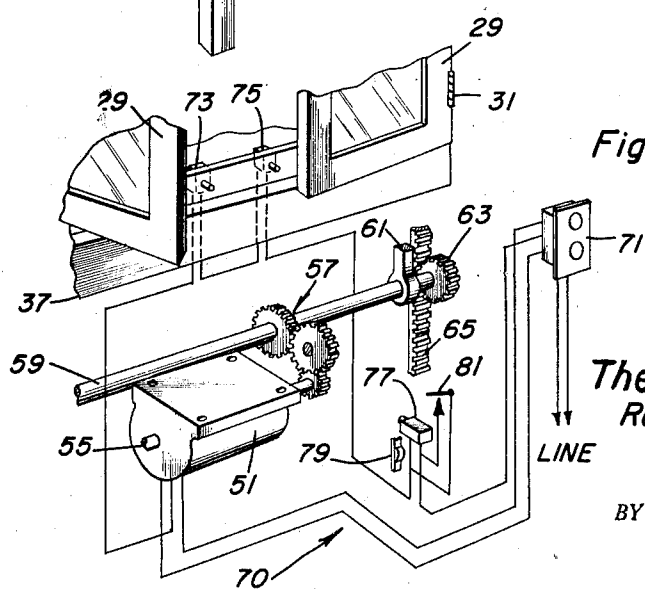
T. LEE ET AL

2,861,857

COMBINED TABLE AND CABINET

Filed April 1, 1957

2 Sheets-Sheet 1



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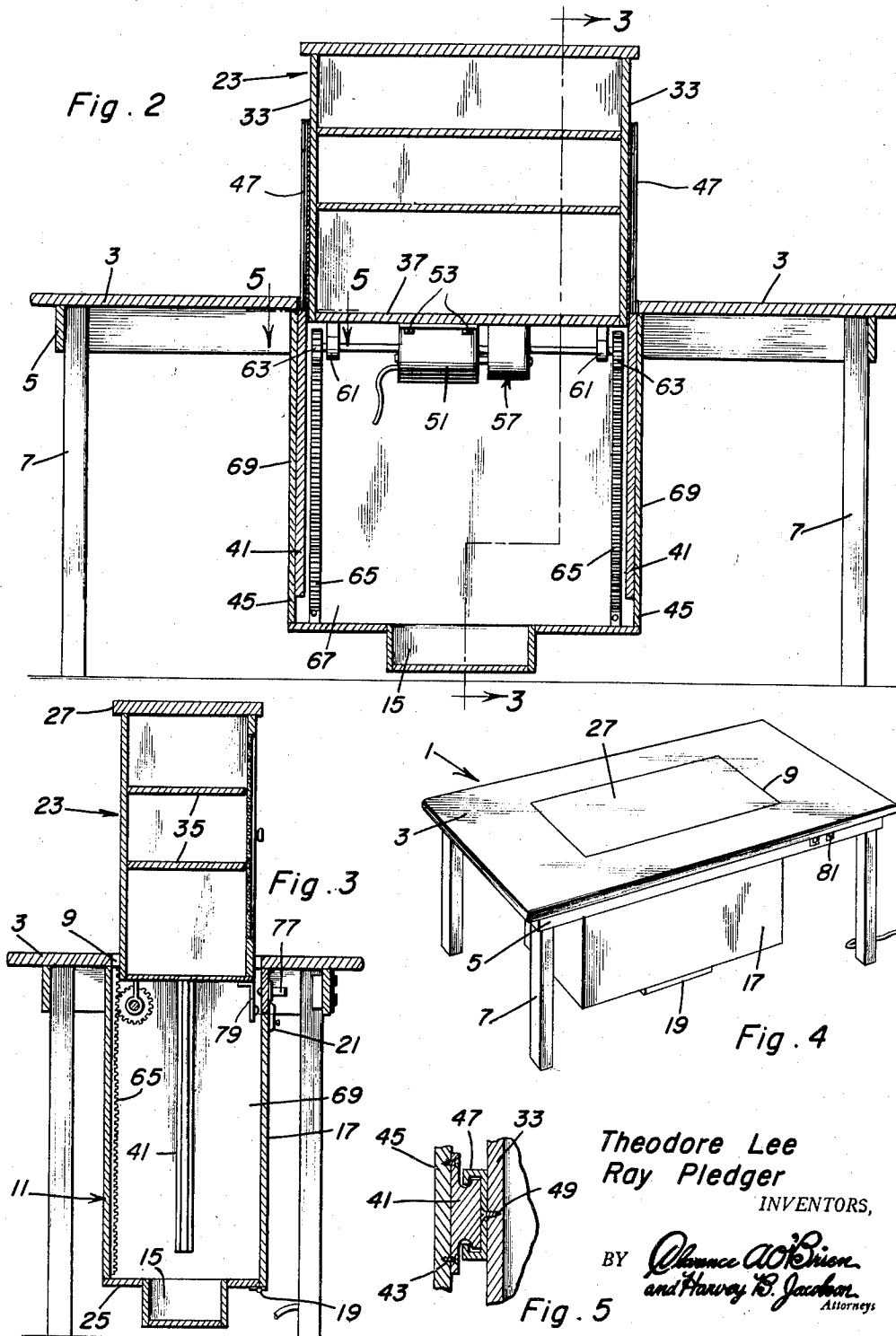
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COMBINED TABLE AND CABINET

Theodore Lee and Ray Pledger, Salt Lake City, Utah

Application April 1, 1957, Serial No. 650,005

1 Claim. (Cl. 312—223)

Our invention relates to improvements in combined tables and retractable cabinets.

The primary object of our invention is to provide means for mounting a cabinet in a table for raising above the table for access thereto or for lowering into retracted concealed position level with the table top so that the top of the table will be flat, together with push button controlled mechanism for raising or lowering the cabinet at will.

Another object is to provide mechanism for raising and lowering the cabinet which is hidden from view except for the push buttons and which is safe, and not liable to get out of order.

Still another object is to provide a combination table and cabinet in accordance with the foregoing which is of simple inexpensive construction and substantially fool-proof as regards control of the cabinet raising and lowering mechanism.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a perspective view of the table and cabinet illustrating the cabinet raised;

Figure 2 is an enlarged view in vertical longitudinal section taken on the line 2—2 of Figure 1;

Figure 3 is a view in vertical cross section taken on the line 3—3 of Figure 2;

Figure 4 is a perspective view drawn to a smaller scale and illustrating the cabinet lowered;

Figure 5 is an enlarged fragmentary view in horizontal section taken on the line 5—5 of Figure 2, and

Figure 6 is an exploded perspective view illustrating parts of the push button controlled raising and lowering mechanism.

Referring to the drawings by numerals, a table 1 having a rectangular flat top 3 supported on a rectangular frame 5 and corner legs 7 is provided with a preferably central rectangular opening 9 in the top 3 communicating with the top of a rectangular casing 11 depending from and suitably secured to the table top 3 to fit around the opening 9 and forming with said opening 9 a rectangular well 13 below the table top 3 provided with a central reduced bottom sump 15. A front downwardly opening door 17 for the casing 11 is hinged, as at 19, thereto for opening the casing and is secured in closed position at its top by a conventional latch 21.

A rectangular cabinet 23 of a size to fit with a slight clearance in the well 13 is mounted in the well for raising and lowering into and out of the well 13 by means presently described. The cabinet 23 is of a height to be lowered, into a fully retracted position in the well 13 with the top 27 of said cabinet fitting in the opening 9 in the top 3 flush with said top 3 as shown in Figure 4.

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A pair of front double doors 29 preferably of a glass panel type are hinged as at 31, to said cabinet adjacent opposite sides 33 of said cabinet for access to shelves 35. The doors 29 are raised above the bottom 37 of the cabinet 23 for opening when the cabinet 23 is raised into a limit of elevating movement thereof in which its bottom portion is projected into the top of the well 13 as shown in Figure 3.

Means for slidably mounting the cabinet in the well 13 is provided comprising a pair of vertical guide bars 41 of dove tail cross section secured in the well 13 by screws 43 to opposite sides 45 of the casing 11 in the vertical centers of said sides, and a pair of channel slide bars 47 secured by screws 49 to the sides 33 of the cabinet in the vertical center thereof and slidably fitting over the guide bars 41.

The push button controlled mechanism for raising and lowering the cabinet 23 comprises a conventional reversible electric motor 51 bolted, as at 53, to the bottom 37 of the cabinet 23 beneath the same with its armature shaft 55 horizontal and drivingly connected by reduction gearing 57 to an intermediate portion of a horizontal cabinet raising and lowering shaft 59 mounted on and beneath the bottom 37 in a pair of hanger bearings 61 depending from and suitably secured to said bottom adjacent opposite sides 33 of the cabinet 23 and journalling said shaft 59.

A pair of gear pinions 63 fastened on opposite ends of the shaft 59 mesh with a pair of vertical rack bars 65 bolted in the well 13 to the back 67 of the casing 11 adjacent opposite sides 69 of said casing. As will be seen the mechanism so far described is within the well 13 and when the cabinet 23 is lowered into fully retracted position the motor 51 is lowered and fits in the sump 15 and limits lowering of said cabinet 23 to establish its fully retracted position.

The motor 51 is interposed in a suitable electric circuit 70 controlled for drive of the motor in opposite directions by push button switch means 71 on the front of the frame 5 and which may be of any conventional type. Spring opened plunger type switches 73, 75 are provided in the circuit 70 and on the cabinet 23 adapted to open the circuit when the doors 29 are opened and closed by engagement of the doors therewith when said doors are closed and whereby the cabinet cannot be lowered from fully raised position if either or both doors 29 are open. A conventional circuit breaker or switch 77 on the upper portion of the casing 11 is wipingly engaged by a member 79 on the cabinet 23 in the fully raised position of the cabinet 23 to open the circuit and stop the motor 51. A push button switch 81 on the frame 5 is provided for closing the circuit so that the motor 51 may be rendered operative under control of the switch means 71 to lower the cabinet.

The operation of our invention will be readily understood. When the motor 51 is operated in one direction the pinions 63 ride up the rack bars 65 and raise the cabinet 23 out of the well 13 into the position shown in the drawings and when the cabinet is thus raised the doors 29 are above the table top 3 and can be opened. As the cabinet 23 is thus raised the member 79 engages the circuit breaker 77 to cause the circuit to be opened to stop the motor. The motor may then be caused to operate in the opposite direction to lower the cabinet into the well 13 into its fully retracted position after the switch 81 has been closed. The door 17 may be opened in the event of failure of the circuit 70 or motor 51 for access to the cabinet 23 when lowered into the well 13.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those

skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

In combination, a table having an elevated top provided with an opening therein, a casing attached to said top beneath the same and forming together with said opening a well, a cabinet fitting in said well for raising out of the same and lowering into said well into a fully retracted position, an electric motor on the bottom of the cabinet, toothed rack bars secured to said casing in the well, pinions rotatably mounted on the bottom of the cabinet in mesh with said rack bars for operation in opposite directions to raise and lower said cabinet, means

operatively connecting said motor to said pinions, doors on said cabinet raised above said top in response to raising of the cabinet, and means on said cabinet engaged by said doors when the latter are closed and disabling said motor in response to opening of either door.

References Cited in the file of this patent

UNITED STATES PATENTS

10	328,475	Ford	Oct. 20, 1885
	1,392,595	Pifko	Oct. 4, 1921
	1,699,710	Pearlman	Jan. 22, 1929
	2,180,161	Miller	Nov. 14, 1939
	2,300,345	Clerc	Oct. 27, 1942
15	2,565,304	Garstang	Aug. 21, 1951
	2,575,725	McKay	Nov. 20, 1951