Jan. 19, 1926. 1,570,388

F. B. MILLER

CLASSROOM WARDROBE AND BLACKBOARD

Filed March 31, 1924 2 Sheets-Sheet 1

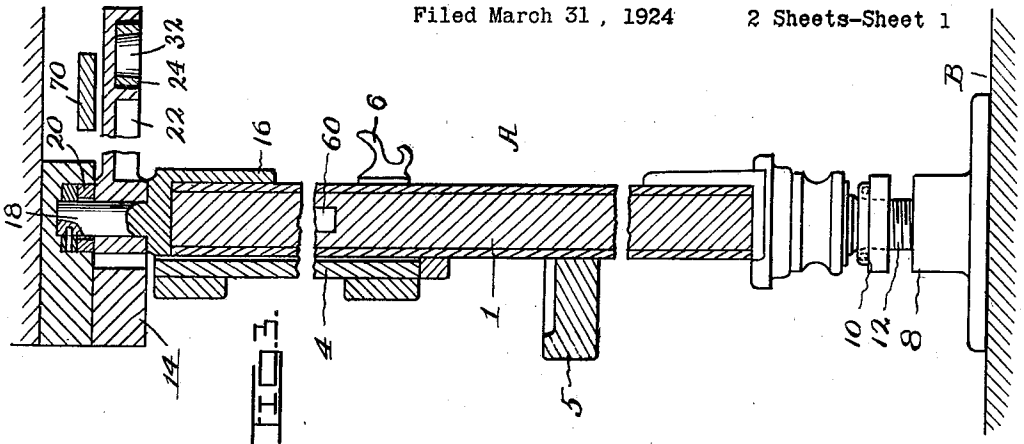



FIG. 3.

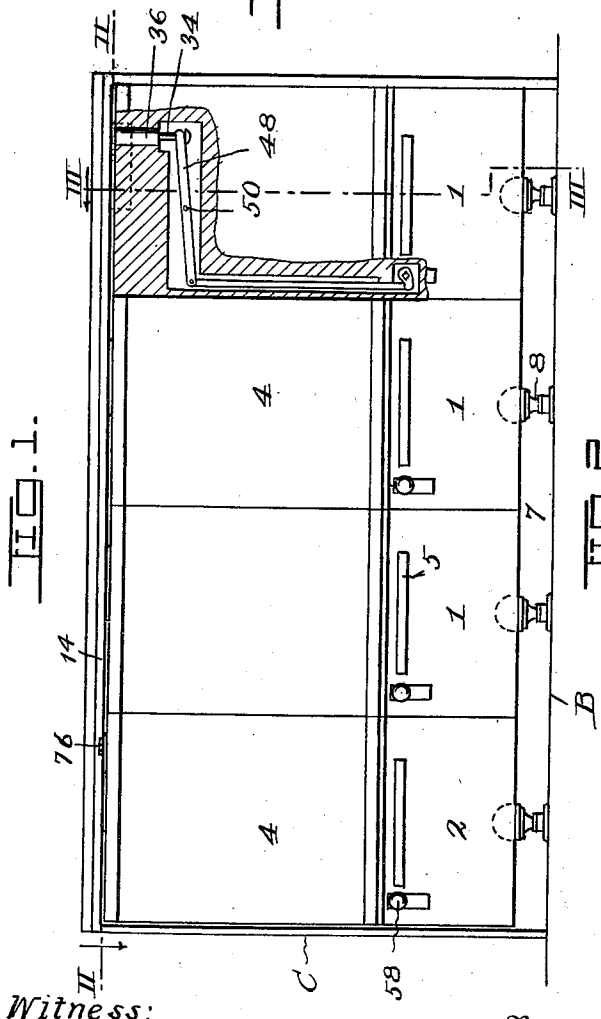



FIG. 1.

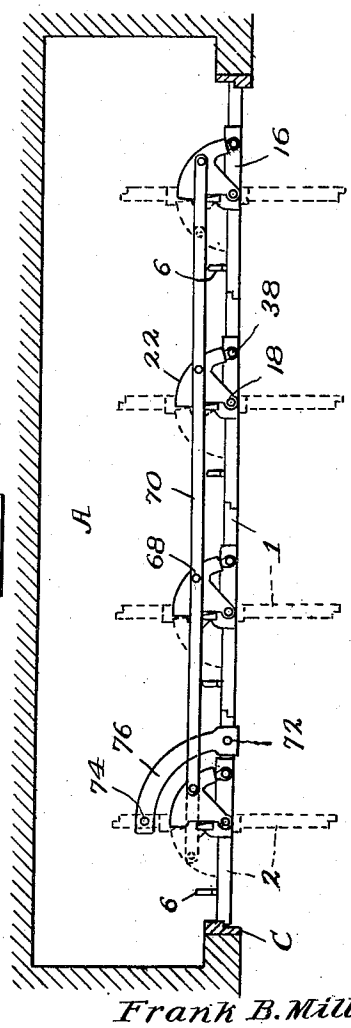



FIG. 2.

Witness:
Fred C. Fischer.

By

Frank B. Miller,
F. G. Fischer, Attorney.

Jan. 19, 1926. 1,570,388

F. B. MILLER

CLASSROOM WARDROBE AND BLACKBOARD

Filed March 31, 1924 2 Sheets-Sheet 2

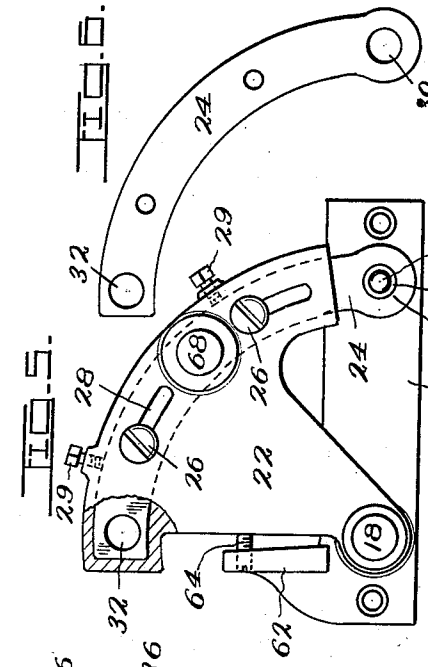



FIG. 6.

FIG. 5.

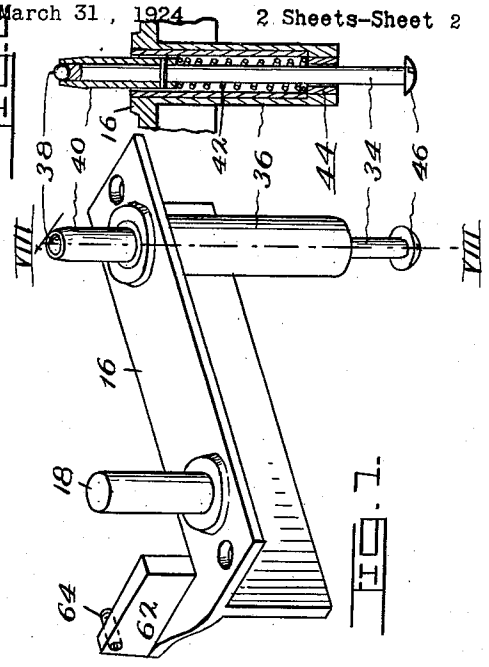



FIG. 7.

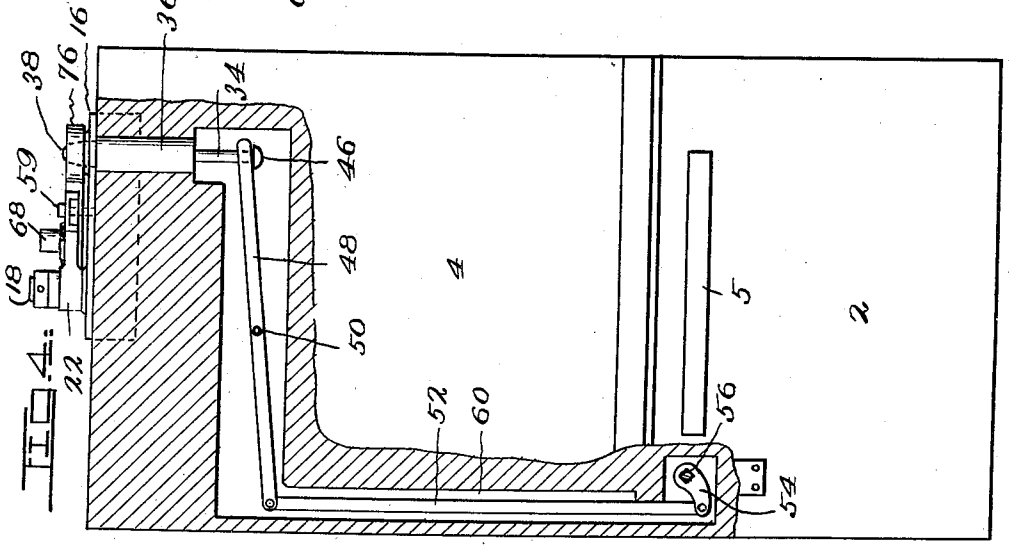



FIG. 4.

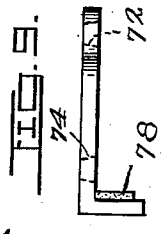



FIG. 9.

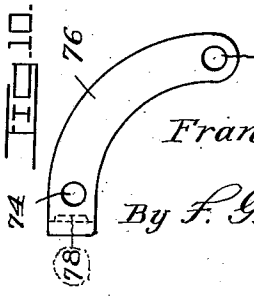



FIG. 10.

Witness:
Fred C. Fischer.

Inventor
Frank B. Miller,
By F. G. Fischer,
Attorney.

Patented Jan. 19, 1926. 1,570,388

# UNITED STATES PATENT OFFICE.

FRANK B. MILLER, OF KANSAS CITY, MISSOURI.

## CLASSROOM WARDROBE AND BLACKBOARD.

Application filed March 31, 1924. Serial No. 703,298.

*To all whom it may concern:*

Be it known that I, FRANK B. MILLER, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Classroom Wardrobes and Blackboards, of which the following is a specification.

My invention relates to a combination wardrobe and blackboard designed for class-rooms, schools, churches and other institutions, and one object of the invention is the provision of a wardrobe, the front of which is in the form of one or more doors having blackboards on their front sides and mounted to turn on a vertical axis, so that the pupils may gain access to the interior of the wardrobe for the purpose of hanging or removing their garments.

The present invention is an improvement over my class-room sanitary wardrobe and blackboard disclosed in United States Letters Patent No. 1,268,038, granted to me on the 28th day of May, 1918, and embodies simple and inexpensive mechanism whereby the rack-bar 12 and its bearings 13, the crank 15, the sprocket mechanism 18, 19 and 20, and the pinions 10 and 21 for turning the panel sections 2, are dispensed with. Provision is also made in the present instance for better ventilation and more ready access to the interior of the wardrobe, by leaving an air space beneath the doors and dispensing with the stationary front wall 4 disclosed in the patent above referred to.

In order that the present invention may be fully understood, reference will now be had to the accompanying drawings, in which:

Fig. 1 is a front elevation partly in section of the wardrobe, showing the doors at the front thereof in closed position.

Fig. 2 is an irregular horizontal section on line II—II of Fig. 1, with some of the parts removed, and showing the doors in open position in dotted lines.

Fig. 3 is an enlarged broken vertical section of the wardrobe on line III—III of Fig. 1.

Fig. 4 is an enlarged front elevation, partly in section, of the master door and associate parts.

Fig. 5 is an enlarged plan view partly in section of a bracket and associate parts.

Fig. 6 is a detail plan view of a segmental keeper which cooperates with the parts disclosed by Fig. 5.

Fig. 7 is a detail perspective view of some of the parts shown by Fig. 5.

Fig. 8 is a broken, vertical, sectional view on line VIII—VIII of Fig. 7.

Fig. 9 is a side view of a keeper which cooperates with the master door.

Fig. 10 is a plan view of said keeper.

Referring now in detail to the various parts, A designates the wardrobe, the front side of which is closed in the present instance by a series of doors 1 and a master door 2.

The master door 2 is substantially the same as the dependent doors 1, excepting that it is arranged to coact with mechanism hereinafter described whereby said doors 1 may be caused to open and close simultaneously with said master door 2.

The doors 1 and 2 are provided at their front sides with blackboards 4 and chalk rails 5, while their rear sides are equipped with hooks 6 from which garments may be hung. For the purpose of ventilation, the doors 1 and 2 are spaced above the floor B to leave an air space 7 communicating with the interior of the wardrobe A.

Each of the doors 1 and 2 is mounted centrally upon a pedestal 8 embodying a ball-bearing 10 to insure easy operation of the doors, and a screw 12 whereby the respective doors may be adjusted into proper relation with the lintel 14. Each door 1 is provided at its upper portion with a fixedly mounted bracket 16 having a pivot 18 arranged in axial alinement with the underlying pedestal 8. The pivot 18 is journaled at its upper end in a bearing 20 in the upper portion of the wardrobe and said pivot 18 is provided with a freely mounted lever 22 having a keeper 24 adjustably secured thereto by suitable means such as screws 26 extending through arcuate slots 28 in said lever 22. Set screws 29 threaded in the

large end of the lever 22 are provided to cooperate with the screws 26 in firmly holding the keeper 24 in any of its adjusted positions.

The keeper 24 is provided at its ends with holes 30 and 32 for the reception of the upper end of a bolt 34 extending freely through a barrel 36 formed integral with and depending from the bracket 16. The upper end of the bolt 34 is provided with an antifriction ball 38 held in position by a bushing 40 extending into the upper portion of the barrel 36 and bearing against the upper end of a coil spring 42 retained in the barrel 36 by a bushing 44. The bolt 34 is normally pressed upwardly by the spring 42, so that its upper end and the bushing 40 will automatically enter the keeper holes 30 and 32, as will hereinafter appear, and the ball 38 which travels against the underside of the keeper 24 is provided to reduce the friction which would occur if the upper end of the bolt 34 rubbed directly against said keeper 24.

The lower end of the bolt 34 projects below the barrel 36 and has a head 46, which is operably engaged by one end of a lever 48 fulcrumed at 50 and pivotally connected at its opposite end to the upper end of a push bar 52, resting at its lower end upon a cam 54 fixed upon the rectangular shank 56 of a knob 58 arranged at the exterior of the door 1. The lever 48, the push bar 52 and the cam 54 operate in a channel 60 arranged within the interior of the door 1, as shown by Fig. 1.

Referring again to the bracket 16, it will be seen on inspection of Figs. 5 and 6, that it is provided near one end with a lug 62 having an adjustable stop 64, preferably in the form of a set screw for limiting the movement of the lever 22 in one direction when the same moves independently of said bracket 16 as will hereinafter appear.

Each lever 22 is provided with an upwardly projecting stud 68 upon which a connecting bar is freely mounted and whereby the doors 1 may be simultaneously opened and closed by the master door 2.

The master door 2, Fig. 4, like each door 1 is equipped with a lever bracket 16, a lever 22, a keeper 24, a bolt 34, a lever 48, a push bar 52, a cam 54, and a knob 58 which are similar in construction and operation to the correspondingly numbered parts on the doors 1, the only difference being that the lever 22 instead of being free to turn on its pivot 18 is fixedly connected to the bracket 16 by suitable means such as a machine screw 59 which is passed through the hole 30 and threaded into the bracket 16.

The lever 48 of the master door 2 is also somewhat longer than the corresponding levers in the doors 1, so that the bolt 34 instead of entering the holes 30 and 32 in the keeper 24, may enter holes 72 and 74 in a segmental keeper 76, which is secured above the master door 2 to the lintel 14. The free end of the keeper 76 has a cushioned stop 78 depending into the path of the master door 2 to check the opening movement thereof after the same has turned through ninety degrees, as shown by dotted lines, Fig. 2.

The operation is as follows: When it is desired to simultaneously open all of the doors, the knob 58 of the master door 2 is grasped and turned to the right. This operation withdraws the bolt 34 from the hole 72 of the keeper 76. The operator then pulls on the knob 58 until the master door 2 is swung through ninety degrees as indicated by dotted lines, Fig. 2. As the master door 2 moves to open position it, through the intermediacy of the connecting bars 70, opens all of the doors 1. During this operation the levers 22 of the doors 1 are locked to the brackets 16 through the intermediacy of the respective bolts 34. On reaching open position the doors are locked in such position by the bolt 34 of the master door 2 entering the hole 74 of the keeper 76. The doors are closed by again turning the knob 58 of the master door 2 to the right to withdraw the bolt 32 from the keeper hole 74, after which said master door is swung to closed position against the jamb C, the doors 1 being simultaneously closed through the intermediacy of the connecting bar 70.

Any door 1 may be opened and closed independently of the others. This is accomplished by turning the respective knob 58 to the right to withdraw its bolt 34 from the keeper hole 30, the lever 22 being held stationary by the bar 70. The door 1 is secured in open position by the bolt 34 engaging the keeper hole 32. The door may be closed on retracting the bolt 34 from the keeper hole 32 and swinging said door to closed position, where it will be locked by the bolt 34 engaging the keeper hole 30.

From the foregoing description it is apparent that I have provided a wardrobe embodying the advantages above pointed out; and while I have shown and described the preferred construction, combination and arrangement of parts, I reserve the right to make such changes as properly fall within the spirit and scope of the invention as claimed.

Having thus described my invention, what I claim and desire to secure by Letters Patent, is:

1. A wardrobe having an opening, a plurality of doors including a master door for closing said opening, levers for opening and closing said doors, a connecting-bar operably-connecting all of said levers so that the doors may be simultaneously swung to open or closed position, and mechanism as-

sociated with said levers and doors, whereby any door excepting said master door may be opened independently of the others.

2. A wardrobe having a front opening, a plurality of doors including a master door for closing said opening, a lever fixed to turn with said master door, levers free to remain stationary or turn with the other doors, and means connecting said levers so that the master door may open or close said other doors.

3. A wardrobe having a front opening, a plurality of doors including a master door for closing said opening, a lever fixed to turn with said master door, levers free to remain stationary or turn with the other doors, spring actuated means for normally holding the last-mentioned levers in position to turn with the respective doors, manual means for adjusting any of said spring actuated means to inactive position so that the associate door may be opened and closed independently of the others, and means connecting all of the levers so that the master door may open or close the other doors when said spring actuated means is in active position.

4. A wardrobe having a front opening, a plurality of doors including a master door for closing said opening, a lever fixed to turn with said master door, mechanism whereby the master door is enabled to simultaneously open and close the other doors therewith, and means for securing said master door in open and closed positions.

5. A wardrobe having a front opening, a plurality of doors including a master door for closing said opening, a lever fixed to turn with said master door, mechanisms whereby said master door is enabled to simultaneously open and close the other doors therewith, a keeper fixed to the wardrobe at a point adjacent to the master door, and securing means movable with the master door and adapted to cooperate with said keeper in securing said master door in open or closed position.

6. A wardrobe having a front opening, a pluraltiy of doors including a master door for closing said opening, a lever fixed to turn with said master door, mechanisms whereby the master door is enabled to simultaneously open and close the other doors therewith, a keeper fixed to the wardrobe at a point adjacent to the master door, securing means movable with the master door and adapted to cooperate with said keeper in securing said master door in open or closed position, spring means for normally holding said securing means in active position, and manual means for adjusting said securing means to inactive position so that the master door may be opened or closed.

7. A wardrobe having a front opening, a plurality of doors including a master door for closing said opening, a lever fixed to turn with the master door, mechanism whereby the master door is enabled to simultaneously open and close the other doors therewith, a keeper fixed to the wardrobe at a point adjacent to the master door, bolt-means mounted on the master door to coact with said keeper in securing said master door in open or closed position, means for normally holding said bolt-means in engagement with the keeper, a lever on the master door for disengaging said bolt-means from the keeper, a bar mounted on the master door for actuating said lever, a cam for actuating said bar, and a knob on the master door for actuating said cam.

8. A wardrobe having an opening, a plurality of doors to close all but the lower portion of said opening and provided at their front sides with blackboards, a pedestal arranged centrally beneath each door to space the same above the bottom of the wardrobe, means for adjusting the upper portion of each pedestal vertically, a pivot at the upper central portion of each door, and a bearing in the upper portion of the wardrobe for each pivot.

9. In a wardrobe, a door thereto, central upper and lower pivots on which said door is mounted, a lever freely-mounted on the upper pivot and provided with keeper means, means for normally holding said lever stationary, and a locking device mounted on the door and adapted to engage said keeper means and thereby lock the door in open or closed position.

10. In a wardrobe, a door thereto, central upper and lower pivots on which said door is mounted, a bracket fixed to the upper portion of the door and carrying said upper pivot, a lever freely-mounted on said upper pivot, means for normally holding said lever stationary, a keeper, means adjustably connecting said keeper to said lever, and a locking device mounted on the door and adapted to enter said keeper and thereby lock the door in open or closed position.

11. In a wardrobe, a door thereto, central upper and lower pivots on which said door is mounted, a bracket fixed to the upper portion of the door and carrying said upper pivot, a lever freely-mounted on said upper pivot, a bar for normally holding said lever stationary, a keeper, a locking device mounted on the door and adapted to enter said keeper and thereby lock the door in open or closed position, and means for moving said bar to effect opening and closing of the door through the intermediacy of the lever and said locking device.

12. In a wardrobe, a door thereto, central upper and lower pivots on which said door is mounted, a lever freely mounted on the upper pivot, an arcuate keeper carried

by said lever and provided at its ends with holes, means for normally holding said lever stationary, a bolt mounted on the door, a ball freely mounted at the upper end of the bolt to travel against the underside of the keeper when the door is opened or closed, means for forcing the bolt into one keeper hole when the door is opened and into the other hole when the door is closed, and manual means for withdrawing the bolt from said keeper holes.

In testimony whereof I affix my signature.

FRANK B. MILLER.