M. KOTUN.

ADJUSTABLE PARTITION WALL.

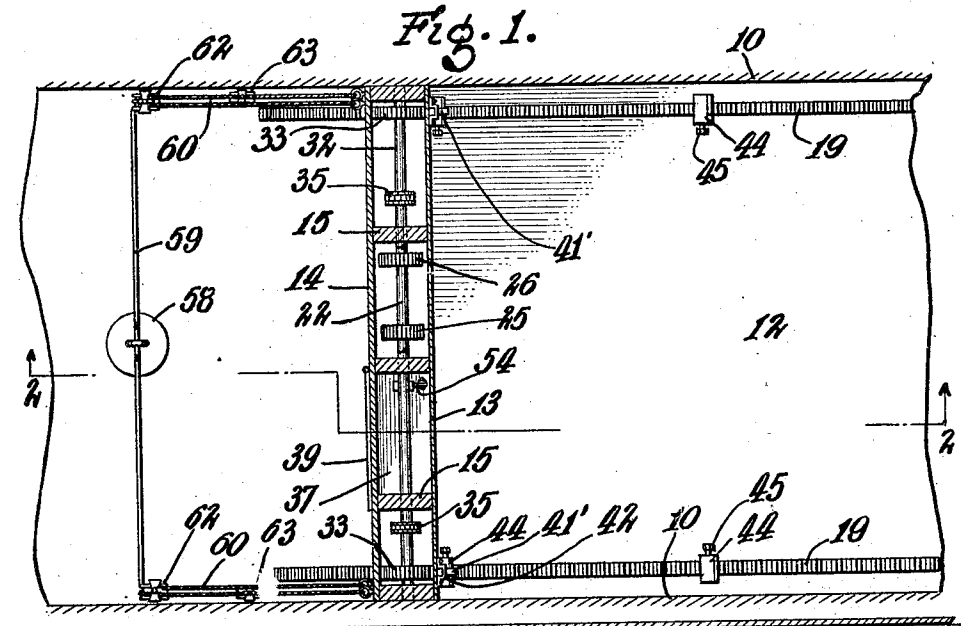
APPLICATION FILED DEC. 15, 1920.

1,421,089.

Patented June 27, 1922.

2 SHEETS—SHEET 1.

Fig. 1.



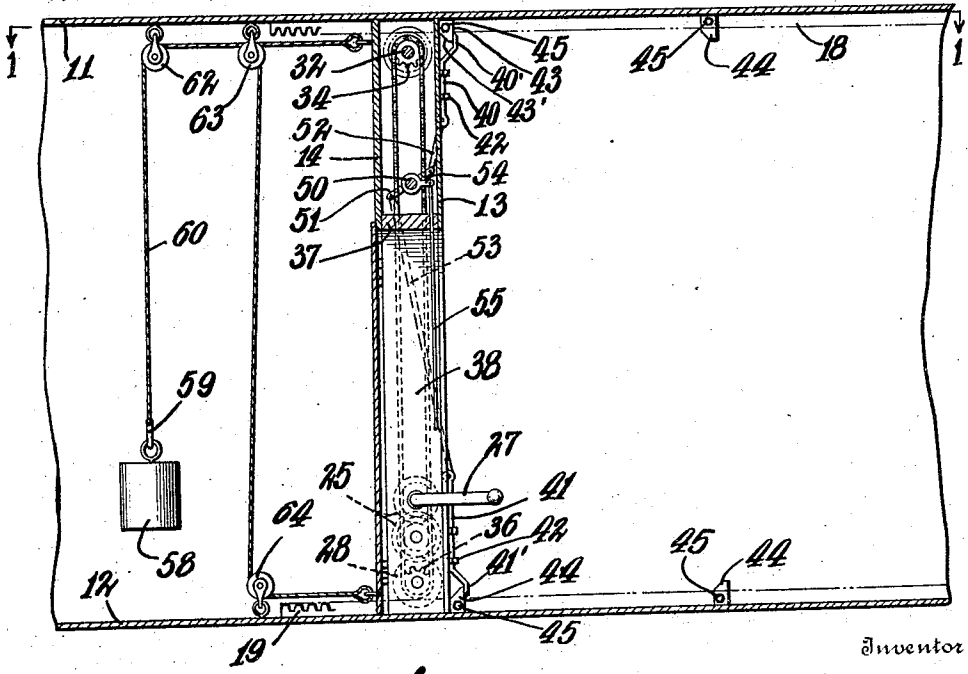


Fig. 2.

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2 SHEETS—SHEET 2.

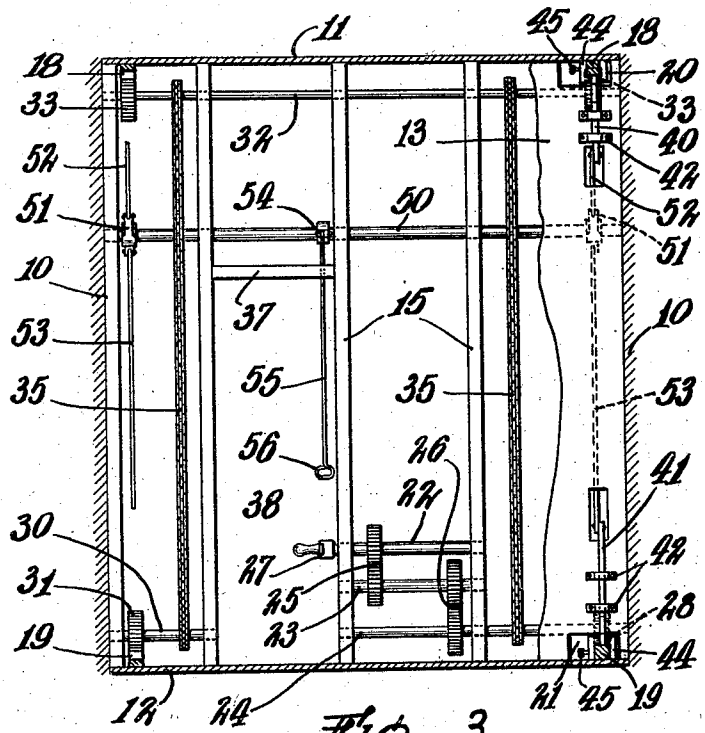


Fig. 3.

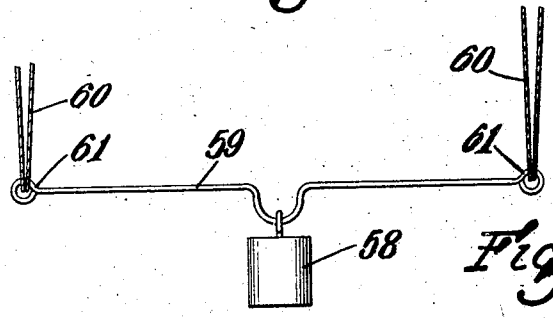


Fig. 4

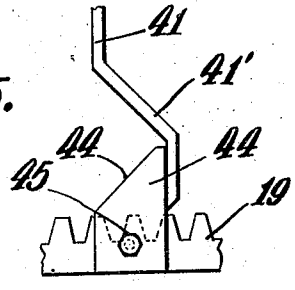


Fig. 5.

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UNITED STATES PATENT OFFICE.

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ADJUSTABLE PARTITION WALL.

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Application filed December 15, 1920. Serial No. 430,849.

To all whom it may concern:

Be it known that I, MICHAEL KOTUN, citizen of Czecho-Slovakia, residing at New Geneva, in the county of Fayette and State of Pennsylvania, have invented certain new and useful Improvements in Adjustable Partition Walls, of which the following is a specification.

This invention relates to an adjustable partition wall adapted for application to buildings of any kind in which a variation of the size of any of the rooms or apartments, may be desirable, the maximum capacity of many rooms or halls being only needed on certain occasions and a considerable saving of fuel in cold weather being effected by reducing the size of such hall or apartment.

The invention has for a general object to provide an adjustable wall for this purpose which may be easily and quickly moved from one position to another.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claims in which the various novel features of the invention are more particularly set forth.

Fig. 1 of the drawings is a horizontal sectional view showing the adjustable wall, this view being taken on the plan indicated by the line 1—1 of Fig. 2 and indicating also the side walls of the room to which it is applied.

Fig. 2 is a vertical section of the wall, this view being taken on the line 2—2 of Fig. 1 and showing also the floor and ceiling of the room.

Fig. 3 is a front elevation of the adjustable wall, showing portions of the fixed side walls in transverse section, one of the facing members of the adjustable wall being partly broken away to show the adjusting mechanism enclosed within the wall.

Fig. 4 is a detail elevation, showing the weight for moving the wall in one direction, with parts of its supporting ropes, this view being taken looking in the same direction as Fig. 3.

Fig. 5 is a detail fragmentary elevation of the device for locking the door in position.

Referring now to the drawings, the side walls of a room, hall or other apartment to which the invention is applied are indicated at 10, the ceiling at 11 and the floor at 12.

As here embodied my improved adjustable wall comprises the front and rear face members 13 and 14 fixed upon opposite sides of a series of vertical posts 15, the space enclosed between the face members 13 and 14 being adapted to contain the adjusting mechanism. It is to be understood of course that the movable wall corresponds in area to the cross-sectional area of the hall or apartment.

For adjusting this wall a pair of racks 18 are fixed to the ceiling 11 adjacent the side walls 10, while a second pair of like racks 19 are fixed to the floor, these racks running parallel to the side walls 10, or in the direction of movement of the adjustable wall, which latter has notches such as 20 and 21 cut in the upper and lower edges thereof to accommodate the racks. The racks 18 and 19 will extend for such distance as it may be desired to adjust the movable wall.

Journaled between a pair of intermediate ones of the posts 15 are a series of horizontal shafts 22, 23 and 24 upon which are fixed the reducing gear and pinion pairs 25 and 26, the shafts 22 having a crank handle 27 for turning purposes. The shaft 24 is extended at one end to bear in the outer one of the posts 15 and has a gear 28 fixed to the extended portion and meshing with one of the racks 19. A second shaft 30 is alined with the shaft 24 and extends between and is journaled in the opposite outer side post 15 and the adjacent intermediate one, this shaft 30 having a gear 31 thereon meshing with the other rack 19. Extending from side to side of the movable wall near the top thereof is another shaft 32 upon opposite ends of which are fixed a pair of gears 33 meshing with the racks 18 on the ceiling 11. Upon this upper shaft 32 are fixed a pair of sprocket wheels, such as 34, over which are looped chains 35 which extend in vertical reaches and are looped at their lower ends over sprocket wheels such as 36 fixed on the alined shafts 24 and 30.

As shown in the drawings the inner ends of the shafts 24 and 30 are supported in adjacent ones of the intermediate posts 15 while a horizontal beam 37 extends between such posts at a suitable height to form the lintel of a door frame. The facing members 13 and 14 do not extend across the space 38 thus formed which may be closed by an

ordinary hinged door 39. The crank handle 27 for shaft 22 is located in this space while an operating handle for the locking means of the wall is also disposed in this space as will be presently set forth.

The means for locking the wall in selected positions comprises pairs of vertically slidable bolts 40, 41 arranged in vertical alinement on the face 13 of the wall and slidably guided thereon by the straps 42. These bolts have their operating ends offset as at 40′, 41′ and adapted to take over blocks 43, 44 fixed on the racks 18 and 19 respectively. The blocks 43, 44 are suitably spaced along the racks and may be secured thereto by screws 45, while additional screw-holes may be provided in the racks if desired to permit of adjustment of the blocks to different positions. To move these bolts 40, 41 into and out of engaging position with the blocks a horizontal rock-shaft 50 is mounted in the wall and has fixed thereto a pair of double-ended rock-levers 51 which are connected to the upper and lower bolts by the rigid links 52 and 53. Fixed on the rock-shaft 50 above the door opening 38 is an arm 54 to the free end of which is attached a vertical rod 55 extending downwardly into the door opening and having a handle 56 on its lower end. The blocks 43 and 44 are preferably beveled off at one side as at 43′, 44′ to allow the bolts to ride freely thereover when the wall is being moved to decrease the size of the room.

The wall is preferably normally urged in the direction to enlarge the apartment by means of a weight 58 carried by a horizontal bar 59 suspended at opposite ends in ropes 60 which are looped through eyes 61 on the end of the bar, the two reaches of each rope extending upwardly over pulleys 62 mounted in the ceiling 11, one end of each rope connecting to the upper part of the wall and the opposite end being led around pulleys 63 and 64 to connect to the lower part of the door.

It is believed that the manner of use and adjustment of the wall will be apparent from the foregoing description, it being obvious that the bolts 40 and 41, when in locking position resist the action of weight 58 so that the wall is held in adjusted position, while it can be readily moved by first pulling handle 56 and withdrawing the bolts from the blocks 43, 44 and then rotating crank handle 27.

Having thus described my invention what I claim as new and desire to protect by Letters Patent of the United States is as follows:—

1. In a building, a wall for a hall or apartment adjustable to vary the size of such hall or apartment, and means for adjusting said wall, said means including racks fixed in the ceiling and floor of said apartment, gears meshing with said racks, horizontal shafts mounted in the door near the top and bottom thereof and having said gears fixed thereon, a train of reducing gears for operating the lower of said shafts, and sprocket chain and wheel connections between said shafts.

2. A device of the class described, comprising a wall, mechanical means for moving said wall horizontally in one direction, a weight for moving said wall in an opposite direction, and silidable bolts carried by said wall and engaging fixed elements to hold said wall against the action of said weight.

In testimony whereof I have affixed my signature.

MICHAEL KOTUN.