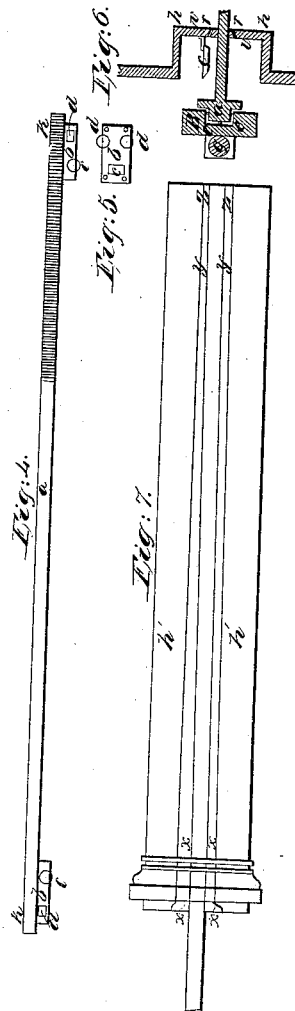
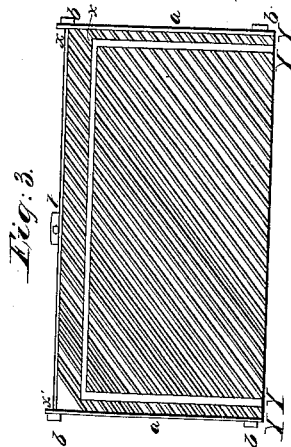
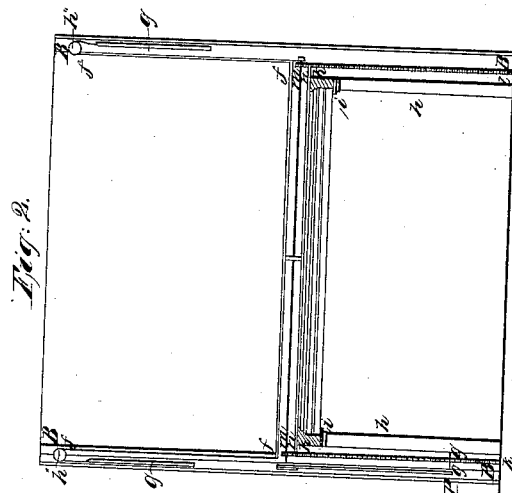
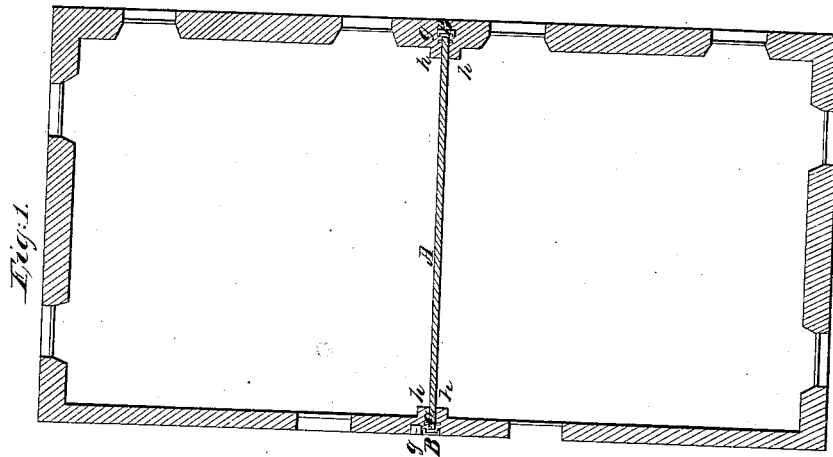


G. Kilburn,

Door.

N^o 1,052.

Patented Dec. 31, 1838.



UNITED STATES PATENT OFFICE.

GEO. KILBURN, OF WALPOLE, NEW HAMPSHIRE.

DROP DOOR OR PARTITION FOR SEPARATING ROOMS, &c.

Specification of Letters Patent No. 1,052, dated December 31, 1838.

To all whom it may concern:

Be it known that I, GEORGE KILBURN, of Walpole, county of Cheshire, and State of New Hampshire, have invented a new and
5 useful improvement in the modes generally practised of separating or uniting rooms by folding doors, so termed, or various other ways usually adopted.

These improvements, the principles there-
10 of, the application of said principles, by which the same may be distinguished from other inventions, the manner of using the same, together with such parts, improve-
15 ments, or combinations I claim to be my inventions, and hold to be original and new, I have hereinafter set forth and described, which description, taken in connection with the accompanying drawings, herein re-
ferred to, composes my specification.

20 Figures 1, 2, 3, 4, 5, 6, 7, represent my improvements. Fig. 1 is a plan of the first story, or parlors of a house, which as has heretofore been the practice, would be divided by folding or sliding doors, were my
25 invention not substituted therefor. Fig. 2 represents a section of the said rooms and the second or next story above. Fig. 3 is an elevation of the rising partition. Figs.
30 4, 5, 6, 7, show the different parts in detail.

My invention consists in making use of a partition between the two rooms which shall be suspended by chains, cords, pulleys and weights, somewhat similar to the common window sash.

35 A, Fig. 1, represents the partition, the same being more particularly shown in Fig. 3. It is composed of strips of lathing, crossed and nailed or properly secured together by ribands of wood or otherwise, the
40 same being plastered over with mortar, in the usual mode of plastering walls, and afterward painted or papered. Instead of the above it may be built with panel work, similar to doors, or in any other convenient and
45 proper manner.

The two ends *a a* have a suitable number of blocks *b, b, b, b*, (see Figs. 3, 4, 5) attached to them. These blocks have friction
50 rollers *c, d, d*, Figs. 4, 5, inserted in three of their sides as represented in the drawings. These friction rollers play against the three sides of grooves *e, e*, in long pieces of wood or metal B, B., Figs. 1, 2, 6. The partition is balanced by weights *g, g*, attached to
55 cords *f, f*, Fig. 2, or chain belts, fastened to

its upper corners and passing over pulleys *h'', h''*.

The weights may hang on either side of the ends of the partition as represented in Fig. 2 or Figs. 1, 6, at *g''*. 60

h, h, h, h, Figs. 1, 2, 6, 7, are pilasters, which are formed around the ends of the partition as seen in the different figures. These pilasters may reach from the floor to the ceiling of the room, or there may be an
65 entablature above them, as represented at *i, i*, in Fig. 2.

For the purpose of conveniently raising the partition, two racks *k, k, l, l*, are affixed at each end as represented in Figs. 2, 4. *m, m*, is a long shaft supported in suitable bearings in the middle and near its extremities. On this shaft are fixed two pinions
70 *n, n*, the teeth of which gear with the racks *k, k, l, l*. At or near the end of the shafts *m, m*, is a cogged wheel or pulley *o*, Fig. 2, around which a chain belt or cord passes and from thence to and about another and smaller cogged wheel or pulley *p*, on a shaft
80 *q, q*.

By fitting a key on the end of shaft *q, q*, and turning the said shaft in a proper direction, motion is communicated to the shaft
85 *m, m*, the pinions *n, n*, of which acting in the racks *k, l*, raise or lower the partition at pleasure. The tightness of the band which drives the pulleys *o, p*, may be regulated by a lever, pulley, and weight pressing thereon, or in any other proper and convenient
90 manner.

When the partition is elevated it passes into a proper space formed in the partition which separates the rooms in the story above, it may be raised still higher, into the third story if necessary, by a proper dispo-
95 sition or arrangement of the shaft *m* and other parts connected thereto. The space *r, r*, Fig. 6, left in each of the pilasters, is closed by a small hinged door, *s*, which on being shut, fills the space and gives a finish to the exterior of the pilasters. In order to steady the central part of the partition while in motion a piece of wood or metal, *t*,
100 Fig. 3, may be attached to the top of the same. In the opposite sides of this piece, *t*, small friction rollers may be inserted, which should run against cleats or rails affixed in the inside of the space, between the parti-
105 tions of the second story.

There may be various modes (as I have 110

heretofore mentioned) of constructing the rising partition, but that to which I give preference, is one formed of lathing, or thin strips of wood of any convenient size
 5 crossed or laid on each other diagonally, with proper spaces between each strip, to receive and hold the plastering laid on each side. It will be seen by reference to Fig. 3 in what manner these laths cross each other.
 10 They are to be pinned or nailed as often as may be necessary, and may be further strengthened by strips of wood or metal, $x, x, x y, x y, x' x', x' y', x' y'$, applied opposite to each other on each side of the lathing and properly fastened thereto. To
 15 these latter strips may be attached the finishing boards and moldings, required to give the same, when finished, a proper appearance, the latter, at the same time, aiding to
 20 strengthen the whole.
 The great disadvantage of other constructions consists in their liability to twist or warp, from change of temperature, and thus derange their operation.
 25 By my application of the friction rollers, c, d, d , by rendering them the only points of bearing and by the above mode of constructing the partition, the difficulty, above mentioned, is successfully obviated. By
 30 placing two pinions, n, n , Fig. 2, on the shafts m, m , the movements of each end of the partition are similar and regular—and thus any tendency to bind in the grooves e, e , is prevented. It will be readily seen that
 35 were one rack and pinion used, instead of two, that one end being raised, would cause some of the rollers to bind more than others and thereby increase the friction. This difficulty can not possibly take place by my
 40 arrangement of two racks and pinions. Furthermore the side strips $x' y', x' y'$, Figs. 3, 7, may be shaped wider at their tops $x' x'$ than at their lower ends $y' y'$ (see

Fig. 7). Should the wood swell by moisture of the atmosphere, this wedging form
 45 of the sides, will, when we wish to raise the partition, prevent their adhering to the edges v, v , Fig. 6, of the pilaster.

z', z' , Fig. 7, are sections of the base boards of the partition.

The strips $x' x'$ Fig. 3 are formed wedging as represented in section in Fig. 7 so that when the partition is down they shall make a close joint with the soffit of z' the
 50 entablature.

Having thus set forth and explained the nature and use of my invention I shall now proceed to point out particularly and specify, wherein I shall confine my claims,
 55 the same being as follows:

1. The arrangement of the rising partition with the racks k, k, l, l , and pinions n, n on the shaft m, m to operate together substantially as described, and for the purpose
 60 above set forth.

2. Constructing the rising partition of laths or strips of wood laid on each other and secured together, and plastered in the
 65 manner above explained.

3. The mode of finishing or completing
 70 the pilasters, when the partition is raised, by small hinged portions of the same as seen at s , Fig. 6, and when the partition is lowered, by wedged portions or pieces $x' y', x' y'$, as seen in Fig. 7. Also the mode of
 75 finishing the soffit of the entablature by the wedged strips $x' x'$ Fig. 7.

In testimony that the above is a true description of my said invention and improvements I have hereto set my hand this
 80 twelfth day of July in the year eighteen hundred and thirty-eight.

GEORGE KILBURN.

Witnesses:

R. H. EDDY,
 JOHN NOBLE.