No. 814,457. PATENTED MAR. 6, 1906.

L. KOMOROWSKI.

WARDROBE.

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Fig. 1

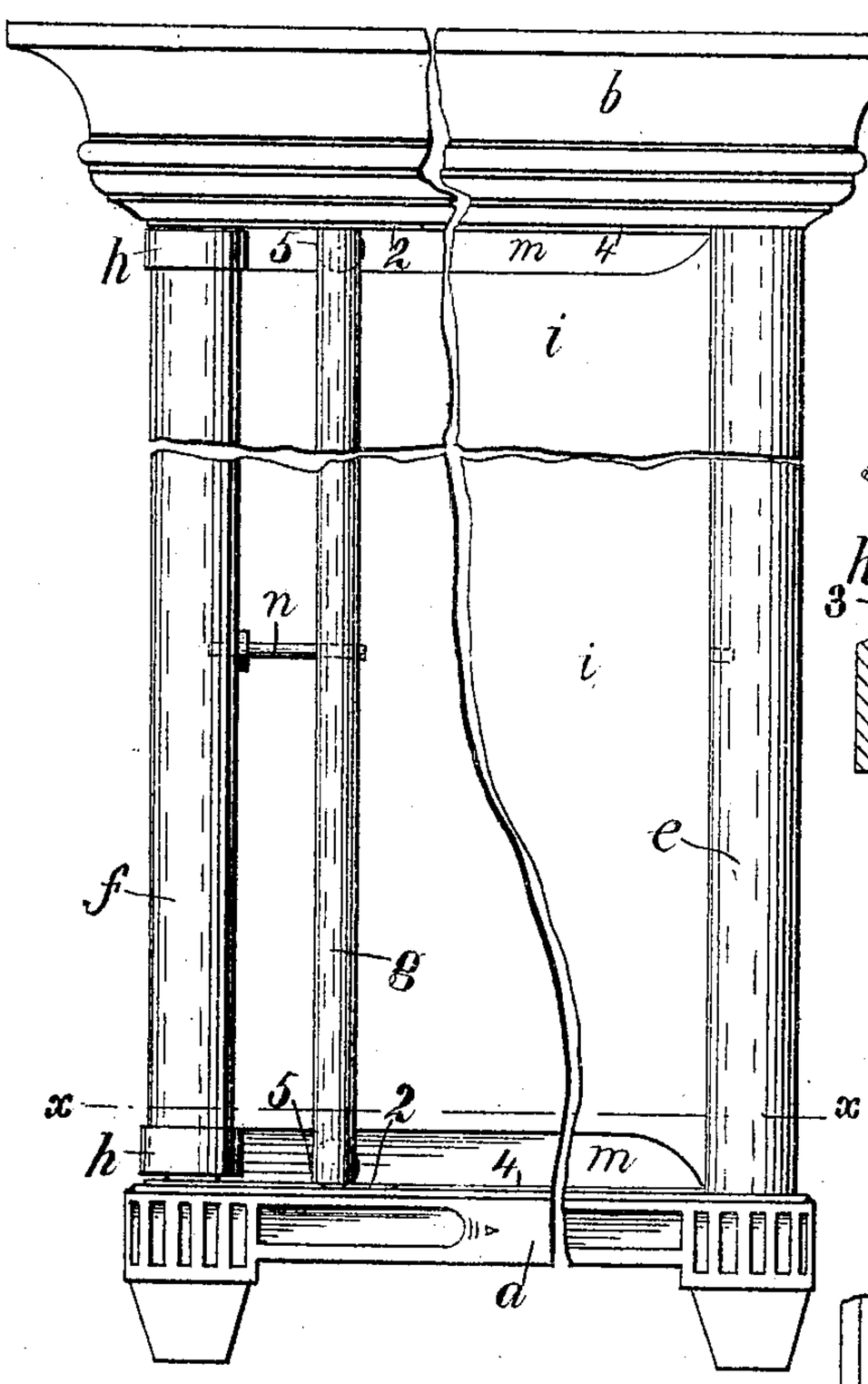


Fig. 4

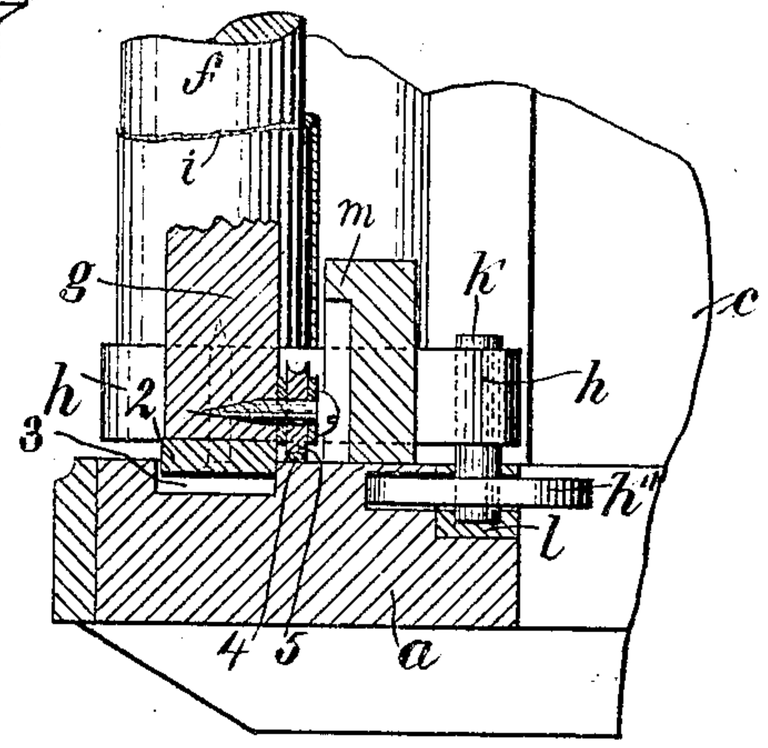


Fig. 2

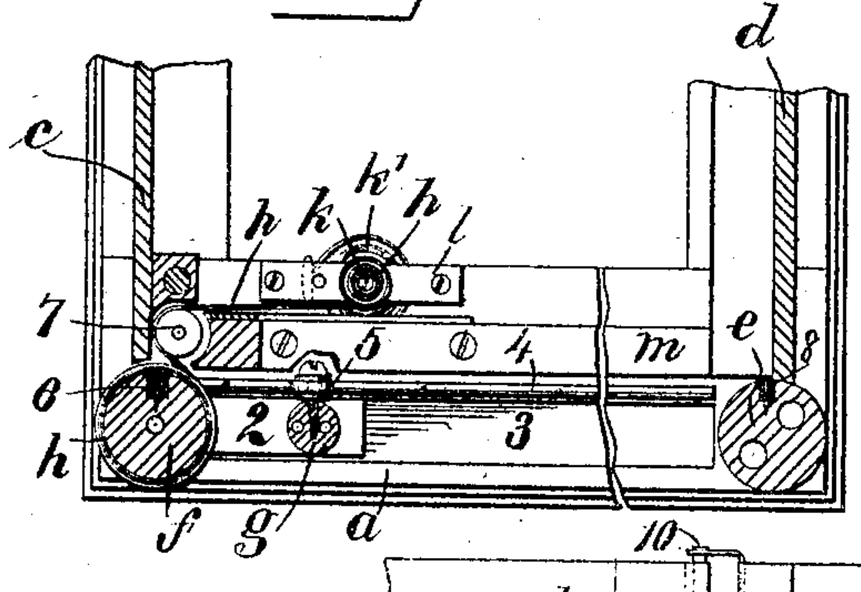


Fig. 3

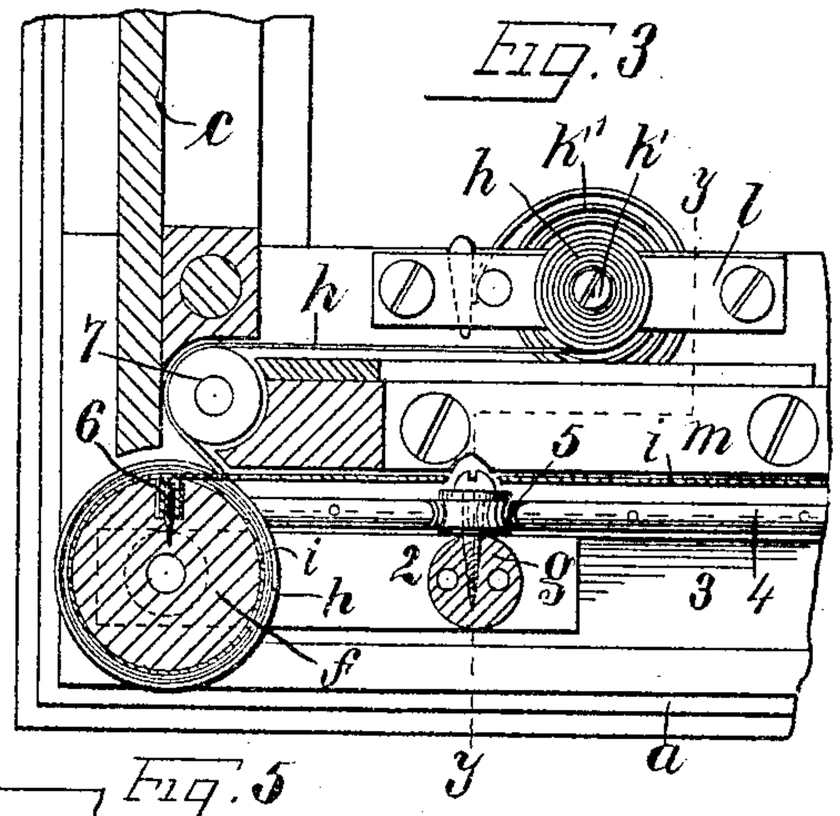


Fig. 5

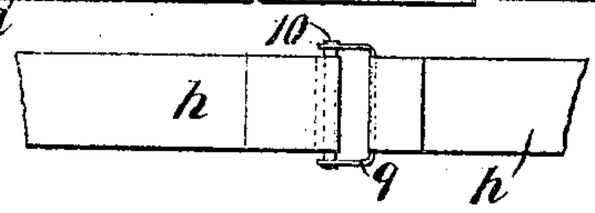
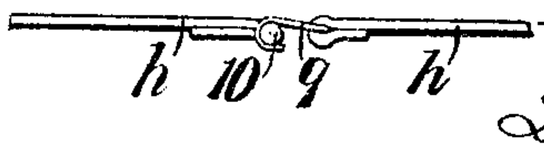


Fig. 6



WITNESSES

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WARDROBE.

No. 814,457. Specification of Letters Patent. Patented March 6, 1906.

Application filed October 5, 1904. Serial No. 227,190.

To all whom it may concern:

Be it known that I, LUDWIK KOMOROWSKI, a subject of the Emperor of Russia, residing in the borough of Manhattan, in the city, county, and State of New York, have invented an Improvement in Wardrobes, of which the following is a specification.

My invention relates to a part of a wardrobe, cabinet, or similar structure by the movement of which the wardrobe is opened to gain access to the contents.

The object of my invention is to dispense with one or more doors with which the wardrobe, cabinet, or similar structure is usually provided and which take room to swing in and occupy valuable space when standing open, besides being liable to be hit by persons or furniture.

My invention is especially applicable in the front of the wardrobe, cabinet, or similar structure, and comprises a curtain of flexible material secured along one vertical edge to a fixed device and along the other vertical edge to a revoluble member of a series of manually-actuated devices adapted to be moved across the front of the wardrobe, cabinet, or other structure from one side to the other in the act of opening the wardrobe to give access to the interior. In this movement the flexible-material curtain is wound up on the revoluble member and other devices are unwound, and tension is applied to assist in holding the parts in any position in which they may be placed and also to assist in returning the parts to an initial position, all of which are hereinafter more fully described.

In the drawings, Figure 1 is an elevation representing my invention, in which the cabinet is broken open both vertically and horizontally, so as to compact the illustration. Fig. 2 is a sectional plan of the same at about the line *x x* of Fig. 1. Fig. 3 is a sectional plan at the left-hand corner, showing the operative devices. Fig. 4 is a vertical section and partial elevation on the line *y y* of Fig. 3. Fig. 5 is an elevation, and Fig. 6 an edge view, showing the separable tension-band and the manner of its connection. Figs. 3 and 4 are upon the same scale and of exaggerated size over Figs. 1 and 2 for clearness.

The wardrobe, cabinet, or similar structure includes a bottom *a*, top *b*, sides *c d*, and a back, all of which may be of any desired construction or ornamental configuration. As illustrated, and at the front of the wardrobe, cabinet, or similar structure, I prefer to place a column *e* on the right-hand side. This is fixed in position connected in place to the bottom and top of the cabinet and abutting against the side *d*. At the left-hand front corner I provide a roller *f* and near the same and parallel thereto a hand-rod *g*.

The upper face of the bottom of the wardrobe and the under face of the top of the wardrobe along the front edge are provided with grooves 3. These run across the entire front of the wardrobe and are adapted to receive the metal plates 2, which plates come at the opposite ends of the roller *f* and hand-rod *g*, the roller *f* being pivotally connected to the metal plates and the hand-rod at its ends permanently connected to the metal plates by screws or in any desired manner.

Along the back edges of the grooves 3 on the upper surface of the bottom of the wardrobe and the under surface of the top I provide tracks 4 for the grooved rollers 5, which are pivotally connected to the back surface of the hand-rod *g*. The hand-rod *g* and the grooved rollers 5 serve to position the metal plates 2 and the roller *f* to the extent that the metal plates are received in the grooves 3 and are guided thereby; but said plates do not touch the bases of the grooves to produce any retarding friction to their movement. It is thus apparent that the roller *f*, the hand-rod *g*, the metal plates 2, and the grooved rollers 5 are so connected that they all move together with the hand-rod when the same is manually operated.

Secured to the upper surface of the bottom of the wardrobe and to the under surface of the top and parallel with and adjacent to the tracks 4 there are ribs *m* of appreciable depth, and the front of the wardrobe is to be closed by a flexible-material curtain *i*, the right-hand vertical edge of which is secured to the fixed column *e*, at the inner surface thereof, preferably by a let-in strip 8, and said flexible-material curtain *i* at its left-hand vertical edge is secured to the roller *f* by a let-in securing-strip 6, said strips being advantageously secured in place by nails or screws and the surfaces thereof made flush with the surface of the roller or column.

To the opposite ends of the roller *f* I connect bands *h*. These are secured by the same strip 6 which is employed in connecting the flexible-material curtain to the roller, and while the flexible-material curtain *i* passes around the roller *f* one or more convolutions from the back around the corner to-

ward the front the bands *h* extend around the ends of the said roller *f* in the opposite direction. (See especially Fig. 3.) These bands *h* in width are appreciably less than the width, or, in other words, the height, of the ribs *m*, and the horizontal edges of the bands *h* and the flexible-material curtain *i* substantially meet. Consequently the flexible-material curtain *i* at its top and bottom edges overlaps the ribs *m*.

I provide rollers 7 adjacent to the forward portion of the side *c* of the wardrobe and between the same and the end of the ribs *m*, there being between the rollers and the adjacent portion of the side and ribs room for the passage around the rollers of the bands *h*.

In the upper surface of the bottom *a* and under surface of the top *b* of the wardrobe and farther within the same than the ribs *m* and near the left-hand side *c* I provide frames *l*, let into the surfaces of said parts of the wardrobe, and between which frames there is space for springs *k'* on spindles *k*, which pass through said frames, the inner portion of the convolution of each spring being fastened to a spindle and the outer free end of the convolution being fastened between a wedge and bar of the frames, as shown in Fig. 3, in a manner well known. The spindles *k* project beyond the surfaces of said frames, and to these spindles are connected the opposite ends of the bands *h*, said bands being wrapped around the projecting ends of the spindles a number of turns, so as to apply a tension on the bands by the springs.

I prefer to provide a device for connecting the separable parts of the bands *h*, which is shown in Figs. 5 and 6, and comprises a hook-yoke 9, secured to one end of the band, and a pin 10, secured to the adjacent end of the other portion of the band. When these parts are hooked into engagement, the entire band is one functionally; but the parts may be separated when it is desired to change the tension on the springs *k'* or to take the devices to pieces. This means of separating the parts of the bands comes, by preference, when they are in their normal position, Fig. 3, between the inner surface of the side *c* and the end of the frames *l*, where it is not visible, but is easily reached and where it is less liable to come into contact with any parts that would accidentally cause a separation. In the drawings the features constituting my invention are shown as closing the wardrobe or cabinet, the flexible-material curtain extending across the front and the roller *f*, the substantial duplicate in area of the fixed column *e*, being at the other corner of the wardrobe.

In the operation of the parts the rod *g* is grasped and moved by hand toward the fixed column *e*. With it the roller *f*, plates 2, and grooved rollers 5 move, the same being guided by the grooves 3 and the tracks 4. With this movement the tension on the springs *k'* is slightly increased by the pull upon the bands *h*, and the bands *h*, unwinding from the roller *f*, wind up the flexible-material curtain *i* and continue to wind up the curtain throughout the extent of movement of the manually-operated parts across the front of the wardrobe. In doing this the tension upon the springs *k'* is greatly increased, and the pull of the opposite forces is presumed to be so nearly equally divided that the manually-operated devices stay in whatever position across the front of the wardrobe they may be placed in. When said manually-operated devices are entirely moved across the face of the wardrobe adjacent to the fixed column *e*, the front of the wardrobe between the upper and under surface of the ribs *m* is entirely open for access to the wardrobe, so that articles may be removed therefrom or placed therein. When it is desired to close the wardrobe, the manually-operated devices are moved in the opposite direction—that is, toward the left hand—this movement unwinding the flexible-material curtain *i*, and consequently winding up the bands *h* at the top and bottom and greatly reducing the tension upon the springs *k'* until the end of the movement is reached, when the roller *f* is in proximity to the side *c* of the wardrobe, as illustrated.

It may be advantageous to lock the roller *f* with reference to the hand-rod *g* or the manually-operated devices with reference to the fixed column *e* when the same are adjacent thereto. For this purpose any suitable device may be employed. I have shown a bolt *n*, which is adapted to pass freely and transversely through the hand-rod *g*. Near the left-hand end this bolt is provided with an enlargement, and there is a hole made in the roller *f*, adapted to receive the right-hand end of the bolt, as shown in Fig. 1, and another hole in alinement with the right-hand end of the bolt in the fixed column *e*, so that when the hand-rod *g* is in proximity to the fixed column *e* the bolt may be moved into the hole in the fixed column to maintain the parts in position. Therefore in either position of the manually-operated devices means may be employed for preventing accidental movement.

I claim as my invention—

1. In a wardrobe, cabinet or similar structure, the combination with a flexible-material curtain, of a fixed column at one side to which one vertical edge of said curtain is secured, a roller to which the other vertical edge of said curtain is secured, bearing-plates forming pivots at the ends of said roller, a rod to be grasped by hand standing between and secured to said plates parallel with said roller, grooved rollers secured to the opposite ends of said hand-rod, tracks for the same and grooves for the plates in the upper sur-

face of the bottom and under surface of the top of the cabinet, the same forming straight-line guiding devices across the front of the wardrobe or cabinet upon which the said devices move, and means for insuring the winding up of the curtain on said roller with the movement of said parts.

2. In a wardrobe, cabinet or similar structure, the combination with a flexible-material curtain, of a fixed column at one side to which one vertical edge of said curtain is secured, a roller to which the other vertical edge of said curtain is secured, bearing-plates forming pivots at the ends of said roller, a rod to be grasped by hand standing between and secured to said plates parallel with said roller, grooved rollers secured to the opposite ends of said hand-rod, tracks for the same and grooves for the plates in the upper surface of the bottom and under surface of the top of the wardrobe, the same forming straight-line guiding devices across the front of the wardrobe or cabinet upon which the said devices move, bands secured to and extending around the opposite ends of the roller in the opposite direction to the flexible curtain, and a spring-controlled fastening for the opposite ends of said bands.

3. In a wardrobe, cabinet or similar structure open at the front, the combination with the bottom and top of the cabinet, of ribs *m* secured to the under surface of the top and upper surface of the bottom near the front of the wardrobe, a fixed column at one side of the wardrobe, a manually-actuated series of devices including a roller forming the counterpart of the said column at the opposite side of the cabinet, a flexible curtain to close the cabinet connected along one vertical edge to the fixed column and along the other vertical edge to the said roller, the top and bottom edges of the curtain overlapping the said ribs so as to insure the closing of the wardrobe, and means forming guides for the manually-actuated series of devices during their movement back and forth across the front of the wardrobe.

4. In a wardrobe, cabinet or similar structure open at the front, the combination with the bottom and top of the cabinet, of ribs *m* secured to the under surface of the top and upper surface of the bottom near the front of the wardrobe, a fixed column at one side of the wardrobe, a manually-actuated series of devices including a roller forming the counterpart of the said column at the opposite side of the wardrobe, a flexible curtain to close the wardrobe connected along one vertical edge to the fixed column and along the other vertical edge to the said roller, the top and bottom edges of the curtain overlapping the said ribs so as to insure the closing of the wardrobe, means forming guides for the manually-actuated series of devices during their movement back and forth across the front of the wardrobe, and bands extending around the opposite ends of the said roller in the direction opposite to the winding of the flexible curtain, and spring tension devices to which the opposite ends of the said bands are secured so as to insure the winding up and the unwinding of the flexible curtain for opening and closing the wardrobe.

Signed by me this 3d day of October, 1904.

LUDWIK KOMOROWSKI.

Witnesses:

GEO. T. PINCKNEY,

S. T. HAVILAND.