C. W. CROGAN.

PHOTOGRAPH ALBUM.

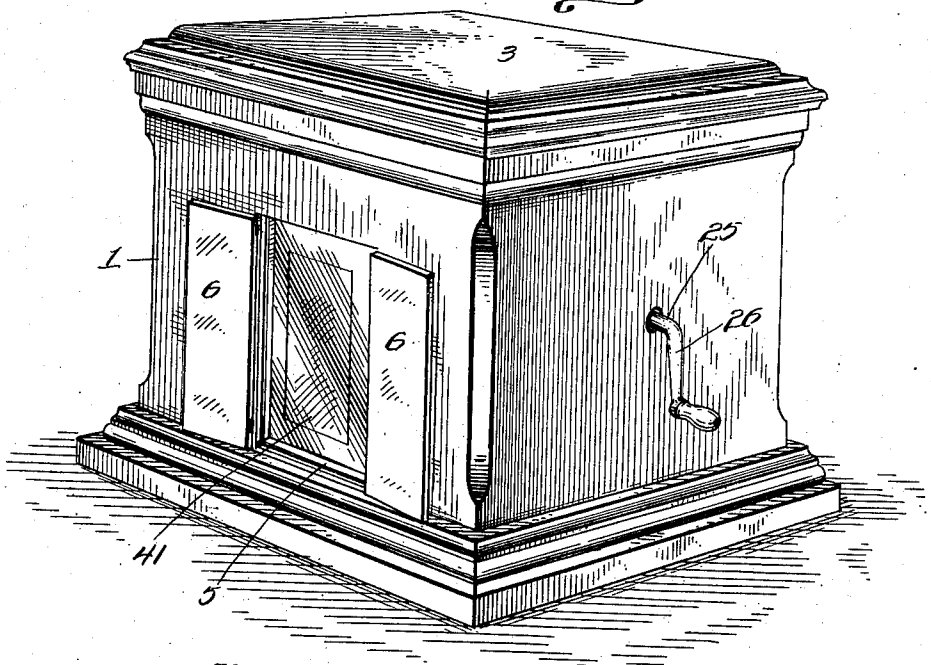
APPLICATION FILED DEC. 7, 1909.

986,965.

Patented Mar. 14, 1911.

3 SHEETS—SHEET 1.

Fig. 1.



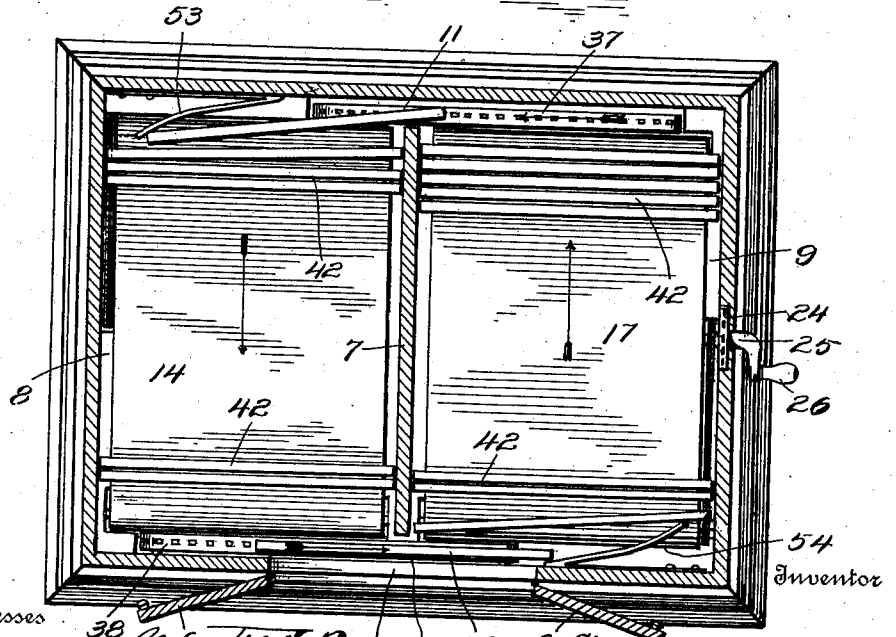


Fig. 2.

Witnesses

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3 SHEETS—SHEET 2.

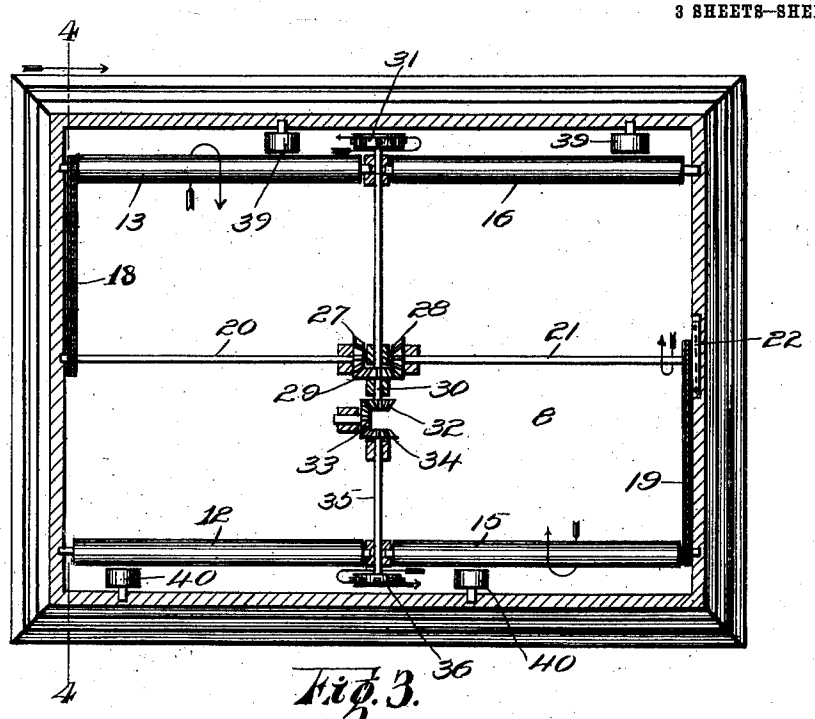

Fig. 3.

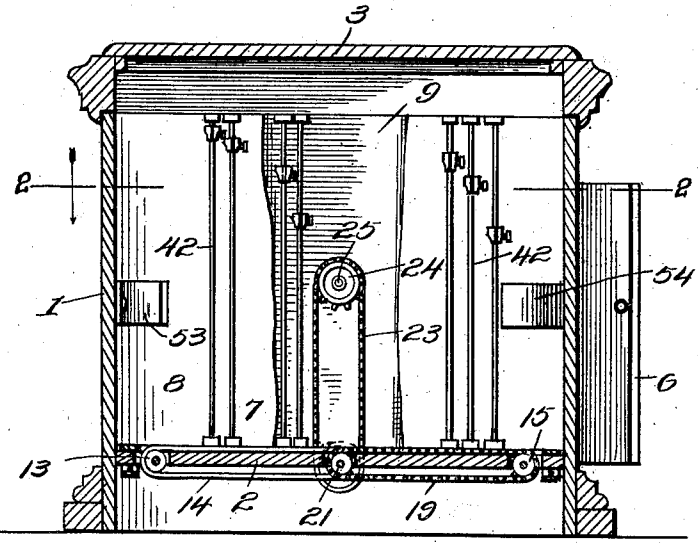

Fig. 4.

Witnesses

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3 SHEETS—SHEET 3.

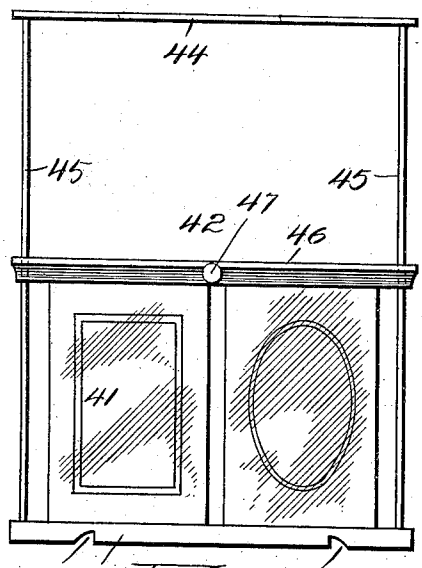

Fig. 5.

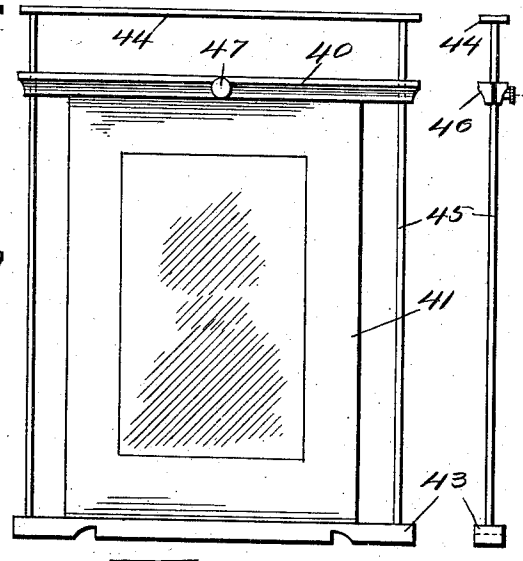

Fig. 6.

Fig. 7.

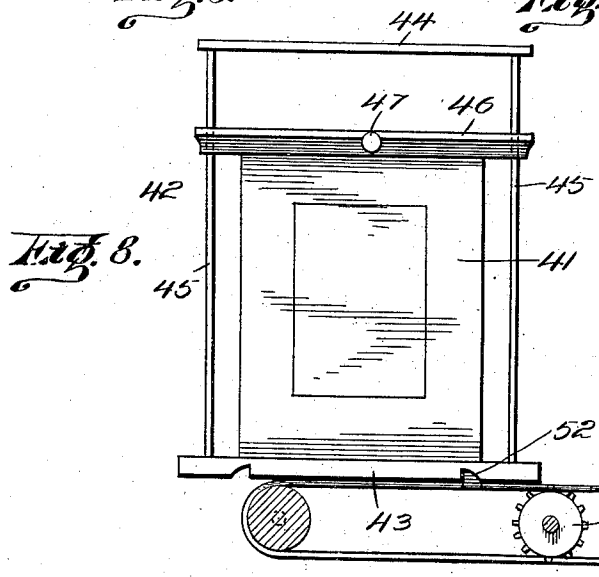

Fig. 8.

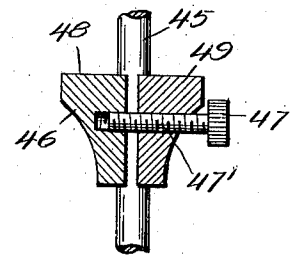

Fig. 9.

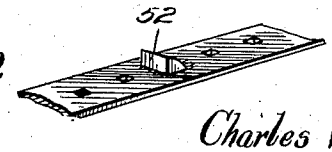

Fig. 10.

Witnesses

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UNITED STATES PATENT OFFICE.

CHARLES W. CROGAN, OF BANGOR, MAINE.

PHOTOGRAPH-ALBUM.

986,965. Specification of Letters Patent. Patented Mar. 14, 1911.

Application filed December 7, 1909. Serial No. 531,830.

To all whom it may concern:

Be it known that I, CHARLES W. CROGAN, a citizen of the United States, residing at Bangor, in the county of Penobscot and State of Maine, have invented new and useful Improvements in Photograph-Albums, of which the following is a specification.

This invention relates to photographic albums or display cabinets, the object of the invention being to provide an album or cabinet which is adapted to receive photographs of different sizes and to protect the same from light and dust, and in which the photographs are arranged and mounted for travel past a door or opening, by which they may be successively displayed.

The invention consists of the features of construction, combination and arrangement of parts hereinafter fully described and claimed, reference being had to the accompanying drawings, in which:—

Figure 1 is a perspective view of a photographic album or display cabinet embodying my invention. Fig. 2 is a horizontal section thereof on the plane thereof indicated by the line 2—2 of Fig. 4. Fig. 3 is a horizontal section through the base portion of the cabinet showing the gearing. Fig. 4 is a vertical front to rear section on line 4—4 of Fig. 3. Fig. 5 is a front elevation of one of the racks or carrier frames as adjusted to hold small photographs. Fig. 6 is a similar view of the rack as adjusted to hold large photographs. Fig. 7 is an end view of the rack. Fig. 8 is a view showing a rack and one of the transmission belts. Fig. 9 is a detail section through the rack. Fig. 10 is a detail view of a transmission belt.

Referring to the drawings, the numeral 1 designates a casing or cabinet of suitable size and form, said cabinet being shown in the present instance as of rectangular form and of suitable external ornamental configuration. This cabinet is provided with an elevated bottom wall 2 and a removable top or cover 3, which may be detached whenever it is desired to insert or remove any of the contained parts. In the front wall of the cabinet is a display opening 5, through which a photograph may be observed, which opening is designed to be closed by swinging doors 6 to prevent entrance of light and dust to the cabinet when the same is not in use for display purposes. The interior of the cabinet is divided by a central vertical partition 7 to form compartments 8 and 9, said partition terminating short of the front and rear walls of the casing to provide transverse passages 10 and 11 for the travel of the photographs from one compartment to the other, as hereinafter described, the passage 10 being arranged immediately in rear of the observation opening 5, as shown in Fig. 2.

Mounted in the base of the compartment 7 are front and rear rolls 12 and 13 which extend transversely at the front and rear thereof and support a forwardly movable feed belt or apron 14. Similarly mounted within the compartment 8 in axial alinement with the rolls 12 and 13 are rolls 15 and 16 which support a rearwardly movable feed belt 17, the shafts of the respective rolls being mounted in suitable bearings in the side walls of the casing or in the bottom wall 2, as preferred. The shafts 13 and 15 are respectively connected by sprocket chains 18 and 19 with transverse transmission shafts 20 and 21, whereby the said rolls are driven to respectively move the belts 14 and 17 forwardly and rearwardly. The shaft 21 carries a sprocket wheel 22 which is connected by a chain 23 with a sprocket wheel 24 on a primary drive shaft 25 journaled on one of the side walls of the casing and having an actuating handle or crank 26. The inner ends of the shafts 20 and 21 carry beveled gears 27 and 28 meshing with a bevel gear 29 on one end of an intermediate shaft 30, through which motion is transmitted from the shaft 21 of the shaft 20. The shaft 30 carries at its rear end a sprocket wheel 31 and at its forward end a beveled pinion 32, which latter meshes with an idler 33, which in turn meshes with a beveled gear 34 on the inner end of a shaft 35, the outer or forward end of which carries a sprocket gear 36, the connecting gearing thus described being arranged to rotate the sprocket wheel 31 in one direction or toward the left in Fig. 1 and the sprocket wheel 36 in the reverse direction or toward the right in Fig. 1. The sprockets 31 and 36 are arranged to drive transmission belts 37 and 38 arranged transversely at the rear and front of the cabinet and movable in the passages 11 and 10. These belts move over suitable sets of supporting rollers 39 and 40, respectively, shown clearly in Fig 3.

The photographs 41 intended for storage and display are mounted in racks or carrier frames 42, which are of proper width to fit snugly between the walls of the re-

spective compartments. These racks or carrier frames are disposed in practice one in rear of the other so as to be successively fed forward through the compartment 8 by the belt 14, thence transversely through the passage 10 at the front of the cabinet for display at the opening 5 by the belt 38, thence rearwardly through the compartment 9 by the belt 17, and finally transversely through the passage 11 by the belt 37 for return to the compartment 8 and forward feed by the belt 14, for a repetition of the feeding operation above described.

Each rack 42 comprises a rectangular frame formed of a bottom strip 43, a top strip 44 and connecting guide rods or wires 45, together with a clamping strip 46, slidably mounted on said wires 45 and provided with a knob or handle 47 by which it may be conveniently adjusted. Preferably the strip 46 is composed of two members 48 and 49 and the knob 47 is formed upon a screw 47′ adjustably connecting said sections so that they may be spaced for adjustment on the rods 45 and drawn together to clamp them in fixed position upon said rods. By these means the strip 46 may be moved toward and from the strip 43 to receive photographs of different sizes, as illustrated in Figs. 5 and 6. The strip 43 is provided with reversely facing notches 50 and 51 adapted to respectively receive lugs or projections 52 upon the belts 37 and 38, so that a proper engagement between the belts and racks may be secured for moving said racks in reverse direction, it being understood that the projections 52 on the belt 37 faces in one direction, while the corresponding projection upon the belt 38 faces in the opposite direction.

Assuming that a series of the racks or carrier frames are arranged in the compartment 8 and rest upon the belt 14, while a number of the racks are also arranged in the compartment 9 and rest upon the belt 17, it will be understood that upon rotating the driving crank 26 to the right the belt 14 will be moved forwardly to carry the racks thereon toward the feed passage 10, while the belt 17 will be moved rearwardly to carry the racks thereon toward the feed passage 11. The racks may be arranged in close relation to follow each other in rapid succession, and it will be understood that as each rack on the belt 14 reaches the belt 38 the projections 52 upon said belt 38 will engage the notch 51 in the rack and thus feed said rack along the passage 10 toward the front end of the feed belt 17, thus displaying the picture held by the rack at the observation opening 5. The rack thus fed onto the belt 17 will be carried rearwardly thereby until it passes onto the belt 37, the projections 52 of which will engage the notch 50 and feed said rack through the passage 11 back of the conveyer 14, ready for a repetition of the above described operation. In order to guide the racks from the transmission belts to the feed belts, curved resilient guide strips 53 and 54 are arranged upon the front and rear walls of the casing to respectively engage the racks feeding from the belts 37 and 38, so as to guide them onto the belts 14 and 17.

From the foregoing description, taken in connection with the drawings, the construction and mode of operation of my improved photographic album or cabinet will be readily understood, and it will be seen that provision is made for holding photographs or pictures varying in size and for moving the same through the cabinet and successively displaying them at the opening 5. When the cabinet is not in use for displaying purposes, the opening 5 may be closed by the doors 6, thus preventing entrance of light and dust and consequent injury to the photographs.

The racks are designed in practice to be mutually supported in an upright position, but, if desired, they may be supported in any other way.

Having fully described the invention, what is claimed is:—

A photographic display cabinet comprising a casing having an observation opening and partitioned to provide compartments and transverse passages communicating with said compartments at front and rear, reversely movable rolls in the two compartments, conveyers passing over said rolls, transverse shafts in the compartments, gearing for driving the respective rolls from said shafts, endless conveyers in the transverse passages, front and rear shafts connected at right angles to the first-named shafts for operating said conveyers, gearing between the adjacent ends of the shafts for operating the same in unison, and suitable means for imparting motion to said gearing.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES W. CROGAN.

Witnesses:
RALPH W. MERRILL,
WALTER H. SNOW.