

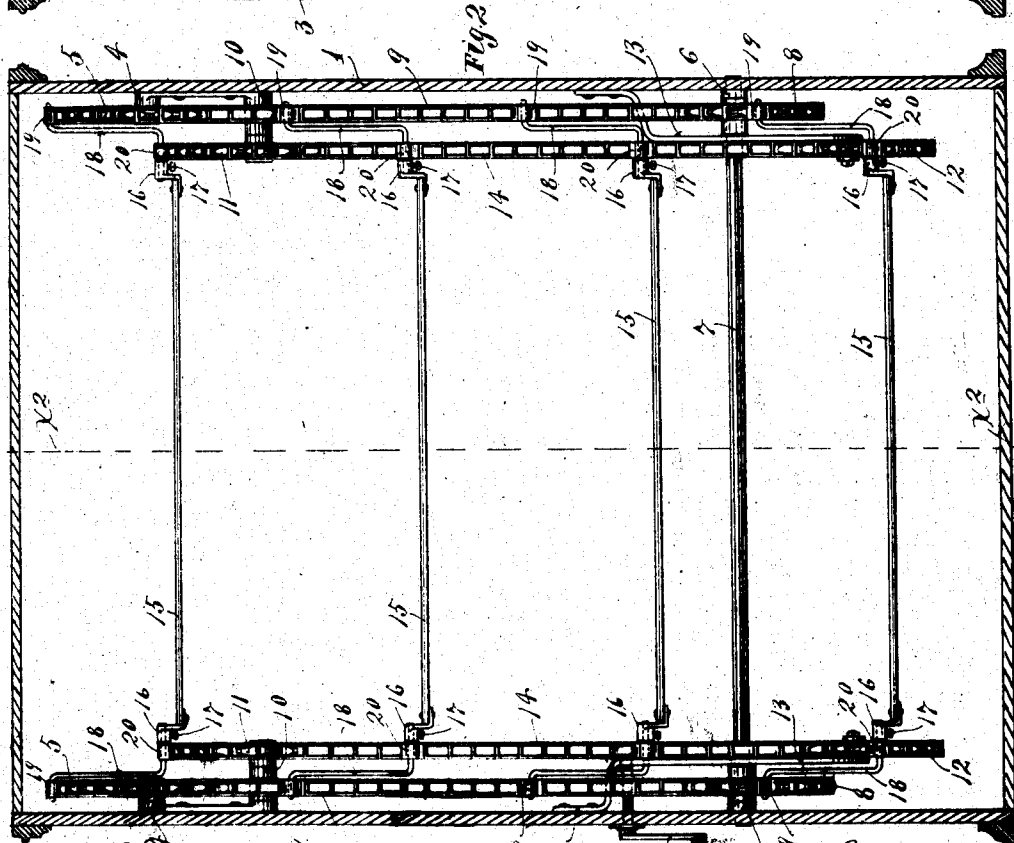
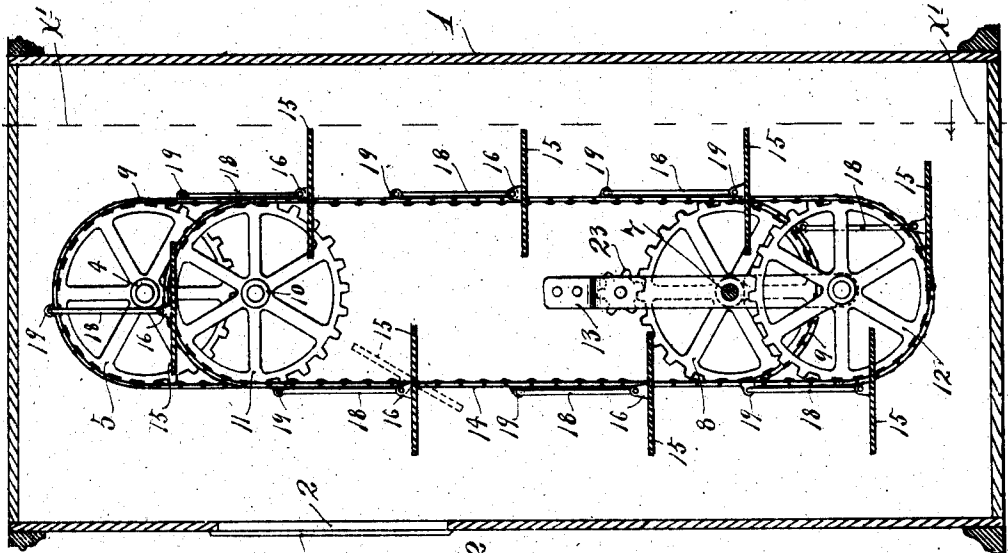
No. 864,438.

PATENTED AUG. 27, 1907.

R. SZCZYS.
DISPLAY RACK.

APPLICATION FILED MAR. 24, 1906.

3 SHEETS—SHEET 1.



Witnesses.
A. H. Ophelt
E. W. Jippson

Fig. 1.

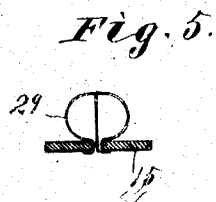
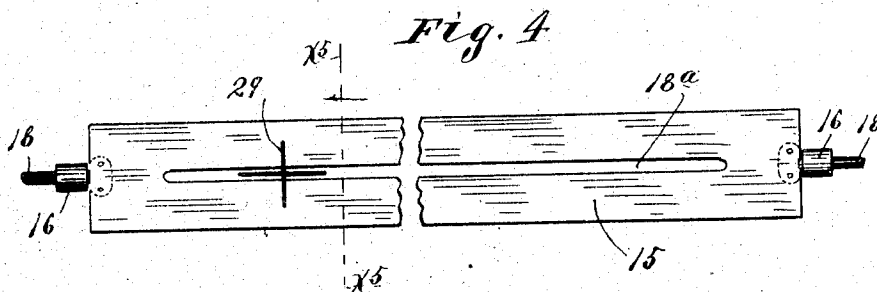
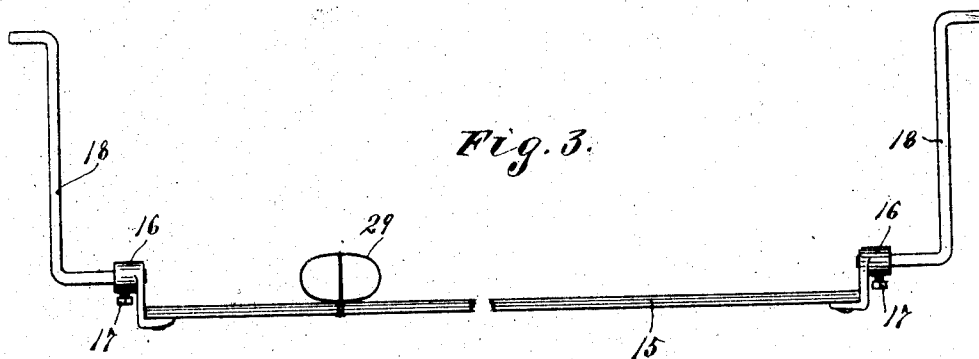
Inventor.
Robert Szczys
By his Attorneys
(Williamson Merchant)

No. 864,438.

PATENTED AUG. 27, 1907.

R. SZCZYS.
DISPLAY RACK.
APPLICATION FILED MAR. 24, 1906.

3 SHEETS—SHEET 2.



Witnesses.
a H. Opsahl.
J. W. J. J. J.

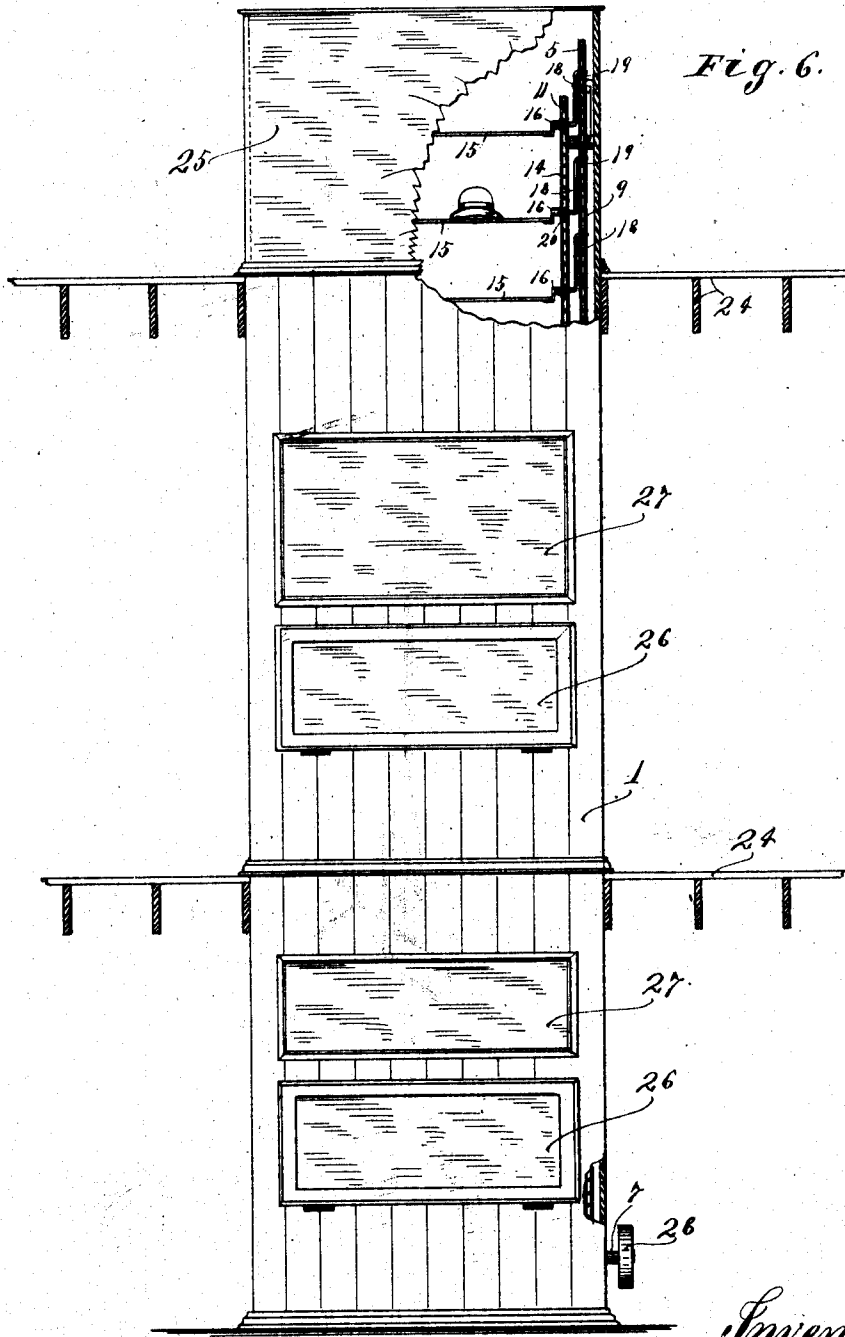
Inventor
Robert Szczys.
By his Attorneys.
Williamson & Muchand

No. 864,438.

PATENTED AUG. 27, 1907.

R. SZCZYS.
DISPLAY RACK.
APPLICATION FILED MAR. 24, 1906.

3 SHEETS—SHEET 3.



Witnesses
A. H. Osoahf.
E. W. J. J. J. J.

Inventor.
Robert Szczys.
By his Attorney
William M. Merchant

UNITED STATES PATENT OFFICE.

ROBERT SZCZYS, OF MINTO, NORTH DAKOTA, ASSIGNOR OF THREE-EIGHTHS TO JOHN J. SPRAFKA AND ONE-EIGHTH TO HENRY O'KEEFE, OF MINTO, NORTH DAKOTA.

DISPLAY-RACK.

No. 864,438.

Specification of Letters Patent.

Patented Aug. 27, 1907.

Application filed March 24, 1906. Serial No. 307,939.

To all whom it may concern:

Be it known that I, ROBERT SZCZYS, a citizen of the United States, residing at Minto, in the county of Walsh and State of North Dakota, have invented certain new and useful Improvements in Display-Racks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

11 This invention has for its object to provide an improved display rack, by means of which various articles of merchandise may be displayed in succession, either for advertising purposes or for convenience in making sales, or both.

15 To the above end the invention consists of the novel devices and combinations of devices hereinafter described and defined in the claims.

Hitherto in display racks a series of shelves have been hung on endless chains or traveling conveyers, and have received movements therefrom to display 20 articles of merchandise in succession, but in these prior devices the suspended shelves have not been positively held against vibration or swinging movements, and it has been found that they would vibrate or 25 swing to a very considerable extent, especially in making the turns at the upper and lower portions of the conveyor or endless carrier.

The principal feature of my present invention is directed to the provision of simple and efficient means 30 for positively preventing vibrations or swinging movements of the shelves at all times throughout their complete travel.

The improved device embodying the above noted feature of improvement and other features hereinafter 35 noted or embodied in the improved machine illustrated in the accompanying drawings.

In the drawings like characters indicate like parts throughout the several views.

Referring to the drawings, Figure 1 is a view partly 40 in elevation and partly in section on the line $x-x'$ of Fig. 2, showing a cabinet or case and illustrating my invention as applied thereto. Fig. 2 is a transverse vertical section taken on the line $x''-x'''$ of Fig. 1. Fig. 3 is a detail view in elevation showing one of the shelves 45 removed from working position. Fig. 4 is a plan view of the shelf shown in Fig. 3. Fig. 5 is a transverse section taken on the line $x''-x'''$ of Fig. 4, some parts being broken away, and Fig. 6 is a view principally in elevation but with some parts sectioned and with some 50 parts broken away, showing a form of the device in which the cabinet or case is extended through several stories of a building.

Referring first to the construction illustrated in Figs. 1 to 5 inclusive, the numeral 1 indicates an upright

case or cabinet which, as shown, is rectangular in cross 55 section and is provided in one side or vertical wall with an opening 2, which would preferably be normally closed by a glass door 3. Mounted on suitable bearings 4 on the sides of the cabinet near its top is a pair of axially aligned sprockets 5. Extended trans- 60 versely of the cabinet and mounted in suitable bearings 6, on the sides thereof a considerable distance above the bottom of the cabinet, is a transverse shaft 7 that carries a pair of laterally spaced sprockets 8, which sprockets aline one with each of the sprockets 5. The sprocket chains 9 run over the aligned sprockets 5 and 8. Mounted in bearings 10 located on the sides 65 of the cabinet 1 directly below the bearings 4, but laterally offset inward therefrom, is a pair of sprockets 11. These sprockets 11 are aligned one with each of a pair of sprockets 12, which latter are mounted on the depending ends of quite long and thin brackets 13, 70 the upper ends of which are attached to the sides of the cabinet above the sprockets 8. Sprocket chains 14 run over the aligned sprockets 11 and 12. The axes of the sprockets 5 and 8 are in the same vertical plane, and the vertical distance between the axes of the sprockets 11 and 12 is the same as the vertical distance between the axes of the sprockets 5 and 8; 75 hence it of course follows that the vertical distance between the axes of the upper sprockets 4 and 11 is the same as the vertical distance between the axes of the lower sprockets 8 and 12. The shelves 15 are, as shown, provided at their ends with bearing hubs 16 that are adjustably secured by set-screws 17 to the 80 lower ends of supporting links 18, the lower ends of which links are turned inward and the upper ends of which are turned outward. The chains 9 are provided at the proper intervals of space with links that have perforated bearing lugs 19, and likewise the chains 14 at corresponding intervals of space, but have 85 vertically off-set points, are provided with links that are formed with bearing lugs 20. The crank-like inturned lower ends work pivotally in and project through the bearing lugs 20 of the chains 14, while the crank-like outturned upper ends of said links work 90 pivotally in the bearing lugs 19 of the chains 9. The vertical distance between the axes of the upper and lower ends of the links 18 must be the same as the vertical distance between the axes of the sprockets 4 and 11 and between the axes of the sprockets 8 and 12. 95 The bearing brackets 13, it will be noted, are attached to the sides of the cabinet at points above the shaft 7, and are off-set laterally from the planes of travel of the links 18, so that the said links in making their lower transverse movements will pass clear of said brackets. 100 With this arrangement when the sprocket-equipped shaft 7 is rotated all of the sprockets will be caused to 105

rotate in unison, the chains will be caused to travel parallel courses, and the links 18 throughout their movements will be held in vertical position. It therefore follows that if the shelves 15 be set in horizontal position they will maintain such horizontal position throughout their movements. If the shelves be set in an oblique position they will be held parallel to that position throughout their movements. The two pairs of chains hold the links 18 and hence the shelves supported thereby against vibrations or swinging movements, throughout the entire line of travel thereof. To adapt the shelves to support articles such as hats, they are provided with longitudinal slots 18^a, and skeleton spring holders 29 are mounted for sliding movements in said slots. These holders 29 are, as shown, formed by intersecting bowed springs, the ends of which are passed through said slots and are turned outward below the shelves. (See Figs. 3, 4 and 5.) In Fig. 2 one of the shelves is shown as set in an oblique position, as may be required for properly displaying a great many kinds of merchandise. As a means for driving the chains by hand power I have shown a crank 22 mounted in and extending through one side of the cabinet, and having at its inner end a pinion 23 that meshes directly with one of the lower sprockets 8. When the chains are to be driven from another source of power, the shaft 22 may be provided at its outer end with a pulley or sprocket, or any other suitable means may be provided for transmitting the motion to said sprockets and chains.

In Fig. 6 the numeral 24 indicates the floors of different stories in the building, and in this arrangement the cabinet 1 is extended from what may be assumed to be the basement, through the first story and into the second story. The upper portion of the cabinet is in the form of a glass showcase 25. In the basement and in the first floor section, the cabinet is shown as provided with hinged glass doors 26, and above said doors with glass windows 27. The upper sprockets 5 and 11 are mounted within the showcase section 5, and the lower sprockets 8 and 12 are located in the basement section of the cabinet near the basement floor. The sprocket shaft 7 is shown as extended and provided with a pulley 28, over which a power-driven belt (not shown) may run to impart motion to the sprockets and chains. The sprocket chains, are, of course, length-

ened out to correspond to the increased length of the cabinet.

For advertising purposes means would be usually provided for imparting continuous motion to the sprockets and chains, and the transparent sections of the cabinet would of course be disposed where they would best display the articles of merchandise carried by the shelves. Where the device is used for the purpose of exhibiting goods in making sales, means would usually be provided for imparting intermittent movements to the chains, or for moving the same at will, as by means of the hand crank illustrated. The device shown in Fig. 6 is adapted to be loaded with the goods in the basement, and the goods will, of course, be displayed in regular order of succession at the several transparent sections of the several stories.

In practice a plurality of hat holders 29 will be placed in the slot of each shelf, and these may be adjusted with respect to each other so as to closely position hats of different sizes and shapes.

In practice the device described has been constructed and put into actual use, and it has been found efficient for the purposes had in view.

What I claim is:

1. In a device of the kind described, the combination with the upper sprockets 5 and the upper sprockets 11, said latter being off-set laterally and vertically below the former, of the lower sprockets 8 and 12 the former being aligned vertically with said sprockets 5, and the latter with said sprockets 11, the distance between said sprockets 5 and 8 being the same as the distance between said sprockets 11 and 12, brackets 13 supporting said sprockets 12 at their lower ends and themselves supported at their upper ends above said sprockets 8, sprocket chains 9 running over the sprockets 5 and 8, sprocket chains 14 running over the sprockets 11 and 12, crank-like links 18 pivotally connected to links of said chains 9 and 14, and shelves 15 adjustably secured to the intumed ends of said links 18, substantially as described.

2. In a device of the kind described, the combination with an endless carrier, of a shelf attached to said carrier, said shelf having a longitudinal slot, and a skeleton holder mounted to slide in said slot, substantially as described.

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

ROBERT SZCZYNS.

Witnesses:

H. C. DE PUY,
WALTER BARCLAY.