No. 713,988. Patented Nov. 18, 1902.

P. J. JACKSON.

APPARATUS FOR DISPLAYING PICTURES.

(Application filed June 9, 1902.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

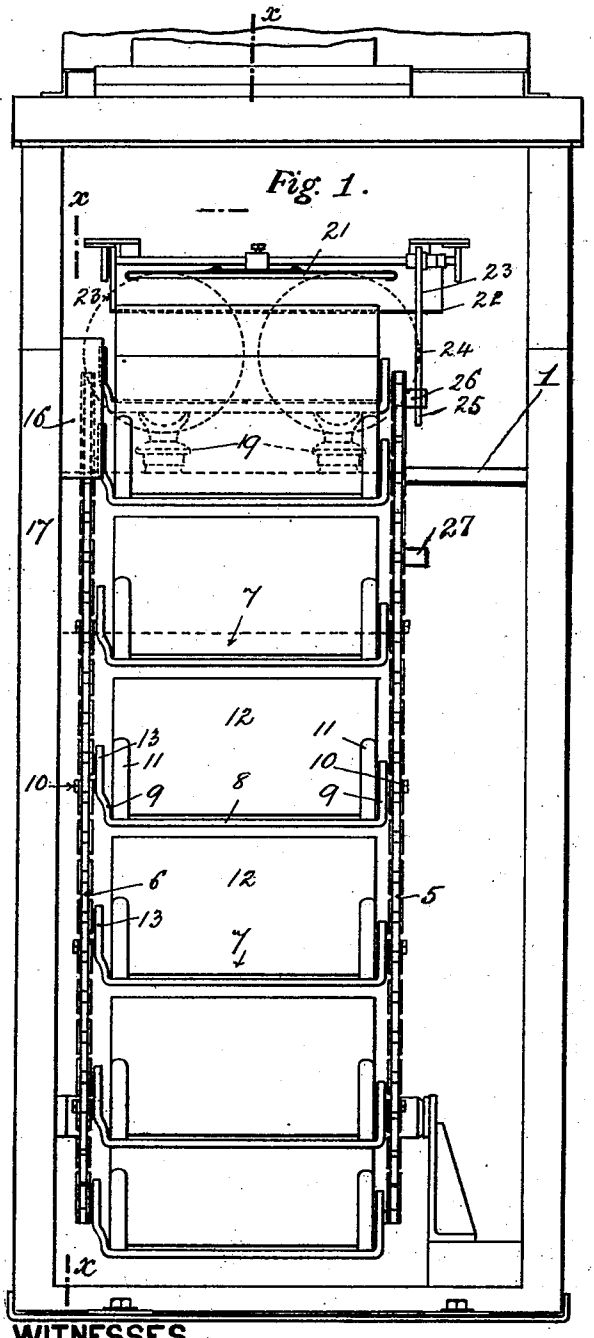
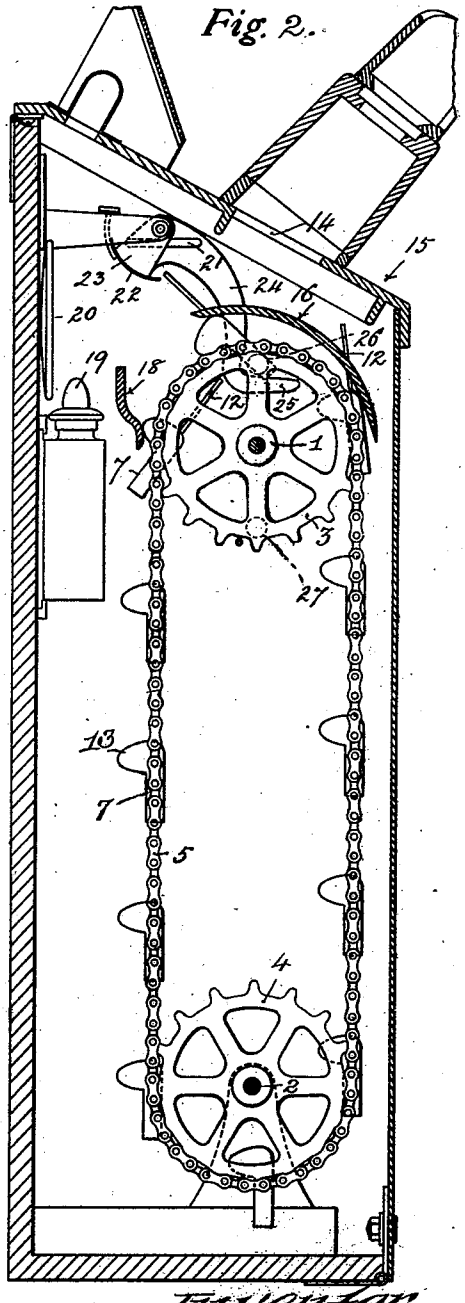


Fig. 2.



WITNESSES

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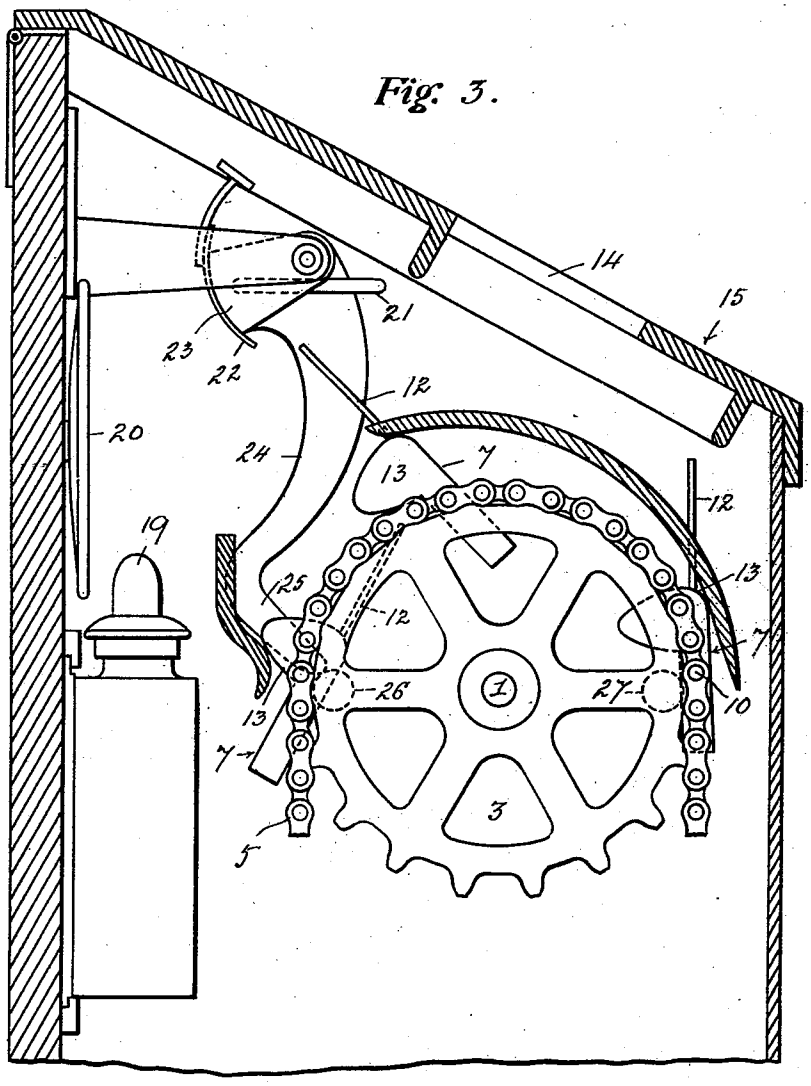
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(No Model.) 2 Sheets—Sheet 2.

Fig. 3.



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UNITED STATES PATENT OFFICE.

PEARSON JACQUES JACKSON, OF NEWCASTLE-UPON-TYNE, ENGLAND.

APPARATUS FOR DISPLAYING PICTURES.

SPECIFICATION forming part of Letters Patent No. 713,988, dated November 18, 1902.

Application filed June 9, 1902. Serial No. 110,916. (No model.)

To all whom it may concern:

Be it known that I, PEARSON JACQUES JACKSON, engineer, a subject of the King of Great Britain, residing at Coatham House, Whitley, Newcastle-upon-Tyne, England, have invented certain new and useful Improvements in Apparatus for Displaying Pictures, of which the following is a specification.

This invention relates to apparatus for displaying pictures, and has for its object to provide an improved apparatus of this character which shall be simple in construction and efficient in operation.

The invention consists in an improved apparatus for displaying a series of pictures or other objects upon an endless carrier, which is intermittently operated by any suitable means, and it resides particularly in the improved means for presenting the successive pictures in proper position for inspection and in the improved means for reflecting light generated from any suitable source upon either the front or back of a picture, according as to whether the same is transparent or opaque.

To the foregoing and other ends the invention consists of the novel combination and arrangement of parts and details of construction hereinafter described and claimed.

In the drawings forming part of this specification, Figure 1 is a front view of my improved apparatus, the front of the casing in which it is contained being shown removed. Fig. 2 is a vertical section of my said apparatus upon the dotted line *x* of Fig. 1, and Fig. 3 is a view representing, upon an enlarged scale, partly in section and partly in elevation, my improved means for presenting the successive pictures in proper position for inspection and for lighting them while in such position.

The same numerals of reference indicate corresponding parts in the several figures of the drawings.

In the machine suitable mountings are provided in the interior of the casing to carry, at suitable distances apart, a pair of axles or spindles 1 2, each fitted with a pair of toothed chain-wheels 3 4, (one at either end,) the top axle 1 being intermittently driven by any suitable means, while the other axle 2 derives its motion from the driven one through the medium of a pair of drive-chains 5 6, passing over the respective chain-wheels and also constituting carriers or traveling conveyers for the holders 7, in which the pictures to be displayed are mounted. These carriers each consist of a bar 8, disposed transversely between the two chains and having upturned ends 9, which are pivoted at 10 to the said chains in such a manner that the carriers normally hang in a vertical plane, the cross-bars of same being provided with clips 11 for holding the views 12, which may either be transparent or opaque, or a transparency and an opaque view may be arranged alternately throughout the series.

The right-hand end of each carrier is formed or provided with an arm 13, which when the carrier is brought by the movement of the conveyer-chains up to the viewing-apertures 14 in the casing 15 is made to impinge against a cam or wiper 16, fixed to the side 17 of the casing within the path of the movement of the said arms 13 and curved gradually away from the periphery of the adjacent wheel 3, as shown. The effect of the arms 13 of the several carriers striking against and wiping in succession under the said cam or wiper 16 is to tilt each carrier temporarily into an inclined position, as shown in Fig. 3, so as to present the picture parallel with the view-holes through which it is inspected, and then after having been held stationary for a time the next onward movement of the conveyer-chains takes the arm 13 clear of the cam or wiper 16, when the carrier again assumes a vertical position.

In order to prevent the last-displayed picture or a portion of it being seen again as it is carried around, and which would occur if the holder was allowed to remain in a vertical position, it is proposed to arrange at the back of the chain-wheel and in the path of the arms 13 a second cam or wiper 18, which is so curved that when one of the arms 13 strikes against it in wiping past the carrier is tilted forward, so as to partially turn the picture face downward, (see Fig. 3,) and thus prevent any part of same being visible or interfering with the view that is at the time being inspected at the sight-holes. It will thus be

understood that the two cams or wipers 16 18 are so arranged as to tilt each successive carrier first into a proper angular position for its effective display for inspection and then in the opposite direction, or face downward, so as to prevent any part of same being seen again. The second tilting movement also prevents the picture obstructing the light which is being reflected to the picture under observation.

An oil, gas, electric, or other lamp 19, having a reflector 20 behind it, is arranged at the back of the upper part of the apparatus and above it. A mirror 21 is fixed for reflecting the light onto the front of opaque pictures when presented for inspection. When transparent and opaque pictures are arranged to be displayed alternately, it is proposed to provide in connection with this mirror a means for alternately throwing the light reflected from the lamp onto the front of an opaque picture and then screening or cutting off the mirror, so as to allow light from the lamp to pass directly through a transparency. This means may consist of a concave-sectioned shutter 22, swinging upon a pair of suitably-mounted short arms 23, one of which is extended into or provided with a hanging lever 24, having an inclined end 25, coming within the path of a pair of studs 26 27 on the outer side of the chain-wheel 3 of the display mechanism. The arrangement of these studs and the lever is such that as the chain-wheel rotates the lever is allowed to escape one stud and swing forward against the other stud, which in turn carries the lever back again, this movement being repeated so long as the conveyer-chains are being moved around, and the swinging to and fro of the lever imparts a corresponding movement to the shutter or screen plate, which is alternately taken under the mirror and then allowed to move clear, so as to direct the reflected light first to the front of the picture and then cut off the mirror altogether when the light is to be transmitted direct from the lamp through a transparent view.

When the pictures are all transparencies or all opaque views, then this light-directing mechanism can be dispensed with.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In an apparatus for displaying pictures, the combination of a conveyer, a series of picture-carriers mounted on said conveyer, an arm on each of said picture-carriers, a cam or wiper, in the path of movement of the arms on said picture-carriers, adapted to be engaged by said arms to tilt said picture-carriers into position for inspection, and a second cam or wiper, in the path of movement of said arms, adapted to be engaged by said arms to tilt said picture-carriers out of inspecting position.

2. In an apparatus for displaying pictures, the combination of a conveyer, a series of picture-carriers, mounted on said conveyer, adapted to carry a series of transparent and opaque pictures, means for tilting said picture-carriers into and out of inspecting position, a lamp, a mirror mounted to reflect the light from said lamp onto the front of the opaque pictures carried by said picture-carriers, a movable shutter mounted adjacent to said mirror, and means, operated by said conveyer, for moving said shutter into the path of light between said lamp and said mirror so as to periodically shield said mirror from the light of said lamp.

3. In an apparatus for displaying pictures, the combination of a conveyer, a series of picture-carriers, mounted on said conveyer, adapted to carry a series of alternating transparent and opaque pictures, means for tilting said picture-carriers into and out of inspecting position, a lamp, a mirror mounted to reflect the light from said lamp onto the front of the opaque pictures carried by said conveyer, a movable shutter mounted adjacent to said mirror, a lever on said shutter projecting into proximity with said conveyer, and studs on said conveyer adapted to engage said lever for moving said shutter into the path of light between said lamp and said mirror.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

PEARSON JACQUES JACKSON.

Witnesses:

H. D. JAMESON,

A. NUTTING.