

1090,179



PATENT SPECIFICATION

DRAWINGS ATTACHED

1090,179

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COMPLETE SPECIFICATION

Improvements in or relating to Slide Projectors

We, FRANKE & HEIDECHE, G.M.B.H., a German body corporate trading as REOLLEI-WERKE FRANKE & HEIDECHE, of 196 Salzdh-lumerstrasse, Braunschweig, Germany do hereby declare the invention for which we pray that a patent may be granted to us and the method by which it is to be performed, to be particularly described in and by the following statement:—

10 This invention relates to a slide projector of the kind in which the slides are separately taken from the forward end of a stack disposed beneath the image gate, then conveyed vertically upwardly through said gate and finally returned by gravity through a chute to the rearward end of the stack, and is especially concerned with an improvement in or modification of the slide projector described and claimed in Specification No. 1,032,067, referred to hereinafter as the parent Specification.

In the Patent Specification No. 1,032,067 there is described and claimed a slide projector of the kind referred to, wherein the stack of slides is arranged on an inclined plane whereby the foremost slide in the stack is gravitationally located at a position at which it is engageable by an upwardly and downwardly movable claw, the travel of said claw corresponding to the height of the individual slides. The slides rest on one another at their edges so that they are pushed upwardly in a row into the image gate, being guided within a guideway in which they are held by springs. After leaving the image gate, each slide runs on to a curved portion of the guideway so that it tilts to disengage its lower edge from the upper edge of the following slide, then falling by gravity through a chute to the rearward end of the stack.

It has been found that where the slides are mounted in cardboard mounts, disengagement of the bottom edge of the slide leaving the image gate from the upper edge of the next following slide does not take place satisfac-

torily if the lower edges of the front and rear flaps of the upper mount are not precisely in alignment with one another, i.e. one lower edge is offset relative to the other lower edge so as to form therewith a step which obstructs disengagement of the upper slide from the lower slide. It is an object of the invention to avoid this disadvantage.

According to the invention there is provided a slide projector of the kind claimed in Specification No. 1,032,067, wherein the stack of slides is arranged on an inclined plane whereby the foremost slide in the stack is gravitationally located in a position at which it is engageable by an upwardly and downwardly movable claw, the travel of said claw corresponding to the height of the individual slides, each slide as it leaves the image gate being tilted by a pusher member actuated by means for driving the claw, said pusher member during actuation moving above the chute in a direction transversely of the plane of the image gate into engagement with the slide so as to disengage the bottom edge of the slide from the top edge of the next following slide.

The invention is illustrated by way of example in the accompanying drawing, in which the single Figure shows the parts in the rest position.

The drawing is generally identical with Figure 1 of the Parent Specification, and for this reason similar reference numerals have been used to designate corresponding parts. The crank arm 11 which drives the claw 13 has secured thereto a cam 21 co-operating with an upwardly inclined pusher rod 22, the cam being shaped to move the pusher rod upwardly during the last part of the upward movement of the claw. The upper end of the pusher rod carries a roller 23 which preferably is of a length corresponding to the width of the slide mounts and is provided with a friction covering of, for example, rubber. The roller 23 passes through an obliquely upwardly and

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forwardly directed slot 24 so that said roller is guided during actuation of the pusher rod in a direction transversely of the plane of the image gate. The pusher rod may extend through a guide channel or, as shown, may be guided by a link 25 connected to the slide guideway 17.

In operation, the pusher rod is actuated to cause the roller 23 to engage a slide as the lower edge thereof leaves the image gate, thereby lifting and tilting said slide in the counter-clockwise direction. The obliquely upward and forward direction of movement of the roller positively forces the slide out of engagement with the next following slide, and this will occur not only if the lower edge of the upper slide mount is stepped but also if a step has been produced at the top edge of said following slide mount. The lifting action applied to the upper slide effects disengagement of the slides without damage to the slide mounts.

WHAT WE CLAIM IS:—

1. A slide projector of the kind claimed in Specification No. 1,032,067 wherein the stack of slides is arranged on an inclined plane whereby the foremost slide in the stack is gravitationally located in a position at which it is engageable by an upwardly and downwardly movable claw, the travel of said claw corresponding to the height of the individual slides, each slide as it leaves the image gate being tilted by a pushed member actuated by means for driving the claw, said pusher

member during actuation moving above the chute in a direction transversely of the plane of the image gate into engagement with the slide so as to disengage the bottom edge of the slide from the top edge of the next following slide.

2. A slide projector as claimed in claim 1, wherein the pusher member is upwardly inclined so as to effect a lifting action of the slide from the next following slide.

3. A slide projector as claimed in Claim 1 or 2, wherein the pusher member is provided with a friction covering engageable with the slides.

4. A slide projector as claimed in any one of the preceding claims, wherein the pusher member is provided with a roller engageable with and extending over the full width of the slides.

5. A slide projector as claimed in any one of the preceding claims, wherein the pusher member is guided above the chute by means of an obliquely upwardly extending slot engaged by a part of said pusher member.

6. A slide projector as claimed in Claim 1, substantially as described with reference to and as illustrated in the accompanying drawing.

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