



(Under International Convention.)

Date claimed for Patent under Patents and Designs Act, 1907, being date of first Foreign Application (in Germany), 29th Nov., 1909

Date of Application (in the United Kingdom), 19th Nov., 1910

At the expiration of twelve months from the date of the first Foreign Application, the provision of Section 91 (3) (a) of the Patents and Designs Act, 1907, as to inspection of Specification, became operative

Accepted, 20th Apr., 1911

## COMPLETE SPECIFICATION.

### Improvements in Toy Cinematographs.

We, NÜRNBERGER METALL-UND LACKIER-WAARENFABRIK VORM. GEBRÜDER BING ACTIENGESellschaft, of 16, Blumenstrasse, Nuremberg, in the Empire of Germany, Manufacturers, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

In toy cinematographs lamps usually fed with burning oil or the like are used for illuminating the pictures, but electric light has already also been employed. The use of the latter involves the provision of small accumulators, or connection with an existing electric main. The accumulators have to be recharged from time to time, and they make the cinematographs somewhat heavy. A supply of current from the main is, moreover, only available in exceptional cases.

The disadvantages hereinbefore mentioned are removed in the present invention by a dynamo being provided, and the arrangement according to this invention is such that the crank handle for operating the film-band roller is connected with the armature of a dynamo by intermediate members.

In the accompanying drawings:—

Figure 1 is a side view; and

Figure 2, a plan view of a portion of the improved toy cinematograph.

On the upper part of a frame *a* there is on the one hand a casing *b*, on the rear wall of which an electric incandescent lamp *c* is provided, and on the other hand the projector tube *d*. In the lower part of the frame *a* the film band roller *e* is mounted, on the shaft of which a crank handle *f* is provided at one end. At the other end the shaft of the roller *e* has a spur wheel *g*, which gears with two pinions *h* and *m*. The former is mounted on a cranked bar or shaft *i*. The spur wheel *h* also gears with a crown wheel *k*, the spindle of which carries the so-called shutter *l*, which serves for periodically covering over the picture aperture of the cinematograph. The pinion *m* is mounted on the spindle *n* of an armature *o*, the pole shoes of which are embraced by the magnets *p*. Two wires *r s* lead from the armature to the incandescent lamp *c* in the casing *b* of the cinematograph.

On the rotation of the handle *f*, there is set in rotation, on the one hand, in addition to the roller *e*, the crank shaft *i* of the so-called beater and the shutter *l*, by the intermediary of the wheels *g h* and *k*, and, on the other hand, the

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armature *o* by the wheels *g* and *m*. The endless film band indicated by the dotted line *x* carried over the roller *e* receives an intermittent movement by means of the crank shaft and the beater *i*. It is in fact drawn downwards when the crank makes the right hand part of its rotation, but remains stationary when the crank is describing the left hand part. The current produced in the dynamo machine is conducted through the wires *r s* to the lamp *c* and causes this to glow. The arrangement described has the advantage that no separate source of energy for the light need be provided, and the latter is produced only when the cinematograph is in action.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

A toy cinematograph, characterized by the crank handle for operating the film-band roller being connected by intermediate members with the armature of a dynamo machine, the current of which generated by the rotation of the handle is employed for producing the light necessary for the illumination of the pictures, substantially as described.

Dated this 18th day of November, 1910.

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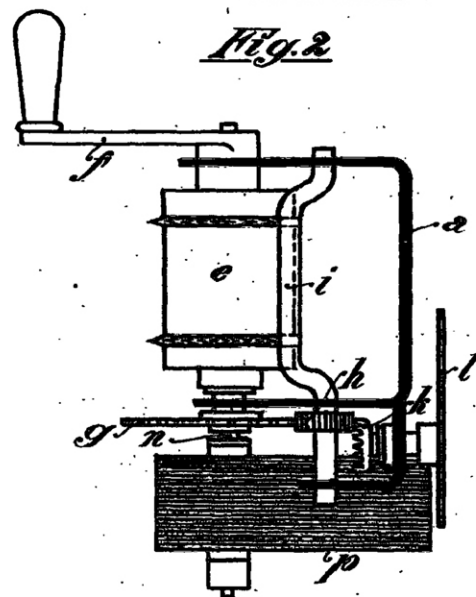
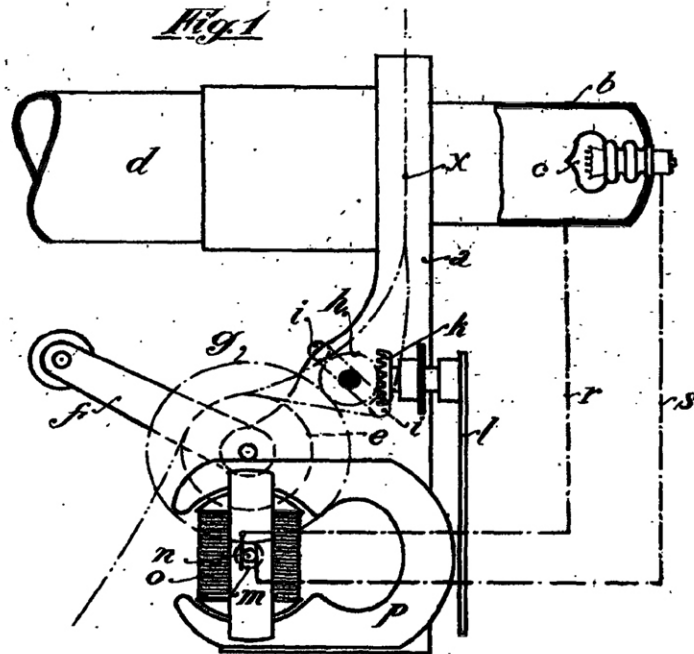
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THE COMPLETE SPECIFICATION OF MURNBERGER METALL-UND  
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