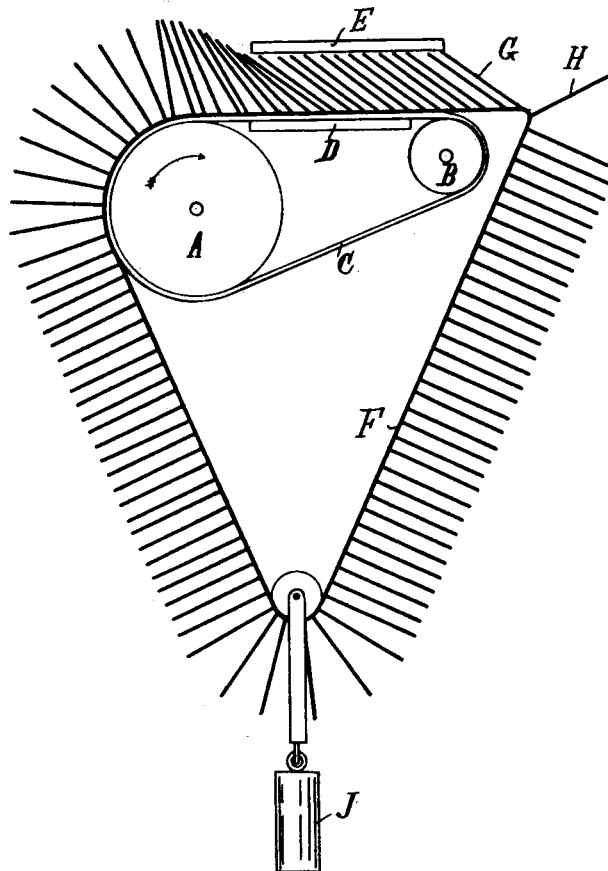


No. 675,962.

Patented June 11, 1901.

O. MESSTER.
STROBOSCOPIC APPARATUS.
(Application filed Dec. 4, 1899.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

OSKAR MESSTER, OF BERLIN, GERMANY.

STROBOSCOPIC APPARATUS.

SPECIFICATION forming part of Letters Patent No. 675,962, dated June 11, 1901.

Application filed December 4, 1899. Serial No. 739,090. (No model.)

To all whom it may concern:

Be it known that I, OSKAR MESSTER, engineer, a subject of the Emperor of Germany, and a resident of No. 94 Friedrichstrasse, Berlin, in the Empire of Germany, have invented certain new and useful Improvements in Stroboscopic Apparatus, of which the following is a clear, full, and exact description.

This invention relates to improvements in stroboscopic apparatus—*i. e.*, apparatus for reproducing living pictures—in which apparatus the pictures are fastened upon elastic cards carried past the observation-opening of the apparatus.

15 The characteristic feature of the invention consists in the construction of the moving mechanism for the ribbon supporting the pictures and of the arresting device for the pictures, the construction being of such a nature that the picture-ribbon passes partly in a guiding-channel formed by two fixed rails and is guided through such channel by means of a driving-belt or the like. The known apparatus for reproducing living pictures, in which apparatus the pictures are provided on an endless flexible ribbon, have a pin or the like for arresting the pictures while the picture-ribbon passes over a pointed edge or over a roller. According to these different 30 apparatus it is not possible to cause the pictures to form at the short bent point of the ribbon a sufficiently large angle. This drawback is, however, completely avoided by the present arrangement. The picture-ribbon lies freely on a driving-belt stretched over two pulleys, such belt moving forward the picture-ribbon during the rotation of the driving-pulley. Between both pulleys is located a fixed plate or rail directly below the belt which slides freely on the said plate. Above this plate and at a height above it equal to about half the height of the pictures, there is also arranged a fixed plate or rail in such a manner that if the picture-ribbon moves forward the pictures are passed through the channel formed by both fixed plates. On entering the channel the pictures when touching the upper edge bend downward. The outlet-opening of the channel is located above the front pulley in such a manner that the last-caught picture of the ribbon protrudes with its hinged point beyond

the said pulley. Only just at this point a bend takes place in the ribbon by the weight of the latter and the last-released picture hangs over so far that the same forms a sufficiently large angle with the picture to be released at the next moment.

The accompanying drawing represents a diagrammatical side elevation of the moving mechanism of the apparatus.

A and B indicate the pulleys for the belt C, tightly stretched over the same. By the plate or rail D, fixed below the belt, and by the plate E, fixed over the latter, is formed a guiding-channel for the picture-ribbon F, the outlet-opening of such channel being located above the pulley B.

On entering the channel the pictures bend downward more or less, according to the height of the channel. On leaving the channel the last picture G is arrested by the edge of the plate E, while the hinged point of the picture G on the ribbon F has moved a certain distance beyond the pulley B, in consequence of which the ribbon can only bend just at this point. The preceding picture H, however, which is located at this bent point, hangs over to such an extent, partly by its own weight and partly by the weight of the ribbon, that a large angle is produced between the pictures G and H, in consequence of which the picture H does not prevent the observer from seeing the picture G in case the picture G is to be observed and, vice versa, the picture G does not prevent the observer from seeing the picture H, if the latter is to be observed.

The weight of the ribbon may be increased by means of a weight J. It may still be observed that it is impossible to move forward the ribbon by pulling it in front of the bent point, but only by pushing the pictures from the entrance of the channel.

Having now particularly described and ascertained the nature of the said invention, I declare that what I claim, and wish to secure by Letters Patent, is—

1. The combination in a stroboscopic apparatus of a flexible ribbon and pictures secured to and projecting at an angle from said ribbon, means for giving an abrupt turn to said ribbon, consisting of an upper and a lower fixed plate or rail, which together forms

a guiding passage-way through which said ribbon passes, said passage-way being of less height than the said pictures, and means for giving travel to the said ribbon through the space between the said plates or rails, substantially as set forth.

2. The combination in a stroboscopic apparatus of a flexible ribbon and pictures secured to and projecting at an angle from said ribbon, means for giving an abrupt turn to said ribbon, consisting of an upper and a lower fixed plate or rail, which together forms a guiding passage-way through which said

ribbon passes, said passage-way being of less height than the said pictures, and means for giving travel to the said ribbon through the space between the said plates or rails consisting of a belt and pulleys, substantially as set forth.

Signed this 17th day of November, 1899, at Berlin.

OSKAR MESSTER.

Witnesses:

WOLDEMAR HAUPT,
HENRY HASPER.