

(No Model.)

W. A. FOSTER & W. H. DANIELS.
SCENOSCOPE.

No. 575,153.

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Fig. 1.

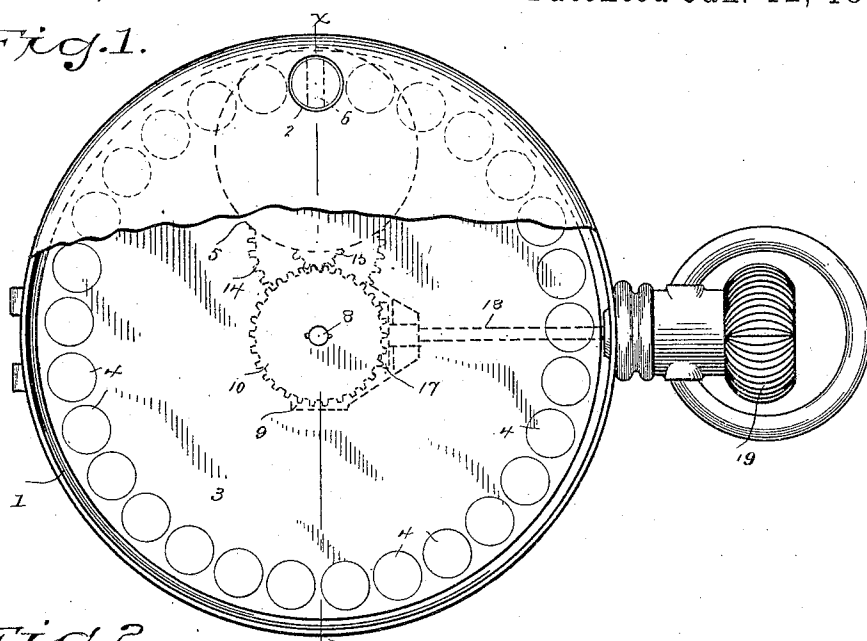


Fig. 2.

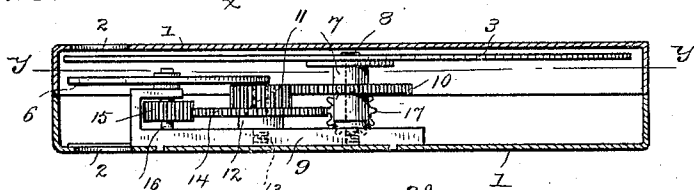
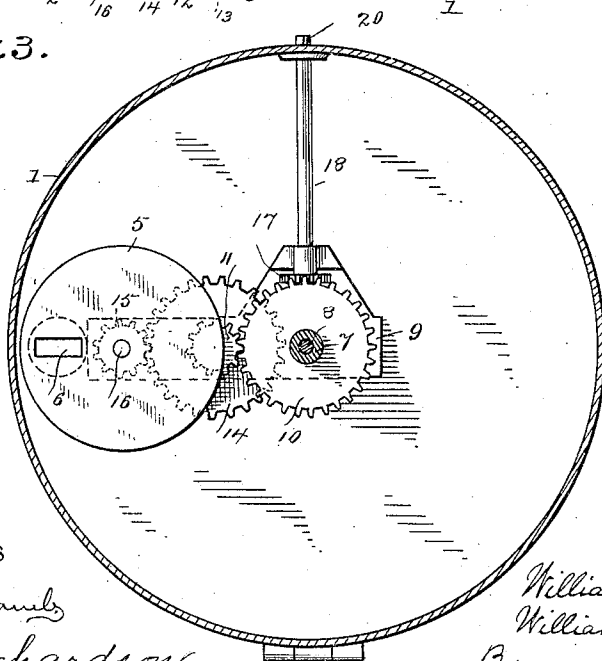


Fig. 3.



WITNESSES

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SCENOSCOPE.

SPECIFICATION forming part of Letters Patent No. 575,153, dated January 12, 1897.

Application filed May 23, 1896. Serial No. 592,709. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM A. FOSTER and WILLIAM H. DANIELS, citizens of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Scenoscopes; and we 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.

Our invention has for its object to produce a simple and inexpensive article which may be carried in the pocket like a watch and will resemble a watch in size and appearance, and which will exhibit a series of pictures in such a manner as to produce the motions of life, or, in other words, to produce in an article which may be carried in the pocket and may be furnished at trifling cost the same effect as that produced by the well-known kinetoscope.

With these ends in view we have devised the novel scenoscope, of which the following description, in connection with the accompanying drawings, is a specification, numbers being used to designate the several parts.

Figure 1 is an elevation, one side of the case being broken away to show the disk; Fig. 2, a section on the line $x x$ in Fig. 1, and Fig. 3 is a section on the line $y y$ in Fig. 2.

1 denotes the case, which may be made of any suitable shape or size, but is preferably made circular in shape and of a size to resemble a man's watch of ordinary size, and is provided on opposite sides near its edge with corresponding openings 2.

3 denotes a transparent disk, near the edge of which, on one side, is placed a series of pictures, which we have indicated by 4. These pictures are on photographic films or a single film, which are placed upon the disk so as to register successively with openings 2 in the case. Owing to the transparency of the disk it affords a support for the entire surface of the pictures and avoids the necessity of providing perforations for permitting the passage of light through the pictures.

5 denotes a rotating shutter having an opening 6. The shutter is of a size less than one-half of the diameter of the disk 3, and is located at one side of the center of the latter

and is geared relatively to the disk in such a manner that the shutter will make a complete rotation while the disk is moving forward a distance equal to the distance from the center of one picture to the center of the next picture. In the present instance we have shown a disk carrying twenty-nine pictures. It follows, therefore, that the shutter and disk must be so geared that the shutter will make twenty-nine revolutions while the disk is making one revolution, it being of course immaterial, so far as the principle of the invention is concerned, how many pictures are placed upon the disk.

The pictures may be instantaneous photographs of living objects, so that a succession of them, when the disk is rotated and the pictures appear through the openings in the case, will produce the effect of the motions of life, as, for example, two men boxing or a person dancing. The disk is shown as carried by a sleeve 7, which turns freely on a stud 8, secured in the case in any suitable manner, in the present instance in a frame 9, which is fixed to the inner side of the case. This sleeve carries a gear-wheel 10, which meshes with a pinion 11 on a sleeve 12, which turns freely on a stud 13, also fixed in the frame. Sleeve 12 also carries a gear-wheel 14, which meshes with a pinion 15 on a shaft 16, also journaled in the frame 8, and which likewise carries the shutter. Motion is communicated to the train by means of a pinion 17, which meshes with a gear-wheel 10 and is carried by an operating-shaft 18, one end of shaft 18 being journaled in frame 8 and the other in the edge of the case. Shaft 18 may be rotated in any suitable manner, as by the usual crown 19 of a stem-winding watch, or the outer end of said shaft may be squared, as at 20 in Fig. 3, to receive a crank or key. (Not shown.)

The operation will be obvious from the description. The operator holds the case up so as to look into one of the openings 2, and by turning the operating-shaft rotates the disk with more or less speed, as may be required, and the shutter rapidly, the opening in the shutter being central with openings 2 at the instant that each picture is central in said openings, so that the view of each picture is instantly followed by the view of another picture in which the characters are in a slightly-

changed position, thus producing the effect of the movements of life. Owing to the shaft 16 being journaled in the frame at one side of the stud 8 and the shutter being small in diameter, as above described, the inertia of said shutter is slight and thus permits the parts to be moved by the fingers grasping the crown 19 with sufficient rapidity at the beginning of the operation to produce the desired effect.

Having thus described our invention, we claim—

The combination with a circular case having openings on opposite sides and a transparent disk free from perforations and having near its edge pictures adapted to register with said openings, of a shutter having a diameter less than half the diameter of the disk and

having an opening adapted to register with the pictures on the disk, and an operating-shaft and gearing intermediate said operating-shaft and the disk and shutter which will impart rotary movement to the disk and will cause the shutter to make an entire rotation in the necessary time required to make the opening in the shutter central with the openings in the case at the instant each successive picture is central with said openings.

In testimony whereof we affix our signatures in presence of two witnesses.

WILLIAM A. FOSTER.
WILLIAM H. DANIELS.

Witnesses:

JOSEPH L. PRAGER,
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