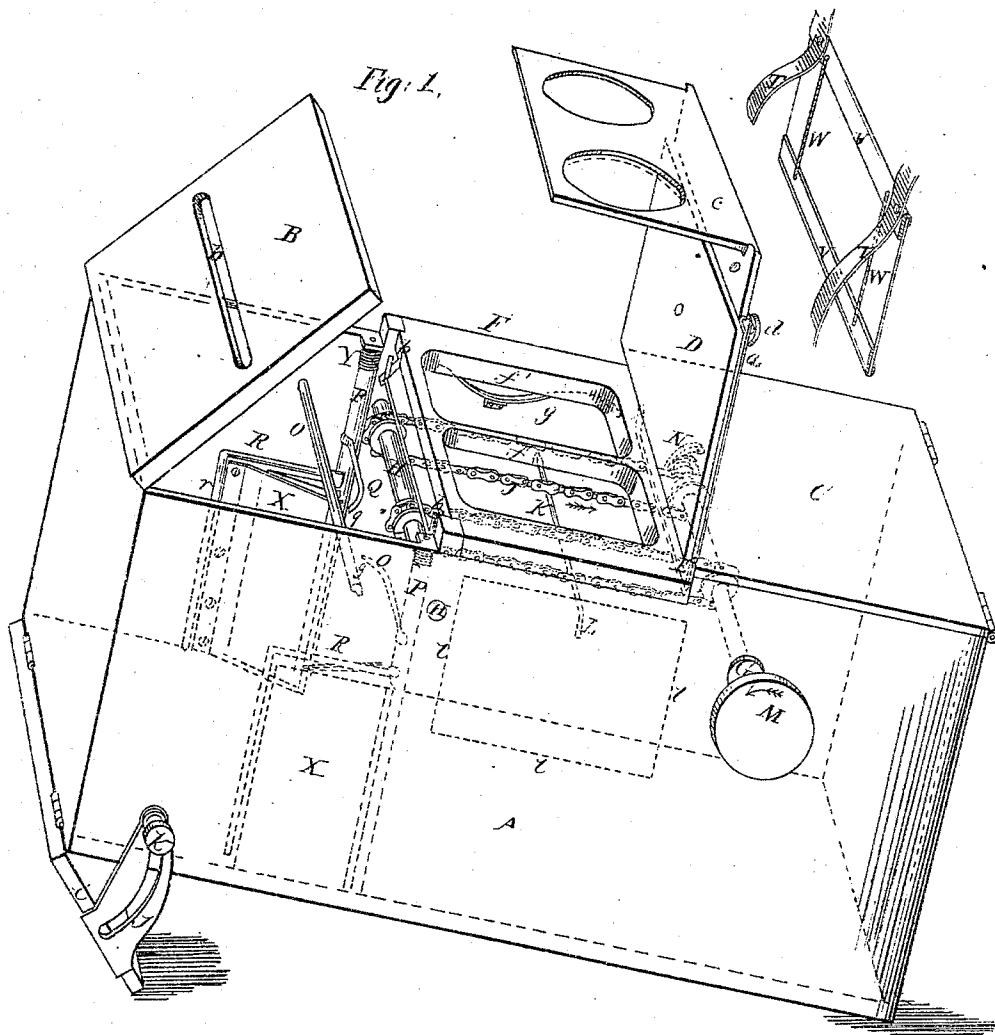


A. Heilbrun.

Stereoscope.

N^o 71753

Patented Dec. 3, 1867



Witnesses:

J. H. Mulholland
C. H. Tucker

Inventor:

A. Heilbrun
By Knight & Horn Attys

A. Heilbrun.

Stereoscope.

N^o 71753

Patented Dec. 3, 1867

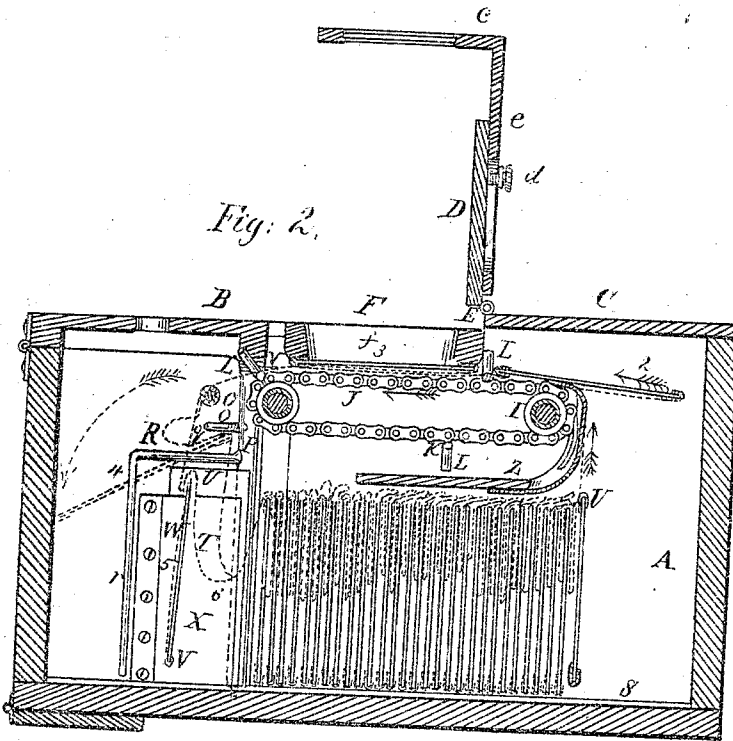
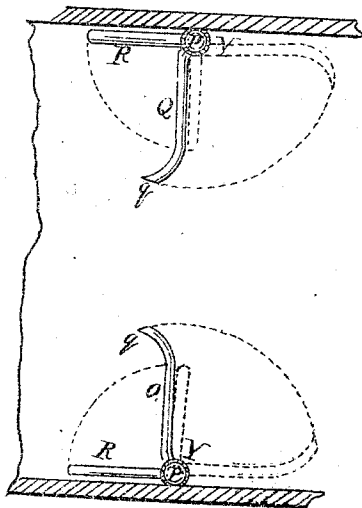


Fig. 3.



Witnesses:

Willard
Pechle

Inventor:

A. Heilbrun
By Knight & Son, Attys.

United States Patent Office.

ALEXANDER HEILBRUN, OF CINCINNATI, OHIO.

Letters Patent No. 71,753, dated December 3, 1867.

IMPROVEMENT IN STEREOSCOPES.

The Schedule referred to in these Letters Patent and making part of the same.

TO WHOM IT MAY CONCERN:

Be it known that I, ALEXANDER HEILBRUN, of Cincinnati, Hamilton county, Ohio, have invented a new and useful Improved Stereoscope; and I hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

My invention relates to a simple, compact, and effective device for the exhibition of stereoscopic pictures.

Figure 1 is a perspective view of a stereoscope embodying my improvements.

Figure 2 is a longitudinal section thereof.

Figure 3 is a horizontal section at the line $x x$, fig. 2.

A is a rectangular box, closed at sides and bottom, but openable at top by the unfolding of two flaps, to wit, a single flap, B, and a flap in two parts or leaves, C D, connected by a hinge, E. Extending athwart the said open top, near its mid-length, is a board, F, having two equal apertures $f f'$, through which the pictures are seen, and which form a framework thereto. Journalled at a common level near the top of the box are two shafts G H, armed with sprockets I, which propel a pair of endless chains, J. Stretching transversely from chain to chain, and at equal distances from each other, are rods K, terminating in outwardly projecting fingers L. One shaft, G, projects to the outside of the box, and has a knob or handle, M, and is armed with a ratchet-wheel and pawl, (see dotted lines N,) to prevent retrogression. Journalled a little in advance of and in the plane of the shaft H is a roller, O, over which my peculiarly connected slides overturn in manner hereafter explained. Journalled vertically near the respective sides of the box, and a little in advance of the shaft H, are two shafts P, having each one two arms Q R, which project horizontally at right angles to each other, and of which the arm Q has its end q curved forward, and the arm R has a perpendicular portion, r , which operates on each slide in succession to press it forward for the return movement. S is an elevated track, (formed of two parallel wires,) along which the slides travel in their lower or return movement. T are two endless ribbons, to which are riveted or otherwise secured clips U, which, in conjunction with similar clips V, connected to the former by extensible cords W, serve to hold any picture that may be placed in them, and which, in connection with said picture, are here spoken of collectively as the "slides" or "scenes." X are spring-catches or detents, to prevent any retrogression of the slides after being caught and forwarded by the arms. Y are spiral springs, which restore the arms to their initial position, (see strong lines, figs. 1, 2, and 3.) A stationary partition, Z, curved upward at its front end, serves to confine the slides to the track S, until the proper juncture for their consecutive elevation, (see short arrows 1 2, fig. 2.) The leaf D of flap C D has guides a , for a sliding leaf, e , which carries a lens-holder, c , which can be slid up or down, and secured in any position by manipulation of a screw, d . A slot, b , in the flap B, receives the lenses in the closed or folded condition of the apparatus. g are springs, (one shown,) which serve to guide and hold the slides in their uppermost or effective position, (see 3, fig. 2.) Grooves h , on the under side of the board F, permit the passage of the fingers L.

The operation is as follows: The slides having been provided with the desired pictures, the handle M is rotated as per arrow, and one pair of the fingers L catching against a slide, forward it to the position 3, and at the same time bring four others of the slides to the positions 1, 2, 4, and 5, respectively. While this is taking place, another pair of the fingers L, acting on the arms Q, vibrates the arm R, so as to press one of the slides past the catches X, which having been accomplished, the said arms are suddenly retracted by the agency of the springs Y, so as to be ready for the next slide, which reaches position 5 by capsizing over the roller O, (see dotted lines 4,) so as to assume the reversed position shown at 5, from which position it is pushed forward on its return passage by the arms R, as before stated. In order to enable the box to be set at any desired inclination to the eye of the observer, I hinge to the rear bottom corner a foot, i , having a slotted bracket, j , which being traversed by a screw, k , enables the foot to be secured in a more or less protruded position, so as to elevate, to the desired extent, the rear end of the box. I do not propose to restrict myself to the precise form here represented; for example, a wheel may be made to replace the two shafts and chains, and the instrument may be so arranged as to enable inspection from the front instead of from above, as in the present illustration. The apparatus may be adapted to transparencies by providing one or more side doors, as indicated by red lines l.

I claim herein as new, and of my invention—

1. The arrangement of the two shafts G and H, endless chains J, fingers L, arms Q R, roller O, and catches

X, in the described combination with the series of slides secured to one or more endless ribbons T, in the manner and for the purpose set forth.

2. In the described combination, the fingers L, groove h, roller O, arms Q and R, and the catches X, for the purpose set forth.

3. In combination with the elements of claim 1, I claim the springs g, for holding the slides to the under side of the open frame F.

4. The guard or partition Z, curved upward at its front end, as and for the purpose stated.

5. The hinged and folding foot i, having the bracket j and screw k, for the purpose set forth.

In testimony of which invention, I hereunto set my hand.

ALEX. HEILBRUN.

Witnesses:

GEO. H. KNIGHT,

JAMES H. LAYMAN.