H. J. LEWIS.

Stereoscope.

No. 165,241. Patented July 6, 1875.

Fig. 1.

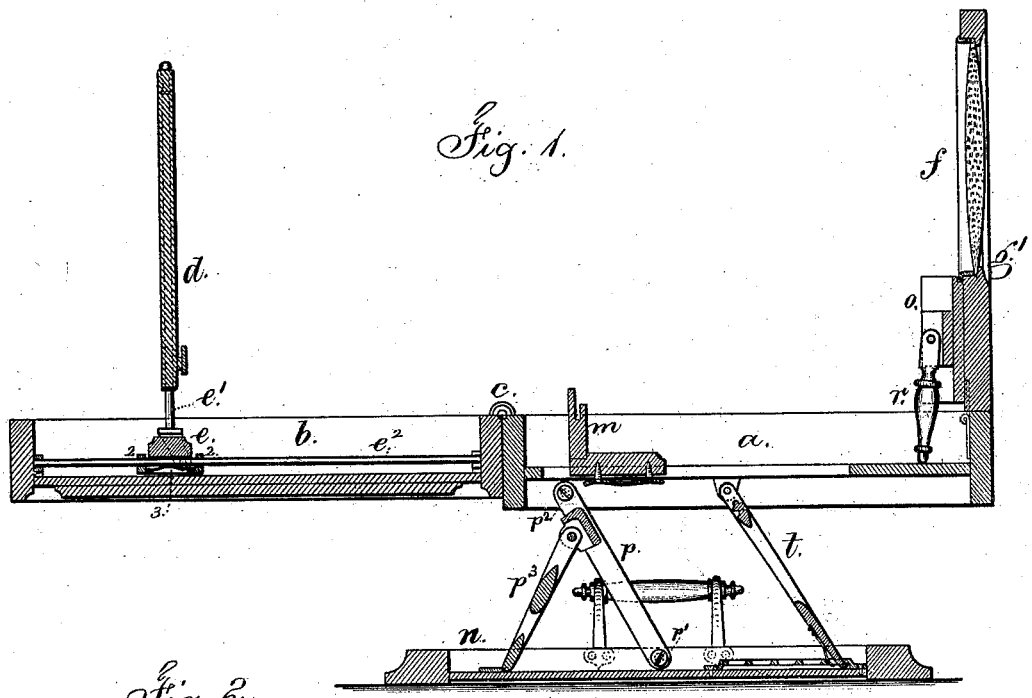



Fig. 2.

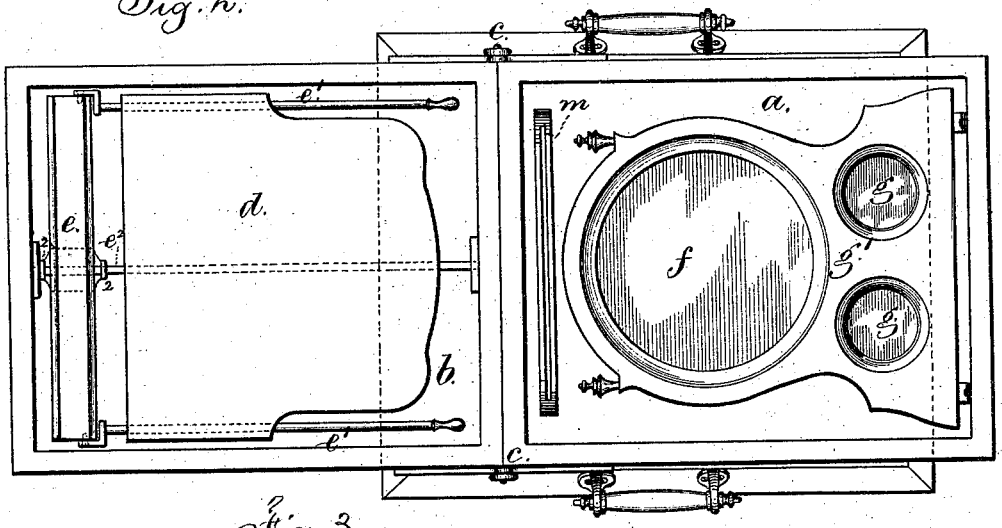
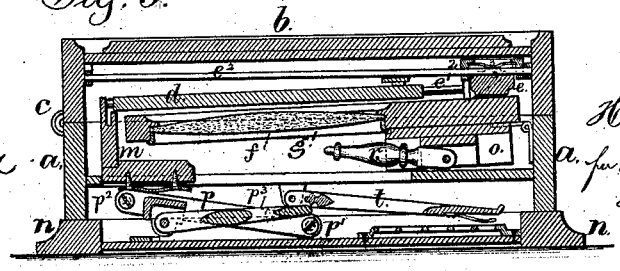



Fig. 3.




Witnesses
Chas. H. Smith
Harold Sewell

Inventor
Henry J. Lewis
a. for L. W. Serrell
Atty

# UNITED STATES PATENT OFFICE

HENRY J. LEWIS, OF GREEN POINT, BROOKLYN, NEW YORK, ASSIGNOR TO E. AND H. T. ANTHONY & CO., OF NEW YORK CITY.

## IMPROVEMENT IN STEREOSCOPES.

Specification forming part of Letters Patent No. **165,241**, dated July 6, 1875; application filed June 7, 1875.

*To all whom it may concern:*

Be it known that I, HENRY J. LEWIS, of Green Point, Brooklyn, Kings county, New York, have invented an Improvement in Folding Graphoscopes, of which the following is a specification:

The base of the graphoscope is made to fold and inclose the lens, and the supports for the lens and stereoscope-glasses are constructed so that no portion appears on the outside of the box when folded. The base contains slides—one for the larger single pictures, the other for stereoscope-pictures. The base of the graphoscope is provided with folding legs, by which the instrument is connected with a stand, and upon these folding legs the instrument can be tipped to any desired inclination and there held, and when the instrument is folded the box composing the base closes down upon the stand, and the entire instrument assumes the shape of a box more or less ornamental in its finish, but inclosing all the parts, so that they are excluded from injury or dust.

In the drawing, Figure 1 is a section of the instrument as open and ready for use. Fig. 2 is a plan of the same with the picture and lens holder turned down. Fig. 3 is a section, showing the instrument as folded into the box.

The base is made of the two half-boxes *a b*, hinged together at *c*, so that they may be opened out flat, as in Fig. 1, or closed into the box form, as in Fig. 3. The picture-holder *d* rests upon rods $e^1$, that are hinged to the cross-piece *e*, that slides within the portion *b* of the base, so as to adjust the position of the picture by moving it nearer to, or farther from, the lens *f*, and raising or lowering the holder and picture, and this holder can fold forward, as seen in Fig. 3, so as to give room for the parts of the stereoscope-lens frame. The cross-piece *e* slides upon the bar $e^2$, and is provided with a friction-spring, 3, that holds the same in position when adjusted, and there is a metal cross-piece, with eyes 2, sliding upon this rod, and serving to retain the cross-piece at right angles to the bar. The slide *m*, for the stereoscope-pictures, is fitted to be moved within the portion *a* of the base, and it may be made with the ordinary holding-wires at the ends. The drawing represents a groove in the slide, into which the bottom of the stereoscope-picture is inserted. This slide *m* is upon a block, that slides in a groove or mortise in the bottom of the box *a*. The graphoscope-lens *f* and the stereoscope-glasses *g* are in a front piece, *g'*, that is hinged to the front portion of the box *a*, and hence the parts can be folded down into the box *a* when not in use; and in order to hold such front piece up when in use I employ the hinged leg *r*, that is hinged between the wings *o*, and is turned down to rest upon the inner surface of the box *a*, as seen in Fig. 1, to hold the front and lenses in position, and this leg is turned up out of the way when the instrument is folded. The base is supported upon the stand *n'* by the folding legs *p*, that are hinged at $p^1$ to the stand, and at $p^2$ to the base *a;* and $p^3$ is a strut hinged to the legs *p*, so that, when opened into the position shown in Fig. 1, the base is firmly supported triangularly, and can be tipped to any desired inclination for convenience in observing the pictures. A strut, *t*, is employed for holding up the lens end of the base. This strut is hinged at its upper end to the base *a*, and its lower end enters one of several notches in the stand *n*, and the lower end of this strut should be made as a spring-catch to grasp one of the cross-bars, or with double spring-catches to enter cavities in the stand and prevent the base moving after it is adjusted.

The direction in which the parts fold will be apparent by an inspection of Fig. 3, and it will be seen that there are not any parts that project outside the box formed when the parts are folded.

Locks, catches, or hooks may be used to keep the parts of the box together when folded.

When the parts are unfolded or opened out both the stereoscope and graphoscope may be made use of in the ordinary manner, and they can be adjusted as easily as the instruments heretofore employed.

I claim as my invention—

1. The base for the graphoscope made of the two portions *a* and *b*, that are hinged together and form the inclosing-box, substantially as set forth.

2. The rods $e^1$ for the picture-holder *d*, hinged

at their lower ends to the cross-bar *e*, sliding within the base *b*, in combination with the friction-spring 3 and eyes 2, that guide the holder when in use, substantially as set forth.

3. The stereoscope-lens frame *g'*, hinged to the front edge of the base *a*, in combination with the hinged leg *r* at the back of such lens-frame *g'*, substantially as set forth.

4. The base *a b* of the graphoscope, hinged to the stand by a folding strut, substantially as set forth.

5. The picture-holder *d*, hinged to the sliding cross-piece *e*, and the sliding stereoscope-holder *m*, in combination with the folding lens-holders and box *a b*, forming the base, the parts being constructed and arranged substantially as set forth.

Signed by me this 4th day of June, A. D. 1875.

HENRY J. LEWIS.

Witnesses:
GEO. T. PINCKNEY,
CHAS. H. SMITH.