

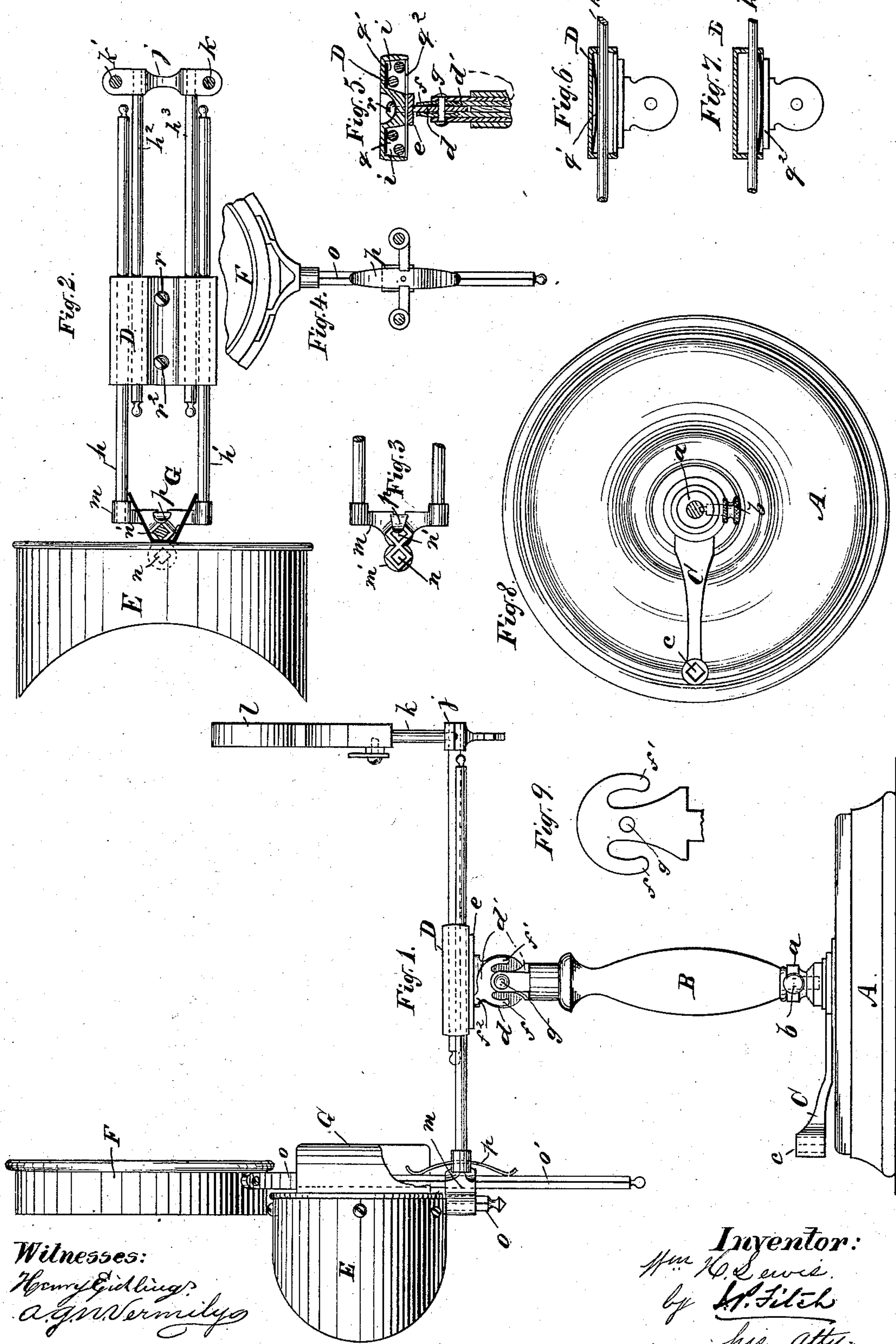
(No Model.)

W. H. LEWIS.

Combined Stereoscope and Graphoscope.

No. 242,830.

Patented June 14, 1881.



Witnesses:

Henry Gidding.  
A. J. Vermilye.

Inventor:  
Wm H. Lewis.  
by H. Fitch  
his atty.



# UNITED STATES PATENT OFFICE.

WILLIAM H. LEWIS, OF BROOKLYN, NEW YORK, ASSIGNOR TO E. & H. T. ANTHONY & CO.

## COMBINED STEREOSCOPE AND GRAPHOSCOPE.

SPECIFICATION forming part of Letters Patent No. 242,830, dated June 14, 1881.

Application filed April 8, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM H. LEWIS, of the city of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Stereoscopes and Graphoscopes, of which the following is a specification, reference being had to the accompanying drawings, forming part of the same, in which—

10 Figure 1 is a side elevation of a stereoscope and graphoscope, with the picture rest or holder mounted on the same stand which contains my invention. Fig. 2 is a plan or top view of the stereoscope and the sliding bars with which it  
15 and the picture-rest are connected. Fig. 3 is a top view of the cross-bar with which are connected the sliding bars that carry the stereoscope, showing the ends of the said bars, and also the two sockets for receiving the stems or stand-  
20 ards of the stereoscope and graphoscope lenses and holders. Fig. 4 is a rear-edge view of the said cross-bar and of the standard of the graphoscope lens and lens-holder, with a broken portion of the latter; also, a rear-face view of the  
25 spring attached to the said cross-head, and acting to hold by pressure upon the said standard the graphoscope-lens at any desired point of vertical adjustment. Fig. 5 is a longitudinal  
30 central sectional view of the parts forming the friction-joint connections of the standard of the instrument, with the head-block of the frame on which the stereoscope and graphoscope lenses and holders and the picture-holder  
35 are mounted. Figs. 6 and 7 are detailed views, particularly described hereinafter. Fig. 8 is an upper face view of the base or pedestal on which is mounted the standard of the instrument, and to which is attached a socket-arm  
40 or bracket to receive the stem or standard of the graphoscope when not in use; and Fig. 9 represents the peculiar form of one of the leaves constituting the friction-joint, connecting the standard of the instrument with the  
45 head-block of its frame or sliding rods, herein- after particularly described.

My invention relates to stereoscopes and graphoscopes the lenses and lens-frames and picture-holders of which are supported on a frame, (or rods,) that is, in turn, supported on  
50 a pedestal and standard, and connected there-

with by a joint that permits the adjustment of the said frame at different angles of inclination; and it consists in the devices and combination of devices hereinafter described and claimed.

A is the base or pedestal, and B the stand- 55 ard, the foot of which sets into a socket in the stem *a* on the base, and is secured thereto by a set-screw, *b*.

C is an arm or bracket, the looped inner end 60 of which is secured on the stem *a*, and in the outer end of which is a socket or hole, *c*, to receive the stem of the graphoscope when not in use.

D is a head-block connected with the stand- 65 ard B by a friction-joint. This joint is formed of two metal leaves, *d* and *d'*, one, *d*, projecting edgewise from the under side of the block D, and the other, *d'*, extending from the upper end of B. The leaf *d* is secured to the bar *e*, 70 that is fastened by screws to the under side of D. The leaf *d* is made circular, and the leaf *d'* has the peculiar form shown in Fig. 9, the points *f* and *f'* being bent inward a little, so that they bear with a spring-pressure against 75 the leaf *d*. The two leaves being held closely in contact by the center pivot, *g*, a joint is formed in which there is constant spring pressure and friction, caused by the points *f f'* pressing against the leaf *d*, that will hold the head- 80 block D and its accessories at any desired angle of inclination. *f<sup>2</sup>* is a lug projecting from the upper left-hand quarter-segment of *d'*, which prevents the head-block rotating on the pivot *g* from right to left beyond the horizontal. If 85 desired, there may be a second leaf, the duplicate of *d*, one on each side of the leaf *d'*.

The head-block D is recessed, as shown in Figs. 5, 6, and 7, and *h*, *h'*, *h<sup>2</sup>*, and *h<sup>3</sup>* are sliding rods, which pass through the said block 90 within the recesses *i i'*. The outer ends of *h<sup>2</sup>* *h<sup>3</sup>* are connected by a cross-bar, *j*, from which rise two rods, *k k'*, which support the picture-holder *l*. The outer ends of the rods *h* and *h'* are connected by the cross-bar *m*, from the 95 front edge of which, at its center, projects a short arm, *m'*, through which are two vertical holes or sockets, *n n'*.

E is the eye-piece or lens-holder of the stereoscope, of the ordinary construction. From 100



the bottom of E, near its rear edge, projects a single stem, *o*, which is made to fit into the socket *n* in the arm *m'*, which constitutes the support for E.

5 F is the graphoscope lens and frame, from the lower edge of which projects a stem, *o'*, that fits into the hole or socket *n'*, so that it may slide vertically therein.

10 *p* is a leaf-spring fixed to the cross-bar *m*, the ends of which bear with a spring-pressure against the stem *o*, whereby F is held at any desired point of vertical adjustment.

G is the plate designed to prevent each eye from seeing the picture intended for the other. 15 Instead of being a single division-plate extending at right angles from the center of E, which is the usual form and construction, it consists of a plate bent in the form shown plainly in Fig. 2, forming substantially two 20 plates, each inclining outward from its point of connection with E, and only broad enough to prevent each eye from seeing the picture intended for the other, while it permits it to see the picture that is intended for it. This form 25 of the said division-plate permits the insertion of the stem *o'* of the graphoscope-lens and lens-frame F in its socket *n'*, and the vertical adjustment therein, without removing the stereoscopic lenses from their place in the instru- 30 ment.

If at any time it is desired to remove the graphoscope when not in use, it may for convenience be set down with its stem in the socket or hole *c* in the bracket or arm C.

35 Friction is applied to the rods *h h' h<sup>2</sup> h<sup>3</sup>* by means of leaf-springs *q q'*, laid into the bottom of the recesses *i*, which act with a spring-pressure on the rods *h<sup>2</sup> h<sup>3</sup>*, and the spring *q<sup>2</sup>*, which consists of a curved thin metal plate, that constitutes the bottom plate of the head-block D. 40 Screws *r r'* pass through the said block D and said plate or spring *q<sup>2</sup>* into the bar *e*. By securing these parts together there is caused a spring-pressure of the ends of the plate *q<sup>2</sup>* on

the rods *h* and *h'*. This construction and ar- 45 rangement of parts permit an adjustment of both the stereoscope and graphoscope lenses and of the picture-holder to and from each other by the sliding of the rods *h h' h<sup>2</sup> h<sup>3</sup>* in the head-block D, while at any point of adjust- 50 ment they are held in place by the friction of the springs *q q' q<sup>2</sup>* within the said block.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a stereoscope, the combination, with 55 the rods *h h'*, of the cross-bar *m* and arm *m'*, provided with the two sockets or holes *n* and *n'*, fitted to receive respectively the stems *o* *o'* of the lenses and lens-holders E and F, as and for the purpose described. 60

2. The combination of the head-block D and standard B by means of a joint, as described, in which a spring-friction is accomplished by the curved points *f* and *f'*, as and for the purpose described. 65

3. The combination, in a stereoscope, of the recessed head-block D and rods *h h' h<sup>2</sup> h<sup>3</sup>*, the said rods being fitted to slide thereon, and to which friction is applied therein by means of the springs *q, q', and q<sup>2</sup>*, as and for the purpose described. 70

4. The combination, in a stereoscope, of the rods *h h'*, the cross-bar *m*, provided with the socket or hole *n'*, the spring *p*, and the stem *o'* of the graphoscope lens and frame F, as and 75 for the purpose described.

5. The combination, in a combined graphoscope and stereoscope, of the base A and the arm or bracket C, provided at its outer end with a socket or hole, *c*, fitted to receive the stem *o'* 80 of the lens and lens-frame F, as and for the purpose described.

Witness my hand this 6th day of April, 1881.

WILLIAM H. LEWIS.

In presence of—

A. G. N. VERMILYA,  
HENRY EICHLING.