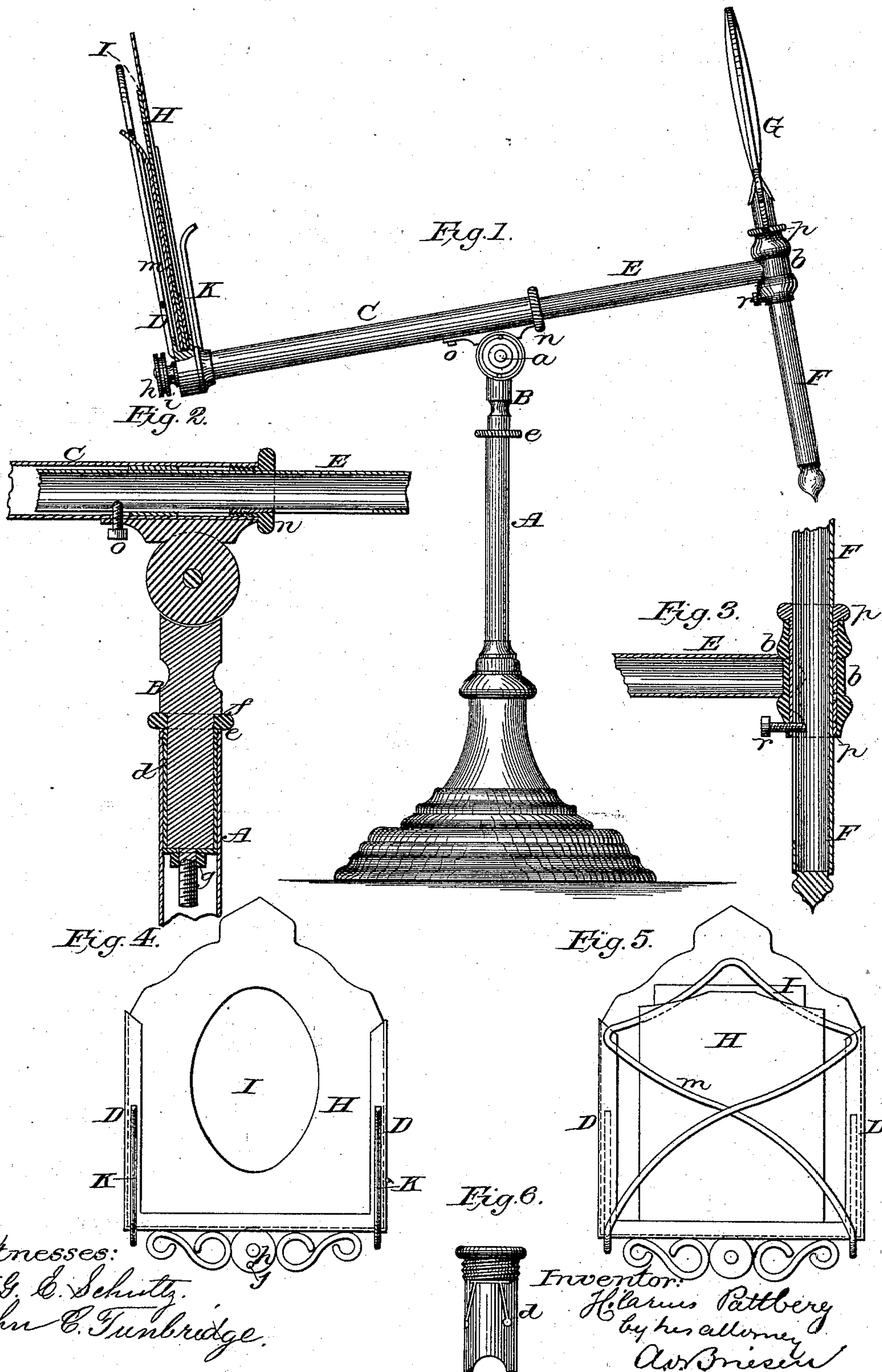


H. PATTBURG.
Graphoscope.

No. 214,789.

Patented April 29, 1879.



Witnesses:
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UNITED STATES PATENT OFFICE.

HILARIUS PATTBERG, OF JERSEY-CITY HEIGHTS, NEW JERSEY.

IMPROVEMENT IN GRAPHOSCOPES.

Specification forming part of Letters Patent No. **214,789**, dated April 29, 1879; application filed January 25, 1879.

To all whom it may concern:

Be it known that I, HILARIUS PATTBERG, of Jersey City Heights, in the county of Hudson and State of New Jersey, have invented a new and Improved Graphoscope, of which the following is a specification.

Figure 1 is a side elevation, partly in section, of my improved graphoscope. Fig. 2 is a detail vertical section through the joint between the post, picture-holder, and lens-holding arm; Fig. 3, a detail vertical section through the joint between the lens-holding arm and the vertically-adjustable lens-holder. Fig. 4 is a face view, and Fig. 5 a back view, of the picture-holder. Fig. 6 is a detail side view of one of the tubular friction-pieces used in the joints.

Similar letters of reference indicate corresponding parts in all the figures.

This invention relates to a new construction of graphoscope, some features of which are also applicable to stereoscopes.

The invention consists, principally, in the new combination of horizontally-sliding lens-holder with the picture-holder, which cannot be slid horizontally; also, in details of improvement as regards the character of the joints employed, and in the construction of the picture-holder, all as hereinafter more fully described.

In the accompanying drawings, the letter A represents the post; B, the swivel on top of the post; C, the picture-holding tube or rod, pivoted at *a* to the swivel B. D is the body of the picture-holder, secured to the outer end of the tube or rod C. E is the sliding lens-holder arm, made to slide in or on the tube or rod C. A tubular T-extension, *b*, at the outer end of the arm E serves to receive the vertically-adjustable rod F, which carries the lens G.

The character of the connection between the swivel B and post A is clearly shown in Fig. 2. The upper part of the post A is made tubular, to receive a slotted friction-tube, *d*, of the kind shown in Fig. 6. The friction-tube has its upper portion screw-threaded, as shown, and is screwed into the post A until a collar, *e*, at the upper end of the friction-tube bears upon the upper end of the post. The swivel-pin B is fitted through the friction-tube *d*, and rests upon it with a shoulder, *f*. A screw at

the lower end of pin B serves to receive a nut, *g*, which, bearing against the closed lower end of the friction-tube, serves to lock the pin B to the tube *d*, and to prevent the withdrawal of the pin B otherwise than by unscrewing the tube *d* from the post A. The friction-tube *d*, being slotted, bears, spring-fashion, against the pin B, and prevents it from turning too readily within the post A.

To the upper end of the pin B is pivoted by a suitable friction-joint, *a*, the tube C. The outer end of this tube is closed, and receives on a threaded projecting nipple, *h*, the picture-holder D. A nut, *i*, secures the picture-holder in place on the nipple *h*. A projecting pin, *j*, on the picture-holder, entering a corresponding cavity on the carrying-arm C, or vice versa, prevents the picture-holder from turning on the arm C.

The picture-holder D is a grooved frame, open on top, and provided at its face with projecting hooks K K. In these hooks may be laid a large picture. Smaller pictures may be inserted in the grooved frame direct, their backs resting against a wire-netting, *m*, or filling, which is applied to the back of the frame D. But for properly displaying smaller pictures I insert a pouch, H, of leather or other material, within the grooved frame. The pouch is made to fit the frame, is open on top to receive the picture I, and has a large opening in front, through which the picture is displayed. By means of this pouch smaller pictures can be properly secured in the frame and exhibited to advantage.

Into the open inner end of the tube C is inserted the tube or rod E, which constitutes the lens-holding arm. It is, by a slotted friction-tube, *n*, that is screwed into the tube C, clamped, so as not to slide too freely. A pin or screw, *o*, Fig. 2, is fitted through the tube C into a groove or slot of the rod or tube E, and prevents the latter from turning within the tube C, and also prevents the accidental separation of the parts C E.

Instead of sliding the tube or rod E within the tube C, it may be made to embrace the tube or rod C, and to slide thereon, with otherwise substantially the same effect.

The outer end of the arm E carries an upright short tube, *b*, through which the upright

rod or tube F, carrying the lens G, is inserted. The tube F is also fitted through a slotted friction-tube, *p*, which is screwed into the tube *b*, and prevents the tube F from sliding too freely. A pin or screw, *r*, extending through the tube *b* into a groove or slot of the rod or tube F, prevents the latter from turning within the tube *b*.

Instead of the friction-tubes herein described, suitable rubber packings or other well-known friction-pieces may be used. The lens can thus be adjusted to any desired height, and to any desired distance from the picture; but the parallelism of its face to that of the picture cannot be varied.

I claim—

1. The combination of the picture-holder H, the post A, and intermediate vertical swivel, B, with the horizontally-sliding lens-holder, the picture-holder being pivoted to said verti-

cal swivel, substantially as herein shown and described.

2. The combination of the hollow post A, swivel-pin B, friction-tube *d*, having collar *e*, and nut *g*, all arranged substantially as herein shown and described.

3. The picture-holding frame D, made with grooves and provided with projecting hooks K K, substantially as herein shown and described.

4. The combination of a vertically-adjustable lens-holder, horizontally-adjustable lens-holding arm E, and pivoted picture-holding arm, substantially as herein shown and described.

The foregoing description of my invention signed by me this 17th day of January, 1879.

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Witnesses:

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