To all whom it may concern:

Be it known that we, JOHN PAGLIUGH, of the city of New York, county of New York, and State of New York, and JOHN ARDITO, of Hoboken, county of Hudson, and State of New Jersey, have invented a new and useful Improvement in Stereoscopes, of which the following is a full, true, and exact description, reference being had to the accompanying drawings.

Stereoscopes as hitherto constructed have had many serious defects. It has been found necessary to make the picture-holder adjustable, so that the person using the stereoscope may be able to select that position for the picture in which it can be viewed to the best advantage. This has generally been accomplished by making the picture-holder slide forward and back on a tongue of wood or metal; but in stereoscopes thus constructed it has been found that after some use the picture-holder becomes loose and will not stay in position. It has then to be held in position by hand, or some contrivance, such as a spring, has to be used to accomplish the desired result. Then, too, the contrivances for holding the picture in position in the holder have either been inefficient, holding the picture only loosely in position, or they have been awkward and cumbersome.

It is the object of our invention to produce a stereoscope in which the picture-holder is readily adjustable, and is held with sufficient firmness upon the rest upon which it is placed.

It is also the object of our invention to produce a stereoscope which is convenient and portable, and for this purpose we make the handle so that it can be removed at will, and so that the position of the stereoscope can be easily changed with relation to the handle.

Our improvement will be clearly understood from the accompanying drawings, in which Figure 1 represents a perspective view of our improved stereoscope; Fig. 2, a view, partly in section, taken in a plane parallel to the division-strip B of the stereoscope; Fig. 3, a view, partly in section, taken through the handle in a plane at right angles to the plane in Fig. 2; and Figs. 4 and 5 represent a view and section of our improved lens-holder, formed of metal, in one piece.

Similar letters have reference to similar parts.

The brass rod C is bent in the form shown in Fig. 1, and has an outward spring. This spring is compressed by the picture-holder D, which slides thereon. The friction caused by this outward pressure prevents the picture-holder from sliding out of position. By this means I dispense with the necessity of any spring or catch to retain the picture-holder in any position in which it may be placed, and I enable the person using the stereoscope to adjust the picture-holder to suit his convenience.

The stereoscopic views are retained in the proper position in the holder by the spring E, which is fastened at three places, m, n, and l, as shown in the drawings. This form of spring holds the picture firmly in position, supporting it through nearly the entire length of the holder.

In Figs. 2 and 3 the handle and its attaching parts are shown. A circular brass plate, a, and cup b are shown in these figures. The cup b is firmly screwed to the under portion of the stereoscope B, while the inner plate, a, remains free. There is, however, between it and the outer cup a loose circular spring, (shown in the drawings at p p.). The object of this loose spring is to occasion sufficient friction to move the moving and stationary parts, and thus prevent the inner plate from being turned too easily within the outer cup. Both the plate and cup have oblong openings, cut out in a somewhat circular form at the center, which exactly correspond, and the upper portion of the handle e is made to exactly fit these openings. The brass of the handle is then cut away for a distance equal to the thickness of the outer plate, as shown at d, leaving a circular stem which is attached to a circular brass plate, f. This brass plate is pivoted at h to two other brass plates, g g, having long brass tines. These tines are compressed together and inserted in the wood-work of the handle, D. In this manner a tight friction-joint is formed at h. These plates g g are shown in the drawings with oblong slots.
It is evident that the mode of attaching the handle to the stereoscope is as applicable when stiff as when jointed handles are used. Our improved lens-holder consists in forming the lens-holding portion of a single metallic casting instead of uniting several pieces of wood to form such lens-holder. The advantages of this are evident. When the lens-holder is made of wood, it is liable to warp, throwing the lenses out of true, and it is more expensive and difficult to make, owing to the necessity of cutting several pieces and joining them together.

The lens-holder shown is adapted, as will be readily seen, to support the lenses, and the dividing-strip and base of the stereoscope being provided with suitable surfaces and projections for the same. A surrounding bead is also shown to receive and protect the hood, which is fastened around the periphery of the lens-holder in the manner shown.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The combination of a lens-holder and a double wire, having substantially parallel sides and attached to said lens-holder, with a sliding picture-holder moving on said wire and supported by the same at any point of adjustment, substantially as described.

2. In a stereoscopic apparatus, a picture-frame provided with a picture-holding wire, which consists of a looped or bent wire fastened at each end to the picture-holder and looped around itself and fastened in the middle to said sliding picture-holder, thereby forming a convenient and substantial picture-support, substantially as described.

3. In a stereoscopic instrument, a folding stereoscope-handle attached to the stereoscope by means of a folding friction-joint, which consists of a central friction-plate embraced by two circular movable plates held firmly against said central plate by a pivot, and themselves slotted with two circular slots extending around their circumference and almost meeting, substantially as specified.

4. The stereoscope-handle attachment here shown, which consists of a slotted cup attached to the stereoscope-body, and itself containing a rotating plate having an elongated slot, and a stem having an elongated button adapted to enter the hole in the cup and to revolve the plate contained in the cup, whereby it is prevented from being drawn from said cup, substantially as specified.

5. A stereoscope-handle attachment, which consists of a slotted cup containing a revolving plate, which plate is prevented from freely revolving within the cup by means of a friction-spring, and a handle provided with a button adapted to enter a slot in the cup and in the revolving plate, and to rotate the same, substantially as and for the purposes specified.

6. A lens-holder consisting of a single metallic piece or body and provided with the necessary attaching portions for holding or supporting the lens-holder, dividing-strip, and base, substantially as described.

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Witnesses:

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