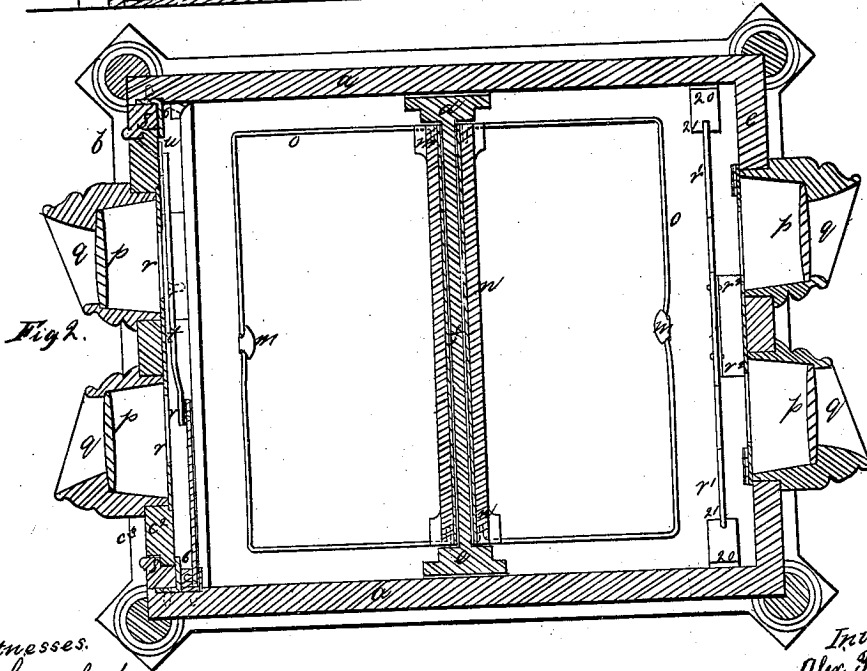
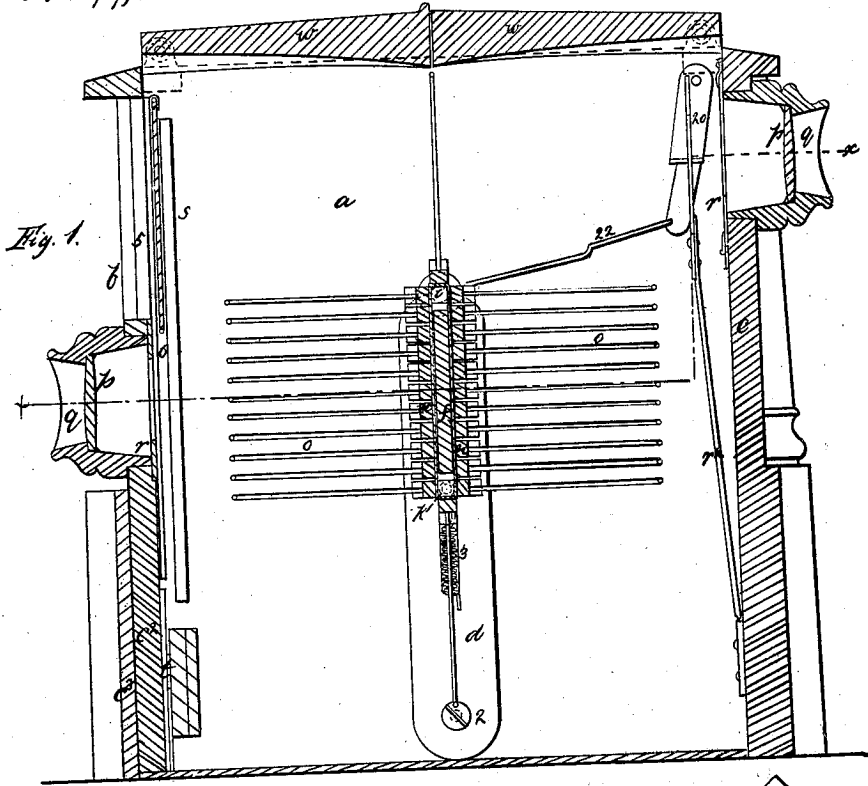


A. Beckers.

Revolving Stereoscope.

N^o 99,135.

Patented Jan. 25, 1870.



Witnesses.
Chas. H. Smith
Geo. D. Miller

Inventor.
Alex. Beckers.
per S. M. Sewell

A. Beckers.

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Fig. 3.

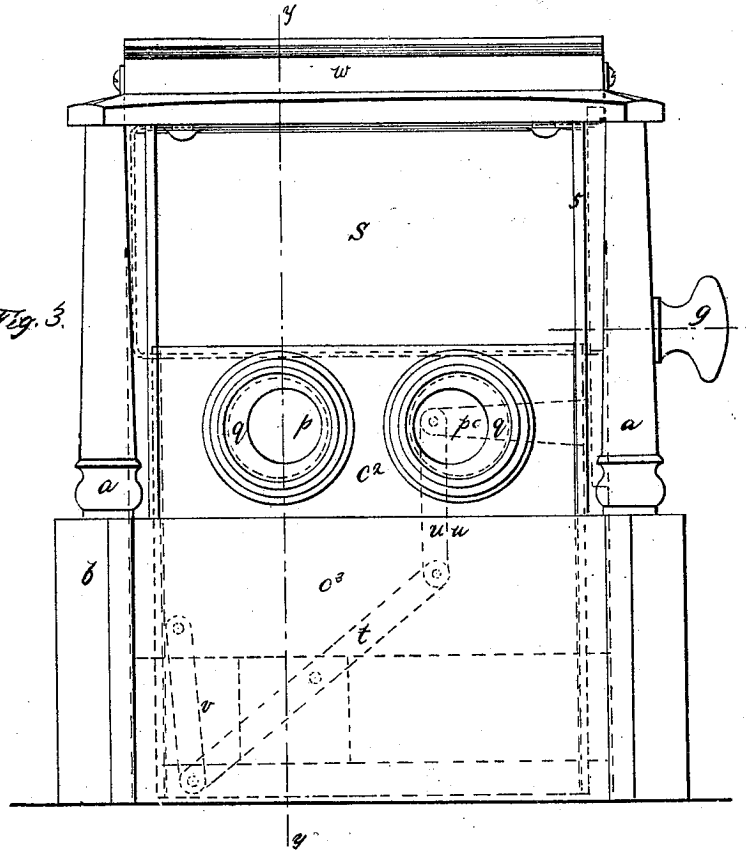
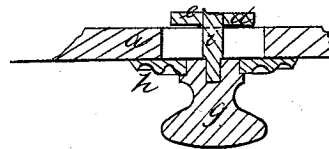


Fig. 4.



Witnesses:
Chas. H. Smith
Geo. D. Walcott

Inventor:
Alex. Beckers
per L. W. Serrell

United States Patent Office.

ALEXANDER BECKERS, OF NEW YORK, N. Y.

Letters Patent No. 99,135, dated January 25, 1870.

IMPROVEMENT IN REVOLVING STEREOSCOPES.

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

To all whom it may concern :

Be it known that I, ALEXANDER BECKERS, of the city and State of New York, have invented and made a new and useful Improvement in Stereoscopes; and I do hereby declare the following to be a full, clear, and exact description of the said invention, reference being had to the annexed drawing, making part of this specification, wherein—

Figure 1 is a vertical section of the said invention, showing the box, the chain for the pictures, and the lenses;

Figure 2 is a sectional plan at the line $x x$, fig. 1;

Figure 3 is an elevation of the sliding front of the camera; and

Figure 4 is a detached section at the turning-knob.

Similar letters of reference denote the same parts.

The object of this invention is to simplify the construction of the chain for the pictures, also to support said chain on a swinging frame, so that the picture may be brought to a focus with facility, and avoid the complicated mechanism heretofore employed.

I also fit the lens at one of the fronts of the camera, so that it can be slid up or down, and when down, open a space for allowing light to pass in for transparent pictures.

In the drawing—

$a a$ are the sides, and

b and c , the fronts of the stereoscope-box.

The frame for the chain of stereoscopes, is formed of two side-pieces $d e$, united firmly together by the cross-piece f , that is framed into d and e , and properly secured so that the entire frame can be swung within the box; 2 being the screws that attach the lower ends of d and e to the inner surfaces of the side-pieces $a a$.

At the upper ends of the side-pieces $d e$, is the shaft i , for the chain, the same projecting at one end through an elongated opening in the box a ; and g is the revolving knob, and h , a rose or flange to cover the elongated opening in a .

By this construction, the frame $d e f$ can be swung on the screws 2, so as to focus the picture.

The shaft k forms the lower axis for the belt of pictures. This axis is fitted to slide in the frame $d e$, and the belt is strained by the springs 3.

The belt of pictures is made of wooden strips $n n$, glued to and firmly attached upon the belt of canvas, or similar material, that passes around the polygonal axes or shafts i and k .

Instead of having wooden frames, as heretofore usual, I make the picture-holder of a wire, o , bent up into an oblong shape, and the bent ends pass into the ends of the strips n , as shown by dotted lines, and a sheet metal clasp, m , is provided to hold the edge of the picture, as in my patent of March 29, 1866.

The lens p is placed eccentric to the opening in the eye-tube, in order to obtain the necessary refraction of the light from the pictures, to show but one picture.

I make use of the septa $r r'$, to cut off the rays of light, and confine the vision to the picture. It is, however, to be understood that where the picture is

moved, so as to bring it to focus, the stationary septum, as ordinarily employed, would allow portions of the second picture to be seen on the margin, thus marring the effect. To prevent this, I introduce a movable septum, r' , between the lenses and the adjustable picture, and the same is moved simultaneously with the picture.

I have shown this septum as supported by a spring, r'' , inside the box, and moved by small side-levers 20, having projections 21 near the middle, to take the edges of the septum and links 22, from the lower ends of the levers 20, connect them with the upper part of the swinging frame $d e$, so that the septum will be moved, as the frame $d e$ is moved to adjust the picture, but only about half the distance, thus adjusting said septum, so as always to cut off the rays of light from outside the picture.

The links 22 have bends in them, so as to facilitate the proper positioning of the parts in applying the septum, by bending said links more or less.

Stereoscopes have been made with a hinged front, that turns down when glass or transparent pictures are to be shown. In this case, the inner sides of the lenses become dusty, and the camera-box is unsightly.

To remedy these objections, I make use of a front, c' , that is fitted to slide vertically down into the base c , the front being set in grooves at 5 5.

I also provide a sliding glass, s , that is set in a light metal frame, so as to be moved up and down in the slide-ways 6 6, and the lever t is connected at its ends by the links u and v , (see dotted lines, fig. 3,) with the sliding front c' , and glass, s , respectively, so that as the front is slid down, the glass is raised, and the reverse.

The swinging lids w are made with concave under surfaces, so that when turned up, they illuminate the pictures, the surfaces being silvered or covered with bright reflecting foil that concentrates the rays of light.

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

1. The swinging frame for the chain of photographic pictures, formed of the side-pieces $d e$, and cross-piece, f , firmly united together, said frame being attached by the screws or pins 2, and moved by the knob g , as set forth.

2. The front c' , carrying a pair of lenses, in combination with the glass s , lever t , and grooves in the stereoscope-box, substantially as set forth, so that the front and glass can be simultaneously moved in opposite directions, as specified.

3. A septum applied between the picture and the lens, and moved automatically and simultaneously with the picture, so as to adjust said septum the proper proportionate distance, as and for the purposes set forth.

In witness whereof, I have hereunto set my signature, this 24th day of March, 1869.

Witnesses:

ALEX. BECKERS.

CHAS. H. SMITH,

GEO. T. PINCKNEY.