J. F. Adams.

Stereoscope.

No. 91,997. Patented Jun. 29, 1869.

Fig: 1

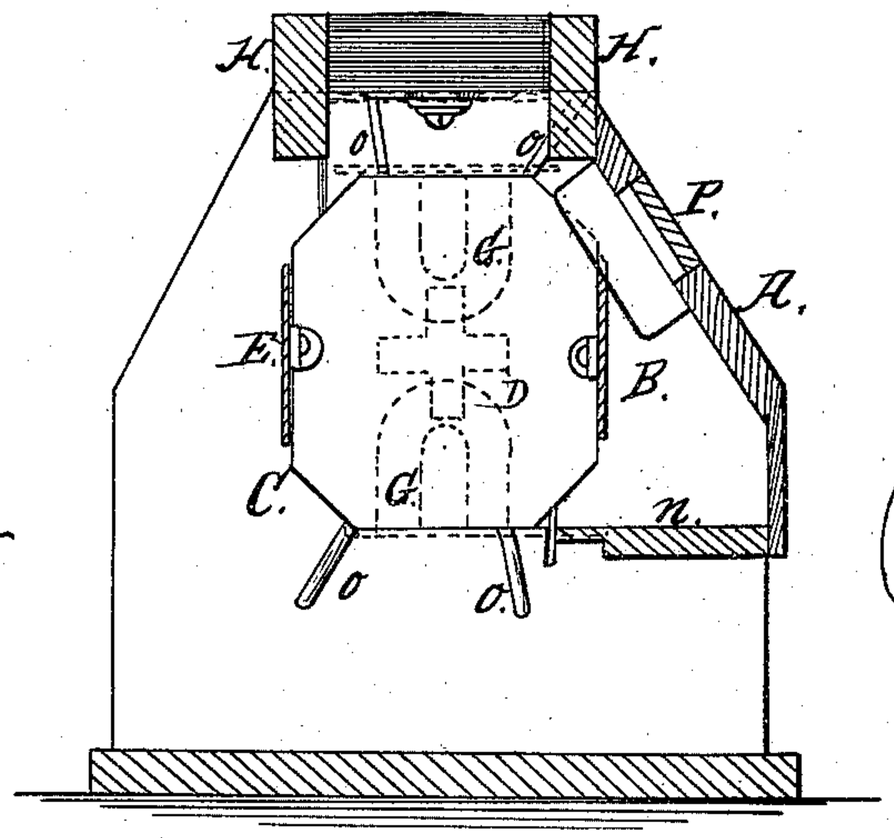


Fig: 5.

Fig: 3.

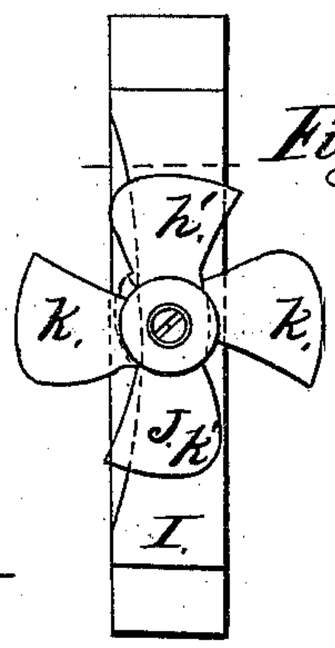


Fig: 2.

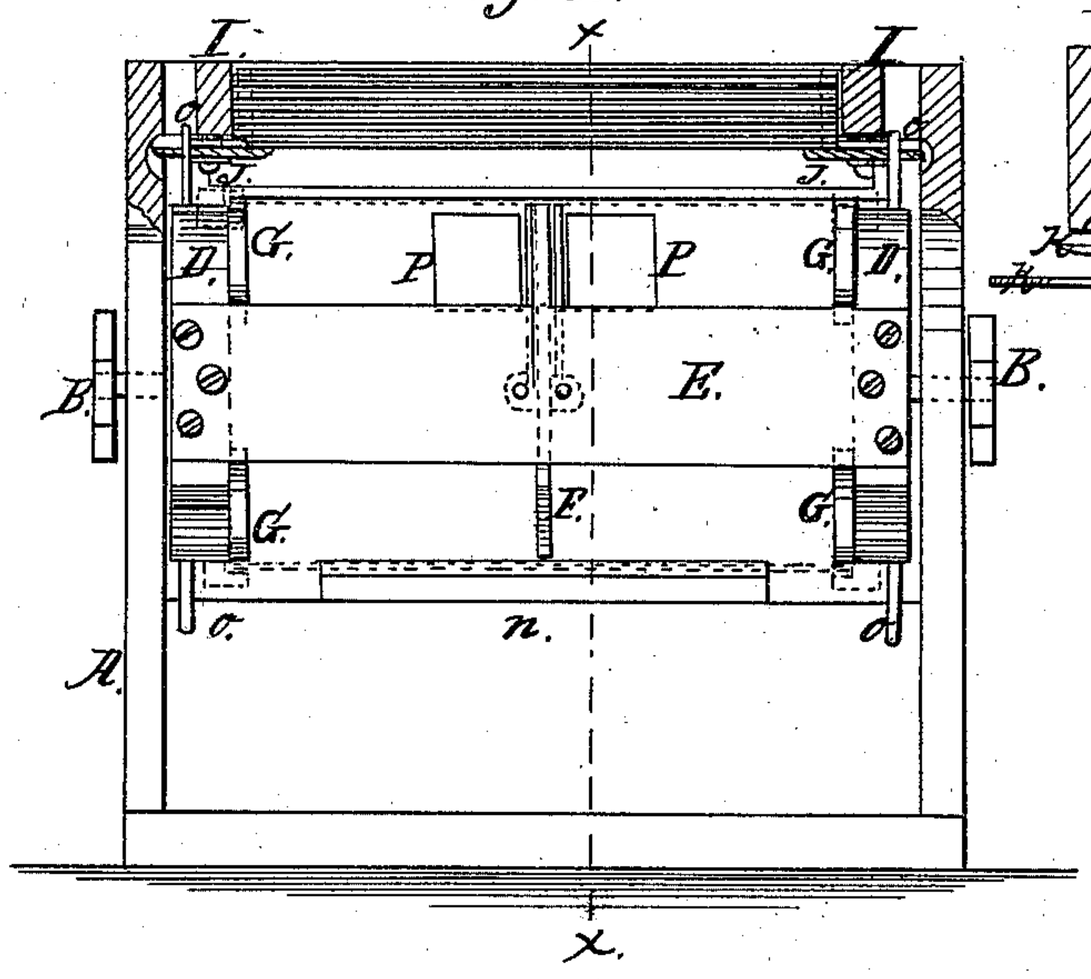
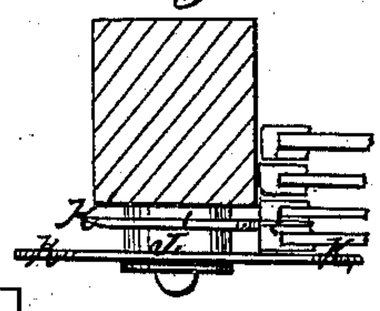


Fig: 4.



Witnesses.

John F. Brooks.
Joh. Becker.

Inventor.

L. F. Adams.

per Munn & Co.

Attorneys.

United States Patent Office.

JOHN FRANCIS ADAMS, OF NEW YORK, N. Y.

Letters Patent No. 91,997, *dated June* 29, 1869.

IMPROVEMENT IN STEREOSCOPE-INSTRUMENTS.

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, JOHN FRANCIS ADAMS, of New York, in the county of New York, and State of New York, have invented a new and useful Improvement in Stereoscopes; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to new and important improvements in instruments used in viewing stereoscopic or photographic pictures; and

It consists mainly in the use of magnets for receiving and holding the pictures in the proper position for being viewed.

It also consists in binding the ends of the card-pictures, or views, with iron or other suitable material, to be acted upon by the magnets, and in the method of delivering a single card, or picture, to the magnets, and discharging it therefrom, by which arrangement any desired number of cards, or pictures, may be received and discharged from a revolving cylinder, as will be hereinafter more fully described.

In the accompanying sheet of drawings—

Figure 1 represents a vertical section of the instrument, through the line *x x* of fig. 2.

Figure 2 is a side elevation, partly in section, or with the upper portion broken away to show the method of detaching a single picture from the bottom of the pack of pictures.

Figure 3 represents a side view of the detaching-button, enlarged.

Figure 4 is an edge view of the same.

Figure 5 gives an edge view of a picture, showing the binding on its ends, for receiving the magnets.

Similar letters of reference indicate corresponding parts.

A represents the box or case, which contains the cylinder, the ends of which support the cylinder-pivots, as seen in dotted lines in fig. 2.

B B represent hand-wheels, cranks, or crosses on the pivots for turning the cylinder.

C is the cylinder, formed by connecting two principal heads D D, by two or more cross-pieces E, which support a central head or partition, F.

The pivots, upon which the cylinder revolves, are secured to the heads D, and the cross-pieces E are screwed to the heads, as seen in the drawing.

Upon the inner sides of each of the heads D, magnets G are placed, one or more in number, according to the diamter of the cylinder or the number of pictures or views which it may be desired to exhibit at each revolution of the cylinder.

In this example of my invention, I place two magnets on each head, with their faces flush, or about flush with the edge or periphery of the heads, and pointing in opposite directions, as seen in fig. 1, where the magnets are shown in dotted lines.

The heads may be octagons, or made in any other desired shape. In the drawing they are octagonal.

The upper portion of the case A is made so as to enclose more or less card-pictures, as represented at H H, the pictures being shown in red color.

I I, fig. 2, represent transversely-placed pieces, which are secured in grooves, so that they may be readily removed, upon the under sides of which are the detaching-buttons J J, secured to the pieces I by central pivot-screws, as seen in fig. 3.

These buttons are formed of four (more or less) wings *k k'*, so connected together that the pairs do not revolve in the same plane, but so that while the pictures are supported by two wings of one pair, (as, for instance, one of the wings of each button marked *k'*,) one of each of the wings marked *k* revolves in a plane the thickness of a card higher, so that they pass over and detach the lower card, being placed and revolved at each end of the pack, as seen in fig. 2.

Two cards are thus detached at every revolution of the buttons, and the buttons are so arranged, in relation to the magnets, that when a picture is so detached, it drops square on to the magnets, which hold it by means of the binding *m*, on the ends seen in fig. 5

This binding on the ends of the picture is attracted by the magnets, and held by such attraction with sufficient force to keep the picture in place on the cylinder while the latter is revolved, or being carried to the proper position or focus for viewing.

After the picture has been viewed, the cylinder is turned a part of a revolution, or until the picture is carried down beneath the cylinder, where it strikes a trap or plate, *n*, which stops its further progress. The motion of the cylinder being continued, it slides from the magnets, and drops into a drawer or box beneath.

The manner in which the detaching-buttons J are revolved is by means of the projecting wires O, in the heads D, which are placed opposite the magnets, on the same side of the cylinder, as seen in the drawing.

These wires engage with the wings of the button, so that each pair of wires on each head turns the button one-fourth of a revolution.

While the buttons are turned so that the lower card or picture is detached or separated from the rest, they are also turned, so that the pack of pictures above is supported by them, as stated above.

P represents the lenses.

In operating with the instrument, the pictures are placed loosely in a pack, so that they rest upon the buttons J, as represented in the drawing.

The cylinder is then revolved by means of the cranks or wheels B. When the magnets of one side

of the cylinder point upward, a picture is dropped by the revolution of the buttons, or rather by a half revolution for each picture, which is caught by the magnets, and held until it is carried, by the continued motion of the cylinder, into the proper focus.

When viewed sufficiently, the cylinder is carried around until the other pair of magnets points up, another picture is dropped and caught, when, by the continued revolution of the cylinder, the first picture is discharged by the trap *n*, and the next carried into focus, and so on for any number of pictures, amounting to scores or hundreds, if desired.

Any suitable arrangement may be made, in constructing the case A, for the management of the light for delivering the pictures to the buttons, and securing them after their discharge from the magnets.

Having thus described my invention,

I claim as new, and desire to secure by Letters Patent—

1. In combination with a stereoscope, the use of magnets, substantially as and for the purposes herein shown and described.

2. The metallic binding *m*, or its equivalent, on the ends of stereoscopic or photographic pictures, substantially as and for the purposes described.

3. The buttons J, in combination with a stereoscope for delivering the pictures singly from the pack, when constructed, revolved, and operating substantially as described, for the purposes set forth.

4. The method of discharging the pictures from the magnets, substantially as described.

The above specification of my invention signed by me, this 8th day of March, 1869.

JOHN F. ADAMS.

Witnesses:

FRANK BLOCKLEY,

ALEX. F. ROBERTS.