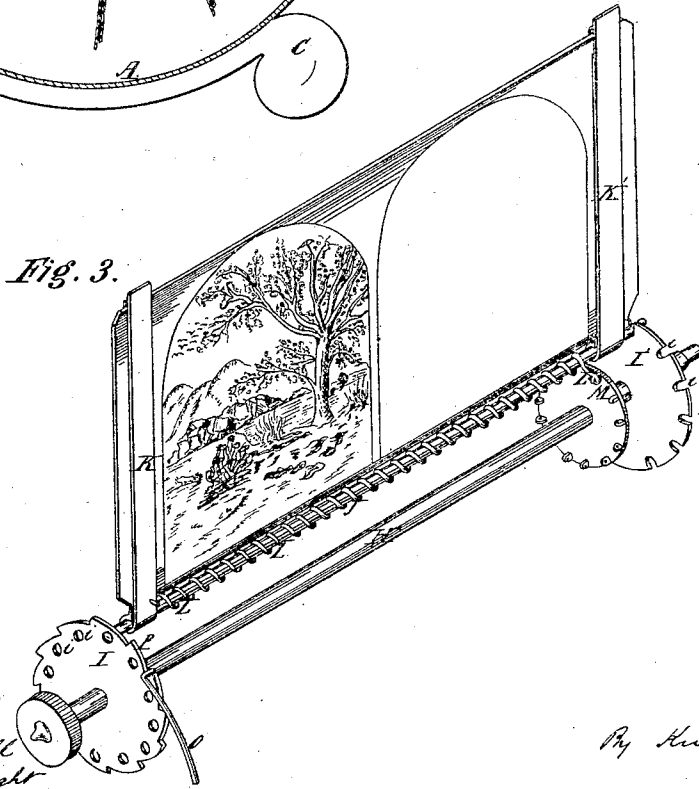
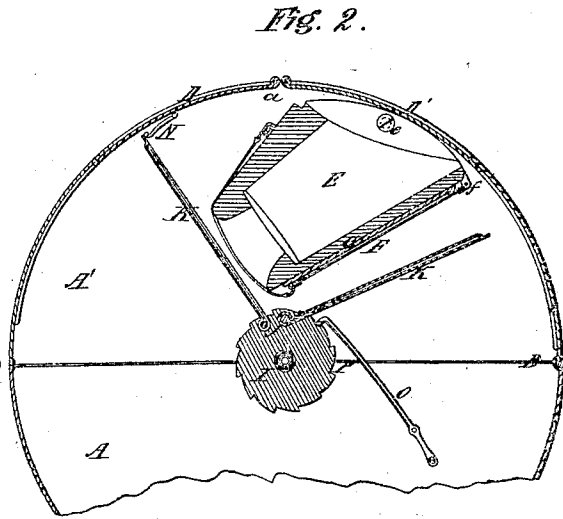
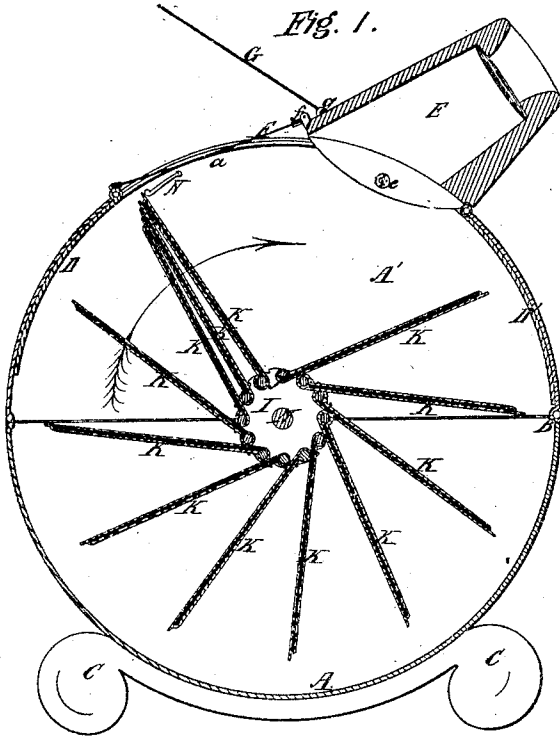


S. D. GOODALE.
STEREOSCOPE.

No. 31,310.

Patented Feb. 5, 1861.



Witnesses
W. R. Bell
Octavius Knight

Inventor.
S. D. Goodale.
By Haight Brothers & Co.

UNITED STATES PATENT OFFICE.

SAMUEL D. GOODALE, OF CINCINNATI, OHIO.

STEREOSCOPE.

Specification of Letters Patent No. 31,310, dated February 5, 1861.

To all whom it may concern:

Be it known that I, SAML. D. GOODALE, of Cincinnati, Hamilton county, Ohio, have invented a new and useful Improvement in Stereoscopes, of which the following is a full, clear, and exact description, reference being had to the annexed drawings, making part of this specification.

My invention relates to devices for more convenient manipulation of stereoscopic scenes and their more effective exhibition.

Figure 1 is a transverse section of the open instrument. Fig. 2 is a transverse section of the closed instrument. Fig. 3 is a perspective view of a scene holder.

The external case or shell A, A', is a horizontal cylinder parted and hinged at B, in the plane of its axis, the lower section A, resting on feet C. An aperture *a*, at top of the upper section A' is provided with sliding doors D, D', which are slid back when the instrument is in use. The lens holder E, is hinged to the section A' at *e*, and, for use, occupies the position shown in Fig. 1.

F is a diffusing glass and G, a reflector, hinged to the lens holder at *f* and *g* respectively, and occupying when in use positions shown in Fig. 1. When not in use, the lens holder, diffusing glass and reflector, being folded within the case, the latter may be closed by means of the doors D D' as seen in Fig. 2.

H is a shaft journaled at the center of the case A A', and having two wheels I, I', with sockets *i*, *i'*, for the ends of the rod J, of the scene holder J K K'. A spiral spring L, attached at one end to the scene holder and at the other end to a collar M upon the shaft H, tends to incline each scene forward in direction of rotation.

A detent N, projecting from the interior of the case, acts to detain each scene in suc-

cession at the proper angle and focal distance, until, being liberated by the rotation of the shaft H, it suddenly disappears from the field of view; and exposes the succeeding scene, which has already taken its place. A spring pawl O, working in a ratchet P, whose teeth correspond in number with the scenes, prevents a retrograde rotation of the latter. The substitution of one scene for another is by this means made so instantaneous as to wholly relieve the spectator from the fatigue of vision usually incident to shifting pictures, and the motion of transposition being imperceptible the illusion is complete. By separating the two sections, the interior is laid open for inspection and replacement of scenes.

The lens holder, diffusing glass and reflector being folded into the case, and the doors D', D', closed, the entire instrument is in extremely compact form and well adapted for embellishment and for conveyance from place to place.

I claim herein as new and of my invention and desire to secure by Letters Patent—

1. The arrangement of shaft H, wheels I I, and collar M, scene holder J K K', spring L, and detent N or their equivalents, the whole operating together to instantaneously shift the scenes substantially as set forth.

2. The arrangement of hinged lens holder E, diffusing glass F, and reflector G, adapted to be extended for use or compactly folded within the case in the manner represented.

In testimony of which invention, I hereunto set my hand.

S. D. GOODALE.

Witnesses:

GEO. H. KNIGHT,
S. C. GOODALE.