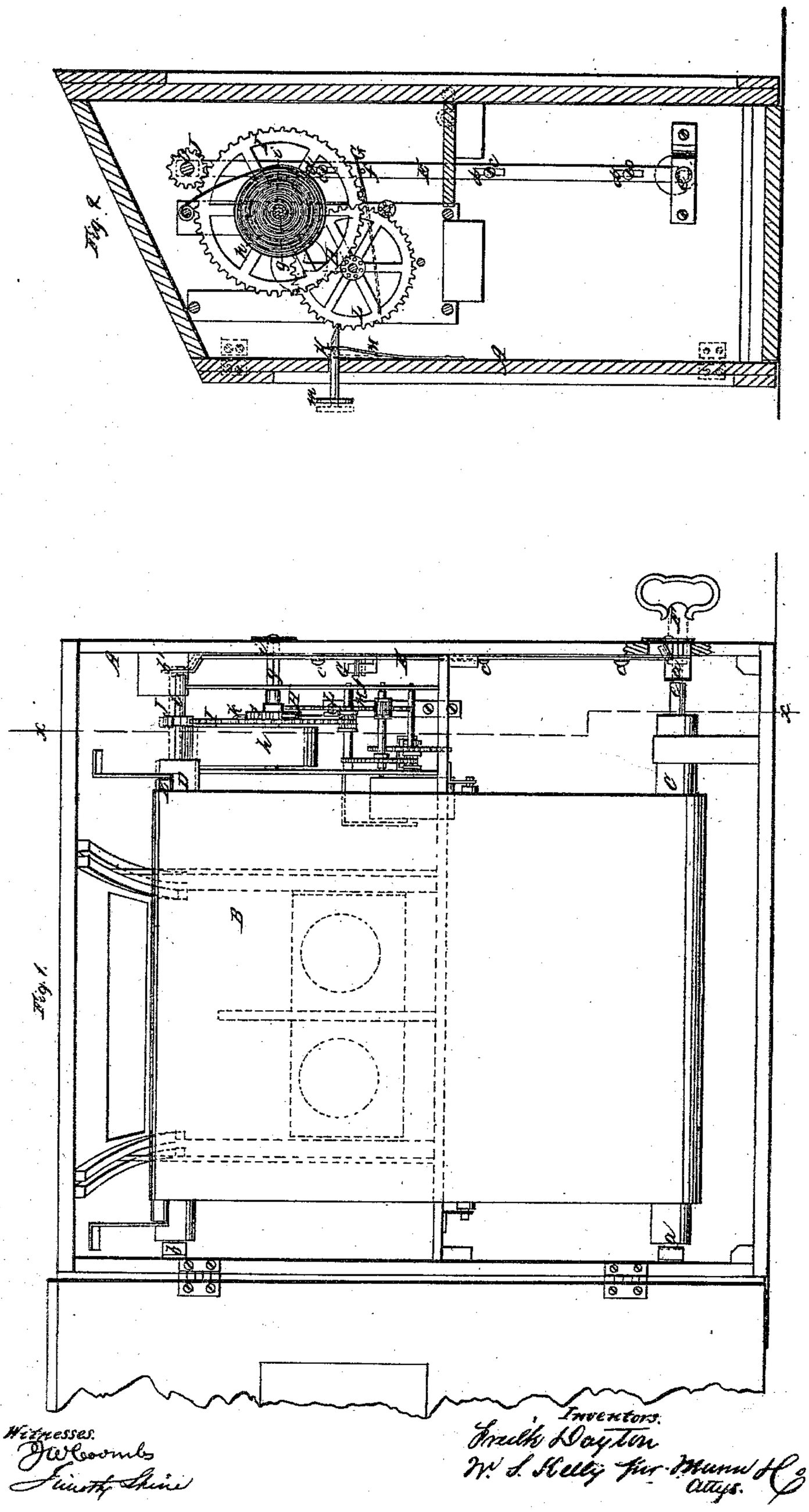
F. DAYTON & W. S. KELLY.

STEREOSCOPE.

No. 36,395. Patented Sept. 9, 1862.



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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN STEREOSCOPES.

Specification forming part of Letters Patent No. **36,395**, dated September 9, 1862.

To all whom it may concern:

Be it known that we, FREDERICK DAYTON, of Watertown, in the county of Litchfield and State of Connecticut, and WILLIAM S. KELLY, of Waterbury, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Stereoscopes, and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a back elevation of our invention, the back of the case being thrown open in order to show the interior; Fig. 2, a vertical section of the same, taken in the line *x x*, Fig. 1.

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

This invention relates to an improvement in that class of stereoscopes in which the pictures or photographs are so arranged as to form a continuous sheet and admit of being brought consecutively in front of the lenses by the turning of a shaft.

The within-described invention consists in applying a clock-movement to a continuous sheet of stereographic pictures in such a manner that the latter will be operated and brought consecutively before the lenses and the movement of the sheet placed entirely under the control of the person using the implement, so that the sheet may be started and stopped at any time, and also be capable of being wound upon the roller from which it is unwound during the operation of the device without any special manipulation on the part of the operator other than simply applying the key to the proper roller on which the sheet is to be wound.

To enable those skilled in the art to fully understand and construct our invention, we will proceed to describe it.

A represents the case of the stereoscope, which may be constructed of any suitable form and dimensions and provided with lenses arranged in the ordinary or in any proper way.

B is a sheet of paper or other suitable material on which the photographs (stereoscopic pictures) are taken or permanently affixed. This continuous sheet of photographs is at the back part of the case A, and it is attached at its lower end to a roller, C, which is at the lower part of the case A, and is attached at its upper end to a similar roller, D, the band B passing over a roller, E, which is smaller in diameter than D, the roller E serving as a guide for the sheet B, and also to keep the latter in a proper state of tension.

The lower roller, C, has its bearings *a* attached permanently to the inner sides of the case A, and the upper roller, D, has one of its bearings, *b*, permanently attached to the case, so as to be a fixture, while the bearing *b'* at the opposite end of the roller is in the upper end of a sliding bar, E, which is secured to the inner side of the case by screws *c*, which pass through oblong rectangular slots *d d* in the bar E and into the case. The screws *c* serve as guides for the bar E, the slots *d* admitting of the bar being raised and lowered, as will be fully understood by referring to Fig. 2. The lower end of the bar E rests upon the journal *e* of the roller C, and this journal *e* has a square formed on it to receive a key, F. The lower end of bar E is kept in contact with the journal *e* by means of a spring, G, which bears upon a pin, *f*, projecting horizontally from said bar.

H represents a clock-movement, which is placed within the case C at one side of it. This clock-movement has nothing at all peculiar in its construction, and therefore does not require a minute description. The movement may be operated by either a weight or spring; but the latter is preferable, and is shown applied to the movement represented in the drawings.

The arbor *g*, to which the spring (designated by *h*) is attached, passes through one side of the case, and has a square, *i'*, formed on it to receive the key F, by which the spring is wound up. The toothed wheel I, which is placed loosely on the arbor *g*, is made to turn with it by means of the ratchet *j* and pawl *k*. Into this wheel I a pinion, J, which is on the shaft *l* of the upper roller, D, gears when the band B is in motion.

K represents a stop, which is simply a rod passing through the front side of the case A in line with a toothed wheel L of the clock-movement H. This rod is connected with a spring, M, which is attached to the inner side of the case A, said spring having a tendency to keep the inner end of the rod K engaged with the wheel L, as will be fully understood by referring to Fig. 2. The outer end of the rod K is provided with a button, *m*.

The operation will be readily seen. The sheet B of stereoscopic pictures is wound upon the lower roller, C, by placing the key K on the square of the journal *e* of said roller, and as the key is placed on said square the bar E is raised in consequence of the key passing underneath it, as shown in red in Fig. 1. This raising of the bar E causes the pinion J on the shaft *l* of the upper roller, D, to be thrown out of gear from the wheel I, and thereby frees the roller D from the clock-movement, so that the sheet B may be wound upon the lower roller, C, by the turning of the key F. When the key F is withdrawn from the journal *e*, the spring G forces the bar E down to its original position, and the pinion J is thereby thrown into gear with the wheel I, and by drawing outward the stop or rod K, so that it will be free from the wheel L, the spring *h* will set the movement H in motion, and the sheet B will be wound upon the upper roller, D, and the pictures on the sheet passed before the lenses. It is designed to have the sheet B move quite slowly, so that each picture may be viewed sufficiently long without stopping the sheet; but in case it is desired to look at any particular picture longer than usual the person using the implement releases the rod or stop K, which then, under the action of the spring M, is made to engage with the wheel L and stop the motion of the movement H, and consequently that of the band B. On withdrawing or pulling out the rod or stop K the sheet B is again moved, the rod or stop being held by the person until the sheet is fully wound upon the roller D, or until it is desired to again stop the band for the purpose of dwelling upon a particular picture. Thus it will be seen that in winding the sheet of pictures B upon the lower roller, C, no special manipulation is required to free the upper roller, D, from the clock-movement H, that result being attained by the application of the key F to the journal *e* of the roller C, and the sheet of pictures may be stopped at any time and any picture viewed as long as desired by simply releasing the rod or stop K. We would remark that the application of the clock-movement and the continuous sheet of pictures, as shown, will not preclude the ordinary detached pictures being used. Provision may be made for inserting them in the case A as usual.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A stereoscope-case, A, provided with a clock-movement, H, and a continuous sheet, B, of stereoscopic pictures, so arranged that the sheet will be actuated or moved by the clock-movement and the pictures made to pass before the lenses of the case, substantially as set forth.

2. The sliding bar E, arranged in the relation, as shown, with the journal *e* of the lower roller, C, of the sheet B, and having one of the journals of the shaft *l* of the upper roller, D, fitted in it, whereby the pinion J on the shaft of roller D may be detached from the clock-movement, so that the sheet B may be wound on the lower roller, C, by simply placing the key on the journal *e* of roller C, as set forth.

3. The rod or stop K, in combination with the clock-movement H, as and for the purpose specified.

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