

(No Model.)

L. S. BURRIDGE.

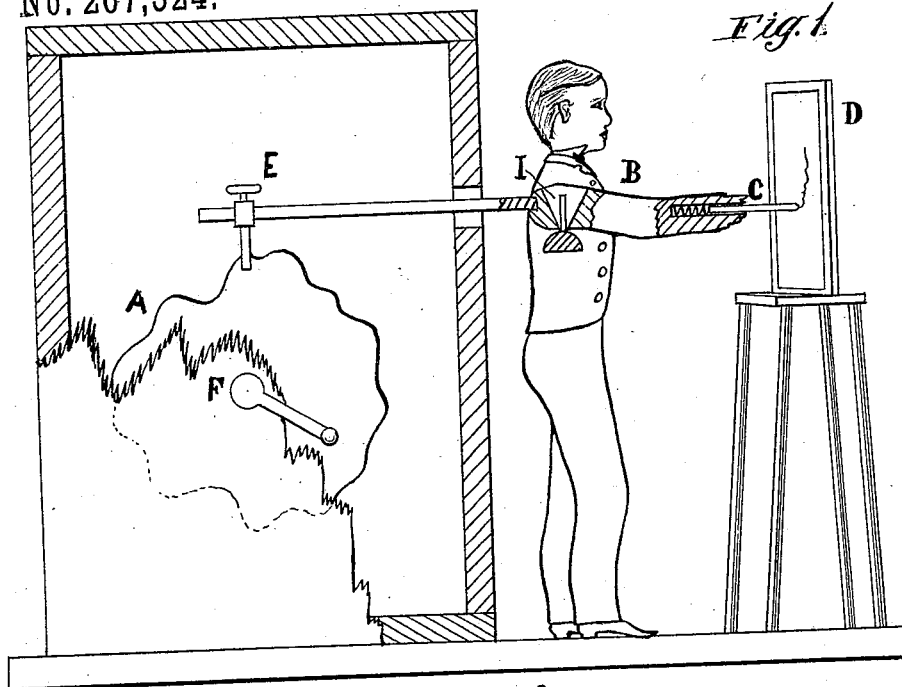
AUTOMATIC TOY.

Patented Nov. 14, 1882.

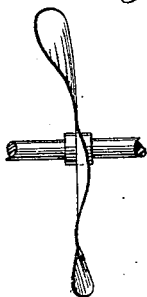
No. 267,324.

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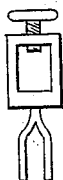
*Fig. 1.*



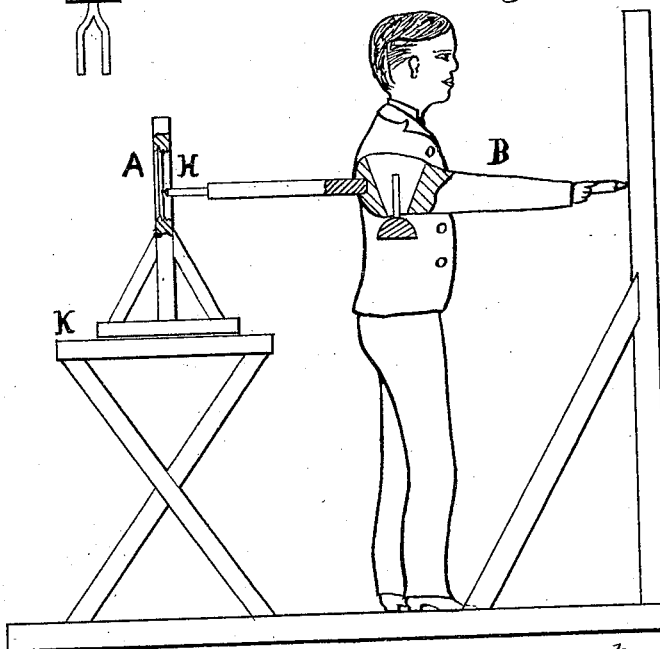
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



*Fig. 5.*



Witnesses  
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# UNITED STATES PATENT OFFICE.

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## AUTOMATIC TOY.

SPECIFICATION forming part of Letters Patent No. 267,324, dated November 14, 1882.

Application filed April 17, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, LEE S. BURRIDGE, a citizen of the United States, residing in the city, county, and State of New York, have invented certain Improvements in Automatic Toys, of which the following is a specification.

My invention relates to that class of toys in which parts of one or more figures are operated by clock-work or a crank.

The object of my invention is to operate the arm of a figure to make it draw an object on a slate or sheet of paper. I attain this end by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a partial vertical sectional view of my invention. Figs. 2 and 3 are detail views of certain parts of it. Fig. 4 is a side elevation of a modification thereof, and Fig. 5 is a front view of one of the parts included in said Fig. 4.

The arm B, Fig. 1, is provided with a pencil, C, running in a hole in the arm, and is made to press against a slate or sheet of paper, D, by a spring. This arm B is fastened to the body of the figure by a piano-key hinge, as shown in section I, which allows it to play up and down or right and left. The arm extends through the body and passes behind a scene, L, for the purpose of hiding the mechanism. This arm or lever B terminates in a fork, E, of which a full view is shown in Fig. 3, and between which is the edge of a plate, A, which revolves on an axle, F. When an upward or downward motion of the arm is required the plate is cut away, and when a motion toward the right or left is required the plate is curved to the side, as shown in Fig. 2. Now, when this plate A, provided with indentations and curvatures, is made to revolve by clock-work or other means the pencil in the arm will necessarily trace on the slate or sheet of paper lines proportionate to the indentations and curvatures in the plate. As the drawing produced by this mechanism would be very imperfect, in consequence of the pencil never being raised from the slate or paper, and to produce any shading or elaborate drawing the plate A would have to be impractically large, I have modified that form into the mechanism as shown in Fig. 4, which, however, has also its disadvantage, in that the

arm has to be moved by the operator. The arm B differs from the one in Fig. 1, in that instead of the pencil being pressed against the slate or sheet of paper it is made stationary in the arm, and the hinge is made wider, to allow play, so that when the pencil is required to be drawn from the slate the entire arm is pulled back. This arm terminates in a point, H, which is set in a groove in the plate A. This plate A differs from the one in Fig. 1, in that it does not revolve and is put on a slide, K, that it may be moved backward or forward, and on it are grooved the lines of a drawing, as shown in Fig. 5. Now, when the point H of the arm B is made to follow the grooves in the plate A the same drawing will be produced on the slate that is grooved in the plate, only reversed. The plate must be placed upside down on the slide. Now, when the pencil is required to be drawn away from the slate the plate A is pushed back and the arm B pulled away. This plate A may be very small, and still the drawing produced on the slate be very large, owing to the length of leverage on either side of the hinge.

I do not confine myself to the hinges shown in the drawings. A ball-hinge may be used, but is less preferable.

Instead of the arm or lever B, Fig. 1, terminating in a fork, E, it may terminate in a point which would follow a groove made on the edge of the plate A.

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

1. As a means for producing drawings automatically, a plate the edge of which is provided with indentations and curvatures, substantially as shown and described.

2. As a means for producing drawings mechanically, a plate grooved on the surface, substantially as shown and described.

3. In combination with any of the plates A, an arm or lever provided with a pencil on one end and a fork or point on the other, and hinged, substantially as shown and set forth.

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Witnesses:

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