

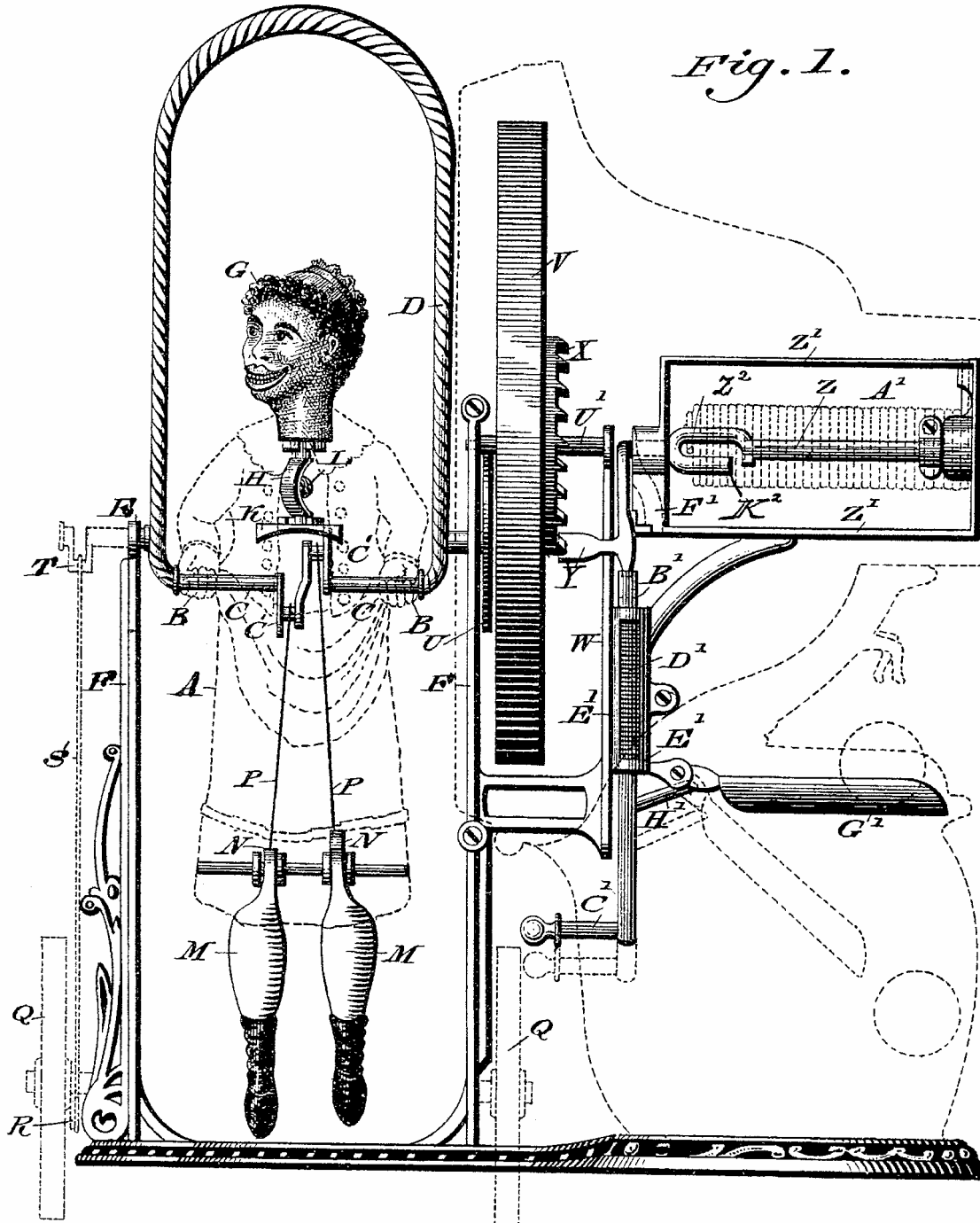
(No Model.)

2 Sheets—Sheet 1.

J. H. BOWEN.  
TOY.

No. 428,450.

Patented May 20, 1890.



*Fig. 1.*

WITNESSES:

*P. F. Doyle.*  
*L. Dowille*

INVENTOR:  
*James H. Bowen*  
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ATTORNEY.

(No Model.)

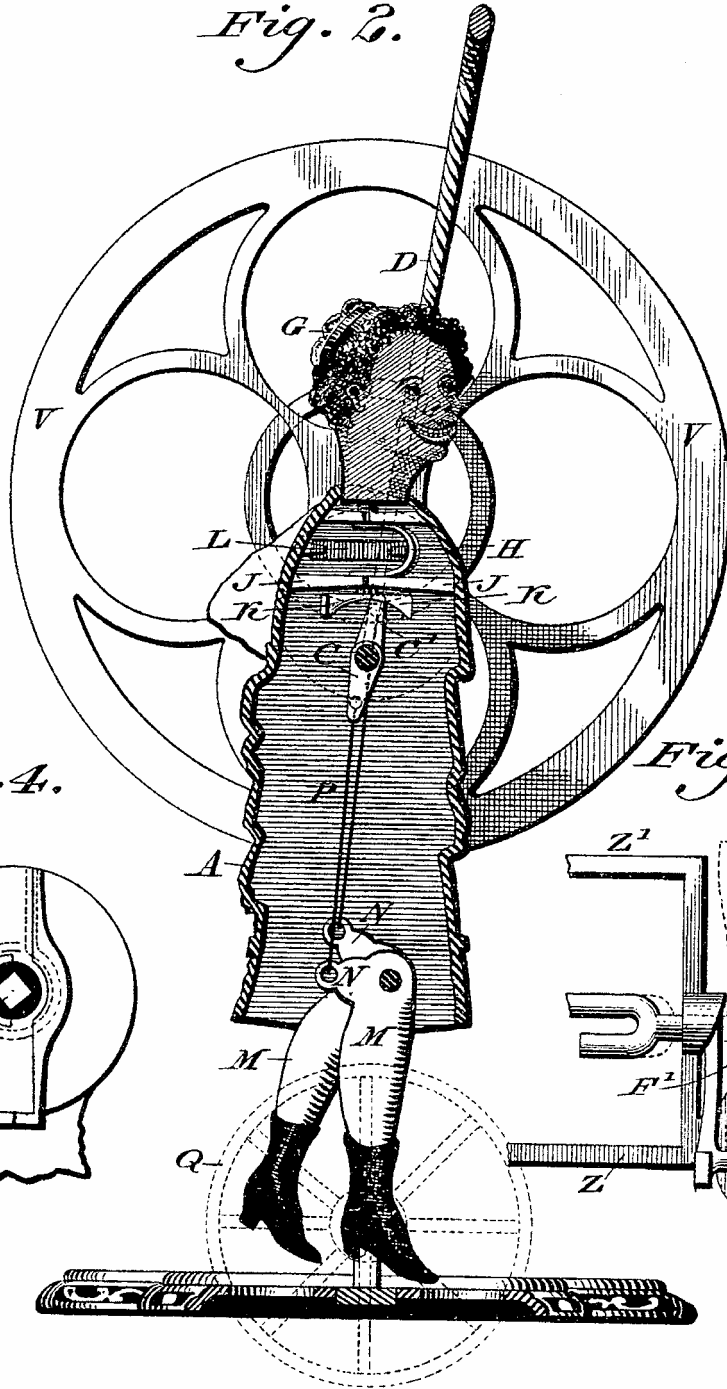
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J. H. BOWEN.  
TOY.

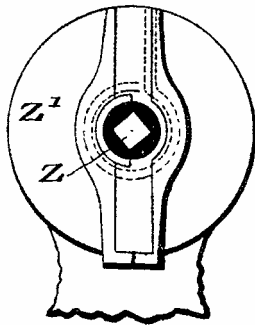
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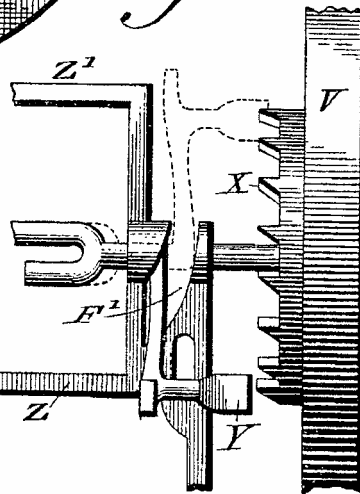
*Fig. 2.*



*Fig. 4.*



*Fig. 3.*



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# UNITED STATES PATENT OFFICE.

JAMES H. BOWEN, OF PHILADELPHIA, PENNSYLVANIA.

## TOY.

**SPECIFICATION** forming part of Letters Patent No. 428,450, dated May 20, 1890.

Application filed June 11, 1889. Serial No. 313,879. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES H. BOWEN, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Toys, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of a toy embodying a figure having a head which may be turned from side to side and legs simulating the motions of walking, the figure also rising and falling.

It also consists of means for imparting motion to the toy, as will be hereinafter fully set forth.

It also consists of other novel features, as will be described and claimed.

Figure 1 represents a front view of a toy embodying my invention. Fig. 2 represents a vertical section thereof. Fig. 3 represents a side elevation of a detached portion. Fig. 4 represents an end view of a detached portion.

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

Referring to the drawings, A designates a figure formed of suitable metal or other material, in the hands B of which is journaled a crank-shaft C, whose ends are connected with a bow or bow-shaped piece D. Projecting from the sides of the bow D near the ends of the shaft C are journals E, which are mounted on the uprights F, so that as said shaft C is rotated rising or falling motions are imparted to the figure.

G designates the head of the figure, whose neck is connected with a vertical crank-shaft H, the latter being mounted on cross-pieces J within the body of the figure and having secured to its lower end an arm K, which is located above the central cranks C' of the shaft C and so disposed that said cranks may successively strike the ends of the arm K, thus vibrating the latter and rotating the head and causing it to turn to the right and left. In order to return the head to its normal position, there is secured to the frame or body of the figure and the crank of the shaft H a spring L, the operation of which is evident.

M designates the legs of the figure, the same being pivoted to the lower end of the body of

the figure and formed with limbs N at their upper ends, forming elbow-levers or cranks, to the upper ends whereof are connected the wires or rods P, which are hung on the cranks C' of the shaft C. By this provision the legs are moved in imitation of walking, the rods P being alternately raised and lowered by the cranks C', the motions of which are communicated to the legs. The uprights F may be supported on wheels Q, the shaft whereof carries a crank R, to which is attached a connecting-rod S'. The upper end thereof is attached to a crank T, continuous on one of the journals E on the side of the bow D, by which provision the shaft C receives motion, the effect of which is to cause the turning or swaying of the head of the figure, the movement of the legs, and the ascent and descent of the figure, as has been stated, said wheels Q, cranks R and T, and connecting-rod S' being shown in dotted lines, Fig. 1.

For the purposes of a money-box, motion is imparted to the shaft C by means of a friction-wheel U, which engages with a shaft U' of the power-wheel V, said shaft U' being mounted on a frame W. On the side of the wheel V is a ratchet X, with which engages a dog or detent Y, the latter being connected with a crank-shaft Z, which is mounted on a frame Z'. Encircling said shaft Z is a coiled spring A', one end of which is connected with the frame Z' and the other end with a fork K<sup>2</sup> on the shaft Z, said shaft being also squared for the application of a key by which the spring may be wound.

B' designates a sliding latch, the upper end whereof is adapted to engage with a lip or projection on the detent Y, the lower end having a handle C<sup>2</sup>, so that the latch may be conveniently lowered, and thereby released of the holding-contact with the detent, said latch being raised and held in its normal position by a spring D', which is suitably connected with said latch and the guide E', in which the latch is fitted. The portion of the crank of the shaft Z which is adjacent to the detent Y is adapted to move in a cam-passage or bear against a cam F', which is formed on the inner end of the frame Z', it being noticed that when the shaft C is rotated in one direction and the spring A' wound up the detent Y, moving in the cam-passage F', is

advanced toward the ratchet X, and when it has fully described its motion and forced down the latch B' it then engages with said latch, so as to be locked by the same, and it  
 5 furthermore engages with one of the teeth of the ratchet X. Pivoted to the guide E' is a tray G' for receiving coin, it being noticed that the several parts enumerated, beginning with the friction-wheel U, are inclosed in the  
 10 box, (shown in dotted lines, Fig. 1,) said box being adapted to receive money or coin. Projecting from the side of the portion of the latch B' below the guide E' is a foot H', which bears against the under side of the tray G',  
 15 near the axis thereof, so as to hold the same in horizontal position, it being seen that when a piece of coin is inserted through a slot in the box so as to be dropped upon the tray G' the latch B' is lowered by the handle C', a  
 20 portion of which is outside of the money-box, whereby the detent Y is released, and as the spring A' now controls said detent the power of the spring is communicated to the ratchet, and consequently to the power-wheel V, and  
 25 thus motion is transmitted to the crank-shaft C, whereby the figure is rotated in a manner similar to that hereinbefore described. As the detent describes its rotary motion and plays in the cam-passage F', its nose is gradually  
 30 withdrawn from the engaging tooth of the ratchet X and removed from the path of the ratchet, so that the power-wheel rotates without obstruction on the part of the detent, as will be seen in Fig. 3. It will also be seen  
 35 that as the latch B' is lowered the foot H' follows the same, and thus the tray G' loses its support and drops, whereby the coin is deposited in the box, as illustrated in Fig. 1. The latch B' then returns to its normal position and again elevates the tray, after which  
 40 the shaft may be rotated, whereby the detent engages with either tooth of the ratchet and is locked by the latch.

The bow D simulates a jumping-rope, and  
 45 is constructed of metal in imitation of the twisted strands of a rope, the ends of the bow being connected with the shaft C, so that when the said shaft is operated the bow is rotated, this part of the toy when in operation producing an imitation of a child jump-  
 50 ing a rope.

Should the bow D be obstructed or stopped, it will not to any material extent interfere with or injure the features of the toy or gearing thereof, as the friction-wheel U is permitted to slip on the shaft U', the rotation of the wheel V continuing as long as its momentum endures.

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

1. A toy having a rotatable crank-shaft, a figure having hands loosely fitted on said shaft, a bow connected with the ends of said  
 65 shaft, legs pivoted to the lower part of said

figure and having angular limbs, and rods connected with crank-arms on said crank-shaft and upper limbs of the legs, said parts being combined substantially as described.

2. A toy having a rotatable crank-shaft, 70 with a bow connected with its ends, and a figure with movable head and legs, and having hands loosely fitted on said shaft, said head having depending parts adapted to be engaged by the crank-arm of the shaft, and the said legs 75 having rods connecting the angular limbs thereof with crank-arms on the said crank-shaft, said parts being combined substantially as described.

3. A toy having a figure with hands, a shaft 80 with cranks and journaled in said hands, a bow secured to the ends of said shaft, a head with vertical crank-shaft having bearings in said figure and carrying an arm the ends of which are adapted to be in contact with the cranks 85 of the shaft, pivoted legs with limbs forming elbow-levers, and rods connecting said limbs with the said cranks of the shaft, said parts being combined substantially as described.

4. A toy having a rotatable shaft with a 90 figure freely mounted thereon, a bow rigidly connected with said shaft, a second shaft in frictional contact with a wheel on the first-mentioned shaft, a wheel connected with a ratchet-wheel on the second shaft, and a 95 spring-actuated pawl adapted to contact with said ratchet-wheel and thereby rotate the same, said parts being combined substantially as described.

5. A toy having a rotatable shaft with a 100 figure freely mounted thereon, a bow connected with said shaft, a second shaft in frictional contact with a wheel on the first shaft, a ratchet-wheel on the second shaft, a frame with a shaft having a coiled spring thereon, 105 and a pawl on the end of said shaft and adapted to contact with said ratchet-wheel and thereby rotate the same, said parts being combined substantially as described.

6. A toy having a spring and a shaft act- 110 uated by the same, and a latch for rendering said spring inactive, in combination with a tray or pan which is held in operative position by means of a foot or projection on said latch, substantially as described. 115

7. In a toy, a rotatable crank-shaft with a figure freely mounted thereon, a bow secured to said shaft, mechanism, substantially as described, connected with said shaft for rotating the same, and pivoted angular limbs having 120 their upper ends connected by rods with said crank-shaft, said figure having a turning head provided with arms adapted to be moved by said crank-arms, said parts being combined substantially as described.

JAMES H. BOWEN.

Witnesses:  
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 A. P. JENNINGS.