

(No Model.)

L. KOCH.
EXERCISING APPARATUS.

No. 450,769.

Patented Apr. 21, 1891.

Fig. 1.

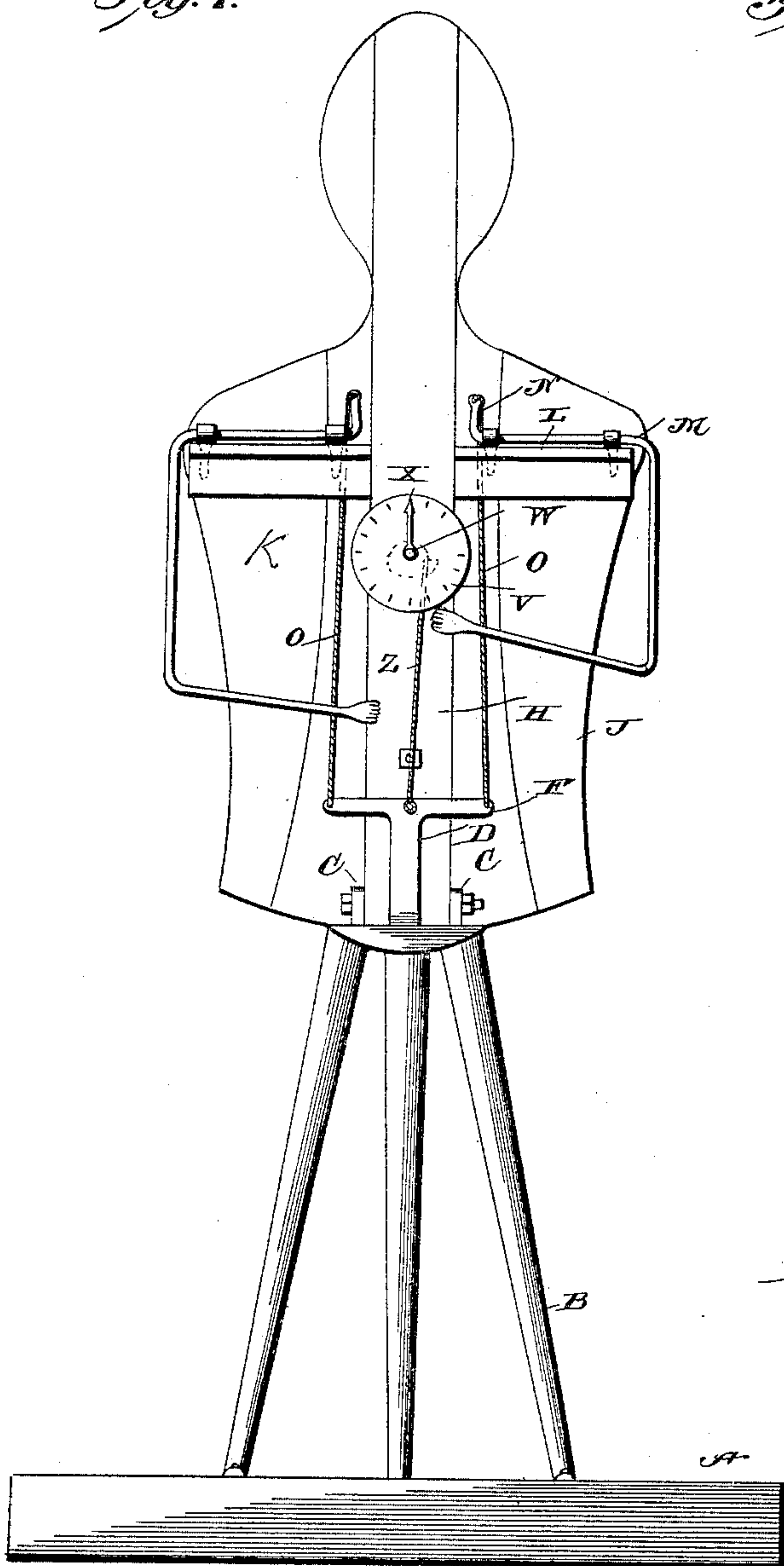


Fig. 2.

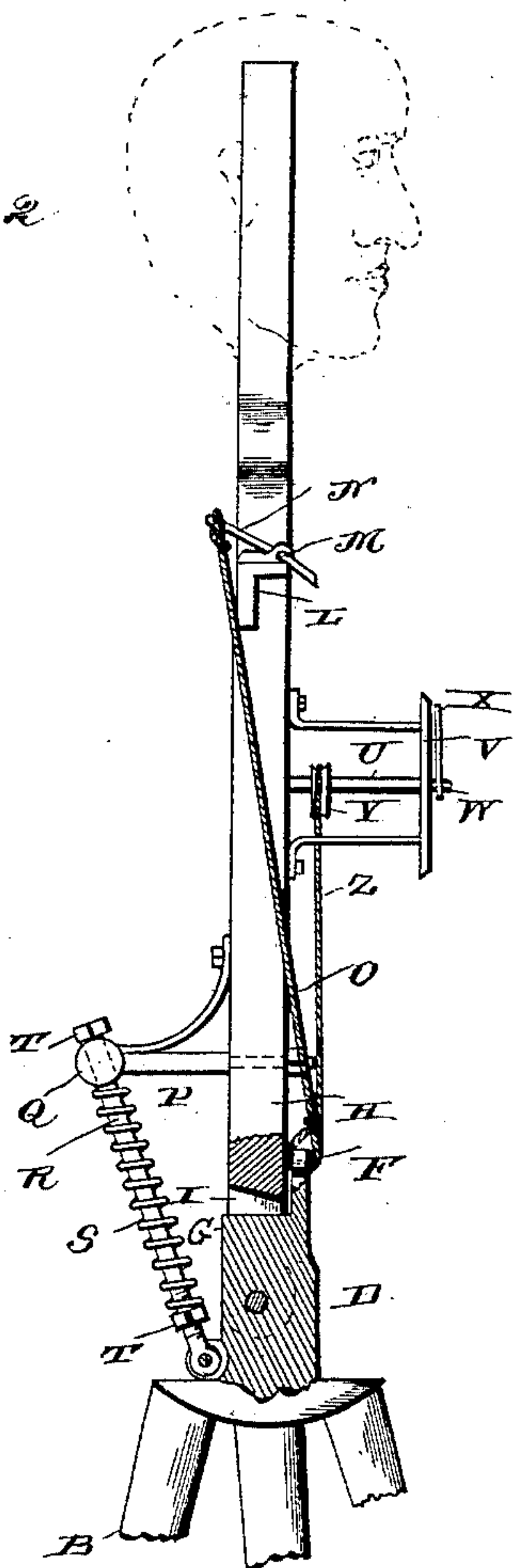
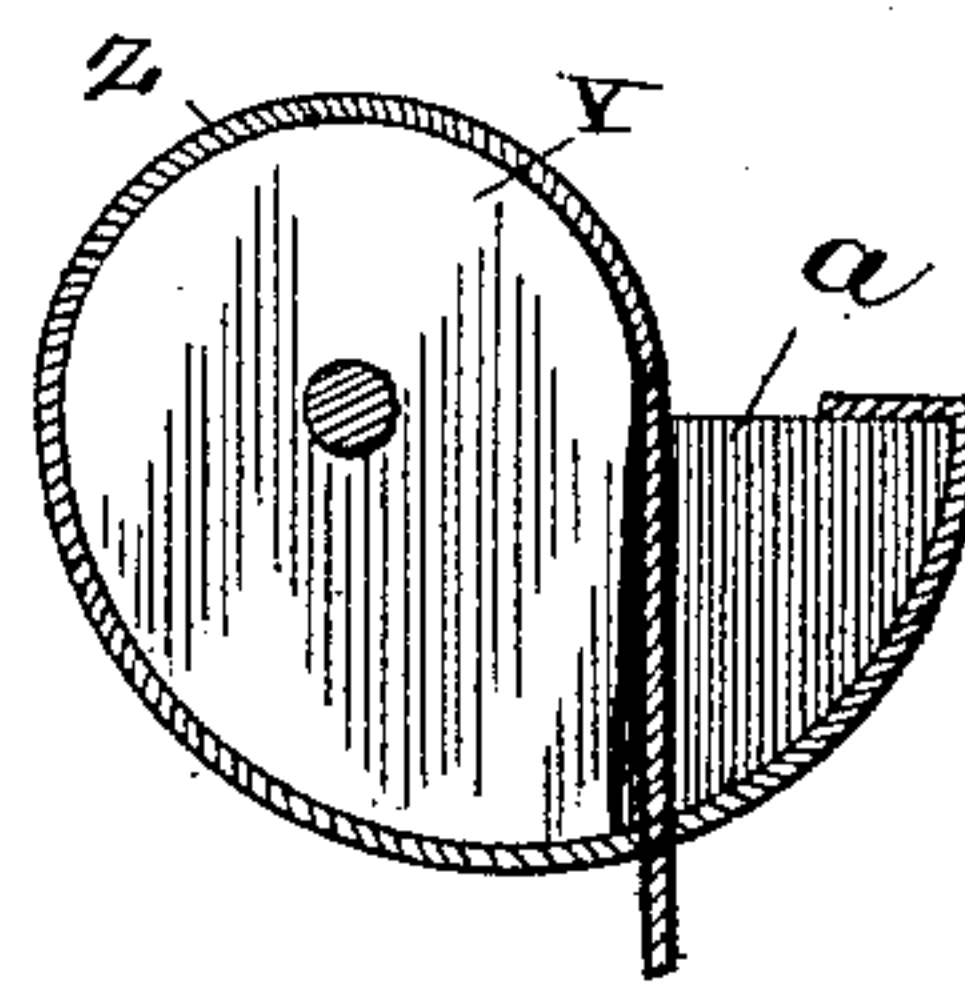


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

LOUIS KOCH, OF DENVER, COLORADO.

EXERCISING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 450,769, dated April 21, 1891.

Application filed December 29, 1890. Serial No. 376,088. (No model.)

To all whom it may concern:

Be it known that I, LOUIS KOCH, of Denver, in the county of Arapahoe and State of Colorado, have invented certain new and useful

5 Improvements in Power-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

10 My invention relates to improvements in exercising-machines; and it consists in certain novel features hereinafter described and claimed.

In the accompanying drawings, which fully 15 illustrate my invention, Figure 1 is a front elevation of my improved device, and Fig. 2 is a side elevation of the same. Fig. 3 is a detail view of the cam that turns the index.

In carrying out my invention I employ a 20 platform A, of any suitable material and of any preferred size and form. Upon this platform I erect the tripod B, which is provided at its upper end with the lugs C and the stop-block or short standard D, the said standard 25 or stop being provided with the cross-bar F at its upper end. The standard is further provided with the projection G on its rear side, and the vibratory standard or lever H is provided with a notch or open-ended slot I in its 30 lower end, which engages the said projection, as shown, the said standard or lever being pivoted to the said projection and the lugs C.

To the upper end of the vibratory lever or standard I secure the body or block J, which 35 is given a configuration corresponding to the human head, and is formed from rubber or some similar substance, so as not to injure the hand of the operator when struck thereby. This head may be hollow or solid; but in practice it will be found best to form it solid in 40 front and hollow in the back portion. The device is made to still further resemble the human figure by suitable drapery or covering K, arranged below the head and supported by 45 the vibratory standard or lever and a cross-bar L, secured thereto just below the head.

On the upper side of the cross-bar L, I mount the rock-shafts M, the inner ends of which are provided with the crank-arms N, 50 which are connected to the ends of the cross-bar F by the rods or cords O, as shown. The

outer ends of these rock-shafts are carried forward and slightly downward in front of the body of the device and are bent into the proper form to resemble the arms of a boxer 55 when in position to spar.

On the rear side of the vibratory lever or standard I provide the horizontal arm P, having an eye Q in its outer end. Through the said eye Q, I pass the upper end of a rod R, 60 which has its lower end pivoted to the stop-block D. A spring S is coiled around the rod R between the arm P and the nuts T on the said rod. This spring serves to return the vibratory lever or standard to its normal po- 65 sition after being forced backward, and the nuts serve to regulate the tension of the spring.

On the front side of the vibratory lever or standard, and preferably at about the center of the same, I secure the sleeve U, to the front 70 end of which I secure a dial V, and in which I mount a shaft W, having a pointer or index X on its front end adapted to play in front of the dial. On the rear end of the shaft W, I secure a cam Y, which is connected to the 75 cross-bar F by a cord Z, which passes around the edge of the cam and has its end secured to the point thereof, a recess α being formed in the back of the cam to permit the cord to pass downward in rear thereof to the cross- 80 bar F.

The operation of the device is thought to be obvious from the foregoing description, when taken in connection with the accompanying 85 drawings. The operator or person using the device assumes a position in front of the figure and then strikes the head of the same with more or less force with the fist or hand. The vibratory lever will be thus thrown back- 90 ward, and the spring will be compressed and act to return it to its former position. When the lever swings rearward, the sleeve U and shaft W will be carried rearward and the cord α consequently made to turn the shaft, and thus rotate the index or pointer in front 95 of the dial to indicate the force of the blow. Simultaneously with the movements just described the rods or cords O will cause the rock-shafts M to turn in their bearings, and the outer ends of the said shafts will thus be 100 caused to swing upward in imitation of a man striking a blow. By making these arms of

the proper size the machine will be adapted to train a boxer to withstand the blows given him by an opponent in a boxing-match.

The advantages of the device are thought
5 to be obvious. The force required to strike the head of the figure a blow sufficient to send it backward develops the muscles of the arm very thoroughly, and the tension of the spring can be easily regulated, so as to require more
10 or less strength to swing the lever, according to the strength and experience of the operator using the device. By making the device in small sizes a very amusing toy may be provided, and as the machine is composed of very
15 few parts and can be cheaply manufactured I purpose so producing toys. The front legs of the supporting tripod may be draped, if so desired, and the resemblance to the human figure thus made nearly perfect. It will be
20 noticed, upon reference to the drawings, that the stop-block extends upward in front of the lower end of the vibratory lever, so as to prevent the same from swinging too far forward.

Having thus described my invention, what

I claim, and desire to secure by Letters Patent, is—

1. The combination of the tripod, the vibratory lever pivoted thereto, the stop-block, and the spring arranged between the stop-block and the lever, as set forth. 30

2. The combination of the support, the vibratory lever mounted thereon, the stop-block, the rock-shafts, and the rods or cords connecting the said rock-shafts with the said stop-block, as set forth. 35

3. The combination of the support, the vibratory lever mounted thereon, the index and shaft carried by the said lever, the cam on the said shaft, and the cord connecting the said cam with the support, as set forth. 40

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

LOUIS KOCH.

Witnesses:

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S. A. LAYTON.