(No Model.)

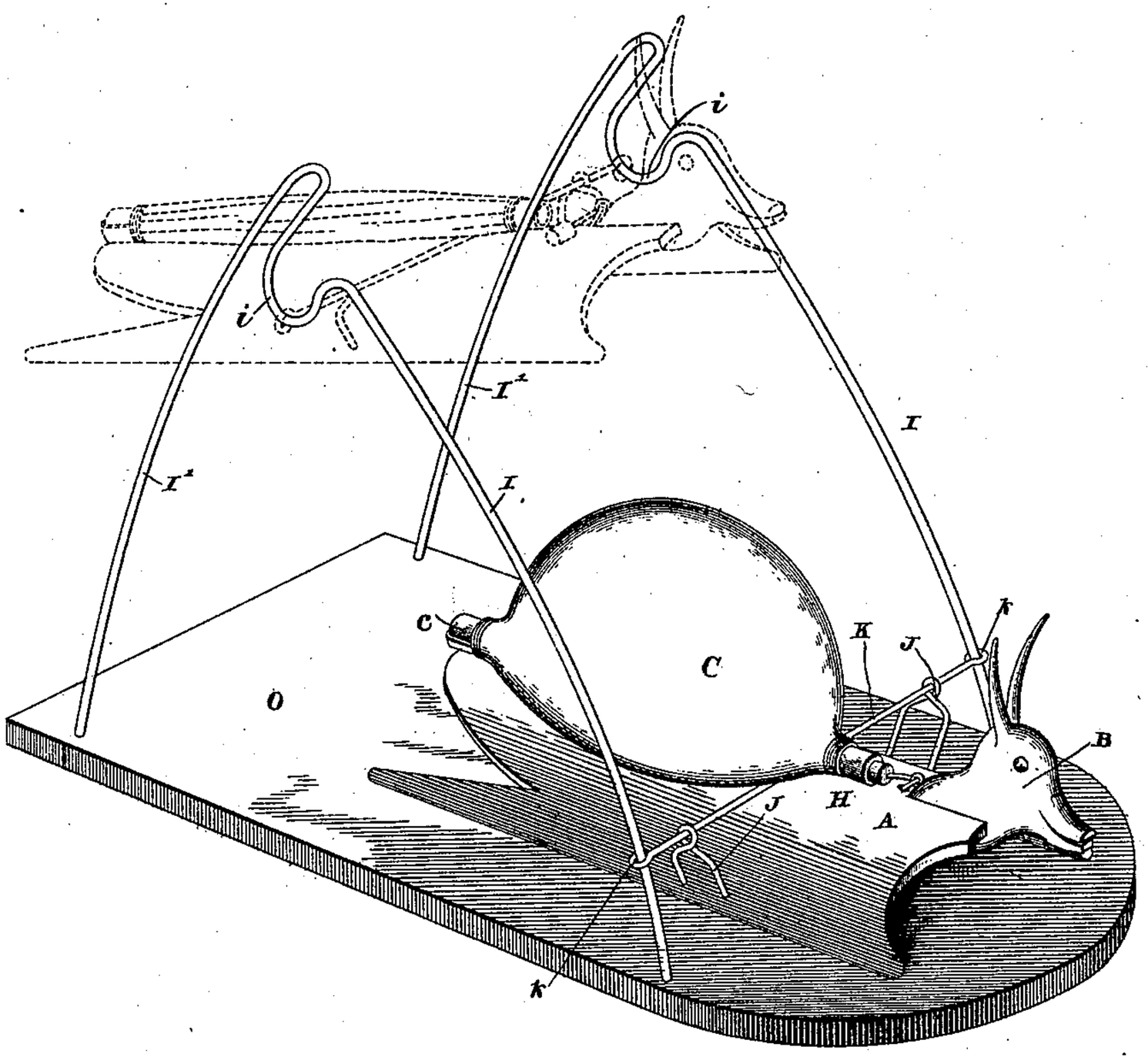
2 Sheets—Sheet 1.

J. W. TURNER.

MECHANICAL TOY.

No. 502,790. Patented Aug. 8, 1893.

Fig. 1.



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(No Model.)

2 Sheets—Sheet 2.

J. W. TURNER.

MECHANICAL TOY.

No. 502,790. Patented Aug. 8, 1893.

Fig. 2.

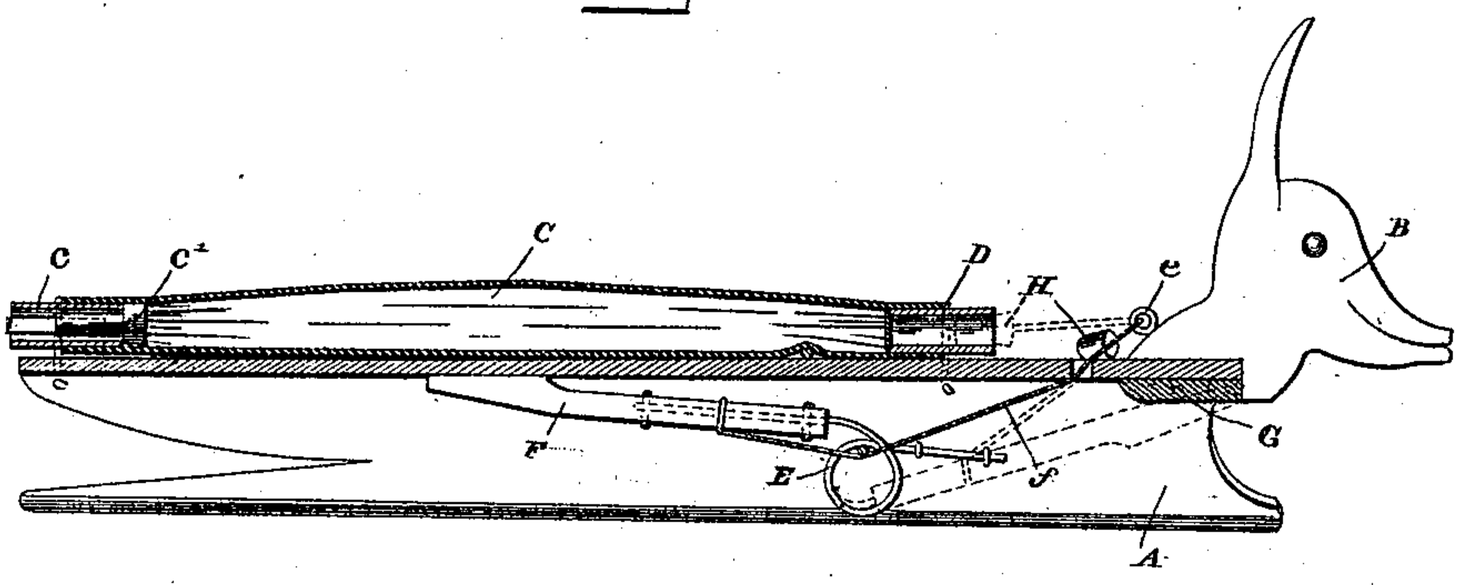
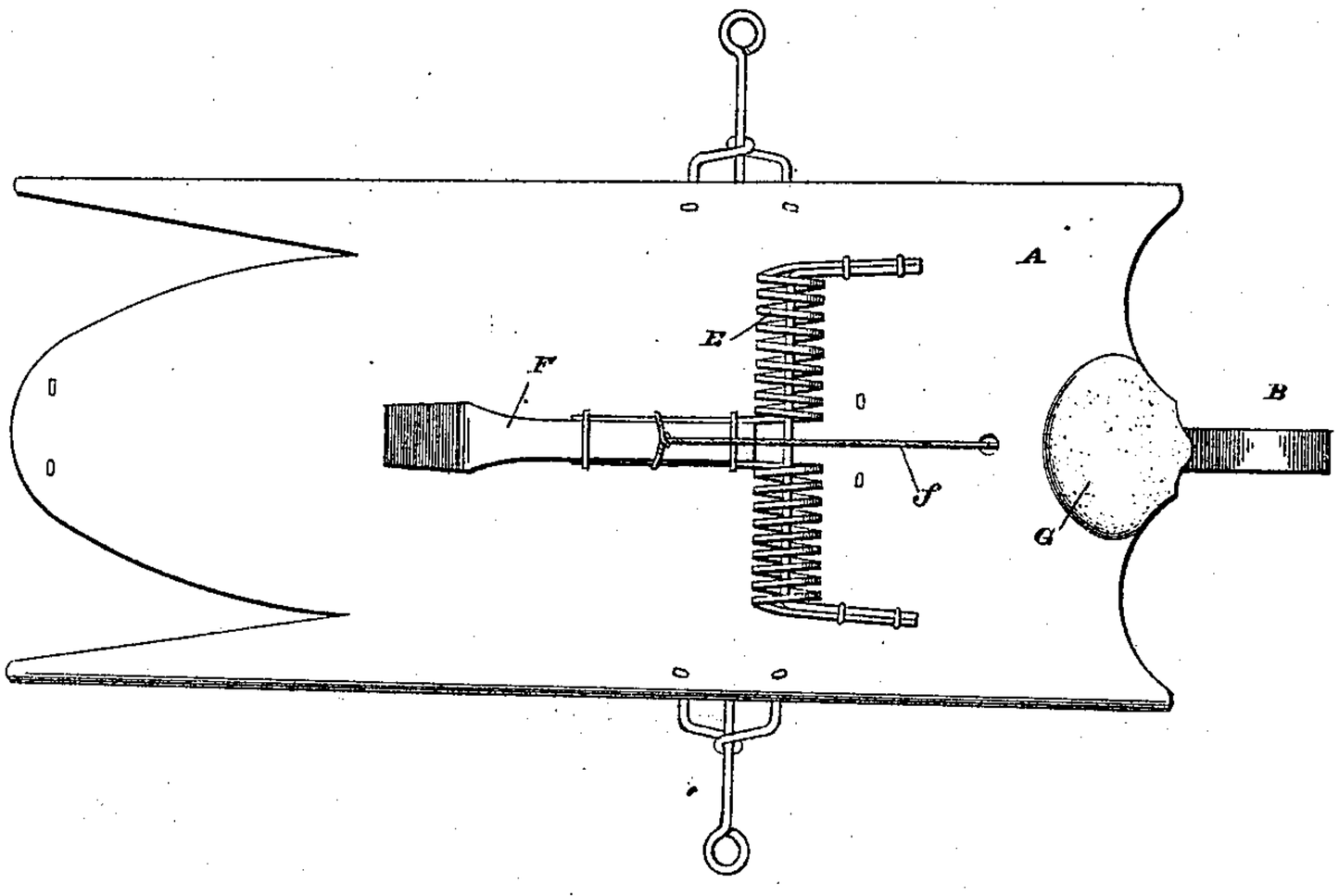


Fig. 3.



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UNITED STATES PATENT OFFICE.

JACOB W. TURNER, OF VAN WERT, OHIO.

MECHANICAL TOY.

SPECIFICATION forming part of Letters Patent No. 502,790, dated August 8, 1893.

Application filed August 31, 1892. Serial No. 444,684. (No model.)

To all whom it may concern:

Be it known that I, JACOB W. TURNER, a citizen of the United States, residing at Van Wert, in the county of Van Wert and State of Ohio, have invented certain new and useful Improvements in Mechanical Toys; 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.

This invention has reference to a mechanical toy.

The object of the invention is to provide an amusing and salable toy device of simple and cheap construction which will afford pleasure by its remarkable gyrations resulting from its automatic flying which is caused by the action of mechanical contrivances arranged in connection with a suitably-shaped and preferably mechanical figure or jack, and the invention therefore consists in the construction, arrangement and combination of the several parts substantially as will be hereinafter described and then particularly pointed out in the appended clauses of claim.

In the accompanying drawings illustrating my invention: Figure 1 is a perspective view of my improved mechanical toy, the flying figure being shown in full lines in one position and in dotted lines in another position. Fig. 2 is a longitudinal sectional elevation of the same. Fig. 3 is a bottom plan view.

Similar letters of reference designate corresponding parts throughout all the different figures of the drawings.

In carrying my invention into practical effect I first provide a suitably shaped figure of wood, metal or any other preferred substance or material. This figure may be made in the likeness of a bird or an animal or any other conventional or desired form. I am restricted to no particular shape or size for this figure or jack, as it may be termed. In the particular example of jack shown in the drawings and designated by the reference letter A, it will consist simply of a curved wooden piece, convex on the top and concave on the bottom and provided at its outer end with a horned head B which serves to give the figure a striking and remarkable appearance especially when said figure is performing its aerial revolutions in the manner to be hereinafter fully set forth.

The jack A is provided with a balloon, as C. This balloon is adapted to be inflated and collapsed in the manner in which I shall presently specify. It is shown in its inflated condition in Fig. 1 and in its collapsed condition in Fig. 2. It may be of any suitable kind, size and form and arranged upon any suitable part of the jack A, as for instance upon the back or top thereof, being secured thereto in any suitable manner. I preferably use a balloon of the ordinary variety such as are used by children as toys, the same having at one end an inlet valve through which air can be blown for the purpose of inflating the balloon, said valve consisting simply of a small tube *c* and an automatic puppet *c'* within the tube *c*. The puppet *c'* being held in place by a rubber band so that when the air blows through the tube *c* it will open the valve, and when the air ceases to blow, the valve will automatically close under the action of the rubber. The other end of the balloon is provided with a small tube D inserted therein and carrying a whistle. This tube D is closed by means of a plug H carried on the end of a cord *f* which passes through the staple *e* and then downward through the perforation in the main part of the plate A, having its lower end attached to the spring hammer F. The actuation of the spring hammer F, as will be presently explained, operates to automatically withdraw the plug H from the tube D, permitting the air to be expelled from the balloon at that point, the result of which expulsion of the air will be to blow the whistle contained within the tube D.

The jack A is provided on its under side with a coiled spring E or any other elastic device of considerable strength. Said spring is securely fastened to the hammer F and acts normally to throw the spring backward into the position shown in full lines in Figs. 2 and 3. Immediately below the head B, the piece A is provided with a mass of wax or other suitable adhesive material, its adhesive power being sufficient to enable it to hold the hammer F in contact with itself for a short time, thereby overcoming the power of the spring E, until at length as the adhesive force of the

wax gradually becomes weakened, the hammer will disengage itself therefrom and fly backward under the impulse of the spring, striking first the table and then the under side part A and causing the latter to bound upward, and at the same time that the hammer thus flies back, it pulls upon the cord *f* and withdraws the plug H from the tube D so that air rushes out from the inflated balloon and the whistle is blown with a shrill noise.

So much for the general description of the construction and arrangement of the essential parts of my improved mechanical toy. I will now describe how the same may be arranged upon a support if desired and will then explain the operation of the toy.

In Fig. 1 I have shown the toy arranged in connection with a support. Of course this support is not indispensable. It may be used or not, as desired. The toy is equally effective and amusing whether it be provided with the supporting frame or not. It will operate as readily if it is arranged as shown in Figs. 2 and 3, as it will if it is combined with the base and rods which are illustrated in Fig. 1. In Fig. 1 the mechanical toy is shown as resting upon a flat board O, which constitutes a base or table. Said board is provided at each side with upwardly extending bent rods having the forward inclined parts I I and the rearward inclined parts I′ I′, there being loops or bends *i i* at the upper points of these wire frames. The mechanical figure A is provided on its upper side with a pair of staples J J, having eyes which support the horizontal rod K which has at each end an eye *k* through which pass the rods I I of the wire frames just described. Thus it will be seen that the toy is in this way connected with the supporting framework and that when it flies upward it will be guided in its movements by the rod K which slides upon the rods I I until it reaches the loops *i i* when the toy will be balanced in mid air in such a position that it can revolve a number of times upon the rod K, as an axis. In other words, when the supporting framework just described is employed in connection with the toy, said toy in flying upward, will not move at random but will be guided in such a manner as to have a uniform and steady movement. By referring to Fig. 1 the position of the toy at the upper portion of the frame is indicated in dotted lines.

I will now describe the use and operation of the toy. The user will first place the hammer F in contact with the adhesive material G and at the same time will insert the plug H into the tube D, thereby effectively closing the same. He will then inflate the balloon by blowing through the valve therein. After it has been fully inflated, it will then be allowed to rest upon some suitable support, either the board O of the supporting frame or some other surface. When the hold of the wax upon the hammer F has weakened sufficiently to cause the automatic disengagement of the hammer therefrom, said hammer will fly backward, striking first the table and then the under side of the part A with considerable force and at the same time removing the plug H from the tube D. The result of this action of the hammer F will be to cause the toy to leap into the air and perform numerous gyrations or revolutions, presenting in so doing a startling and novel appearance owing to the peculiar construction of the animal or other head with which the jack is provided and indeed the peculiar configuration of the entire jack. When the supporting frame is not used, the jack will have no guide for its movements in the air but will leap at pleasure. When the support is provided however, the jack will fly upward until it rests upon the looped top of the frame, when it will perform numerous revolutions as long as the impulse given it by the blow of the hammer is in effect in keeping it in motion. While the jack is thus leaping about or revolving in the air, the balloon will be collapsing and causing the whistle to blow so that the resulting shriek will appear to come from the flying animal. Thus it will be seen that a balloon provided and whistle-provided animal will give a loud shriek as it flies about wildly, the shriek being in keeping with its movement and the whole device presenting a laughable and remarkable appearance.

Many changes may doubtless be made in the exact construction of the various parts of my improved mechanical toy and in their relation to each other for the purpose of performing the results which I have in view, and I therefore reserve the liberty of making such changes in the structure and arrangement of the parts as may appear desirable and necessary.

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

1. A mechanical toy consisting of a jack, shaped like an animal, bird or in any other form, in combination with an automatic whistle thereon, a spring actuated hammer, means for temporarily holding said hammer and a connection between the hammer and the whistle so that when the hammer is released, the device as well as the whistle will be simultaneously actuated.

2. The combination of the jack, a whistle thereon having an inflated bag and a plug, the spring actuated hammer on the jack, adhesive means for holding said hammer temporarily in a retracted position and a connection between the hammer and the aforesaid whistle plug, substantially as described.

3. In a mechanical toy, the combination of a mechanical figure, shaped to represent a bird, animal or other creature, in combination with a balloon secured thereto, said balloon having an automatic valve at one end and a whistle at the other, which whistle is provided with a plug, a spring actuated hammer secured to the mechanical figure, adhesive means for temporarily holding the hammer in

a retracted position and a connection between the hammer and the whistle plug so that when the hammer is released the latter will be set in violent motion and the whistle at the same time caused to blow, substantially as described.

4. The combination with a whistle-provided automatic operating mechanical figure having a horizontal rod thereon, of the bent rods combined with a flat base, said rods having loops at their upper portions which receive the rod on the mechanical figure and permit the same to revolve at that point under the action of its automatic mechanism, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JACOB W. TURNER.

Witnesses:
D. L. CORBIN,
EDWARD C. STITZ.