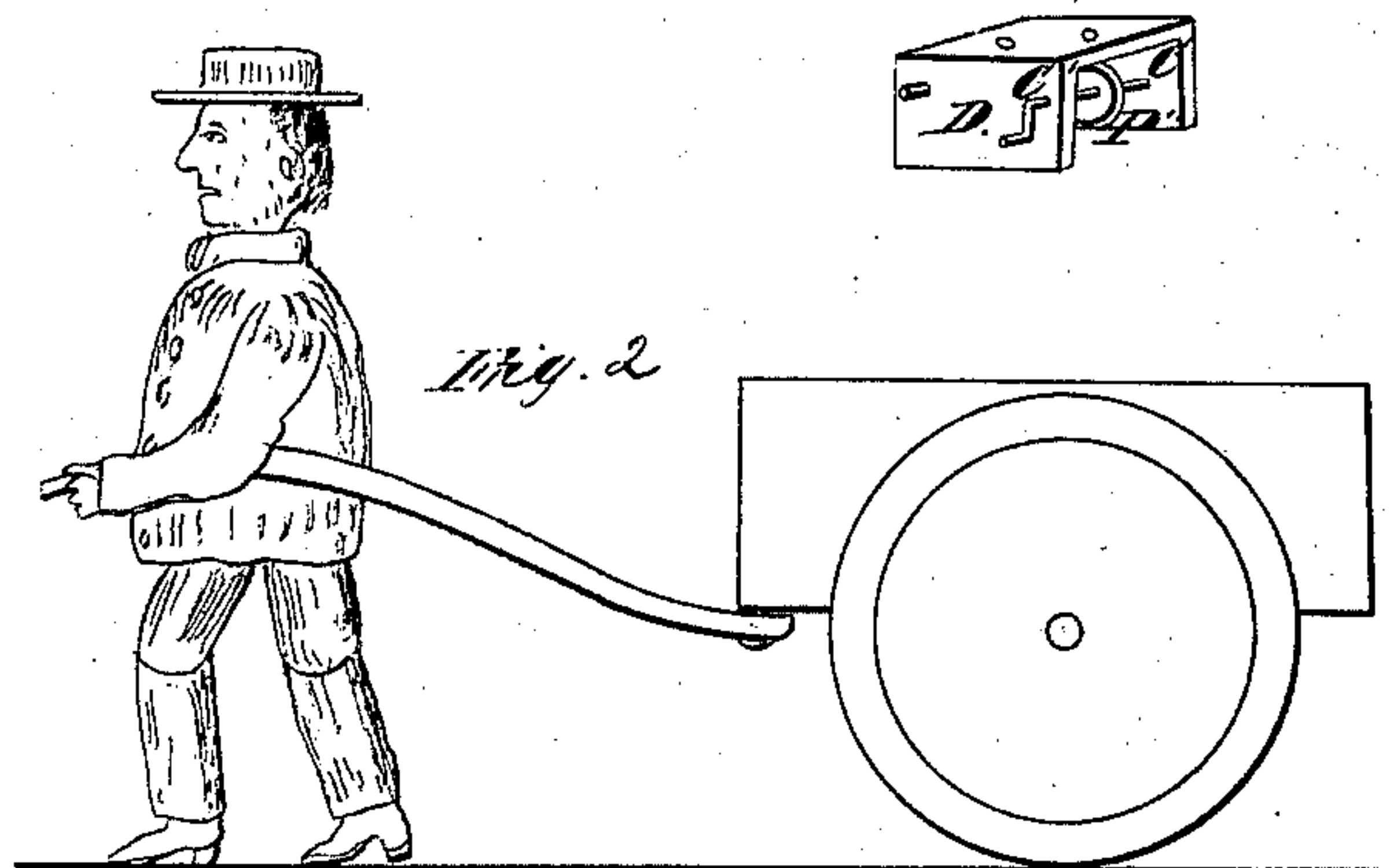
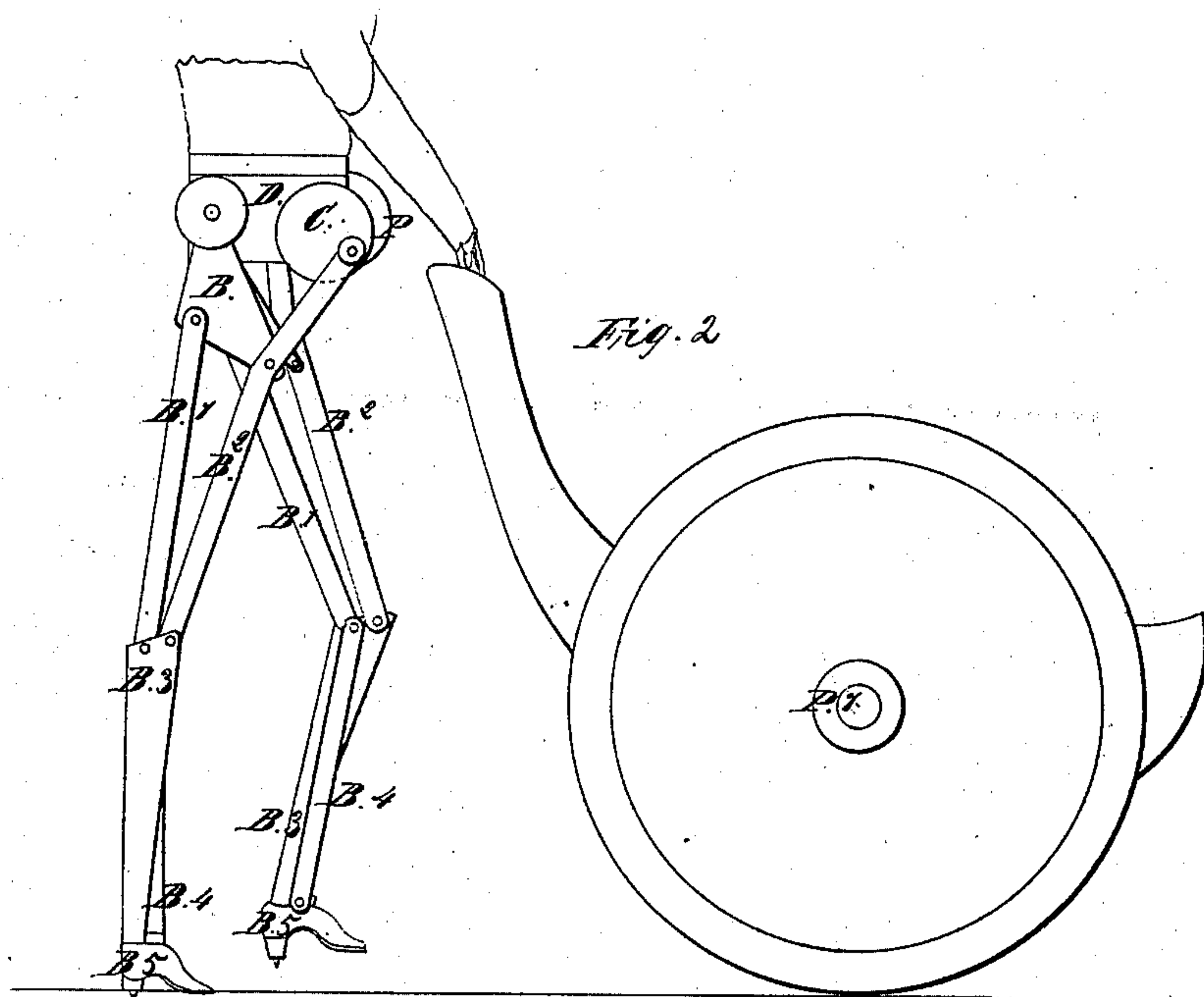


W. F. Goodwin,
Automatic Toy,
No 81,491,
Patented Aug. 25, 1868.



Witnesses.

A. Mahon
Moses Foster

Inventor

W. F. Goodwin

United States Patent Office

WILLIAM F. GOODWIN, OF EAST NEW YORK, N. Y.

Letters Patent No. 81,491, dated August 25, 1868.

IMPROVED AUTOMATIC TOY.

The Schedule referred to in these Letters Patent and making part of the same.

TO WHOM IT MAY CONCERN:

Be it known that I, WILLIAM F. GOODWIN, of East New York, county of Kings, and State of New York, have invented a new and useful Improvement in Automaton Toys; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 represents the legs of a toy, made to imitate the movements of the human leg, constructed and operated on my improved plan.

Figure 2 represents the same when dressed and attached to a toy-carriage.

Letter A is the stud or pivot on the hip, to which the leg is attached. Letters B, B¹, B², B³, B⁴, and B⁵ are the bars or pieces composing the leg and foot. Letters C and C' are the cranks and crank-shaft. Letter D represents the frame to which the legs and body are attached.

The construction and operation of the movement will be understood by those skilled in the art of mechanics, by referring to the drawings, assisted by the following description of the manner of operating the toy.

The legs and body are made and joined together, substantially as shown in drawings, and attached to a carriage with wheels, or other suitable support, in the manner shown.

The toy is operated by drawing it on the floor or ground. The feet coming in contact with the surface on which the toy is drawn, causes the legs to walk; the legs being attached to the cranks on the revolving shaft, operate together; the traction of the foot in contact with the floor, causes the cranks to revolve, which operates on the other leg, causing it to raise its foot, bend its knee, raise the whole leg, and step forward, making a step in imitation of the motions of the human leg and foot.

The toy can be operated by a string or band passing over the pulleys P and P', on the shaft C' and axle of the wagon, or may be operated by a spring, in any manner that will give rotation to the shaft C' and cranks C, or to the axle or wheels of the wagon. The same arrangement can be used to imitate the movements of a variety of animals, by very slight changes in the lengths of bars and points of attachment. A less or greater number of bars may be employed in the construction of the legs, and made to operate or walk, on the same principle. The points or stickers in the heels are to prevent the feet from slipping.

Having now described the construction and operation of my invention or improvement, what I claim as new, and desire to secure by Letters Patent, is—

1. In the construction of the leg of a toy, adapted to imitate the movements of the natural leg, the attachment of the bar B⁴ to the lower end of the bar B¹, and to the foot, at a point in advance of the point of attachment of bar B³ to said foot, substantially as and for the purpose shown and described.

2. The frame or hip-plate D, to which the legs are attached, and by means of which said legs are connected with the body of the toy, substantially as described.

3. The construction of the legs or movable parts of the toy, substantially as described, whereby, when the toy is moved over the floor, the said parts are caused to imitate the movements of the corresponding parts of the natural limb which it is designed to represent, substantially as set forth.

4. The legs of a toy, made of one or more pieces, connected with cranks, or the equivalent thereof, and operated or made to walk by contact of the feet or lower extremities with the surface over which the toy is propelled or drawn.

WM. F. GOODWIN.

Witnesses:

MOSES FOSTER,
ALEX. MAHON.