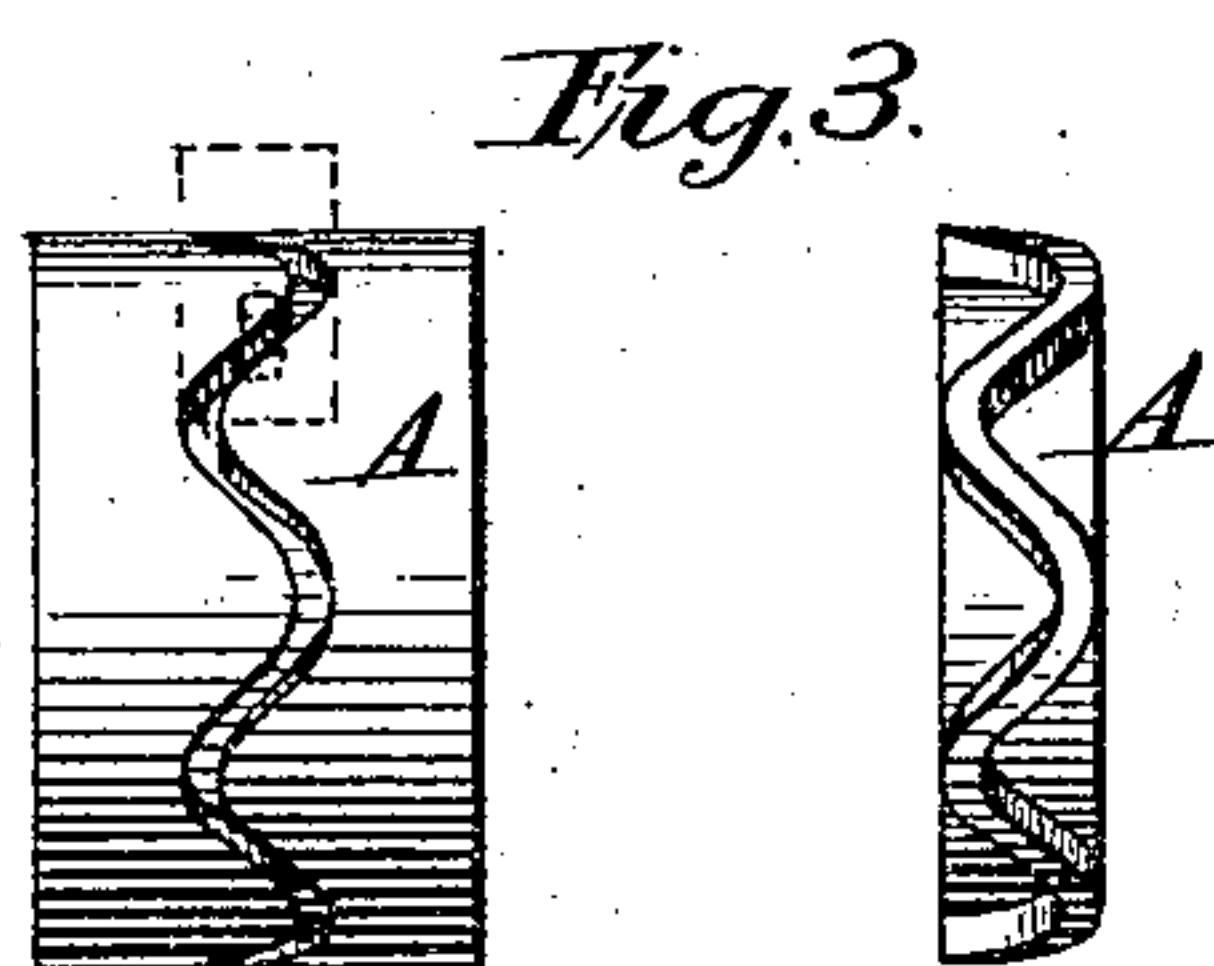
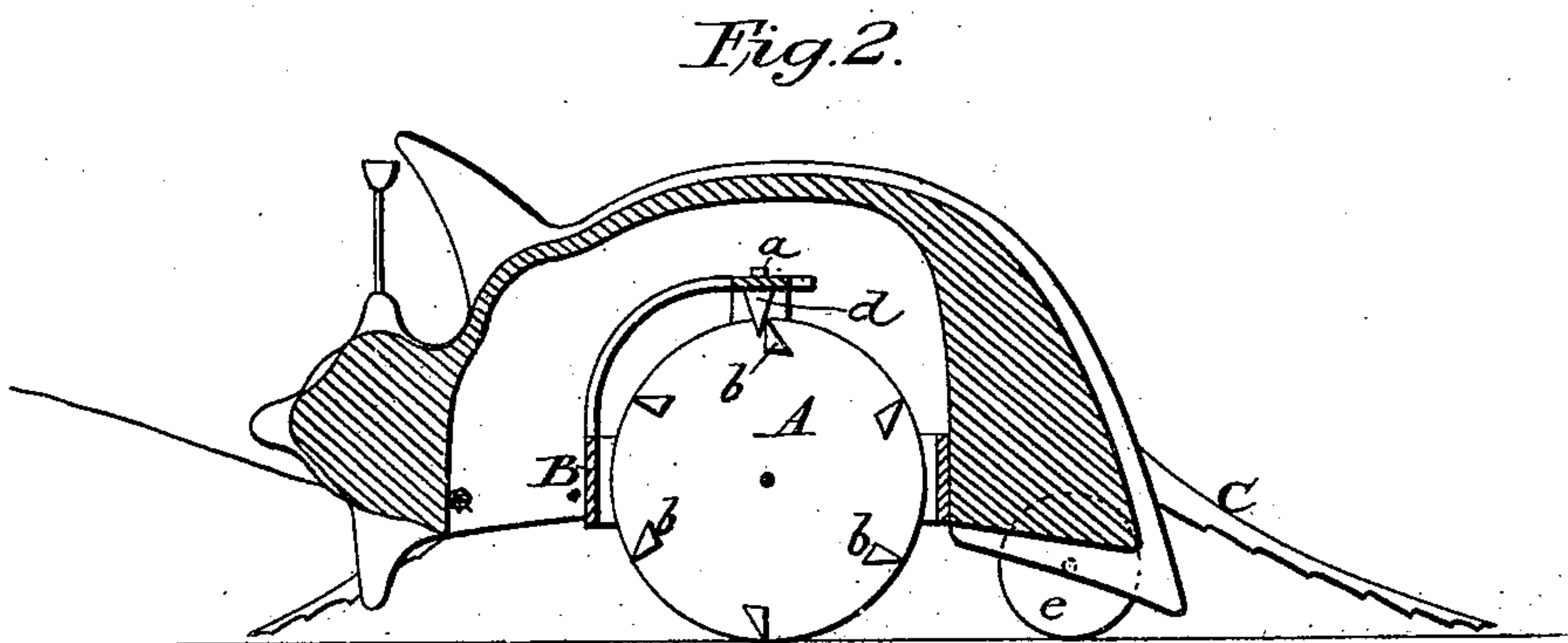
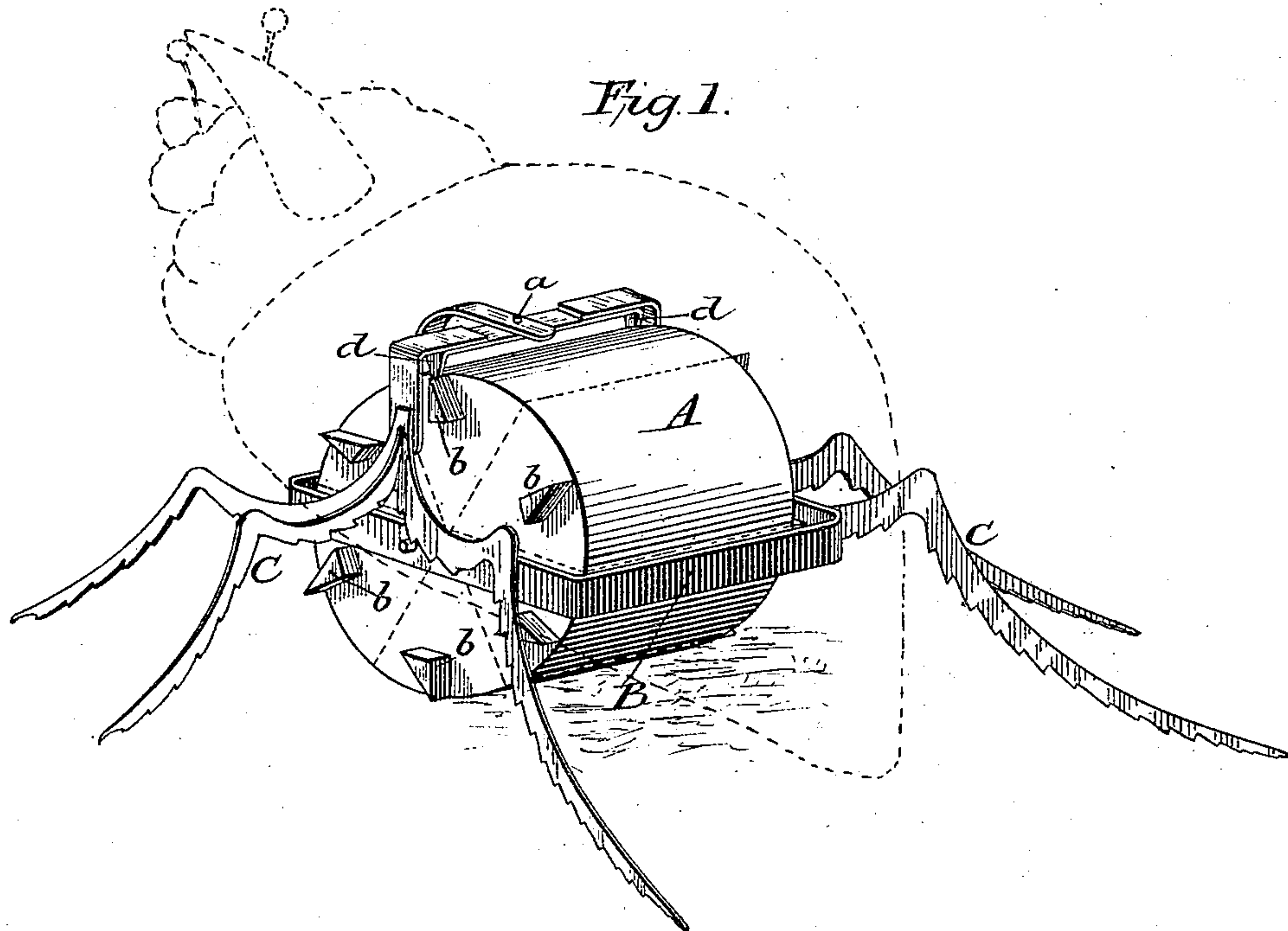


P. VON ERICHSEN.
Creeping Toy.

No. 228,231.

Patented June 1, 1880.



Attest.

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UNITED STATES PATENT OFFICE.

PAUL VON ERICHSEN, OF WASHINGTON, DISTRICT OF COLUMBIA.

CREEPING TOY.

SPECIFICATION forming part of Letters Patent No. 228,231, dated June 1, 1880.

Application filed February 28, 1880.

To all whom it may concern:

Be it known that I, PAUL VON ERICHSEN, of Washington, in the county of Washington, District of Columbia, have invented certain
5 Improvements in Creeping Toys, of which the following is a specification.

My invention relates to a toy made to imitate a creeping insect; and it consists in a body having a supporting cam-roller, which
10 imparts an alternating motion to a set of legs suspended from a common pivot in the body.

The invention further consists in details of construction hereinafter more fully set forth.

In the accompanying drawings, Figure 1 is
15 perspective view, illustrating the construction and arrangement of the supporting and operative parts; Fig. 2, a longitudinal section; Fig. 3, views showing certain slight modifications of the operating-roller.

20 Toys have hitherto been made in a great variety of forms and representing many animate objects—as illustrated, for instance, in the well-known crawling and walking dolls, acrobatic performers, and other familiar toys.
25 In one instance a crawling motion was imparted to a toy representing a turtle, the legs being caused to swing upon pivots by means of cams formed upon a rotating disk, which latter was caused to revolve by means of a
30 spring. Such toys are, however, necessarily expensive and liable to become inoperative or out of order.

The object of my invention is to produce a toy which, while it shall imitate closely the
35 creeping movement of the insect represented, shall at the same time be comparatively inexpensive, simple in construction, and durable. To this end I cast or otherwise produce a body in close imitation of the insect to be represented, and mount the same upon a supporting-roller provided either with alternate cams
40 or studs at opposite ends, or with a cam groove or flange adapted to engage with some portion of a set of legs suspended from a pivot within
45 the body, the parts being so arranged that as the toy is drawn forward the legs shall be caused to move alternately forward and backward on opposite sides.

Referring to the drawings, A represents the
50 supporting-roller, journaled at its ends in a frame, B, formed either separately from or in

one piece with the body, as desired, and C the legs, formed in one piece or of several pieces attached to a common center, and suspended from an arm or from the body by a pivot, *a*. 55

By referring to Fig. 1 it will be observed that the roller is furnished on its end faces with studs or cams *b*, and also that the studs at one end are placed on a line midway between those at the opposite end. 60

It will also be observed that the legs C are furnished with or attached to a horizontal cross-bar extending over the roller from end to end and provided with a tappet, *d*, at each side to engage with the studs or cams *b*. 65

The parts being thus constructed and arranged, it will be observed that upon drawing the toy forward, which is done by means of a thread or hair, the roller will be caused to rotate and travel and one of its studs to engage with one of the tappets *d*, carrying the legs on that side forward and those on the opposite side backward. This continues until the stud or cam *b* rides out from behind the tappet, when a stud or cam at the opposite
70 side engages with the tappet or projection *d* at the opposite end of the cross-bar; reversing the movements of the legs. This alternate movement of the legs takes place rapidly and produces a very perfect imitation of the crawling of an insect. 80

The face of the roller will, in practice, be roughened, in order that it may not slide while turning.

It is apparent that, instead of employing the
85 studs or cams *b*, a cam-groove may be made in the face of the roll, or a wave-like or cam-shaped flange may be formed thereon, and an arm extending from the cross-bar adapted to engage in or upon the same, and thus effect
90 the same action of the parts as above, as shown in Fig. 3.

The body may be made in one piece with the frame and supporting-arm of the cross-bar, or they may be inserted in a previously-
95 formed body, as preferred.

In practice it is found desirable to provide the body with a small supporting-wheel, *e*, in rear of the main roll, as shown; but this is not essential. 100

The body is preferably cast of pewter, lead, or other soft metal, as they possess considera-

ble weight, and cause the roller to work more perfectly on this account. Other metals or substances may, however, be employed.

5 The legs are arranged to travel just clear of the surface on which the toy is placed.

I am aware a spring-driven supporting-roll serving to advance the toy and to impart motion to its parts is old, and that toys have been mounted upon wheeled supporting-plat-
10 forms and operated by the wheels thereof, and I make no broad claim thereto; but I am not aware that an internal supporting-roll rotated by drawing the toy forward has ever before
15 been caused to impart to the legs of the toy a motion in imitation of walking or crawling.

Having thus described my invention, what I claim is—

1. In a toy insect, the combination of a cam-roller adapted and arranged to be rotated without interruption by drawing the toy for-
20 ward, and pivoted or swinging legs receiving an alternating motion therefrom, substantially as described.

2. The herein-described toy, consisting of the body, the legs suspended therein, and the
25 cam-roller, serving both to support the body and operate the legs, and adapted and arranged to rotate and travel continuously forward, as shown and described.

PAUL VON ERICHSEN.

Witnesses:

WILLIAM W. DODGE,
ELIZA JUNKEN.