2. Sheets, Sheet. 1.

H. A. House,

Automatic Toy.

No. 109,618. Patented Nov. 29. 1870.

Fig. 1

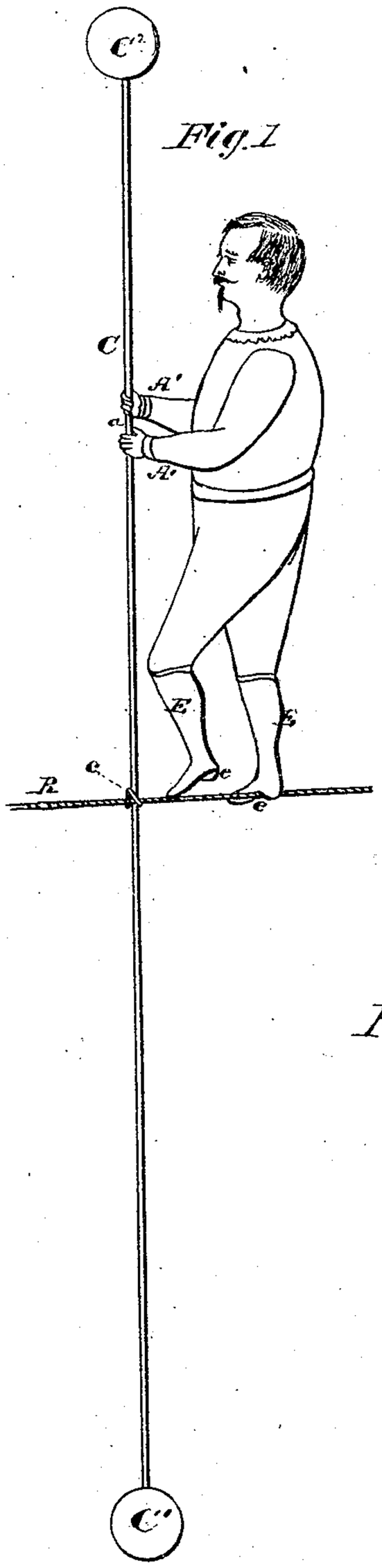


Fig. 2

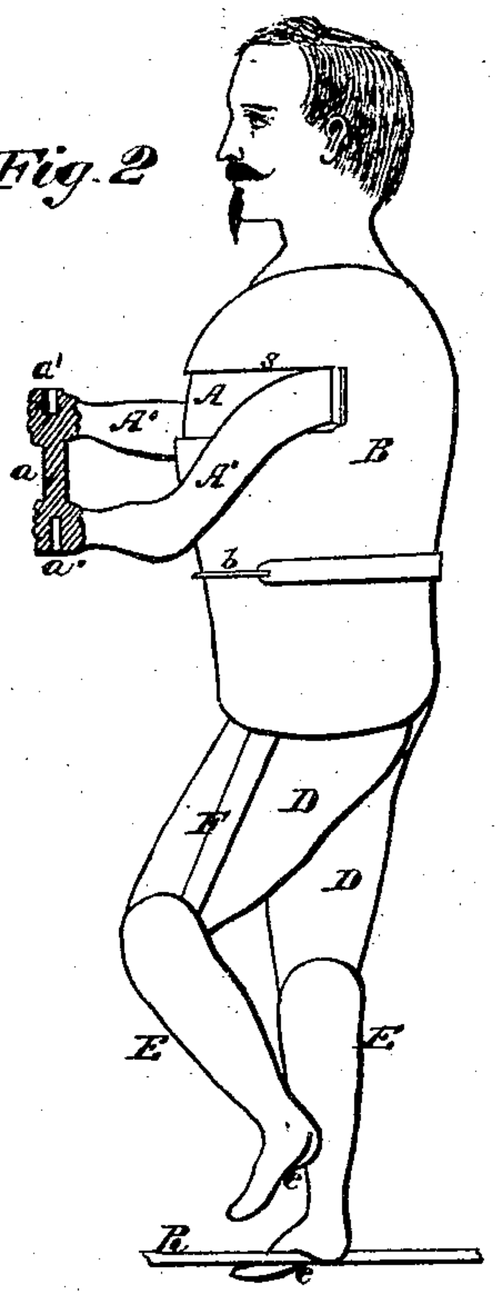
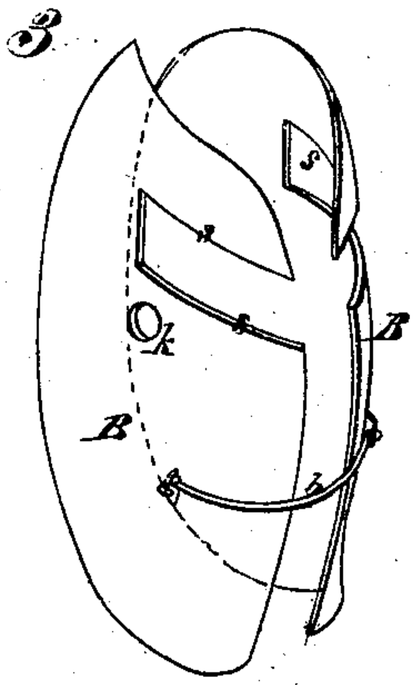


Fig. 3



Witnesses.
R. T. Campbell
J. N. Campbell

Inventor
Henry A. House
by
Mason, Fenwick & Lawrence

2 Sheets, Sheet 2.

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Fig. 4

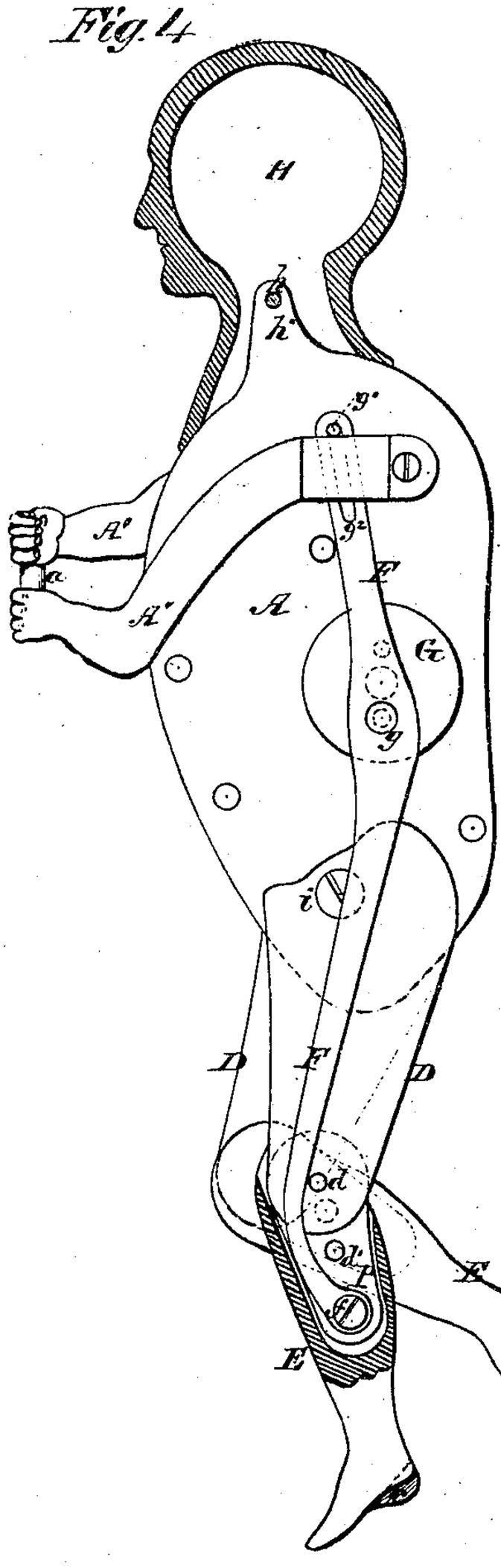
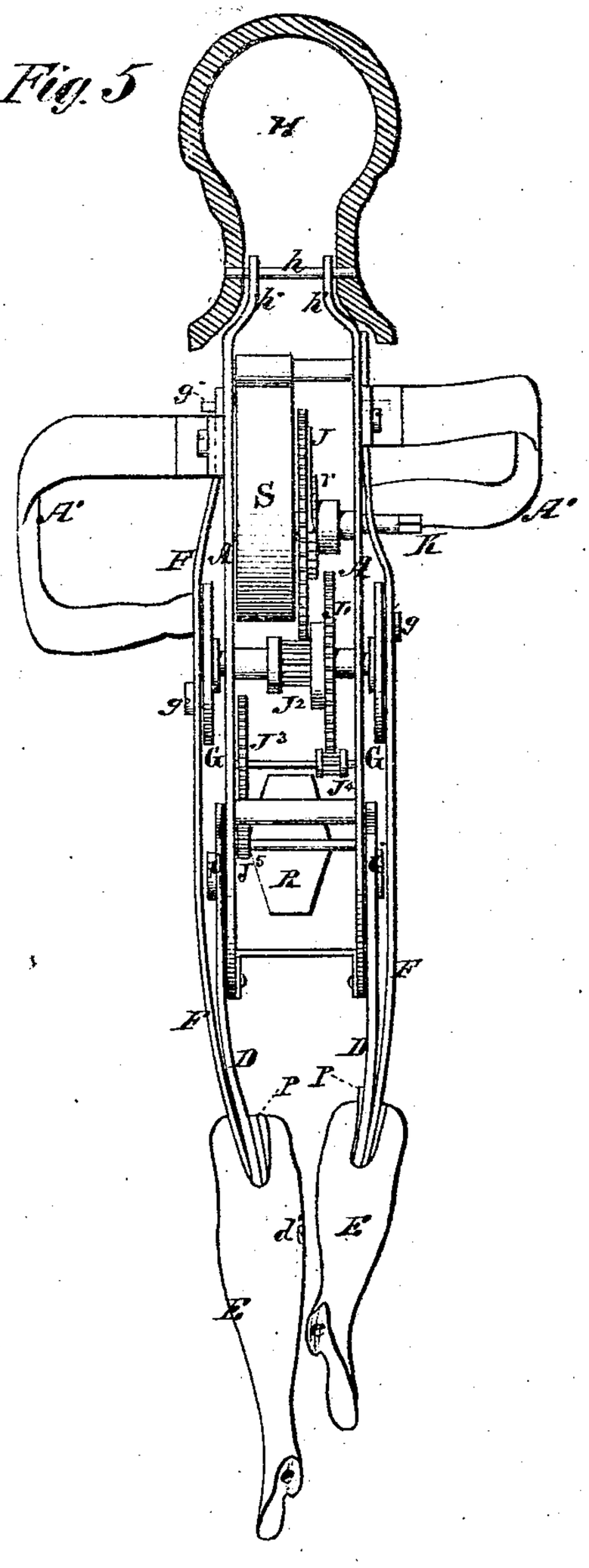


Fig. 5



Witnesses.
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Inventor.
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by
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United States Patent Office.

HENRY A. HOUSE, OF BRIDGEPORT, CONNECTICUT.

Letters Patent No. 109,618, dated November 29, 1870.

IMPROVEMENT IN AUTOMATON ROPE-WALKERS.

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

To all whom it may concern:

Be it known that I, HENRY A. HOUSE, of Bridgeport, in the county of Fairfield and State of Connecticut, have invented a new and improved Toy, which I denominate an Automaton Rope-Walker; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1, plate 1, represents the toy balanced and in the act of walking on a rope.

Figure 2, plate 1, is a view, partly in section, of the figure with clothing removed.

Figure 3, plate 1, is a perspective view of the case for the body of the automaton.

Figure 4, plate 2, is a side view, partly in section, of the automaton.

Figure 5, plate 2, is a posterior view.

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

My invention relates—

First, to a walking-automaton kept in position upon its support by a balancing-pole;

Second, to a guide, in combination with the balancing-pole and walking-automaton;

Third, to a combination of devices by which the stepping movements are produced;

Fourth, to diagonal grooves in the soles of the feet of the walking-automaton;

Fifth, to a socketed section of balancing-pole, attached to the hands of the automaton, in combination with detachable sections of said pole;

Sixth, to a casing which gives the form to the body of the figure, in combination with the frame which supports the gearing which actuates the walking-figure; and

Seventh, to leg sections of the figure, made bowing inwardly, so that the feet of the autematon will both step in the same line.

To enable others skilled in the art to understand my invention, I will explain its construction and operation.

The body of the figure consists of two flat plates, A A, which are secured together at a proper distance apart by posts, and shaped as near as possible to resemble the contour of the front and back of the human body. These plates, thus connected together, constitute a frame for containing and supporting the driving mechanism shown in fig. 1.

From the upper ends of plates A A ears *h' h'* rise, which are perforated transversely, and receive through them a pin, *h*, that connects the head H of the figure to the body, shown in figs. 4 and 5.

The arms A' A' are curved strips, which are secured fast to plates A A, and bent so as to leave the arms akimbo and the hands grasping the rod *a* in front of the body.

The rod *a* has screw-sockets, *a' a'*, made into its upper and lower ends, to receive screw-threaded sections that form the balancing-pole C.

This pole C has a light ball, C^2, on its upper end. and a loaded balancing-ball, C^1, on its lower end.

The pole is connected to the rope R, on which the figure walks, by means of a spiral loop, *c*, or by a ring somewhat larger than the diameter of the rope.

The lower limbs are jointed, at *i i*, to the plates A A, and consist, respectively, of a thigh section, D, and leg sections P and E.

The metal section P is jointed at *d*, to give the knee articulation, and it is also connected at *d'* to the light leg portion E, which latter is made of wood, or other light material, hollowed out to receive the section P, as shown in fig. 4.

To the lower end of the section P, at *f*, the lower backwardly-curved end of a vibrating and endwise-moving rod, F, is pivoted, which rod extends up alongside of the body A, nearly to the head H.

This rod F is connected eccentrically to a rotating crank-plate, G, at *g*, and above this crank-plate the rod is slotted, at g^2, and receive a guide-pin, g^1, through its slot, which pin is fixed into the plate A.

By the rotation of crank-plate G, and the action of pin g^1 on the rod F, the lower limb receives the stepping motions. The devices for moving the lower limbs are precisely alike on both sides of the body, and the crank-pins *g* are arranged so that one leg will rest upon the rope while the other is sifted to make a step forward.

It will be seen, by reference to fig. 5, that the lower limbs are bowed toward the median line of the body, so as to bring those portions of the feet which are grooved (at *e e*) in the same plane, thus preventing the figure from stepping off the rope while walking.

The shaft of the two crank-plates G G has a trundle-pinion, J^2, and a spur-wheel, J^1, keyed on it.

The trundle is engaged by the teeth of a spur-wheel, J, which is applied to a shaft, K, around which a clock-spring, S, is wound.

By means of a pawl and ratchet, *r*, and a key, the spring S is wound up.

The wheel J^1 communicates rotary motion to a regulating-fan, R, through the medium of spur-wheels J^3, J^4, and J^5, which fan controls the speed of the mechanism.

B represents a case, which is shaped to represent the form of the human body, and which is hinged behind, and connected together in front by a hook, *b*.

This case is applied to the frame B so as to inclose

it, and it is perforated at *k* to correspond with the end of the spring-shaft K, so that the key can be readily applied to this shaft.

The figures may be clothed in any desirable manner.

Having described my invention,

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

1. The combination of a balancing-pole with a walking-automaton, substantially as described.

2. The guide *c*, in combination with the balancing-pole and the walking-automaton, substantially as described.

3. The leg sections D and P, jointed together, pivoted to the frame A, and actuated so as to make stepping movements by means of rod F, guide g^1, and crank-wheel G, substantially as described.

4. The diagonal grooves in the soles of the feet of the automaton, substantially in the manner and for the purpose described.

5. The socketed pole section *a*, attached to the hands of the automaton, in combination with the removable sections of the balancing-pole C, substantially as described.

6. The case B, constructed with recesses or slots *s s* and fastening *b*, in combination with the frame A of the walking-automaton, substantially as described.

7. The leg sections F E, bowed inwardly in such manner that the feet of the automaton will step in the same line, substantially as described.

HENRY A. HOUSE.

Witnesses:

GEORGE C. BISHOP,

JOHN H. VINTON.