

C. BOPP.  
Toy.

No. 221,441.

Patented Nov. 11, 1879.

Fig 1.

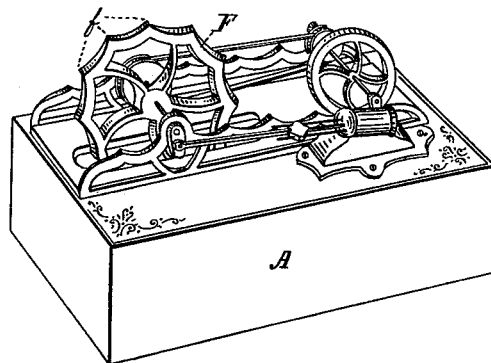


Fig. 2.

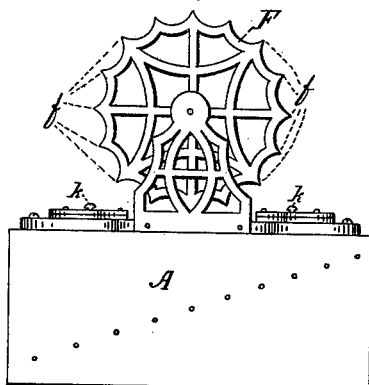


Fig. 3.

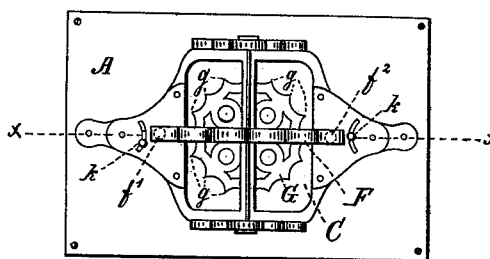
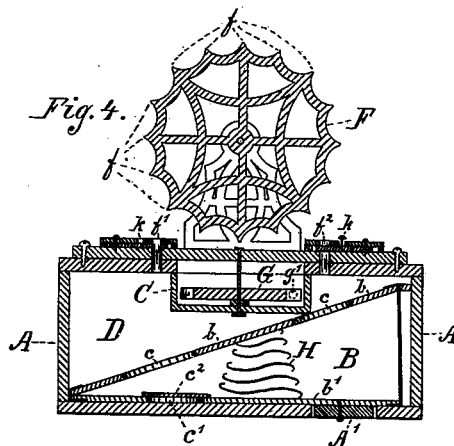


Fig. 4.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

CHRISTIAN BOPP, OF INDIANAPOLIS, INDIANA.

## IMPROVEMENT IN TOYS.

Specification forming part of Letters Patent No. **221,441**, dated November 11, 1879; application filed August 8, 1879.

### *To all whom it may concern:*

Be it known that I, CHRISTIAN BOPP, of Indianapolis, in the county of Marion, State of Indiana, have invented a new Improvement in Toys, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The purpose of my invention is to provide a cheap and simple toy mechanical movement, which may be applied to operate toy engines and the like, or may be used simply as a toy.

The invention consists of the combination of bellows, air-chamber, and escapes with a horizontal and vertical wheel, having projecting points, upon which the blast of air from the bellows impinges.

In the accompanying drawings, in which similar letters of reference indicate like parts, Figure 1 is a perspective view of a toy engine worked by my invention. Fig. 2 is a side view of the device embodying my invention. Fig. 3 is a top view of the same. Fig. 4 is a vertical longitudinal section of the same on line *xx* on Fig. 3.

A is a box, in part of which the bellows are placed. *b* is the stationary top of bellows B, with air-escapes *c c* cut in it; and *b'* is the movable bottom of bellows, with an air-hole, *c'*, cut through and covered by a valve, *c<sup>2</sup>*. *A'* is a piece cut out of the bottom of box A and fastened to the bottom *b'* of bellows B, as a finger-board. H is a spring to throw bottom of bellows B back in place. C is a casing sunk in box A around horizontal wheel G. F is a vertical wheel, with projecting points *f* on outer edge, to catch the air from escapes *f'* or *f<sup>2</sup>*, which turns wheel, giving a vertical motor. G is a horizontal wheel, with projecting points *g* on outer edge to catch the air from escape *g'*, which turns wheel, giving a hori-

zontal motor. *f'* is an escape from air-chamber D, striking projecting points *f* on wheel F, and turning said wheel from left to right. *f<sup>2</sup>* is an escape from air-chamber D, striking projecting points *f* on wheel F, and turning said wheel from right to left. *g'* is an escape from air chamber D, striking projecting points *g* on wheel G, and turning said wheel. *k* is a device to cut off or turn on air to either side of wheel F, as desired.

The operation of my invention is as follows: When the movable bottom *b'* of bellows B is moved up by pressing A, the air contained in the bellows B is forced out through the air-escapes *c c* into air-chamber D of box A. This forces the air already in chamber D through escape *g'*, operating horizontal wheel G, and through escape *f'* or *f<sup>2</sup>*, operating vertical wheel F.

The spring H operates bellows when empty, throwing bottom plate *b'* back. The bellows are filled with air through valve *c<sup>2</sup>*.

By repeatedly filling and emptying bellows B a current of air is produced, and works on the wheels F and G, thus moving mechanical toys connected with said wheels.

By using device *k* the run of wheel F can be changed from either left or right, as desired.

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

1. The combination of bellows B, air-chamber D, escapes *f'* and *f<sup>2</sup>*, and projecting points *f* on vertical wheel F, substantially as and for the purpose specified.

2. The combination of bellows B, air-chamber D, escape *g'*, and projecting points *g* on horizontal wheel G, substantially as and for the purpose specified.

CHRISTIAN BOPP.

Witnesses:

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