

(No Model.)

C. L. PEIRCE.
TOY.

No. 498,025.

Patented May 23, 1893.

Fig. 2.

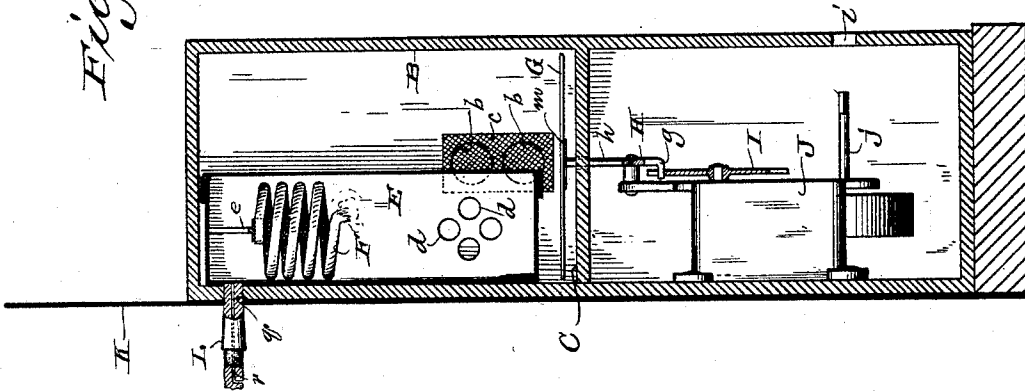
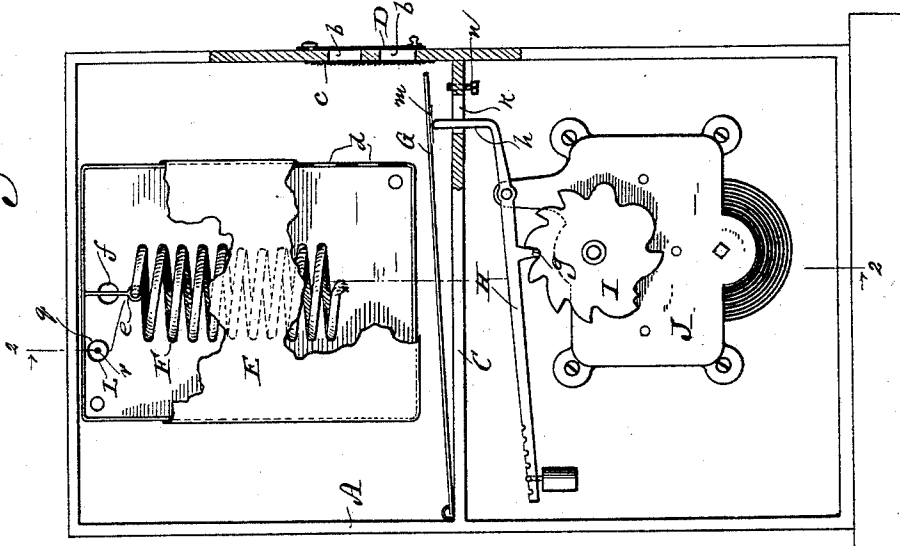
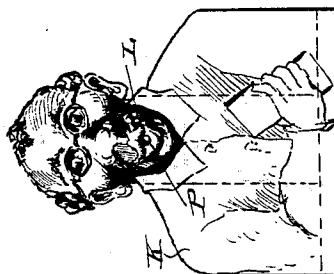


Fig. 1.



Witnesses,
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Fig. 3.



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UNITED STATES PATENT OFFICE.

CHARLES LEONARD PEIRCE, OF MILWAUKEE, WISCONSIN, ASSIGNOR TO
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TOY.

SPECIFICATION forming part of Letters Patent No. 498,025, dated May 23, 1893.

Application filed December 19, 1892. Serial No. 455,568. (No model.)

To all whom it may concern:

Be it known that I, CHARLES LEONARD PEIRCE, a citizen of the United States, and a resident of Milwaukee, in the county of Milwaukee, and in the State of Wisconsin, have invented certain new and useful Improvements in Toys; and I do hereby declare that the following is a full, clear, and exact description thereof.

10 My invention has for its main object to provide a simple means for producing smoke-rings, and a further object of the invention is to provide a device comprising the representation of an animate or inanimate object, 15 combined with means for producing smoke, and other means for causing an emission of the smoke from said representation in the form of rings or puffs or both at regular or irregular intervals.

20 The said invention therefore consists in certain peculiarities of construction and combination of parts substantially such as herein-after described with reference to the accompanying drawings and subsequently claimed.

25 In the drawings: Figure 1 represents the relative arrangement of parts necessary to an automatic form of my invention, these parts being in rear elevation and certain of them broken away for the purpose of better illustration. Fig. 2 represents a vertical transverse section taken on line 2—2 of the preceding figure, and Fig. 3 a design for a picture card that may form part of a device constructed according to said invention.

35 Referring by letter to the drawings, illustrating one of many possible forms of my invention, A represents a preferably wooden casing provided with a removable back B, and, by means of a horizontal partition C, this 40 casing is divided into upper and lower compartments. The upper compartment of the casing is provided with air-inlets *b* and as a check against back-draft these inlets may be covered with foraminous material such as 45 wiregauze *c* preferably arranged inside of said compartment. In order to regulate the admission of air through the inlets *b*, a damper D may be employed, and in Fig. 1 I have shown such a device pivotally connected to the 50 casing.

Arranged within the upper compartment of the casing is a chamber E made from sheet-metal or other suitable fire-proof material and provided with draft-openings *d* near its base. In order that ready access may be had to the 55 interior of the chamber E its rear side is shown as removable, and depending from the top of said chamber is a hanger *e* for a slow burning fuse F the latter being preferably of spiral form to obtain the greatest possible 60 length within a limited space. The fuse is made of such material as will give off a considerable amount of smoke when on fire, and this fuse may be treated with a material that will give the products of combustion an odor 65 of burning tobacco.

The combustion-chamber E has at least one outlet *f* for smoke from the fuse F, and by a sudden compression of the air in said chamber a portion of the smoke will escape through 70 the outlet in the form of a ring, but a gradual compression will cause a puff like escape of said smoke. As herein shown, a diaphragm G practically fitting the interior of said receptacle or casing A is hinged to the partition C 75 in the upper compartment of the casing A and actuated at suitable intervals by any suitable mechanism, one form of the latter being a cranked and weighted lever H, a notched wheel I operating against a lug *g* on the lever, 80 and a spring-motor J for the wheel. With the exception of the crank-end *h* of the lever, the diaphragm actuating-mechanism is confined within the lower compartment of the casing A, the back or some other convenient 85 portion of this casing being provided with a key-opening *i* in register with the spring-arbor *j* of the motor. The crank-end of the lever extends through an opening *k* in the partition C to oppose the diaphragm above specified, 90 and I prefer to interpose a buffer *m* of felt or other suitable material between the two in order to deaden the sound of contact between said lever and diaphragm. I may also employ a stop in the form of a set-screw *n* 95 adjustable in the partition C to limit the play of the diaphragm.

It will be seen that by causing the diaphragm G to practically fit the interior of the receptacle A, a comparatively slight move- 100

ment of the diaphragm will cause a sufficient disturbance of the air to expel the smoke from said receptacle in rings.

By suitable spacing of the notches in the wheel I the lever H will tilt at irregular intervals to depress its crank-end, and the reverse movement of said lever by its own gravity will impart a lift to the diaphragm G whereby there will be a compression of air in the combustion-chamber E and a consequent discharge of smoke therefrom in the form of a puff or ring according to the contour of any particular notch engaged by the lug *g* on the aforesaid lever. I have shown the weight on the lever adjustable in order to vary the impetus of said lever on its return to normal position, and by the adjustable stop *n* the amount of air compressed or disturbed may be regulated, rendering diaphragm G adjustable in its movements.

I have chosen to show the apparatus above specified in connection with a picture card K, the latter representing a man smoking a cigar. An opening P in the card, corresponding in location to the mouth of the man delineated thereon, registers with the smoke outlet *f* extending from the combustion-chamber through the surrounding casing. Another opening *q* in the card registers with one in the casing and chamber, this continued opening being plugged with an artificial cigar L having an escape-channel *r* for smoke from said chamber. Instead of the cigar, an imitation pipe or cigarette may be as readily employed, but with either device there is preferably an escape of smoke from the same in such a manner as to simulate a combustion of tobacco, and at certain predetermined intervals a ring or puff of smoke issues from the mouth of the figure delineated on the card.

While I have shown a pictorial representation of a smoker, it is obvious that a statue-like device may be substituted, and that the smoke-producing and discharging apparatus may be employed in connection with a representation of any animate or inanimate object, either as a toy, advertising medium or for such other purpose as may be found desirable.

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

1. A suitable receptacle provided with inlet and outlet openings, an inflammable material combustible in the receptacle, a hinged solid diaphragm practically fitting the interior of said receptacle, and suitable means for actuating said diaphragm and thereby creating a disturbance of the air in said receptacle, substantially as set forth.

2. A suitable receptacle provided with inlet and outlet openings, an inflammable material combustible in the receptacle, a hinged solid diaphragm practically fitting the interior of said receptacle, and suitable means for actuating said diaphragm, and thereby creating a disturbance of the air in said re-

ceptacle at pre-determined intervals, substantially as set forth.

3. A suitable receptacle provided with inlet and outlet openings, an inflammable material combustible in the receptacle, a hinged solid movable diaphragm practically fitting the interior of said receptacle, and a clock-work mechanism for actuating the diaphragm, and thereby creating a disturbance of air in said receptacle, substantially as set forth.

4. A suitable receptacle provided with inlet and outlet openings, a coiled fuse of inflammable material combustible in the receptacle, a solid hinged diaphragm practically fitting the interior of said receptacle, and suitable means for actuating said diaphragm, and thereby creating a disturbance of air in said receptacle, substantially as set forth.

5. A suitable receptacle provided with inlet and outlet openings, a foraminous plate for preventing back-draft, an inflammable material combustible in the receptacle, a hinged solid diaphragm, and suitable means for actuating said diaphragm, and thereby creating a disturbance of air in said receptacle, substantially as set forth.

6. A suitable receptacle provided with inlet and outlet openings, a damper plate for regulating the admission of air to the receptacle, an inflammable material combustible in said receptacle, a hinged solid adjustable diaphragm, and a timed mechanism for actuating the diaphragm, and thereby creating a disturbance of the air in said receptacle, substantially as set forth.

7. A suitable receptacle provided with inlet and outlet openings, an inflammable material combustible in the receptacle, a hinged solid adjustable diaphragm, suitable means for actuating said diaphragm and thereby creating a disturbance of air in said receptacle, and a representation of any desirable object provided with an opening in register with the outlet of the aforesaid receptacle, substantially as set forth.

8. A suitable receptacle provided with inlet and outlet openings, an inflammable material combustible in the receptacle, a hinged solid adjustable diaphragm, suitable means for actuating said diaphragm and thereby creating a disturbance of air in the receptacle, a representation of a tobacco smoker, having a mouth portion in register with the receptacle outlet, and a perforate imitation of a cigar pipe, or analogous device, projecting through the mouth portion of said representation into said receptacle, substantially as set forth.

9. A casing provided with an inlet and outlet, a damper for the inlet and suitable means for preventing back-draft a receptacle arranged within the casing and provided with inlet and outlet openings, this latter opening being in register with the outlet of said casing, an inflammable material combustible in the receptacle, a hinged solid motor-actuated diaphragm also arranged within, and practi-

cally fitting the interior of, the aforesaid casing, a representation of a tobacco smoker having a mouth portion in register with said outlets, and a perforate imitation of a cigar, pipe or analogous device, projecting through the mouth portion of said representation into said receptacle, substantially as set forth.

In testimony that I claim the foregoing I

have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

CHARLES LEONARD PEIRCE.

Witnesses:

N. E. OLIPHANT,
H. G. UNDERWOOD.