2 Sheets—Sheet 1.

G. H. IRELAND.

Toy Steam Fire-Engine Apparatus.

No. 203,459. **Patented May 7, 1878.**

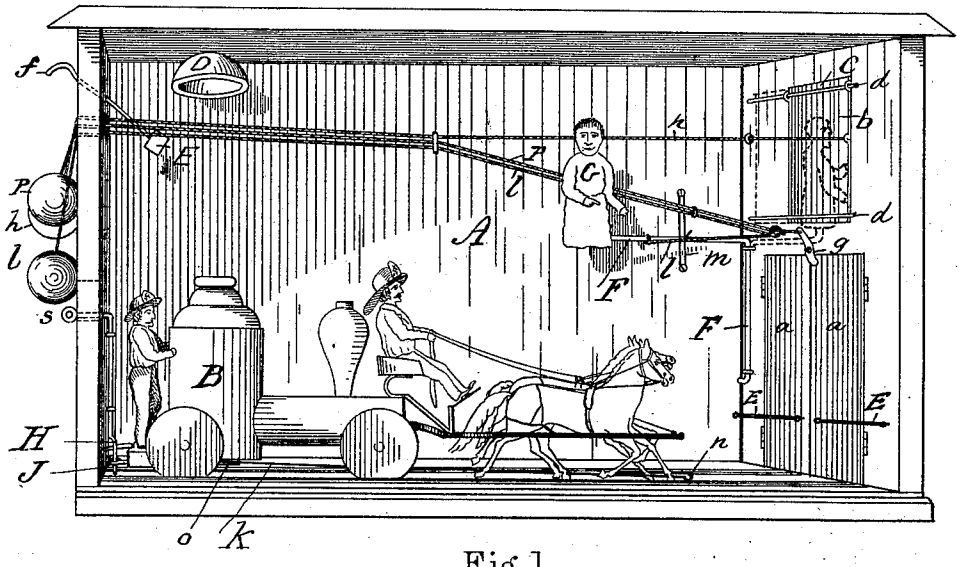


Fig. 1.

Witnesses:
Geo. H. Earl
W. L. Wentworth

Inventor:
George H. Ireland
Per Brown Bros.
Attorneys.

N. PETERS. PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

2 Sheets—Sheet 2.

G. H. IRELAND.

Toy Steam Fire-Engine Apparatus.

No. 203,459. **Patented May 7, 1878.**

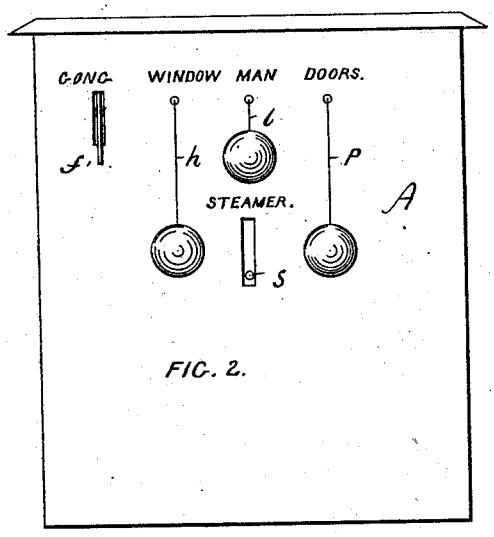


FIG. 2.

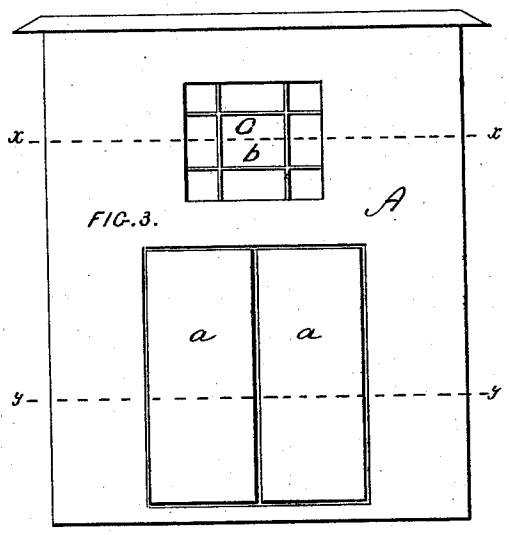


FIG. 3.

FIG. 4.

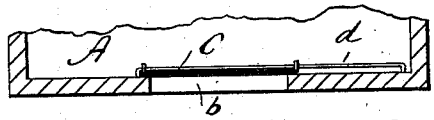
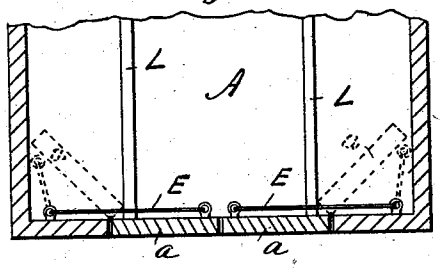


FIG. 5.



z

FIG. 6

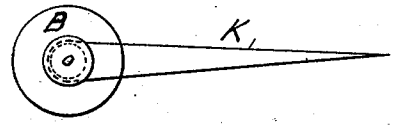
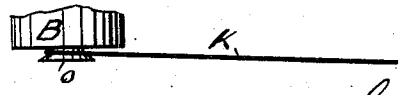


FIG. 7.



WITNESSES.

Geo. H. Earl,

M. L. Wentworth

INVENTOR.

G. H. Ireland

Per Brown Bros

Attorneys

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

GEORGE H. IRELAND, OF SPRINGFIELD, MASSACHUSETTS.

IMPROVEMENT IN TOY STEAM FIRE-ENGINE APPARATUS.

Specification forming part of Letters Patent No. **203,459**, dated May 7, 1878; application filed October 5, 1877.

To all whom it may concern:

Be it known that I, GEORGE H. IRELAND, of Springfield, in the county of Hampden, in the State of Massachusetts, have invented an Improved Toy, of which the following is a specification:

The object of this invention is the illustration, in miniature, for the amusement and play of children, of a supposed system of workings at fire-engine houses when an alarm of fire is given; and this improved toy for such purpose combines, in miniature, a fire-engine house, with doors, a lookout-window, and a gong or alarm, all under such an arrangement, substantially as hereinafter described, that the whole can be manipulated, and effects thereby secured which will be very pleasing and interesting, and will illustrate the movements at fire-engine houses in cases of alarms of fire.

In the accompanying plates of drawings, Figure 1, Plate 1, is a perspective view of the interior of the engine-house, with all the parts in position for an alarm of fire. In Plate 2, Fig. 2 is an elevation of the rear end of the engine-house; Fig. 3, a view, in elevation, of the front of the engine-house; Figs. 4 and 5, detail views, in cross-section, on lines *x x*, *y y*, and *z z*, Fig. 3, respectively; Figs. 6 and 7, detail views.

In the drawings, A represents a fire-engine house, and B a steam fire-engine and its horses and driver, &c., all in blank and miniature; *a a*, two hinged doors for the engine B to pass out of the house A; and *b*, a lookout-window, closed by a slide, C, which is painted in imitation of a window, and is arranged to be slid in guide-rods *d* inside of the engine-house A; D, a gong or alarm-bell, and E the hammer for sounding it, which hammer is operated from the outside of the house A, and by seizing its handle *f*.

The doors *a a* are held closed by a pivoted lever-button, *g*, which is connected to a line or cord, *p*, running to the outside of the house, so that it can be pulled from the outside to free the button *g* of the doors, and the doors are made to open automatically, when such button is so released, from the reaction of elastic bands or springs E, which are hung at one end to the door and at the other to the engine-house, and so that when the doors are closed they will be at a tension, which being released, the reaction will quickly throw open the doors.

The lookout-window slide C is connected to a line, *h*, which runs to the outside of the engine-house, for operating the slide from the outside to open it; and, for appearance, at this lookout-window there is a miniature representation of a man, G, carried by a swinging arm, F. This arm F is swung so as to bring this man G to the window by pulling on a line, *l*, connected therewith, which line runs to the outside of the house, and it is swung back in releasing such line by a spring or elastic, *m*, arranged to act on the said arm F, as shown.

The engine B is set against movement in the engine-house A by hooking the pin H in its ring J, and this pin is adapted to be operated from the outside of the house, so as to set the engine free to the throw or reaction of an elastic band or spring, K, which is connected at one end to a staple, *n*, in the floor of the house A, and at the other end to a round block, *o*, on the under side of the engine, from which it can escape, thus releasing the engine. This spring is such as to be at a tension when the engine is hitched as described.

The various lines *p*, *h*, and *l* herein referred to have suitably-arranged guide loops or pulleys, and, together with the operating-handles for the alarm-gong and the engine on the outside of the engine-house, are properly designated by painting or otherwise, so as to avoid mistakes—as, for instance, by "gong," "window," "man," "doors," "steamer."

All the several parts which are herein described and referred to are arranged so as not to interfere with the intended movements and operations of the others, and are arranged to secure an operation of the whole by manipulation of the several parts, such as is obvious from the following plan of proceedings and directions.

Close the window-slide C, shut the doors *a a*, and fasten them with the catch *g*; place the rubber band K (on the floor) around the knob *o* on bottom of engine; draw the engine back, and fasten it through the ring J at rear of foot-board by means of the slide-pin H. The toy is now ready for operation. Strike the gong by pulling the handle of its hammer—any alarm desired may be given. Pull the line

h to open the window *b*, then the line *l* to bring the man G to the window, and keep this string taut as long as desired for the man to remain at the window. Then a pull upon the line *p* releases and secures the opening of the doors *a a;* and by another pull on the handle *s* of slide-pin H the engine is released, and runs from the house.

The floor of the house A has guide-rails L for the travel of the engine, to insure its straight and direct movement out through the door.

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

1. The combination of the engine-house A, having doors *a a* and lookout-window *b*, with a sentinel figure of a man and a steamer, B, the whole being arranged for operation substantially as described.

2. The combination of the engine-house A, steamer B, having knob *o*, the ring F, pin H, and reaction-spring K, constructed and arranged for operation as herein shown and described.

3. A toy consisting of the engine-house A, having doors *a a*, springs E, and catch *g*, the whole constructed and combined for operation substantially as described.

GEO. H. IRELAND.

Witnesses:
EDWIN W. BROWN,
GEO. H. EARL.