

(No Model.)

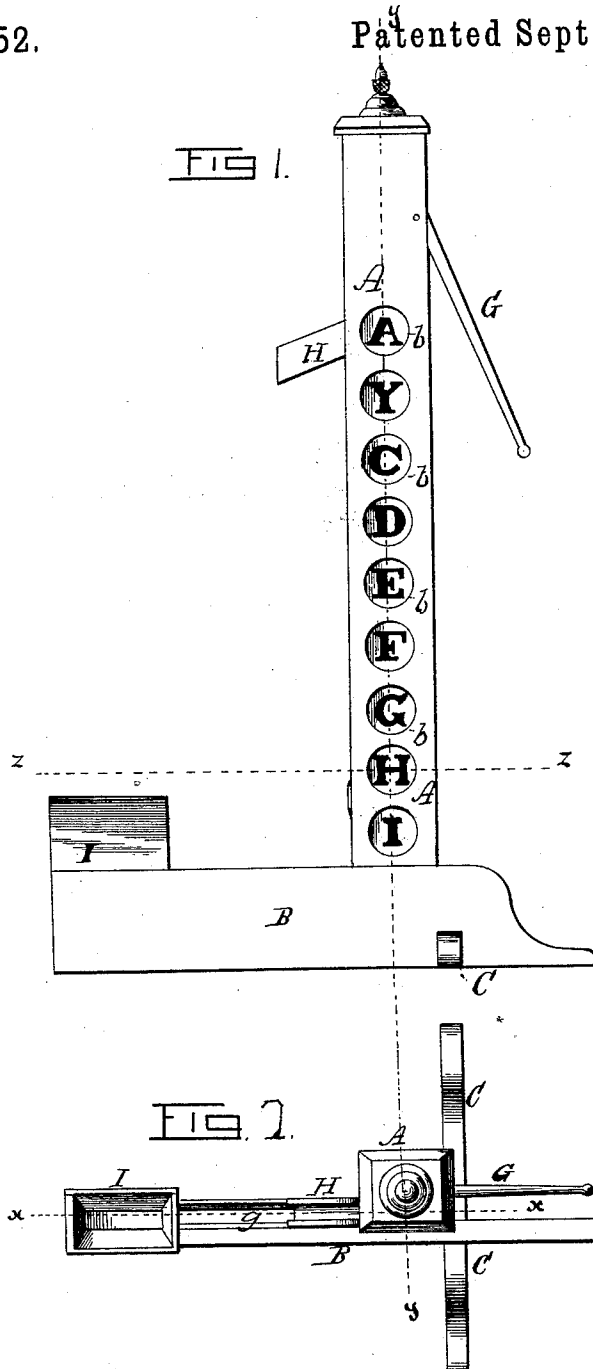
2 Sheets—Sheet 1.

M. E. CONVERSE.

TOY.

No. 348,952.

Patented Sept. 14, 1886.



WITNESSES:

Morris A. Clark
A. S. Brown

INVENTOR:
Morton E. Converse,
By his attorney,
J. S. Brown.

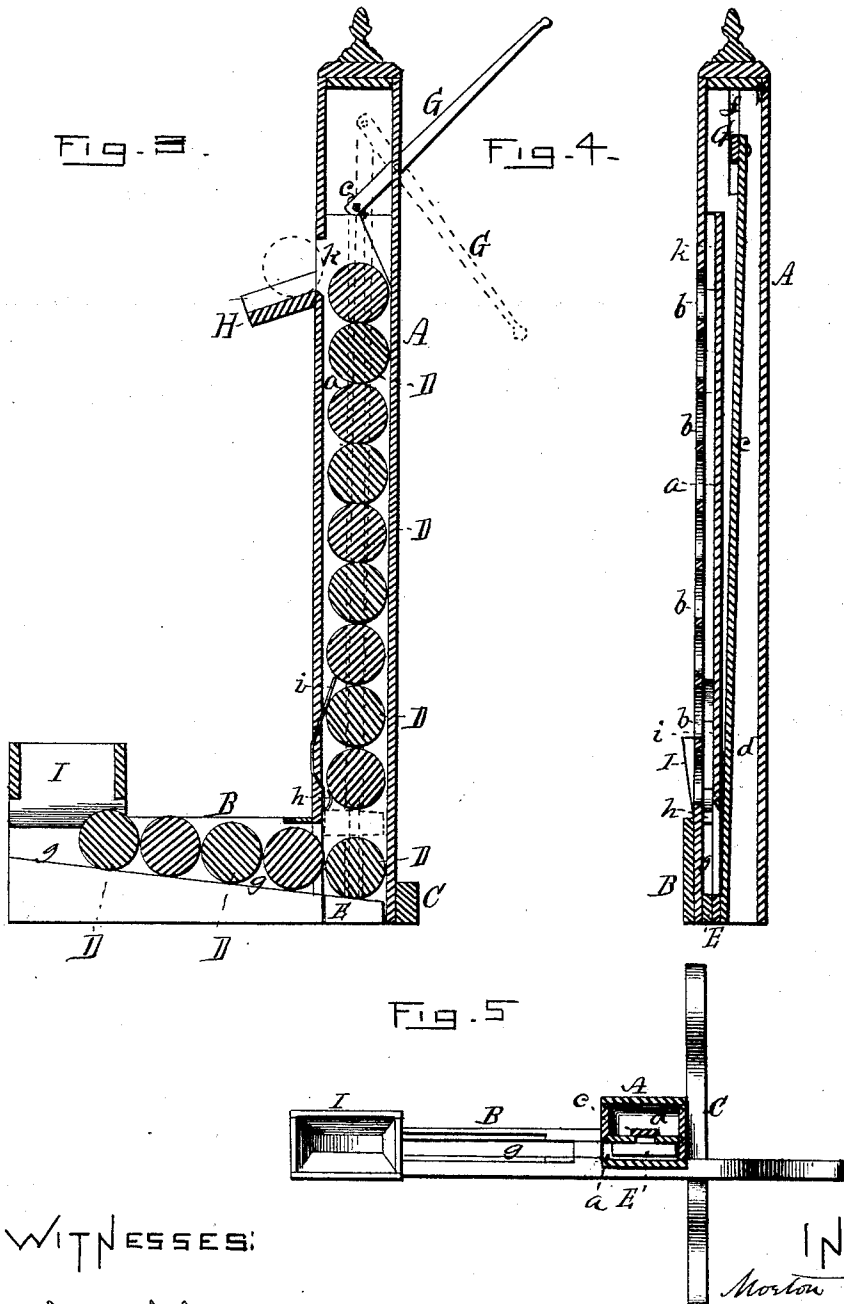
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Norris A. Clark,
A. S. Brown

INVENTOR:

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J. S. Brown.

UNITED STATES PATENT OFFICE.

MORTON E. CONVERSE, OF WINCHENDON, MASSACHUSETTS.

TOY.

SPECIFICATION forming part of Letters Patent No. 348,952, dated September 14, 1886.

Application filed July, 29 1885. Serial No. 172,958. (No model.)

To all whom it may concern:

Be it known that I, MORTON E. CONVERSE, of Winchendon, in the county of Worcester and State of Massachusetts, have invented a new and Improved Toy; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification—

Figure 1 is a side view of the toy; Fig. 2, a top view of the same; Fig. 3, a vertical section in a plane indicated by the line *x x*, Fig. 2; Fig. 4, a vertical section in a plane indicated by the line *y y*, Figs. 1 and 2; Fig. 5, a horizontal section in a plane indicated by the line *z z*, Fig. 1.

Like letters designate corresponding parts in all of the figures.

My invention, which may be termed an "educational pump," and resembles a pump in general appearance, consists in an apparatus, substantially as herein described, whereby disks or circular blocks, balls, marbles, or other spherical forms are lifted to any desired height in a directing passage or way and discharged, one at a time, through a spout or exit-guide, into a receptacle, from which they automatically return to position for raising them again, so that there is a continual circulating round of the disks or balls as long as the pumping or reciprocating lifting movement is continued by the operator. On these disks or balls letters of the alphabet are usually printed, and, succeeding in variable order, form various combinations, thereby often spelling words, which are seen through apertures formed in the side of the lifting passage or way. Other devices besides letters of the alphabet may be printed on the disks or balls, if preferred.

In the drawings, A represents a standard or shaft supported by a base-piece, B, and a cross-piece, C, or any equivalent construction. In the standard A is a passage or way, *a*, of proper size to allow the disks or balls D D to be raised therein freely, one upon another. Openings *b b* are made into one side of this passage or way at regular intervals, through which to see the disks or balls and read the letters or view the characters thereon. In the lower end of the passage or way *a* is located a piston or lifter, E, to which an up-and-down re-

ciprocating movement is given, sufficient to raise the disks or balls in the passage or way to the extent of the diameter of one of them, by means of a rod, *c*, extending from the lifter upward through a passage or aperture, *d*, in the standard A, and of a handle, G, secured to the upper end of the rod *c*, and projected outward through a slot, *f*, in the side of the standard, to be grasped by the operator in moving the lifter up and down. Any suitable construction and arrangement of these parts may be employed, as I do not confine myself to the construction shown.

In the principal base, B, is a trough or inclined way, *g*, into which the disks or balls are first received, and in which they roll toward the lifter E, the bottom of the trough being sufficiently inclined in that direction for the purpose, and the top of the lifter is similarly inclined, and is below or even with the bottom line of the trough when the lifter is down or at the bottom of its stroke. By this construction, as the disks or balls are lifted, one by one, by the lifter, and the lifter is depressed to its lowest position, another disk or ball rolls upon it from the trough ready to be lifted by the next upward stroke of the lifter.

In order to retain the disks or balls stationary in the lifting passage or way *a*, as far as lifted, when the lifter is depressed for another stroke, one or more springs or equivalent means are employed. In the drawings I have shown a spring, *h*, located in the passage or way *a*, at one side thereof, to hold the lower one or two of the disks or balls at the proper height, it may be, by simple side pressure; but there are so many in the passage or way at one time that more effectual means than mere spring-pressure is required. I therefore use a spring-catch, *i*, for the purpose, also located in the passage or way near one side, and constructed so that its upper extremity will hold as a pawl under the contiguous disk or ball, as shown in Fig. 3. Both the spring *h* and spring-catch *i* may be made of a single strip of sheet-brass or other elastic metal, secured in the side of the standard in the manner shown, or in any suitable way.

At the top of the passage or way *a* is a side outlet, *k*, opening to a spout or discharge-way, H, which directs the disks or balls to a hopper or receiver, I, situated over the outer end of the

feed-trough D, into which they are automatically projected when properly discharged from the spout. This hopper is adjustable along the top of the feed trough or way, so as to adapt it to accurately catch the flying disks or balls as they descend from the spout; or the trough may be so shaped as to serve as a hopper for the purpose, although I prefer the construction described.

10 I claim as my invention—

1. In a toy, the combination of a lifting passage or way provided with means, as retaining springs or catches, for holding the disks or balls at the height to which they are lifted, a set of disks or balls adapted to be raised in the said passage or way, a reciprocating lifter having an inclined top, an inwardly-inclined way for carrying the disks or balls upon the lifter, a discharge-spout, and a receiving-hopper, substantially as and for the purpose herein specified.

2. In a toy, the combination of the lifting passage or way provided with retaining springs or catches, *h i*, the feeding trough or way *g*, lifter E, provided with a handle, spout or discharge-way, a catch hopper or receiver, and a set of disks or balls, substantially as and for the purpose herein set forth.

3. In a toy, the combination of the standard having the lifting passage or way *a*, and side perforations, *b b*, a set of disks or balls provided, respectively, with letters of the alphabet or other devices, and a reciprocating lifter, E, substantially as and for the purpose herein specified.

MORTON E. CONVERSE.

Witnesses:

FRANK B. SPALTER,
ROLLO HALE.