

(No Model.)

J. SEYBERTH.
AUTOMATIC PNEUMATIC INSTRUCTOR.

No. 407,128.

Patented July 16, 1889.

FIG. 1.

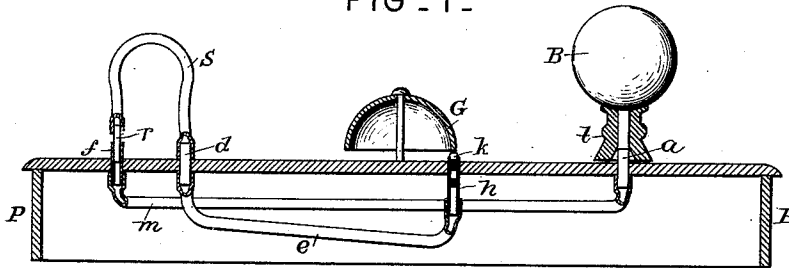


FIG. 2.

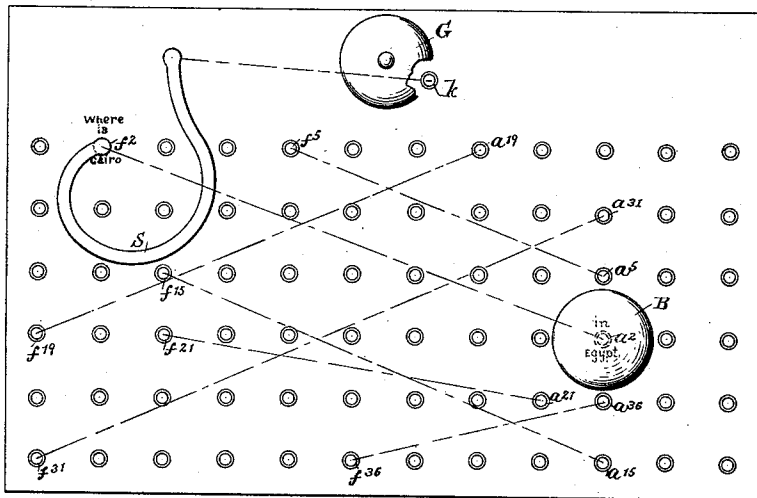


FIG. 3.

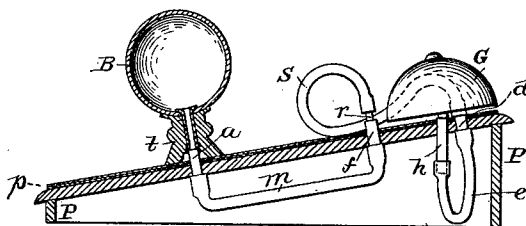
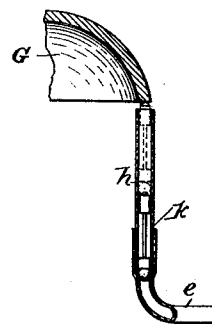


FIG. 4.



Attest:

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by *[Signature]*

UNITED STATES PATENT OFFICE.

JOHANN SEYBERTH, OF VIENNA, AUSTRIA-HUNGARY, ASSIGNOR TO ALFRED J. OSTHEIMER, OF PHILADELPHIA, PENNSYLVANIA.

AUTOMATIC PNEUMATIC INSTRUCTOR.

SPECIFICATION forming part of Letters Patent No. 407,128, dated July 16, 1889.

Application filed May 9, 1889. Serial No. 310,132. (No model.) Patented in Germany February 1, 1888, No. 45,141; in England February 10, 1888, No. 2,041; in France March 9, 1888, No. 189,232, and in Austria-Hungary April 10, 1888, No. 419 and No. 11,488.

To all whom it may concern:

Be it known that I, JOHANN SEYBERTH, a citizen of Austria, and a resident of Vienna, in the Empire of Austria-Hungary, have invented a new and useful Improvement in Pneumatic Automatic Instructors, (for which I have obtained patents in Great Britain, No. 2,041, dated February 10, 1888; in France by Patent No. 189,232, dated March 9, 1888; in Germany by Patent No. 45,141, dated February 1, 1888, and in Austria-Hungary by Patents Nos. 419 and 11,488, dated April 10, 1888,) and which improvement is fully set forth in the following specification.

The subject of the present invention is a pneumatic apparatus for automatically answering a series of questions arranged in any desired sequence.

I call this apparatus an "instructor" because it can be advantageously employed as agreeable means for instruction; but the apparatus could be also called a "catechism" or "a game of questions and answers."

In one part of the apparatus a group of tubes is arranged corresponding to questions which are to be automatically answered by means of another group of tubes arranged in another part of the apparatus.

The accompanying drawings show the mode of carrying out the present invention.

Figure 1 is a longitudinal section, Fig. 2 a plan view, Fig. 3 a cross-section, and Fig. 4 a section of a detail, of the apparatus.

The apparatus consists of a group of tubes f and a second group of tubes a , both groups being arranged in a desk P . Each single tube f of the one group is connected separately by means of a separate tube m with a single tube a of the other group, so that when a current of air is injected into one of the tubes f it cannot pass through any of the tubes a except that one with which the particular tube f is connected. It is therefore evident that if, for instance, as shown in Figs. 1 and 2, the tube f^2 is put into pneumatic communication with a pneumatic ringing device k G by means of a flexible tube s , and if then a current of air is injected into the tube a^2 —for instance, by means of the rubber ball B —the bell G will

be caused to ring. On the other hand, if the rubber ball should be caused to inject a current of air into any other one of the tubes a , the bell G will not ring, because the current of air will pass out through one of the open tubes f not attached to the flexible tube s , and therefore not in communication with the pneumatic bell G .

The group of tubes f is arranged to serve for questions and the group of tubes a for answers.

The questions and answers are preferably printed on sheets of paper p , Fig. 3, provided with perforations corresponding with the projecting ends of the tubes f and a , so that on placing such a perforated sheet on the desk P there will be a group of questions on the side where the tubes f are and a group of answers on the side where the tubes a are. By way of example, Fig. 2 shows the question "Where is Cairo?" appearing where the tube f^2 is situated, while the answer "In Egypt" appears where the tube a^2 is. It is evident that on attaching the flexible tube s to the tube f^2 , and then putting the compressible ball B , with its mouth-piece t , on one of the tubes a , the pneumatic bell G will not ring unless the ball B has been placed on the tube a^2 , communicating with f^2 , and compressed so as to force a current of air through the tubes. The situation of the different questions and answers on the different perforated sheets must of course always correspond with the communication between the respective tubes of the groups f and a . Thus the questions "Where is Cairo?" or "Divide 132 by 12" must be arranged to appear at the spot where the tube f^2 is situated, if the answers, "In Egypt" or "11," are arranged to appear at the spot where the tube a^2 is situated. The dotted lines in Fig. 2 show how, for instance, the tubes f^2 a^2 f^5 a^5 f^{15} a^{15} f^{19} a^{19} f^{21} a^{21} f^{31} a^{31} f^{36} a^{36} are connected together by tubes m , arranged beneath the board of the desk. These tubes m are perfectly flexible tubes and cross each other in all kinds of directions.

The flexible tube s is provided at its movable end with a tube r , fitting into any of the

tubes *f*, so as to be able to conveniently connect any one of the tubes *f* with the pneumatic bell *G*, while the other end of the tube *s* is attached to a tube *d*, fixed in the desk *P* and communicating by means of the tube *e* with the pneumatic ringing device. This device consists, as shown in Fig. 4, of a piston *k*, sliding in a tube *h*, so that it can be impelled upward by a current of air coming through the tubes *s d e*, and then strikes against the edge of the bell *G*, afterward sliding down again by its own weight.

It is evident that without departing from the substance of this invention the current of air coming through the tube *s* may be caused to put a whistle, a sounding-reed, or other sounding or suitable signal device into action instead of a bell.

On the perforated exchangeable sheets the questions and answers may be arranged in the form of maps or illustrations from natural history or any other suitable form, so as to form an article of amusement or instruction for young or old.

Having now more particularly described the nature of my said invention, what I claim is—

1. A pneumatic toy or instructor comprising a series of tubes corresponding with questions to be answered, each tube being connected by an air-passage with another tube corresponding with the answer to such question, a sounding device, a flexible pipe for connecting any of the first group of tubes with said sounding device, and an aspirator or device for inject-

ing a current of air into any of the second group of tubes, substantially as described.

2. The combination of two groups of tubes, each tube of one group being connected with a tube of the other group, a sounding device—such as a bell—a flexible pipe for connecting the same with any of one group of tubes, and a movable air-forcing device—such as a hollow ball or bulb—for connection with any of the other group, substantially as described.

3. The combination, with a desk or stand, of two groups of connected tubes projecting therefrom, a pneumatic signaling device thereon, an aspirator or air-forcing device adapted to be placed at will over any of one of the groups of tubes, and a flexible pipe for connecting any of the other group with said signaling device, substantially as described.

4. The combination of the sounding device, the group of question-tubes and the group of answer-tubes projecting from a desk or stand and connected as described, the movable aspirator, the connecting-pipe for the sounding device, and a series of question and answer sheets having perforations corresponding to the positions of said tubes, as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JOHANN SEYBERTH.

Witnesses:

EDMUND JUSSEN,
OTTO SCHIFFER.