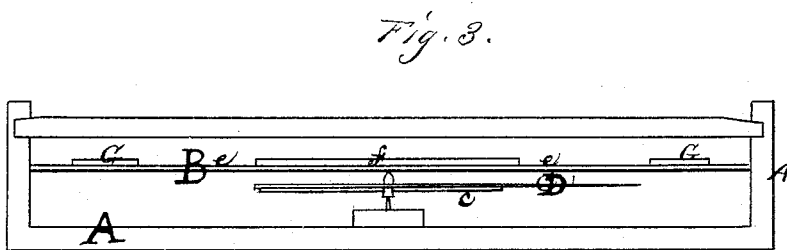
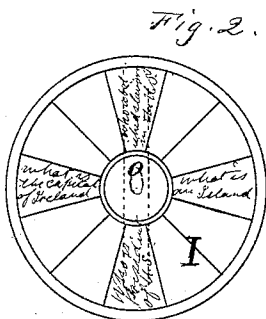
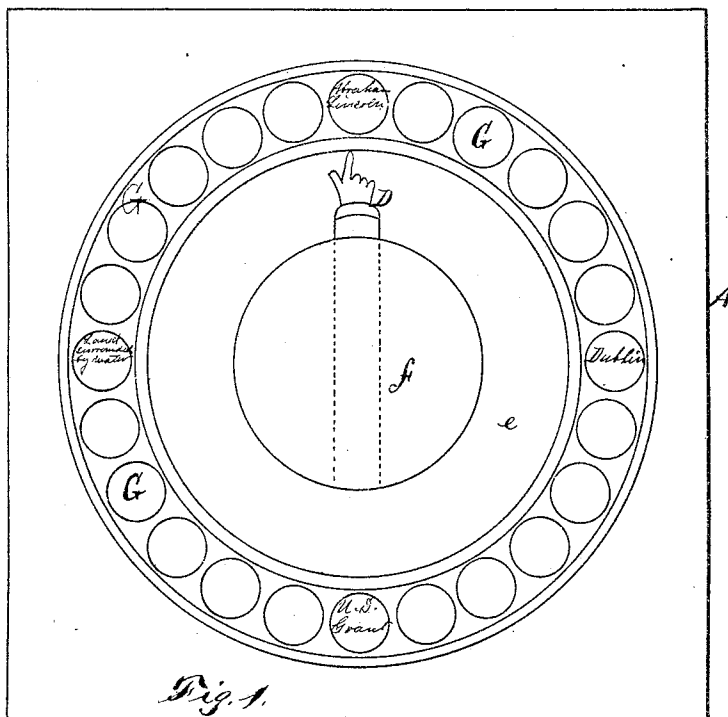


JACOB UNNA.

Improvement in Magnetic-Indicator for Teaching, &c.

N o. 126,761.

Patented May 14, 1872.



Witnesses

Geo. W. Strong,
J. L. Doane

Inventor

Jacob Unna
By his Atty's
Lewey & Co.

UNITED STATES PATENT OFFICE.

JACOB UNNA, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR TO A. ROMAN & CO., OF SAME PLACE.

IMPROVEMENT IN MAGNETIC INDICATOR FOR TEACHING, &c.

Specification forming part of Letters Patent No. 126,761, dated May 14, 1872.

SPECIFICATION.

To all whom it may concern:

Be it known that I, JACOB UNNA, of the city and county of San Francisco, State of California, have invented a Toy or Instructor, which I call a Magnetic Indicator; and I do hereby declare the following description and accompanying drawing are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use my said invention or improvement without further invention or experiment.

My invention relates to a toy or instructor, which I call a magnetic indicator, to be used either for amusement or instruction. It is intended more particularly as a toy for children or scholars who are studying elementary school-books, and serves as an aid or teacher.

In order to explain my invention so that others will be able to understand its nature and operation, reference is had to the accompanying drawing forming a part of this specification, in which—

Figure 1 is a plan of the magnetic indicator. Fig. 2 is a plan of the question-card. Fig. 3 is a cross-section of the box.

A is a box, having a glass partition, B, dividing it into an upper and lower compartment. This glass provides a flat surface, raised a short distance from the bottom of the box. Directly in the center of the bottom of this box, beneath the glass, I secure a small pedestal, upon which I mount a small load-stone or magnetic bar, C, so as to move freely under the glass, similar to a magnetic needle, and attach to it a non-magnetized finger or indicator, D, which will, by natural attraction, point to the north. The glass surface I cover or paint, so that only an annular portion, *e*, of the glass will be exposed, having directly over the magnet a circular card or piece of paper, *f*, which entirely conceals the magnet. The extremity of the finger or indicator D will then extend far enough to be seen through the annular exposed portion of the glass. The circular card *f* I then mark with cross-lines to indicate the four cardinal points. Then around the outer rim of the annular exposed portion of the glass, upon the paper or painted portion, I make a circular or other figure, G, inside of each of which is printed the answer to some question. I then employ a cir-

cular card, I, corresponding in size to the circular card *f*, which covers the magnet. The surface of this card is divided by radial lines into as many subdivisions as there are figures containing answers on the rim of the annular exposed portion of glass on which are printed the questions to which the answers are given in the outer ring. This card is made of at least two thicknesses of paper, between which I place a strip of magnetized steel, O.

As is well known, an attraction will exist between the dissimilar poles, and a repulsion between the similar poles of the magnetized strips C and O; hence, if the magnet O be turned it will cause the magnet C to revolve with it, the dissimilar poles of each magnet being attracted to each other.

The arrangement of the answers around the exposed portion of glass is such that when the subdivision in which the question occurs on the card is placed to correspond with the mark *m*, the negative pole of the magnet in the question-card will be toward the answer, and will cause the indicator-hand, which is placed upon the positive or north pole of its magnet, to turn and point to the answer.

This arrangement of the poles may be reversed and still accomplish the same result.

By employing a number of question-cards and an equal number of answering-cards the device can be made use of quite extensively as an instructor for children, and will also afford amusement and instruction for older persons.

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

An automatic instructor, consisting of the magnetic bar C with its indicating-finger D, annular glass space *e*, subdivided question-cards D having the concealed magnetized strip O, and the surrounding rim G provided with answers to the questions on the card D, all constructed and arranged to operate substantially as above described.

In witness whereof I hereunto set my hand and seal.

JACOB UNNA. [L. S.]

Witnesses:

J. LEE BOONE,
W. F. BINGHAM.