

H. Skinner,

Teaching Spelling,

Nº 52,758,

Patented Feb. 20, 1866.

Fig. 1.

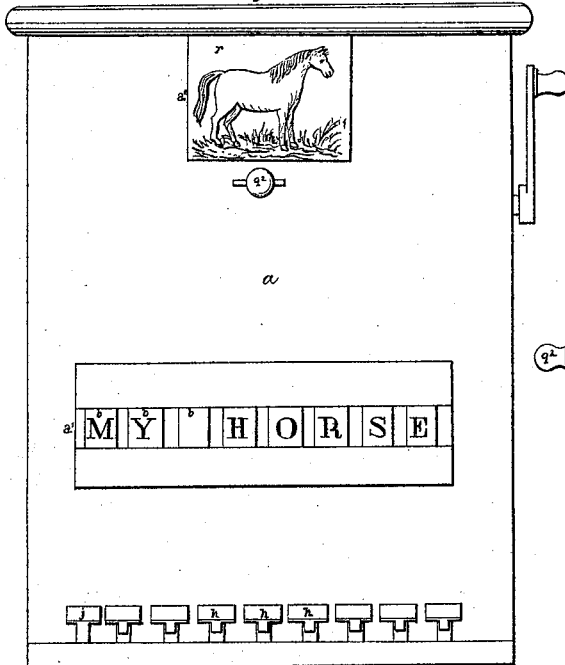


Fig. 4.

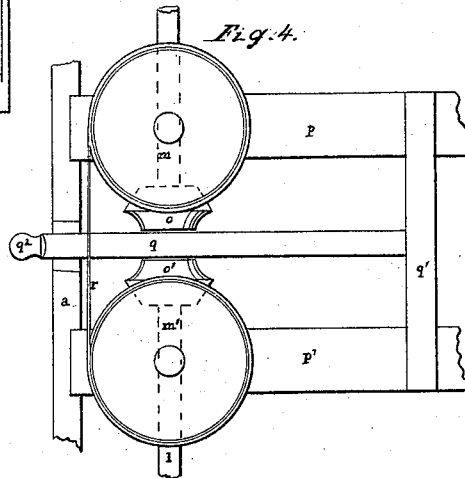


Fig. 3.

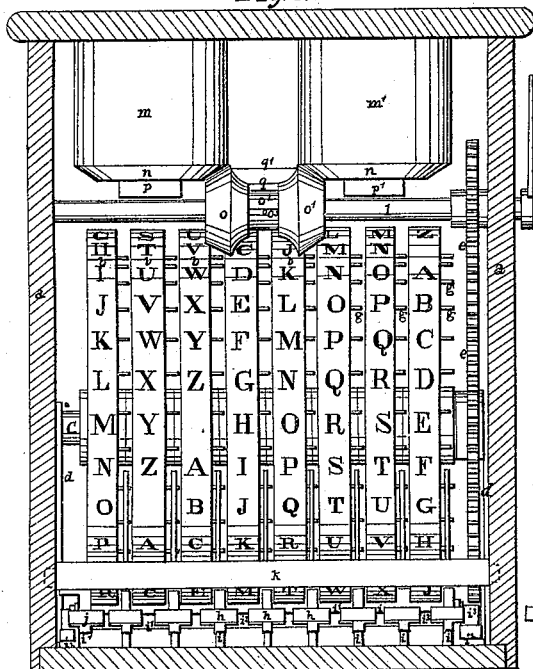
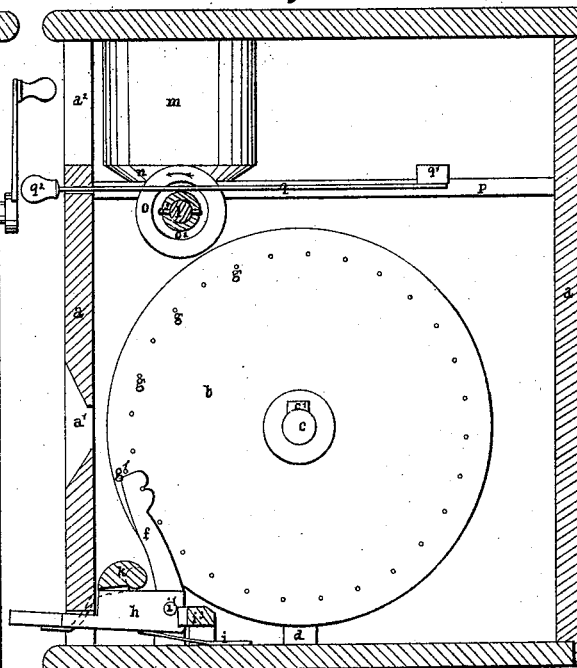


Fig. 2.



Witnesses:

*Henry Holt
John D. Bell*

*Inventor:
Hobeyn Skinner*

UNITED STATES PATENT OFFICE.

HALCYON SKINNER, OF YONKERS, NEW YORK.

IMPROVEMENT IN APPARATUS FOR TEACHING SPELLING.

Specification forming part of Letters Patent No. 52,758, dated February 20, 1866.

To all whom it may concern:

Be it known that I, HALCYON SKINNER, of Yonkers, in the county of Westchester, in the State of New York, have invented a new and useful Improvement in Apparatus for Teaching Spelling; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Figure 1 is a front view. Fig. 2 is a transverse section; Fig. 3, a longitudinal section, and Fig. 4 a top view of some of the parts.

Similar letters refer to like parts in all the figures.

In this apparatus the letters of the alphabet are arranged upon the peripheries of a series of wheels or rollers mounted side by side upon a horizontal shaft, and fixed in a box or case having an opening in front through which one letter on each wheel can be seen; and the nature of my improvement consists in a convenient and simple method of operating the wheels by which they may be rotated singly or together to bring any required letter or letters into view; and also in a method of holding the wheels stationary, and releasing them singly or together as may be desired; and, in combination with the other parts, arranging a series of pictures upon a band mounted upon one or more rollers, so that any picture may be brought in front of a second opening in the case, as may be desired.

The case *a a* is made with a horizontal opening, *a'*, in front, of sufficient length and width to show one letter on each wheel. Another opening, *a''*, shows one picture at a time.

The letters of the alphabet are arranged in regular order upon the peripheries of the wheels *b b*, which are mounted upon the shaft *c*, not rigidly secured to it, but holding with sufficient force to cause them to revolve with it when they are left free, but not so as to offer much resistance to the motion of the shaft when the wheels are held stationary. To give the proper degree of friction between the wheels and shaft, a recess is cut in the hub of each wheel, and a piece, *c'*, of indiarubber or other elastic substance is inserted. The shaft *c* has its bearings in the pieces *d d*, which are fixed in grooves in the ends of the case. Motion is communicated to the shaft *c*

by the crank operating through the crank-shaft *l* and the cog-wheels *e e*.

To hold the wheels stationary when the required letters are opposite the opening, a series of pins or teeth, *g g*, are fixed in the sides of each wheel, and are seized at the proper time by the catches *f f*, which are pressed against them by the springs *i i*.

The number of pins corresponds to the number of letters on the wheel, with an additional one for a blank space. The catches are drawn back from the pins by pressing down the keys or levers *h h* to which they are attached, and which extend outside of the case.

The rod *i'*, supported by the standards *i'' i''*, forms a fulcrum for all the keys, which are held in place laterally by the piece *i'''*, which extends along their inner ends with projections extending between them. The key *j* is not attached to a catch, but to the rocking bar *k*, which extends across the tops of all the keys *h h* and has its bearings in the ends of the case, and by pressing this key all the wheels are released at once and left free to revolve with the shaft. When the wheels are all in position with the blanks opposite the opening, and it is desired to spell a word or sentence, the crank is turned in the direction shown by the arrow, Fig. 2, and the second key from the left pressed down. This releases the first wheel and allows it to revolve with the shaft till the first letter of the word comes into view. The key is then released, and the catch seizes the pin opposite to it and holds the wheel stationary, the shaft continuing to revolve while the next key is pressed down and the second letter brought into view, and so on till the word is complete. To bring the wheels back with the blanks in front, a reversed motion is given to the crank and the key *j* is pressed down. This releases all the wheels and starts them all back at once, though they do not arrive with the blanks in front at once, as some of them may have nearly a full revolution to make, while others have only to move through the space of one or two letters. To stop the wheels as the blanks successively arrive at the front, another pin, *g'*, is fixed in the side of each wheel at such a distance from the center that it cannot pass the catch when it is drawn back to clear the other pins, but strikes upon the top of it

at the moment when the blank comes opposite the opening. When they have all arrived in this position the key *j* is released, and all the catches seize the pins opposite them and hold the wheels from turning in either direction.

The pictures are arranged upon the band *r*, and mounted upon the rollers *m m'*, which have their upper bearings in the top of the case and their lower ones in the supporting-pieces *p p'*. The lower ends of the rollers are beveled to form friction-gears *n n'*, which are operated by the bevel-wheels *o o'* on the shaft *l*. The wheels *o o'* are connected together by the hub or sleeve *o²*, and are made to revolve with the shaft by the pin *o³*, which passes through the shaft and through the slot in the hub, allowing the wheels to slide on the shaft to engage with the roller *m* or *m'*, and move the band to the right or left or leave it stationary, as may be desired. The wheels *o* and *o'* are moved laterally on the shaft *l* by the lever *q*, which has its fulcrum at *q'*, and extends through the front of the case, where it is provided with a knob, *q²*, by which it is operated. The wheels *o o'* are covered with

leather, and the beveled surfaces *n n'* are slightly rigid, like the teeth of a wheel, to insure a sufficiently firm hold without risk of injuring the band *r* in case the motion of the shaft *l* is continued after the band is all wound off from one wheel onto the other.

By removing four small screws the bottom of the case may be taken off, and all the parts removed for inspection or repair.

Having now fully described my invention, what I desire to secure by Letters Patent is—

1. Holding the wheels *b b* stationary, when required, by means of the pins *g g* and catches *f f*, and releasing them in any required number by the keys *h h*, or all together by the key *j* and rocking bar *k*, substantially as described, and for the purpose set forth.

2. In combination with the other parts described, mounting a series of pictures upon one or more rollers, substantially as specified.

HALCYON SKINNER.

Witnesses:

THOMAS SMITH,
HENRY HOLT,
JOHN T. BELL.