

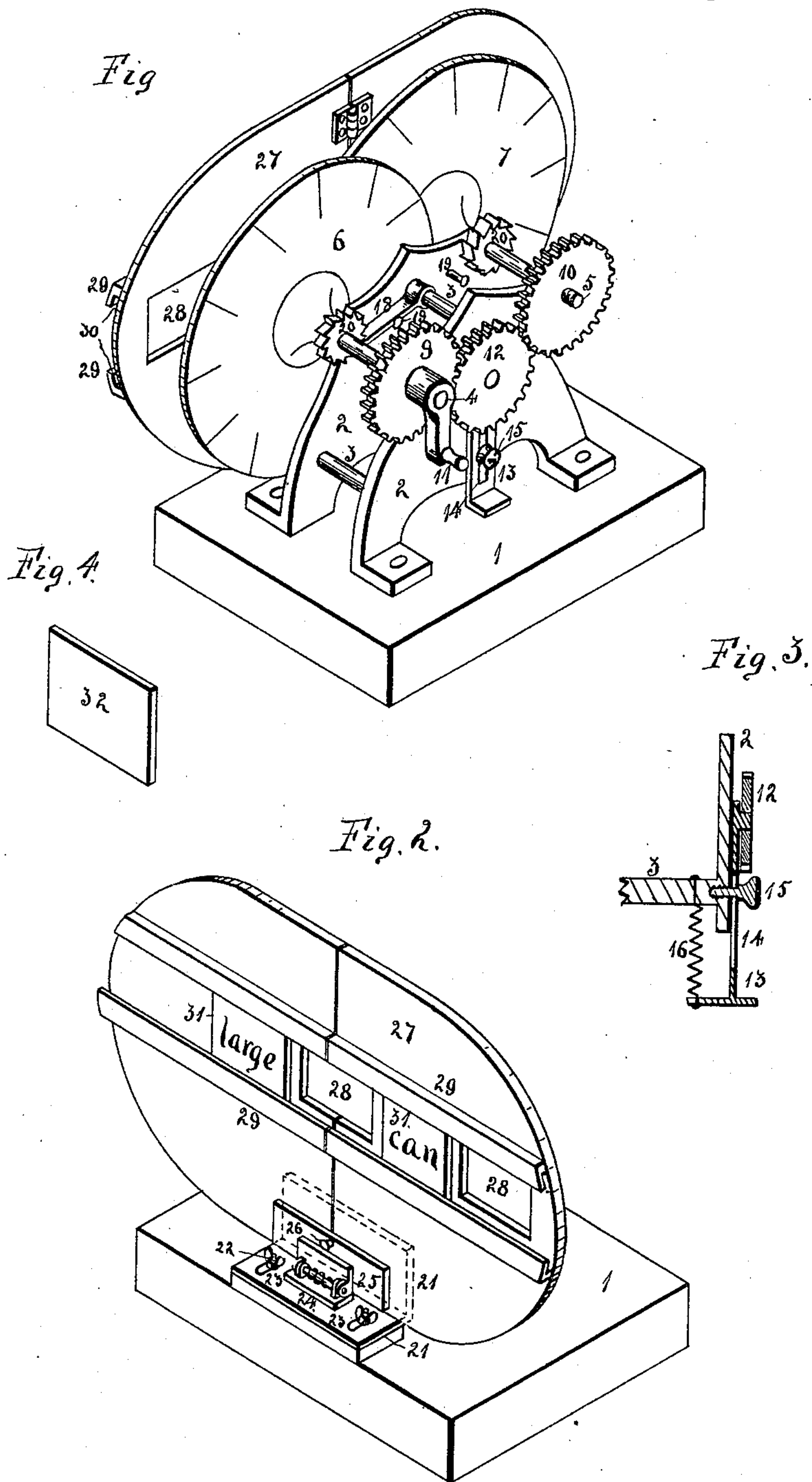
(No Model.)

W. W. HALLETT.

DEVICE FOR INSTRUCTION IN READING AND CALCULATING.

No. 481,728.

Patented Aug. 30, 1892.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

WILLIAM W. HALLETT, OF LEE, ILLINOIS.

## DEVICE FOR INSTRUCTION IN READING AND CALCULATING.

SPECIFICATION forming part of Letters Patent No. 481,728, dated August 30, 1892.

Application filed February 17, 1892. Serial No. 421,890. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM W. HALLETT, a citizen of the United States, residing at Lee, county of Lee, and State of Illinois, have invented certain new and useful Improvements in a Device for Instruction in Reading and Calculating, of which the following is a specification.

The improvements herein shown apply particularly to that class of machines illustrated and described in Letters Patent of the United States numbered 462,405 granted to me November 3, 1891, wherein two revolving disks bearing educational matter are screened from view excepting such portions as coincide with openings in the obscuring curtain and with which on the curtain may be written other matter to be read in conjunction with the words or signs on the disks.

In the accompanying drawings, Figure 1 is an isometrical representation of my device for reading and calculating as seen from the rear. Fig. 2 is an isometrical representation of the same, looking at its face side. Fig. 3 is a sectional view of the parts necessary to withdraw the intermediate gear from between the two larger gears and for locking it in or out of engagement therewith. Fig. 4 is an isometrical representation of one of the slips which slide in the grooves in the face of the screen.

In the construction of my calculator I first provide a base-piece 1, secured to and arising from which are the two sides 2 of the supporting-frame, joined together by the connecting-rods 3, which hold the sides in fixed relation. In the upper outer ends of the supporting-frame I journal the two shafts 4 and 5, each bearing upon its forward end a disk, upon which is placed educational matter, the shaft 4 carrying the disk 6 and the shaft 5 the disk 7, the latter disk partially overlying the former. These disks are secured rigidly to their respective shafts by thumb-nuts, and on the rear ends of the shafts and rigidly secured thereto are the two gears 9 and 10 on shafts 4 and 5, respectively, and outside the gear 9 I secure the hand-crank 11, by which the shafts are rotated. To communicate motion from the drive-shaft 4 to the shaft 5 I interpose a gear-wheel 12 between those 9 and 10. The gear 12 is journaled loosely in a vertically-

sliding bracket 13, and a vertically-elongated opening 14 in the bracket admits a thumb-screw 15, having a screw-threaded connection with the supporting-frame, allowing the withdrawal of the intermediate gear from engagement with the other two. A coil-spring 16 extends between the bracket and one of the connecting-rods 3 of the frame, tending to hold the gear 12 in engagement with the gears 9 and 10, though it may be locked out of engagement by means of the thumb-screw 15.

To prevent a turning of the disks in other than one direction, I provide a flexible bar 18, pivoted in the frame midway between the shafts on one of the connecting-rods 3 and extending over the stud 19. This bar engages the teeth of the serrated wheel 20. Both shafts bear ratchet-wheels, the teeth of which are set in opposite directions, that the flexible bar 18 may be turned to engage either ratchet.

On lines radiating from the centers of the disks 6 and 7 I form words, signs, letters, pictures, or other educational matter to be presented to the learner.

In constructing sentences I may provide one disk with nouns and the other with verbs.

On the base 1, before the disks, I secure angle-bracket 21, the bars of which are movable secured to the base 1 by the threaded rods 22, passing through elongated openings 23 in the bracket 21. One leaf of the spring-hinge 24 is affixed to the base of the bracket 21 and to its free leaf is secured the plate 25, to which I attach the hand-knob 26.

To cover the face of the disks, I provide a screen 27, of some stiff material, held upright in the bracket 21, and this screen has openings 28, by which certain portions of the surface of the disks are exposed to view. This screen is formed in two sections, joined together by hinges, and on its face bears strips 29, about on a level with the upper and lower edges of the openings 28, provided with grooves in their adjacent edges.

To slip into the grooves I provide detached pieces 31 of card-board or other suitable material, bearing letters, signs, words, punctuation-marks, &c., to be used in conjunction with the matter exposed and to be arranged in suitable order in reference to the matter on the disks. Other slips 32 are made in blank to partially close the openings of the screen

and thus hide certain portions of the exposed surface of the disks.

In use when arithmetic is to be taught with my calculator I place the disks bearing numbers on the shafts and secure the screen in place, covering those numbers not to be considered and placing the slip 31, bearing the proper sign, on the screen between the openings.

10 The jointing of the screen is to allow its folding into a more convenient shape in packing for transportation.

I claim as my invention—

A device for instruction in reading and calculating, having a supporting-frame, shafts 15 journaled therein, disks bearing instructive matter mounted on the shafts, a screen for hiding certain portions of the disks, a bracket for supporting said screen, the bracket having a stationary upright back and a spring- 20 actuated movable jaw, between which and the back the screen is held.

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Witnesses:

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