June 19, 1928. 1,674,553

C. S. JONES

EDUCATIONAL DEVICE

Filed April 30, 1927 2 Sheets-Sheet 1

Fig. 1.

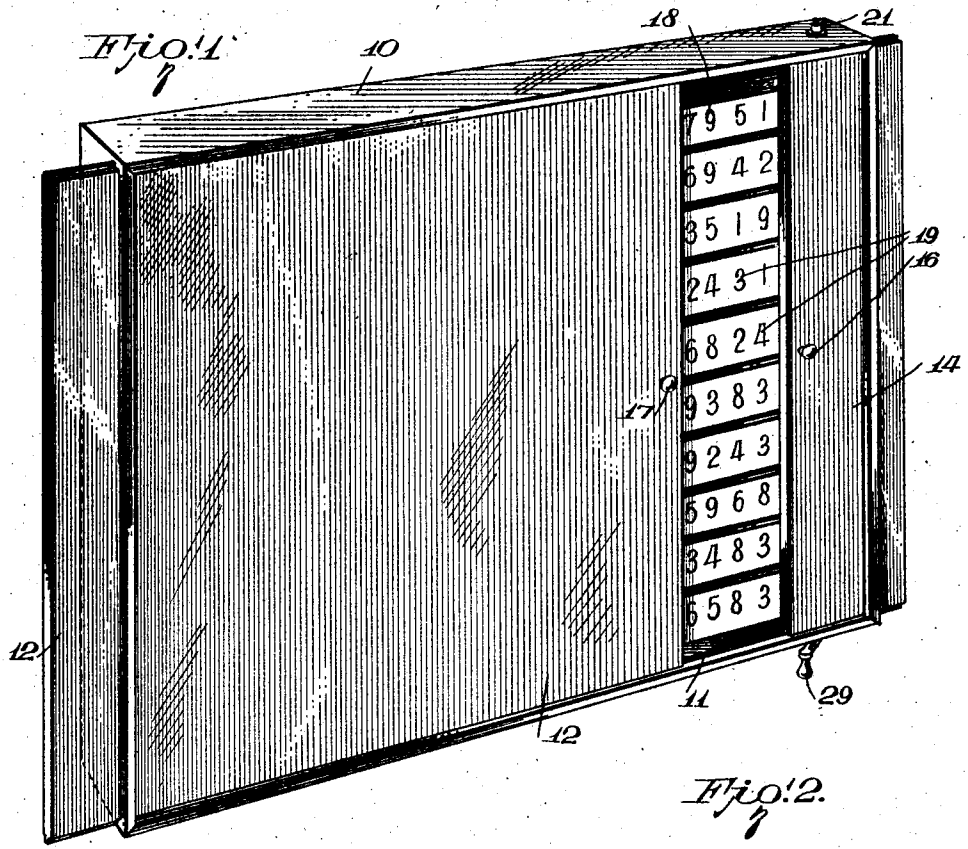


Fig. 2.

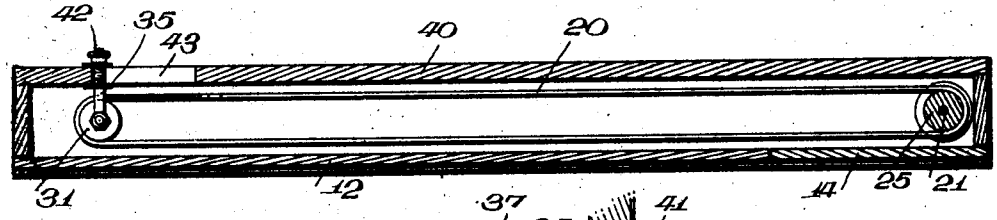
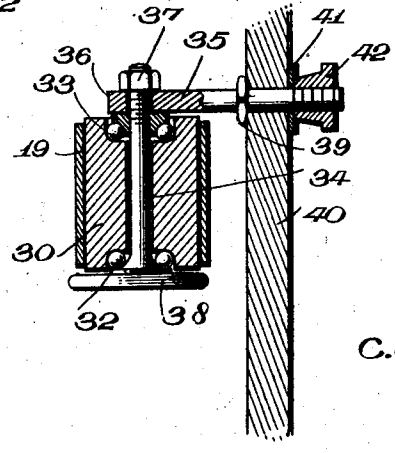


Fig. 3.



WITNESSES

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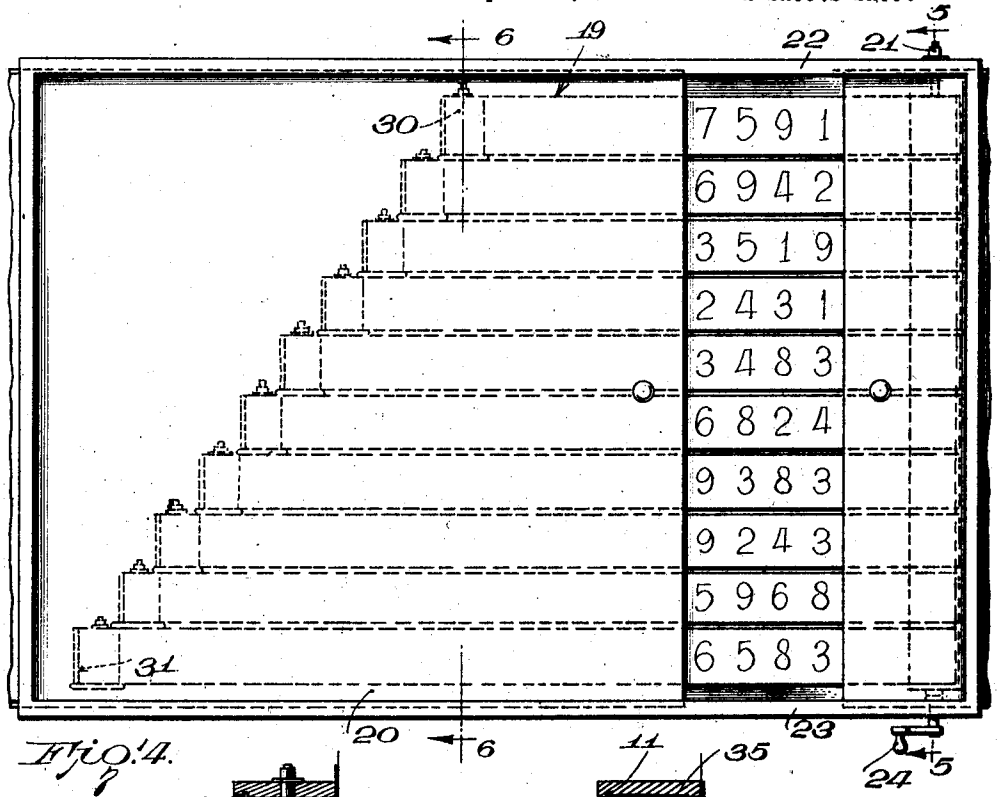


FIG. 4.

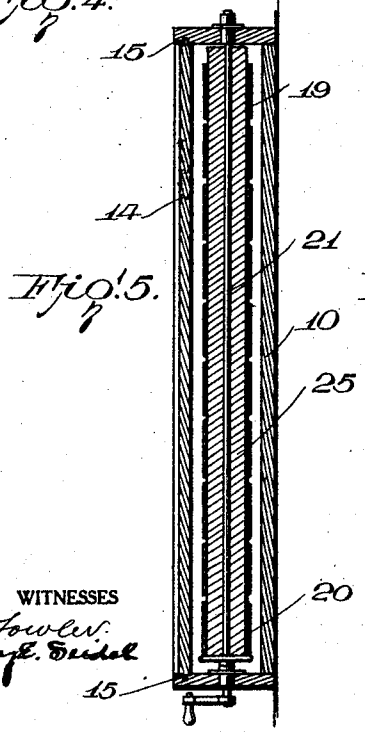


FIG. 5.

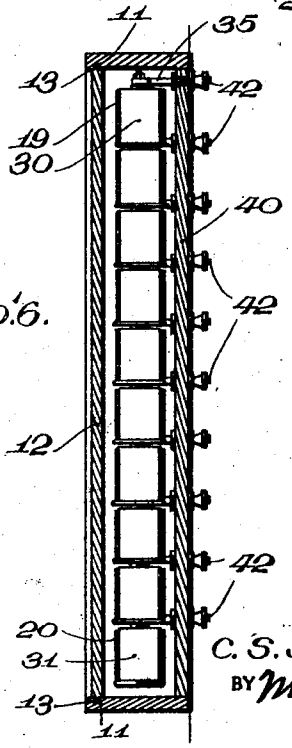


FIG. 6.

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UNITED STATES PATENT OFFICE.

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EDUCATIONAL DEVICE.

Application filed April 30, 1927. Serial No. 188,011.

This invention relates to an educational device, and has for its object the provision of an instrumentality for displaying to the pupils of the class various groups or columns of figures for addition and in which many combinations of figures may be had.

A further object of the invention is the provision of an instrumentality having a plurality of belts of progressively increasing length and in which the length of the belt is proportionate to the number of figures imprinted thereon, so that various combinations of figures may be displayed before an opening in a casing carrying the belts for conveniently disclosing columns of figures for addition, and in which a great number of variations may be had.

This invention will be best understood from a consideration of the following detailed description, in view of the accompanying drawings forming a part of the specification; nevertheless, it is to be understood that the invention is not confined to the disclosure, being susceptible of such changes and modifications as shall define no material departure from the salient features of the invention as expressed in the appended claim.

In the drawings:

Figure 1 is a view in perspective of the educational device constructed in accordance with the principles of my invention.

Figure 2 is a horizontal longitudinal section of the device,

Figure 3 is a fragmentary vertical section showing the means for tightening the belts,

Figure 4 is a view in elevation of the educational device,

Figure 5 is a vertical section taken along the line 5—5 of Figure 4, and

Figure 6 is a vertical section taken along the line 6—6 of Figure 4.

Referring more particularly to the drawings 10 designates a housing having its front end open and provided with tracks 11 to receive the opposite ends of a sliding door or closure 12. The opposite ends of the sliding door are reduced, as shown at 13. An auxiliary door 14 is provided at one end of the casing and has its opposite ends reduced, as shown at 15, and received within the tracks 11. The door 14 is provided with a knob 16 for manually moving the door while the door 12 is provided with a knob 17 for a similar purpose. These doors are adapted to be moved toward and away from each other for increasing the display opening 18 in the front of the casing and for exposing the numbers 19 on the various belts as will be presently explained.

It will be noted that a plurality of belts are arranged at different horizontal levels with the uppermost belt 19 being the shortest in length while the lowermost belt 20 is the longest. The intermediate belts progressively increase in size from the uppermost to the lowermost so that the belts from the shortest to the longest have an increase in number of the indicia in order to provide for different combinations of the columns of the figures for addition.

The shaft 21 is mounted in bearings in the top 22 and bottom 23 of the casing and a crank 24 is secured to the lower end of the shaft whereby said shaft may be rotated. Secured to the shaft is a drum 25 on which the various belts are trained so that when the shaft and drum are rotated the belts will be moved in synchronism. The belts are each trained at their opposite ends upon separate pulleys which are disposed in stepped relation, with pulley 30 being disposed at the top which is adapted to idle when the belt 19 is revolved. The lowermost pulley 31 idles when the belt 20 is moved by the rotation of the drum 25. Each of the idling pulleys, as shown in Fig. 3, has ball bearings 32 and 33 seated in pockets in the opposite ends of the pulley embracing an axle 34. This axle is supported by a bolt 35 having a bearing 36 to receive the axle and a nut 37 in co-operation with a disc 38 secures the pulley 30 to the bolt 35. This bolt is provided with a flange 39 embracing the inner face of the rear wall 40 and a washer 41 and nut 42 co-operate with the flange 39 for locking the bolt in position. This bolt is mounted in a slot 43 in the rear wall and is adapted to be adjusted horizontally for tightening the belt.

The operation of my device is as follows: The casing 10 is placed in any convenient position in the class room before the pupils and the sliding doors 12 and 14 are moved away from each other to provide a space which is sufficient to expose any number of columns of figures. It will be appreciated that while certain columns of figures will be exposed before the predetermined opening between the inner edges of the doors by operating the crank 29 various combinations

of figures will be had due to the fact that the smaller belt 30 at the top of the casing will travel through a greater number of revolutions than the lowermost belt and since the belts increase in length proportionate from the top to the lowermost that the other belts will have different periods of movement and thus co-operate with the other belts to provide different combinations of columns of figures for addition. The manipulation of the doors will determine the number of columns which may be desired for the purpose.

I claim:

An educational device comprising a casing, a plurality of belts of progressively increasing lengths located at different horizontal levels in the casing, a plurality of doors slidably mounted at the front of the casing the doors adapted to be moved towards and away from each other to provide the vertical openings of varying widths, said belts having numbers adapted to be exposed through the openings between the doors, the varying of the openings providing for additional columns to produce varying combinations of numbers for the purposes of addition, means for simultaneously rotating the belts, idling pulleys located in stepped relation in the casing and adapted to receive and support the belts, the varying lengths of the pulleys cooperating with the variations of the openings at the front of the casing to provide not only additional columns of numbers but for variations in the numbers in the columns.

CHARLES S. JONES.