

June 24, 1930.

B. APPLGATE

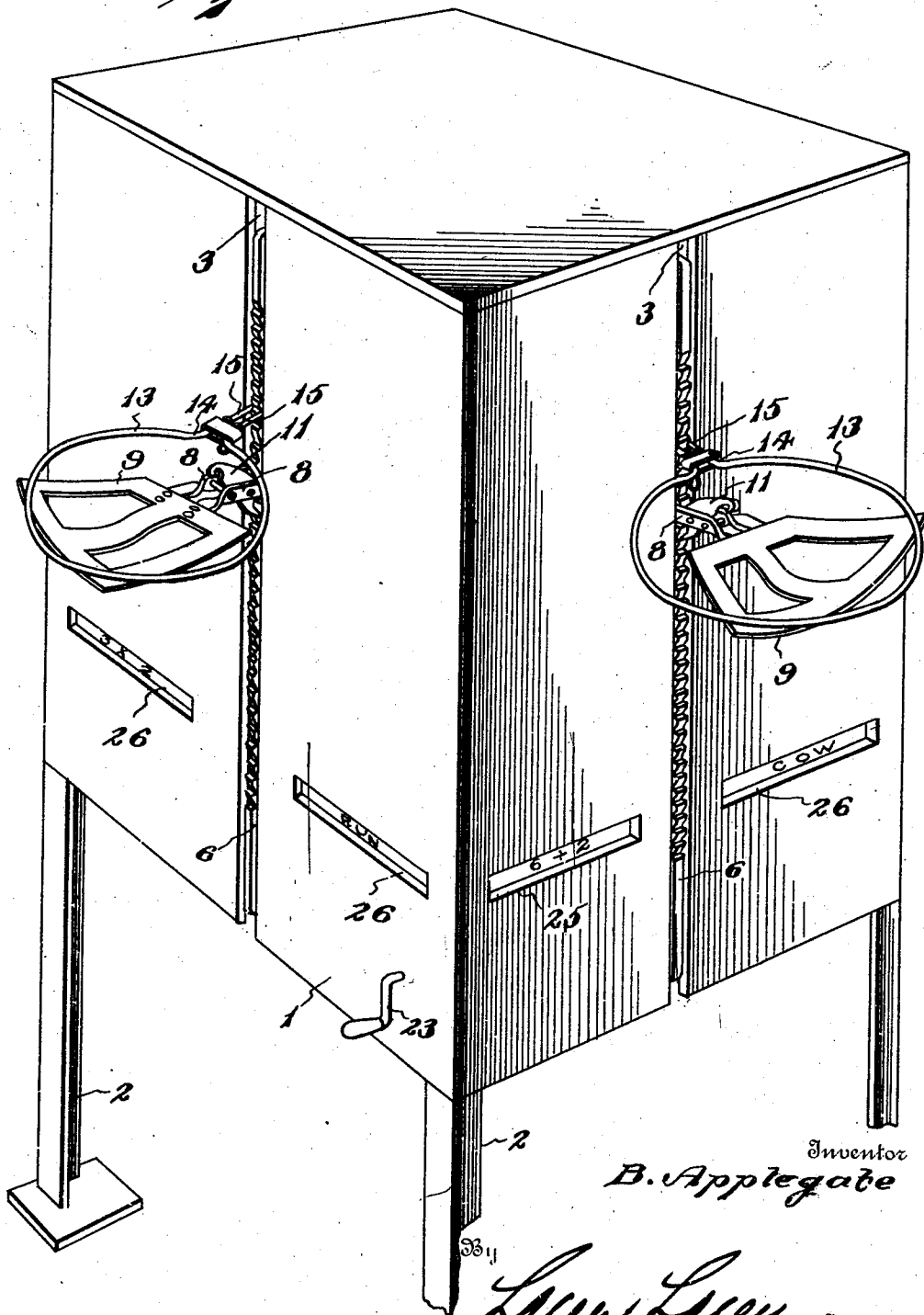
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EDUCATIONAL GAME APPARATUS

Filed Dec. 18, 1928

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Fig. 1.



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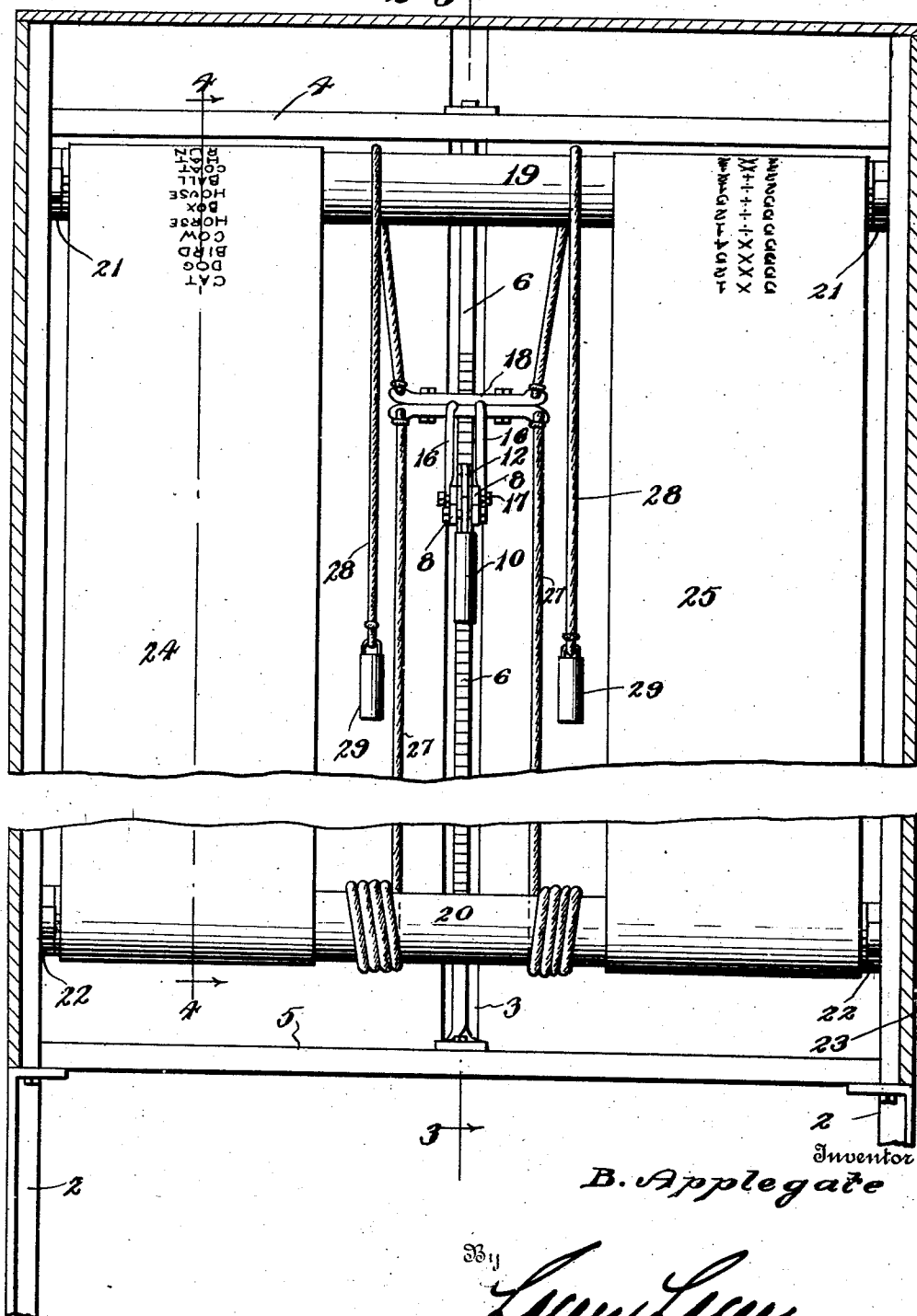
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Fig. 2.



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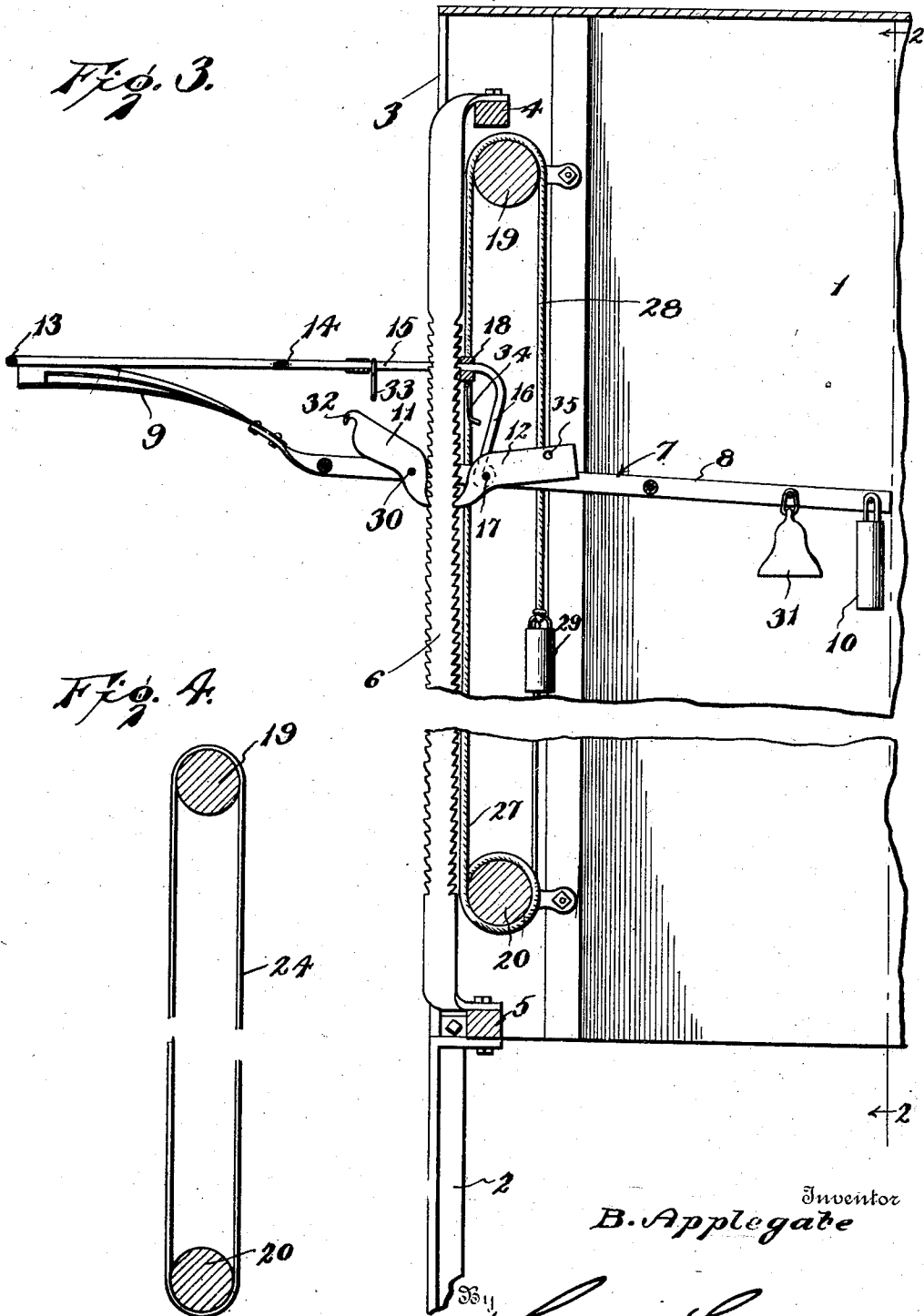
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EDUCATIONAL GAME APPARATUS

Application filed December 18, 1928. Serial No. 326,713.

The present invention is directed to improvements in an educational game apparatus.

The primary object of the invention is to provide an apparatus of this character so constructed that children in primary school grades can be drilled in playing a game closely simulating that of basket ball, and at the same time be taught spelling and simple mathematics.

Another object of the invention is to provide an apparatus of this nature which will not only be instructive to the players, but will furnish amusement, as well.

Another object of the invention is to provide an apparatus of this kind so constructed that each time a goal is scored the goal ring will change its elevation, thus testing the skill of the child in throwing the ball through the ring which is constantly changing its position.

Another object of the invention is to provide an apparatus of this character having a number of goal rings in order that a number of classes can play at the same time.

Another object of the invention is to provide an apparatus of this nature which can be moved from place to place, either for use in a play room or out doors.

With these and other objects in view, this invention resides in the novel features of construction, formation, combination and arrangement of parts to be hereinafter more fully described, claimed and illustrated in the accompanying drawings, in which:—

Figure 1 is a perspective view of the device.

Figure 2 is a vertical sectional view through the device.

Figure 3 is a sectional view on line 3—3 of Figure 2.

Figure 4 is a sectional view on line 4—4 of Figure 2.

Referring to the drawings, 1 designates a casing supported by legs 2, the sides of the casing having slots 3 formed therein. Transverse bars 4 and 5 are supported within the casing adjacent the upper and lower ends of the slots 2, and to which are secured, re-

spectively, the upper and lower ends of the ratchet bars 6.

Each ratchet bar has associated therewith an arm 7 which consists of spaced bars 8, between which the ratchet bar 6 is engaged, the forward ends of the bars 8 being provided with a trip head 9, which is secured to the bars in any approved manner. The arm 7 has secured to its inner end a counter weight 10.

Pivotaly mounted between the bars 8 of the arm are pawls 11 and 12 which cooperate with the ratchet bar to move the arm upwardly, step by step, when the arm is rocked in a manner to be hereinafter described.

Associated with the head 9 is a goal ring 13 which has its terminals 14 terminating in spaced bars 15 between which is engaged the bar 6. The bars 15 terminate in downwardly directed extensions 16 which are pivotaly connected to the bolt 17 which pivotaly connects the pawl 12 with the arm 7.

The inner ends of the bars 15 are connected to a cross head 18, the purpose of which will appear later.

Upper and lower rollers 19 and 20 are employed and have their ends journaled in bearings 21 and 22, respectively, the lower roller having a crank handle 23 fixed to one end, the purpose of which will be later explained.

A pair of endless webs 24 and 25 are trained around the rollers 19 and 20, said webs being formed from suitable fabric. The web 24 has printed thereon words, while the web 25 has thereon numerals, the words being such as those taught in primary classes, while the numerals denote examples in arithmetic for primary class study.

The sides of the casing are provided with sight openings 26 in order that the words and examples may successively coincide therewith during intermittent movement of the webs.

In order to transmit movement to the webs cords 27 are provided and have their lower ends wrapped around the roller 20, while the upper ends thereof are secured to the cross head 18.

Cords 28 are provided and pass over the

roller 19 and have weights 29 secured to their lower ends, the other ends of said cords being secured to the cross head 18, as clearly shown in Figure 2 of the drawings.

When the ball is thrown and it drops through the goal ring 3 it engages the head 9, thus rocking the arm 7 since the weight of the ball is sufficient to overbalance the weight 10. As the head swings downwardly the pawl 11 catches, and during the rocking movement of the arm the pawl 12 moves upwardly, whereupon the cross head 18 also moves upwardly and pulls upon the cords 27 thus rotating the roller 20 to cause the web to move in order that the words or examples may be successively moved into registration with the openings 26, and at each time the arm 7 is rocked by a ball falling upon the head 9. Obviously the weight 10 will swing the inner end of the arm downwardly as soon as the ball falls from the head 9, thus returning the head to its normal position, as shown in Figure 3 of the drawings. Since the cords 28 are engaged over the roller 20 rotary movement will be imparted to this roller as the pawls operate to elevate the goal ring and head 9. After the cross head has moved upwardly to its fullest extent the pawls 11 and 12 are disengaged from the ratchet bar and the crank handle 23 turned, thus winding the cords 27 upon the roller 20 to return the cross head to its lowermost position.

The weights 29 will obviously counterbalance the cross head 18, goal ring 13, head 9, and the associated parts.

After the head 9 and goal ring are in their lowermost position the game can be again started. When the head 9 is subjected to the weight of the ball it will swing downwardly, thus causing the pawl 12 to move upwardly for engagement with a tooth of the bar 6, at which time the pawl 12 remains fixed, the pivotal pin 30 thereof acting as a fulcrum for the arm 7. As the head 9 and arm 7 are successively rocked the pawls will successively move upwardly to elevate the cross head 18, thus causing the cords 27 and cords 28 to rotate the rollers 19 and 20 to impart intermittent travel to the webs to successively position the figures and words in registration with the sight openings.

The children participating in the game will line up and take turns throwing the ball. For instance, if the first child throws a ball and it passes through the ring and drops upon the head 9, the arm will be rocked, and a goal counted. If the same child can properly solve the example and pronounce and denote the meaning of the word exposed at the sight opening, he is given another chance. In this way a child is taught number work and to recognize and

pronounce simple words, and will become efficient in scoring points.

The rule for playing the game as above given of course can be varied, and the rules may be made to suit various conditions.

Since each side of the casing is equipped with one of the goal rings and associated parts, a number of games may progress at the same time.

A bell 31 is supported by the arm 7, and will obviously ring each time the arm 7 is rocked.

Upon reference to Figure 3 it will be observed that the pawl 11 has a hook 32 carried thereby which is adapted to be engaged by the loop 33 carried by the bar 15 in order that when the loop is engaged with the hook the pawl will be held from engagement with the ratchet bar. A hook 34 is carried by the cross head 18 and is adapted to engage the perforation 35 formed in the pawl 12, and it will be obvious that when the hook is engaged in this perforation that the pawl 12 will be held from engagement with the ratchet bar 6 in order that when the lower roller 20 is rotated the cords 27 will be wound thereon to draw the cross head 18 and the associated parts downwardly. The hook 34 can be conveniently engaged with the perforation 35 of the pawl upon removing the top closure of the casing, when desired.

From the foregoing, it is thought that the construction, operation and many advantages of the herein described invention will be apparent to those skilled in the art, without further description, and it will be understood that various changes in the size, shape, and proportion and minor details of construction, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

What is claimed is:—

1. A game apparatus of the class described, comprising a casing, rollers journaled in the casing, endless webs trained around the rollers, a goal ring, an arm having a head thereon, said head being adapted to be engaged by an object passing through the ring to rock the arm, and means associated with the arm for imparting movement to the webs when said arm is rocked.

2. A game apparatus comprising a casing, rollers journaled in the casing, endless webs trained around the rollers, a goal ring, an arm having a trip head thereon for disposition under the ring, a cross head connected with the goal ring, cords connecting the cross head and rollers, said head being operable when subjected to the weight of an object to rock the arm to impart movement to the cross head to rotate the rollers to move the webs.

3. A game apparatus of the class described comprising a casing, a ratchet bar

carried by the casing, an arm, pawls pivotally carried by the arm for engagement with the ratchet bar, a goal ring connected with the arm and having a cross head carried thereby, a head carried by the arm, rollers in the casing, endless webs trained around the rollers, cords connecting the rollers and cross head, said head serving to rock the arm to actuate the pawl to move the cross head upwardly to impart movement to the webs.

arm adapted to be engaged by an object passing through the ring to rock the arm, means for moving the ring downwardly upon the rocking of the arm, and means associated with the arm for imparting movement to the webs during downward movement of the ring.

In testimony whereof I affix my signature.
BENTON APPELEGATE. [L. s.]

4. A game apparatus of the class described comprising a casing, a ratchet bar carried thereby, an arm having pawls pivotally connected therewith for engagement with the bar, a head carried by the arm, a goal ring having a cross head connected therewith, means for connecting the goal ring with the arm, rollers in the casing, endless webs trained around the rollers, said arm being rockable when the head is rocked to actuate the pawl to move the cross head upwardly, and means connecting the cross head and rollers for imparting movement to the webs as the cross head moves upwardly.

5. A game apparatus of the class described comprising a ratchet bar, an arm having pawls carried thereby for engagement with said bar, a head carried by the arm, a goal ring having extensions connected therewith for engagement with the arm, a cross head connected with the goal ring, endless webs in the casing, said head being rockable to rock the arm to impart movement to the webs.

6. A game apparatus of the class described comprising a casing, rollers journaled in the casing, webs trained around the rollers, a goal ring, a cross head connected with the goal ring, an arm mounted for rocking movement in the casing, means for elevating the arm during rocking thereof, and flexible means connecting the rollers and cross head for rotating the rollers to impart movement to the webs during elevation of the arm.

7. A game apparatus of the class described, comprising a casing having a slot in its side, a ratchet bar disposed in the slot, an arm having pawls pivotally connected therewith for engagement with the bar to move the arm upwardly when the bar is rocked, a head on the arm for rocking the same, a goal ring disposed above the head, extensions carried by the goal ring and connecting said ring with the arm, and movable upwardly with the arm to elevate the cross head as the arm moves upwardly, rollers journaled in the casing, endless webs chained around the rollers, and means connecting the cross head and rollers for imparting rotary movement thereto to impart movement to the web.

8. A game apparatus of the class described, comprising a casing, endless webs movable in the casing, a goal ring, a trip

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