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SPINNING TOP GAME APPARATUS

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FIG. 1.

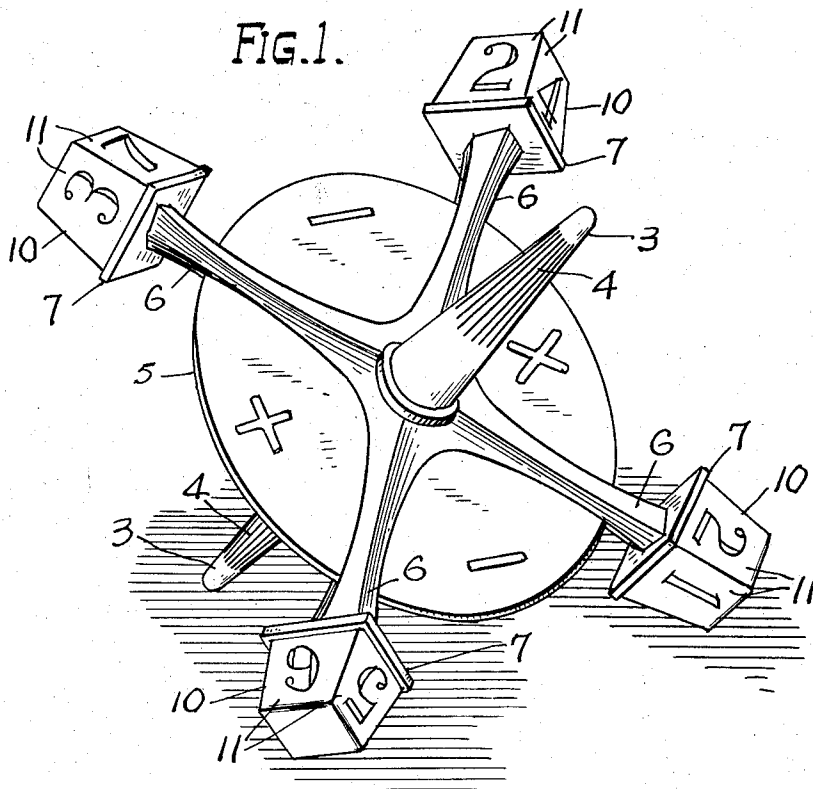
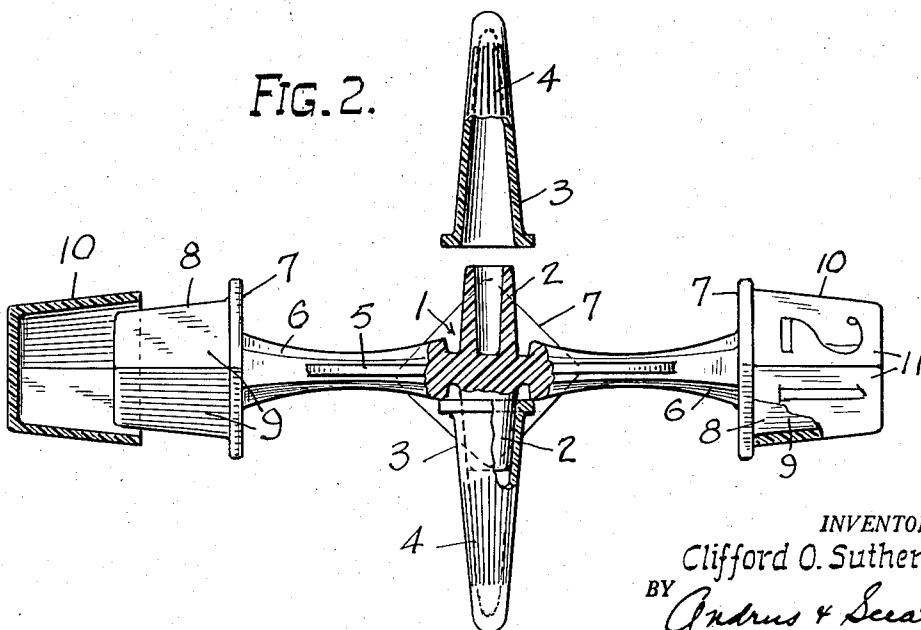


FIG. 2.



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SPINNING TOP GAME APPARATUS

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8 Claims. (Cl. 273—147)

This invention relates to a game apparatus and more particularly to a jack for use in an arithmetic-type game.

The present apparatus is directed to a game device based on arithmetic principles which can be used as an educational aid for children in teaching the basic fundamentals of addition, subtraction, and multiplication and which has an unlimited scope of use in the field of recreation for adults.

According to the invention the apparatus consists of a pair of spindles which are attached to opposite faces of a disc. A plurality of legs are located in the plane of the disc and project outwardly beyond the periphery of the disc. The outer end of each of the legs is adapted to receive a removable cap having a plurality of generally flat or plane surfaces, and each of the surfaces is adapted to bear an arithmetic indicium, such as a number, with the numbers on any one cap being of different value.

The device is spun on one of the spindles and comes to rest with a number of the legs extending upwardly and with one of the flat surfaces of the caps of the upwardly extending legs facing upwardly. The numbers on these upwardly facing surfaces can then be combined in a manner depending on an arithmetic symbol located on the portion of the disc extending between the adjacent upwardly extending legs.

By interchanging the caps on the various legs and by rotating the caps on each leg, various combinations of numbers can be obtained.

The device is particularly useful in teaching children the basic fundamentals of simple arithmetic, for the numbers on the upwardly extending legs can be added, subtracted or multiplied together. The device also has a recreational value for adults and an unlimited number of games can be played with the combination of numbers that appear on the upwardly extending legs. The game not only provides recreation but develops skill and mentally alertness.

The drawings illustrate the best mode presently contemplated of carrying out the invention.

In the drawings:

Figure 1 is a perspective view of the apparatus of the present invention; and

Fig. 2 is an elevational view of the present apparatus shown partly in vertical section and having a spindle and cap shown in exploded position.

The drawings illustrate a game jack or "jackstone" to be used in an arithmetic-type game. The jack is composed of a plastic or metallic material and comprises a central hub 1 which is provided with a pair of generally cylindrical shanks 2. The shanks 2 extend outwardly from the hub in opposite directions and the outer surface of each shank 2 is tapered and is adapted to be wedgingly engaged within the hollow interior of a generally tapered spindle 3. As best shown in Fig. 2, the shanks 2 and the attached spindles 3 make up a central axis or shaft about which the device is adapted to be spun or rotated in operation.

The outer surface of each of the spindles 3 is provided with a series of longitudinally extending grooves 4 or serrations which enable the player to more easily grasp the spindle and spin the same. The outer end of each of the spindles terminates in a generally blunt tip which serves as a bearing support for the jack when the same is spun on a playing surface.

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A generally circular disc 5 is secured axially to the hub 1 and a plurality of legs 6 are formed integrally with the disc and radiate outwardly from the hub. The legs 6 are spaced circumferentially of the disc and are disposed in the plane of the disc. The outer ends of the legs 6 extend beyond the periphery of the disc 5.

The outer end of each of the legs 6 is secured to a generally flat base member 7 which is disposed in a plate extending generally perpendicular to the disc 5. The base member 7 carries a head 8 which has a generally truncated shape and is provided with a series of generally flat or plane side surfaces 9. As shown in Fig. 2, each head 8 is formed with four side surfaces 9 which are disposed at an angle of approximately 45° to the plane of the disc 5.

Each of the heads 8 is adapted to receive a generally hollow cap 10 having an interior surface to complement the head 8. The outer surface of the cap 10 defines a plurality of generally flat or plane side surfaces 11.

To secure the caps 10 firmly on the respective heads 8, the heads and caps are tapered to provide a wedging engagement between the members. When disposed on the head, the base portion of the cap is in proximate relation with the base member 7 of the corresponding leg.

As the head 8 and the cap 10 have generally square cross-sectional contours, the cap will be locked against rotation with respect to the head.

A number or digit is applied to each of the flat surfaces 11 of the caps 10.

The numbers on the respective surfaces 11 of one cap may be 1, 2, 3 and 4, the numbers of a second cap may be 5, 6, 7, 8 and the numbers on the surfaces of a third cap may be of a still different series or combination. No definite number arrangement is contemplated and the particular arrangement of numbers on the surfaces 11 depends on the specific game or use to which the device is to be put.

In operation of the present apparatus, the player supports the jack on one of the spindles 3 and twists the other spindle to spin the jack. The jack comes to rest with two of the legs 6 and one of the spindles 3 extending downwardly and resting on the playing surface and the other two legs extending upwardly. As the surfaces 9 of heads 8 and the surfaces 11 of the caps 10 are disposed at an angle to the plane of the disc 5, one of the surfaces 11 of the caps associated with each of the upwardly extending legs will face upwardly in position to be counted when the jack is at rest. The numbers appearing on these upwardly facing surfaces 11 are then added, subtracted or multiplied as directed by an arithmetic symbol located on the disc 5 between the upwardly extending legs. These symbols, as shown in Figure 1, take the form of an addition sign, a pair of subtraction signs and a multiplication sign.

By turning the caps on the heads 8 the relative position of the numbers can be varied to obtain different combinations of numbers. Similarly, the caps can be interchanged which again will provide a second combination of values to appear on the upwardly extending legs. The combinations of numbers can be further varied without changing the position of the caps by inverting the jack and spinning the same on the opposite spindle. With the above mentioned variations of numbers it is possible to obtain an unlimited number of combinations so that any desired number or arithmetic-type game can be played.

As an example of a simple game that can be played with the present device, the players may select a goal of 100 points to be attained exactly by the totals of the numbers on the upwardly extending legs. Each player has the opportunity of arranging the caps on the heads and interchanging caps to provide a series of possible number combinations most suitable for his needs. Initial-

ly he may arrange the caps in an attempt to obtain a large total, while, later in the game as his total approaches the 100 point goal, he may arrange the caps in an attempt to obtain a particular combination which when added to his present total will give him the needed 100 points. Thus, the present device requires a definite amount of preliminary thought and alertness to determine the most beneficial arrangement of caps and obtain the desired numerical totals.

The present invention provides a simple and inexpensive device which can be used as an educational aid for children or as a recreational device for adults. As the spindles 3 are removably secured to the hub 1 the spindles can be readily removed for handling or carrying with the result that the device is a very compact structure.

While the above description was directed to a device having four legs and two spindles it is contemplated that any number of appendages over five may be employed so that at least two appendages extend upwardly when the device comes to rest. Similarly, the numbers may be applied directly to the heads 8 thereby eliminating the use of caps 10 if desired. However, the elimination of caps 10 will restrict the number of combinations that can be obtained.

Various modes of carrying out the invention are contemplated as within the scope of the following claims particularly pointing out and distinctly claiming the subject matter which is regarded as the invention.

I claim:

1. A game apparatus, comprising a central body, at least five appendages having the inner ends thereof connected to the body and radiating therefrom, said apparatus being supported by three adjacent appendages at any given position of rest of the apparatus with the remaining appendages extending upwardly, an enlarged head secured to the outer end of at least three of said appendages and having a generally flat side surface, and a member removably secured to each head and secured against rotation thereon, each member having upwardly facing arithmetic indicia thereon with each indicium adapted for combination with the indicia on the other members.

2. A game apparatus, comprising a central body, at least five appendages having the inner ends thereof connected to the body and radiating therefrom, said apparatus being supported by three adjacent appendages at any given position of rest of the apparatus with the remaining appendages extending upwardly, and a member removably secured to the outer end of a number of said appendages and having a generally flat surface, each member being locked against rotation on its respective appendage so that said surface will face generally upward when the appendage is in an upwardly extending position, an arithmetic digit disposed on said flat surface, and arithmetic symbol means disposed adjacent said appendages.

3. In a game apparatus, a plurality of legs having the inner ends thereof connected together at a terminal and said legs radiating outwardly from said terminal, a cap removably secured on the outer end portion of each of said legs and having a plurality of generally flat side surfaces, each cap being locked against rotation on its respective leg, a digit disposed on each of said surfaces with the digit on a surface of one cap being of different value than the digits on the remaining surfaces of the cap, and means disposed adjacent said legs for indicating how the digits on different caps are to be combined.

4. A game apparatus, comprising a central body, aligned shaft portions extending from opposite sides of said body, a plurality of legs having the inner ends thereof connected to the body and disposed in a plane extending generally perpendicular to the axis of said shaft portions, each of said legs terminating in an enlarged head, a cap removably secured on each head and locked against rotation thereon and having a generally flat exterior surface adapted to bear a symbol, and means for indicating how

the symbols on said exterior surfaces are to be combined.

5. A game apparatus, comprising a central body, aligned shaft portions extending from opposite sides of said body with one end of one of said shaft portions adapted to be grasped by the operator to spin said apparatus about the axis of said shaft portions and the end of the other of said shaft portions adapted to serve as a bearing support as the apparatus is spun, a plurality of legs having the inner ends thereof connected to the body and disposed in a plane extending generally perpendicular to the axis of said shaft portions, a series of caps disposed on each leg with each cap having a plurality of generally flat exterior surfaces, means to wedgingly engage each of said caps on the outer ends of said legs and to prevent rotation of the cap on the leg, means to arithmetically differentiate the surfaces on each of said caps, and symbol means disposed adjacent said legs for indicating how said differentiating means are to be combined.

6. A game apparatus, comprising a disc, a tapered appendage connected axially to one surface of said disc and extending outwardly therefrom, a second tapered appendage connected axially to the opposite surface of said disc and extending outwardly therefrom, a plurality of legs disposed in the plane of the disc and extending radially beyond the periphery of said disc, a cap for each of said legs and having a generally flat exterior surface adapted to have arithmetic indicia thereon, means disposed adjacent said legs for indicating how said indicia are to be combined, and means for removably securing each of said caps onto the respective legs with the flat surface of each cap being disposed in a plane extending angularly to the plane containing the disc.

7. A game apparatus, comprising a disc, aligned shaft portions extending axially from opposite sides of said disc with one end of one of said shaft portions adapted to be grasped by the operator to spin said apparatus about the axis of said shaft portions and the end of the other of said shaft portions adapted to serve as a bearing support as the apparatus is spun, a plurality of legs disposed in the plane of the disc and extending radially beyond the periphery of said disc, a cap removably secured on the outer end portion of each of said legs and having a plurality of generally flat side surfaces, a digit disposed on each of said surfaces with the digit on a surface of one cap being of different value than the digit on the remaining surfaces of the cap, and an arithmetic symbol disposed on the disc between each pair of adjacent legs.

8. A game apparatus, comprising a disc, aligned shaft portions extending axially from opposite sides of said disc with one end of one of said shaft portions adapted to be grasped by the operator to spin said apparatus about the axis of said shaft portions and the end of the other of said shaft portions adapted to serve as a bearing support as the apparatus is spun, a plurality of legs disposed substantially in the plane of the disc and extending from said shaft portions and radially beyond the periphery of said disc, a cap removably secured on the outer end portion of each of said legs and having at least one flat sided surface, a digit disposed on at least one surface on each cap, and arithmetic symbol means disposed on the disc.

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