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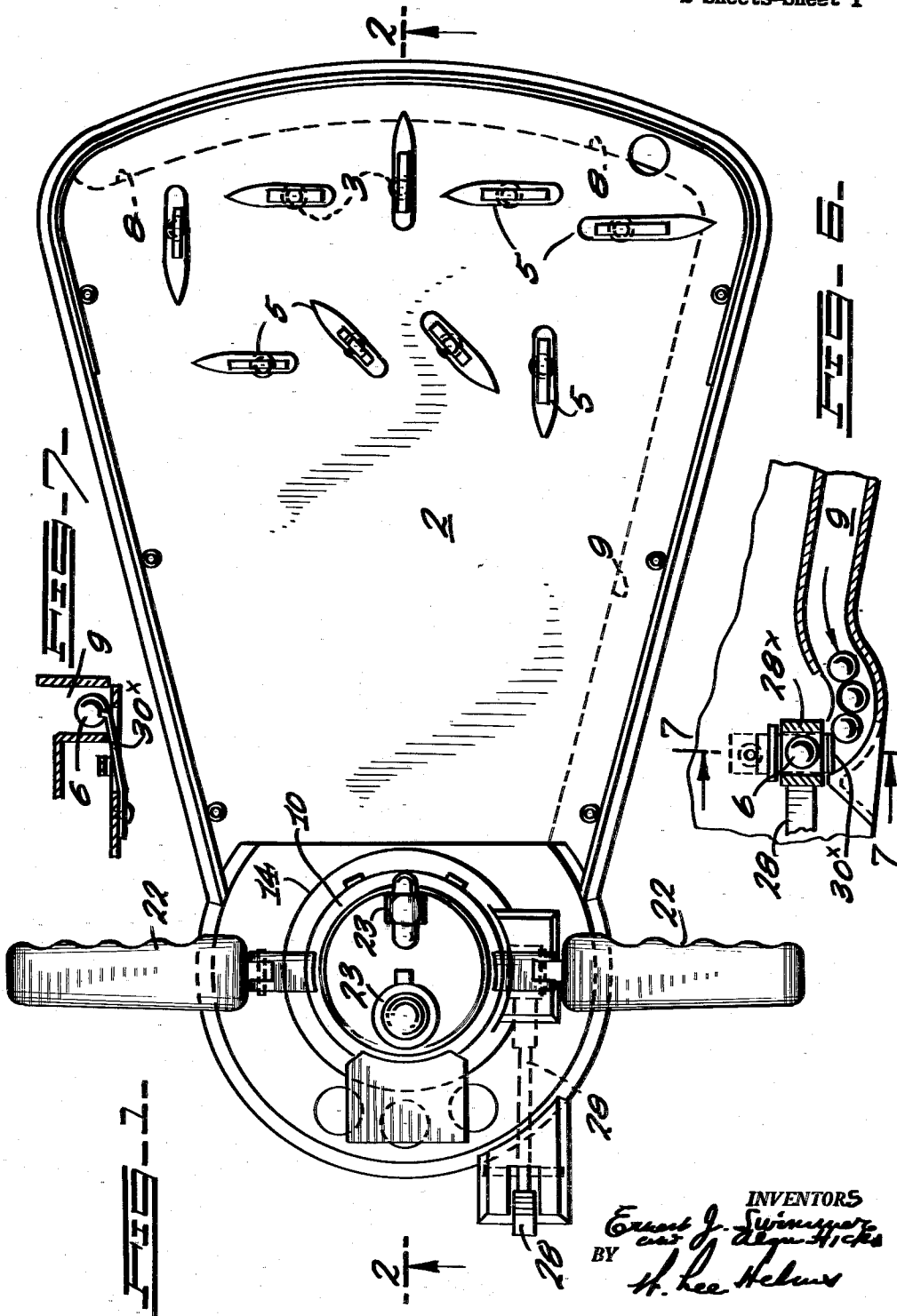
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2,991,081

TOY WITH SIGHTING AND BALL THROWING DEVICE

Filed June 2, 1959

2 Sheets-Sheet 1



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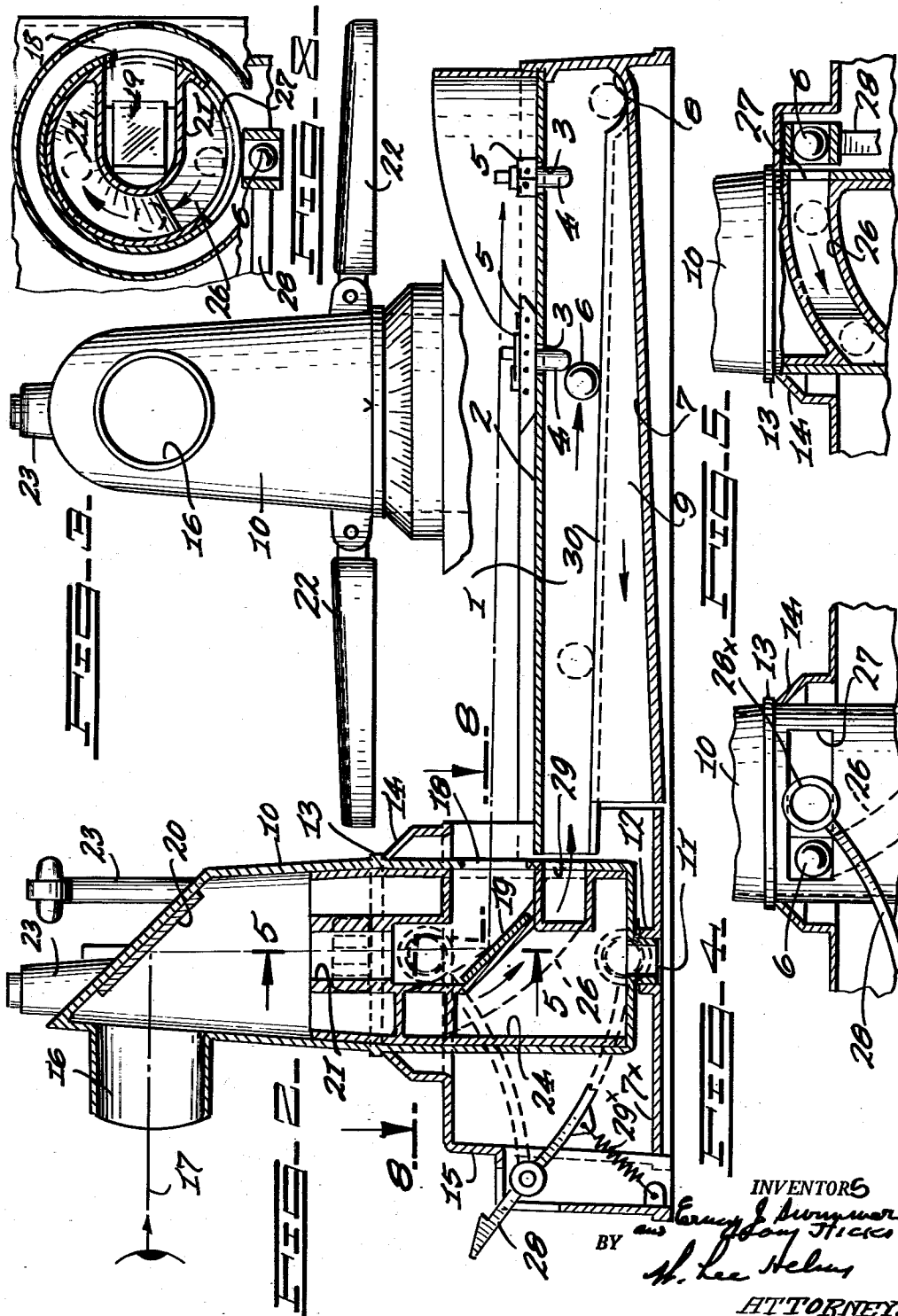
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TOY WITH SIGHTING AND BALL THROWING
DEVICE
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By means of the structure of the present invention, a heavy steel ball is caused to be raised by lever into the top of a spiral runway in a sighting tower which may be moved from side to side to cause an outlet for the ball, at the base of the tower, to register with stud-carrying objects, so that the sighting will direct the ball toward specific objects. The depending studs of these objects project downwardly through holes in a board, and when one of the steel balls strikes a stud the object is thrown upwardly and dislodged. Thus, if the object is the replica of a ship, the latter will be thrown over on its side.

The invention will be described with reference to the accompanying drawings, in which FIG. 1 is a top plan view of the structure.

FIG. 2 is a vertical section on the line 2-2, FIG. 1.

FIG. 3 is a fragmentary elevation showing the sighting tower and its handles for effecting its swinging movements.

FIG. 4 is a fragmentary view showing that area of the sighting tower having the inlet aperture for the raised steel ball.

FIG. 5 is a view similar to FIG. 4 taken at right angles to the latter figure, and on the line 5-5, FIG. 2.

FIG. 6 is a fragmentary view in plan, showing the inlet for the ball raising lever, with the latter in down position.

FIG. 7 is a detail and fragmentary view, in section and vertical on the line 7-7, FIG. 6.

FIG. 8 is a horizontal section on the line 8-8, FIG. 2.

Referring to the drawings, the structure comprises a primary base member 1 having a top horizontal wall 2 which is formed with mutually offset apertures as indicated at 3, FIG. 2, to receive the depending carrier studs 4, for objects 5, to be displaced by the gravity rolling action of a ball 6. At 7 is shown a forwardly slanting wall, having an inclined channel at the rear as indicated at 8, FIGS. 1 and 2, which communicates with a similar forwardly directed channel leading to the front as indicated by the dotted lines at 9, FIG. 1.

Near the front of the structure is a swinging sight tower 10, which has at its base a bearing annular projection 11 rotatable in a socket at 12, FIG. 2, formed in wall 7*. The tower is further supported for rotation by means of an external bearing ring 13, which rests on an annular support 14 carried by the front member 15 of the structure. By sighting the eye of the user through tube 16 of the sighting tower, the objects may be visualized in accordance with the horizontal line at 17, the objects being reflected through opening 18 of the tower, mirror 19 and mirror 20, the light passing through the tower via an axial tube at 21, FIG. 2.

The sighting tower has pivotally attached thereto manually operated handles for swinging the same. The vertical projections 23 have no significance, being only for ornamentation. Within the tower is a supplementary shell which carries the tube 21 and the mirror 19. However, surrounding these elements the said shell, which is indicated at 24, FIG. 2, is formed with a gravity passageway for the steel balls. As shown by the FIGURES 4 and 5, this passageway, indicated at 26, has an inlet at

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27 for successive balls 6. When the balls are positioned at the inlet by the throw of an elevating lever 28, they fall into the passageway 27, and by gravity are rolled down the passageway 26 until they pass out of the sighting tower via discharge opening at 29, FIG. 2, and onto an inclined wall at 30, which is with a flat surface unmodified except for the channelway formations at 8 and 9 at the rear and at the side of the structure.

The balls running down the inclined wall channel 9 are successively raised and delivered to the inlet 27 of the spiral 26 by the following means. Channel 9 being slanted forwardly causes the balls to successively meet a spring stop 30*, FIGS. 6 and 7. This stop is immediately below the ring reception head 28* of lever 28. This lever is normally pressed downwardly by spring 29*, FIG. 2, and hence this spring pressure causes member 30* to be depressed so that one ball will roll by gravity into the lever ring 28*. When lever 28 is moved downward, its receiving ring 28* depresses spring 30 and the foremost ball rolls by gravity into the said ring 28*. Then when the lever 28 is operated to raise the ball to its uppermost position, the ball will roll into inlet 27 and then down the spiral channel 26 to the outlet 29 and thence rearwardly on inclined wall 30 in a direction determined by the outlet 29.

It will be understood that various modifications may be made in the form and arrangements of the elements in the embodiment illustrated, without departing from the spirit of the invention.

Having fully described our invention, what we now claim and desire to secure by Letters Patent is as follows:

A periscopically sighted ball projector comprising an upper table-like member having a plurality of holes which are mutually offset and adapted to receive studs depending from objects held on the table-like member, a rearwardly inclined wall underlying said table-like member and having a ball-receiving channel downwardly inclined and leading to an area thereof extended toward the front of said rearwardly inclined wall, said channel at its front end leading to the ball-receiving end of a lever, a lever having a ball-receiving end, means pivoting the lever to the front of the projector, a tower and supporting means therefor at the front end of the table-like member, said supporting means permitting oscillation of the tower, a ball inlet in an upper area of said tower and in line with the path of the ball-receiving end of the lever, a downwardly inclined passageway in the tower and communicating with said ball inlet for reception of balls, a discharge aperture in the tower at the end of said inclined passageway and communicating with the wall underlying the upper table-like member, a sight tube carried by and communicating with the interior of the tower, a mirror assembly carried interiorly of the tower and including a reflecting mirror inclined rearwardly of an aperture in the tower above the upper table-like member, and adapted for effecting sight of the objects on the table-like member to the eye of an observer looking into said sight tube.

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