

(No Model.)

T. G. CLIFFORD.

MERRY GO ROUND.

No. 288,018.

Patented Nov. 6, 1883.

Fig. 1

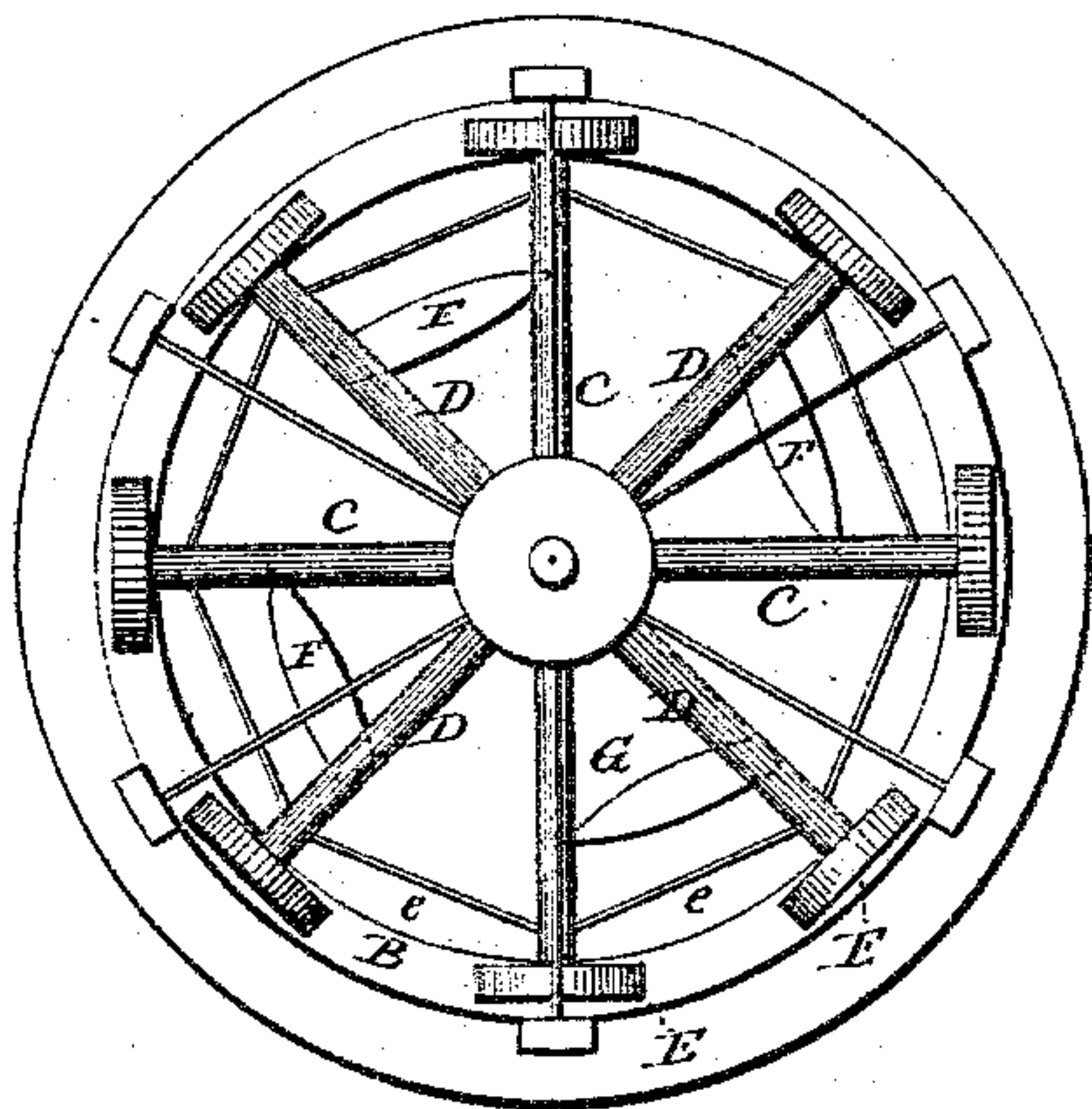


Fig. 3

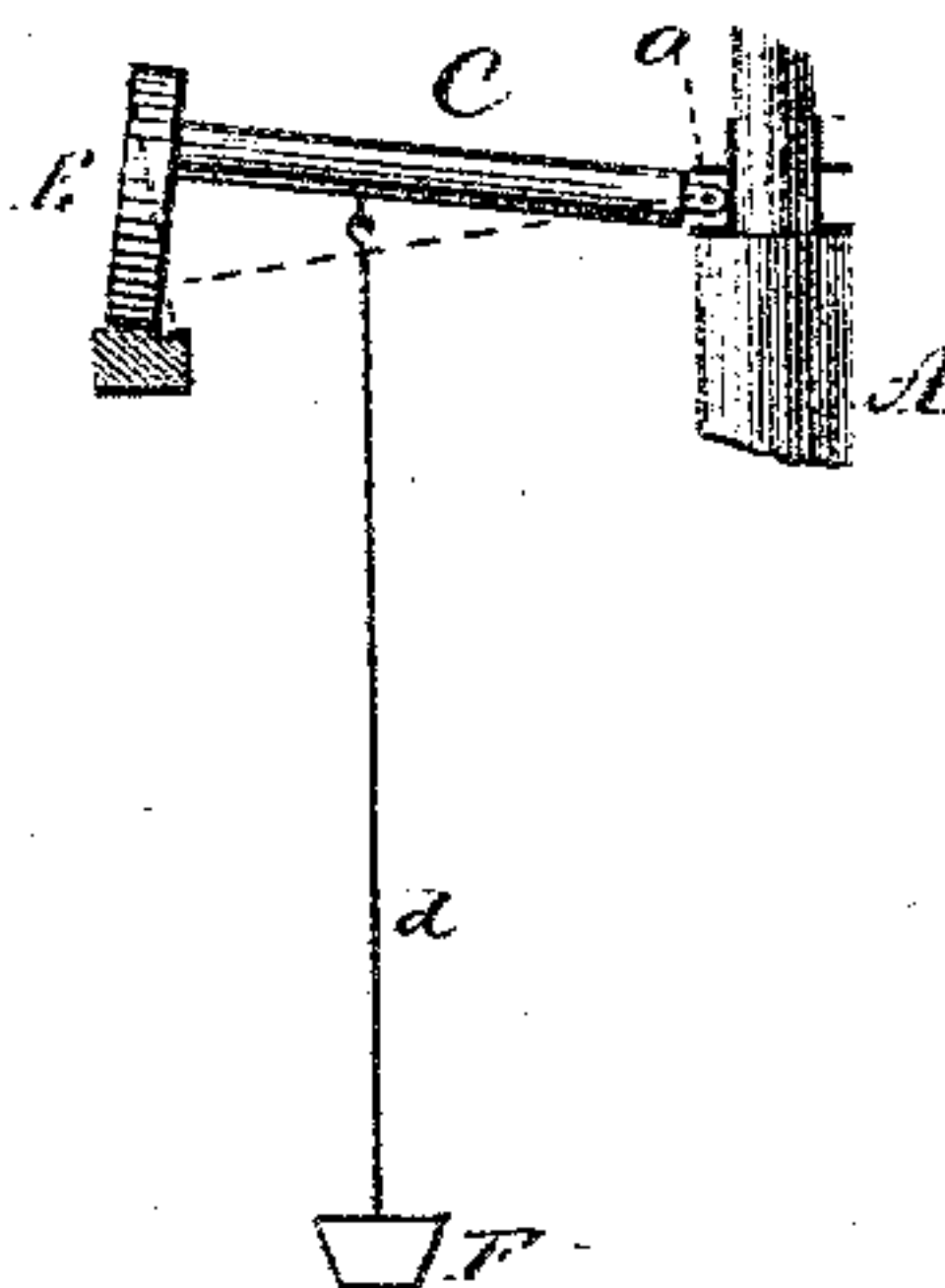
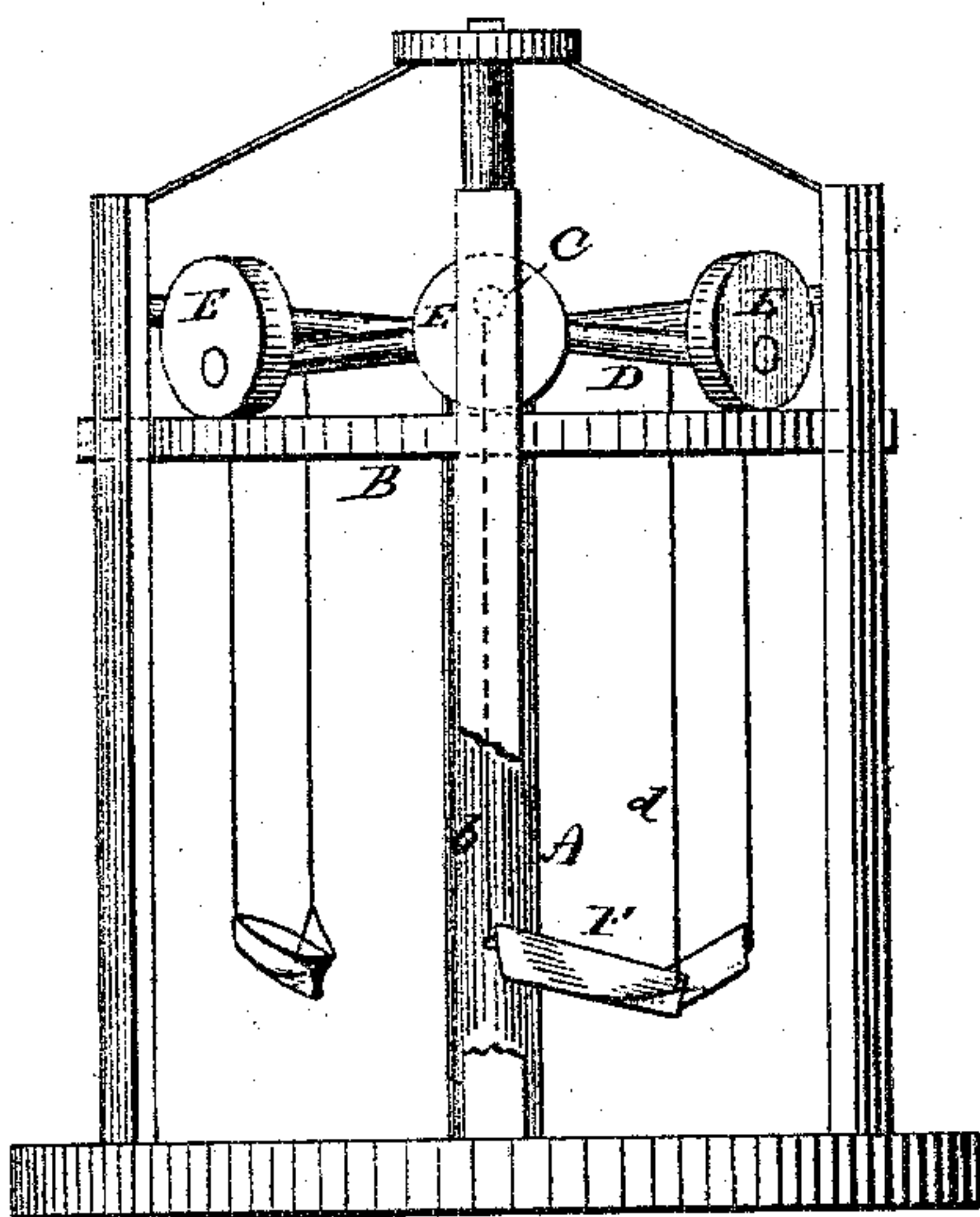


Fig. 2



Witnesses.

J. H. Hummery
J. C. Carle

Thomas G. Clifford
Inventor.
By Atty.
J. C. Carle

UNITED STATES PATENT OFFICE.

THOMAS G. CLIFFORD, OF ATLANTIC CITY, NEW JERSEY, ASSIGNOR OF
ONE-HALF TO JOS. W. CLIFFORD, OF NEW YORK, N. Y.

MERRY-GO-ROUND.

SPECIFICATION forming part of Letters Patent No. 288,018, dated November 6, 1883.

Application filed September 19, 1883. (No model.)

To all whom it may concern:

Be it known that I, THOMAS G. CLIFFORD, of Atlantic City, in the county of Atlantic and State of New Jersey, have invented a new Improvement in Merry-go-Rounds; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a top or plan view; Fig. 2, a side view, a portion broken away for illustration; Fig. 3, a vertical section.

This invention relates to an improvement in apparatus for the amusement of children and others, and in which seats are arranged upon extremities of arms extending from a fixed center in a horizontal plane, and so that the arms revolving on said fixed center carry the passenger round and round in a circle, and commonly called "merry-go-round."

The object of my invention is to construct the apparatus so that the seat for the passenger may be a boat, and in revolving around the center a motion will be imparted to the boat similar to that imparted to boats on water by the waves.

To this end my invention consists in the arrangement of two arms for each boat, the said arms radiating from a common center, and at their outer end each fitted with a wheel the axis of which is eccentric, the longer diameter of one in opposite direction to the longer diameter of the other, the said arms elevated and the wheels arranged to run upon a circular track, whereby an alternate up-and-down movement will be imparted to the said arms, combined with a boat suspended therefrom by flexible connections, whereby a universal swinging motion will be attained, as well as a fore and aft up-and-down movement, and as more fully hereinafter described.

A represents the central revolving shaft, and to which power is applied in the usual manner for merry-go-rounds. B is a circular track concentric therewith, and elevated to a considerable distance above the point where the pas-

sengers are to sit. From the shaft, and above the plane of the track, axles are arranged in pairs, C D, more or less of them, and extend radially from the shaft, connected to the shaft by a pivot-joint, as at *a*, so as to permit an up-and-down vibration of the axles, such up-and-down vibrations being independent each of the other.

At the outer end the axles are fitted each with a wheel, E, the hole in each wheel, in which the axle takes its bearing, being eccentric to the periphery of the wheel, and arranged so that the longer diameter of one is in the opposite direction to the longer diameter of the other, as seen in Fig. 2—that is, the wheel on the axle C standing with its longer diameter downward, the wheel on the axle D will stand with its longer diameter upward, and so that as the wheels revolve the axles are accordingly carried from their highest position to their lowest point, as indicated in broken lines, Fig. 3. The wheels being of equal diameter, the axis of one wheel ascends as the other descends, and vice versa.

From one axle a flexible connection, *b*, extends downward, and from the other a like flexible connection, *d*, extends downward, one connected to the forward end or bow of a boat, F, and the other to the stern, as seen in Fig. 2.

The several pairs of axles are connected by rods *e* or otherwise, so as to retain them in their proper radial position relative to each other.

Power being applied to rotate the shaft, the suspended boats are carried around in a circle, the bows and sterns alternately rising and falling to the extent of the eccentricity of the two wheels. At the same time the flexible connections between the boat and the axles permit the boat to swing to the right and left as well as fore and aft, and thus a universal rocking movement is imparted to the boat, very closely resembling that which results from the waves acting upon a boat on the water.

I claim—

In a merry-go-round, the combination of

the elevated circular track B, the radial axles arranged in pairs, C D, each of the axles provided with a wheel, E, to run upon said track, each wheel having its bearing upon the axle
5 eccentric to its periphery, the longer diameter of one of each pair in the opposite direction to the longer diameter of the other, and the boat F, suspended fore and aft from said pair of axles by flexible connections, substantially as described.

THOMAS G. CLIFFORD.

Witnesses:

GEO. C. LLOYD,

WILLIAM GIBBONS.