

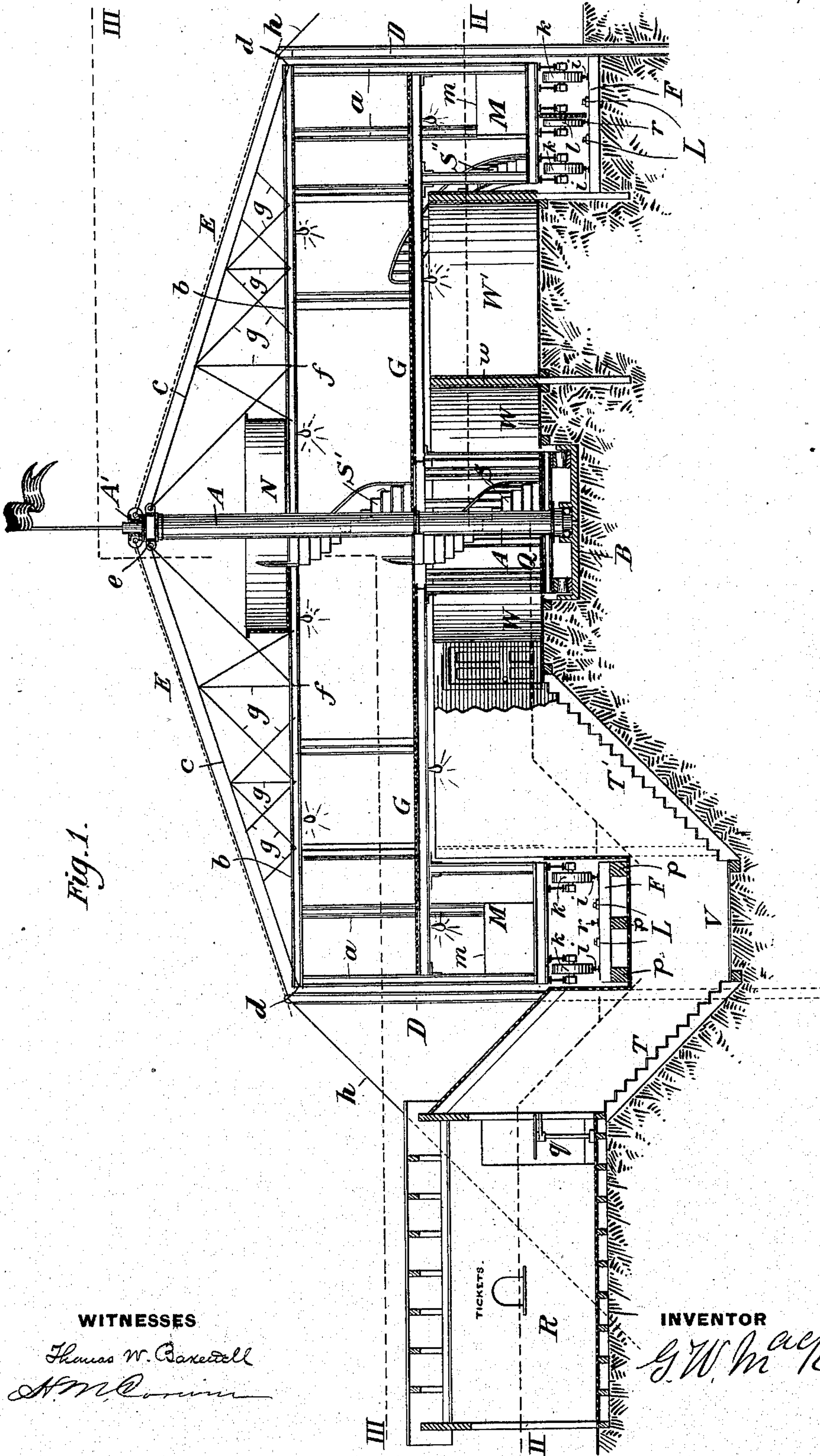
(No Model.)

3 Sheets—Sheet 1.

G. W. MACKENZIE.
AMUSEMENT APPARATUS.

No. 533,393.

Patented Jan. 29, 1895.



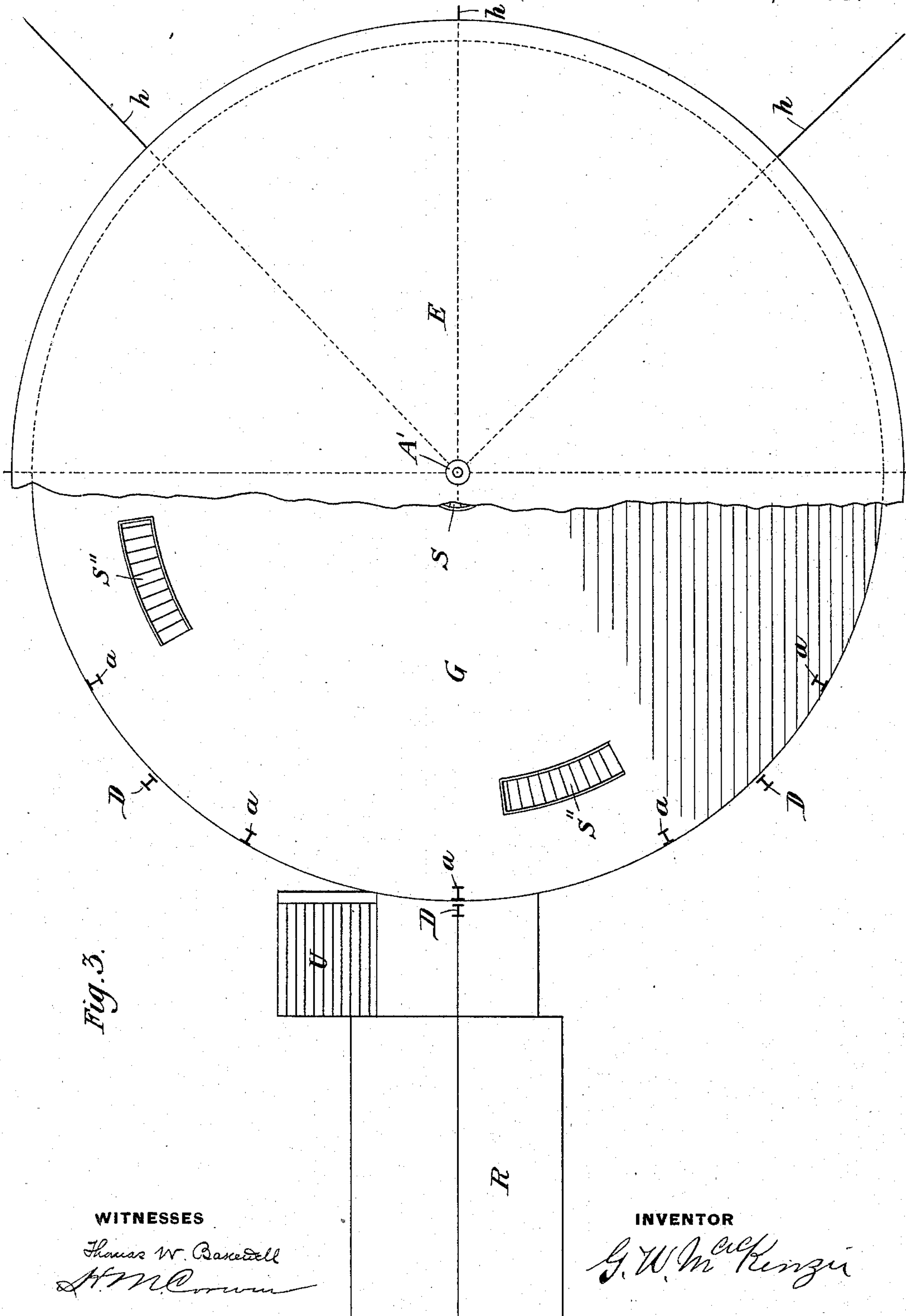
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UNITED STATES PATENT OFFICE.

GEORGE W. MACKENZIE, OF BEAVER, ASSIGNOR OF THIRTEEN-EIGHTEENTHS
TO WILLIAM A. MCCOOL, OF BEAVER FALLS, AND W. H. WILLIAMS, OF
PITTSBURG, PENNSYLVANIA.

AMUSEMENT APPARATUS.

SPECIFICATION forming part of Letters Patent No. 533,393, dated January 29, 1895.

Application filed April 7, 1894. Serial No. 506,752. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. MACKENZIE, of Beaver, in the county of Beaver and State of Pennsylvania, have invented a new
5 and useful Improvement in Amusement Apparatus, of which the following is a full, clear, and exact description.

My improvement relates to a new structure for purposes of amusement, the novelty of
10 which consists chiefly in causing the main portion of the structure to rotate on its center with considerable speed and in so arranging it that the structure or building itself may be easily and safely entered by persons de-
15 sired of making use of it while it is in rotation without slackening its speed.

In the accompanying drawings, forming part of this specification, Figure 1 is a vertical sectional elevation of the entire structure.
20 Fig. 2 is a ground plan of the same on the dotted line II—II of Fig. 1. Fig. 3 is a horizontal section on the dotted line III—III of Fig. 1.

In the drawings I have shown the structure composed of a light iron frame-work covered
25 with a canvas or tent roof so as to make it as light and airy as is consistent with safety. It may, however, be built in a more solid and substantial manner and closed in at the sides, especially where it is designed to be a per-
30 manent structure and used in cold weather. With this explanation, I shall proceed to describe the structure as shown in the drawings, without limiting myself to the precise con-
35 struction of walls and roof shown in the figures, or to the arrangement of the stories and compartments.

In the drawings, A is the central post forming a main support of the structure and with which it revolves. This post may be made of
40 wood or iron, a hollow iron tube being suitable for the purpose, and is stepped into an iron plate B, which rests on the ground and should be firmly bedded on a solid foundation; the plate B being stationary, while the
45 post A revolves on its axis, its lower end resting on balls or other anti-friction device.

The building or structure is in shape preferably cylindrical or polygonal and may be
50 made of a light frame-work of iron I-beams α , set vertically, or, if preferred, the frame-

work may be wood. The sides are covered with net work of iron or wire, or, if desired, may be covered with canvas, wooden boards set on end, or other suitable covering. The top or roof frame b of the structure is hori-
55 zontal, and may also be made of a light iron frame-work, and it is supported by main stay-rods c c , &c., one end of each stay-rod being attached to the circumference of the structure at the edge of the flat frame b , (at a point d ,)
60 and thence extends upward at a suitable angle to the top of its post A, passing through an eye-plate e attached to the upper extremity of the post A, and thence downward to a point f on the horizontal frame b . Other stay-rods g g
65 g , &c., connect the frame b and the main stay-rods so as to form a truss, as shown in Fig. 1, all the parts above described forming parts of and adapted to rotate with the main cylin-
70 drical building or structure.

Outside of the cylindrical structure just de-
scribed, are posts D D, &c., which are sunk into the ground and extend upward to a point slightly above the edge of the horizontal
75 frame b . Ropes or rods h h extend outward from a top journal bearing or steadiment A' in which the post A is journaled, and are secured to the tops of the posts D, and thence extend diagonally to posts or anchors in the ground.
80 Such ropes or rods therefore act as guys for the posts D and brace them, and also in conjunction with these posts support and brace the central rotary post A.

The canvas covering forming the outer roof is secured to the top steadiment A' above the
85 eye-plate e , and is supported by the guy-ropes or rods h h , as shown in Fig. 1. Supported centrally, as described, by the main post A, the structure is also supported at and near its circumference by a circular railroad track F
90 (see Fig. 2), having two track rails i i , on which run the railroad wheels k k , which are attached to the under side of the structure or building, as shown in Fig. 1.

Placed centrally between the track rails i i
95 is a rail r on which run the wheels l of the electric motors H, of which there may be three or more (as may be necessary) located within the structure, as shown in Fig. 2.

The dynamo K may be situated in any con-
100

venient place inside or outside of the structure, the electric poles of the dynamo being connected in the usual way with conductors L L, which are circular and supported on the rail ties between the rails *i i* and on each side of the motor rail *r*. By this means the whole structure is caused to revolve on its axis by means of electricity.

If preferred, steam or other motive power may be employed for rotation of the structure.

The main floor G of the structure, which may advantageously be used as a restaurant, is reached by winding stairs S, around the central post A from the lower central platform Q, which is of comparatively small diameter (see Fig. 2) and revolves with the central post A and the rest of the structure. From the main floor G, another winding staircase S', around the central post A, conducts to a circular stage N on top of the frame *b*. The main floor G is unobstructed throughout its entire area, excepting by the main post A in the center, the staircase S' around the post, and the outer staircases S''.

The central platform Q is located at a sufficient distance below the main floor G to give good head-way, say seven or eight feet, and it forms part of the main structure and revolves with it.

At the circumference of the main structure and below the main floor G is an annular inclosed space M supported from the floor G by vertical I-beams or other frame-work on the inner side, the outer side being furnished by the outer wall or frame of the structure. This circular space M may be open or it may be divided into compartments *m m*, &c., carrying chairs, animal figures, &c., upon which persons may ride as on a merry-go-round. One or more staircases S'' communicate with and give easy access thereto from the main floor of the structure.

The main floor and the several compartments *m* on the lower floor may be lighted with incandescent electric lights or otherwise, and such provision may be made for heating the structure as may be desired, by steam, heated air, or stoves.

Besides the central traction wheel *l* which runs on the middle rail *r* of the circular railroad, the structure is supported circumferentially by two series of car wheels *k, k*, which run on the two parallel circular railway tracks *i i*. Access to this structure, which I term a "flying pavilion," is obtained by two flights of stairs T T', one of which T leads down to an excavated trench V, the bottom of which is under the circular railway *i i*, as shown in Figs. 1 and 2, which circular railway crosses the trench V by a bridge, or by girders *p p* thrown across it under the ties of the railway *i i*. The other flight of stairs T' leads upward from the bottom of the trench V to an annular platform W, which is stationary and surrounds the revolving central platform Q, the inner circumference or edge of the former being placed as close as may be

to avoid frictional contact with the outer circumferential edge of the latter, both being on the same horizontal plane. The outer edge of the small central platform Q being only a short distance from the center of rotation of the structure at the post A, the surface speed of rotation of the central platform Q is so slight compared with that of the outer circumference of the structure, that persons stepping from the stationary annular platform W on to the central revolving platform Q suffer no inconvenience. The means thus afforded for entering a rapidly rotating structure is one of the main features of my invention. The stationary platform W may be divided by a circular partition *w* so as to afford an annular apartment W', which may be used for any suitable purpose.

A second under-ground set of two flights of stairs U U' affords an exit from the structure, as shown in Fig. 2, and a turnstile *q* placed in either or both of the passageways may be used to record the number of entrances and exits to and from the structure. A waiting-room and ticket-office R may be built outside of the structure and connected with the two flights of stairs T and U, as shown in Fig. 2.

It is obvious that the details of construction of the building, the arrangement and number of stories, the number of stairways, &c., may be varied without departing from my invention, and also that the central post might be stationary and the structure be caused to revolve around it instead of with it, and also that the central post might be dispensed with entirely, the structure in that case revolving on the circular track, being kept in place by the flanges of the wheels, and also, if necessary, by friction wheels placed outside of and in contact with the surface of the structure.

Having thus described my improved flying pavilion, what I claim as my invention, and desire to secure by Letters Patent, is—

1. In combination with a building or structure capable of revolution on its axis, a central circular entrance and exit platform rigidly attached to the said building near to and surrounding its center of motion, and communicating with the interior of said structure, on to which parties desiring to enter or leave said building may step from or to the surrounding ground or a stationary platform; substantially as described.

2. The combination with a circular track or tracks, of an annular revolving platform carried thereon, a central circular entrance and exit platform rigidly attached to the platform near to and surrounding its center of motion, an annular space surrounding the central platform, and a passage-way leading from the central platform to the outer annular platform; substantially as described.

3. In combination with a structure, a building capable of revolution on its axis, a central revolving platform rigidly connected

with said structure so as to revolve there-
with, a stationary annular stage platform or
space surrounding said circular platform, and
a passage-way under the track which sup-
5 ports said structure, communicating between
said central revolving platform and the space
outside of the circumference of said build-
ing, for the purpose of securing access to the
interior of said building near its center; sub-
10 stantially as described.

4. A revolving structure comprising a cen-
tral revolving entrance floor, an upper re-

volving floor of larger diameter having com-
munication therewith, and a second outer re-
volving floor below the upper floor and com- 15
municating therewith; substantially as de-
scribed.

In testimony whereof I have hereunto set
my hand.

GEORGE W. MACKENZIE.

Witnesses:

W. B. CORWIN,
H. M. CORWIN.