

May 21, 1946.

R. B. ROGERS

2,400,841

AIRPORT

Filed Dec. 23, 1943

2 Sheets-Sheet 1

Fig. 1

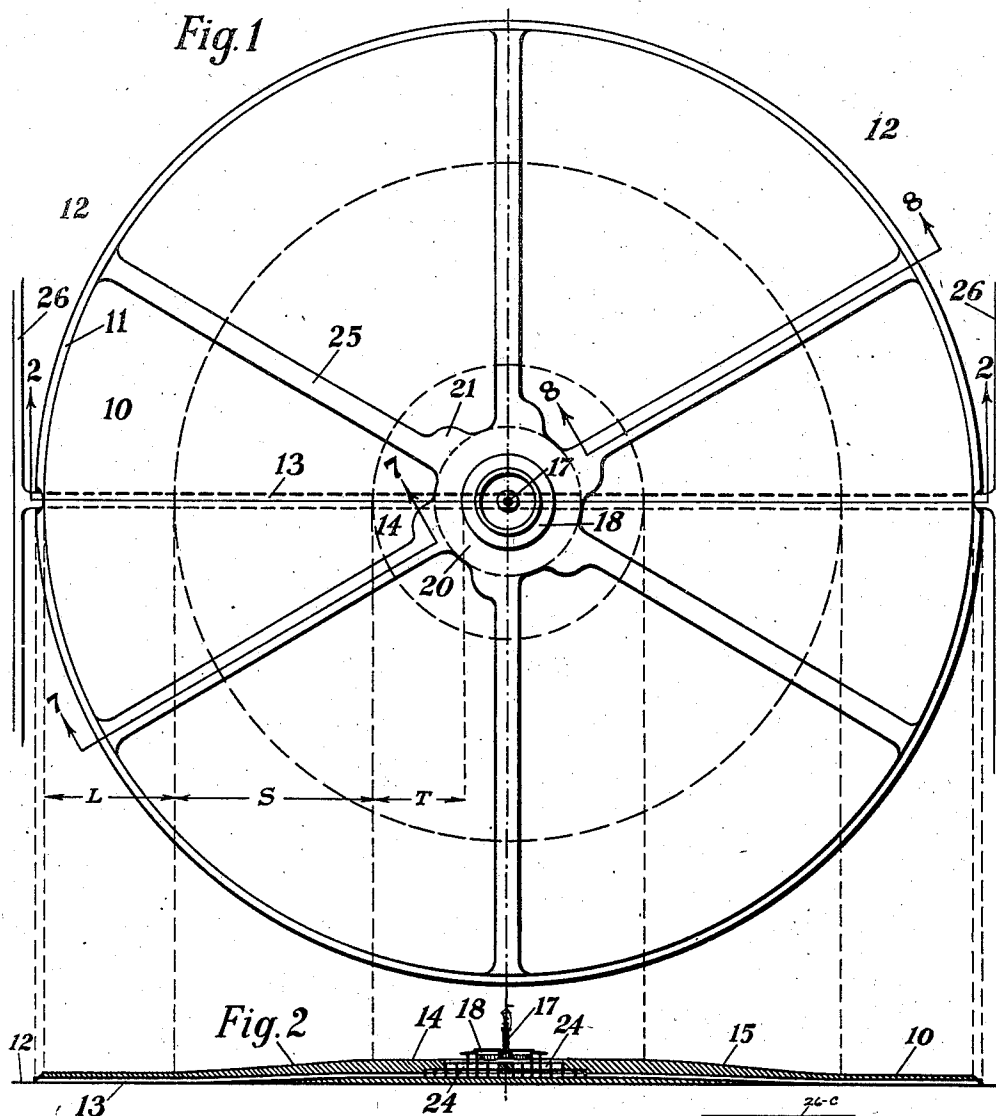


Fig. 2

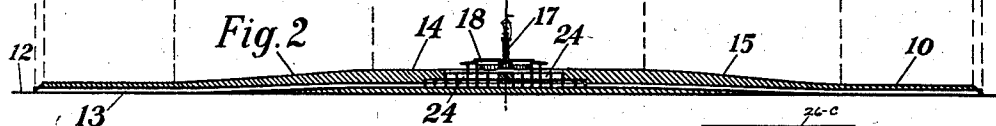
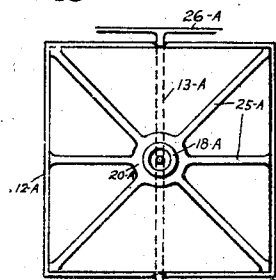


Fig. 3

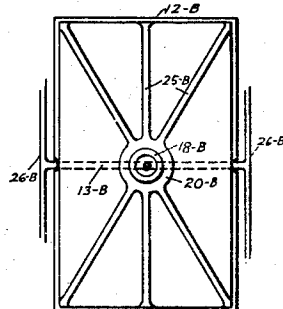


Fig. 4

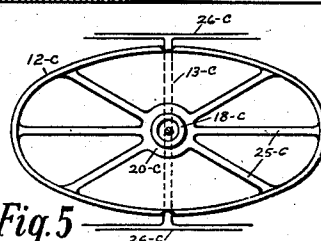


Fig. 5

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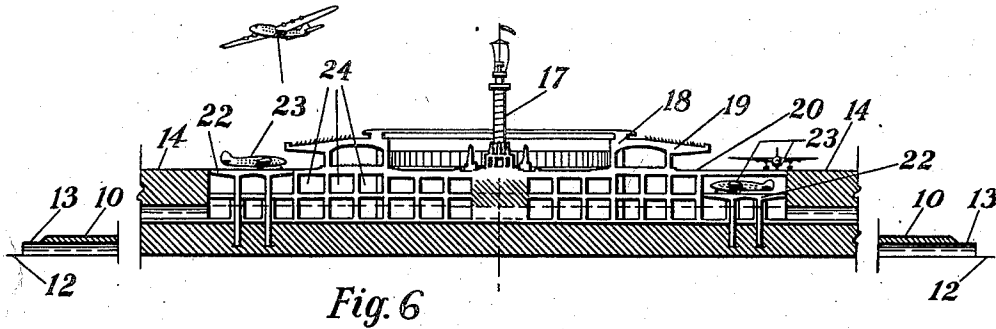
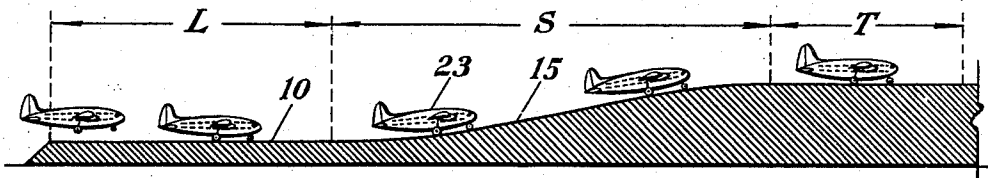
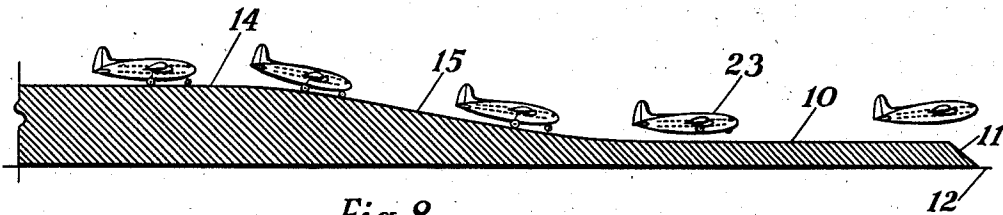
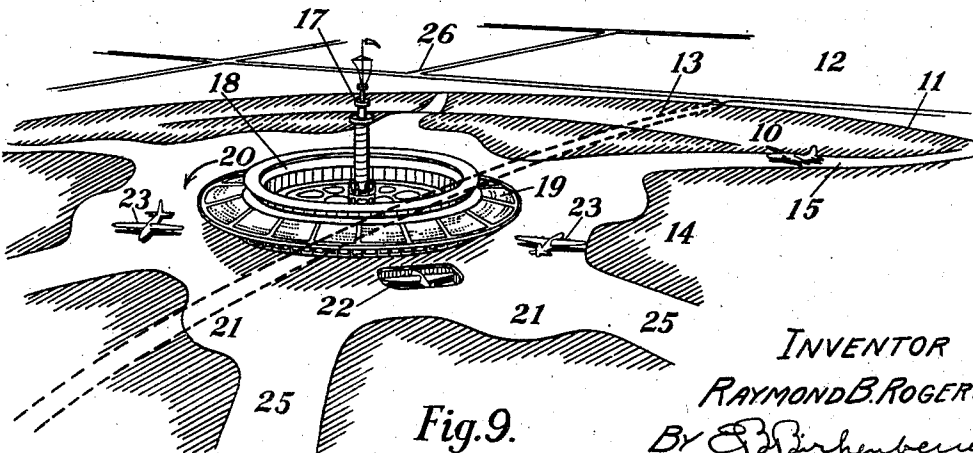
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Filed Dec. 23, 1943

2 Sheets-Sheet 2



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2,400,841

AIRPORT

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Application December 23, 1943, Serial No. 515,375

7 Claims. (Cl. 244-114)

This invention relates generally to aviation and particularly to an airport.

The main object of this invention is to produce an airport design which will lend itself to the rapidly increasing size of airships and facilitate their union with and transfer of passengers and freight to and from other airships or land traveling vehicles.

The second object is to provide the type of airport which will afford excellent drainage in all directions and at the same time assist planes in reaching a flying speed when taking off as well as assisting them in landing by a rapid decrease in speed.

I accomplish these and other objects in the manner set forth in the following specification as illustrated in the accompanying drawings in which:

Fig. 1 is a plan of a representative form of the device.

Fig. 2 is a vertical section taken along the line 2-2 in Fig. 1.

Fig. 3 is a plan of a modified form in which the landing field is substantially square.

Fig. 4 is a plan of a further modification of the landing field which is shown as being rectangular in form.

Fig. 5 is a plan of a further modified form of airport in which the landing field is oval in form.

Fig. 6 is a fragmentary vertical section through a more complete form of the airport with parts broken away.

Fig. 7 is an enlarged section taken along the line 7-7 in Fig. 1 showing a plane in various positions of landing.

Fig. 8 is a vertical section taken along the line 8-8 in Fig. 1 showing the planes taking off.

Fig. 9 is a perspective view showing the airport landing fields and the surrounding terrain.

Referring in detail to the drawings, there is shown in Fig. 1 a circular landing field whose outermost portion 10, is almost flat, having only enough slope to afford drainage to the abruptly sloping outer edge 11, which would be approximately twenty feet above the surrounding terrain 12, extending entirely across the field is a tunnel 13, containing enough traffic lanes to suit the needs of the station. From the center of the field is disposed an elevated table 14, which slopes downwardly by means of a tangent curve 15, and joins with the outermost portion 10, in order to give a better idea of the proportions.

The extent of the level portion 10, is indicated by the dimension "L," and would be approximately 1500 ft. wide, while the portion indicated by

the dimension "S" would be sloping and would be approximately 2300 ft. wide, and would again merge with the level top portion "T" which is approximately 1000 ft. wide. This by way of example, the circular field shown in Fig. 1 would be almost two miles in diameter, the level portion 10, would be 40 ft. above the ground level 12, while the level portion 16, within the dimension "T" at the center of the airport, would be about 200 ft. above the ground level 12. Obviously, these dimensions are not critical but are given only to impart a better understanding of the invention.

It will be seen in Fig. 1 that the surface traffic tunnel 13, extends across the diameter of the airport and passes directly under the center of the level portion 14, over which center is mounted a pylon 17 with the usual weather bureau instruments, radio, search lights, wind socks, etc., a circular building 18 is disposed around the pylon 17, and contains waiting rooms, ticket booths, concessions, etc., while on the roof 19, are the bleachers affording an excellent view of the aerial activities of the port.

Immediately around the outside of the building are the taxiing strips 20, and "warm up" aprons 21 are provided outside of the taxiing lane where the ship may be set without subjecting anyone to the air stream from a ship that is warming up. There is also provided a lift 22, by means of which planes 23, may be raised to the level of the table 14, or lowered to the hanger spaces 24.

It will be noted that the various runways 25, are shown radially in Fig. 1, and enable a ship to take off into the wind regardless of which direction it is blowing. In Figs. 3, 4, and 5, the same plan is followed out except that the field is not circular in form but assumes other shapes, although employing the same principle without departing from the spirit of this invention.

The forms of the port shown in Figs. 3 to 5 are alike in respect to circular building 18A, 18B and 18C and the central taxiing strips 20A, 20B and 20C, which is raised as much as are those in the previously described form of the device in which the strip 20 is considerably higher than the portion 10.

In Fig. 3 the perimeter of the field 12A forms a square from which extend various runways 25A.

In Fig. 4 the perimeter 12B is rectangular and connects with the runways 25B.

In the modification shown in Fig. 5, the runways 25C connect the raised level portion 20C with the level oval perimeter 12C.

In all the forms shown in Figs. 3 to 5, the tun-

nel 13, passes entirely across the center of the port and connects with the highway system 26.

I claim:

1. A landing field having a plurality of strips extending in various directions and an elevated central area communicating with said strips, each strip having a substantially level portion and a sloping portion between the level portion and the central area, of greater length than the level portion.

2. The field of claim 1 in which the slope is very roughly 7%.

3. The field of claim 1 in which the central area is roughly circular with a radius of less than the length of the sloping portions.

4. The field of claim 1 in which the central area is roughly circular, the lengths of the sloping portions are greater than the radius of the central area, the slope is very roughly 7% and the contour of the strip is such that the approaching airplane meets in order, the level surface, a concave surface tangent to the level surface and the slope, the slope, a convex surface tangent to the slope and the level central area, and the level central area.

5. An airport including a field having a substantially level central area, a plurality of runways extending in pairs away from the central area in different directions, airplane storage spaces beneath the central area, elevating means for moving an airplane from the central area to the storage space, a vehicular roadway leading from a point outside of the airport to a point proximate the storage spaces for convenient loading of the airplanes; said runways each comprising a level portion at a level well above the roadway and a substantially plane sloping portion joining the level portion and the level central area.

6. The airport of claim 5 in which the airport is circular, the central area is circular, the runways are radial, and the intermediate portion of the field is conical.

7. The airport of claim 5 in which the airport is circular, the central area is circular, the runways are radial, and the intermediate portion of the field is conical with an angle of slope of very roughly 160 feet of rise to 2300 feet of radial length.

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