

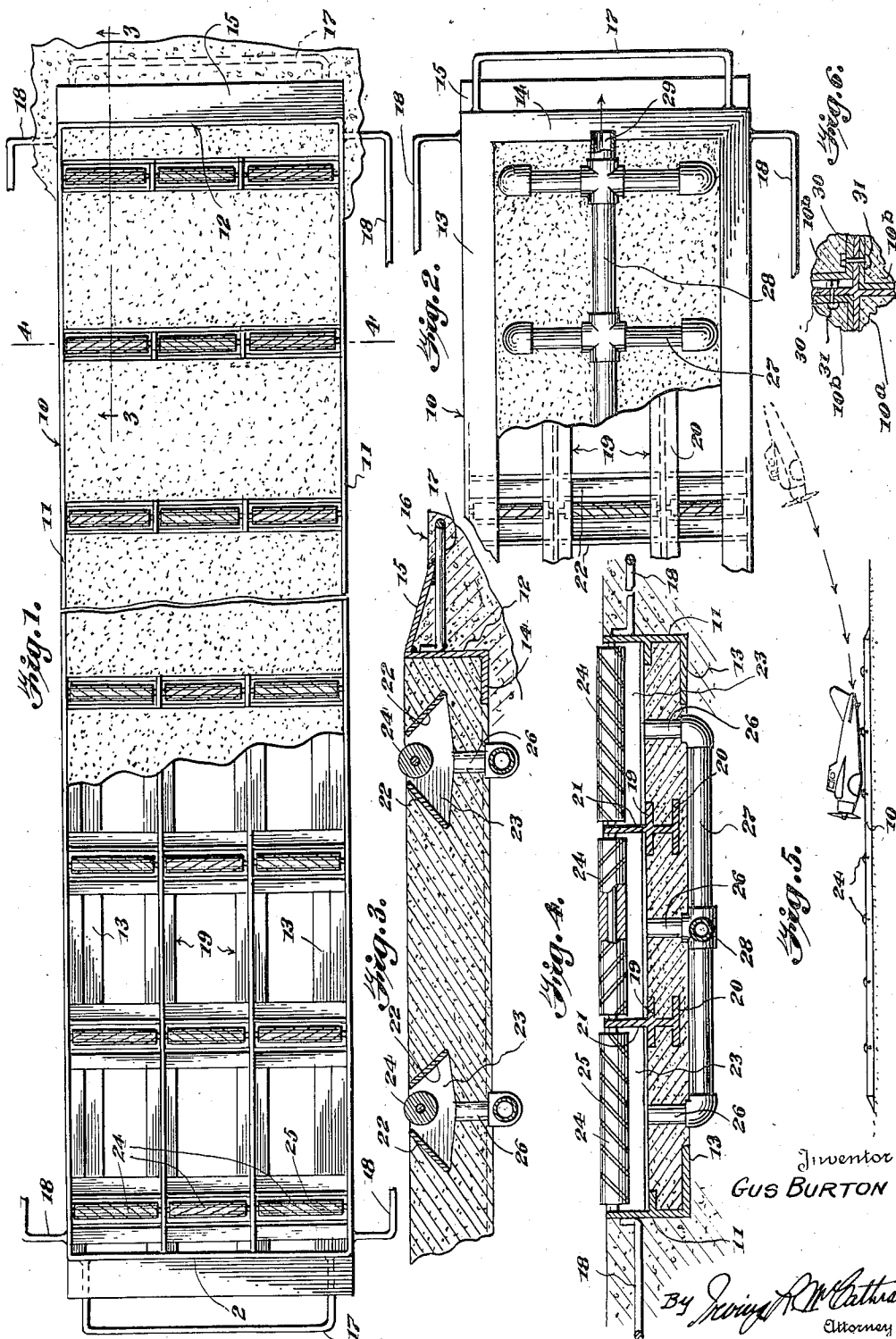
June 13, 1944.

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2,351,002

EMERGENCY LANDING RUNWAY

Filed Nov. 18, 1941



UNITED STATES PATENT OFFICE

2,351,002

EMERGENCY LANDING RUNWAY

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Application November 18, 1941, Serial No. 419,631

2 Claims. (Cl. 244-114)

This invention relates to an emergency landing runway for airplanes and the like, and has for one of its objects the production of a simple and efficient runway which carries a plurality of surface rollers, which rollers are arranged in such a manner upon a plastic runway as to provide an efficient landing area for a disabled airplane.

A further object of this invention is the production of a simple and efficient frame construction around which cement, concrete, asphalt or other road-surfacing material may be placed to embed the frame and anchor the frame in place.

Another object of this invention is the production of a simple and efficient frame construction for a safety runway which is so arranged as to provide an efficient drainage around and adjacent the traction rollers which are carried by the runway.

Other objects and advantages of the present invention will appear throughout the following specification and claims.

In the drawing—

Figure 1 is a top plan view of the runway, a portion of the surfacing material being broken away to illustrate the frame;

Figure 2 is a fragmentary bottom plan view;

Figure 3 is a longitudinal sectional view taken on line 3-3 of Figure 1;

Figure 4 is a transverse sectional view taken on line 4-4 of Figure 1;

Figure 5 is a side elevational view illustrating the manner in which a disabled airplane lands upon the runway; and

Figure 6 is a fragmentary horizontal sectional view illustrating the manner in which a series of sectional safety runways may be anchored together.

By referring to the drawing, it will be seen that a frame 10 of a suitable size and shape is provided, preferably elongated as shown in Figure 1. This frame 10 is provided with side walls 11 and end walls 12, the walls 11 and 12 having inwardly extending bottom flanges 13 and 14 respectively, as shown in Figures 3 and 4. The end walls 12 are each provided with outwardly extending and downwardly inclined flanges 15 to provide ramps or guards at the respective ends of the runway for directing a landing plane upwardly toward the top surface of the runway if contact should be made at the end of the runway and also to eliminate abrupt abutments which might tend to catch into depending portions of the plane or running gear thereof. Suitable roadway surfacing material 16 is laid flush with the outer end of the flange 15 at each end of the

runway, as shown in Figure 3. A U-shaped anchoring rail 17 is carried at each end of the frame 10, as shown, and these anchoring rails are also embedded in the surfacing material 16. Similar side anchoring rails 18 are carried along the side walls 11 for anchoring the frame in the road-surfacing material which may surround the roadway on all sides.

The frame 10 is also provided with longitudinal parallel stringers 19. Each stringer 19 is provided with vertically spaced lateral flanges 20 and a central vertical web 21. A series of pairs of transversely extending roller-protecting plates 22 are secured between the walls 11 and the webs 21 of the stringers 19 and between the webs 21 of the adjacent stringers 19, as shown in Figure 1. These pairs of plates 22 are arranged at spaced intervals throughout the length of the frame 10. The plates 22 of each pair are arranged in downwardly inclined diverging relation, as shown in Figure 3, to provide roller-receiving pockets 23 which are wider at the bottom than at the top. Traction rollers 24 are mounted in each pocket 23 and a suitable number of rollers are arranged in longitudinal alignment transversely of the frame 10, as shown. These rollers 24 are spirally scored or grooved, as at 25, to facilitate traction, and the surfaces of the rollers 24 extend slightly above the upper surface of the runway to provide rolling contact with the bottom of an airplane passing over the runway.

In building the runway, the frame 10 is positioned in the desired location, and a suitable road surfacing material is poured to fill in between the skeleton frame-work of the frame 10 until the surfacing material is flush with the upper face of the frame 10 and suitable molds may be provided to shape the bottoms of the pockets 23 to facilitate drainage. Drain pipes 26 are provided at the bottom of each pocket 23 and a drain pipe 27 is provided to connect the transversely aligned pockets 23, as shown in Figure 4. These pipes 27 communicate with a longitudinal drain pipe 28, which pipe 28 is provided with a suitable outlet, such as the open end 29.

The outer end of the flange 15 is preferably welded or otherwise secured to the anchoring rail 17, as shown in detail in Figure 3.

The runway may be made of any desired size to cover a specific area, or a plurality of runways may be assembled in groups to provide length and width as desired. When assembling a group of runways, the runway 10^a may be provided at each corner with angular extensions 30 to which

the corners of adjoining runways 10^b may be secured by suitable bolts 31.

Having described the invention, what is claimed is:

1. An emergency landing runway for airplanes comprising a skeleton frame having side and end walls, longitudinal stringers mounted between the walls, traction rollers journaled between the stringers and the walls, downwardly inclined roller-protecting plates diverging at their lower ends and defining roller-receiving pockets widened at their lower ends, a filler for said frame extending flush with the top of the frame and said plates, the rollers extending above the surface of the filler and plates to provide traction for a disabled plane landing upon and moving over the runway, and a downwardly inclined flange merging in the top of the frame to guide an airplane up to the top face of the runway.

2. An emergency landing runway for airplanes comprising a skeleton frame having side and end walls, longitudinal stringers mounted between the walls, traction rollers journaled between the stringers and the walls, downwardly inclined roller-protecting plates diverging at their lower ends and defining roller-receiving pockets widened at their lower ends, a filler for said frame extending flush with the top of the frame and said plates, the rollers extending above the surface of the filler and plates to provide traction for a disabled plane landing upon and moving over the runway, and U-shaped anchoring rails extending from the frame and adapted to be embedded in an adjoining surface.

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