

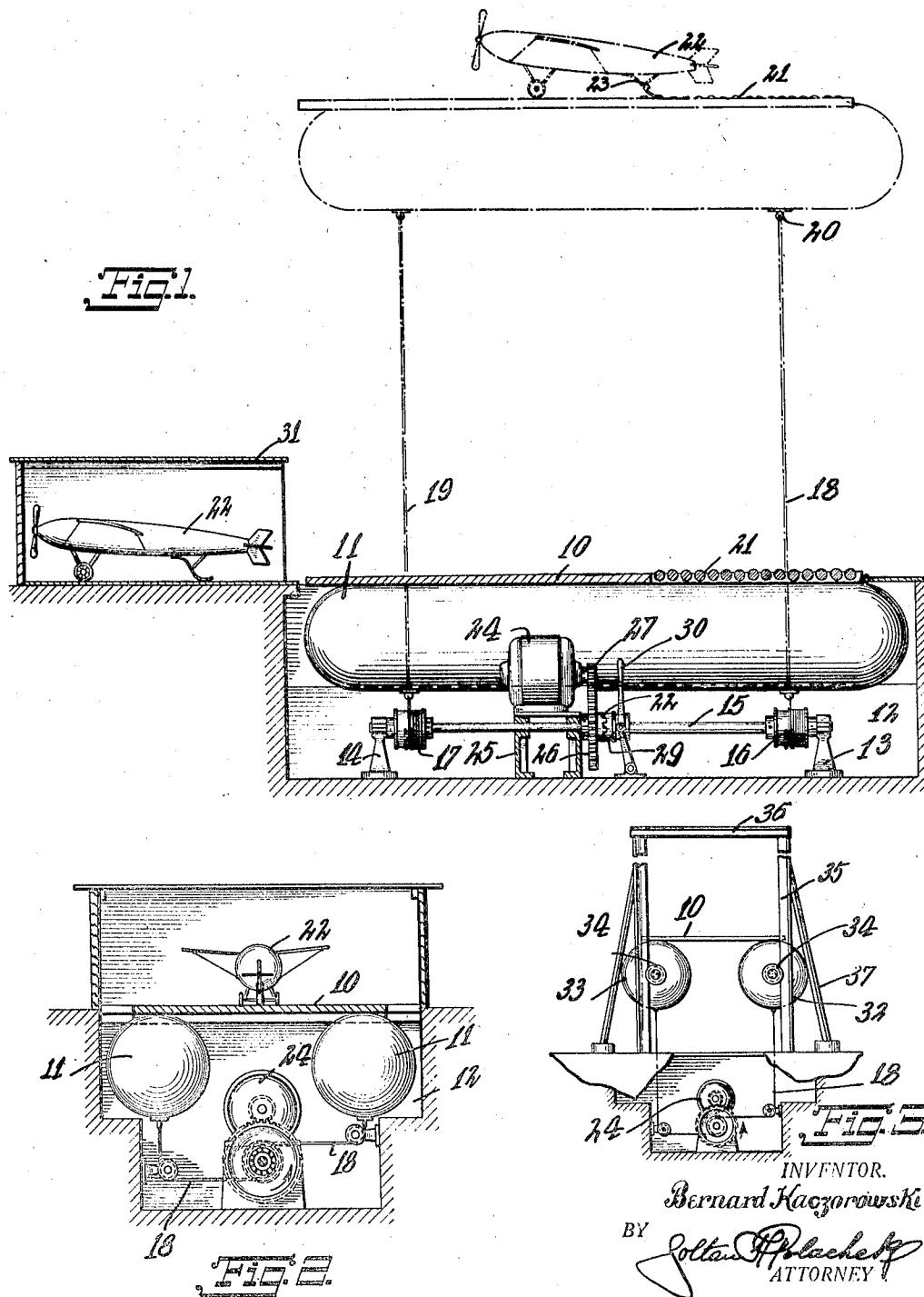
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AEROPLANE LANDING DEVICE

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UNITED STATES PATENT OFFICE.

BERNARD KACZROWSKI, OF YONKERS, NEW YORK.

AEROPLANE LANDING DEVICE.

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To all whom it may concern:

Be it known that I, BERNARD KACZROWSKI, a citizen of the United States, residing at Yonkers, in the county of Westchester 5 and State of New York, have invented certain new and useful Improvements in Aeroplane Landing Devices, of which the following is a specification.

This invention relates to improvements in starting and landing platforms for aeroplanes or similar flying machines, and it is the principal object of the invention to provide such a platform in combination with a balloon and means for raising and lowering the 15 platform carried by the gas bag.

Another object of the invention is the provision of a platform for starting and landing aeroplanes equipped with a roller face for facilitating the start of the planes.

20 A further object of the invention is to provide in combination with a starting and landing platform for aeroplanes combined with a lifting gas bag, a means for storing the aeroplanes protected against the influences of weather and attacks by an enemy 25 when lowered with their platform.

A still further object of the invention is the provision of novel and improved means 30 for guiding the rising and descending platform with the aeroplane thereon during its vertical displacement.

These and other objects and advantages 35 of the invention will become more fully known as the description thereof proceeds, and will then be more fully defined in the appended claims.

In the accompanying drawing, forming a material part of this disclosure:

Fig. 1 is a side elevation partly in section 40 of a starting and landing platform for aeroplanes or the like, constructed according to the present invention.

Fig. 2 is a sectional end view thereof.

Fig. 3 is a sectional end view of a modified form of platform, and operating means therefor.

50 A platform 10 of any suitable material shape and dimension is attached to the upper part of a gas bag 11 or the like adapted to be lowered into a pit or underground chamber 12. Suitable supports 13, 14 are arranged in the pit and secured to the bottom thereof, and act as journals for the ends of a horizontally disposed shaft 15 carrying 55 near its ends drums 16, 17 upon which the cables 18, 19 are wound, the free ends of

which are attached to suitable eyes or the like 20 on the lower face of the gas bag or bags, if, as for instance indicated in Figure 2, more than one bag is used. The rear part 60 of the platform 10 is equipped with a roller platform 21 or the like for facilitating the starting of the aeroplane 22 as it is adapted to be engaged by the rear fin 23 of the same.

65 A motor 24 is located within the pit 12 on a suitable support 25 or the like, and the shaft 15 carries near the motor a gear 26 in mesh with the gear 27 on the motor shaft, while a coupling member 22 integral with gear 26 is adapted to be engaged with or disengaged from a similar coupling member 29 70 slidably arranged on shaft 15 and adapted to be operated by a shifting lever 30 or the like operating a shifting member in the 75 well known manner.

When the aeroplane is not in use it can be wheeled off the platform 10 into a suitable hangar 31 or the like protected on top, or said plane can also be stored in any convenient place or what is commonly called a pit, meaning a suitable parking place roped off or otherwise separated and especially 80 designated.

In the modified form of the invention 85 disclosed in Figure 3, the platform 10 is connected to two gas bags or balloons 32, 33 provided with guide rollers 34 or the like at their ends adapted to engage and to be guided along vertical posts 35 connected on top by bars 36, and braced by suitable braces 37 or the like. The operating parts in this form are the same as described above with respect to the preferred form.

90 While I have shown and described the preferred forms of my invention as an example of the practical embodiments, it will be understood that such changes as fall within the scope of the appended claims may be made in the construction without departure 95 from the spirit of the invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent is:

1. Starting and landing platform for 105 aeroplanes comprising a platform, a gas bag to which said platform is secured, a roller platform combined with part of said first named platform, means for raising and lowering said gas bag, a motor, and means for 110 coupling and uncoupling said raising and lowering means to and from said motor, and

a means for guiding said gas bag during its movements.

2. Starting and landing platform for aeroplanes comprising a platform, a gas bag combined therewith adapted to be lowered into a pit and raised therefrom, a horizontal shaft in said pit, drums on said shaft, cables wound about said drums and secured to said bag, a means for facilitating the start of the aeroplanes from said platform, a motor, and means for coupling and uncoupling said motor from said shaft.

3. Starting and landing platform for aeroplanes comprising a platform, gas bags

carrying said platform and adapted to be lowered into a pit, a frame over said pit, rollers at the ends of the gas bags adapted to engage vertical bars of said frame for guiding said bag and platform during their movements to raise and lower said platform, and means for operating said gas bags and the platform and aeroplane thereon to rise above the pit and to be lowered into the same.

In testimony whereof I have affixed my signature.

BERNARD KACZOROWSKI.