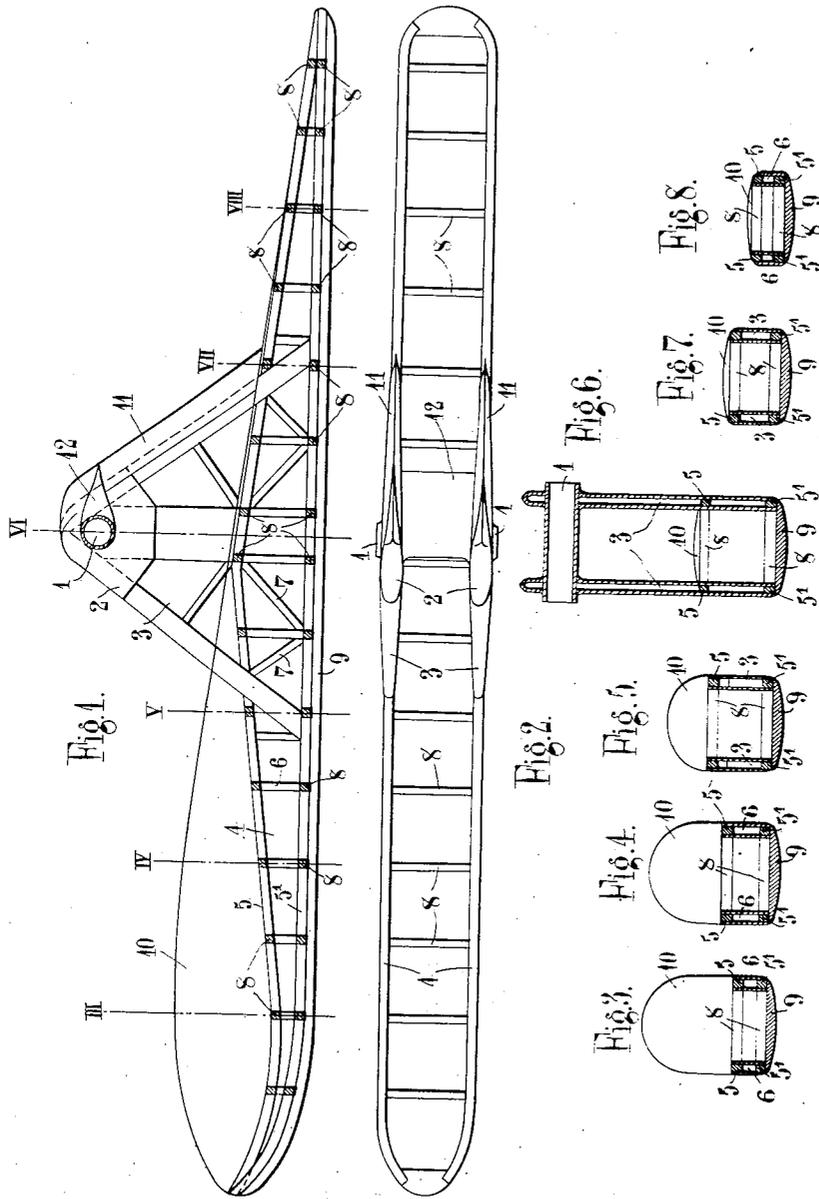


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SNOW LANDING GEAR FOR AEROPLANES

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UNITED STATES PATENT OFFICE.

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SNOW LANDING GEAR FOR AEROPLANES.

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This invention relates to an improved gear for aeroplanes for facilitating their landing on snow.

The object of the invention is to provide a gear of reduced weight and of increased durability, as compared with gears hitherto proposed for the same purpose.

The invention consists in strengthening the tread of the ski and its attachment to the axle journal of the aeroplane by means of a system of trusses whereby a maximum of strength is attained with a minimum of weight.

The invention further consists in the improved snow-landing gear for aeroplanes as hereinafter described, by way of example, with reference to the accompanying drawings, in which

Figure 1 is a sectional elevation of one form of construction of the improved ski according to the present invention.

Figure 2 is a plan view thereof, whilst

Figures 3 to 8 are cross sections along the axes III to VIII.

The ski which is rigid, consists of a metal box 1 by means of which the ski is mounted on the axle journal of the aeroplane in substitution for the wheel. A gusset 2 is rigidly attached to the box 1 being mounted together on and secured to pendulous arm structures 3, the lower ends of which project into the longitudinal supporting trusses 4. The pendulous arms 3 consist of one or more struts forming in the latter case a truss in themselves and one integral whole with the longitudinal trusses 4. The arms and the longitudinal trusses are bound at the sides by thin ply-wood in the case of wooden constructions and by sheet metal in the case of metal constructions. In the drawing the ski is provided with two longitudinal trusses, one on either side thereof; it is however to be understood that the number of longitudinal trusses may be enlarged according to the load to be carried and the width of the ski.

Referring more particularly to the actual construction of the longitudinal trusses, each one of them comprises an upper and a lower longéron 5 and 5' respectively and struts 6 and diagonals 7 by means of which the longérons 5 and 5' are connected together. The longitudinal trusses are secured to each other by means of stays 8 whereby a firm binding is secured. The whole system of longitudinal trusses and cross stays is rigid-

ly secured to the supporting tread of the ski 9, the latter having its front end bent upwards so as to facilitate passing over obstacles that may be encountered.

The ski is preferably provided with a cigar-shaped stream lined metal casing 10 which shape allows air to flow freely around and along the ski. This casing is secured to the upper edges of the longitudinal trusses of the ski. With the same object in view the rear edges of the pendulous arms 3 and the back of the box 1 are provided with stream lined casings 11 and 12.

In connection with the foregoing it is to be noted that the upper longérons or girders are inclined from their point of connection with the uprights 3 in opposite directions towards the respective ends of the lower longérons or girders. In addition these portions are connected with the diagonals and uprights 3 in such a manner that strains due to the shock or impact when landing is imparted throughout the surface of the ski.

The details of construction for carrying the invention into effect may be modified without in any way departing from the spirit of the invention.

What we claim is:—

1. A snow-landing gear for aeroplanes including a ski having a tread, longitudinal trusswork for strengthening the tread including lower girders connected to and arranged in contact with the tread throughout the length and upper longitudinal girders extending downwardly at a slight inclination at a point substantially medially of the ski to the respective ends thereof, cross trusses arranged transversely and vertically between said girders, and attaching means connected with said ski at a point substantially medially of the ends of the girders, substantially as and for the purposes set forth.

2. A snow landing gear for aeroplanes including a ski having a tread and also having a stream line casing, upper and lower longitudinal girders for reinforcing the tread and the sides of the casing, attaching means connected medially of the ski, and the upper girders having portions extending from the point of connection with the attaching means at a slight inclination towards the respective ends of the lower girders and connected thereto so as to coact with the attaching means in equally distributing strain due to impacts when landing.

3. A snow landing gear as claimed in claim 2, wherein the attaching means include opposed uprights rigidly connected with both of the girders medially of the ends thereof and having the upper end constructed for pivotal connection with the axle journal of the aeroplane and other bars extending diagonally from the upper ends of the uprights to the upper and lower girders, substantially as and for the purposes set forth.

4. A snow landing gear for aeroplanes as claimed in claim 2, wherein trusses are arranged vertically and transversely between the girders and also between the girders and the attaching means; substantially as and for the purposes set forth.

In testimony whereof we have signed our names to this specification.

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