

Icy Wings Menace Distance Flights

Aviation

BY THOMAS CARROLL

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Man's conquest of the air has met many obstacles and from many unlooked for sources. The formation of ice on the wings and other parts of an airplane in flight is one which is engaging serious attention just now.

It is not a new phenomenon. It was definitely reported in the Air Mail seven years ago, but it has always been considered a freak consequence of freak conditions.

The conditions which provide the phenomenon are not understood. It is similar to the formation of sleet on trees but that does not by any means appear to be the whole story. Attempts at reproducing the ice con-

dition in the laboratory have failed. Further mystery is supplied in the fact that it has not been reported except by American planes in North America.

The accumulation of ice, once it starts to form, becomes distributed over the front edges of the wings, of the struts and other parts. That it could form on the blades of the propeller running at fifteen hundred revolutions per minute has been scoffed at as an impossibility, but it is nevertheless a definitely established and recorded fact.

Ice is heavy and even a thin coating on an airplane can provide a considerable additional weight to overload the plane. But two other ways in which the ice forces the airplane down are of even greater detriment. As the ice forms it mush-

rooms out along the front edges and forms bulges and bumps along the forward part of the wings. In the first place this greatly increases the air resistance requiring more power to pull it through the air and in the second the proper shape of the wing contour which provides the lifting force is seriously interfered with. These, with the added weight of the ice, drive the plane lower and lower and finally force it to the ground.

Many remedies and preventives have been suggested and have been tried.

Most promising is the proposition to pipe the exhaust through the wings to keep them warm. This may be effective since it is believed that only a small rise in temperature will prevent the ice.

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Cancer Waste

Medicine

Cancer costs on an average \$1,000 per case for medicine and nursing alone. Multiply this by 110,000, the number of cancer deaths in the United States last year, and there results an annual cancer bill of \$110,000,000 according to statistics just compiled by Dr. Louis I. Dublin of the Metropolitan Life Insurance Company.

When the economic value of the victims is computed from the actual dollars and cents earning capacity of the various age groups, cancer losses run up to over \$680,000,000 annually, a figure that Dr. Dublin has estimated equals a tenth of all the iron and steel manufactured in the country every year or all of the current income of the state of Louisiana. This plus the sickness costs brings the grand total up to \$800,000,000.

"If we had that much money loss every year through other forces of nature we would get busy and try to prevent it," declared Dr. Dublin. "Expert engineers and others would be asked to concentrate all their faculties on the problem; but with matters of human life we are not so careful nor so anxious. . . . We must organize agencies of research on a grand scale. Then the monster of cancer will surely, in time, be brought under control, just as the menace of other diseases has been."

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