

went right off the end of the runway through quite a bit of real estate before it finally stopped.

Mr. WATSON. I am not looking for any commissions from your company, but I want to see us push forward in this particular field.

Mr. DEVINE. Would any substantial structural changes be necessary in the airframe to engineer in these hooks so that when they are arrested at a reasonably high rate of speed it would not pop all of the rivets and tear up the airframe?

Mr. WEATHERLY. Yes, sir, there is engineering required. I will tell you about the 720 on which we put the tailhook. Part of our contract and program with the FAA was to put a tailhook on that 720. That installation including the weight of the tailhook and the necessary plates hooked to the fuselage weighs 240 pounds which is the weight assigned to one passenger and minimum baggage.

So, there would not need to be an appreciable modification. That included the structural changes, the doubler plate that went on it. It is a matter of distributing the plate over a small contact surface.

Mr. DEVINE. Would this apply to your DC-9, 707, and 880?

Mr. WEATHERLY. It would be much lighter on the 880 and DC-8 and 707 would be in this order of magnitude.

These other smaller aircraft would be lighter and smaller.

Mr. DEVINE. Pretty soon we will be talking about 747's.

Mr. WEATHERLY. It would be a little bit hard but we might be knocking off a passenger and a half or a passenger and three-quarters in weight for this.

Mr. MACBRIDE. May I add something, Mr. Devine?

Mr. Weatherly did not mention 727's and United Airlines has had the structure of the 727's in their fleet strengthened or had the capability, the hard point designed into their models.

Mr. WEATHERLY. For every aircraft delivered to their airlines.

They already have this structure ready to put a tailhook on.

Mr. DEVINE. Do you mean Boeing changes the specs on United's 720's?

Mr. MACBRIDE. Yes, sir. If we are talking about a net arresting gear there are no structure changes. Any aircraft can take the arrestment by net.

Mr. WEATHERLY. Our concern for recommending a net system when you look at this aspect is if we have a net system not only can we take our own transports but then those other transports that will be using our international airports in this country can then be saved from going off the end of the runway because we certainly cannot control whether these aircraft have tailhooks installed or not.

Mr. DEVINE. Is a net type of device practical for a piston engine with propeller?

Mr. WEATHERLY. The U.S. Navy has tested this particular equipment and were asked this by the press at the presentation of our test program last November and Mr. Walter Kaufman of the Naval Air Engineering Center at Philadelphia answered with a very positive "affirmative."

It will catch the propeller system. The result is the propeller cuts some of the vertical straps in the immediate vicinity of the propeller but we don't use those straps to cut the aircraft.