

GENERAL SCIENCE

# Rescue Being Sought For Anti-Fascists in France

## Mexico Takes Lead in Offering Asylum to Exiles Now In Danger Through Nazi Pressure on Conquered Land

ONE OF the world's largest rescues of political refugees, some 165,000 anti-fascists caught in capitulated France, is being planned, with hope that they may be evacuated from the Old World and brought to the Western Hemisphere.

Most important step so far is the action of the Mexican government in extending its diplomatic protection to all alien anti-fascists in France threatened by the terms of the French armistices with Germany and Italy. President Cardenas of Mexico himself initiated the measures necessary to allow Mexican consulates in France to give visas to such refugees, many of them intellectuals of international fame.

Mexico has made representations to the German and Italian governments, it is understood, to allow the removal from France of such anti-fascists, whose very lives are believed to be in danger if they fall into the hands of German and Italian police.

### U. S. Visas Offered

It is also understood that the State Department has forwarded to American consulates in France the names of about 150 prominent anti-fascist professional men and women to whom American visas can be given should they apply.

Of the 165,000 anti-fascists in France, about 160,000 are Republican Spaniards, victims of the Franco victory. These men, women and children have been in concentration camps in France, and they cannot return to Spain under Franco. Among them are probably 6,000 professional men and women, and perhaps 2,000 teachers. There are also between 4,000 and 5,000 other anti-fascists, most of them citizens of the axis powers, who cannot return to their countries. About 3,500 are members of the famous International Brigade of the Spanish war, the rest include those who fled from Germany and Italy for political reasons. Among them are perhaps 1,500 scientists, physicians and engineers.

American organizations have been urging American aid to implement and supplement the Mexican action. Among

the groups active are the American Committee for Democracy and Intellectual Freedom, the United American Spanish Aid Committee, and the Committee on Displaced Psychologists. Active as representatives are Dr. S. A. Mitchell, University of Virginia astronomer, Prof. Roland H. Bainton of the Yale Divinity School, Kenneth Leslie, editor of the *Protestant Digest*, Ralph Raeder and Douglas Jacobs, New York authors.

The possibilities of obtaining the cooperation of the Maritime Commission and the Red Cross in providing transportation of the refugee anti-fascists from France to Mexico are being explored.

### Cuba, Chile, Bolivia

Mexico is also understood to be suggesting to Cuba, Chile and Bolivia that those governments take a similar course of action to its own with regard to the refugees in France.

A petition has been presented to the State Department by the interested groups urging that the United States government offer similar protection to the refugees in France and to cooperate with Mexico in its planned action.

The whole matter of European refugees, particularly those in danger because of anti-fascist leanings, is expected to be discussed at the Havana conference of Pan-American nations. It may be possible to work out there ways and means of getting joint action.

The plight of anti-fascists in France is acute and urgent. When Great Britain and France went into the war, German citizens, even though they were refugees from Nazism, were generally put in concentration camps. There was danger that Nazi spies might be posing as refugees. So when France fell, the enemies of Hitler were conveniently to be found in these camps. The armistice terms required that they be handed over upon demand. No doubt Hitler and Mussolini would wreck vengeance upon these exiles who have fought totalitarianism from French soil. It is such a fate that the present effort is intended to prevent.

A classic case of protection being afforded to political refugees is the action of the Chilean Embassy at the fall of Madrid. About 70 or 80 Republican leaders wanted by Franco were taken into the Chilean Embassy just before the city fell, given Chilean diplomatic status and eventually gotten out of Spain.

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METEOROLOGY

## Weather Robots Planned For Inaccessible Spots

AUTOMATIC weather observing stations, untouched by human hands for months at a time, may soon be scattered around on high mountain peaks or at inaccessible sea locations so that Uncle Sam's weathermen can have complete and automatic radio reports on the changing weather, necessary for predictions.

A radio weather robot, developed by two national Bureau of Standards radio engineers, Harry Diamond and Wilbur S. Hinman, Jr., with the cooperation of the Naval Bureau of Aeronautics, has undergone a successful two-months test at Naval Air Station near Washington, D. C.

Radio messages that it sends out at predetermined intervals tell the barometric pressure, air temperature, relative



**ROBOT OBSERVATORY**

*This compactly housed equipment can keep unsupervised watch over the elements in lonely spots, reporting its observations automatically by radio.*

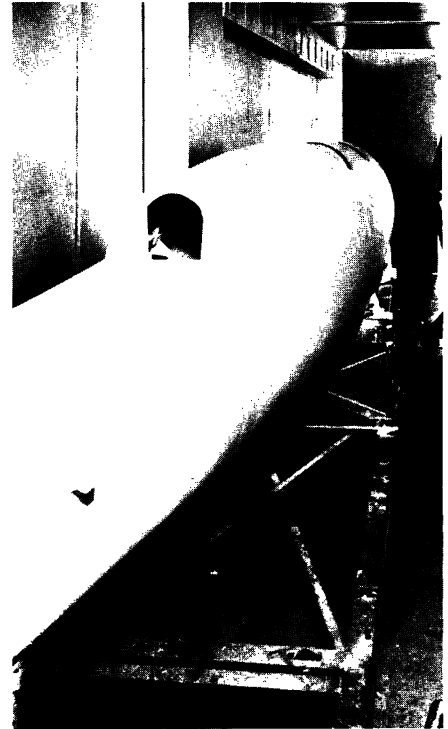
humidity, wind direction and velocity, rainfall and other meteorological factors.

A mechanical cousin to the high-flying radiosondes now extensively sent aloft by means of unmanned balloons for upper-air weather information, the new robot weather station is designed for stationary installations. It is actually simpler than the radiosonde type of weather observing machine.

By operating on a relatively low frequency, signals from the automatic

weather station can be received with any standard receiver. Even through severe static interference, it will only be necessary for the operator, with stopwatch, to listen in and count the number of signals received in a given time. These can be decoded into the values of the various weather factors automatically observed at the distant place. In some cases automatic recording receivers may be used.

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**READY TO BAKE**

*A molded plastic airplane fuselage stands in a huge oven, ready to receive its treatment of strengthening heat.*

**AERONAUTICS**

## Model Plastic Airplanes Are Now Being Developed

**Made of Plywood, Bonded With Synthetic Resin,  
New Planes Are so Smooth That Speed Is Boosted**

**F**OUR aircraft companies and two research laboratories are aggressively attacking the problem of molding airplanes out of plastics for American defense. (*Modern Plastics*, July)

Army, Navy and civil aviation authorities, and the airplane industry in general, are watching these experiments to determine the place of synthetic resins in the future of aircraft.

So far the use of resins has been limited to experimental models of training and light commercial planes, and the quantity production of minor airplane parts.

In airplane structures, such as wings and fuselage, the resins are used very much as glues were in the days of the first World War, with wood veneers used as the reinforcing agent. The molded airplanes are really of plywood resin-bonded construction. Unlike the early glued plywood airplanes, the resin-bonded modern craft are said to be stable and unwarped under all atmospheric conditions, free from internal strains and proof against molds, fungi, water, oil and gasoline.

A five-place Fairchild Model 46, with molded fuselage and wood wings with resin-bonded plywood covering, was first flown three years ago and is today in active service. The Fairchild-owned Duramold Aircraft Corporation has a new molding process that uses a rubber bag as one half of the form. The other non-flexible half is made of sheet steel, cast metal or wood. The advantage of this method is that the flexible die assures equal pressure over all surfaces whether curved or not, which is not possible with conventional hydraulic or mechanical

presses. Fairchild PT 19 training ships now in quantity production use plastic plywood spars which are said to be less costly and stronger than solid spruce.

The Summit plane, now undergoing government tests, was molded by Aircraft Research Corporation of Bendix, N. J., and is believed to be the first completely molded airplane body in the world. Wings, fuselage, tail assembly and controls were molded as complete structures. It is claimed that whereas a commercial plane with a 75 horsepower motor will cruise at 95 miles per hour, the Summit plane similarly powered will cruise at 125 miles per hour because all surfaces are smoother. The Vidal process used employs thermosetting and thermoplastic types of resins for bonding plywood veneer. The same manufacturing methods are being used to make boats, skis, racquets, and automobile parts.

Its first plastic-plywood airplane, a primary trainer, was flown recently by the Timm Aircraft Co. of Van Nuys, Calif. In properly contoured forms, spruce veneers are superimposed one upon another, using a thermosetting phenolic resin applied on each layer during assembling.

A fellowship on plastic airplane construction has been established at the Mellon Institute, Pittsburgh, by the Glenn L. Martin Co., looking toward the mass production of airplanes from plastics instead of by the slower riveting and welding of metals.

In the plastics section of the National Bureau of Standards there is a research group working on a National Advisory

Committee for Aeronautics project to develop factual information on the physical properties of reinforced plastics. Eighteen synthetic resins for impregnating and bonding wood veneers have already been tested.

In dozens of minor ways plastics are entering into aircraft. Instruments have phenol-formaldehyde housing. Windows in transport and military planes are made of acrylic resin sheets. Propellers are made from wood laminated with plastic. Coatings are made of synthetic resins.

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The African sausage tree, planted for ornamental purposes in Florida and California, has long, sausage-like fruits weighing about 15 pounds.

## ● RADIO

Dr. Edward E. Wildman, consultant in charge of the tree ring study for amateurs being undertaken by the American Philosophical Society's Committee on Education and Participation in Science, in the Philadelphia area, will be guest scientist on "Adventures in Science" with Watson Davis, director of Science Service, over the coast to coast network of the Columbia Broadcasting System, Thursday, Aug. 1, 4:00 p.m., EDST, 3:00 EST, 2:00 CST, 1:00 MST, 12:00 PST.

Listen in on your local station. Listen in each Thursday.