

A wild-looking field of this kind, somewhere in the United States, was described by Maj. Adamson. The airplanes are hidden in little ravines, in thickets and beneath trees. Quarters for the men and necessary service buildings, more than 120 structures in all, are all similarly "sunk" into the landscape. No roof rises above treetop level.

As explained by Maj. Adamson, the fundamental principle of camouflage is to avoid hard, straight, continuous lines. Such lines are not found in nature, and when introduced into the landscape they are easy to find on air photographs—and a stand-out invitation to bombers making a return visit.

*Science News Letter, February 14, 1942*

## ASTRONOMY

## Big Telescope for Mexico Sent By Truck From Harvard

### New Instrument for National Astrophysical Observatory Is Symbol of Spirit of Inter-American Cooperation

**T**HE second largest telescope for Latin America has rolled down to Mexico by truck after having been inspected by the staff of the Mexican Embassy in Washington, D. C.

At dawn on Saturday, January 31, this new and modern telescope left the Harvard Observatory, where it was built, with Dr. Harlow Shapley, director of the Harvard Observatory, driving the first lap of its long journey to a hill in the ancient valley of Cholula near Puebla, Mexico.

There the new telescope will go into service at Mexico's new National Astrophysical Observatory as a symbol of the spirit of Inter-American cooperation. Its dedication by President Avila Camacho on February 17 will be the occasion of an Inter-American Scientific Conference.

The new telescope is of the Schmidt type that is more effective for the exploration of the universe of stars and galaxies than more conventional instruments of much larger size. Its spherical mirror has a diameter of 31 inches while the correcting lens of 27 inches diameter insures excellent star images over a large range of sky.

The only larger instrument in Latin America is the 60-inch reflecting telescope of the Argentine National Observatory at Cordova, but the new Mexican instrument because of its more modern design will do several types of work better than the Argentinian telescope.

Despite war priorities and labor shortages, the new telescope was built in the record time of six months. The mirror and plate are optically accurate to within a few millionths of an inch. The mounting of duraluminum and cast iron

weighs 4,500 pounds and consists of a tube fourteen feet long and four feet in diameter and a polar axis of 11 feet.

At Laredo, Texas, the truck was met by Prof. Luis Enrique Erro, director of the new Mexican Observatory, and sped to Tonanzintla so that the telescope may be installed for the dedication.

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## MEDICINE

## Organized Blood Bank Is Complex Job

**B**ETWEEN the donor station where you may give your blood to save life and the hospital blood bank where it is on call for desperately sick patients lies a complicated organization of doctors, nurses, technicians, record clerks and general management.

When the New York Academy of Medicine and the Blood Transfusion Betterment Association first started on the blood plasma for Britain project, in 1940, they thought it would be relatively simple and that preparing plasma "would be not much more difficult than mixing a cocktail," one of their officers, Dr. DeWitt Stetten, reports. Much to their distress, they learned that such was not the case.

A community hospital about to establish its own blood bank does not face quite so many problems. It must, however, equip itself with such things as iceboxes, incubators, centrifuges, electric pumps, and suitable bottles for collection and for storage of the blood.

One important problem it must settle is whether to establish a blood bank or a plasma bank. Some hospitals have both.

Plasma is blood minus the red blood cells. These may be removed by allowing them to settle out of the blood, or they may be separated from the fluid portion by centrifuging the blood, as cream is separated from milk.

Plasma is considered nearly as satisfactory as whole blood for transfusions. Its chief disadvantage is that it does not contain the coloring matter in the red cells, hemoglobin, which carries oxygen. In some conditions such as severe anemia or poisonings such as carbon monoxide or nitrobenzol which damage the red blood cells, whole blood may be preferred to plasma.

Plasma has the advantages of keeping longer and of being usable without typing or matching with the patient's blood. It may also be dried, which makes it easy to transport. Dried plasma keeps several years without refrigeration.

Typing before use is unnecessary when plasma from many people is put into a common pool. This pooling greatly dilutes the agglutinins from each person's blood and thus avoids the danger of a patient getting so much of the wrong kind of agglutinin that his red blood cells would be clumped together or otherwise kept from their vital job of carrying oxygen to all parts of the body. Before pooling each collection of plasma is of course tested to make sure it is free from dangerous disease germs.

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Usual height of a stroke for the big diamond back *rattler* is about the middle calf of the leg, not higher.

Though *aluminum* was a curiosity as late as 1855, this element comprises 7.3% of the earth's crust.

If iron and steel were not so cheap, shipbuilders would use other metals or alloys more resistant to *corrosion*.

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