

Recent Aërial Developments

By H. GERNSBACK



In England They Have Already Mooring Towers Used to Take On and Put Off Passengers and Freight, It Having Been Proved That It Is Easier for an Airship to Anchor at a lofty Height Than to Come Down and Dive into a Shed. This Illustration Shows How the Woolworth Building or Any Other Building Could Be Equipt With a Revolving Landing Tower, to Which the Airship Can Make Fast. Passengers and Freight Can Then Be Readily Landed. A Project of This Kind Is Entirely Feasible From an Engineering Standpoint.

WHEN the Zeppelin, that is, the rigid type of airship, first appeared it had many inherent faults. Probably the greatest one was the inflammable gas carried in the sectional ballonets.

As fast as the Zeppelins were constructed they were destroyed mostly by fire due to electric sparks, which set on fire the inflammable hydrogen gas.

Secondly, the landing arrangements as used by the Germans were very inefficient, and it was not infrequent that the huge airship became wrecked when coming down to earth prior to entering its mooring shed. In the air, the Zeppelin type is safe enough, and even the severest storms can be ridden out with comparative safety, that is, all storms except electrical storms, which not infrequently set the dirigibles on fire, due to lightning.

Recently, the English have proposed a novel manner for landing passengers, and no longer do the huge airships of the rigid type descend to earth to discharge their passengers or cargo. The device used is a sort of huge hitching post in the form of a high tower held fast by means of cables and stays. The upper part of the tower has a revolving top section with which the nose of the airship comes into contact, and to this it is made fast. The passengers and cargo leave and enter by means of this revolving top and descend or ascend to earth by means of elevators. These towers are anywhere from three to five hundred feet high, and the airship can "land" and make fast to the tower with comparative safety, as has been actually demonstrated in England.

It makes no difference which way the wind blows or how hard, the airship will simply take its position, similar to a wind vane, where it offers the least resistance to the wind. It will ride out the most severe storm very readily in such a position and in comparative safety. This also has been actually demonstrated.

The fire danger is now being reduced entirely by the use of an American idea, helium gas, which has approximately the same lifting power as hydrogen, but which is absolutely non-inflammable.

It does seem that for many years to come the rigid type of airship will probably be the one destined to carry passengers and freight, while for a long time, the airplane will only act as a secondary unit, or as a feeder. In other words, the airship will be used to cover long distances, while the air-

plane will cover short distances, bringing passengers and freight to the central dirigible depots.

We have today airships with a capacity of 2,000,000 cubic feet of gas, and it will not be long until the 5,000,000 cubic foot gas dirigible will be in use. Aviation authorities think that such airships will be in operation not later than 1923.

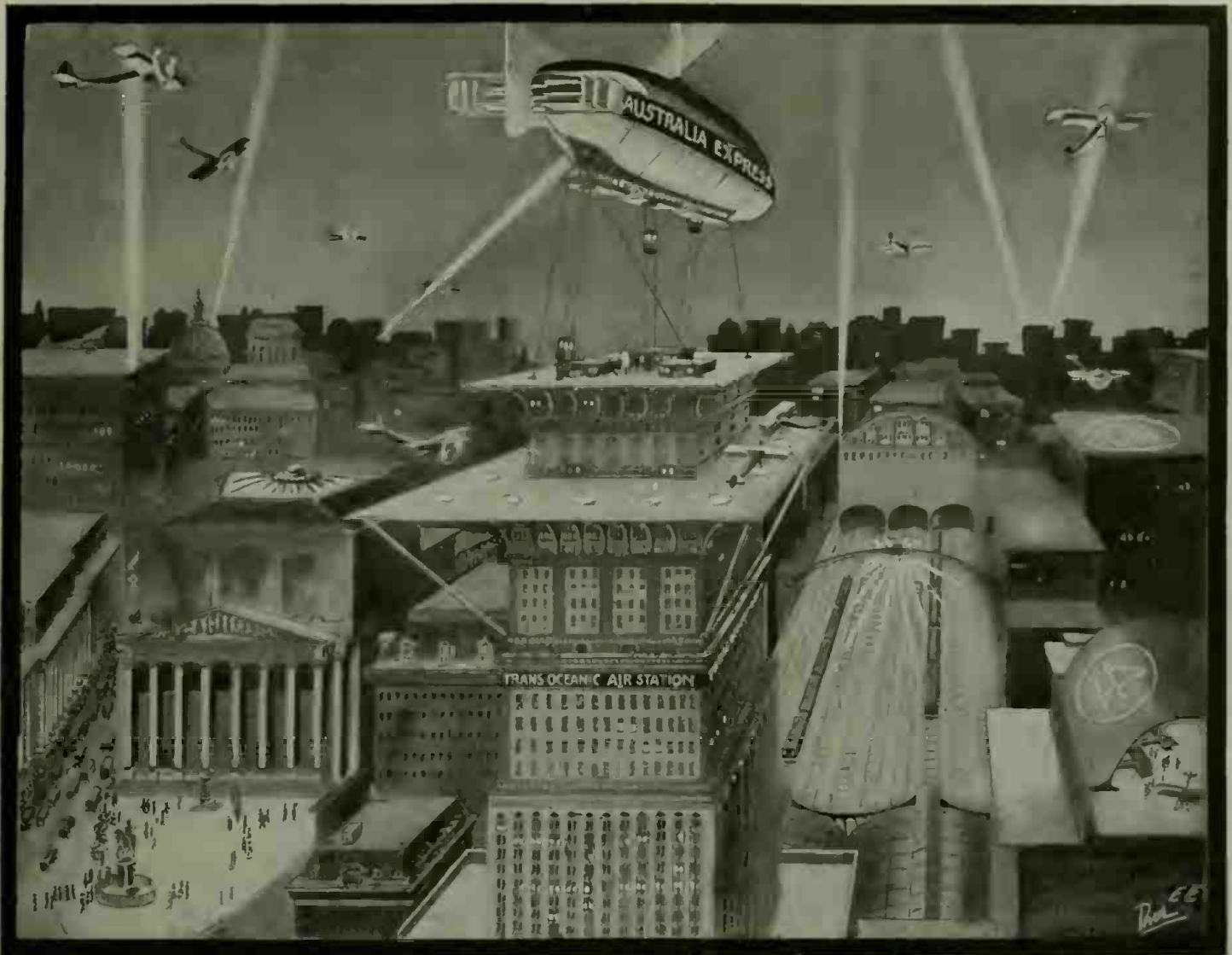
When it is considered that the huge present-day English airships have a capacity of 2,000,000 cubic feet of gas, and which can now cover a radius of 4,000 miles without coming down to earth or renewing their supplies, it will be seen that universal aerial transportation is a feature much closer at hand than is realized by most of us.

There is little doubt that before this year has ended one or more dirigibles will have crossed the Atlantic Ocean. Flying at their present rate of speed, which is sixty miles per hour, it will be seen that the trip from London to New York will take only 2 to 2½ days. The huge 5,000,000 cubic feet of gas airships will probably fly at the rate of 100 miles per hour. The length of the trip will then be cut down to about 1½ days.

While the aerial tower which we discuss above is probably satisfactory, it has many objections, the most important one being that it is an expensive item, and, moreover, if the airship is to rely upon such a structure, it will be almost impossible for it to come down to earth to land passengers *except at such points where the mooring towers are located.* This is a clear disadvantage.

In the accompanying illustration the writer wishes to advance an idea which so far has not been tried out, but which can be readily adapted. The idea is simply to moor the dirigible by means of four cables, which are thrown from the aerial pier. The passengers then will be able to ascend or descend from the airship by means of light elevators operated between the dirigible and earth. These elevators, electrically operated, need not be very heavy and can be constructed of aluminum, duralumin, or some such material. The power to operate these elevators can be taken from the engines of the dirigible itself, and it will be quite an easy matter to take from fifteen to twenty passengers on a single trip.

Our illustration shows the city of London, in the year 1925, with one of these dirigibles made fast to the aerial depot; we see here two elevators operating and taking on passengers and freight. The air-



The Heart of London as It Will Appear Very Shortly When the Plans Now Undergoing Completion Are Realized. It Having Been Demonstrated That It Is Very Difficult to Bring Down the Huge Airships to the Ground—Many Zeppelins Having Been Wrecked That Way—It Has Been Proposed to "Land" Airships on Top of Specially Elevated Stations as Here Shown. The Airship would Be Simply Anchored by Means of Four or More Steel Cables. Then, by Using a Number of Light Elevators or Lifts, the Passengers as Well as Freight Can Be Taken on or Put off, as Our Illustration Clearly Depicts. This Is Not a Dream of Tomorrow, but Plans Are Actually Under Way to Make This Feature a Realization. It Will Be Seen That the Airplanes Merely Act as a Sort of "Feeder" and They Will Be Used Mostly to Bring Their Passengers or Freight to the Trans-Atlantic Landing Station.

ship shown belongs to the regular trans-Atlantic Service and makes the trip between London and Perth, Australia in 4½ days. Should it become necessary to discharge or take on freight at non-important centers, it will be a simple matter to moor the airship by means of its cables even over a city which has no elaborate landing station. Nothing but four points to which to make the cables fast are required. The elevators which are carried by the airship will do the rest.

Our cover illustration shows a spectacular method of an aerial rescue at sea, which immediately demonstrates the practical use of these elevators. Indeed, the airship does not need to make fast to the wrecked airplane; it will keep its position simply by running either one or more of its propellers in order to keep from drifting. This is quite simple even for the present-day airship, as it is possible by means of its propellers to hover over a certain spot even with a strong wind blowing. In this case, the elevator cables only are made fast to the wrecked flyer, the gasoline tanks of which have been set on fire. After the elevator cables are made fast, it will be a com-

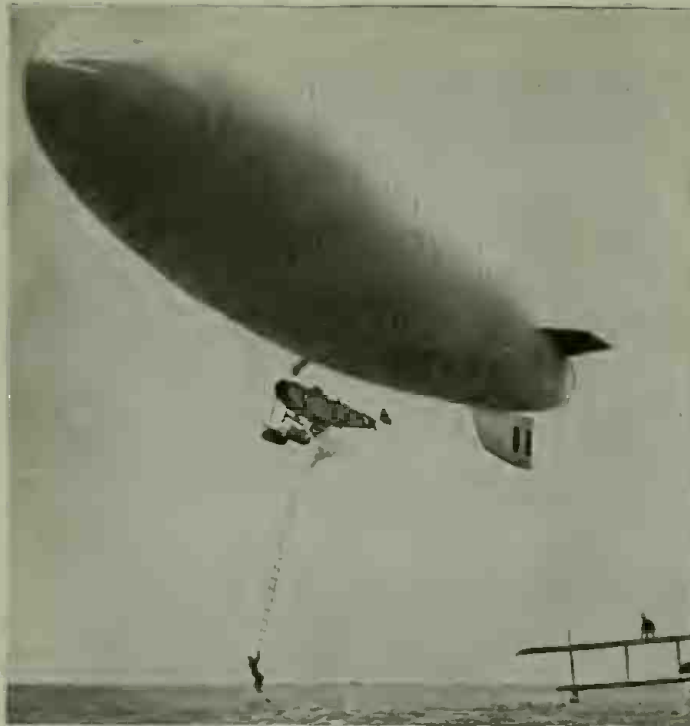


Photo (c) Western Newspaper Union
This Remarkable Snapshot Shows One of Our Navy's Dirigibles Rescuing Two Airmen Who Recently Fell Into the Sea with Their Flying Boat off Key West, Florida. One of the Aviators Can Be Seen Climbing up the Rope Ladder.

paratively simple matter to take off the passengers, and, if necessary, the freight, for the buoyancy of the airplane in the water will probably keep it afloat for some time. After everybody is taken off, the elevator is hoisted, the elevator cables pulled in, while the airship proceeds on its way.

This spectacular rescue might seem to be a thing of the future, but indeed it is not. Our photograph herewith shows that the very same thing has already been accomplished on a smaller scale. Very recently the United States Navy equipt its dirigibles with rope ladders, which made it possible to rescue aviators from the sea. That such a move was indeed wise, our photograph demonstrates better than words. Our remarkable snapshot shows one of the Navy's "blimps" rescuing two airmen who recently fell into the sea with their flying boat off Key West, Fla. The nose of the airship was simply turned into the wind, and after some maneuvering it finally managed to get directly over the disabled flyer. The two marooned airmen experienced no difficulty in grasping the rope ladder and climbing aboard the airship, none the worse for their adventure.