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H. GERNSBACK — EDITOR
H. W. SECOR — ASSOCIATE EDITOR

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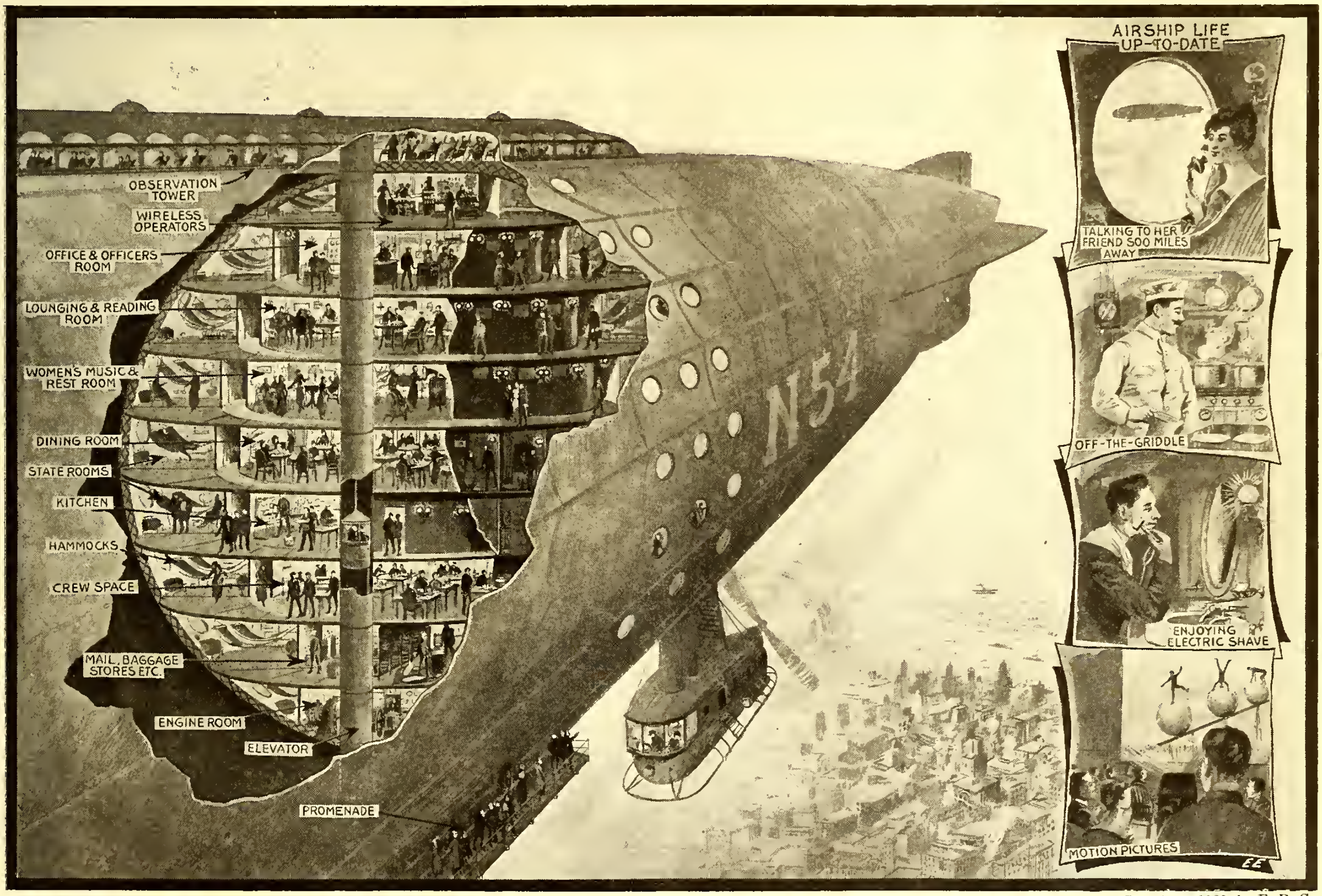
The Airship Of Tomorrow

By GEORGE WALL

WE are gradually becoming accustomed to the sight of rapidly increasing sizes of aircraft, especially those of the lighter than air or Zeppelin type, and those who had the good fortune to see the R-34, the gigantic "gas bag" which successfully flew that will prove a distinct surprise to those who have not been following the progress of aviation in the past few months.

Already in England and France they have developed and built beautiful airplanes which have a capacity of from thirty to fifty passengers, that almost outrival our on the floor and curtains at the windows, with panelled ceilings and electric lights.

The accompanying illustration shows what engineering refinement has done in the perfecting of living conditions for passengers on the latest dirigible or Zeppelin type of aircraft. These gigantic "gas bags"



All the Pleasures of City Life Are to Be Found in the Latest Giant Dirigible Aircraft—Even to an Electric Elevator. The Staterooms Are Arranged in Circular Fashion, Which Has Many Commendable Features.

across the Atlantic Ocean from England to America and back, will perhaps expect most anything in the airship of tomorrow. However, there are many developments in a number of these huge aircraft now proposed and being built in various countries finest railroad train appointments in their luxurious furnishings, parlor-car chairs and even to a wash room such as one finds on the giant *Caudron* passenger-carrying plane, recently exhibited at the great aviation salon in Paris. Here we find carpet are far larger than one would first imagine, as the picture clearly shows, their height easily accommodating nine stories, equivalent to a nine-story hotel, and they propose to fit the one or more passenger com-

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The Oracle

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The wave length of an oscillation is exprest generally as follows:

(a). $\lambda = K\sqrt{CL}$

where
λ = wave length in meters
K = constant, depending upon what units C and L are used
C = capacity
L = inductance

Let us assume in one particular case that C will be in microfarads and L in centimeters, then the time period of the oscillation is

(b). $T = 2\pi\sqrt{CL}$
C = in farads = 10^{-9} milli-microfarads
L = in henries = 10^{-9} centimeters

Since the speed of electricity is the same as that of light, namely 186,000 miles per second, then the wavelength of an electric oscillation as compared with that of light will therefore be the same, thus:

(c). $\lambda = TV$
T = time
V = velocity of light (3×10^{10} cms. per second)

Substituting the value of T and V in expression (c) we get:

$$\lambda = 3 \times 10^{10} \times 2\pi\sqrt{C_f L_h}$$
$$= 6\pi \times 10^{10}\sqrt{C \times 10^{-9} \times L \times 10^{9}}$$
$$= 6\pi \times 10^{10}\sqrt{CL10^{-18}}$$
$$= 6\pi \times 10^{10} \times 10^{-9}\sqrt{CL}$$
$$\lambda = 1.884\sqrt{CL}$$

where: λ = wave length in meters,
C = capacity in milli-microfarads (microfarad $\times 10^{-3}$)
L = inductance in centimeters
1.884 = derived constant

The Airship of To-morrow

By GEORGE WALL

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partments of which the one shown is a single unit, with an electric elevator to carry the passengers from one floor or deck to another.

All the comforts of home will be had on these latest airships which will soon be poking their noses over the horizon of such large cities as New York, London, Paris, Constantinople and even the far eastern cities of Japan, China, India and Australia.

There will be found among other necessary luxuries, if so we may call them, shower baths, music and smoking rooms, an electric kitchen for preparing meals for the passengers, electric lights, and electric fans for the warm weather, electric razors and massage apparatus in the barber shop and private baths, besides an electric heating system for cold weather and telephone service between the guest rooms—and speaking of the telephone it brings to mind some of the joys and pleasures of being an aerial bell-hop!

In the evening there will be motion picture shows operated by electricity, by means of a small and especially compact motion picture projector, and by the use of a powerful audion amplifier, wireless music from ship or shore stations can be picked up on the aerial of the giant aircraft as she swims along thru the clouds, and this music then reproduced thru telephonic "loud-talkers" for the benefit of the audience.

This may sound somewhat fastidious, but by these means a great deal of weight is saved in not having to carry an extra load of pipe organs or band paraphernalia for the amusement of the 1,000 passengers or so aboard!

AIRSHIP ROOMS ARRANGED IN CIRCLE.

As will be seen, the guest rooms are arranged in a circular formation on each deck, and this has many advantages as soon becomes evident. For one thing a single elevator gives impartial service to all of the rooms, in view of its central location, and there are a number of other advantages in the serving of meals to guest rooms, etc., which is more difficult to carry out on an airship such as this where a smaller number of servants would be available, than in a hotel on land.

War Inventions Disclosed

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made of copper wires forming an uninterrupted circuit by being stretched back and forth vertically. In order that the blast of the gun itself does not break the wires it is necessary to place the frames some 300 calibers away from the gun. The distance between the two frames of the Le Boulangé apparatus is variable, but in general, it is between 20 to 50 meters.

This distance between the frames is of course measured with great precisions when it is considered that the time limit down to the hundredths of a second is calculated, using as a base the distance between the two frames.

The insert, Fig. 4-A, shows how two electro-magnets in connection with the chronograph recording trigger mark the exact time elapsed when the bullet or shell strikes the first frame and when it reaches the second frame. At the moment of firing the projectile first cuts the circuit of the first frame. Instantly the long black chronometer bar begins to fall, but the instant the projectile cuts thru the second frame the second circuit is also disturbed.

The second electro-magnet instantly acts and its armature hits the chronometer recording trigger. A small pin with a knife then strikes the falling bar armature of the first electro-magnet and makes a mark easily distinguishable. Noting the time of falling of the long bar and figuring this time against the point on which the mark was made from the knife, actuated by the second electro-magnet, the time interval is readily calculated—it is in fact, almost automatic.