

New Searchlights Foil the Enemy's Guns

IN the illustration herewith is perceived a somewhat novel form of searchlight mounted on a rapidly movable or oscillating arm, which in turn is carried by a powerful motor truck so as to be very mobile and thus readily transported from place to place as required. This idea has been brought forth by H. Gernsback.

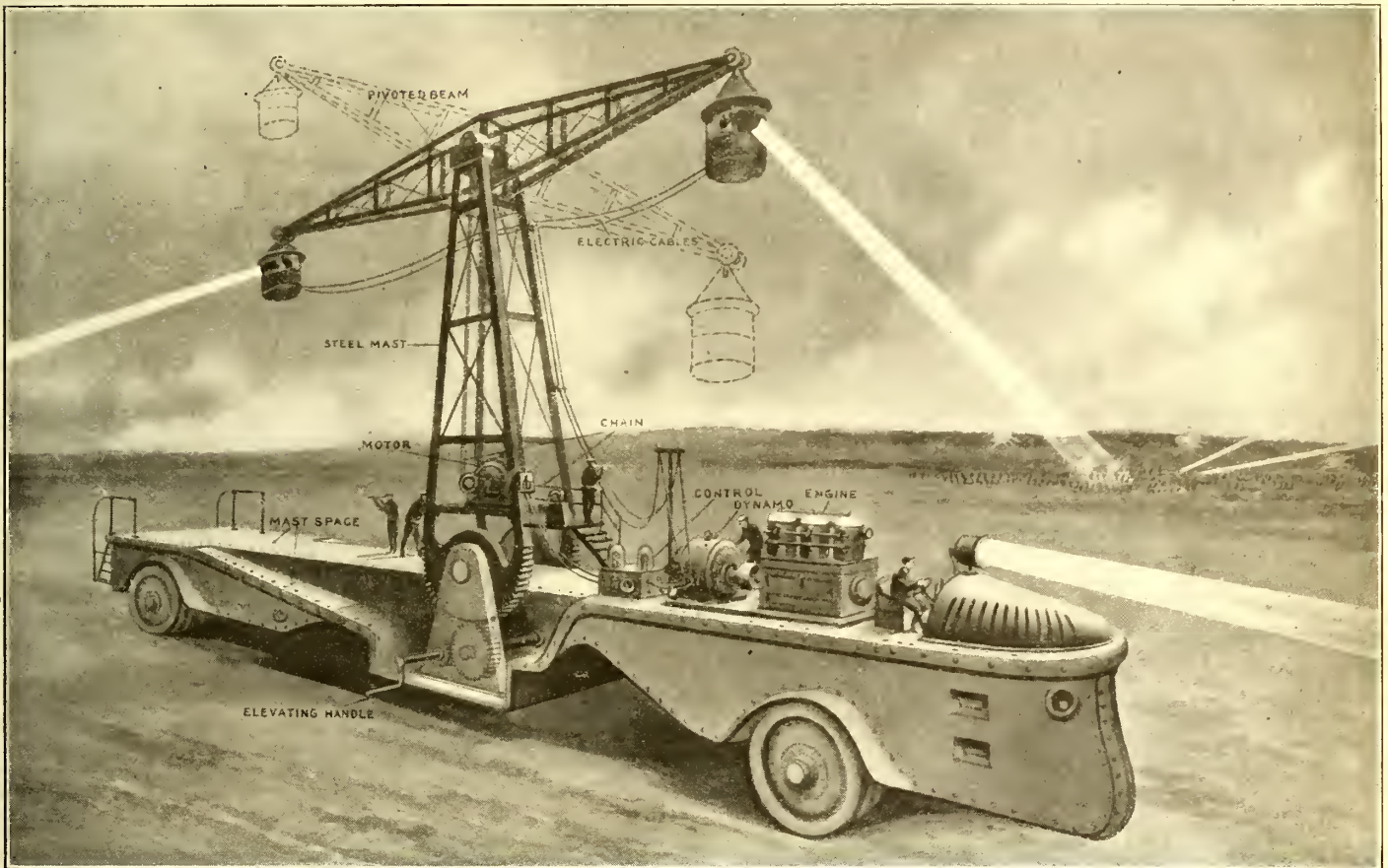
As is quite well known, a fixed searchlight, such as now used by the great European armies, becomes very quickly a target for missiles of all sizes and descriptions, which, needless to say, soon reduce it to a scrap heap. The gun spotters of today, even those in charge of large caliber

The motor truck of large size carries a complete dynamo and gasoline engine for running same, which is seen mounted behind the driver's seat on the truck. By means of heavy flexible cables from the dynamo the searchlights, which are carried in small cases when not in use, are supplied with current. When being used the projectors are constantly oscillated or moved up and down at an ever-changing speed. This is obtained by a hand crank, which is shown in the illustration.

However, it is possible to also effect this irregular up and down movement of the horizontal girder carrying the searchlight

movement of the horizontal searchlight girder.

It is also very easy to arrange reverse current trips on the device just mentioned, so that the arm will move downward so many degrees and then reverse and move upward so many degrees. If desired, this arrangement may be modified in many ways so as to be adapted to stationary requirements. In such an event the truck could be made many times larger, most probably to advantage. Again, the center pedestal carrying the constantly moving horizontal arm could be swung about on its vertical axis so as to give greater play to the



Remarkable Mobile Searchlight Tractor Designed to Keep the Searchlights Constantly Moving, Vertically as Well as Horizontally. A Difficult Target for the Enemy.

field pieces, are notoriously accurate in their work, and unless a searchlight which is visible to them is constantly moved it is bound to be the unhappy target for a host of high explosive shells before many peaceful moments have passed.

To obviate these and other untoward difficulties surrounding the use of searchlights in night-time warfare, this design has been promulgated, and, as may be gleaned from the illustration, it is intended to use one or both searchlight beams at the same time.

baskets by means of electricity. The electric control box for this arrangement is indicated on the truck. Such a mechanism may consist principally of a motor-driven drum having on its surface a considerable number of segments making contact with a pair of brushes. To every pair of segments on the drum there can be joined a different resistance, so that as the drum is rotated it will cause differing values of current to be supplied to the motor on the main pedestal, which in turn controls the up and down

searchlights and also simultaneously to make them a more difficult target for the enemy's gunners. The dotted lines in the illustration show a second position of the horizontal girder carrying the searchlight baskets. It is thought that the constantly moving searchlights of this type are practically proof against the enemy's fire, as it would be impossible to accurately train a gun on them. However, it remains for such a device to be actually tried out before we can predict the results.

PROFESSOR ULIVI OUTDONE IN AMERICA?

Professor Montraville M. Wood, of Chicago, who spoke in Paul Revere Hall at Boston, recently, outdid Giulio Ulivi's claims for his F-rays in claims for the ultra-violet rays, which appear to be the same thing. According, however, to Professor Wood, the naval advisory board is in possession of "the secret of the ultra-violet ray" and is conducting experiments with it, and he predicts that within a short time the turret guns of the ships

of the United States will be operated automatically by the use of the ultra-violet ray, and that the guns will not fire until they are in a direct line with the object at which they are aimed. Men, except to load the guns, will not be needed.

In regard to the employment of time fuses in the starting of fires on board the ships carrying supplies, the professor says, what really happens is that someone, either off shore or on the ship, conceals a carefully tuned Hertzian ring in a lump of coal, and closes the cup, or gap, with a piece of guncotton. The ship sails, gets

as far as mid-ocean. There is a sudden explosion, followed by fire. An operator on shore fired that ship, either by tuning his wireless coil until he reached the proper wave, or by bringing the ring in focus with the ultra-violet ray, or so the professor thinks.

DETECTS THUNDER STORMS 300 MILES AWAY.

Using a modified wireless receiving instrument, a French scientist has been able to detect thunder storms more than 300 miles distant.