

**Building a New Oil Jetty**—(Continued from page 485)

concrete required for this purpose is 4,500 tons.

To secure tankers making use of the jetty there will be 11 bollards on the head, and in addition mooring posts are being constructed upstream and downstream. Ground moorings consisting of screw piles, to which are attached bridle and pendant chains of about 3 in. cast steel secured to buoys, are being provided to take the head and stern ropes of the vessels.

Pipelines for the oil will be laid to headers on the jetty, and Samson posts with double derricks and electric winches are to be installed to deal with the suction hoses through which oil will flow from or into vessels alongside. There also will be water and steel pipes, telephone lines and lighting cables.

**The New R.A.F.**—(Continued from page 490)

best equipped sections of the R.A.F. When re-equipment is complete, pilots will begin their training on "Chipmunks" and the new Percival "Provosts," graduate on to "Balliols" and then pass on to "Meteor" 7, "Meteor" 10, or "Varsity" operational trainers—all of them the finest aircraft for the job.

This then is the blue-print for the new Royal Air Force—Britain's first line of defence in a troubled world. It is strangely reminiscent of the formations which faced the *Luftwaffe* in 1939-40. The Hawker "Hurricane" and Supermarine "Spitfire" have their modern counterparts in the P.1067 and "Swift" from the same companies. Our standard "heavy" in 1940 was the "Wellington," built by Vickers, whose "Valiant" is in production now. For over-water patrol the Avro "Anson" is succeeded by the Avro "Shackleton"; and just as we then had Lockheed "Hudsons" to share their work, so we shall soon have Lockheed "Neptunes."

This is important, for it means that our new warplanes have behind them a tradition of achievement and experience second-to-none in the world. But the British aircraft industry has never let tradition stand in the way of progress; and the fact that we now have more deltas and other revolutionary research machines flying than even the United States augurs well for the future.

**Among the Model-Builders**—(Cont. from page 513)

Angle Bracket is fixed to one end of each brake shoe and is bolted tightly to the Face Plate as shown in Fig. 4 (page 513). A second Angle Bracket 4 is attached to the free end of the shoe.

The brake is applied by depressing a pedal 5, consisting of a Threaded Crank pivoted on a  $\frac{1}{4}$ " Bolt fixed to the chassis. The Threaded Crank is linked by a Rod held in a Collar to a Coupling 6 that pivots on a bolt fixed in a Double Arm Crank 7. The Double Arm Crank is carried on a Rod mounted across the chassis, and a second Double Arm Crank is fitted at the other end of the Rod.

A length of wire is fixed to each Double Arm Crank, and is passed through an outer core of Spring Cord. One end of the Spring Cord is fixed in a Collar attached by a bolt to the chassis, and the other end is similarly fixed to the Face Plate. The free end of the control wire is attached to Angle Bracket 4.

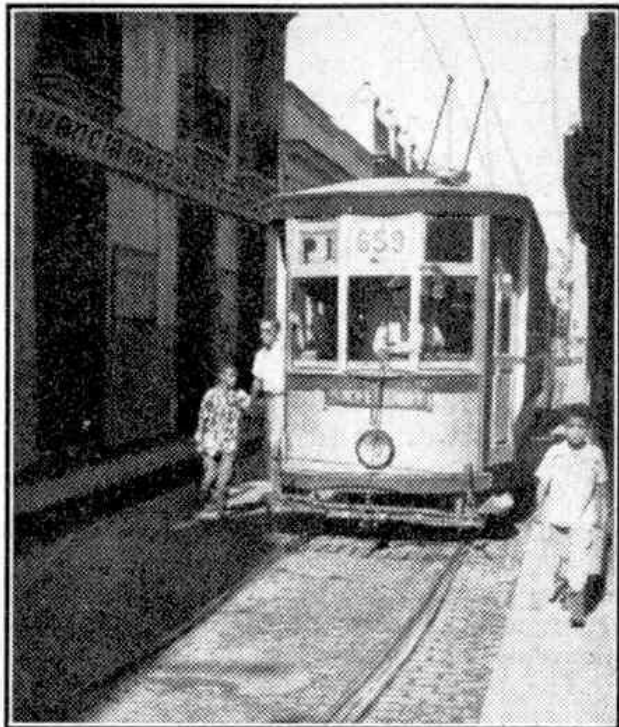
**A Trip on a "Trial Engine"**—(Cont. from page 506)

in water from the troughs beyond. Our first check came just south of Carlton. It became a dead stand and so down we went once more. The troublesome box was definitely cooling off. That little something that was irritating it had finally been overcome.

All aboard and off for another gallop. Another hasty look around at Gamston and we could congratulate ourselves; she was almost perfect, or would be by the time we reached home. As we neared Doncaster the "boards" began to be on. We were fortunate in keeping to the main line all the way past "Carr Loco," but we were held at Balby Bridge

colour lights and once again we went down to inspect. The right driving box was now only warm, nothing to worry about at all, but the left driving box had become warm too!

We entered the Plant Yard via South Yorkshire signal box and got back to the Weigh House about 6.30 p.m. Driver Tacey made out a report of all that had happened, this report being later available for the repair shop foreman. There is nothing like a trial run for showing if "she'll do." With "Lemberg" a second trip was ordered, on which the engine was galloped both ways; no trouble was experienced, she



Tramcar in a narrow street in the old section of Havana, Cuba. Photograph by C. E. Keevil.

came home cool in all bearings, and so another engine was ready for traffic.

**New Meccano Models**—(Continued from page 515)

by two Trunnions. The Trunnions are held together by a  $\frac{3}{8}$ " Bolt passed through the centre hole of their flanges and fixed in place by a nut. The shank of the bolt is then passed through the Flanged Plate and fitted with lock-nuts, so that the unit can be turned to steer the model.

The jib is supported by a  $5\frac{1}{2}$ " Strip 1 on each side, braced by a Curved Strip 2 and a  $2\frac{1}{2}$ " Strip 3. The jib supports are linked by a  $2\frac{1}{2}$ " x  $\frac{1}{2}$ " Double Angle Strip 4.

The jib consists of two  $5\frac{1}{2}$ " x  $1\frac{1}{2}$ " Flexible Plates joined at each end by a U-shaped bracket assembled from two Angle Brackets. The Plates are extended by  $5\frac{1}{2}$ " Strips braced by  $2\frac{1}{2}$ " Strips 5, and the outer ends of the  $5\frac{1}{2}$ " Strips are connected by a  $\frac{3}{8}$ " Bolt 6.

The luffing movement is operated by a length of Cord tied to a 2" Rod 7. This Rod is mounted in one of the Strips 3 and in a Reversed Angle Bracket, and it carries a Bush Wheel fitted with a  $\frac{3}{8}$ " Bolt as a handle. A Spring Clip on the end of the Rod prevents the Cord from slipping off the winding shaft.

The Hook is fastened to Cord attached to a Crank Handle mounted in Strips 1.

Parts required to build the model Mobile Crane: 2 of No. 2; 4 of No. 5; 1 of No. 10; 4 of No. 12; 2 of No. 16; 2 of No. 17; 1 of No. 19s; 4 of No. 22; 1 of No. 24; 4 of No. 35; 22 of No. 37; 4 of No. 38; 1 of No. 40; 2 of No. 48a; 1 of No. 52; 1 of No. 57c; 2 of No. 90a; 3 of No. 111c; 1 of No. 125; 2 of No. 126; 2 of No. 126a; 2 of No. 142c; 2 of No. 155; 2 of No. 189.