

# A 50-Ton Portable Electric Crane at Southampton Docks

**S**OUTHAMPTON has been called the pleasantest of our larger ports, and not without reason. It enjoys a wonderful situation in the middle of the south coast, yet it is less than 80 miles from London, and is within easy reach of the Welsh coalfield and the great manufacturing areas of the Midlands. Among its other advantages Southampton possesses the unusual feature of a double tide, which makes it possible for the largest liners to enter the water at all states of the tide, and renders unnecessary the ceaseless dredging that inflicts such a heavy financial burden upon ports that are dependent upon a river.

The port owes a great deal of its success to the old London and South Western Railway, and in return it became the main source of the prosperity of the railway. The first railway communication between London and Southampton was brought about as the result of the success of the Liverpool and Manchester Railway. The shipowners of Southampton felt uneasy in regard to the development of Liverpool that was likely to result from the railway, and they determined to have a railway of their own. A Bill for the construction of the London and Southampton Railway was passed in 1834, and in due course work commenced.

Serious engineering difficulties had to be overcome, however, and progress was slow. By June 1839, it was possible to reach Southampton from London by taking train from London to Basingstoke, coach from Basingstoke to Winchester, and train again forward to Southampton. The first through train from London to Southampton ran in May 1840. After this line was opened the people of Portsmouth decided that they would like a branch from it, but they insisted that the name should be altered to London and South Western, to avoid the use of the name of the rival port!

The best-known feature of the splendid equipment of the port is of course the floating dock that possesses the distinction of being the largest in the world. All "M.M." readers will be familiar with photographs of this famous dock, engaged in lifting various giant liners. This huge structure has a lifting capacity of 60,000 tons, an overall length of 960 ft., and an inside width of 130 ft. Its greatest feat was the lifting of the White Star liner "*Majestic*," in 1925. This was performed without the slightest hitch, and the unique

sight of the world's largest liner resting in the world's largest floating dock aroused great public interest.

Southampton was among the first ports in the United Kingdom to recognise the advantages of electric cranes, and its equipment in this respect is now very complete.

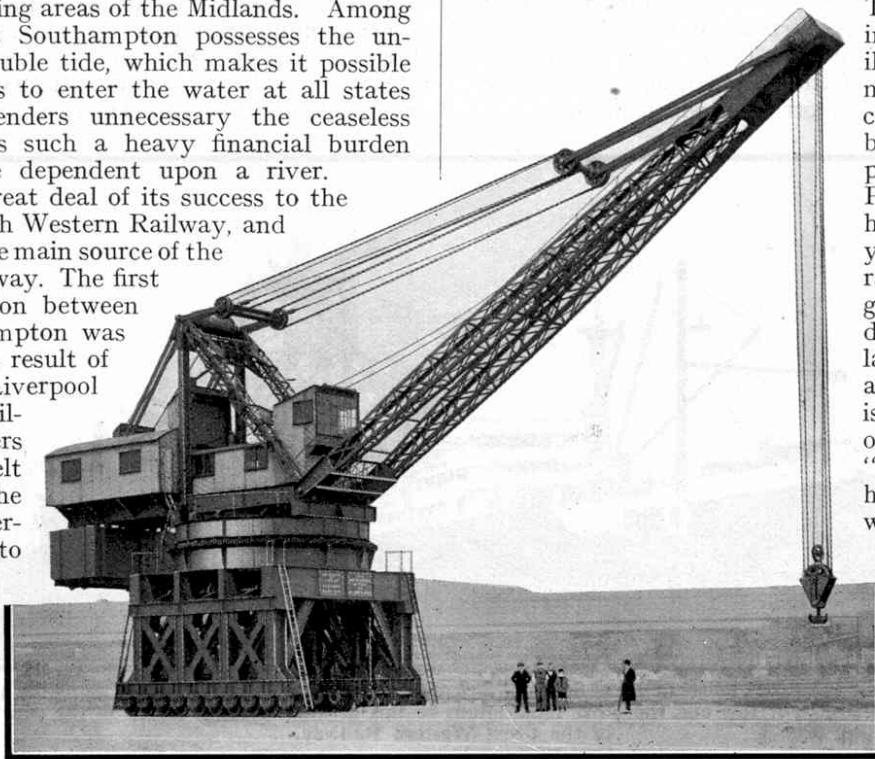
The 50-ton crane shown in the accompanying illustration is one of many of various capacities that have been supplied to the port by Stothert and Pitt Ltd. This crane has already done 20 years' service at the railway company's graving docks. The design is of a particularly robust character, and the understructure is modelled on the lines of the firm's well-known "Titan" cranes for harbour construction work.

Each of the 20 axles of the rail wheels is carried on a group of volute springs.

The hoisting mechanism is housed at the rear of the structure along with the jib derricking gear, the latter being

provided with an automatic mechanical brake resistance, which comes into action when the jib is being lowered and goes out of action when it is being raised. The slewing and travelling motors and gear are situated at the centre of the crane housing, and the control cabin at the front is placed in an elevated position that provides the operator with a clear view down into the dock. When at its maximum radius the crane reaches 10 ft. beyond the centre of the dock.

The working load for this crane is 50 tons, with a maximum radius of 87 ft. The height of lift above rails is 47 ft. and the depth below 43 ft., giving a maximum range of lift of 90 ft. The speed of lift with slow gear is 16 ft. per minute, and with fast gear 56 ft. per minute; while the speed of slewing is one revolution in 2½ minutes and the speed of travelling 30 ft. per minute, in each case with load. Five electric motors are incorporated in the crane; two of 50 b.h.p. each for lifting, one of 25 b.h.p. for slewing, one of 80 b.h.p. for derricking, and one of 50 b.h.p. for travelling. The length of the jib, from centre to centre of pins, is 81½ ft., and the total weight of the crane is 355 tons.



[Courtesy]

A 50-ton portable electric crane at a graving dock at Southampton.

[Stothert & Pitt Ltd.]

## Tea-Making in Ceylon

By E. R. SWEET

While in Ceylon recently I paid an interesting visit to a small tea factory not far from Kandy. The factory draws its supply from a plantation covering about 200 acres. Only the young shoots of the plant are picked, as these make by far the best tea, and they are first spread out on long trays and left to dry naturally for 18 hours. Then they are moistened and passed into a rolling machine, from which they emerge in a drab yellow mass that again is spread out on trays and turned over at intervals.

The leaves next remain for a time in a roasting machine at a high temperature, from which they emerge looking much the same as we see them in shops. The winnowing process follows. A fan revolving at high speed creates a draught that separates the dust from the roasted leaves, which are graded by placing them on a sieve of medium mesh that is shaken fairly quickly. The finer leaves fall on to another sieve of closer mesh, through which only the best quality tea passes.

All three grades separated in this manner are carefully packed in chests ready for export, and soon are sailing across the high seas. Even the dust extracted has its value, and it is sent to Colombo to be sold.

## Treaty Money for Canadian Indians

By P. MACDONALD

Indians in Canada who have ceded their rights to the Government as civilisation has pushed north-west in the last 50 to 60 years, each receive annually four dollars, or approximately £1. This is known as treaty money, and its annual distribution is a great event with the Indians. The Indians of Canada are the wards of the Department of Mines and Resources, but only those who have become parties to the treaty, or their direct descendants, receive the money. The amount paid out has increased steadily as additional Indians have signed away their aboriginal rights.

Treaty Indians are found in Ontario, the Prairie Provinces and the Northwest Territories, but there are none in Quebec, the Maritime Provinces or British Columbia. Those in charge of the distribution of the money travel to isolated portions of Northern Canada by air or canoe, or even on foot. This year the party going to the western part of Ontario left Sioux Lookout, near Ottawa, on 22nd June in two aeroplanes, carrying \$9,500 in small bills for distribution among 2,800 Indians, and travelled as far north as Fort Severn on Hudson Bay. Other parties went from farther west, using in all six aeroplanes, and some districts were reached in canoes.

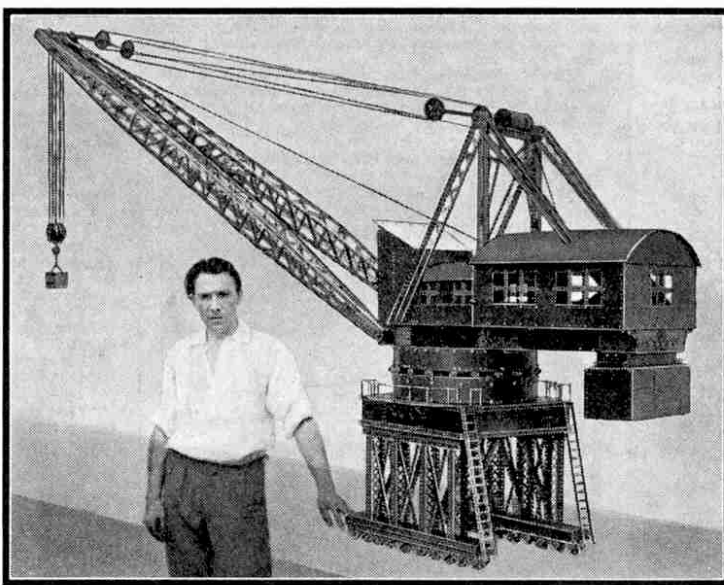
Before the use of the aeroplane the distribution took six months, but now only a few weeks are needed. The Indians are told of the time for distribution by radio, telegraph, Indian runner, and the mysterious bush telegraph of the Indians. They then gather at the posts of the trading companies, where the Government agents meet them, and many of them spend most of the money at the trading post.

## Gold Dredging in Central Otago, New Zealand

By A. L. TITCHENER

During the school holidays in September last I visited Alexandra, in Central Otago. This town, on the banks of the Molyneux River, is near Cromwell, the centre of the gold mining industry. The bed of this river is rich in gold, and many companies carry out dredging operations. The swift current makes dredging difficult, and two companies built dredges for the work.

Each dredge consists of two large pontoons braced together, but with a space of about 6 ft. between them, and a steel superstructure that contains the operating machinery. They are the largest of their kind in New Zealand, and are electrically



A fine Meccano working model of a portable electric crane, built by Mr. P. G. Rich, of Orpington, who is seen beside it. The model is 7 ft. 6 in. high and the jib 7 ft. 4 in. long.

operated. A long ladder suspended from the superstructure passes down between the pontoons into the water, and a bucket chain is driven over it. The material brought up is tipped into a long tube in which it is graded according to size and is then washed, the lighter substance being thus removed.

One dredge was built at Alexandra, and the other, slightly smaller, at Clyde, a town a few miles up the river. When I was at Alexandra the dredge there was nearing completion, but the one at Clyde had not been launched, and work on it was suspended until the river rose high enough for this to be done. It became possible to launch the vessel in January this year, and it was then allowed to move down the slipway, under the control of winches that held it in check. One of the winch cables jammed, however, and caused one end of the dredge to stick high up the slipway, while the other slipped into the water. After much difficulty the launch was completed a week later, and the completion of the vessel then proceeded rapidly.

Ironically enough, the big rise in the river that was so advantageous to the Clyde engineers was a source of trouble to those operating the Alexandra dredge. A suspension bridge crosses the river at the latter town, and the dredge there was built above this bridge. The level of the water on this occasion was so high that the dredge could not pass under the bridge, and it was some time before this was possible.

## The 1937 Cycle Show

This year's Cycle Show at the new Earls Court Exhibition buildings on 22nd to 29th September, marks another milestone in the history of the cycle industry's trade shows. First at the old Crystal Palace, over 40 years ago, later at the Agricultural Hall at Islington, in recent years at Olympia and now at Earls Court, the Cycle Show has gone from strength to strength.

This year's show gains tremendously in interest because it is the first occasion for several years on which the Hercules Company, the largest cycle manufacturers in the world, have been present. Hercules will show a range of 39 of their machines, 36 types of cycle and 3 tricycles, including roadsters, safety and sports models, tourers and tandems, not forgetting machines for boys and girls. Features of the display will be a safety model that allows the rider to place both feet on the ground when stopped in traffic, and another particularly attractive model, known as the "Falcon," that is finished in a new electric blue enamel, with chromium plated fittings and white mudguards and pump.

Another important exhibit that will be of special interest to "M.M." readers will be Messrs. Bluemel Brothers' display of lightweight cycle accessories. Messrs. Bluemels were the pioneers of celluloid accessories, their introduction of celluloid inflators and handles having been made over 40 years ago.

The latest development that Bluemels have to offer is their Duplex mudguard which has the officially approved "Prismatic" reflector actually moulded into the guard, providing a clean smooth contour with no joints or crevices to act as dirt traps. Other refinements for the 1938 season include a front guard with a moulded recess that will fit any width of fork crown without alterations, and a similarly moulded rear guard that will fit any type of bottom bracket. Bluemels will also be showing their "Featherweight" headlamp which will operate off any dynamo providing a suitable bulb is used. It is available in either black or white celluloid construction and weighs only 5½ oz. It is fitted with a most ingenious bracket clip that automatically safeguards the lamp and bulb against theft.

A new type of pocket electric torch will be another feature of the Bluemel display. This has a moulded celluloid case that will not dent, fracture, or become sulphated, but its most interesting feature is its push-button lighting switch countersunk in the base.

## Bond's New Premises

Scale model enthusiasts among our readers will be interested to learn that owing to the great growth of their business, our advertisers, Bond's O'Euston Road Ltd., have found it necessary to move to new premises at 357, Euston Road, London, N.W.1. The new premises are conveniently situated between the Warren Street and Gt. Portland Street Tube Stations and possesses ground floor and first floor showrooms each with approximately 2,000 sq. ft. floor area. In addition there is a completely equipped workshop of about 1,200 sq. ft. floor area, in which a 60-ft. run of track for locomotives has been laid down to permit testing of all types of locomotives from Gauge O up to 7½ in. gauge.

## The Hugar Ship Models

Ship model enthusiasts will be specially interested this month in the range of Hugar ship models advertised in our columns. These models possess many interesting features, notably hulls that are machined from the solid to eliminate joints below the water-line and to avoid any possibility of leakage. The superstructures are built mainly of balsa wood to ensure lightness in the finished model and to obviate the necessity for a heavy keel.

All of the models are electrically operated, the motors having been specially designed to run from small dry batteries. The speeds of the boats can be varied by adjusting the propeller blades, but the ordinary cruising speed is from 150 to 200 feet per minute. Each of the models is supplied complete with an attractive sheet of coloured flags, complete with signal chart, a copy of which will be sent to any reader at 4d., post free.

Hugar Models Ltd., of South Street, Epsom, Surrey, will gladly send details of their full range of marine scale models to any reader who writes to them.

## A New Skybird Model

Readers who like their aircraft model "stables" to be right up to date, will be interested to know that the latest addition to the range of Skybird kits and models is a reproduction of the Bristol 138a single-engined monoplane in which Flt. Lieut. M. J. Adam made a new altitude record of 53,937 ft. on 30th June last. Messrs. A. J. Holladay and Co., makers of the Skybird Kits, 3, Aldermanbury Avenue, London, E.C.2, will be glad to send details of this and other Skybird models to any "M.M." reader.