Results of Meccano Model-Building Contests

By Frank Hornby

"May" Competition, Overseas Section

WITH the commencement of a New Year I always make a practice of glancing back over the results of all the Model-building Competitions that appeared during the preceding year. On this occasion the inspection will certainly show that the 1928 Contests have produced many truly remarkable models, and the average standard of merit displayed by the competition entries throughout the year is undoubtedly much higher than ever before. I shall look forward to the closing of our big £100 Contest, and also of the various other contests to be announced in 1929, with keen interest, for I feel sure that if Meccano boys keep on at their present rate of building, we shall be inundated with wonderful new models and mechanisms. The Overseas entries in the "May" contest are described below, and some very interesting models are to be found amongst them. The names of the prize-winners are as follows:—

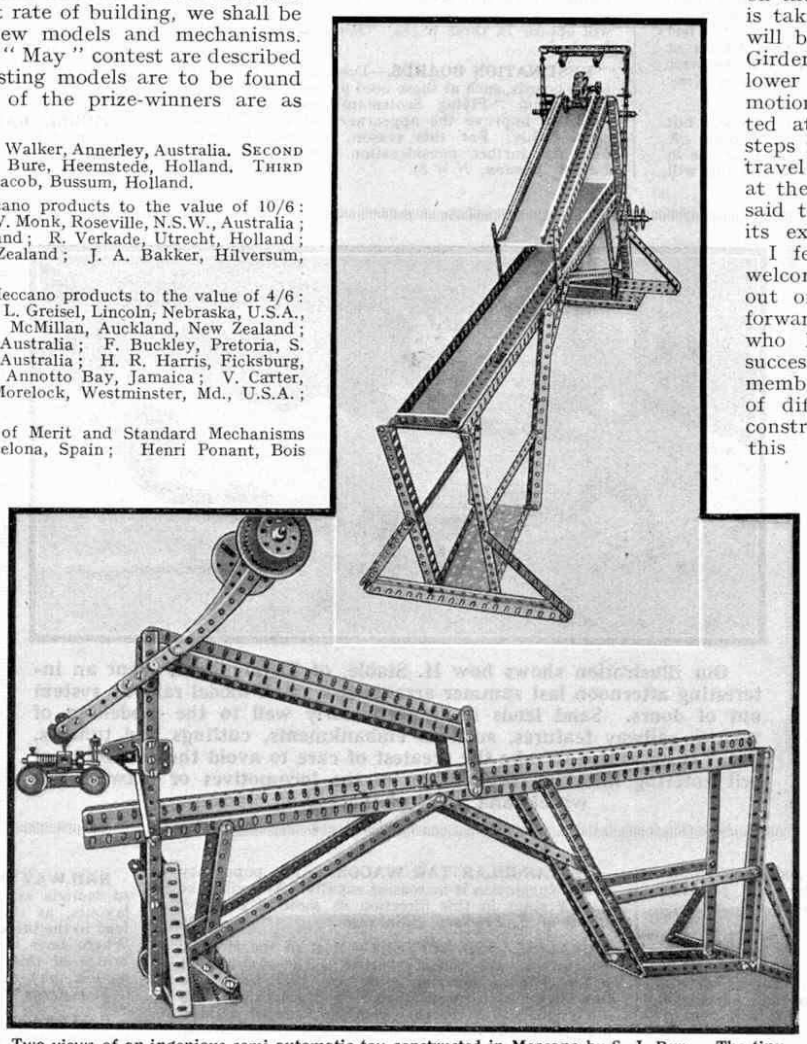
FIRST PRIZE (cheque for £3-3s.): R. E. Walker, Annerley, Australia. SECOND PRIZE (cheque for £2-2s.): S. J. Bure, Heemstede, Holland. THIRD PRIZE (cheque for £1-1s.): F. B. Jacob, Bussum, Holland.

SIX PRIZES, each consisting of Meccano products to the value of 10/6: S. F. Desai, Navsari, India; Clive W. Monk, Roseville, N.S.W., Australia; Douglas Angus, Napier, New Zealand; R. Verkade, Utrecht, Holland; R. O. Jukes, Christchurch, New Zealand; J. A. Bakker, Hilversum, Holland.

TWELVE PRIZES, each consisting of Meccano products to the value of 4/6: L. Fisher, Johannesburg, S.Africa; L. Greisel, Lincoln, Nebraska, U.S.A., W. Müller, Bâle, Switzerland; J. McMillan, Auckland, New Zealand; F. H. Ogier, Hurstville, N.S.W., Australia; F. Buckley, Pretoria, S. Africa; Nelson Eustis, Alberton, Australia; H. R. Harris, Ficksburg, O.F.S., S. Africa; K. McDonald, Annotto Bay, Jamaica; V. Carter, Gisborne, New Zealand; S. P. Morelock, Westminster, Md., U.S.A.; E. Wood, Pretoria, S. Africa.

SPECIALLY COMMENDED (Certificate of Merit and Standard Mechanisms Manual): Ramon Collado, Barcelona, Spain; Henri Ponant, Bois Colombes, Seine, France; W. D. H. Graham, Esk, Queensland, Australia; G. R. Cartledge, Durban, S. Africa; K. Muchlig, Ann Arbor, Michigan, U.S.A.; J. Denny, Melbourne, Victoria, Australia; H. Fraser, Elwood, Victoria, Australia; Donald Malcolm, Premier Mine, Transvaal, S. Africa: Andrew Garriock, Sydney, N.S.W., Australia.

The First Prize winner, R. E. Walker, submitted a model dragline. His model is not simply a replica of the standard Meccano dragline, as might at first be supposed, but an excellent, well-proportioned structure that includes much of the builder's "free-lance" designs. Boom, drag bucket, luffing and hoisting mechanisms, and travelling base have all been carefully and accurately constructed and the complete model has that effect of realism that can only be attained by the exercise of much patience and study.



Two views of an ingenious semi-automatic toy constructed in Meccano by S. J. Bure. The tiny engine races down the "chutes" at a great speed

On first glancing at the illustration on this page one might wonder just exactly what the photographs are intended to represent. Although the caption helps to clear matters up, a more complete explanation will doubtless be appreciated! The model constitutes a most ingenious toy of semi-automatic type, for the tiny locomotive, once started, performs some remarkable antics before finally coming to rest!

To start the "cycle of operations" the pivoted arm is first drawn into a vertical position with the weighted end (the "ballast" consists of Sprocket Wheels and Face Plates) uppermost. This done, the miniature engine is hooked on to the clips at the lower end of the arm, and the whole held in position by a catch formed from a Curved Strip and a Spring. When it is required to operate the toy the catch is drawn down and the locomotive is pulled round by the weighted portion into a position at the top of the "chute" where the engine is released and travels down the first incline, gradually gathering momentum. On reaching the end of this incline the locomotive takes a "leap into space" and lands on the bottom chute, up which it is taken by its own velocity. It will be noticed that a 2½" Angle Girder closes the top end of the lower chute and the engine's motion will consequently be arrested at this point. Gravity then steps in and forces the engine to travel back along the lower chute, at the bottom of which it can be said to have reached the end of its exciting journey!

I feel sure model-builders will welcome this effort as something out of the ordinary and I look forward to hearing from readers who have built similar models successfully. It is well to remember that there are hundreds of different ways in which the constructor can employ a toy of this description, and its construction offers endless possibilities for the ingenious boy.

A clever representation of an army tank will be seen amongst the illustrations on the opposite page. Glancing at the photograph of this little model and noticing the multitude of toothed wheels included in it, one cannot help thinking that although the phrase "armed to the teeth" is more usually applied to pirates, brigands, and suchlike romantic figures of fiction, it would qualify the model tank remarkably well! The novel constructional features of the tank cannot be overlooked, and I congratulate its builder, F. B. Jacob, on his success.

The construction of aeroplanes, seaplanes, airships, etc., is extremely popular with Meccano boys, and many hundreds of models of flying machines are received in each contest. It will be understood, therefore, that any model aeroplane submitted by a competitor must include features of outstanding merit to enable him to carry off a prize. Two particularly interesting examples of miniature aeronautical engineering were submitted by competitors, one being a model "Hercules" air liner constructed by C. W. Monk, and the other an ingenious representation, by D. Angus, of a "flying bicycle."

The most interesting feature of Monk's air liner is the fact that

it can be called a " working model." The model does not of course actually fly (the weight of the Meccano parts would never permit this !) but when moved along a floor or table top the propeller rotates. The method by which this motion has been achieved is as follows. The " propeller shaft," carrying at one end a Bush Wheel to which is attached a pair of Propeller Blades, extends the complete length of the model and carries at its rearmost extremity a ¾" Pinion that meshes with a ¾" Contrate Wheel fastened to a 2" Rod. The latter is journalled vertically in the framework of the machine and carries on its lower end a ⅞" Bevel, and this is rotated by a similar wheel that is fastened to a Rod on which is held a Bush Wheel. This Bush Wheel rests on the ground, forming the " tail skid," and causes the rotation of the propeller.

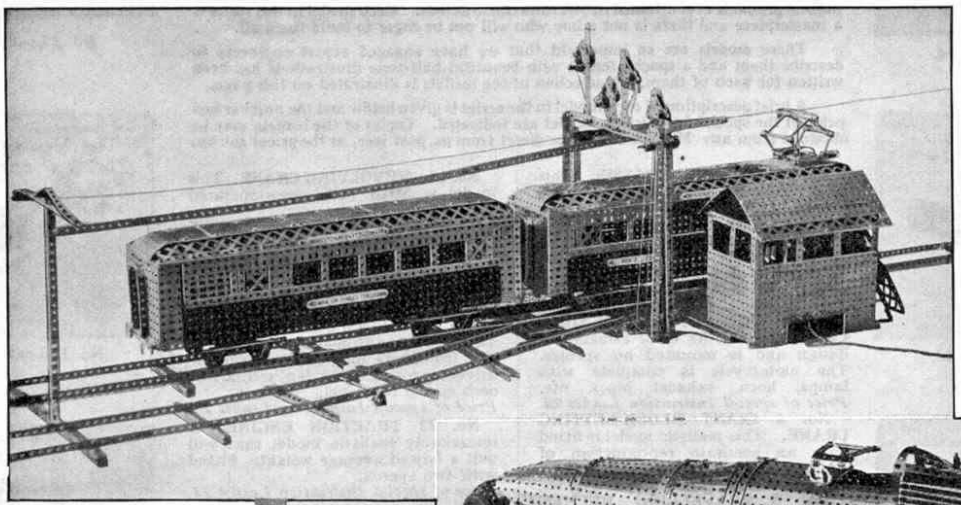
The " flying bicycle " is based upon a remarkable machine devised by a Viennese inventor some time ago. Incidentally, an illustration of the invention was incorporated in the heading " Our Busy Inventors " on page 909 of the November, 1928, *"M.M."* Readers who have this issue available should compare the illustration in question with the Meccano model.

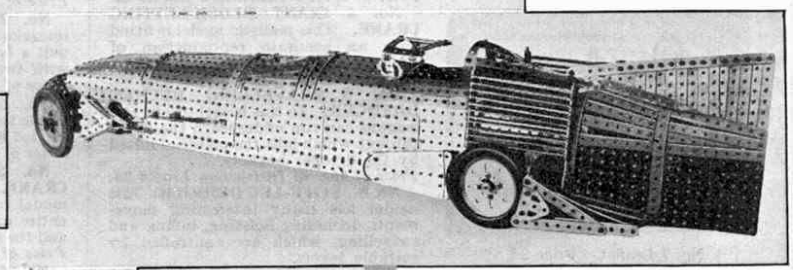
The invention, I may add, has not up to the present been put to a practical test, although a quarter size model is stated to have acquitted itself remarkably well ! The actual machine constitutes a bicycle frame of rather heavy construction and is fitted with the usual pedals, cranks, and chain drive. Auxiliary gearing enables a " pusher " propeller placed at the rear of the bicycle to be rotated with considerable velocity and this, it is claimed, will cause the machine to rise in the air ! Its ascent would of course be assisted by adjustable planes that can be controlled from the rider's seat. On attaining a sufficient altitude, the aviator lowers the planes to a horizontal position and glides along above the clouds untroubled by policemen, motor cars, pedestrians and the other " bugbears " of the less adventurous terrestial cyclist ! It is always refreshing to receive models such as this, for they show that the Meccano boy takes a lively and intelligent interest in the progress and invention of the world of to-day.

A complete electric railway formed R. O. Jukes' entry and the illustration on this page of a portion of the track will show that the builder has completed the various portions of the layout remarkably well. Of the two cars shown in the illustration, the right-hand one contains a Meccano high voltage Motor, and can therefore be termed the motor car. The other car is designed principally for passenger conveyance, but a portion has been divided off for luggage. The appearance of the cars is excellent, and the " corridor connections " help to add realism to the finished model, which is one of the finest received recently.

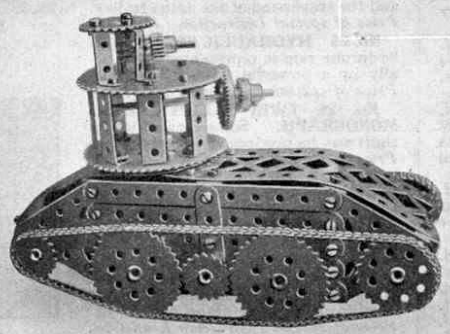
Jukes has adopted the overhead wire system of current collection in this railway, and the small " pantograph " for conducting one pole of the main supply to the Motor may be seen fitted on the roof of the motor coach. The other pole of the current is, of course, connected to the other Motor terminal through the rails and the bogie wheels. This method of wiring, although it complicates matters considerably, has much to commend it, for in addition to giving the complete layout a most realistic appearance, it dispenses with the " third " or " live " rail and consequently standard unelectrified track can be used with an electric locomotive.

The model is fitted with an ingenious control mechanism consisting of a " trip lever " mounted on the rear of the passenger coach and connected by a flexible coupling to the reversing lever of the Motor in the motor coach. When the train reaches a certain specified point on the track, an arm that is normally held down by a spring in the centre of the rails, is released by a control wire operated from the signal box (the box can be seen in the illustration) and engages with the trip lever on the passenger car, so reversing the motion of the train.





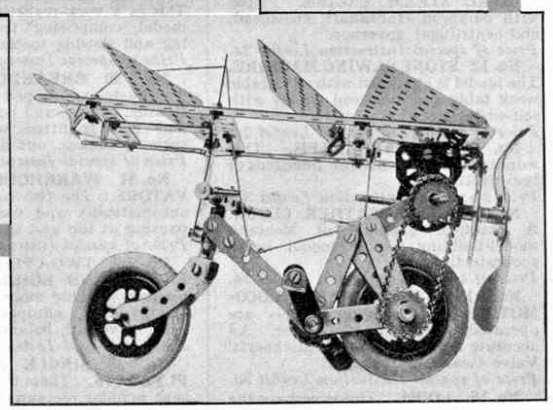
Above: R.O.JUKES' ELECTRIC RAILWAY



Above: A fine model of CAPTAIN CAMPBELL'S world-famed racing car, by R.Verkade.

Left: F.R.Jacob's Army Tank, complete with "crawlers".

Below: The FLYING(?) BICYCLE, a model of a remarkable invention. Sent in by Douglas Angus.



It would be difficult to name any recently-devised object connected with engineering that has aroused more enthusiasm amongst model builders than Captain Malcolm Campbell's racing car " Bluebird," which created a world's speed record early last year. Although the record that was set up was almost immediately broken again, the car enjoys almost universal popularity, and many fine reproductions of it have been entered in the Meccano Contests. I think readers will agree, however, that for careful and accurate constructional work it would be difficult to find a better model of the actual car than that sent in by B. Verkade, an illustration of which appears herewith. The construction of a model of this type is no simple task, for innumerable difficulties are met with when an attempt is made to build up the peculiarly shaped body work from standard Meccano parts. Great credit is due therefore to Verkade.

In these days of motor transport, accidents to large and heavy vehicles are bound to occur, and the auto breakdown crane is gradually becoming a common sight. J. A. Bakker's cleverly-designed model represents a crane of this type.