

VOL. XXXVII No. 12

DECEMBER 1952

MECCANO

MAGAZINE



MERRY CHRISTMAS, MR. SNOWMAN!

1½

DINKY TOYS

TRADE MARK REGD.

Gift Sets

Dinky Toys Gift Sets Nos. 1 and 2 are now in the shops, in addition to Gift Set No. 3 announced last month. These selections of popular models in attractive presentation boxes make ideal Christmas Gifts.

Gift Set No. 1 Farm Gear
Contains the following five models:

- 27a Massey-Harris Tractor
- 27b Harvest Trailer
- 27c Massey-Harris Manure Spreader
- 27g Motocart
- 27h Disc Harrow

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Contains the following five models:

- 25m Bedford End Tipper
- 27d Land-Rover
- 30n Farm Produce Wagon
- 30p Tanker
- 30s Austin Covered Wagon

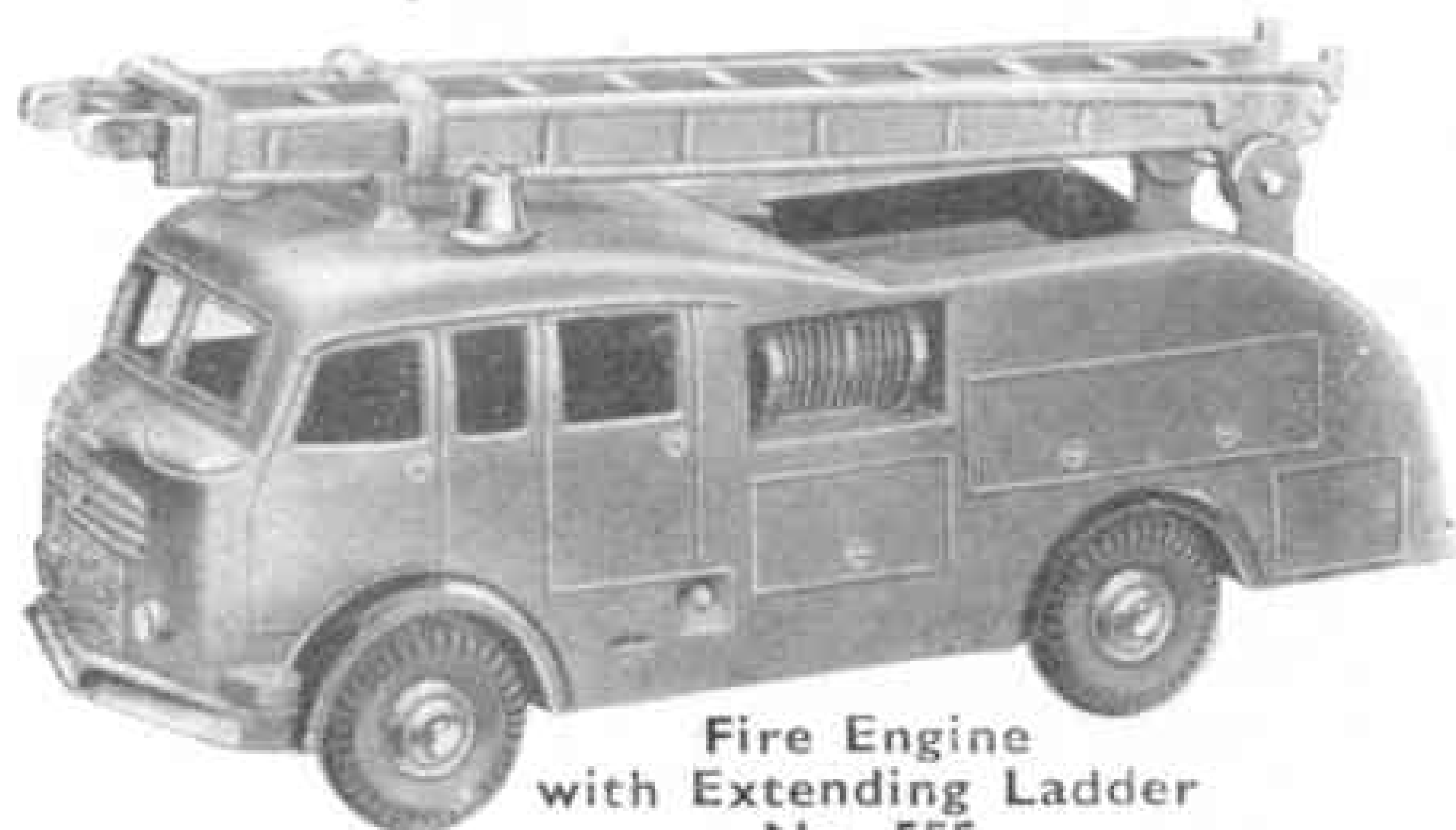
Price 22/-

Gift Set No. 3 Passenger Cars
(6 models) Price 20/2



Gift Set No. 2

Many attractive new Dinky Toys are in preparation. Watch the "Meccano Magazine" for announcements of the latest models.



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with Extending Ladder
No. 555
9/4



Dumper Truck
No. 562
8/8



Big Bedford Lorry
No. 522
6/10



A.E.C. Tanker
No. 591
8/8

Prices include Purchase Tax

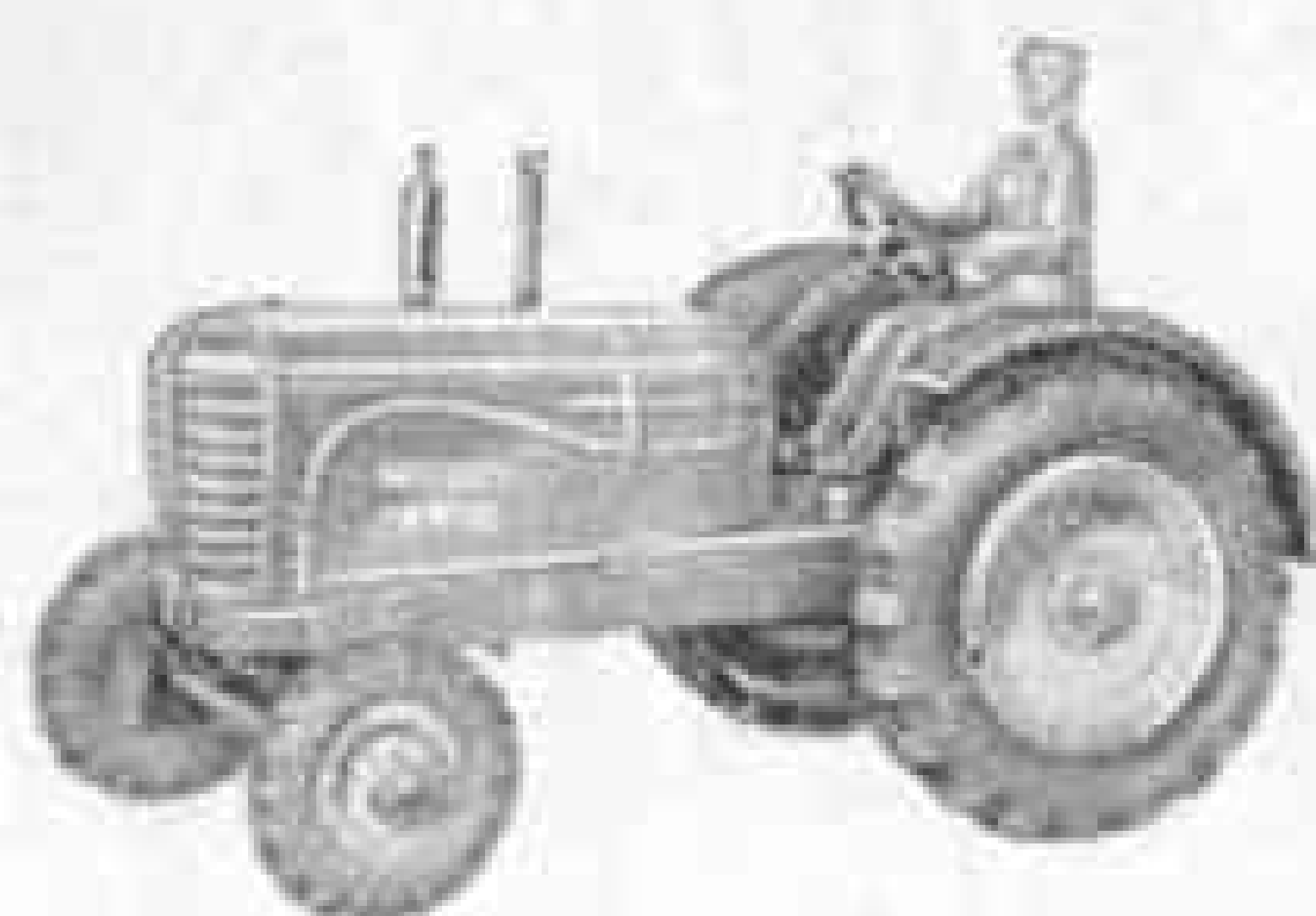
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DINKY TOYS

TRADE MARK REGD.



No. 30s
Austin Covered Wagon
3/6



No. 27a
Massey-Harris Tractor
4/8



No. 40g
Morris Oxford Saloon
2/11



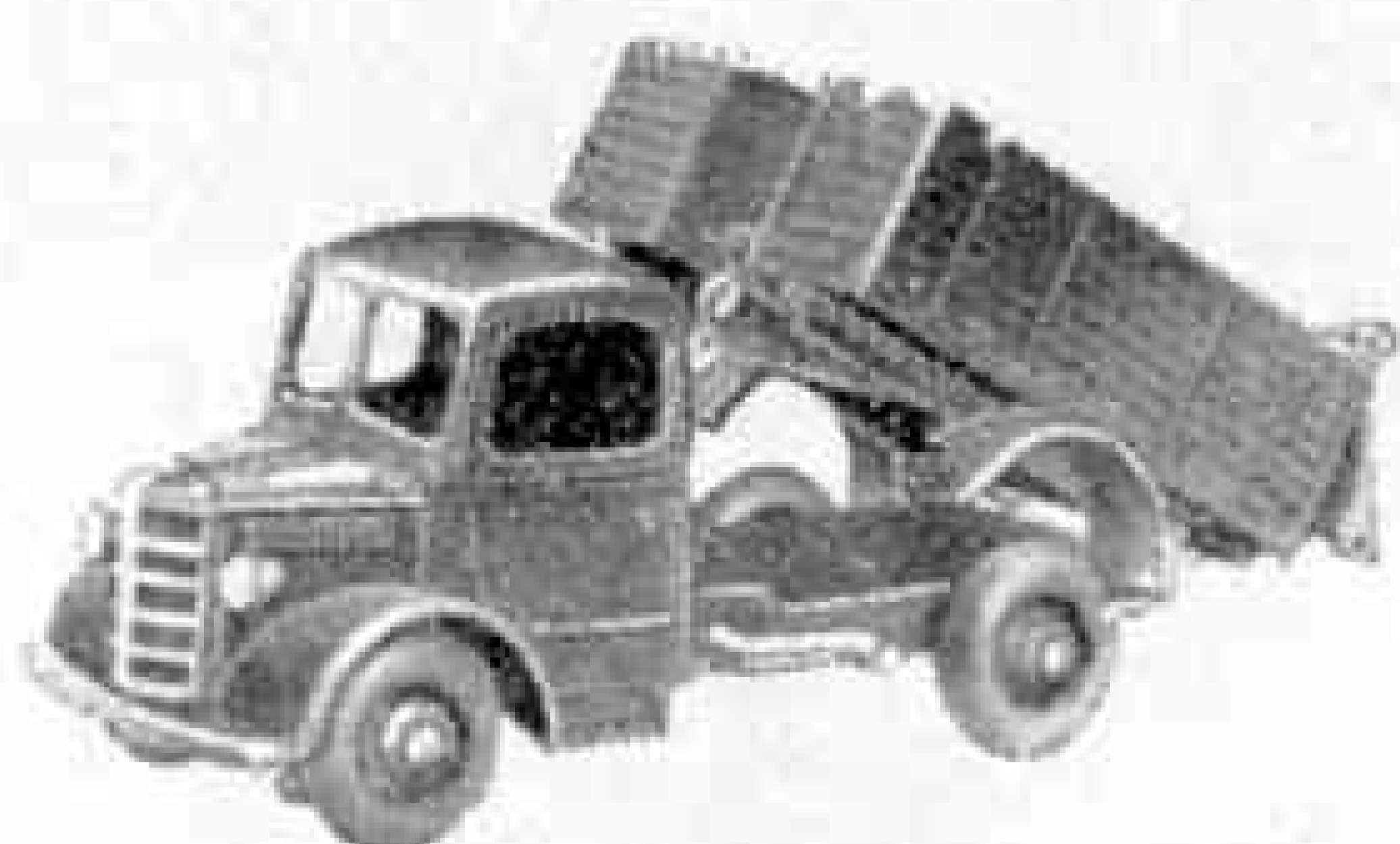
No. 25y
Universal Jeep
4/4



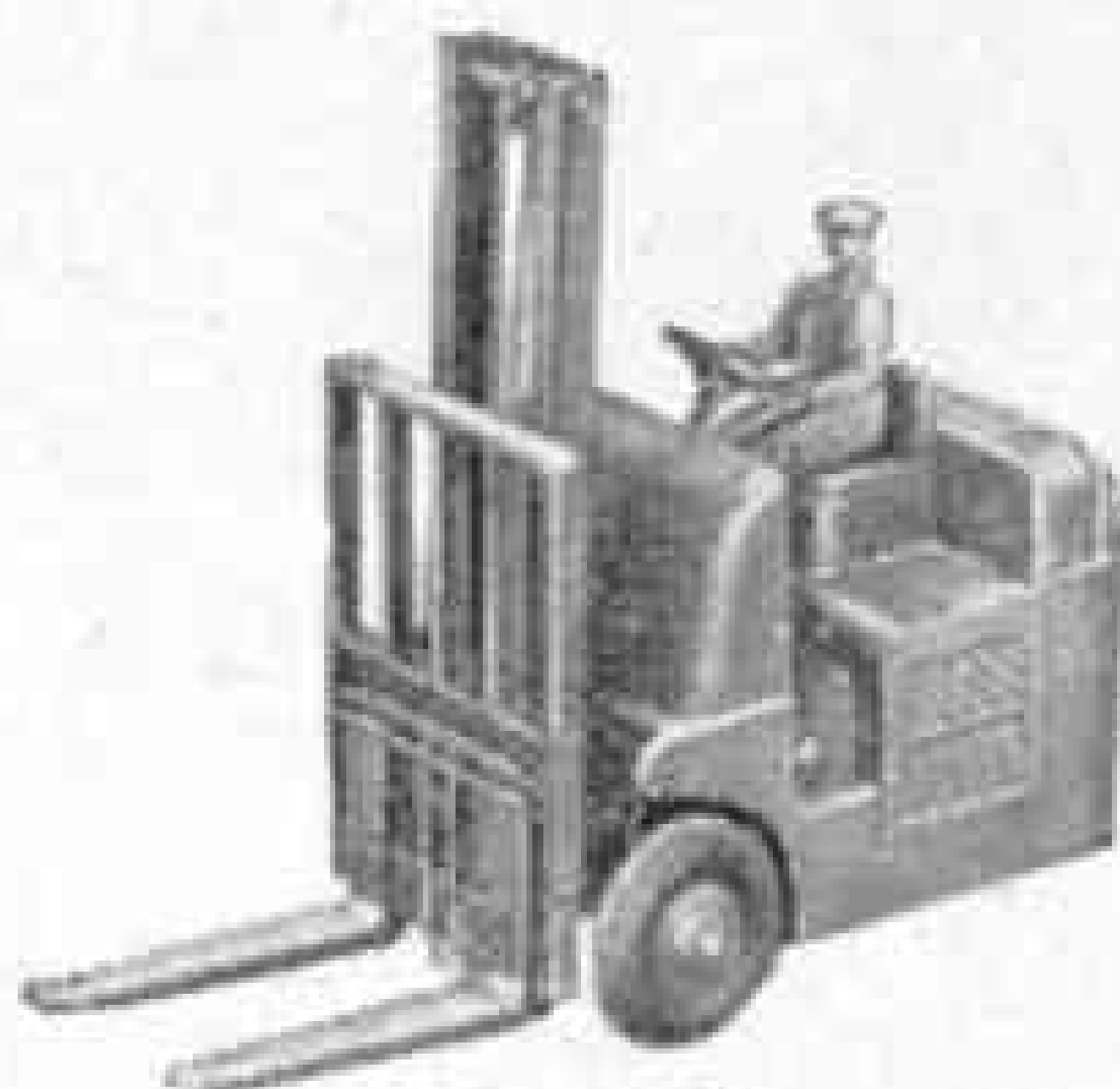
No. 29h
Duple Roadmaster Coach
4/4



No. 40f
Hillman Minx Saloon
2/11



No. 25m
Bedford End Tipper
5/11



No. 14c
Coventry
Climax Fork Lift Truck
8/1



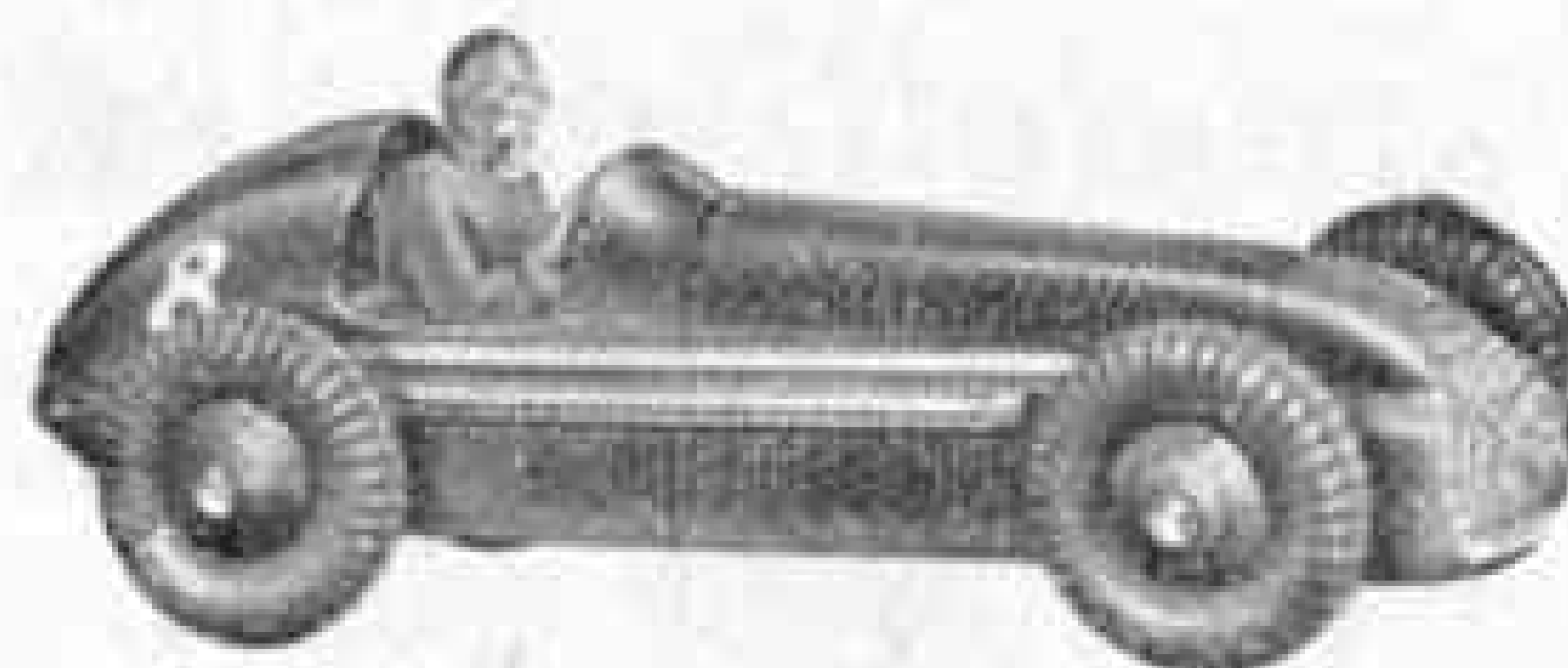
No. 30h
Daimler Ambulance
3/5



No. 564
Elevator
Loader
22/4



No. 504
Foden 14-ton Tanker
10/10



No. 23f
Alfa Romeo Racing Car
3/1

Prices include Purchase Tax

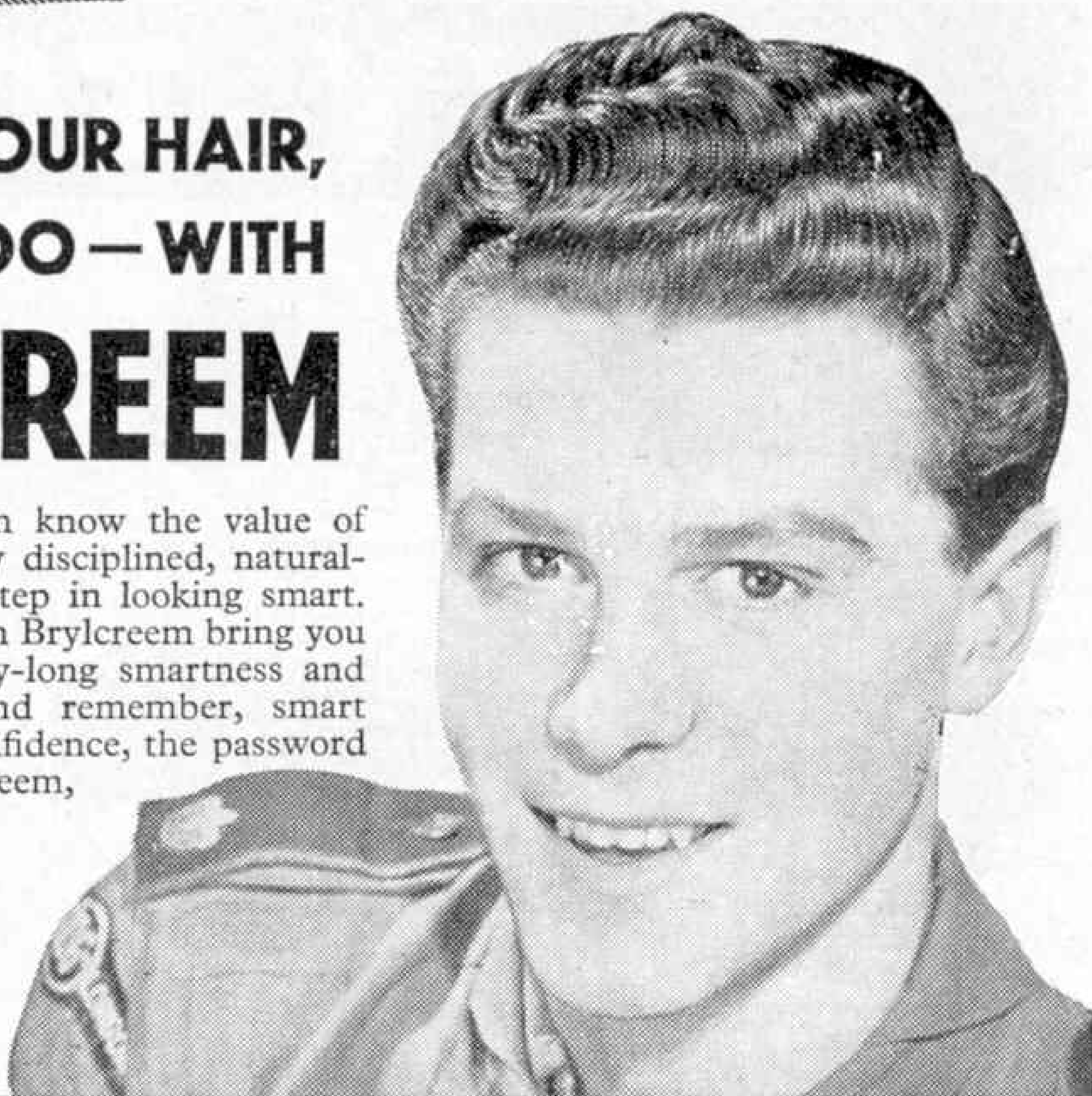
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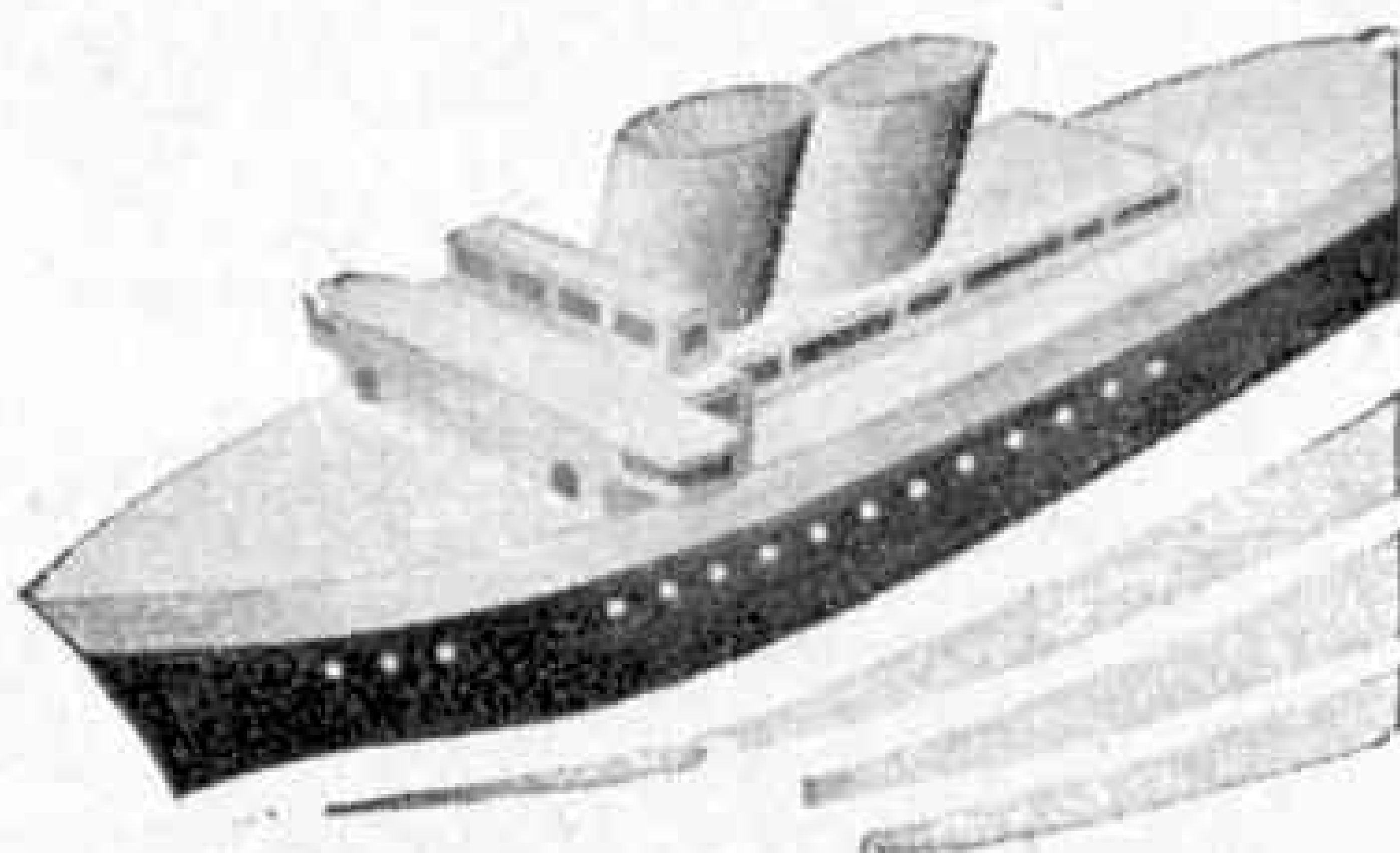
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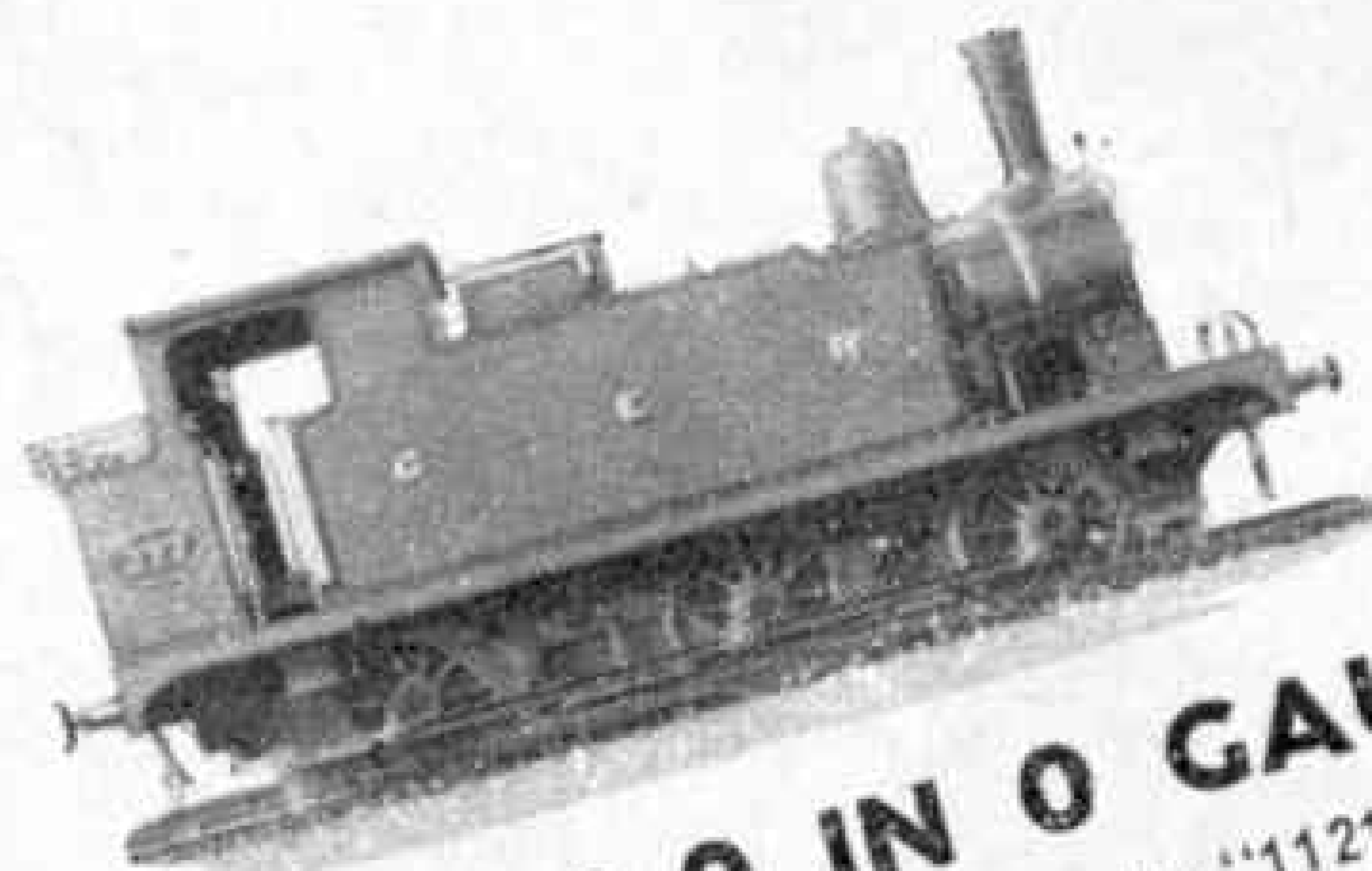


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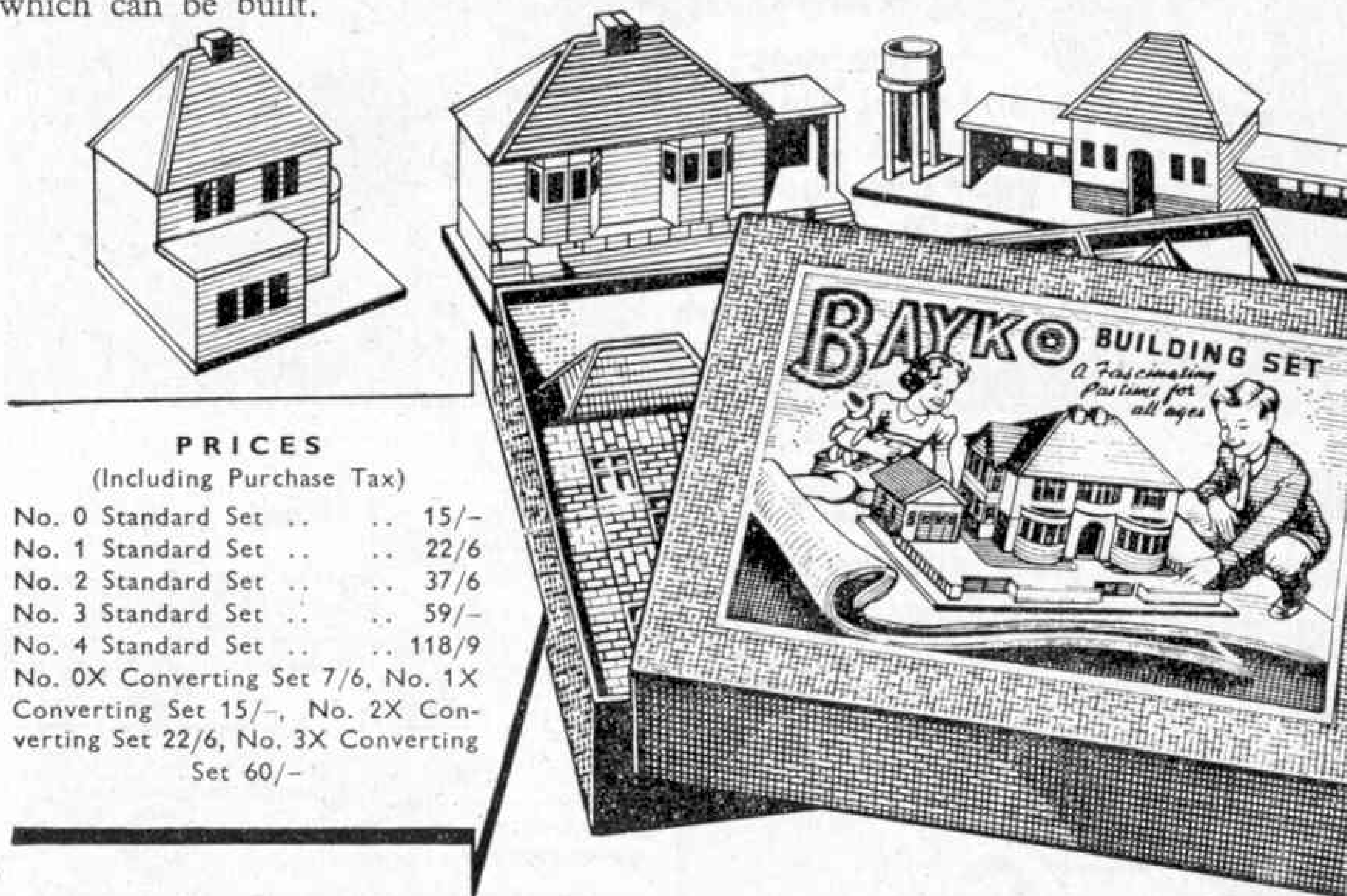
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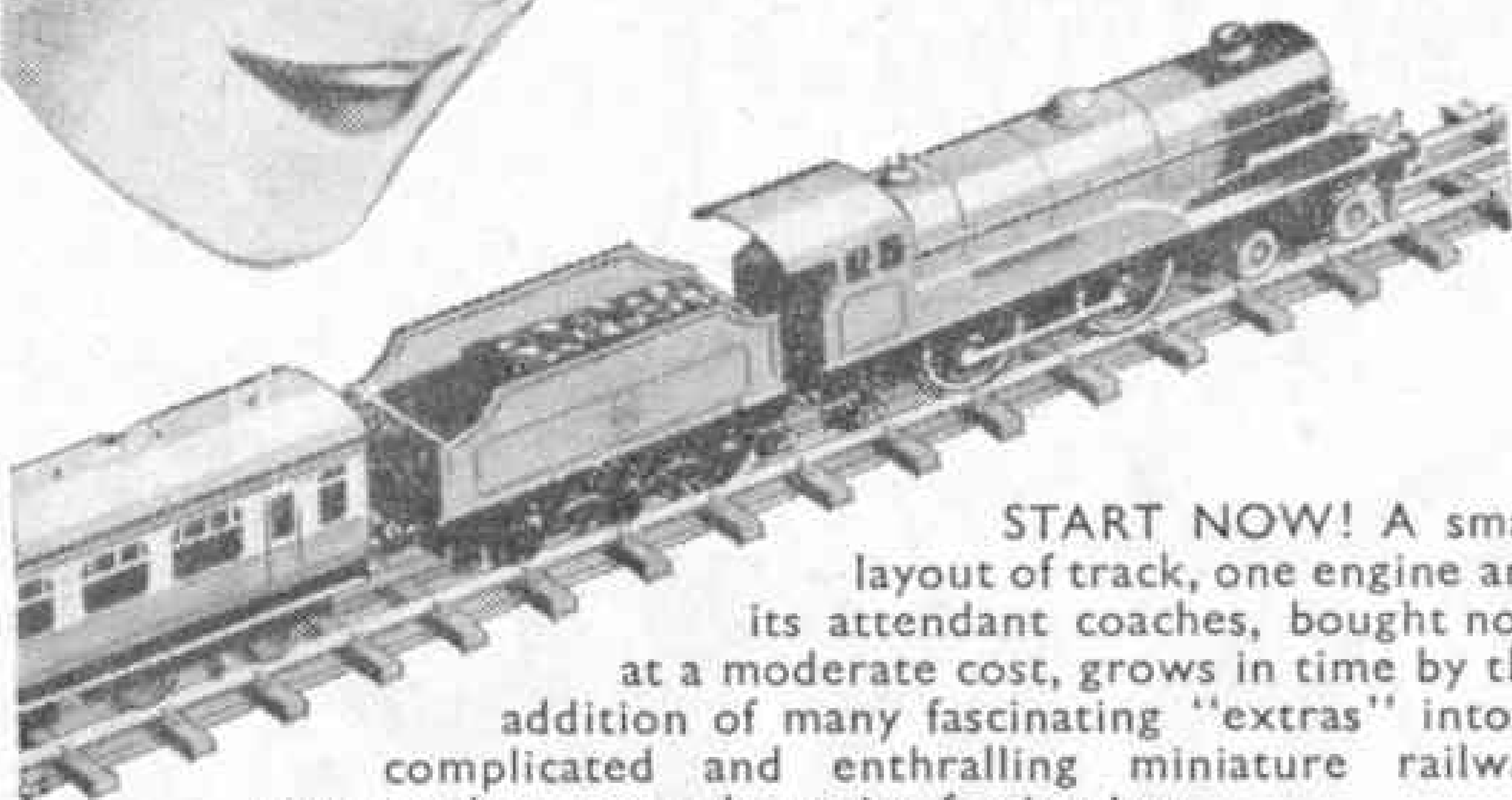
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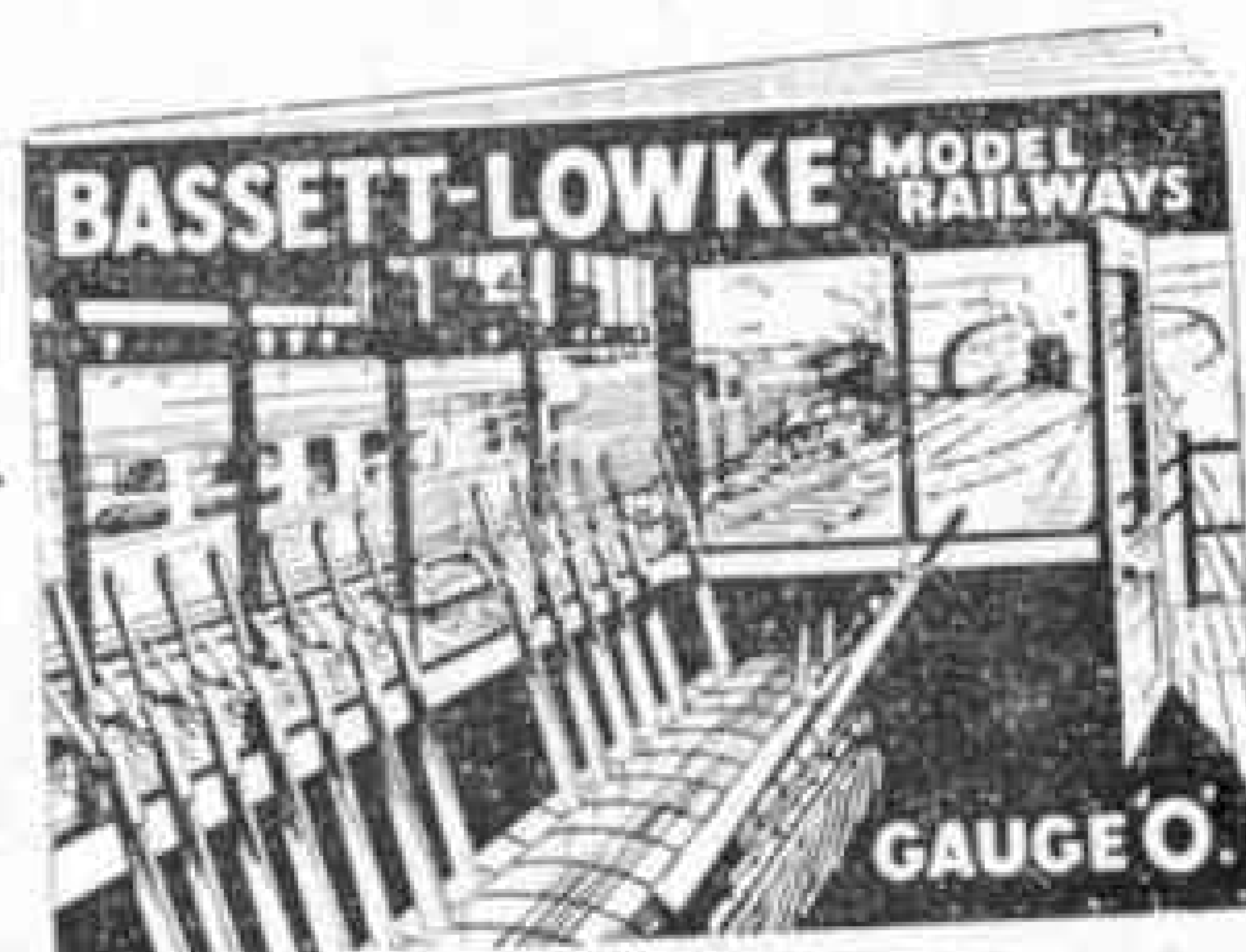


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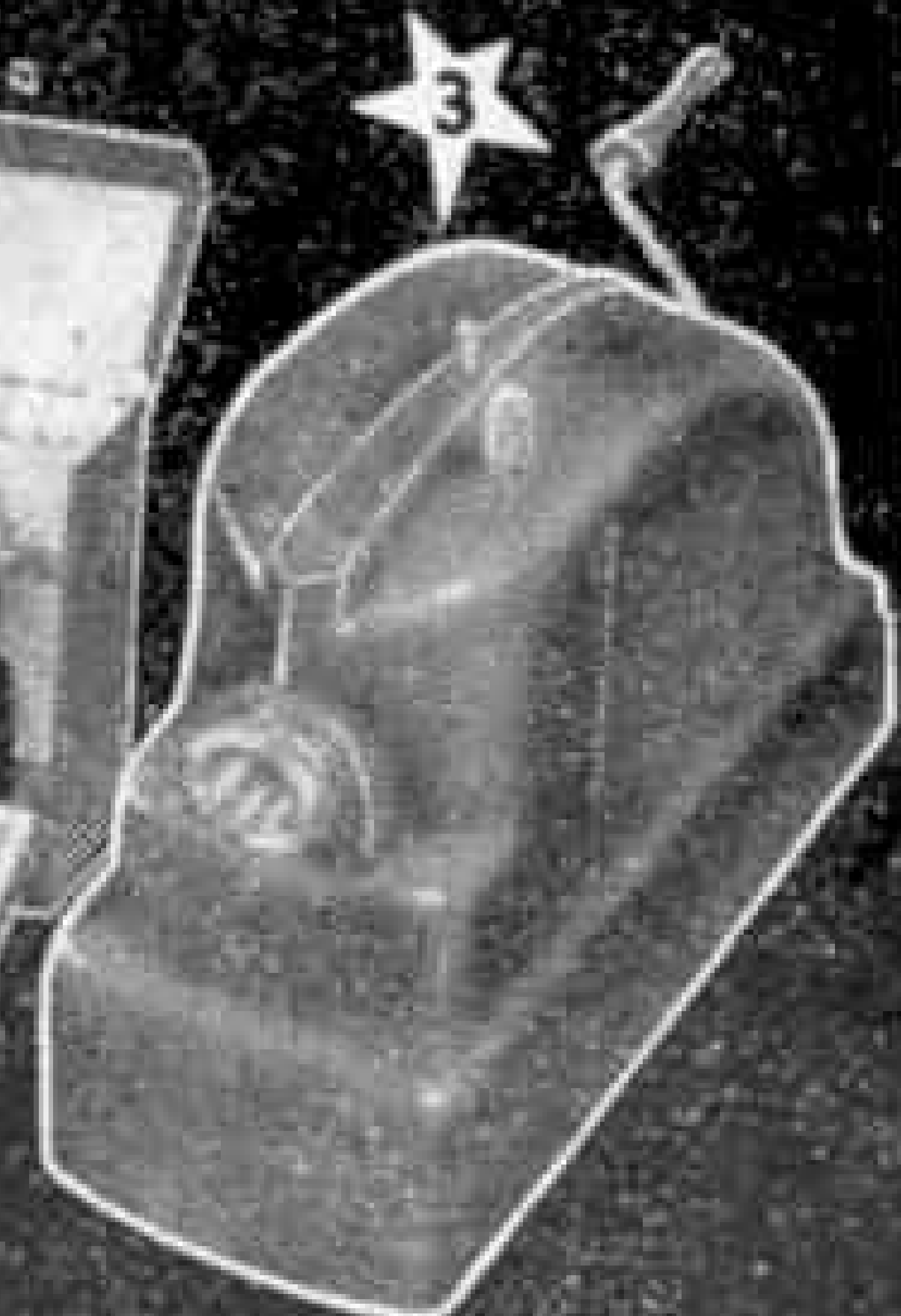
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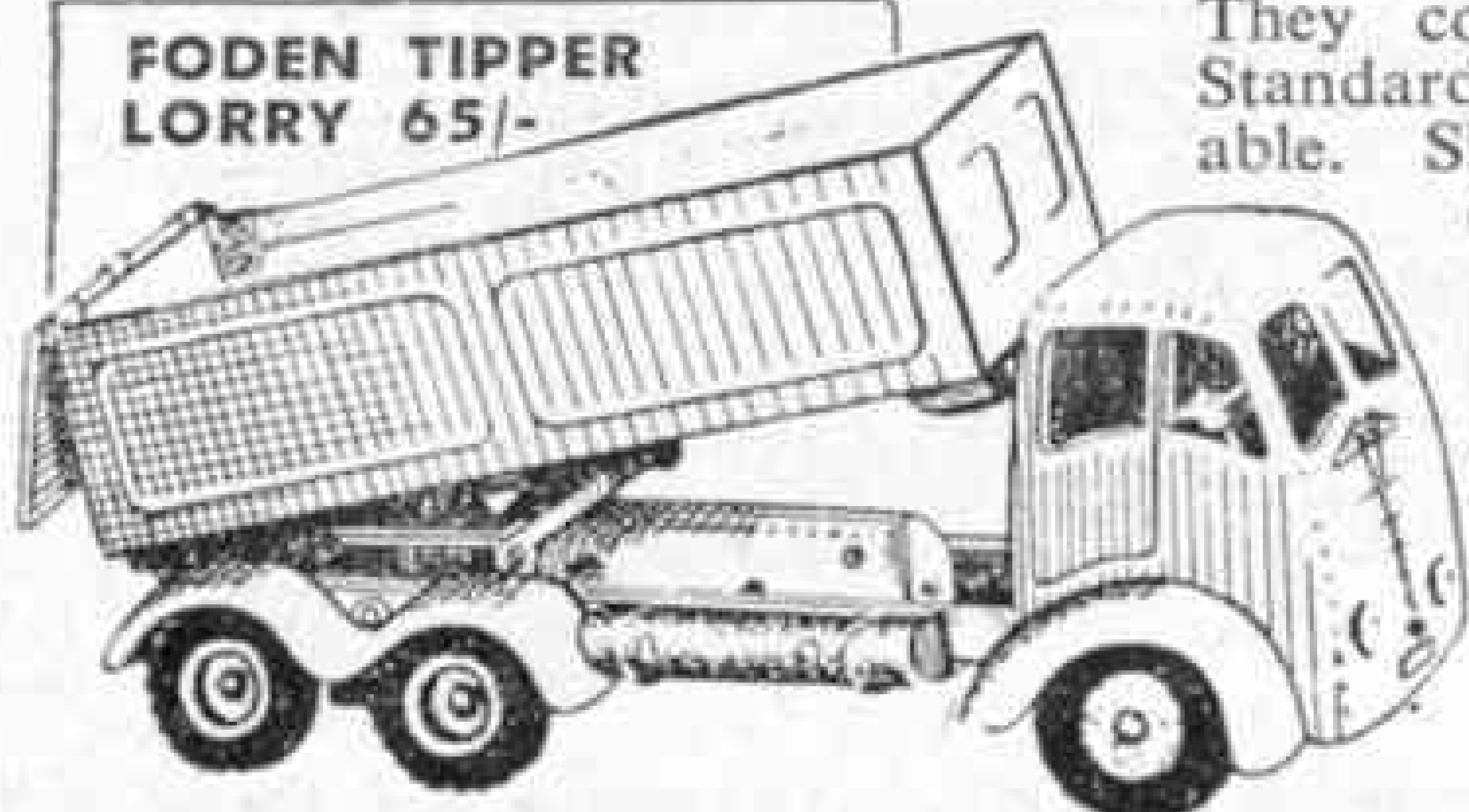
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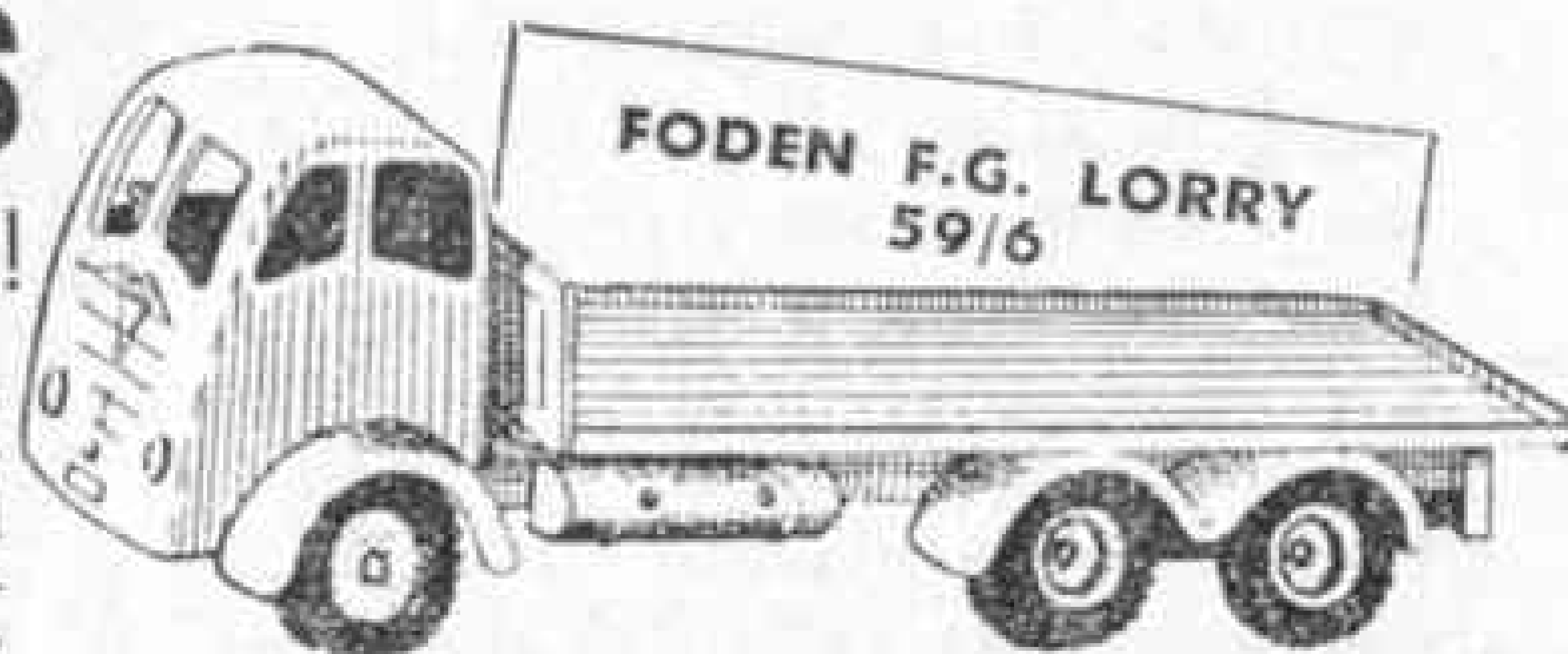
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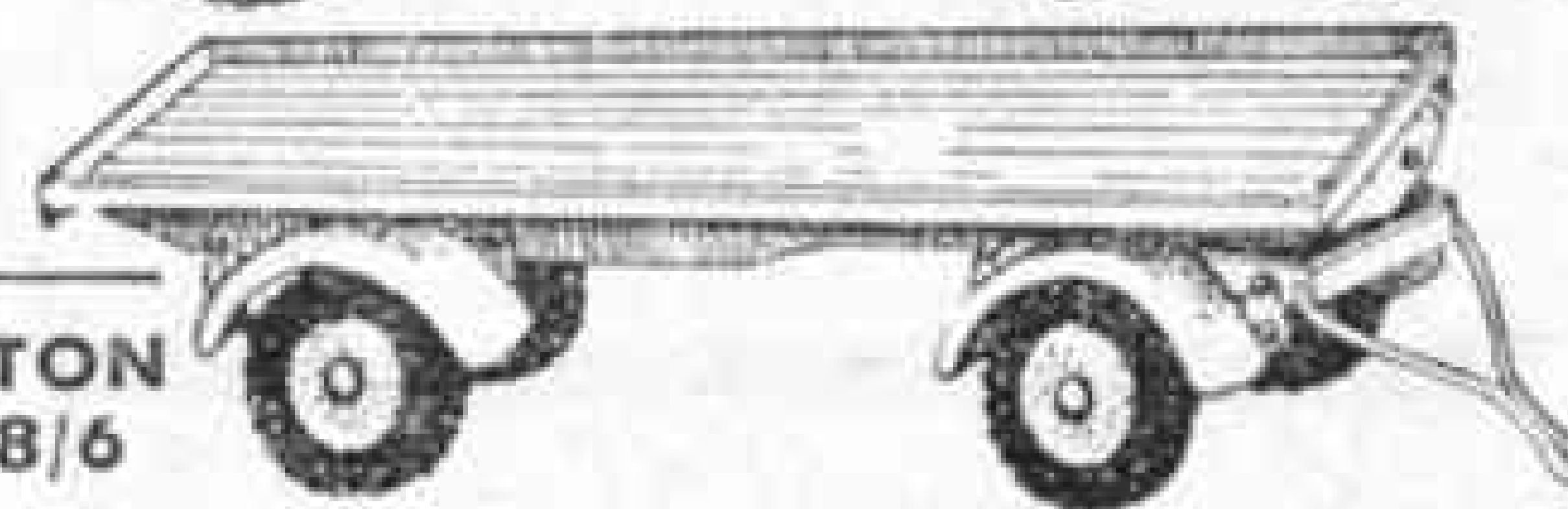


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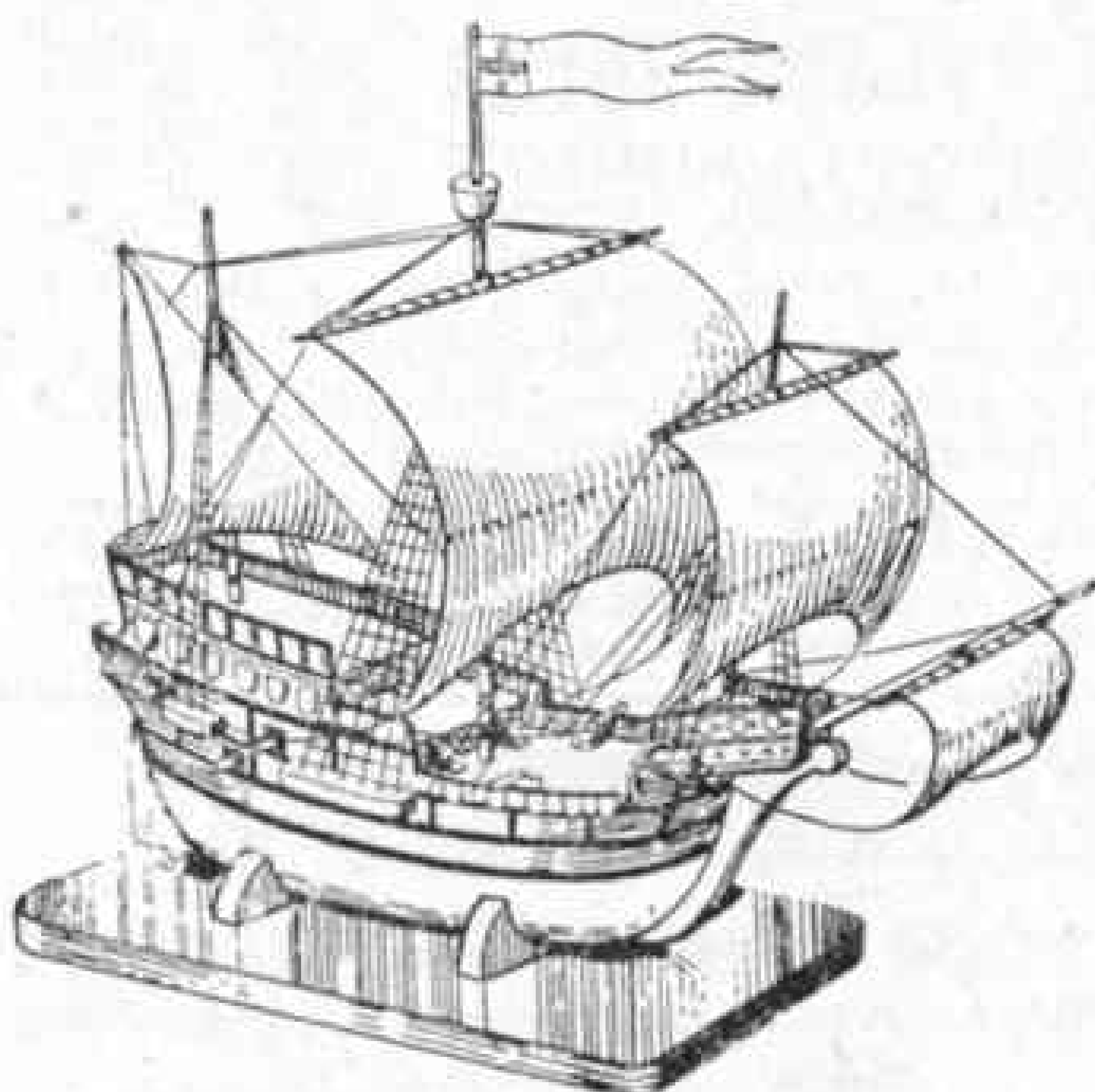
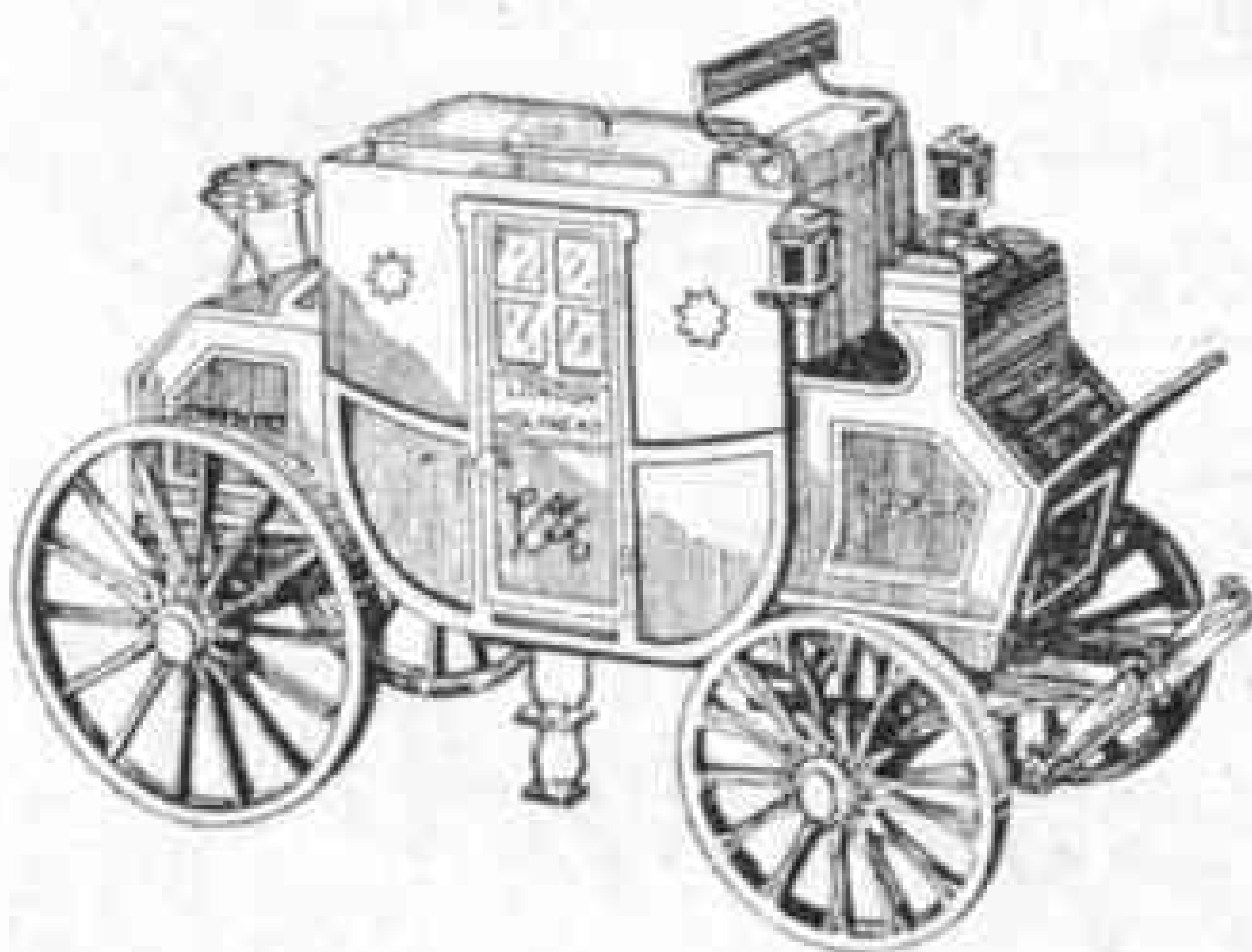
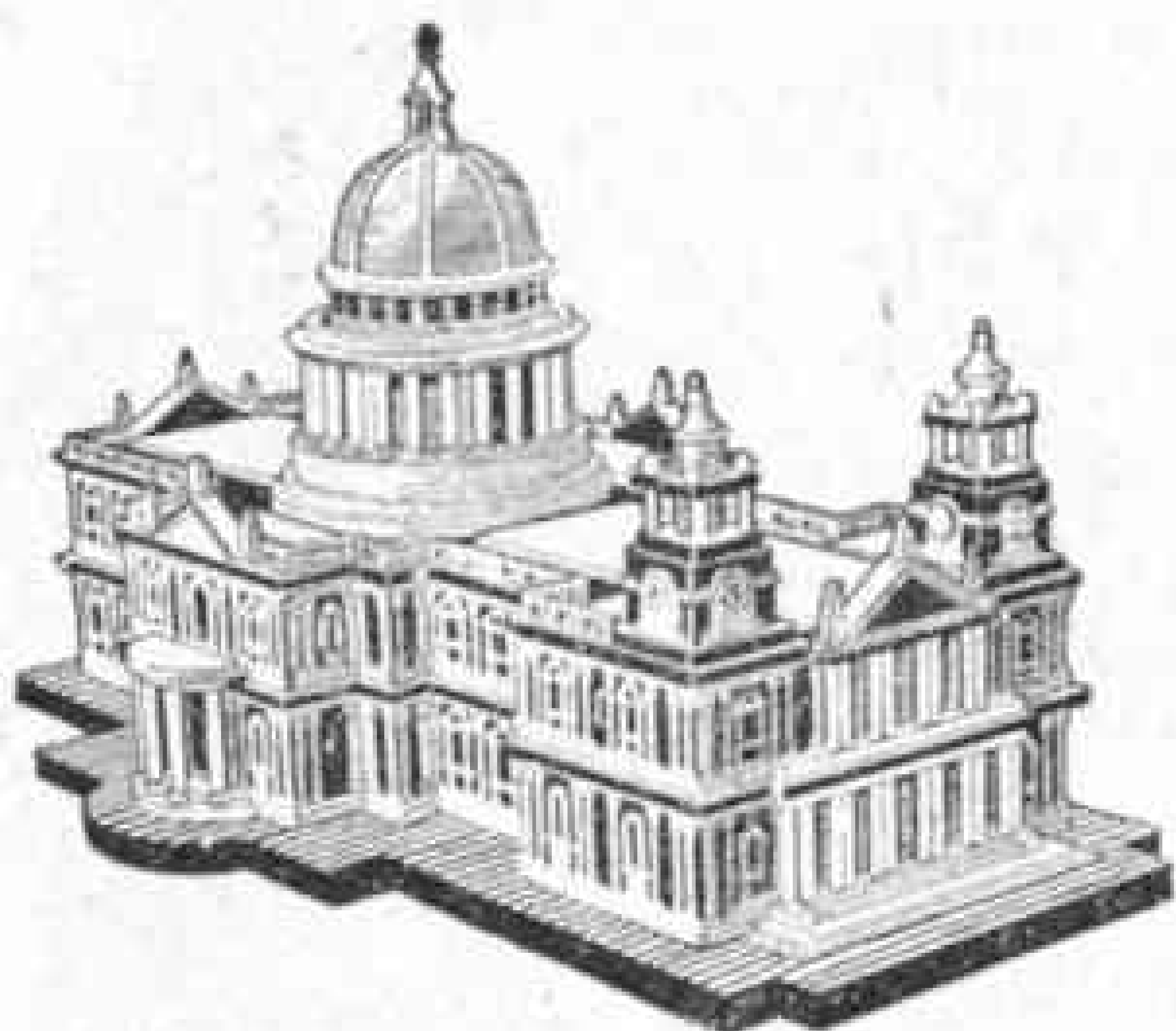
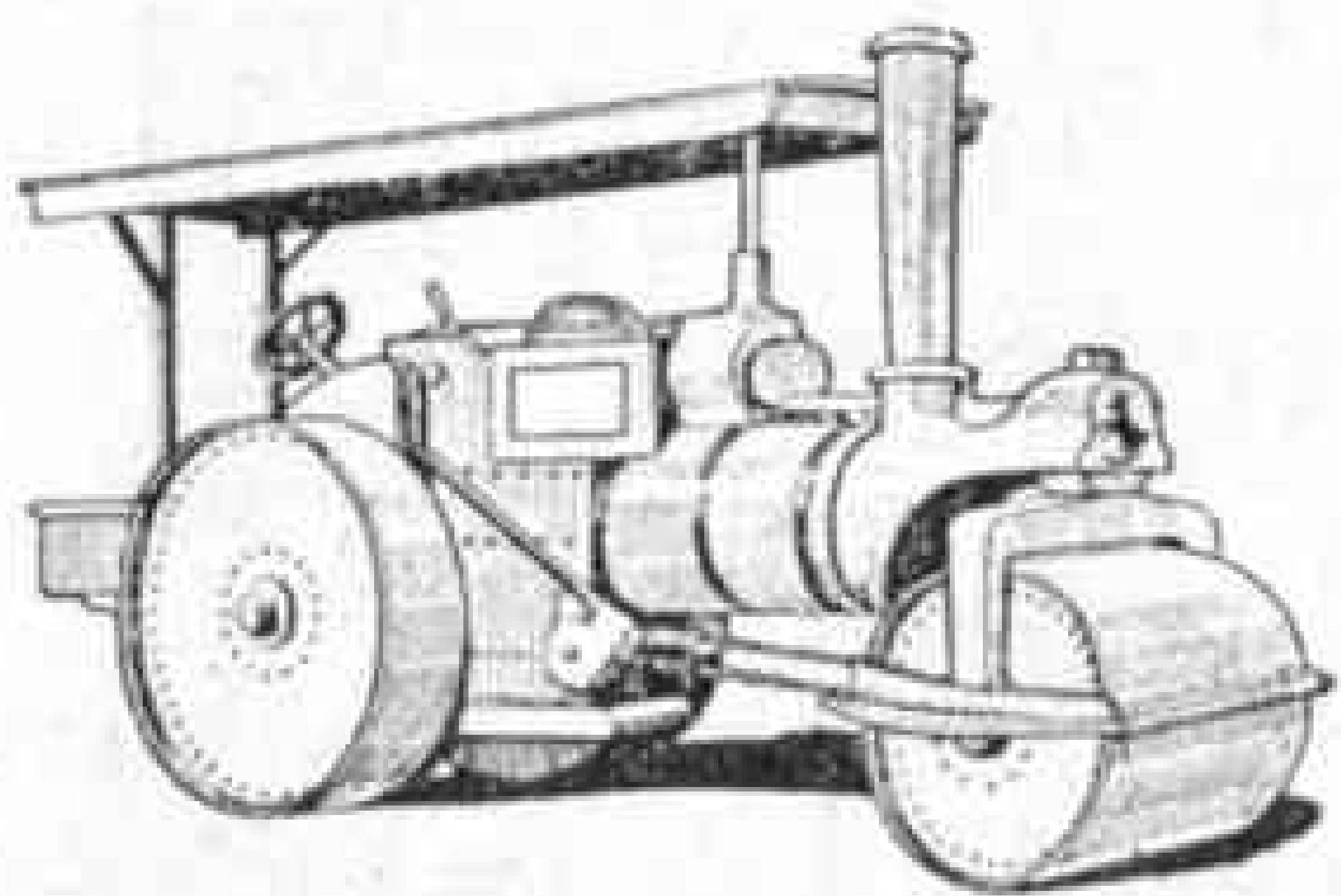
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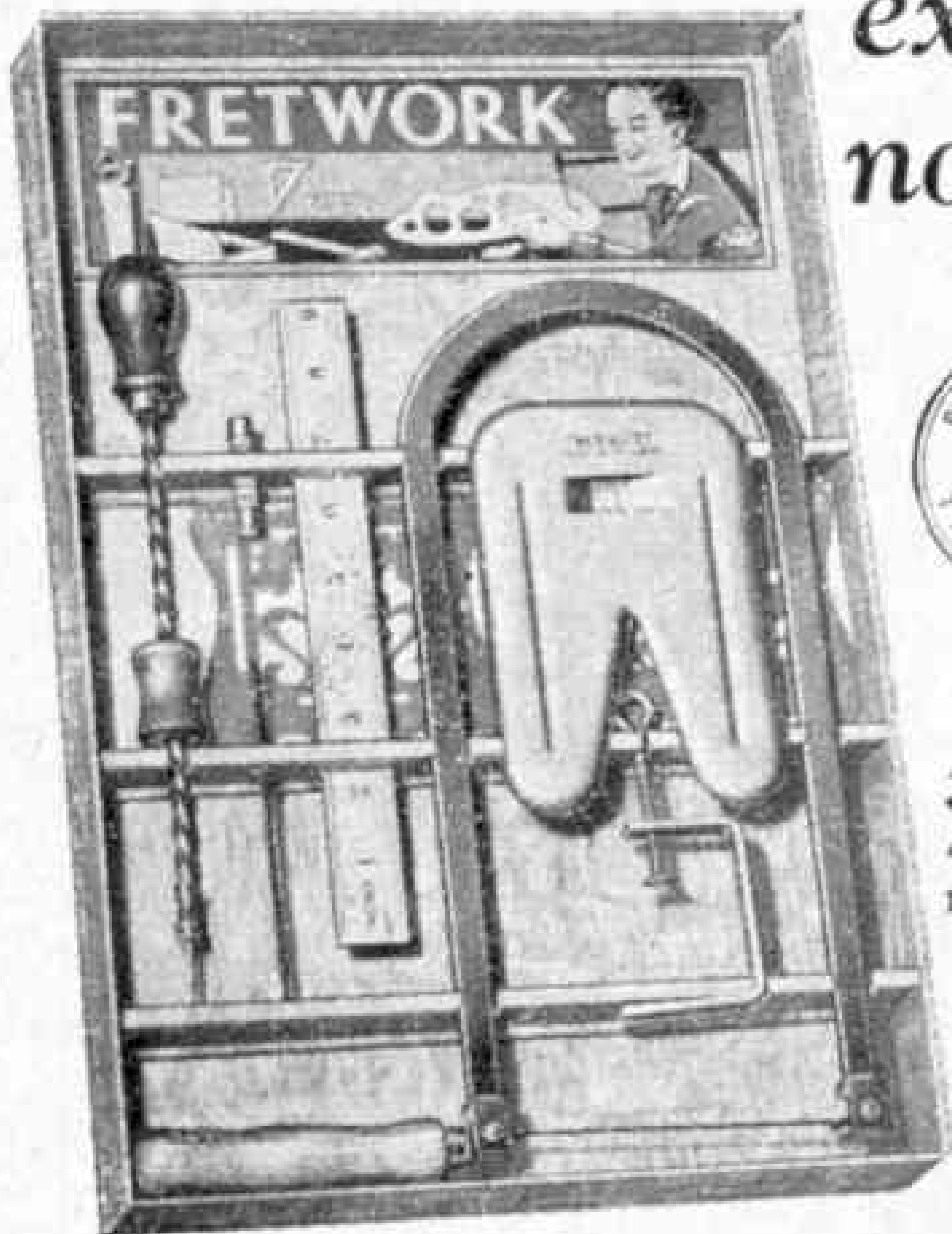
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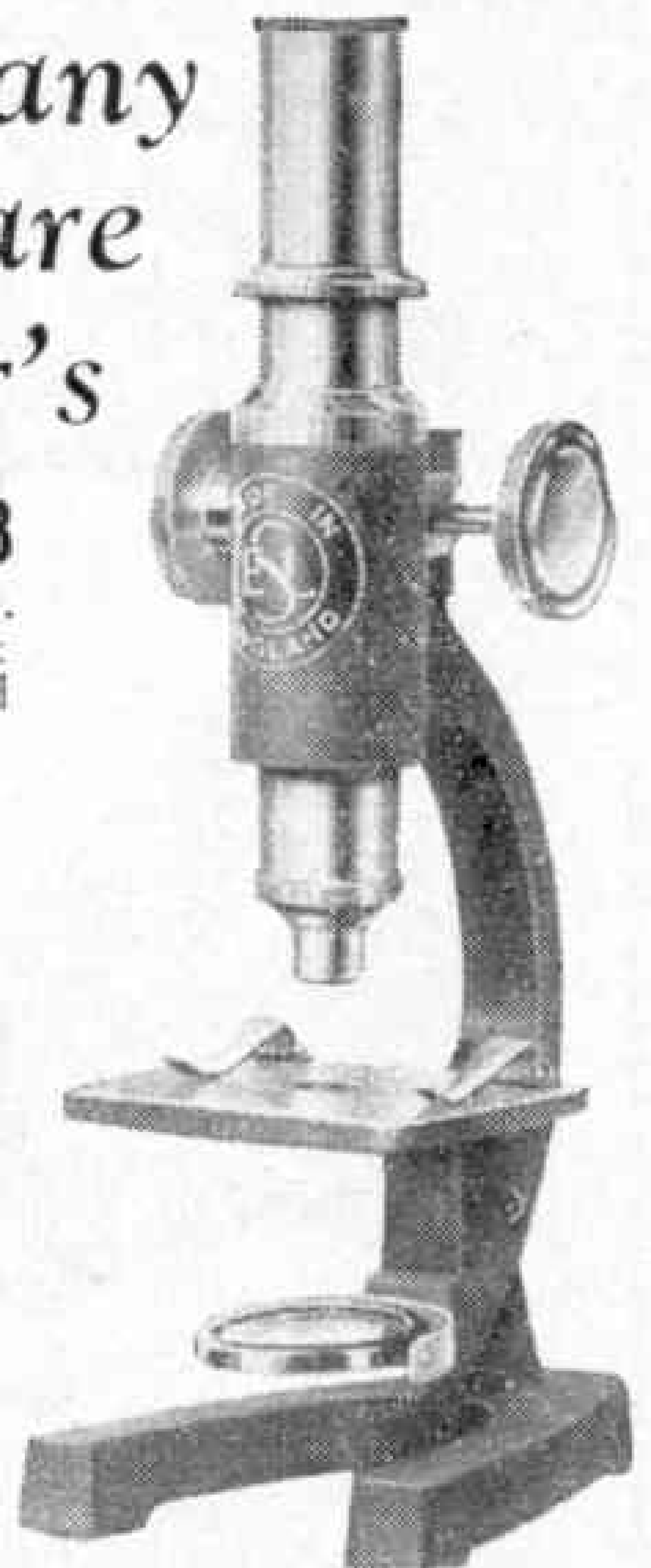
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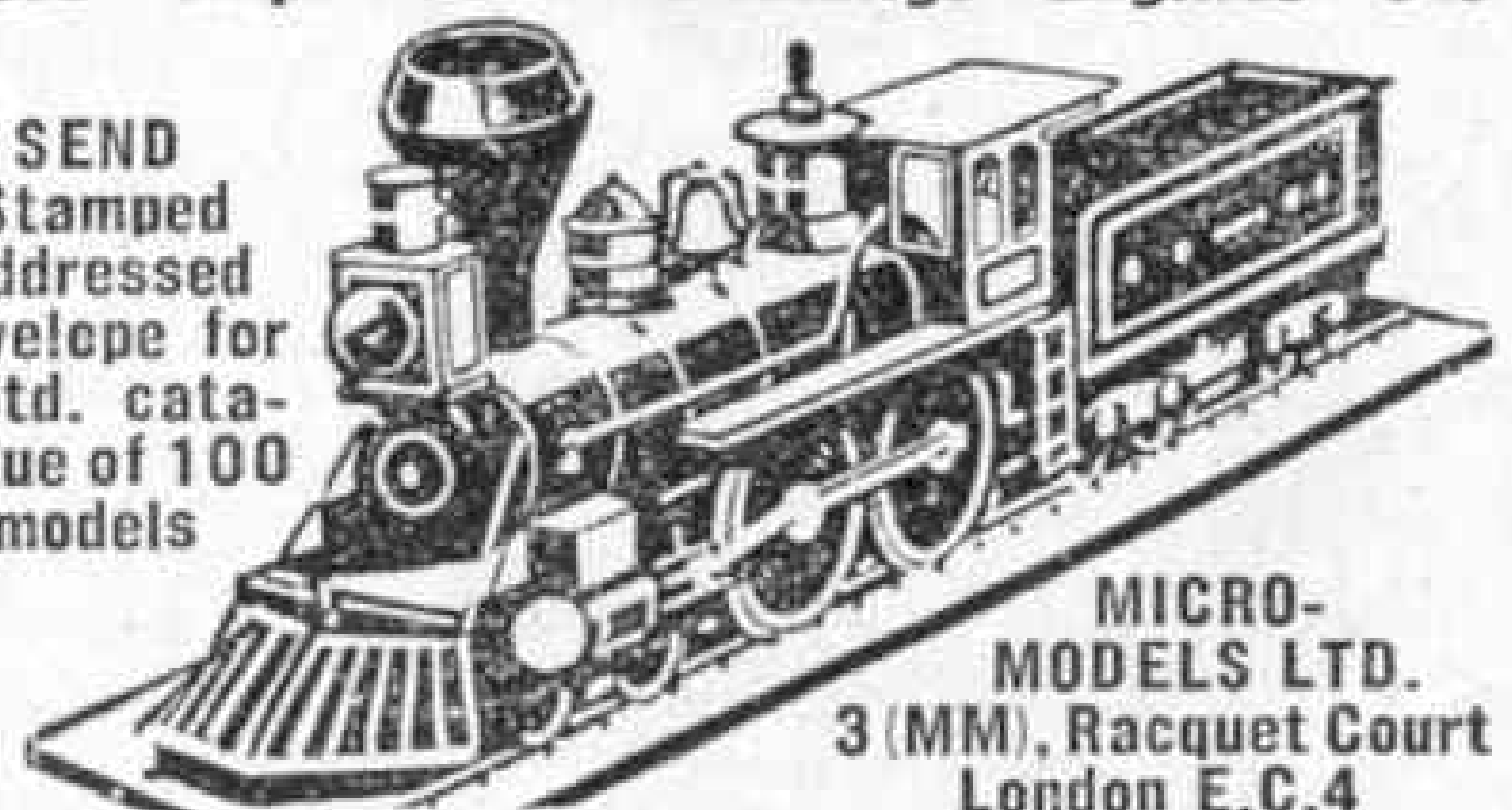
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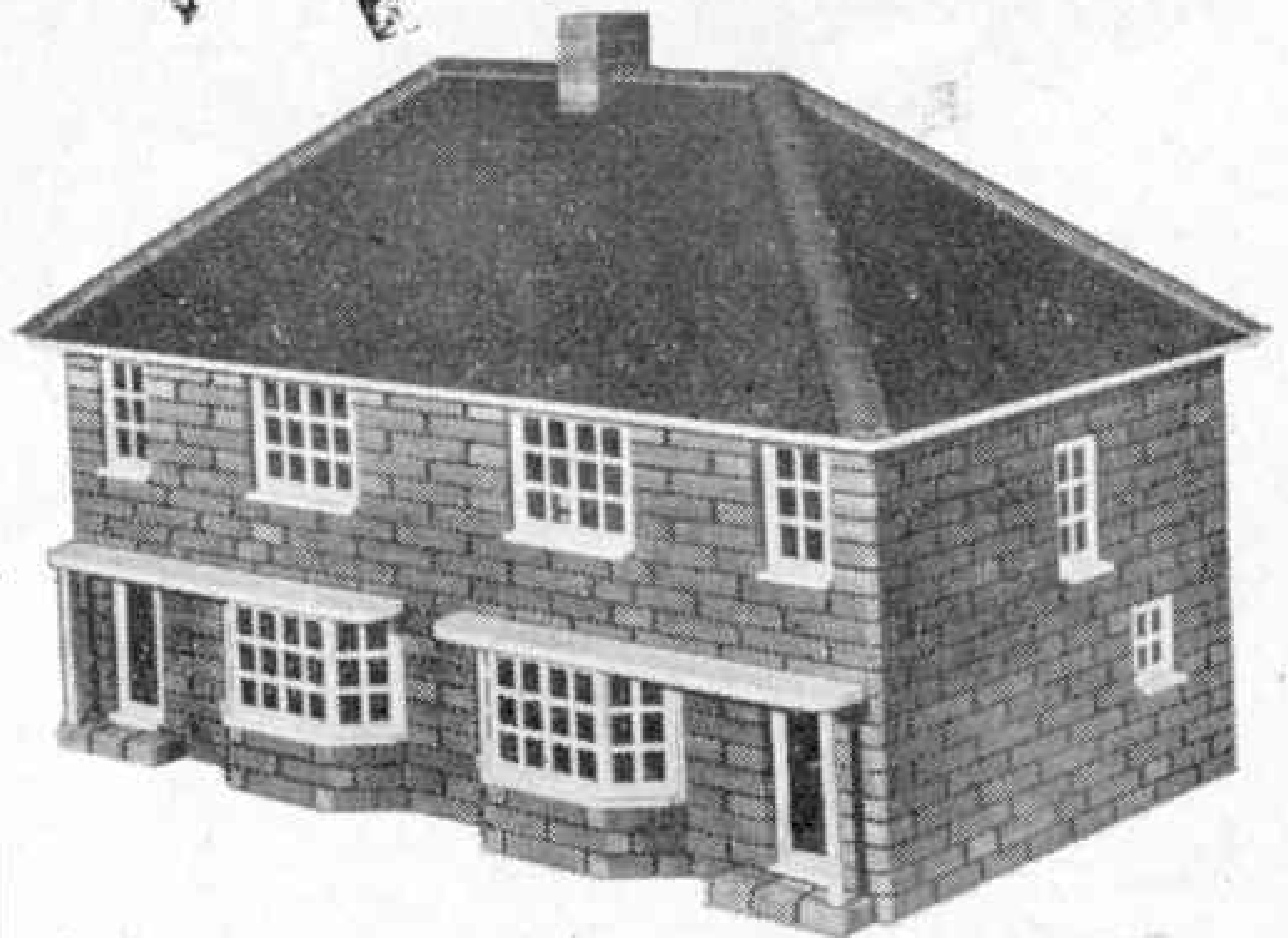


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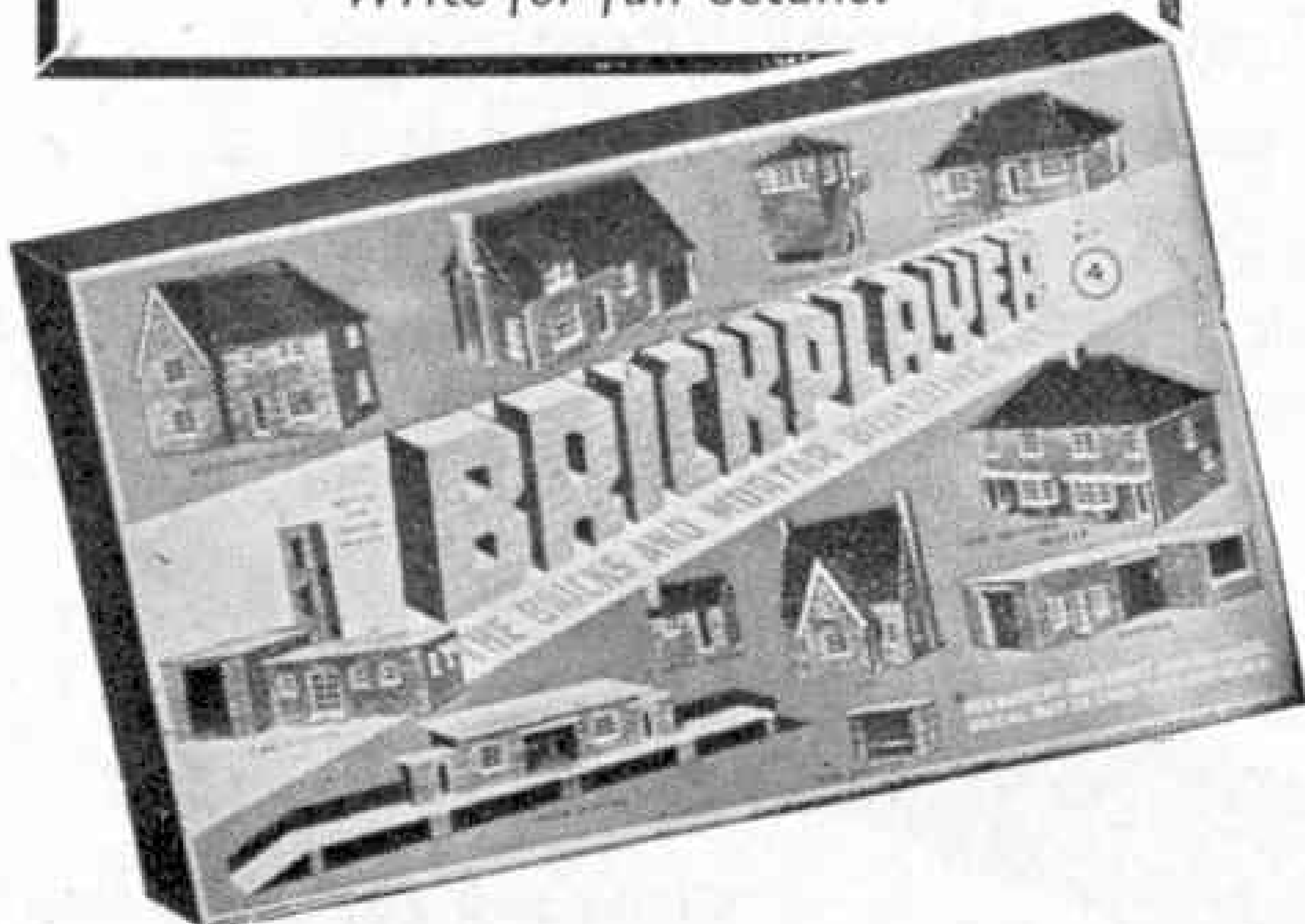


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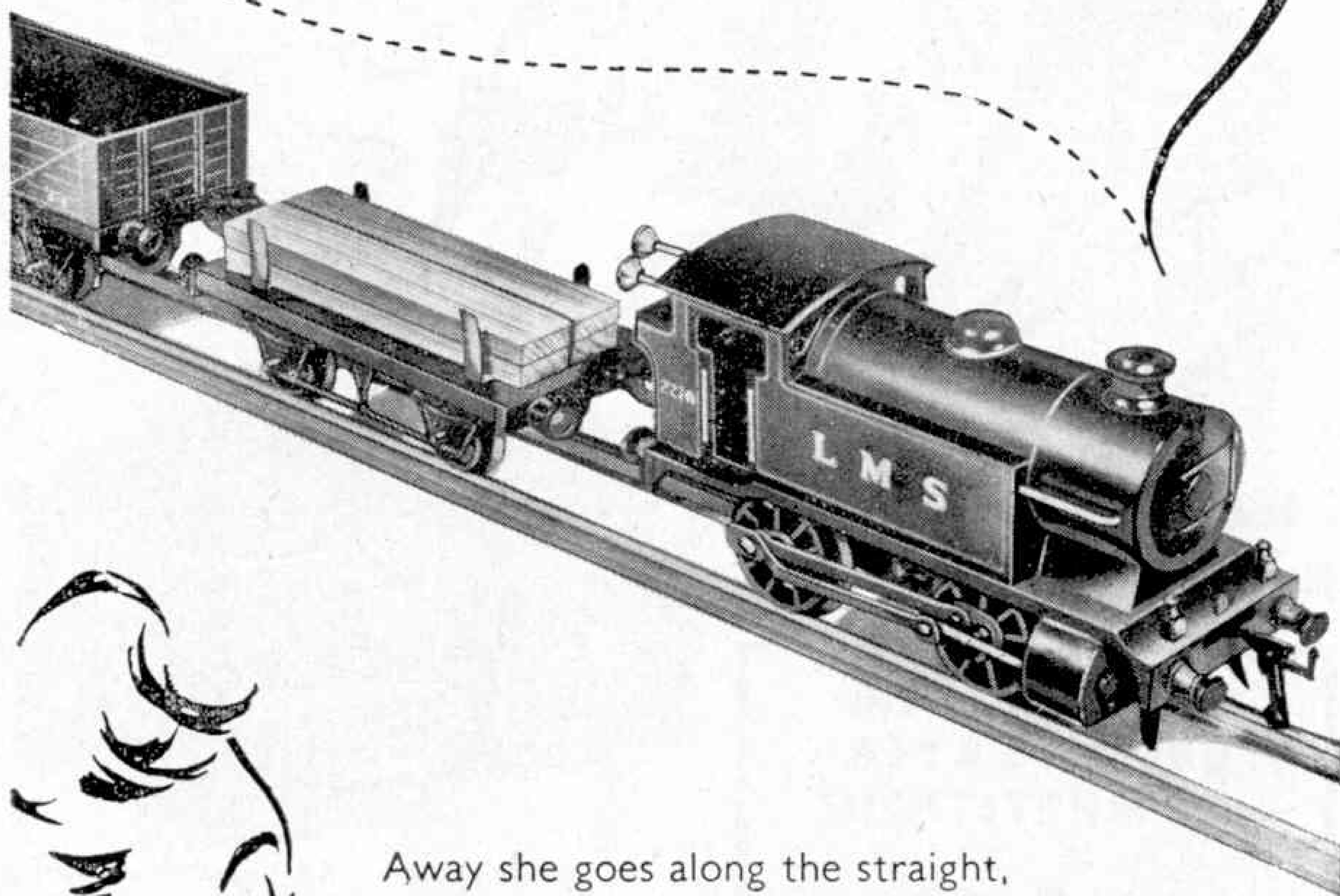
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MAGAZINE

Editorial Office:
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Vol. XXXVII
No. 12
December 1952

We go to a Shilling—and Why

Here is our 1952 Christmas number, and with it I send to all of you my heartiest good wishes. I hope that you will have an enjoyable time throughout the whole of the Christmas season, and I hope too that you will enjoy every page of this issue. Tell me if you don't, or if you find in it something you do not like—if only to give yourselves the opportunity of wishing me a Merry Christmas, as I am sure you will all wish to do!

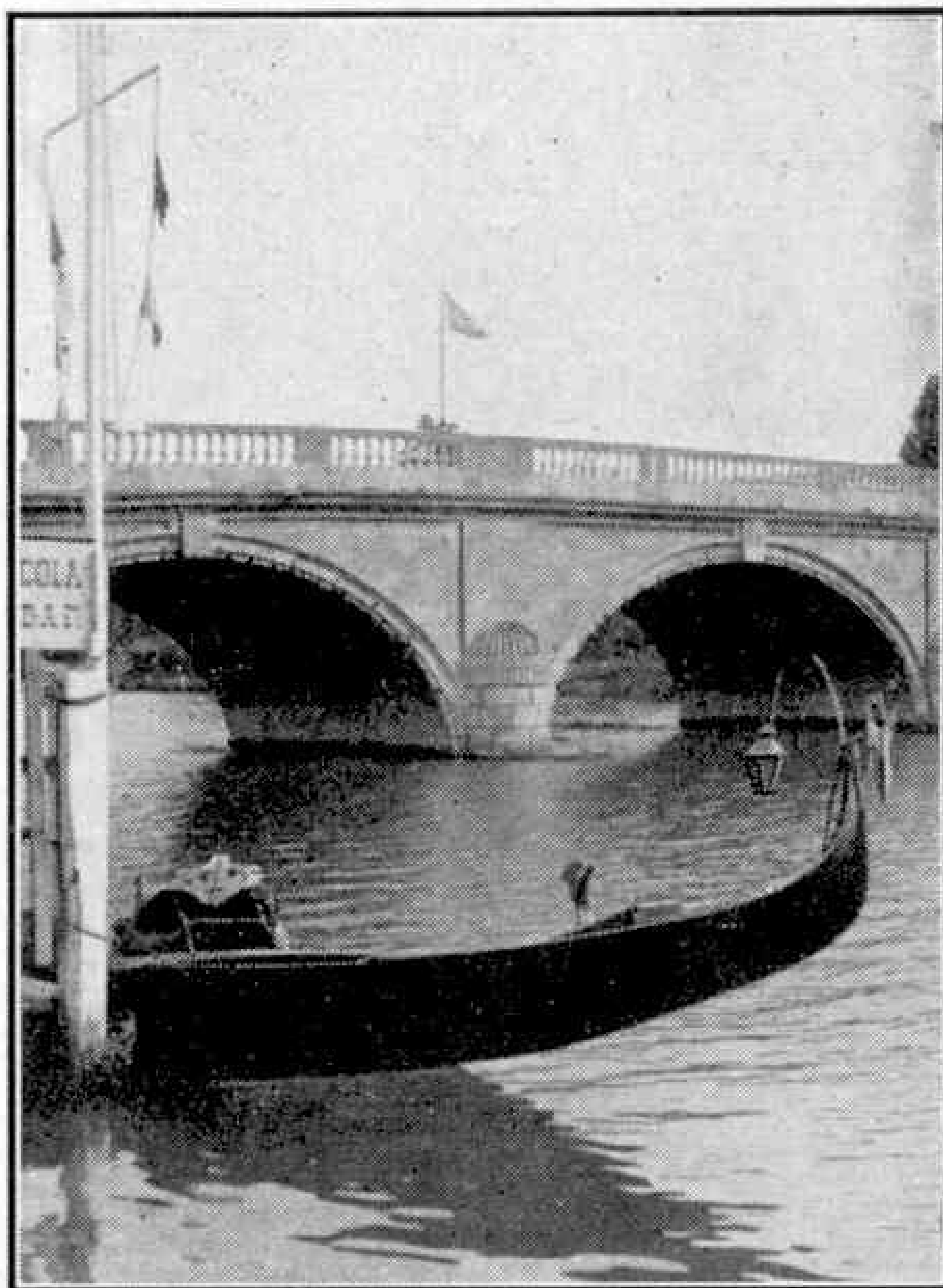
And now I have a surprise for you in news of an important change, one that I feel sure you will all understand and approve. It is now certain that next year's Magazines will be larger than most of those of 1952 have been. As really good paper is being used, they will also be much brighter and more attractive. These changes have brought increased costs, and for that reason the price of the Magazine from January onward is to be 1/-. I have kept the price of the *M.M.* down to 9d. as long as I could. In fact, I have kept it too long below really safe limits, and to continue at its old price of 9d.

would only have been possible if I, and you, had been content to carry on with a thin Magazine, with illustrations that did not show up at all well. I am sure

that you yourselves would not have hesitated over the choice, but would have struck out boldly for a better Magazine in every way—as I have done. After all, the increase is less than three farthings a week! So come with me now to the brighter times ahead, about which I wrote last month.

It is all very well increasing the number of pages, and ensuring better printing and brighter illustrations, but I never forget that it is the contents that make the *M.M.* attractive to you. All our favourites will continue with us, old friends like motor and shipping notes will make more frequent appearances, and we

shall start our new venture with a star—none other than Stirling Moss, the famous motor racing and rally driver.



Here is a hint of sunny climes, welcome in a cold December. But this is not a scene in Venice, although a gondola is visible. The photograph was taken by a reader, Captain W. Harris, C.F., at Henley-on-Thames.

The Editor

Christmas in a Land of Sunshine

By Barbara Neville

IN all Christian countries the Christmas season is regarded as the festival of the children and the time of goodwill towards man—and this is so in far away New Zealand, with its strong ties to the Homeland, England. Although the Sun shines and the day is hot—it is in fact Midsummer Day—many of the old customs are still kept up. What is Christmas without its tree? And of course, there's always Santa Claus!

Although people of other races have landed on our shores over the years, and helped to make up the staunch character that is typical of New Zealand, our Christmas customs in general remain forever those of old England. The shops and business premises cling to the well-known English Christmas with its present-giving, plum pudding and tree.

Preparations in most homes begin towards the end of November, or at the latest as soon as the calendar turns to the fateful December. A long list is made out of recipients for our greetings, whether in the form of cards or gifts, and it seems to get longer with the years. But no one is left out. It is essentially a time of goodwill, and so long as the purse will stretch even our acquaintances are included for at least a card of good wishes. The wise shopper begins early, so that there is a better selection of gifts and to relieve the last minute strain on the family purse.

The cake is made from an old English recipe, a month ahead if possible . . . and the longer the mincemeat is left the more mature it will be. Yes, mince pies are a popular item on the menu.

Santa Claus, or Father Christmas to the "tinies," is "at home" to the children for

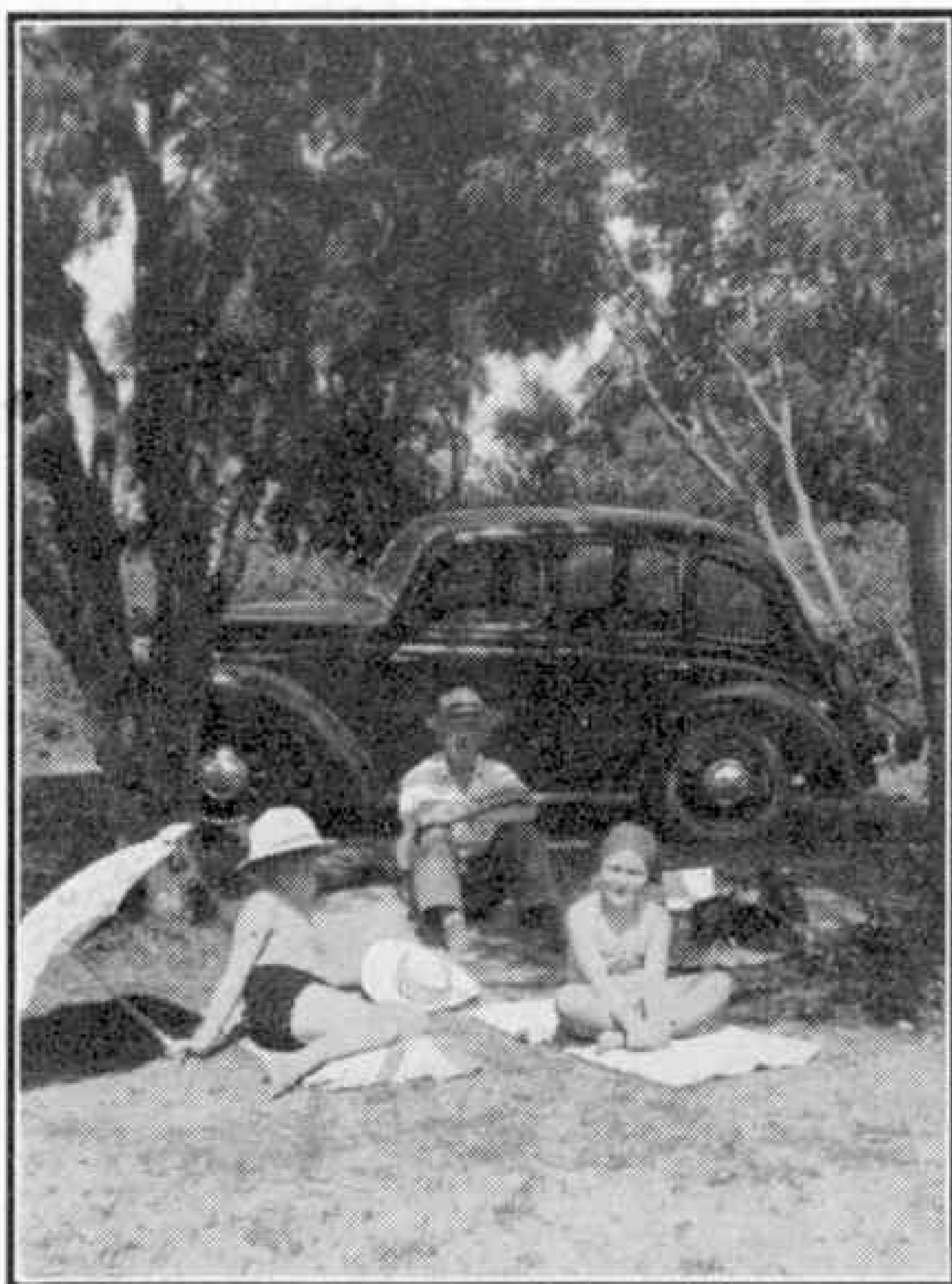
about a month before the eventful day. He takes up residence for the benefit of his little visitors in one, or sometimes two, of the big stores. There is plenty of scope for the artists and window dressers employed by these shops to let themselves go for the Christmas displays. One display I saw took the form of a cave with various cleverly devised mechanical toys making up scenes along the route to Santa himself.

Another recent scheme was a brilliant portrayal of Alice in Wonderland in a window display that attracted children and adults alike. Inside the shop Santa was waiting to meet the little ones and to hear their wishes for their stockings for Christmas morning. While he was busily conversing with the children, a magic, hidden camera took delightful pictures of each child's face, lit up with expectation, alongside Santa's benign, bewhiskered profile.

Other than last minute shopping Christmas Eve has little or no celebration in this country. There is

more secrecy attached to the tree decorating than in other countries, where it is made the excuse for partying. But carols are still sung, although not to the extent they used to be. In some districts bands wander round the streets singing, but it would seem that the carols are dying.

It isn't every home that has its tree, either. But many like this custom and it is possibly becoming more popular with the years. Before the last war, when Christmas decorations were to be bought for a few pence, nearly everyone "decked the hall with holly." But now, when they are prohibitively priced, very few bother to use initiative to make their own



Boxing Day in New Zealand is a day of picnics, and here is a happy family party under the shade of the kowhai trees on the shore of Lake Taupo.

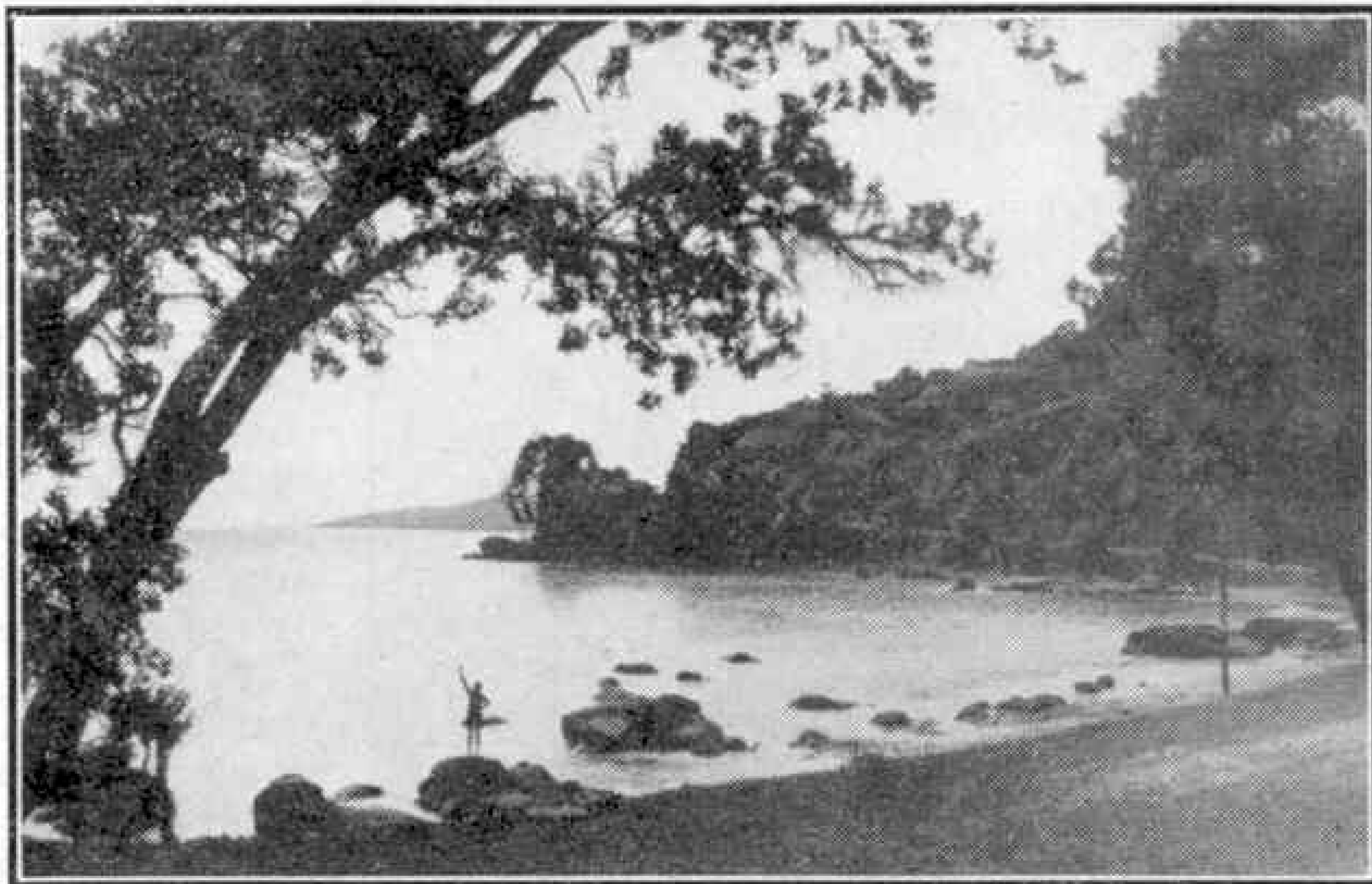
improvisations. Another reason perhaps for lack of house decorations is that many spend the holiday period away from home.

The children like to hang their stockings for Santa, although many prefer pillow cases to hold all they expect. The bottom of the bed seems to be the traditional place to leave the stocking or pillow case, and not the chimney. For many years the children thought Santa came in his sleigh pulled by reindeers, just as he did in the countries with snow, but as they grow older they picture him arriving in more modern transport, until today he travels by plane. Jet, probably.

It is light in this country at an early hour, and children waken early on Christmas morning to inspect their presents. Yes, Christmas morning begins early and it is usually sunny in this land. Gifts other than those from Santa are usually exchanged at breakfast, or are placed on or around the tree. Some few families like to keep the ceremony of the tree until tea-time, but where there are small children the suspense is too great and the presents are gathered from the tree much earlier in the day.

Christmas Day is a day of feasting even

where it is summer time. Breakfast begins the day of hot, cooked meals, with ham and eggs, traditional for New Zealand. Very soon it is dinner time, for most families the middle of the day, and in spite of the



Ngarimu Bay, on the Thames Coast of North Island, New Zealand. The overhanging trees are pohutukawas, the Christmas trees of the country, which are covered with masses of red flowers in December.

heat there's usually chicken or turkey, ham or lamb, and sometimes a combination of the two, with green peas and new potatoes, and often other vegetables baked with the meat.

The old English Christmas pudding follows. Not many years ago it was carried into the dining room brandy-covered and lit in the old-fashioned manner. But this custom has died a natural death from the price of brandy. Strawberries or fruit salad and heaps of whipped cream usually follow. This always seems a more suitable dish for summer weather than the hot plum pudding, but it is a little ironical to have it after the Christmas pudding.

A rest or a run in the car to a nearby beach is the programme for the afternoon, then back again to another large meal. This time the ham is served cold with salad. Or if there has been chicken or turkey for dinner a slice or so does not go amiss. The Christmas cake is cut. Mince pies appear, and there's usually fruit salad or strawberries, or perhaps some frozen dish with ice cream. The table abounds with cakes and fancy biscuits. And soon it is bedtime and everyone declares it has been the most wonderful day.

Up early in the morning, it's Boxing Day, the day of picnics—picnics on the beaches, in the bush, or by the river. Wherever we go it is a time of (Continued on page 592)



Paddling and bathing are Christmas time pursuits in New Zealand.

Deltas



By John W. R. Taylor

HISTORY books do not tell us who designed the first delta-wing aircraft. Perhaps it was the schoolboy who threw the first paper dart. But there is no possible doubt about who is setting the pace in delta design today.

At a time when there are only three or four of these fantastic "flying triangles" in the rest of the world, Britain has the giant Avro 698 bomber and Gloster Javelin fighter in production, the two-seat Avro 707 trainer on the way, and even more exciting deltas on the drawing board for the air forces and airlines of tomorrow.

The word "delta" itself is, of course, older than the earliest legends of human flight, for it is the name of the Greek letter D, part of the language of those first mythical bird-men, Daedalus and Icarus. The Greeks wrote their capital D's like this—Δ—so when aircraft designers started making wings of that shape they remembered the Greeks had a word for it and called them deltas.

Even if we ignore the schoolboy's simple paper dart, aircraft with delta wings are at least 85 years old, because two Englishmen named Butler and Edwards designed one in 1867. What is more, it was intended to be jet-propelled, by a lightweight steam engine. But it was only one of a vast number of strange

The little Saab 210 Draken "double delta" research aeroplane, one of the most advanced aircraft flying today. It has the same general layout as the revolutionary wartime designs of Alexander Lippisch. The Draken is powered by a British-built Armstrong Siddeley Adder turbojet, and has made well over 100 test flights to date. Photograph by courtesy of Svenska Aeroplan A.B., Sweden.

aeronautical shapes produced in the 19th century, and was no more successful than most others.

J. W. Dunne achieved much more in 1909. Probably few readers of *M.M.* will have heard of this great British pioneer, which is a pity because he not only wrote one of the most fascinating books of our age, called *An Experiment with Time*, but also solved a problem that cost the lives of scores of early aviators—how to make an aeroplane fly straight and level.

By 1909 it was becoming comparatively easy to get off the ground in a stick-and-string aeroplane. It was much more difficult to get down again in one piece, because few early machines were stable in the air. Even when there was little or no wind, they wanted to drop a wing, or suddenly stick their nose up or down for no apparent reason.

Dunne believed the answer was to build a tailless aeroplane—not quite a delta, but a sharply sweptback V-shaped wing. In 1907 he flew successfully a glider of this type. Two years later, at Blair Atholl in Scotland, his D.3 powered biplane made its first flight. By 1914, Dunne's tailless aircraft were flying so well that when the engine of one of them stopped over the Channel, its pilot locked the controls, hopped out of the cockpit on to the wing,



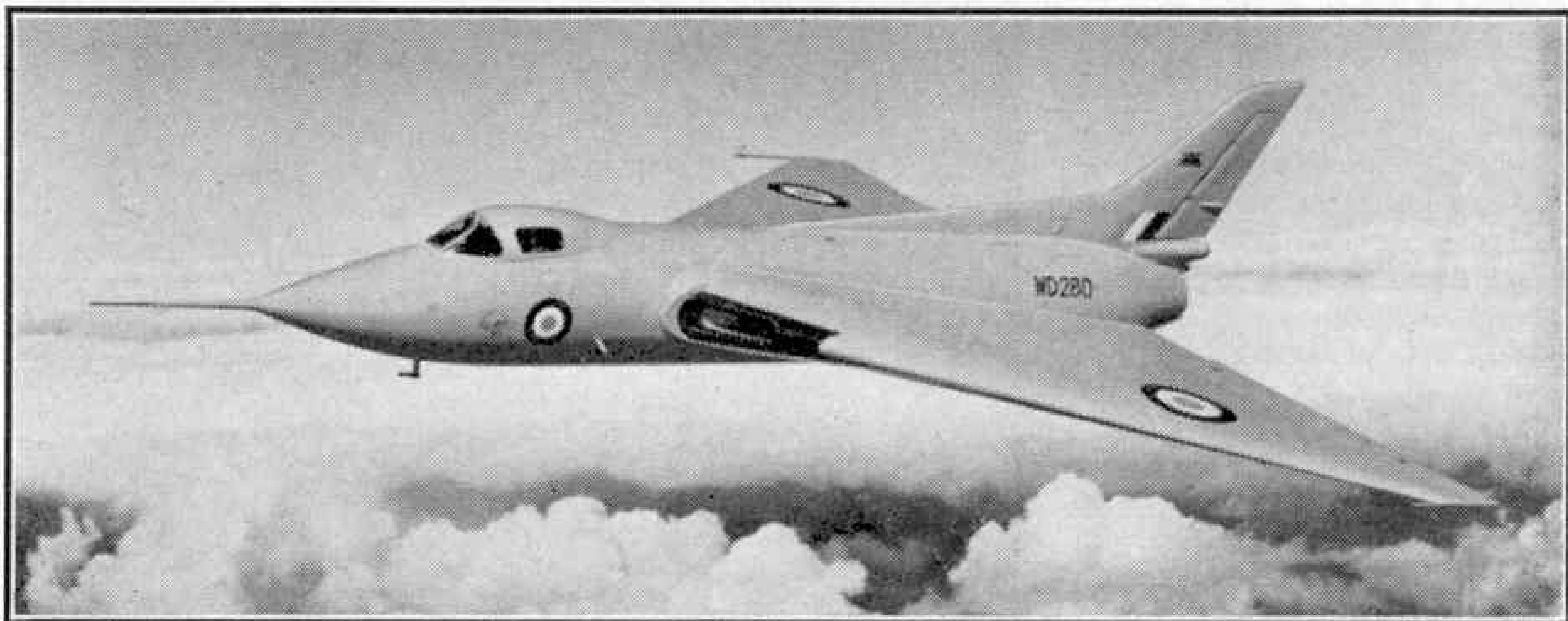
A striking view of the Gloster Javelin two-seat delta fighter. Photograph by courtesy of the Hawker Siddeley Group Ltd.

went and fixed an ignition lead that had dropped off the pusher engine, and then clambered back and resumed his flight.

Unfortunately Dunne was too successful, because when the 1914-18 war started a few months later, fighter pilots needed 'planes like the Sopwith Camel that could be whipped over quickly on to the tail of an enemy scout, or out of the way of a stream of hostile lead. An aeroplane whose sole ambition in life was to fly straight and

has to travel round it and the faster it speeds up, which explains why one of the first British aircraft to run into serious compressibility trouble in high-speed dives was the thick-winged Hawker Typhoon fighter, in 1942.

Its designer, Sydney Camm, realised what was happening, and quickly designed the thin-wing Tempest, which was able to fly 30 m.p.h. faster than the Typhoon without danger.



Avro 707A research aircraft. Photograph by courtesy of A. V. Roe and Co. Ltd.

level was a sitting target. So Dunne's tailless aircraft went the sad way of many good ideas until, in the middle of the second World War, nearly 30 years later, a frightening new "enemy" was discovered that could tear the tail off an aeroplane in a fraction of a second.

The experts called it "compressibility," and it killed a lot of our best pilots before we found ways of combating it. It is not beaten even yet—the tragic death of John Derry at Farnborough proved how much we still have to learn about the problems of very high speed flight.

In simple language, what happens is that as an aeroplane approaches the speed of sound (760 m.p.h. at sea level: 660 m.p.h. at 30,000 ft.), the air in front of it is so compressed by its wing that it becomes virtually solid, forming shock waves that batter the wings and tail. (If you get a chance to see the fine new film *Sound Barrier*, do so, because it illustrates this very well).

Shock wave trouble can start long before the 'plane itself reaches the speed of sound, because airflow is speeded up as it passes over the curved wings and might reach sonic speed at a time when the aircraft is flying at only, say, 550 m.p.h. The thicker the wing, the further the air

At about the same time, wind tunnel tests began to show that still higher speeds were possible in complete safety if wings were also swept back. This discovery could not have come at a more opportune moment, because the first jet fighters were going into production in both Britain and Germany, offering power and speed far beyond those of piston-engined aircraft.

British designers considered the aerodynamic advantages of sweepback did not justify the structural problems involved, so the Meteor and Vampire were given straight wings. But in Germany an incredible series of warplanes began to take shape, ranging from fairly orthodox twin-jet fighters to vertical take-off rocket interceptors and guided missiles, and many of them had V-shaped wings just like Dunne's old biplanes.

One of them, the projected sweptwing Messerschmitt P.1101, was so advanced that some of the most interesting European and American jets of the present day bear a family likeness to it that seems more than mere coincidence. But most startling of all were the designs of Alexander Lippisch, who believed that if wings had to be swept back, they might just as well be merged with the tail to form a delta. The result is a stronger structure, able to fly at very

high speeds without danger. Its chord is so great that, even if it is comparatively thin in section, there is still a vast amount of room inside it for fuel, guns and equipment. In addition a delta combines big wing area with short span, offering exceptional manoeuvrability at high speeds and good handling qualities at low speeds. In fact, it seems to offer unlimited benefits at the cost of only one disadvantage—it is virtually impossible to pull out of a spin.

Lippisch's deltas were weird-looking machines with no fuselage, just a deep wing with a hole in the nose, cockpit in the middle and big vertical fin. The ramjet engines with which he proposed to power them were even more remarkable, one being no more than a block of white-hot carbon in a venturi tube! Fortunately the war ended before he had time to build them, and the first powered delta to fly, in September 1948, was Convair's XF-92, which was illustrated in the June 1952 *M.M.*

One year later, the Avro 707 appeared, and crashed within a month of its first flight. To their credit, Avro persevered with the design, built the Avro 707B with a longer nose, and engaged a test pilot named Roly Falk to fly it. They could have found no braver or more skilful test pilot, and Falk soon proved that there was little wrong with the 707's basic design. In fact he claims that it is no harder to fly than any other aircraft, and the fact that it has quite normal ailerons and elevators in the trailing edge of its wing means that a pilot handling a 707 for the first time would find its controls no different to aircraft he had been flying for years.

The Avro 707B, which flew on 6th September, 1950, has the air intake for its Derwent engine on top of its fuselage. The 707A, completed ten months later, is almost identical except that the intakes have been moved into the leading edge of its wings. A rumour spread quickly that it was a flying scale model for a big delta bomber, and the rumour became fact at the S.B.A.C. Display this year when hundreds of thousands of people saw the giant Avro 698 delta bomber fly gracefully overhead, very fast and very low, with

the two small 707s racing along beside it. Most incredible aspect of the whole business was that Roly Falk was alone in the 698, proving its flying qualities so good that it can be handled perfectly well without any of the usual flight engineers, co-pilots, navigators and radio operators who ease the pilot's burden in such large aeroplanes.

Avro claim that the 698, which has four Avon turbojets, will carry more bombs



Remarkable underneath view of the giant Avro 698 bomber, showing its delta form. Photograph by courtesy of Hawker Siddeley Group Ltd.

farther, faster, higher and more economically than anything else in its class. They add that a civil air liner on the same general lines could, similarly, carry more passengers farther, faster and more cheaply than any other—for the delta is by no means useful only for war.

Nor is the Avro 698 the only British delta already in production. Side-by-side with it in the Royal Air Force in a few years' time will be Gloster Javelin two-seat delta fighters, powered by two tremendously-powerful Sapphire engines. First of a new line of semi-automatic interceptors, they will be guided to their target in all weathers by radar, and formidably armed with cannons and rockets to destroy their enemy. Their shape is very like that of the Avro deltas, but, being fighters, they have tailplanes to give them slight added manoeuvrability that might make all the difference in combat.

Meanwhile, the Avro 707 is being developed into a side-by-side two-seat delta trainer, and

(Continued on page 592)

Life in the Old Rail Yet!

IT is difficult to imagine any article fashioned by man that in its long life serves so many useful purposes as the steel rail.

The combined skill of metallurgist, melter, roller, and inspector produce the countless miles of shining ribbons of steel that follow the valleys, and pierce the mountains, of almost every country in the world.

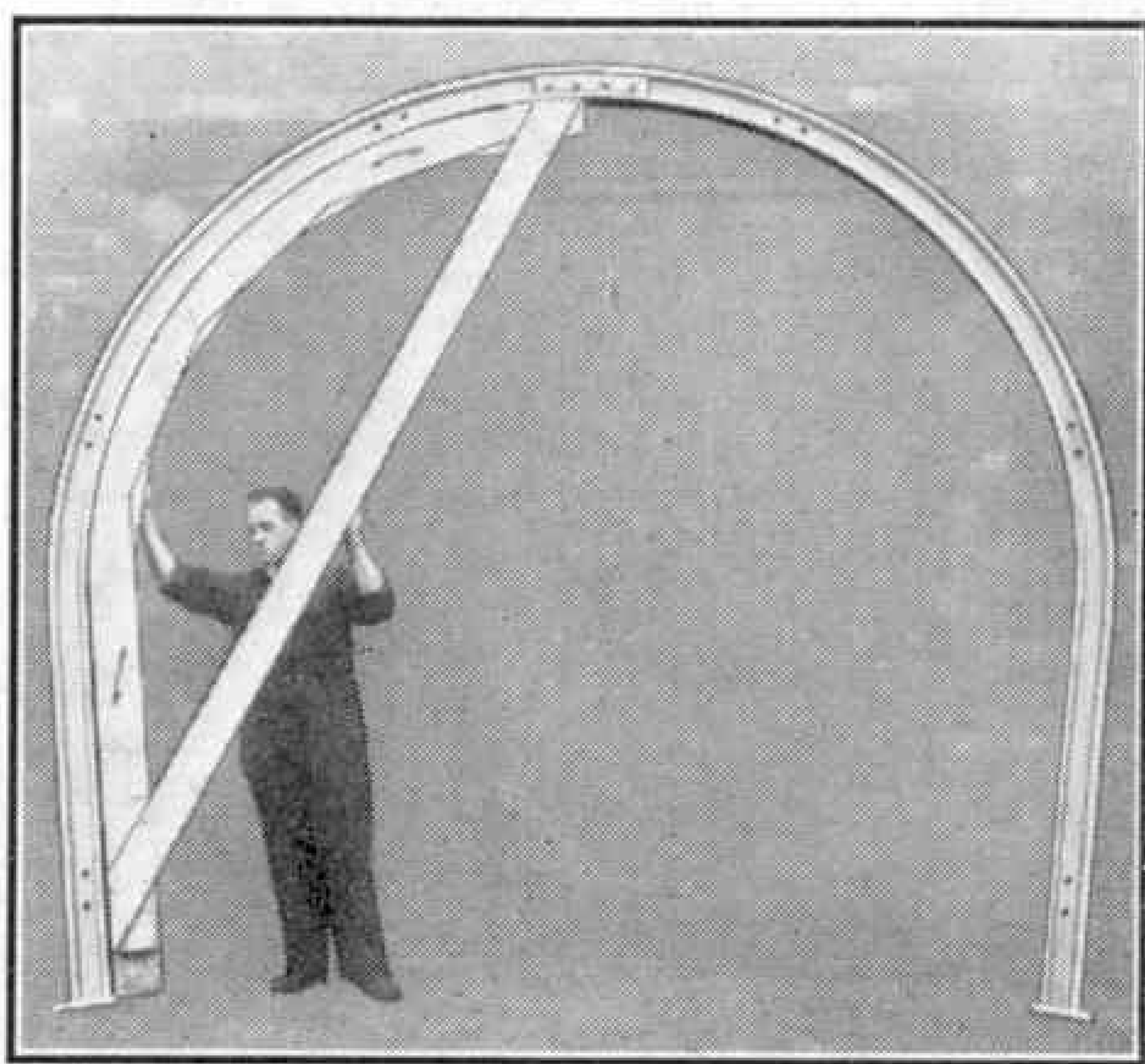
A rail designed with sufficient strength for main line use begins its useful life in a major position on one of the more heavily-used lines. Here it remains until it has lost 10 per cent. of its weight owing to the continued action of wear and corrosion. This period may vary from three to 20 years according to the traffic it carries. It may then be transferred to a secondary line to lose another five per cent. of weight, perhaps in another 20 years.

There is life in the old rail yet, although it may no longer be considered strong enough to carry human freight. Its next position therefore may be in one of the many sidings, adjoining the running lines, dealing with freight vehicles or empty rolling stock. The observer may find in these sidings rails up to, or even more than, a hundred years old.

Even when considered unsuitable for carrying wheeled traffic, rails may then find themselves adapted to serve many other useful purposes. Kerbs for pavement edges, buffer stops, fence posts, grillage for reinforcing concrete columns, stanchions

for steel framed buildings, roof trusses and arches for tunnel support, on railways, in coal mines or elsewhere.

Edgar Allen and Co. Ltd.'s Trackwork department have supplied to the collieries



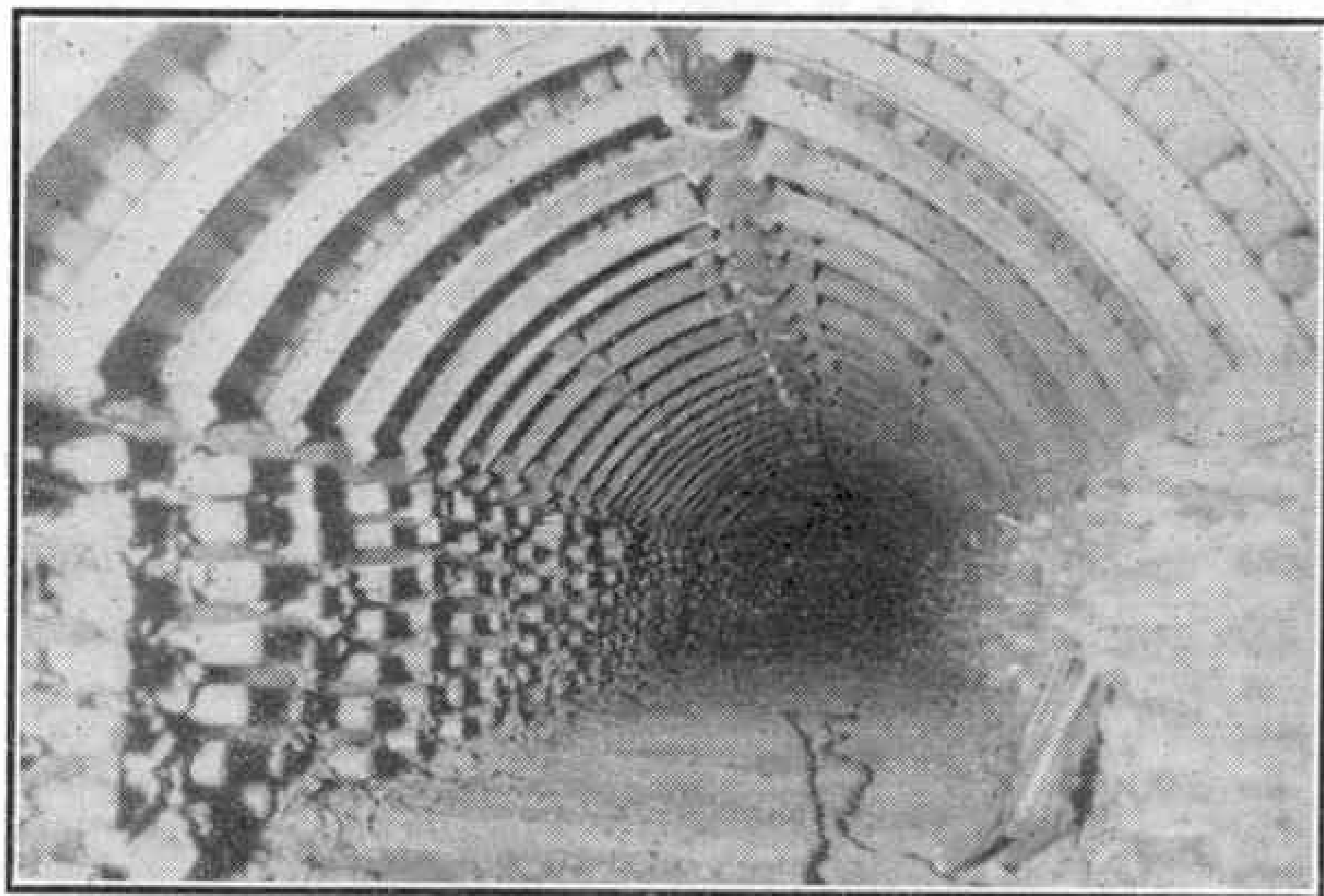
Testing an arch formed of old rails by means of a wooden template.

thousands of tons of rail arches for use as roadway supports, adding materially to the safety margin in the mines. The lower illustration on this page is of the "Moll" type of arch, combining the flexibility of timber with the strength and rigidity of steel.

A recent contract called for large numbers of rigid steel arches for reinforcing and supporting the earthwork surrounding an eight-foot-six-inch concrete tube carrying water through a mile and a half tunnel.

Our upper illustration shows one of these arches formed of two rails pressed to the exact radius required by the engineer and fishplated at the crown. The arches are spaced at about five feet centres and tie-barred together before placing the concrete.

This account of the uses of old rails, and our illustrations, are reproduced from the *Edgar Allen News*.



Arch roof support formed of old rails in use in an underground roadway.

On the Road

Show Business at Earls Court

By J. Dewar McIntock

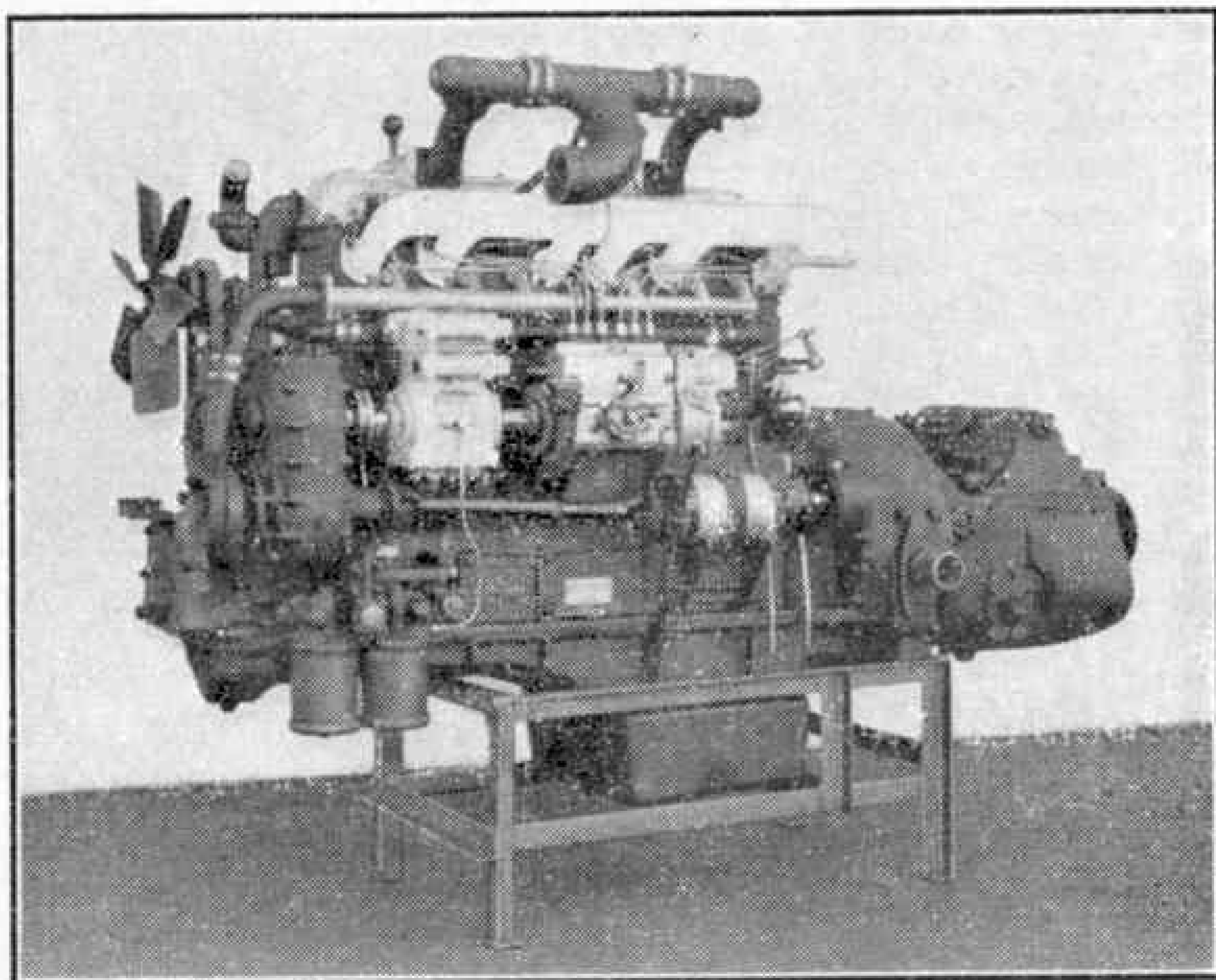
WHAT an exciting year this has been for those interested in things motoring! What with the B.R.M. trying hard and not making the grade until it was already doomed, the turbine-engined Rover giving a promise of great days to come, the Austin and Morris companies combining, and many cars no longer having covenants for buyers, there has been much to talk and think about.

Quite recently, too, there have been the Shows—two this year because the "Commercial," which is biennial, has had its turn. Now, I know there were one or two surprises at the Car Show, and I will have a few words to say about that later, but in the meantime I want to spread myself a little on the Commercial Show, not only, I confess, because I have always had a passion for lorries and buses, but because real technical progress has been exemplified at that exhibition in the great building in Earls Court, where my good friends the Society of Motor Manufacturers and Traders organise these affairs with precision and assurance.

There were certain obvious "highlights." Many of you will have visited the Show and will no doubt have made a beeline for the great, towering Thornycroft known as the Mighty Antar. This is a giant tractor, the term here being used to denote the motive unit for a trailer or other drawn vehicle, and has power-assisted steering, air-operated clutch and a lowest gear of 173 to 1 . . . ! The engine is a Rover Meteorite of 250 b.h.p. At the Show they even had to have a small step-ladder to help folk on to the *first* of three steps up to the driving seat! Its nearest rival, I think, was the Scammell Constructor, a new Rolls-Royce engined 160 b.h.p. diesel to take up to 100 tons, with power steering and twelve forward speeds.

Right at the other end of the scale, Trojans made news of a sensational nature

with the new diesel-engined delivery van. Small oil-engined vehicles have seldom been considered practicable before, but now things have changed. With its Perkins engine, the Trojan should be a glutton for hard work, and it does 45-50 miles to the gallon, they say. The engine is one of only 2.4 litres—i.e., the size of that of the bigger Riley car. Trojans, who are interesting people, still continue their

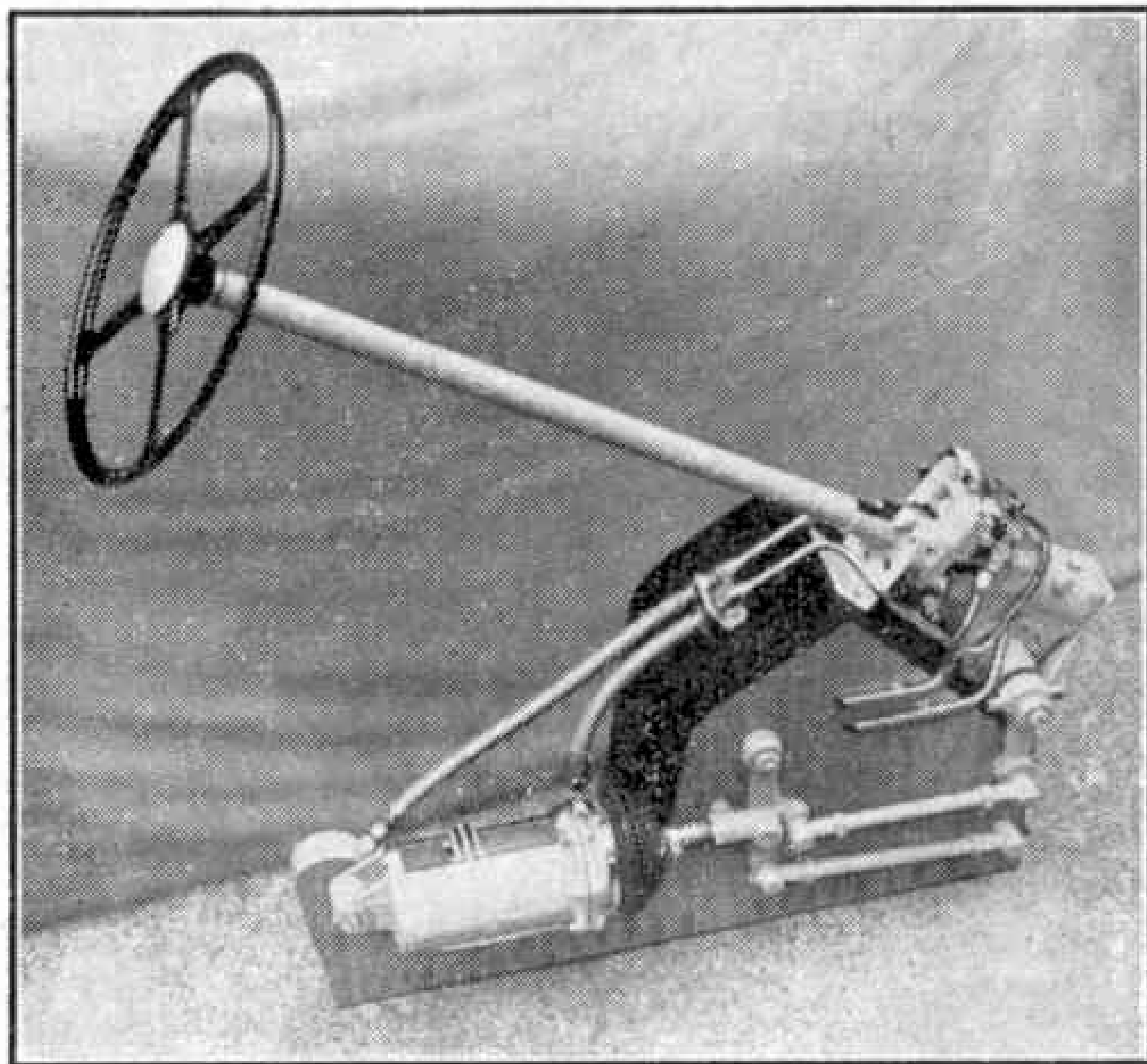


The oil engine still reigns supreme in the kingdom of the "heavies" and is even invading delivery van territory. The engine shown here is of the largest type—a Thornycroft 11.3 litre. A Cooper racing car has an engine of half a litre!

famous two-stroke, and they also have a battery-powered van which is unusual in having a gearbox.

I felt that the greatest interest lay in the efforts of the passenger vehicle makers to get right away from traditional design and build boldly for light weight and maximum load-capacity. The now-popular underfloor engine has given them a start, and now they are well and truly taking advantage of it—making big, light bodies on chassis that are strong enough to take a lifetime of punishment, yet carry no superfluous idle weight. The new Leyland Tiger Cub was an outstanding example, and exemplified the tendency to make body and chassis into a single interdependent assembly.

Wherever possible, public authorities are using single-deckers now that these are more roomy, with the 30 ft. by 8 ft. dimensions now permitted. But it will be a long time before the double-decker is ousted, particularly in London and other



Power-aided steering is used on some heavy lorries and at least one coach. This is the Clayton Dewandre type with double-acting cylinder.

densely-populated towns, and there are new lightweight double deck bodies in which aluminium alloys are widely used, as well as fabricated steel construction.

I have been asked "What does fabrication mean?" Well, of course, the word is ill-chosen, although now so popular. It *could* mean to "forge," in the sense of fraudulently copying, but the curious thing is that it often means the opposite of "forge" when used in the engineering sense, because it refers to parts built up from comparatively light-gauge metal instead of being forged, cast, and sometimes machined. The use of steel pressings for engine bearers, spring hangers and even—in light vehicles—axle cases, is an example.

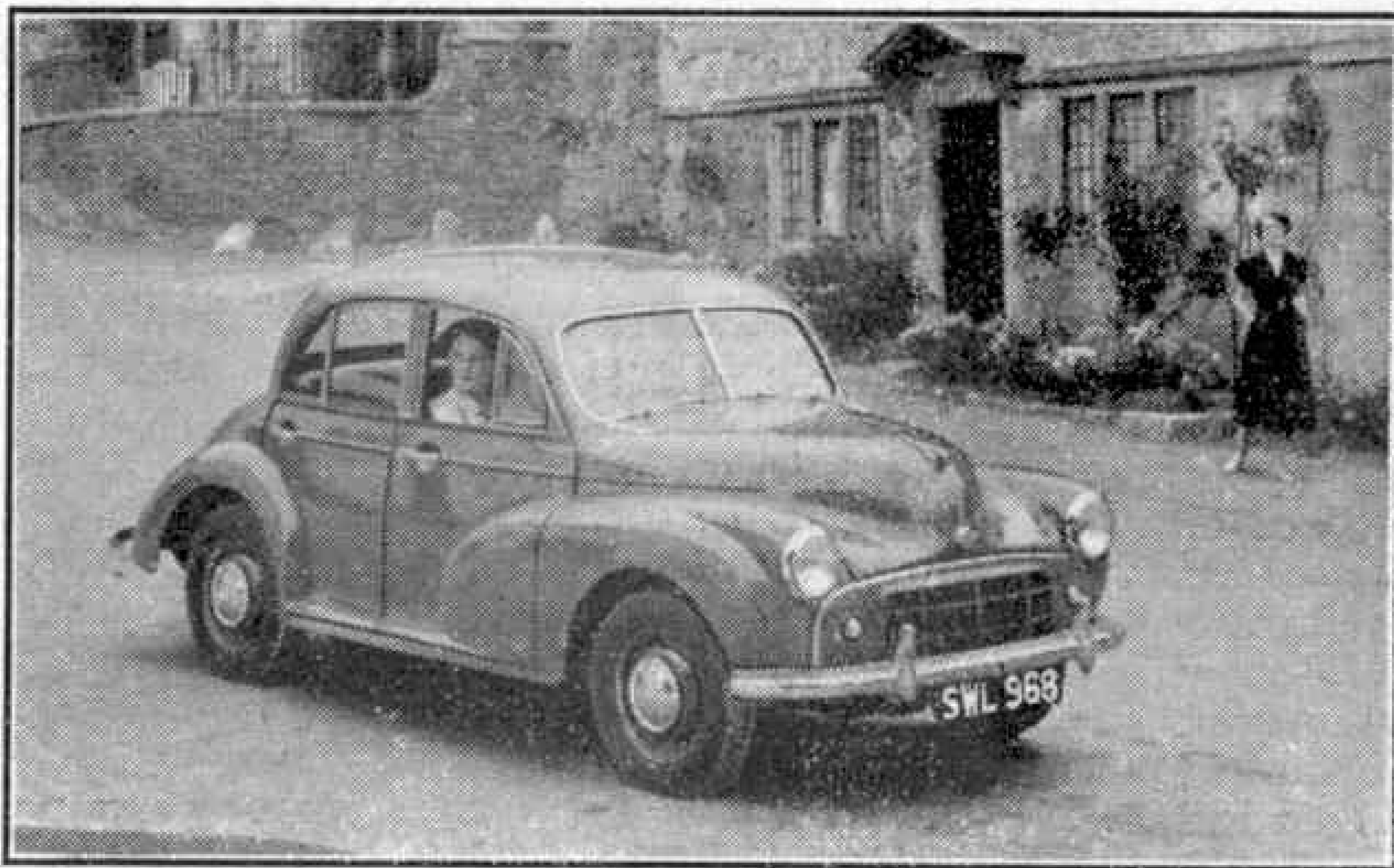
I spent a long time looking at the long-distance coaches. These are the real kings of the road, and I think the

bodymakers feel, as I do, that nothing is too good for the coach traveller or the finest drivers on the road. Here again, the underfloor engine, or in the case of Foden the rear engine, comes into its own, and with it the characteristic pullman-type full-fronted coach. I sat in them all, and tried all the driving positions. Driving visibility is wonderful, especially where they have those cunning little glass panels under the screen, pointing downwards to the road. For passengers, the new features of individual ventilation and lighting, radio installations, Perspex roof panels and floors that slope away to the front are genuine advantages.

Finally, I could not help being impressed by the similarity between some of the latest light-metal bodies and typical Meccano constructional principles! Many of the new bodies are built so that they can be erected or dismantled easily, for quicker and cheaper repair as well as cheaper export costs, and any of us could, with a gang of other fellows, put one of these bodies together—following the instructions in the approved manner!

At the Motor Show, Rootes showed a new Humber Snipe that appealed to me as something I should like if I were a company director! It has an overhead-valve engine in its new form, and the front suspension is now looked after by coils instead of laminations—or leaves, if you prefer it that way. More practical, from my own more modest point of view, would be the new little

(Continued on page 592)



The Morris-Minor now has an o.h.v. Austin Seven engine, giving it even more power than before.

Christmas Fruits and Spices

Good Things for the Cake and Pudding

By W. H. Owens

MANY of the good things we eat at Christmas-time come to us from far-off corners of the world, and few of them, perhaps, have such romantic stories as the dried fruits and spices—those very important ingredients of Christmas plum puddings, mince pies and iced fruit cakes.

The spice trade has a long and colourful history, and is linked with the bold adventures of early seafarers and explorers. In their eager search for spices, European traders sailed across unknown seas and discovered strange new lands and peoples. The little spice ships indeed played no mean part in the development of important trade routes around Africa, and across the Indian and Pacific Oceans.

The trees that produce nutmegs, cinnamon, cloves, mace and other useful spices were originally found in the Far East and the beautiful Pacific islands, where they still grow in abundance today. Their fruits first came to Europe by way of Venice, and were long termed "Arabian Spices" because the Arabs brought them over the great desert caravan routes of the East. The Venetian merchants made huge fortunes out of the spice trade in the early days, for when people had to live on dried and salted meat and fish for much of the year, these rich Oriental flavourings were naturally in great demand.

Sometime during the fifteenth century, however, the Portuguese discovered the remote Moluccas, or Spice Islands, of the East Indies. News of their fabulous wealth of spices set English and Dutch traders quickly on the same trail, and for many years these rival Western powers fought

and quarrelled bitterly among themselves. The control of the Spice Islands passed eventually to the Dutch, and so the quest for spices led to the beginnings of the once-powerful Netherlands Empire after the founding of the Dutch East India Company more than 300 years ago.

But the British continued to be close rivals of the Dutch in this highly profitable trade. Indeed, it was British enterprise that in due course helped to spread the spice plants far across the world to India, Ceylon, Africa, the West Indies and elsewhere.

The spice traders of old led adventurous lives indeed. Apart from the hazards awaiting them in those distant island jungles, they often had to fight desperate encounters on the high seas. For their cargoes were of such great value as to be a prime target of sea pirates,

especially the ruthless, bloodthirsty gangs who terrorised shipping off the African and Mediterranean coasts in the seventeenth and eighteenth centuries. Many a laden spice ship homeward bound after a long and arduous voyage fell a victim to the Barbary pirates.

One spice we certainly could not do without for flavouring the Christmas fare is cinnamon. It is grown in the Pacific islands and in India, but the biggest plantations are on the beautiful forest slopes of Ceylon, the "Cinnamon Isle," where Portuguese explorers discovered the cinnamon tree growing wild some 400 years ago.

This aromatic spice actually comes from the bark of the cinnamon tree. Skilled



One of the happiest tasks of the year! The chef finds willing helpers when the Christmas Pudding is to be mixed. Photograph by courtesy of J. Lyons and Co. Ltd.

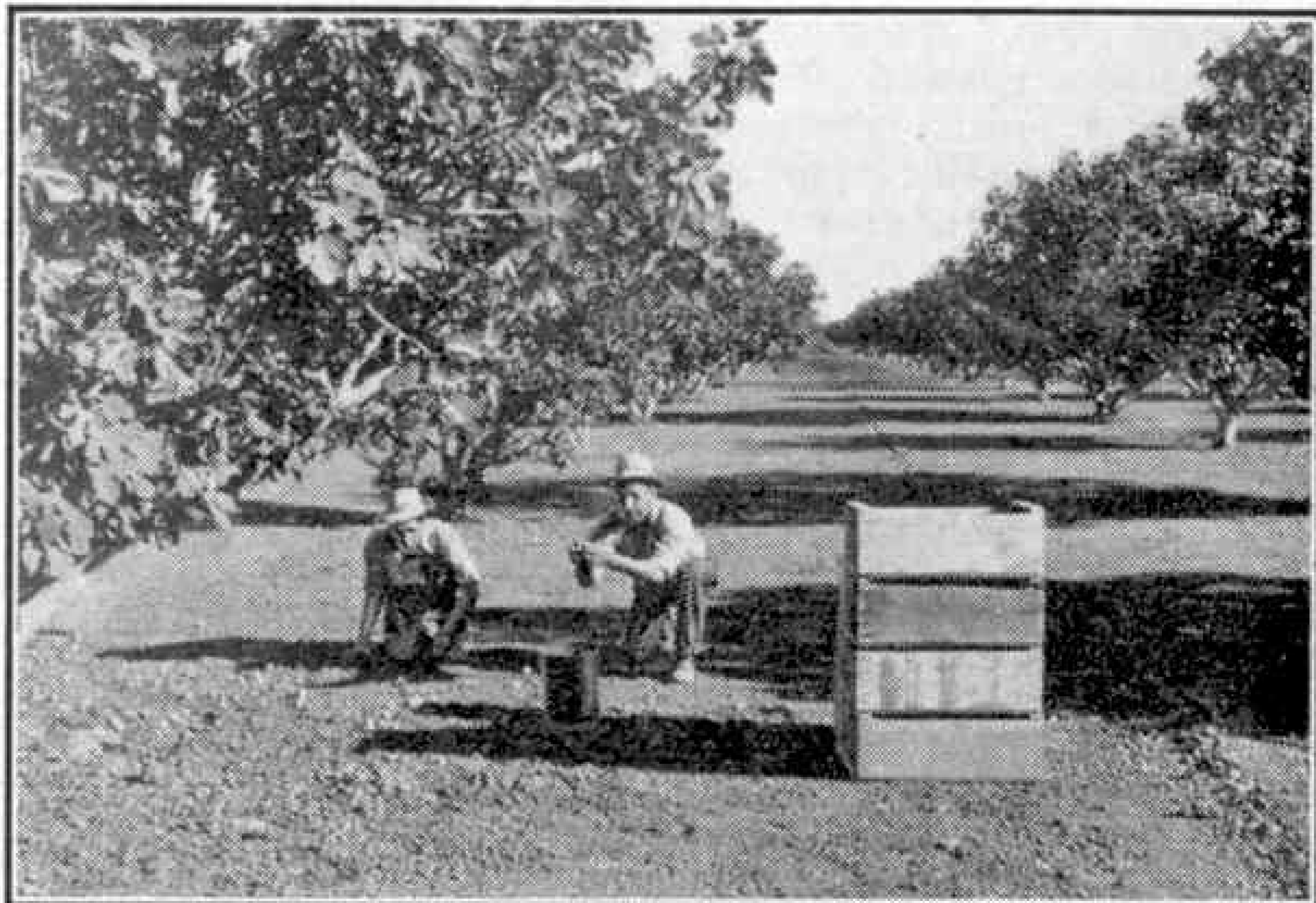
natives work round the plantations at frequent intervals, stripping the bark and peeling off its coarse outer skin. The bark is rolled and dried in the form of long brittle quills, or sticks, which are sorted for quality and later ground into the familiar brown cinnamon powder. Cinnamon oil, which gives the spice its flavour and strong smell, is also extracted from the bark for use in medicines.

From the tropical nutmeg tree come two useful spices, nutmeg and mace, which have been used for flavouring food since early times. This tall tree, a native of the Moluccas, still grows widely in the Far East, and also in places as far apart as Madagascar and the West Indies. It produces thick clusters of a sweet, fleshy fruit, rather like a small peach, that turns yellow when ripe. The kernel of this fruit is the nutmeg, and its bright red covering is the mace.

After the plucked fruit has been cut open, the mace is skilfully separated from the nut and both are thoroughly dried. When dry the nuts can easily be removed from their thin and brittle shell coverings.

A genuine nutmeg can always be recognised by its peculiar grey colour and a fine, marble-like graining which shows

up all the way through when it is grated. Artificial ones are sometimes sold in place of the real thing, however. These are carved from wood and merely impregnated with nutmeg oil or essence. The state of Connecticut in America is still



California figs drop to the ground when they are ripe and are then easily gathered. Photograph by courtesy of the U.S. Information Service.

referred to as the Nutmeg State because at one time some of its inhabitants were alleged to have manufactured wooden "nutmegs" and traded them on quite a large scale before they were found out.

Cloves are the dried buds of a tree that also originated in or about the Molucca Islands, but, like the nutmeg, has since been carried to many other countries. Large quantities are now exported from the East African islands of Zanzibar and Pemba, where their cultivation by Arab, African and Indian farmers is the chief agricultural industry.

The clove plantations make an impressive sight at harvest-time, for the dark green trees, growing to a great height, produce millions of deep crimson flowers. But the buds are usually plucked when they are bright red, just before opening, and are either hand-picked or beaten down with long hooked sticks. Then they are spread out thinly on mats to dry in the blazing tropical sunshine. The dried cloves may be sold as they are, or pressed by machinery to yield the oil of cloves so widely used in medicine, antiseptics and perfumery. On many plantations nowadays the entire clove crop is used for making oil because of the much greater demand for this.

Turning from the spices to the fruits in the Christmas pudding, we leave the islands of the tropics for the sunny hillsides of the



Cinnamon, nutmeg, cloves and mace in a Javanese spice market. A Republic of Indonesia photograph.

Middle East, South Africa, Australia and California. Currants, sultanas and raisins each have their own distinctive flavour and appearance, but all of them are products of different varieties of the vine—the plant whose history goes far back to ancient Biblical times.

Greece and Turkey are the great vineyard lands of the eastern Mediterranean, the one producing mostly currants and the other sultanas. Greek currants have been famous for centuries. They were once called Corinth raisins because they were grown in the area of the Greek city of that name from which our name for them is derived. Incidentally, raisin is a general name used for any variety of dried grapes.

Today nearly nine-tenths of the dried fruits exported by Greece consist of currants. On the sun-drenched foothills round the north and west of the Peloponnese, the currant-grape vines stretch for mile upon mile, and are so closely planted as to give the impression of one vast and unbroken vineyard.

The currant harvest in late summer is a tremendously busy time, because once the grapes ripen they must be picked as quickly as possible. Bunches are cut away with long pointed knives and are spread out on canvas or paper sheets to dry in the sun, but some Greek vineyard owners now dry the grapes indoors on tiered racks to speed up production. Drying takes about two weeks, after which the currants are sorted and packed, and sent down to the port of Patras, headquarters of the trade on the Gulf of Corinth. From there they are shipped to all parts of the world.

Turkey is the original home of the sultana-grape. For many centuries the "sultanina" vine was grown nowhere outside the Smyrna area, on the west coast of Asia Minor, where it still flourishes on a large scale today.

The summer harvesting of the sultana-grapes is traditionally one of the great Turkish outdoor festivals. The local peasant girls still put on their colourful native costumes when they go out gathering

in the vineyards. As the weeks of the harvest draw to an end there are lively celebrations of singing and dancing in the towns and villages of the vineyard country.

These sultana-grapes are not merely sun-dried, but are "cured" by dipping in a strong lye bath of boiling potash, which has a layer of olive oil on its surface. This process gives the sultanas their fine golden-yellow colour and tender skin without spoiling their natural sweetness.

Until last century the dried fruit we know as the raisin was produced almost

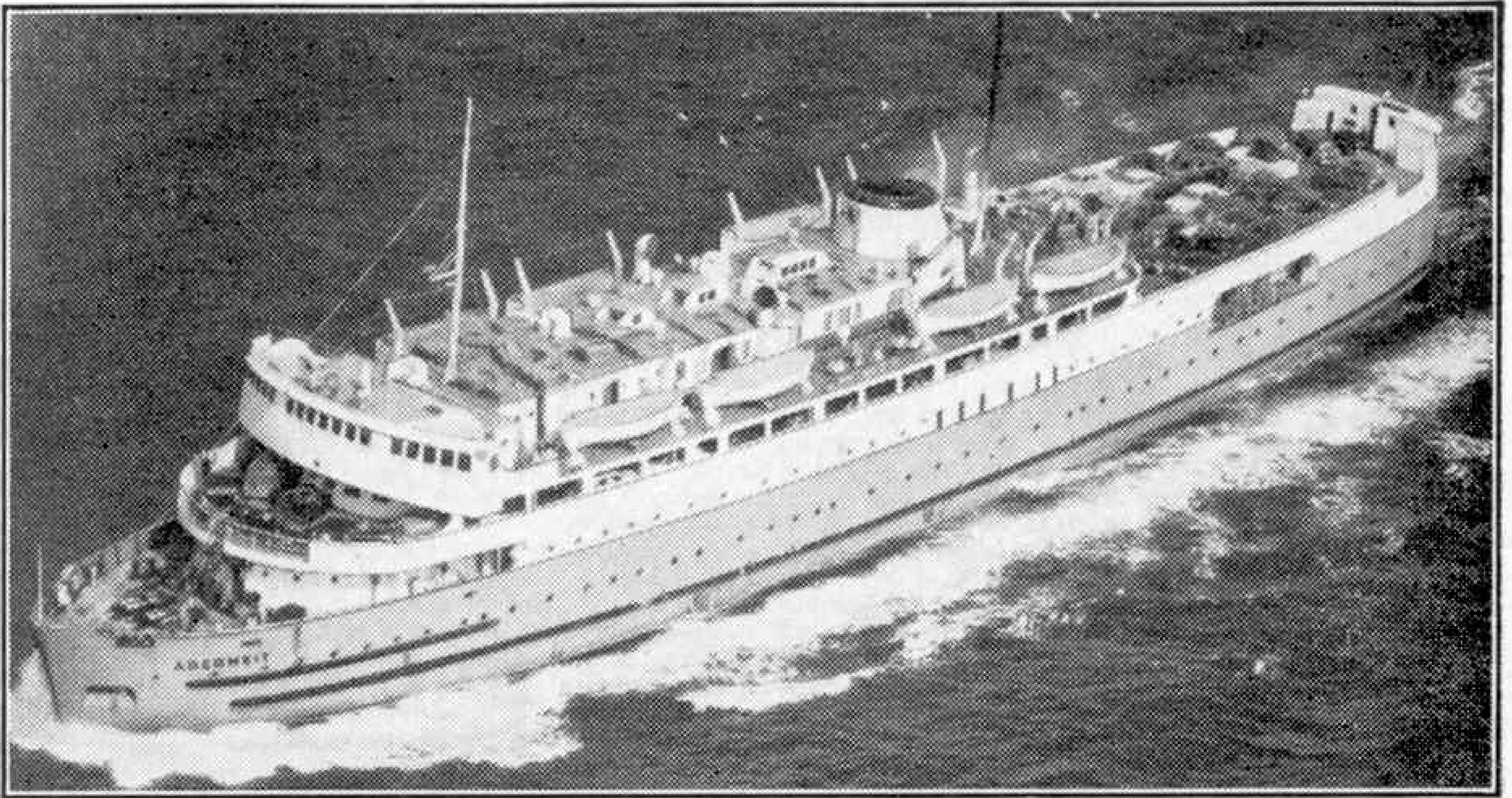


Turkish peasant girls in national costume gathering the grapes that are made into sultanas. Photograph by courtesy of the Turkish Embassy.

exclusively in Spain, Greece and the eastern Mediterranean. The finest muscatel variety are still Spanish grown and are actually dried while partly attached to the vine, from which the leaves have been removed. But in modern times a huge dried fruits industry has grown up in the Commonwealth and in California.

The California industry is centred in the famous San Joaquin valley where about ten thousand growers now produce raisins of most varieties. Vineyards cover hundreds of square miles, and are planted in long regular lines, with space between them for drying out the grapes in the hot sunshine. The vines are kept short, not being allowed to trail or spread, and in this way every plant bears the largest possible crop of fine quality fruit.

This produce goes to Fresno City, at the heart of the great valley, which has the largest and most up-to-date dried fruit processing plant in the world. Prunes and dates, which also contribute to Christmas fare, are other products of California.



Above is a picture of the Canadian National Railways motor vessel *Abegweit*, the largest ice-breaking car ferry in the world. Photograph by courtesy of the C.N.R.

Shipping Notes

A Canadian Car Ferry

The impressive looking vessel in the illustration at the head of this page, with its decks crowded with motor cars, is the *Abegweit*, which is claimed to be the largest ice breaking ferry in the world. She is operated by the Canadian National Railways, and maintains communication across Northumberland Strait between Cape Tormentine, in New Brunswick on the mainland of Canada, and Borden, in Prince Edward Island. The distance across the Strait is nine miles and the time required for the crossing is 55 minutes.

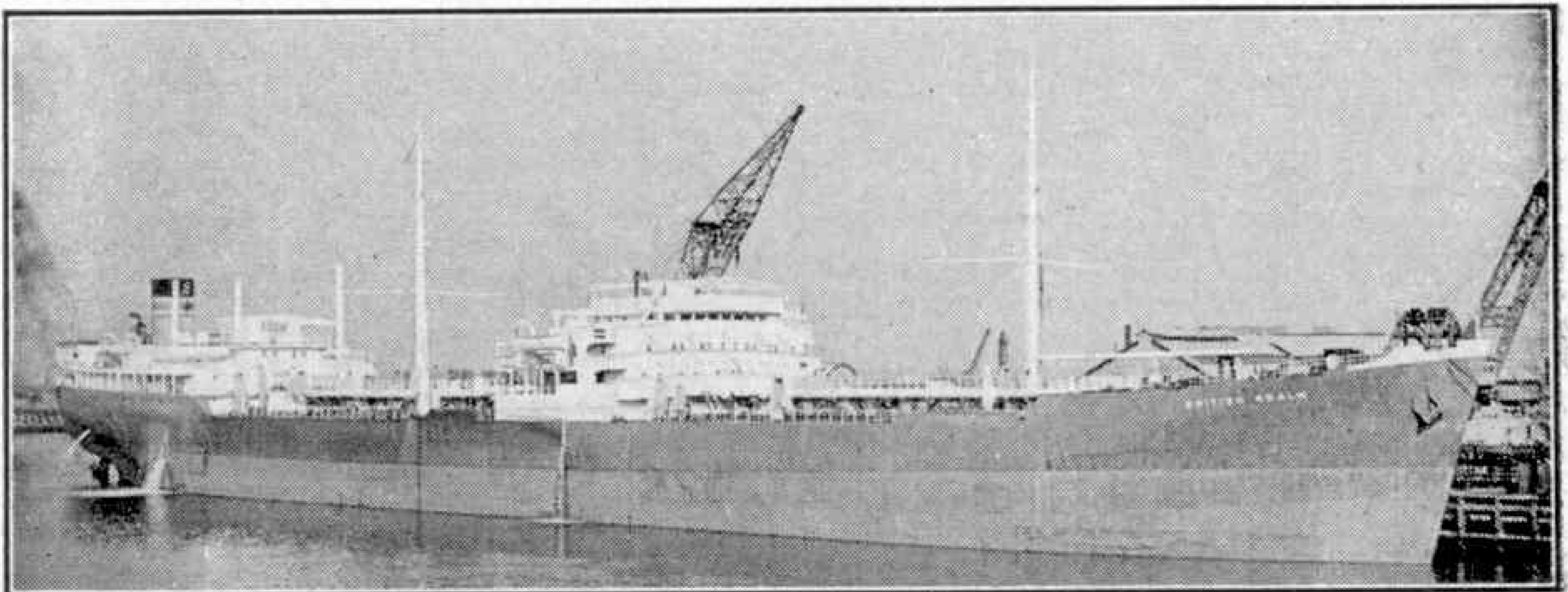
This vessel is 372 ft. 4 in. in length and has a gross tonnage of 6,694. Her diesel engines give her a speed of 16 knots. She can accommodate 60 motor cars, and she has three railway tracks on which 19 railway coaches can be carried. Her passenger capacity is 950. Additional traffic in summer is dealt with by an older vessel, s.s. *Prince Edward Island*.

Overhauls on Merseyside

The largest of the 14 transatlantic liners undergoing their annual overhauls on Merseyside this season is the *Caronia*, of 34,183 tons, which will resume service from Southampton during the present month. Other Cunard liners in the list are the *Britannic*, of 27,666 tons, and the *Media* and the *Parthia*, sister ships of about 13,350 tons.

Other visitors for overhaul will include the *Georgic*, of 27,469 tons, which is owned by the Ministry of Transport, and four Canadian Pacific Steamships vessels, among them the *Empress of Scotland*, the flagship of the C.P.S. fleet, the *Empress of France* and the *Empress of Canada*.

A particularly interesting visitor to Merseyside, also for overhaul in dry dock, has been H.M.S. *Anson*, the 35,000 ton battleship. This vessel played a prominent part in the naval operations of the last war, serving in Japanese and Australian waters as well as in the home seas, and is now in reserve. She was laid up in the Gairloch and was held up at the Bar by a gale for several days when being towed to Merseyside.



The largest vessel ever to enter the port of Sunderland is seen above. She is the British Tanker Corporation's *British Realm*, of 28,000 tons deadweight. Photograph by S. E. Teasdale.

BOOKS TO READ

Here we review books of interest and of use to readers of the "M.M." With certain exceptions, which will be indicated, these should be ordered through a bookseller.

"GRASS BEYOND THE MOUNTAINS"

By RICHMOND P. HOBSON (Bell, 12/6)

Today pioneers who want ranches of their own cannot just go into America's far West, the home of the cowboy and his enemy the rustler, for there the land is already occupied. Mr. Hobson was fired with such an ambition. In Wyoming he was fortunate enough to make friends with a cattleman who had heard of a land where there was still free grass, and they determined to establish their own ranch in it.

This last cattle frontier in North America was away up in British Columbia. The venture was decidedly one for none but pioneers, for in the new land beyond the mountains men, horses and cattle went through everything from freezing blizzards to clouds of mosquitoes, and on one occasion the author and his partner were only saved from death by suffocation in the muskeg swamps by one of the nine horses to whom the book is dedicated.

After cheerfully enduring ample hardships, and surviving frightful emergencies, the dream ranch became a reality, and the story of how this came about has the dramatic air that marks a faithful account of a great adventure.

"TRAINS ANNUAL 1953"

By CECIL J. ALLEN
(Ian Allan Ltd. 9/6)

This favourite railway annual here makes its 7th consecutive yearly appearance. It provides as usual a well varied programme of articles on railway matters in both Great Britain and abroad. Steam locomotives in this country and in France have their full share of attention, and a chapter of special interest is given to the husky Canadian Pacific "Selkirk" 2-10-4s, only recently displaced from their arduous job in the Mountain Division of that line. The mysteries of traffic control in day-to-day working are explained by a Control Officer, and something of the organisation and hard work that is attached to Postal traffic by rail is appreciated in the account of the carriage of Her Majesty's mails.

How many readers know that Fishguard was intended by the G.W.R. to be a port for North Atlantic liners even if only for a few brief years? Its first beginnings on a bleak rocky site on the coast of Wales, its development and subsequent decline to a less spectacular traffic centre form the subject of an able special article. Another that Southern enthusiasts will enjoy tells the story of the early struggles of the Southern Railway after it had been formed by the grouping of the South Western, Brighton and South Eastern Companies.

There is certainly a wealth of reading for the enthusiasts in the 96 large pages of this volume, and they should like too the many illustrations, most of them excellent reproductions of actual photographs.

"THE OBSERVER'S BOOK OF AIRCRAFT"

By W. GREEN and G. POLLINGER (Warne 5/-)

The importance and value of efficient aircraft recognition was proved by the splendid work of the Royal Observer Corps during the last war. This new edition of *The Observer's Book of Aircraft* will be welcomed both by the many thousands of present-day members of that Corps and by readers who want to be able to recognise an aircraft in flight immediately they spot it.

The main body of the book consists of photographs and 3-view silhouettes of 114 different aircraft, which include the most important machines in production at the present time, about to enter production, no longer in production but still widely used, and currently experimental types that are likely to be produced in quantity. Then follows a section containing photographs of 50 current experimental and research aircraft and less important machines that are to be seen in numbers, but which there is not room in this book to describe in detail.

Other helpful features are lists of international civil aircraft markings, British aircraft designations, and U.S. Air Force and Navy aircraft markings; and there is an excellent index.

"THE YOUNG FIELD NATURALIST'S GUIDE"

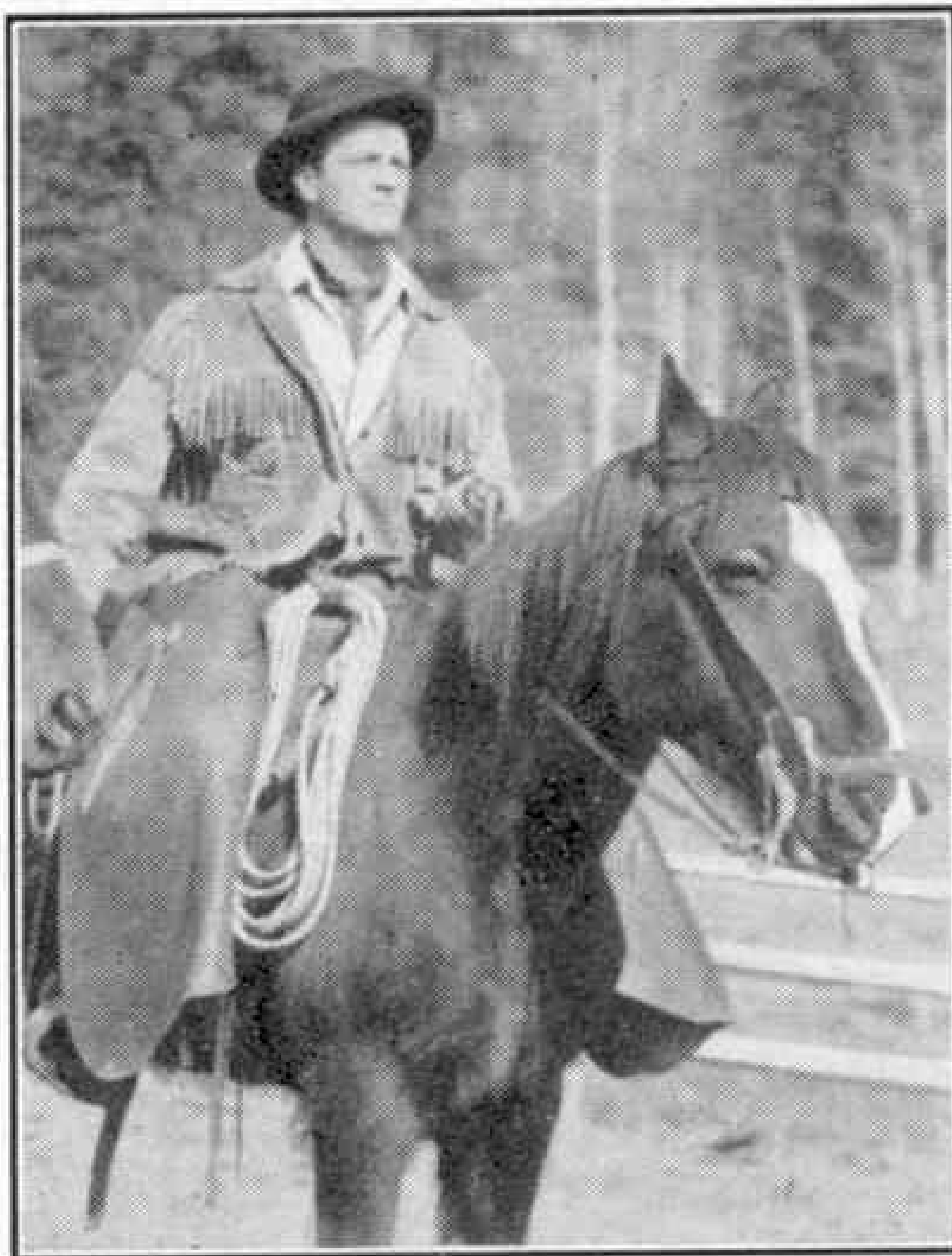
By Major MAXWELL KNIGHT
(Bell 10/6)

There is much more to nature study than observing birds or collecting specimens of flowers and leaves and pasting them in a book, and to get the best out of this healthy and fascinating pastime you need to know what is the right equipment to have, and best way of going about the particular branch of nature study in which you are interested. It is here that this book will help the beginner, for it gives practical advice about all the aspects of nature study that it is usually difficult to obtain without a lot of trouble and research.

It deals with the value of field work and how to set about it; collecting and how

to collect; how to choose and use things like field-glasses, hand lenses and microscopes; and gives suggestions as to how several of the implements and gadgets needed can be made at home. The proper use and attitude towards reference books is discussed, and several books of great value to a young naturalist are suggested. The question of field expeditions is gone into in some detail, and there are chapters on nature note-books and their importance to naturalists, young and old; hints about keeping living things for study and observation, and on setting up an aquarium and a vivarium. Nature study, like many other hobbies, gains in enjoyment when several enthusiasts share their common interest in it, and the author explains how to start a junior nature club or society.

The book is illustrated with 30 excellent half-tone photographs.



Richmond P. Hobson, Jr., author of "Grass Beyond the Mountains" reviewed on this page.

"THE LAND AND PEOPLE OF FRANCE"

By M. E. GARNETT (A. & C. Black 6/6)

Most of us like to read about other countries and their peoples. This book, like others in the same series, has been written as much for the stay-at-home as for the traveller. It reveals France as a country of endless variety, with many changes of scene and ways of life between its grey Channel coast and the shore of the blue Mediterranean. Glancing back over the country's history, the author recalls the immortal story of Joan of Arc, and writes of Francis I, who reigned at the time of the Renaissance and for whom palaces were built and pictures painted that are "among the most beautiful things that France can show." We read also of Louis XIV—the Sun King—and of Napoleon—"the little corporal" whose reign ended in defeat and exile.

It is far from being just another history book, and the author tells us much that is interesting about life in France today, about Paris, the capital, and the peoples of Brittany and of the tiny Basque province between France and Spain.

The book is illustrated with 12 full-page plates, four of them in colour, and there is an appendix of useful and interesting facts and figures.

"HOW TRAINS WORK"By GEOFFREY DAY
(Hutchinson 2/6)

Here is something for our younger readers. It tells them how trains work very largely by pictures in colour, some of which are sectional, showing the insides of locomotives and tenders, and they are taken behind the scenes, to the sheds, and on the footplate, and into the guard's brake van and the signal box. Besides explaining how trains go the author tells his readers how they stop, with the aid of clear illustrations. Altogether this is a book that will be thoroughly enjoyable for youthful newcomers to railway interests.

"LINGER AND LOOK"

By L. HUGH NEWMAN (Staples Press 11/6)

A book by Mr. Newman is always welcome. In explanation of the title he has chosen for this, his latest work, he remarks that no naturalist has ever made any worthy observation in a hurry, and he invites his readers to accompany him as he strolls along the lanes, rambles through the woods and over the hills, and lies by the pond edge, lingering and looking.

In imagination readers can share in his slow penetration into the mysteries of the lives of butterflies and moths and other insects, creatures of the mud, and the bugs and beetles that live in water, and of the teeming life between the tides.

Mr. Newman tells his wonderful stories in his usual attractive style, and the many excellent illustrations show clearly every detail of the various creatures with which he deals. Every reader interested in our butterflies and moths, however slightly, will "linger and look" in the book itself, in addition to being led to follow the author's example in the open air.

SCIENCE FICTION

In these days of rocket flight, with exciting forms of power in prospect, a new kind of science fiction has

been developed in which man conquers space and finds his way to other worlds, not merely in the solar system, but far beyond in the great stars millions of light years away.

There is great variety in these stories of space and time. In *Islands In the Sky* by Arthur C. Clarke (Sidgwick and Jackson, 8/6) we travel to an artificial satellite or space station that has been built as a weather station and a refuelling base for space ships. The story itself is exciting, and from it the reader will acquire much interesting information on the wonders of space. *City At Worlds End* by Edgar Hamilton (Museum Press 9/6) is the story of a town that a superatomic

blast has hurled through time into the far distant future, when our Earth has grown old and cold. Here the space travellers come from other worlds than ours, to rescue the inhabitants of the doomed planet.

The Weapon Shops of Isher by A. E. van Vogt, and *New Tales of Space and Time* (Weidenfeld and Nicholson, 10/6 and 9/6 respectively) are more sophisticated and suitable for older readers of the M.M. The former describes an exciting adventure in the year 4787, when a decadent dictatorship is brought to an end; and the latter includes stories by many who have spied into the mysteries of the future, when space travel is commonplace and new ideas have arisen of which today we have little conception.

"COWBOYS"By E. JOSEPH DREANY
(Publicity Products Ltd.
5/-)

All youngsters love pictures and stories of cowboys and of the highly adventurous life they are

reputed to lead "way out West." This novel book will appeal specially to very young readers, as not only is it splendidly illustrated in colour, but many of the pictures "come to life" when the pages are opened, the characters and their setting moving up into position to give a remarkable realistic effect. Each of these "pop up" pictures is described briefly in an accompanying paragraph. The other illustrations in the book also have descriptive notes.

This is the first of a series of "pop up" action books.

"THE JOHNSON PHOTOGRAPHIC YEAR BOOK"
(Johnsons of Hendon Ltd.)

The 1953 edition of this popular pocket size annual is in two separate parts, one containing the now familiar articles and tables of technical data and the other the diary and pages for recording exposures. This latter section is slotted inside the front cover of the main part of the annual.

The technical section has been thoroughly revised, with new illustrations, and the Light Tables and Film and Plate Speeds brought up to date. There are the usual time and temperature tables for those who do their own developing, and articles on lens aperture, depth of focus, exposures for colour, photography by artificial light and the use of photoelectric exposure meters. As usual, there is the exposure calculator, with detailed instructions on how to set it and on using it in artificial light.

The year book can be bought from photographic dealers, price 6/- including purchase tax on the diary.



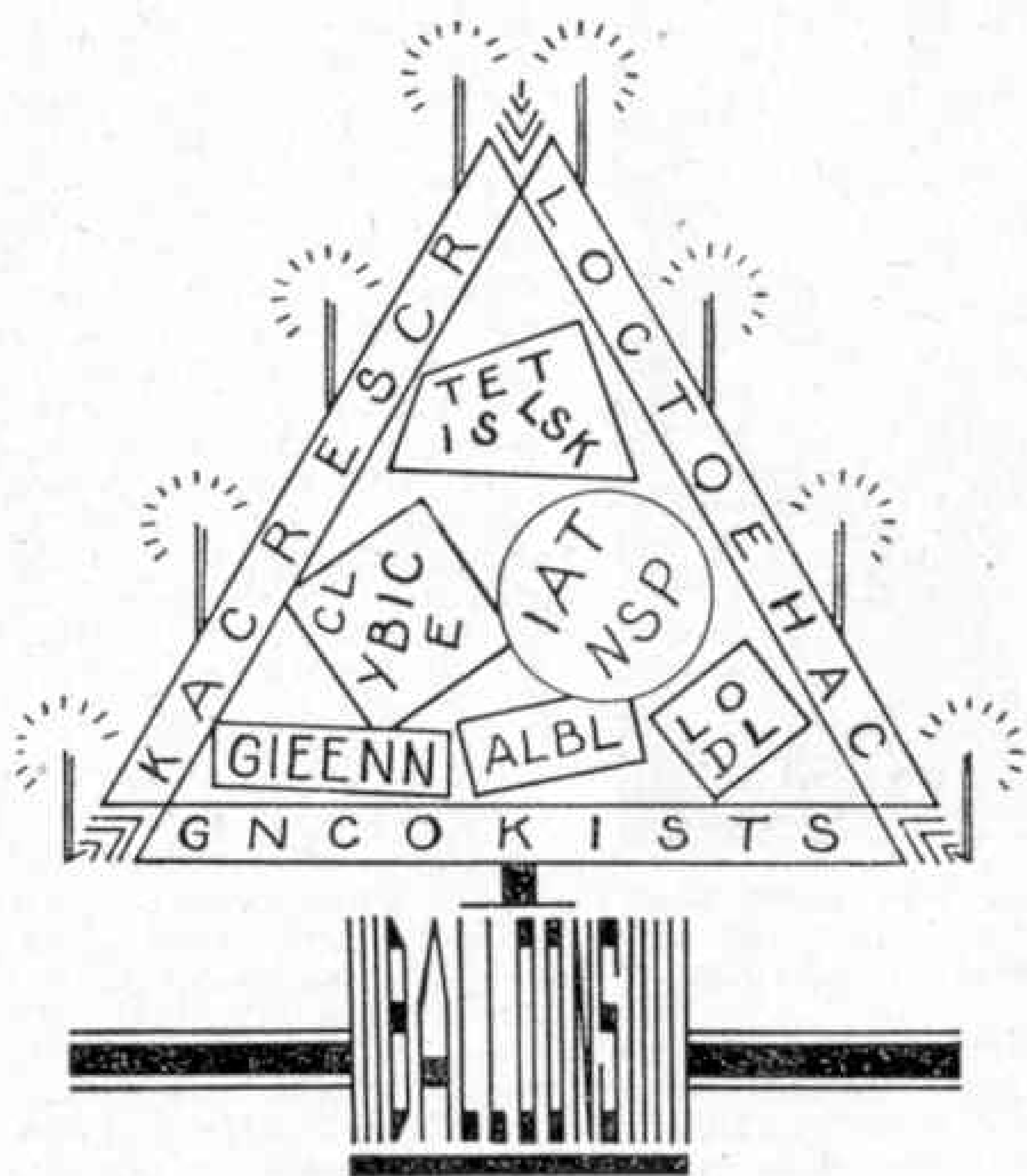
Three Paris urchins on the way home from school. An illustration from "The Land and People of France" reviewed on this page.

Christmas Fireside Puzzles

By H. Hutchinson

WE all love sitting by the side of a nice big fire, especially on a cold winter's night just before going to bed. So, while you have your drink and biscuits here is something in which every member of the family can join—a variety of amusing puzzles suitable for all, in fact.

A WELL-LADEN CHRISTMAS TREE



Let us begin with a Christmas tree. We all love the old fashioned Christmas tree and so does Uncle Sam. His favourite game is counting the number of presents hanging on it, and trying to guess what is inside each parcel. This year Santa Claus has been extra busy trying his very best to out-wit him by disguising both the tree and the presents. At first Uncle Sam thought that Santa had done his job well and that he would never discover them, but after a careful study and exercising plenty of patience he found out what the tree really held.

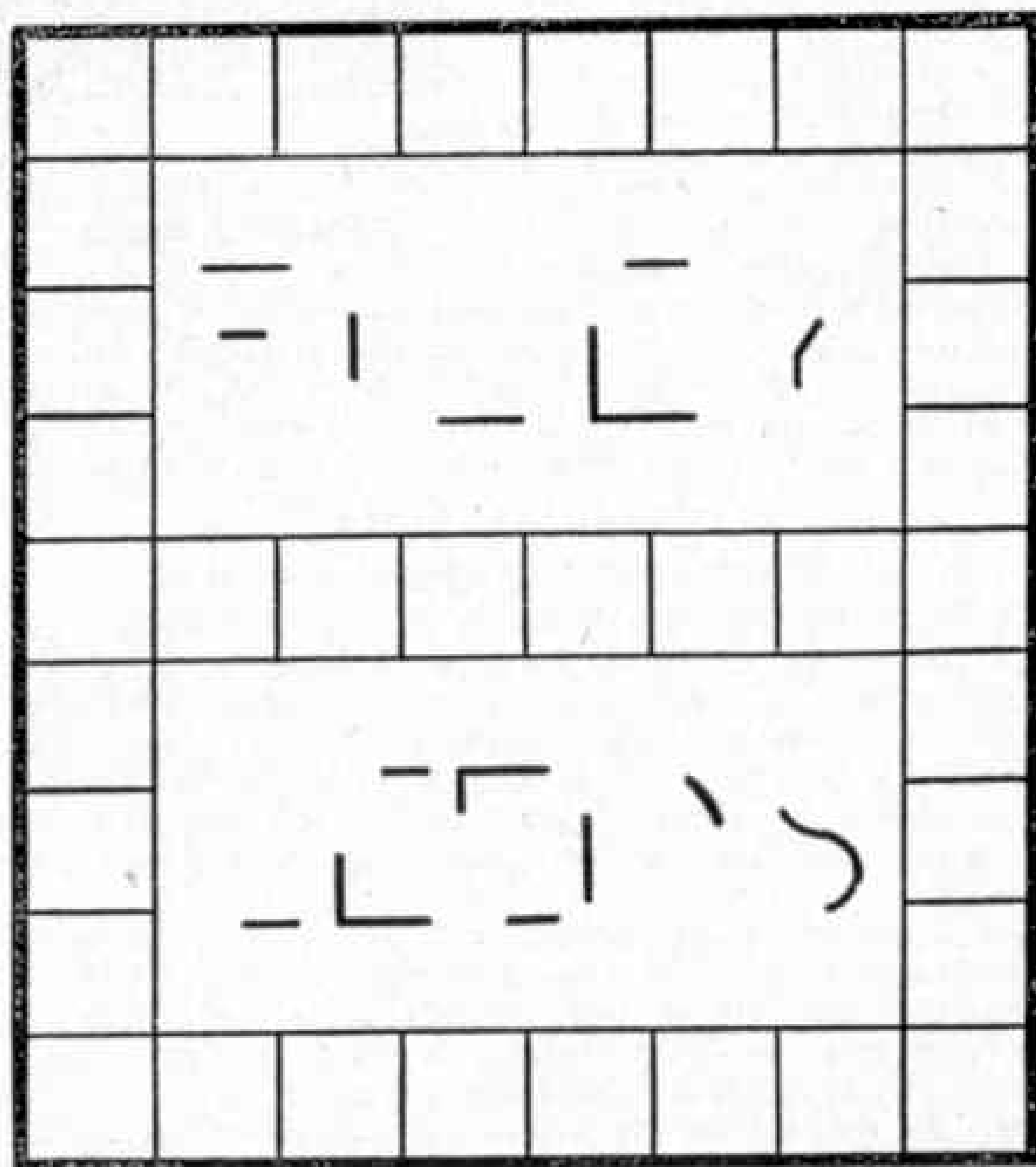
Have a good look at the tree drawn here and see if you can name the articles that have been placed on it by Santa Claus.

Just to help you I will say that there are ten of these Christmas gifts, all represented somewhere in the drawing by their names.



THE MAGIC LENSES

Uncle Sam's optician is a very wonderful man and one day he decided to play a trick. Instead of the usual ones he put magic lenses in Uncle Sam's spectacles and then gave him something to read. What he saw made him gasp, and no wonder. Can you say what he saw? Just to help you a little I can tell you that the answer is the name of an English town.



GEOGRAPHY, BUT IT'S EASY

Here is a peculiar kind of square made up of the names of seven places in England, Scotland or Wales. It will be a good idea for the young ones to have an atlas in front of them, but perhaps the grown ups

may think it more fun to try without the help of one.

Clues Across:

- A seaside resort in Kent
- A seaside resort in Sussex (reversed)
- A town in Worcestershire

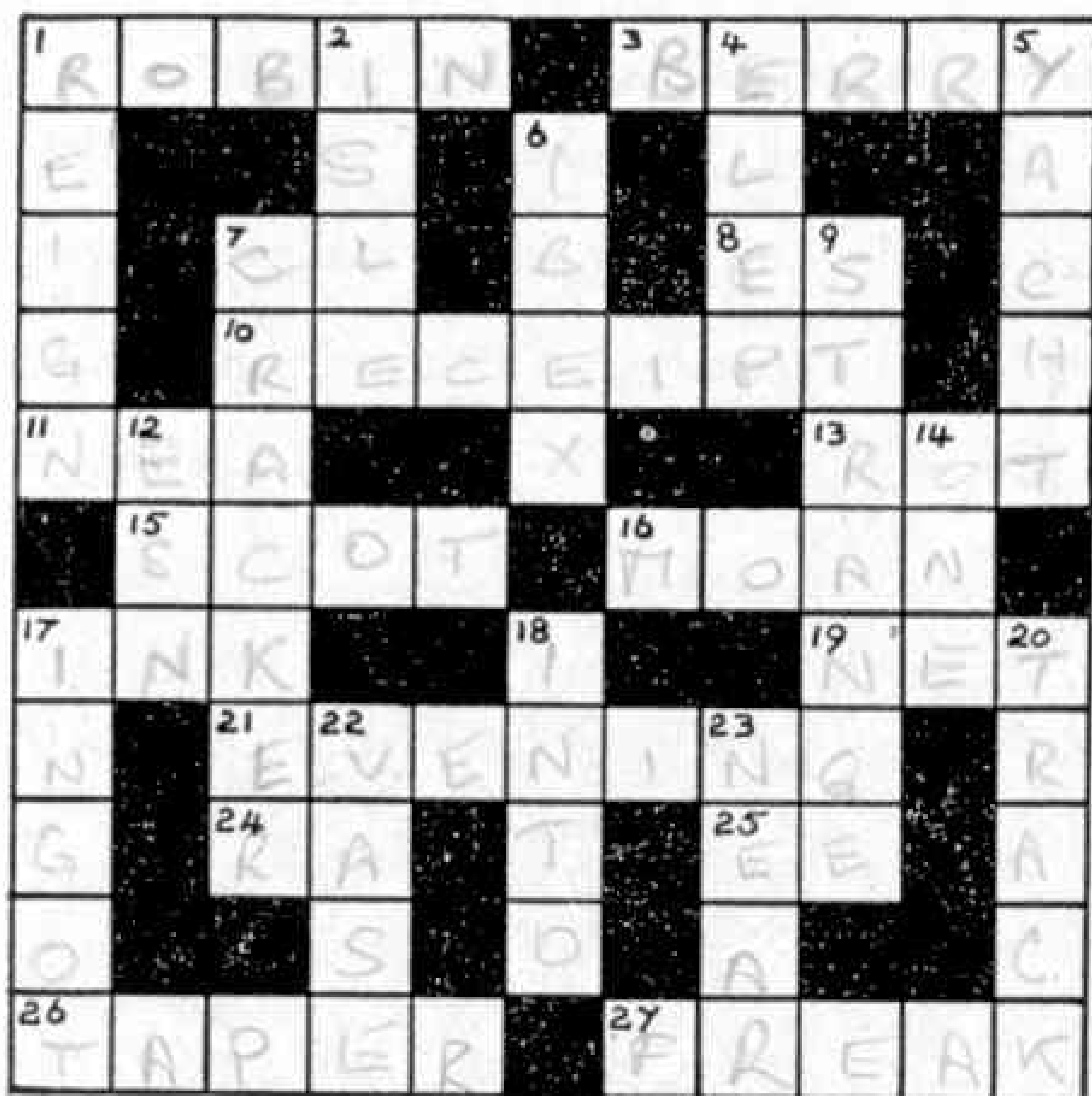
Clues Down:

- A place in Anglesey
- A city in Scotland connected with a Royal Duke

Complete the broken lines within the square and you will find a seaside resort and a city, both in Yorkshire.

A QUICK CROSSWORD

Here is something that will really test your knowledge—a ten minute crossword puzzle. It is not too difficult, so don't be afraid of it.



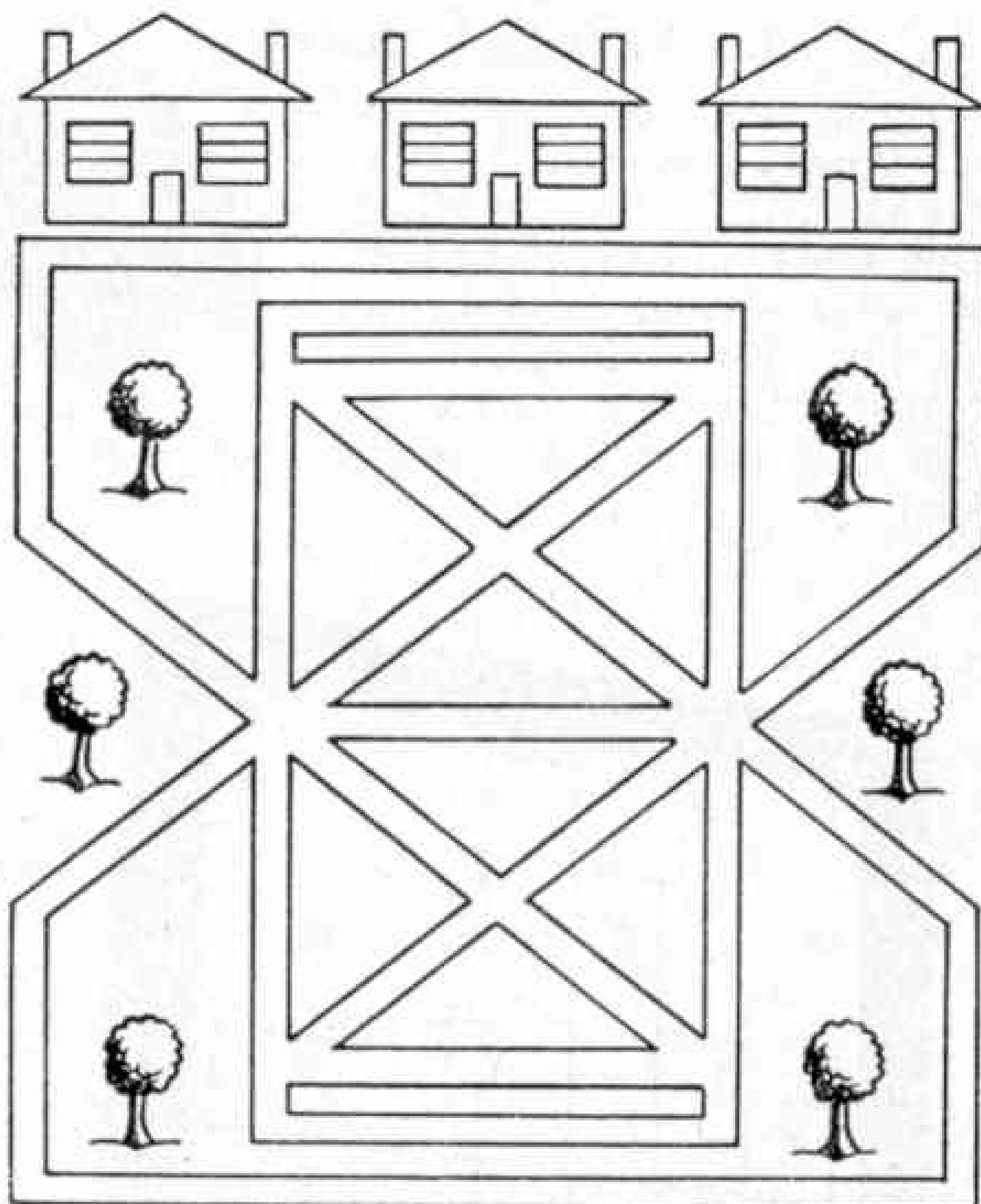
Clues Across:

1. A bird with a red breast.
3. A small stoneless fruit.
7. Civil Law (abbrev.)
8. Half of Espy.
10. Acknowledgment of money received.
11. Undiluted (curtailed).
13. Nonsense.
15. A native of Scotland.
16. A low murmur.
17. Fluid used for writing.
19. Meshes of cord.
21. The close of day.
24. Royal Academy (abbrev.)
25. Centre of heel.
26. A wick covered with wax.
27. Caprice.

Clues Down:

1. Period of a Sovereign's rule.
2. A small island.
4. One half of elephant.

5. A light vessel used for racing.
6. A wild goat with large horns.
7. An explosive firework.
9. Unaccustomed.
12. Edward Samuel Nelson (abbrev.)
14. A number.
17. Cast metal.
18. Expresses motion within.
20. A railway line.
22. A vessel.
23. Close to.



OUR POLICEMAN'S BEAT

The policeman on our new housing estate is a very wise man. On his beat he has quite a number of roads to cover, and every night he has to patrol each one. One day he decided to draw a plan of his beat—and he found that on one of his usual rounds every road could be covered without going down a road twice. Can you trace the way the wise policeman went?

WHICH STATION IS THIS?

Here is a nice easy one that everyone of you should be able to solve quickly.

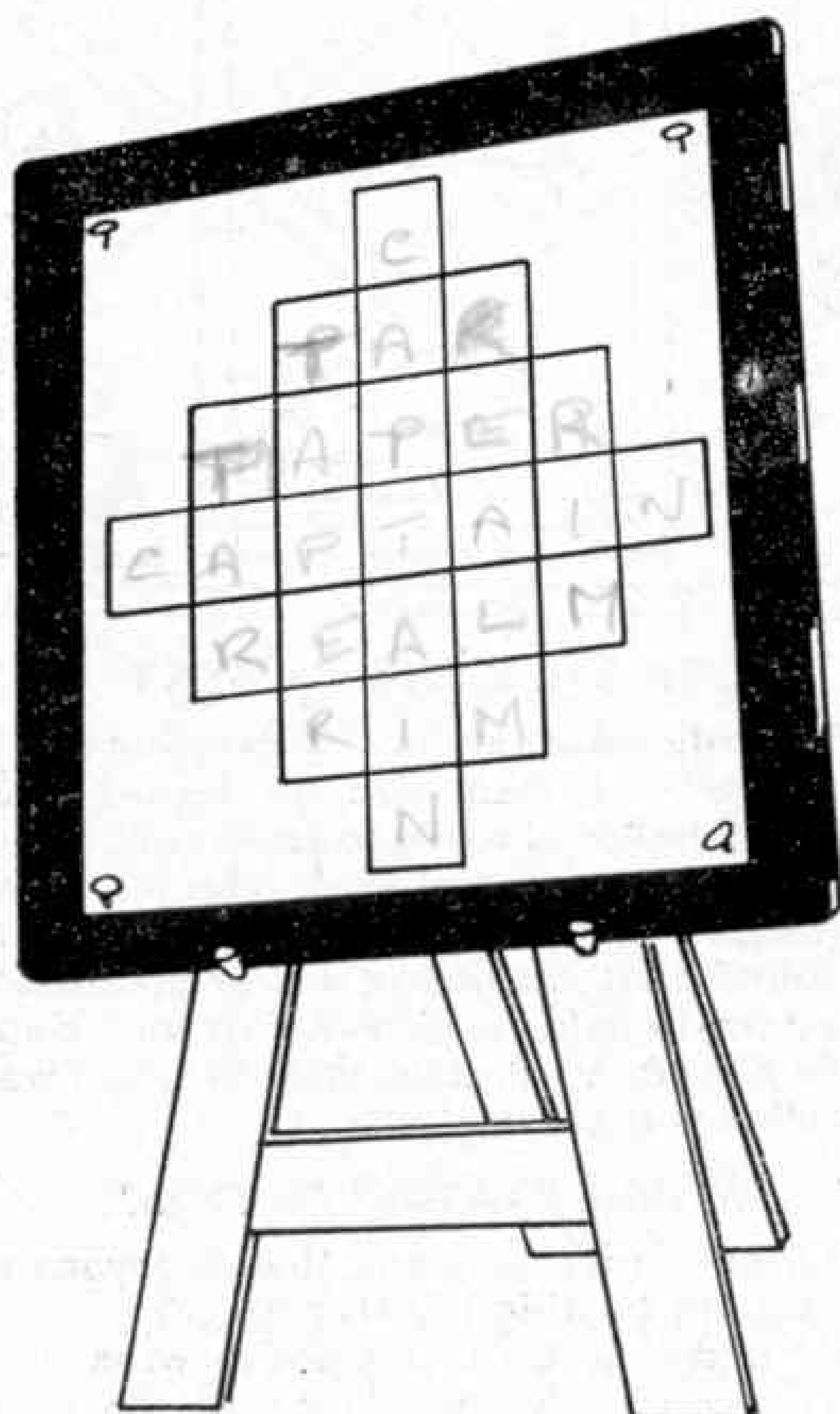
My first is in kiwi, but not in wren,
My second is in six, but not in ten,
My third is in prince, but not in duke,
My fourth is in George, but not in Luke,
My fifth is in ship, and also in skip,
My sixth is in chip, and also in clip,
My seventh is in railway, and also in train,
My eighth is in Poland, but not in Spain,
My ninth is in spine, but not in bone,
My tenth is in square, but not in cone,
My whole is a well-known station.

VERY TASTY, VERY SWEET

When you see a very heavily laden lorry go by your house do you ever stop to think what it may be carrying? Next time one passes your door just think of the one in the picture. This one is delivering something most people like, can you guess what it carries? One clue is that there is a special way of looking at it.

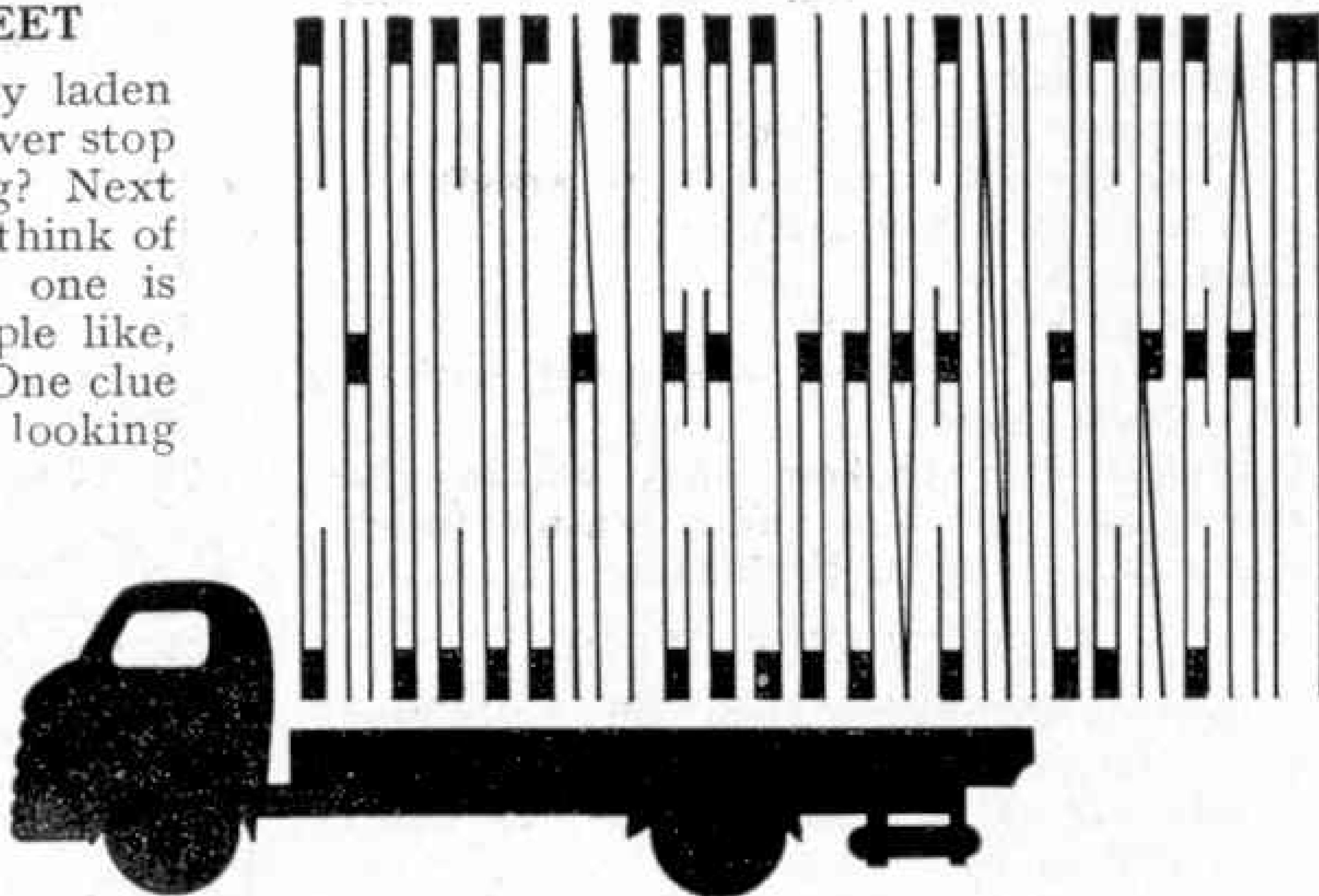
A WORD DIAMOND

Have you ever played at Word Diamonds? It's great fun. Our artist pretended that he was back at school again and drew up our word diamond on a blackboard on an easel. Can you fill in the words he has missed out?



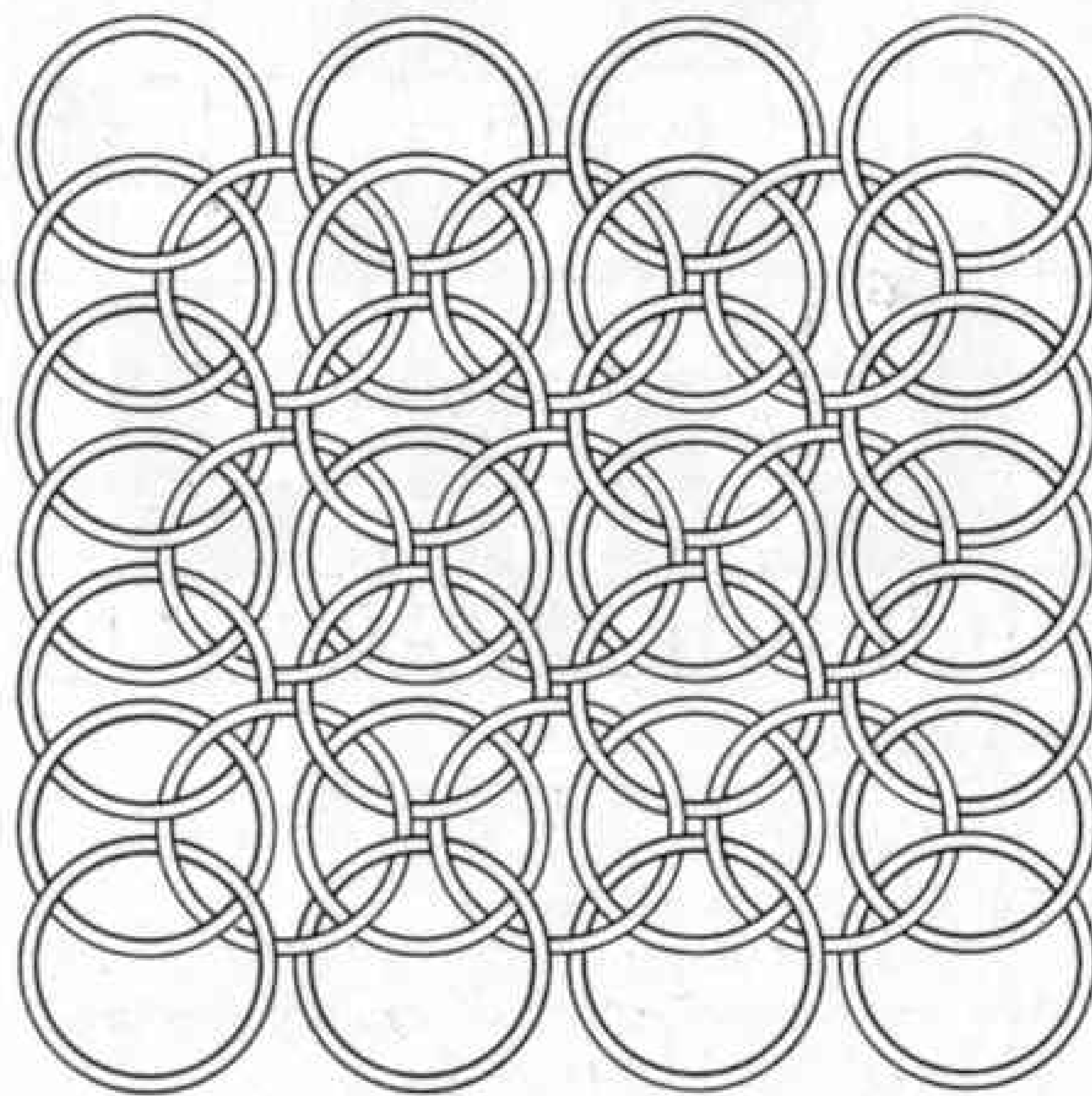
Clues Across:

1. A consonant.
2. Road repairers use this.
3. Often used when lighting a fire.
4. In command of a ship.
5. Region.
6. The edge of a wheel.
7. Another consonant.



HOW MANY RINGS ARE THERE?

Uncle Sam had set out all his rings, prior to giving the children a show, and left them tidily arranged on the small table while he went to find his magic stick, which is necessary for all magicians. But,



oh dear! While he was away naughty Pimpot got busy. He rang the changes on the rings so that his master experienced great difficulty in counting them to make sure they were all there. Can you help him by saying how many rings there are?

Don't ask me how Pimpot managed to entangle the rings so thoroughly. He must be a magician himself! He certainly puzzled poor old Uncle Sam.

And now, have you solved all the puzzles? If not, try again before turning to the solutions on page 592.



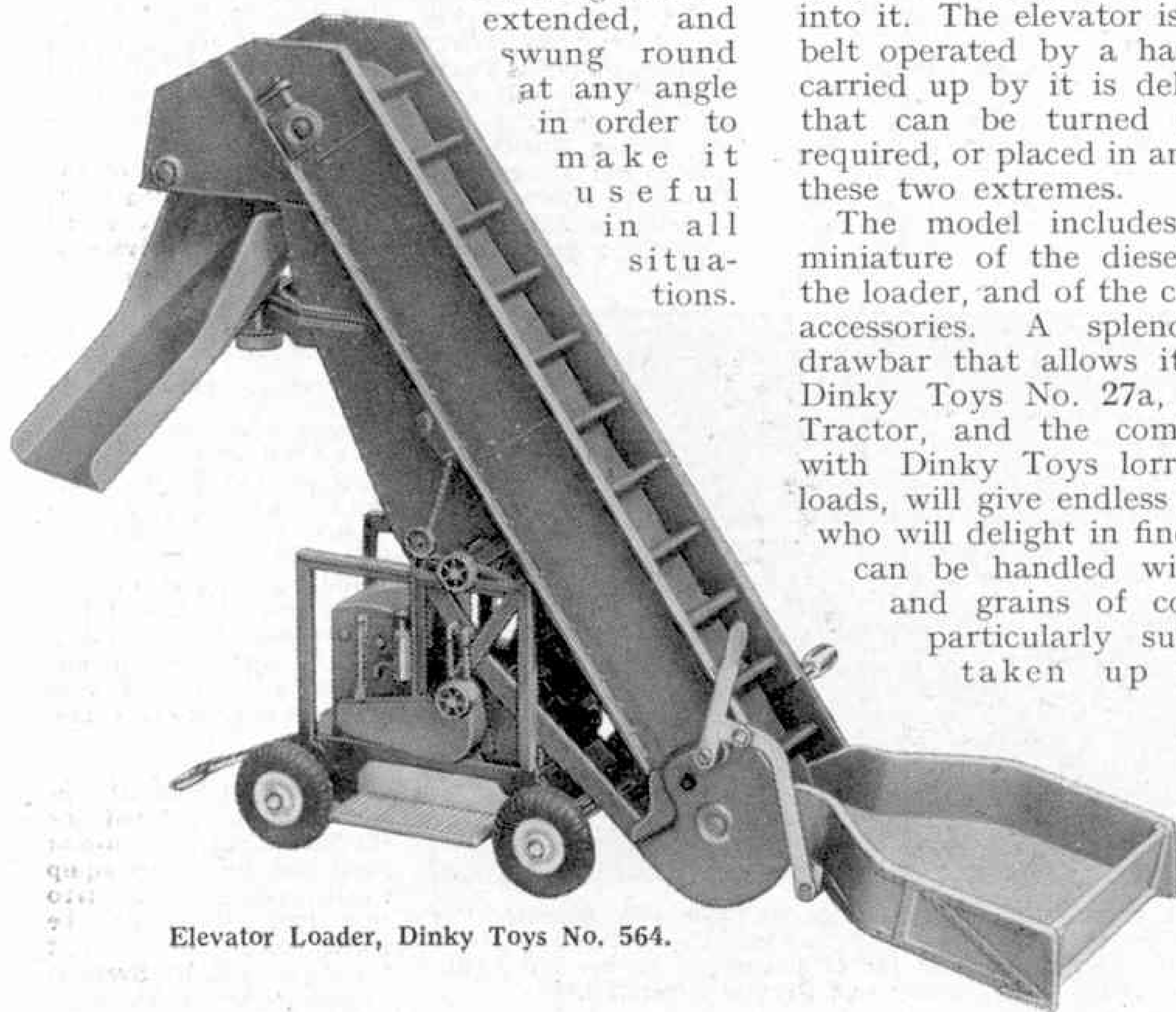
NEW DINKY TOYS

Fire Engine and Elevator Loader

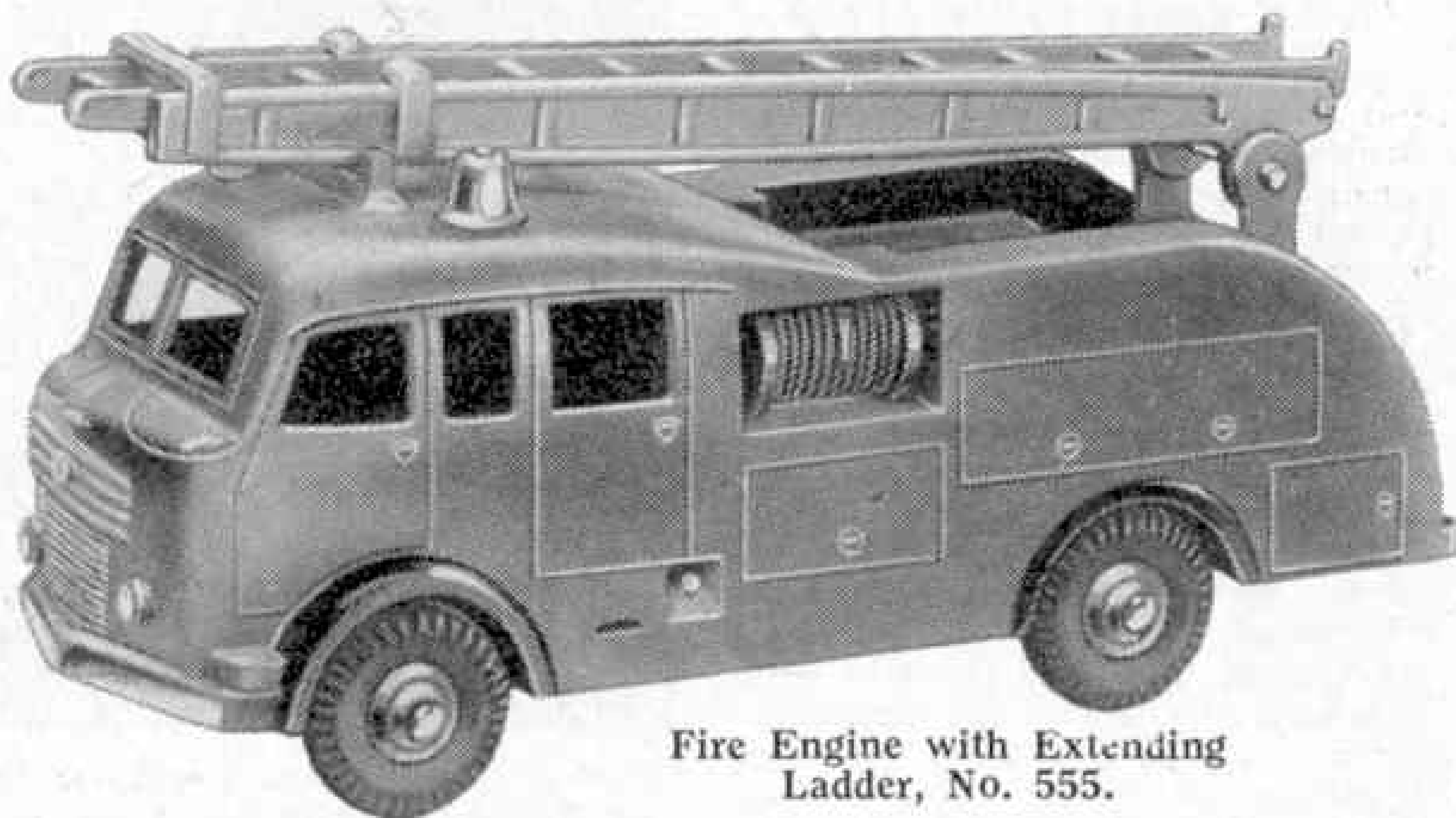
THE new Dinky Toys that were announced in last month's *M.M.* are really exciting. The Fire Engine, a water tender with an extending ladder, will delight all enthusiasts, and the Elevator Loader has fascinating movements that will give endless fun to its owners.

Let us look first at the Fire Engine, Dinky Toys No. 555. It is a miniature of one built by Hampshire Car Bodies Ltd., and is very modern in type, with every detail represented in a realistic manner, from reels of hose to the pumps. There is accommodation for the firemen in a special compartment behind the driver, and the ladder, which is hinged at the rear, can readily be raised into position for effecting rescues,

extended, and swung round at any angle in order to make it useful in all situations.



Elevator Loader, Dinky Toys No. 564.



Fire Engine with Extending Ladder, No. 555.

The Elevator Loader, Dinky Toys No. 564, is based on a versatile machine made by Barber-Greene, Olding and Co. Ltd., that loads a variety of materials efficiently and rapidly. The Dinky Toys model provides all the fascinating movements of a Loader of this kind. At its foot is the loading hopper, which is controlled by a handle that gives it two positions, in one of which it can be used as a scraper to collect material as the machine is backed into it. The elevator is an endless rubber belt operated by a handle, and material carried up by it is delivered by a chute that can be turned to either side as required, or placed in any position between these two extremes.

The model includes reproductions in miniature of the diesel engine operating the loader, and of the controls and various accessories. A splendid feature is a drawbar that allows it to be moved by Dinky Toys No. 27a, the Massey-Harris Tractor, and the combination of these, with Dinky Toys lorries to receive the loads, will give endless fun to enthusiasts, who will delight in finding materials that

can be handled with it. Small peas and grains of corn will be found particularly suitable. These are taken up neatly by the

compartments formed on the belt, and it is fascinating to load them into Dinky Toys lorries with the aid of the Elevator Loader.

Air News

By John W. R. Taylor

Walkie Talkies on the Airport

Maintenance engineers at London and Northolt Airports are using Marconi "Walkie-talkie" radios to speed air liner servicing and turn-round time. B.E.A. engineers for example, when sent to inspect dispersed aircraft use their walkie-talkies to call up and ask for spare parts, or to notify Control that an air liner is ready to embark passengers, as well as for marshalling aircraft on the tarmac.

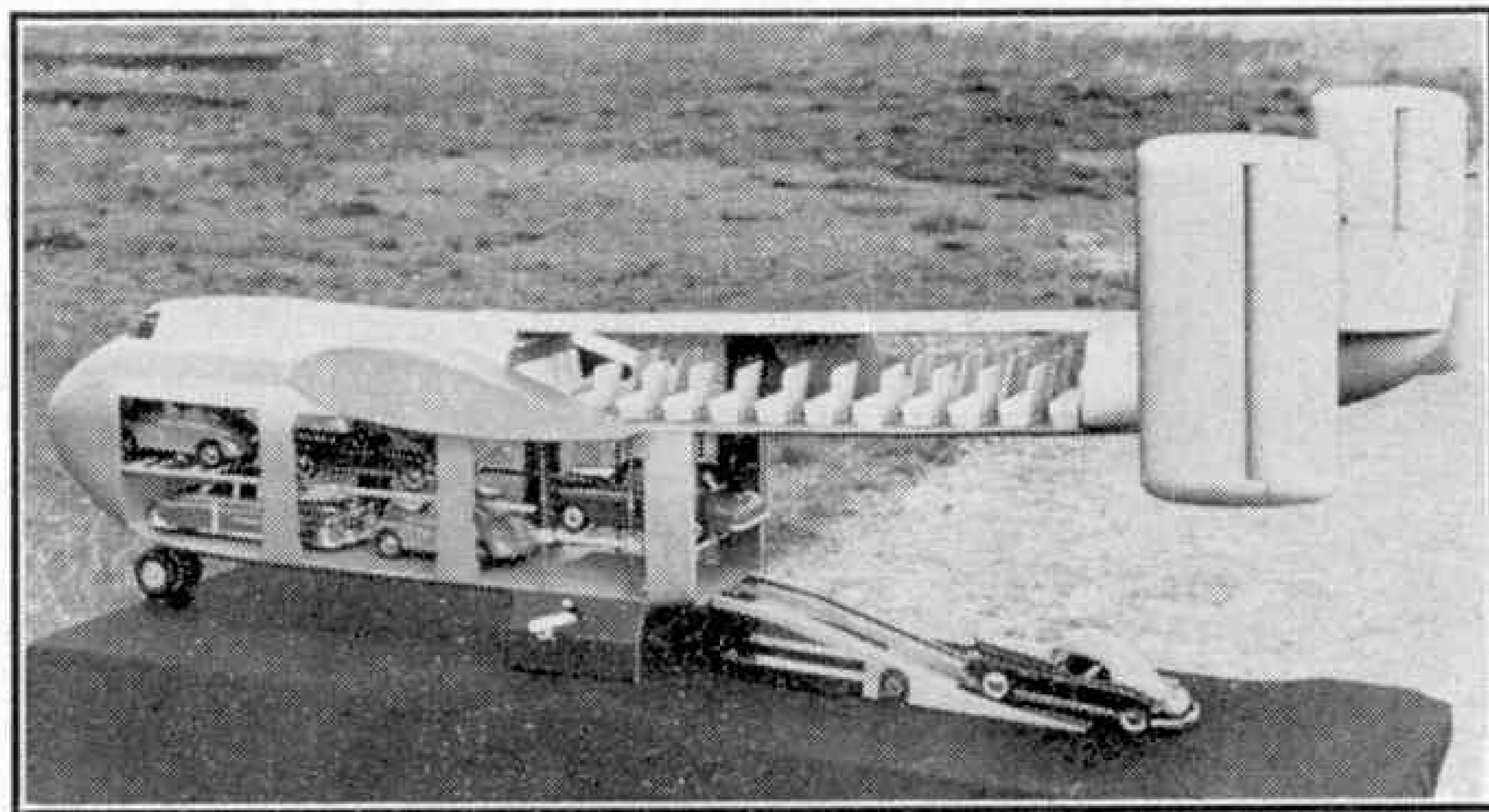
The walkie-talkies, which are, in effect, completely portable radio telephones, weigh under 15 lb. and are carried in packs the size of a shoe box strapped to the engineer's back. They are effective over the $3\frac{1}{2}$ miles of open airfield that separate the farthest dispersal from control points on London Airport.

Biggest Freighters Ordered

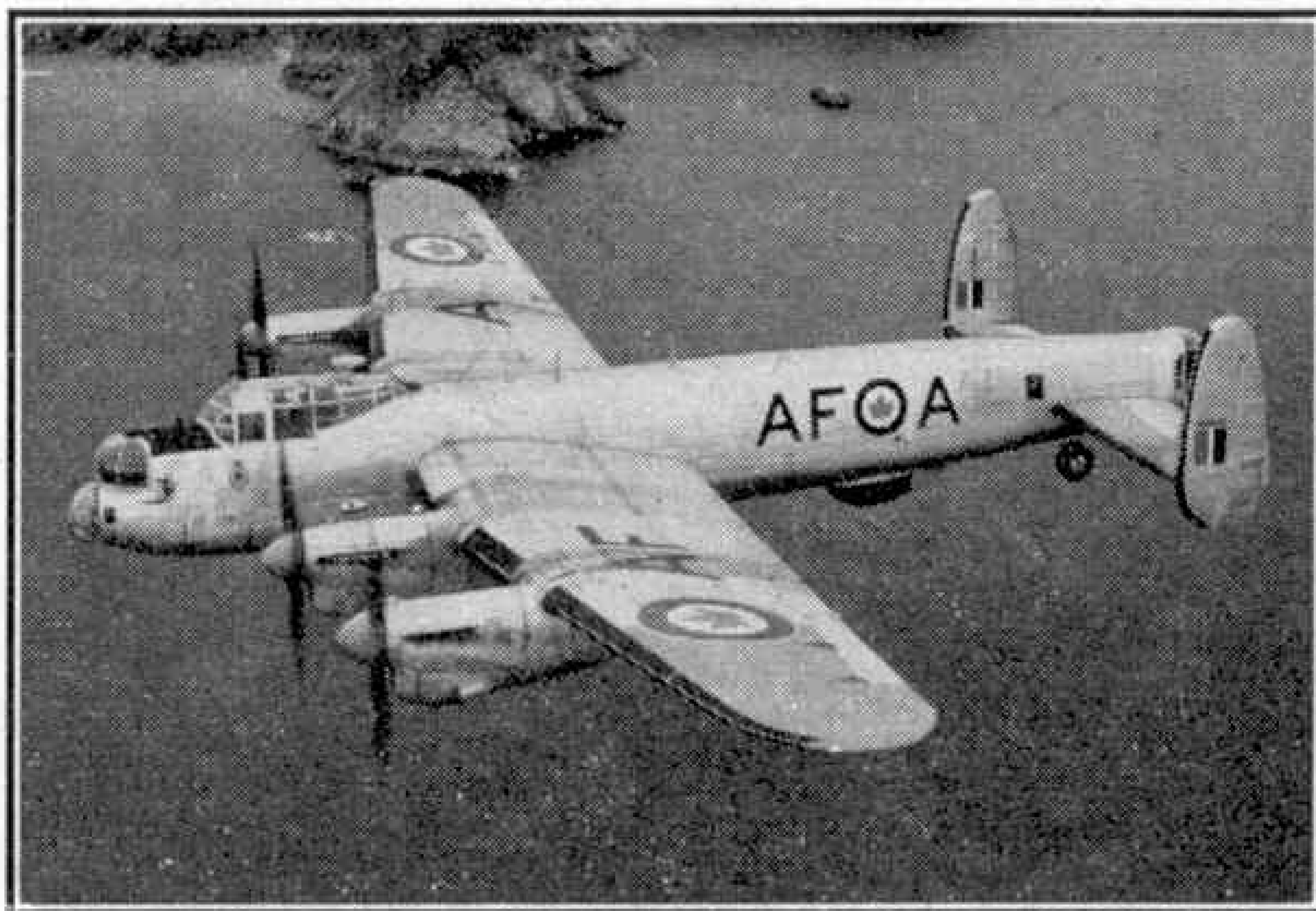
Long overdue, but no less welcome for that, is the news that about 20 Blackburn Universal Freighters have been ordered for R.A.F. Transport Command. They will be the biggest aircraft ever put into production in Britain, and the R.A.F.'s first modern, really efficient cargo transports.

The production-type Universal Freighter Mk.2, of which a prototype is now being completed at Brough in Yorkshire, will be a 60-ton aircraft, with a wing span of 162 ft., able to carry up to 22 tons of cargo. Its four 2,850 h.p. Bristol Centaurus engines will give it a cruising speed of 172 m.p.h., and sufficient power to operate from smaller fields than any current R.A.F. or U.S.A.F. heavy transport.

Some idea of its load-carrying capacity is given in the announcement that Silver City Airways, who have ordered three Universal Freighters for their cross-Channel air ferry at a total cost of nearly £1,000,000, plan to carry six motor cars, six motor cycles and 42 passengers at a time on the one-hour flight from Gatwick Airport to Cormeilles, near Paris. How they will do it is shown in the lower photograph on this page.



Working model of a Universal Freighter for service on Silver City Airways' car ferry, showing how six motor cars at a time will be carried. The cars will be raised to the upper deck by lift. There is seating for 42 passengers in the tail boom. Photograph by courtesy of Blackburn and General Aircraft Ltd.



One of several Avro Lancaster MK.10-MR over-water patrol aircraft of the Royal Canadian Air Force that visited the United Kingdom recently to take part in combined Services exercises.

Airship Flights Resumed

Following certain modifications proved necessary by its first flights last year, the Airship Club's little dirigible *Bournemouth* has now resumed flight trials at Cardington. With a crew of three, commanded by Capt. Beckford Ball, it made two successful flights on 8th September at a height of 200-300 ft. and a speed of about 25 m.p.h.

Most Powerful Twin

A new version of the Canberra B.Mk.2 bomber is the most powerful twin-engined aircraft ever flown, as it is fitted experimentally with two 9,750 lb. thrust Bristol Olympus turbojets. In simple terms, it has as much power as two whole squadrons of 1939 light bombers, but will not go into production as it is intended merely as a "flying test bed" for these outstanding British engines.

Even the Canberra cannot make full use of the Olympus's power in level flight, but some idea of its tremendous performance was given at this year's S.B.A.C. Display at Farnborough when the Olympus-Canberra shot up into a rocket-climb that ended long after it was out of sight above the clouds.

Korea Air Lift

Some idea of the air transport effort supporting United Nations' forces in Korea is given by the fact that more than 150 million aircraft miles were flown over the U.S.-Japan supply route in two years. This is equivalent to one 14,000-mile round trip every 96 min. of every day.

The Royal Swedish Air Force have ordered de Havilland Venom two-seat night fighters to re-equip their present Mosquito squadrons. They will be fitted with D.H. Ghost turbojets built by Svenska Flygmotor of Stockholm.



The twin-engined Bristol 173 helicopter at this year's S.B.A.C. display at Farnborough. Photograph by courtesy of Mr. H. Stewart.

Bristol 173 Progress

Britain's first twin-engined helicopter, the Bristol 173, is now flying well, with no signs of the vibration trouble experienced with earlier twin-rotor helicopters. As a result, it is quite likely that B.E.A. will operate a small number of 173s until the bigger, winged Type 181s become available. With 17 seats instead of the normal 13, they would probably be the first helicopters able to operate commercially at a profit.

Japan Buys British

First aircraft ordered from Britain after the ban on Japanese civil aviation was lifted this year were an Auster Aiglet Trainer and a number of 4-seat Autocars. This brought to 75 the number of countries in which Austers are flying, which must be a record for any current aircraft types.

Soon afterwards, de Havillands received orders from Japan for about £1,500,000 worth of Comets, Herons and Doves. Two Comet 2s will be built for Japan Air Lines, who plan to use them on services to India, Europe and eastward across the Pacific. The same airline will use three 14-17 seat Heron four-engined light air liners on a network of local routes that will augment the company's main internal route served by Martin 202s. Three of the Doves have been ordered by a new privately-owned airline based at the industrial centre of Nagoya; the other by the *Mainichi* newspaper.

Airborne Isotopes

To meet demands from 37 countries, the Atomic Research Establishment at Harwell sends abroad more than 3,000 consignments of radio-active isotopes each year. Most of them travel by B.O.A.C. Argonaut air liners, in special wing-tip containers. These reduce the cost of transport by about 60 per cent., as they are far enough from the fuselage to obviate need for heavy lead containers to protect aircrews and passengers from radiation.

It is probable that

B.O.A.C.'s Avon-powered Comet 2s will be fitted with similar wing-tip containers in due course.

Flying Palace

King Ibn Saud of Saudi Arabia has ordered a DC-4 Skymaster to replace his present DC-3 personal transport. Extra-special features of the new aircraft, which is being converted by Transocean Airlines at Oakland, California, include a royal bed and an elevated, revolving throne complete with safety belt.

Germany Restarts Rocketry

A group of German scientists, headed by Professor Albert Puellenberg, have begun a series of experiments with mail-carrying rockets from a heath near Bremen. If they receive support from the German Post Office they plan to open a network of rocket mail services covering the whole of Germany within four years. First rockets would have a range of only 20 miles, but Professor Puellenberg believes that progress would be so rapid that it would soon be possible to have mail delivered in New York 45 min. after it left Germany.

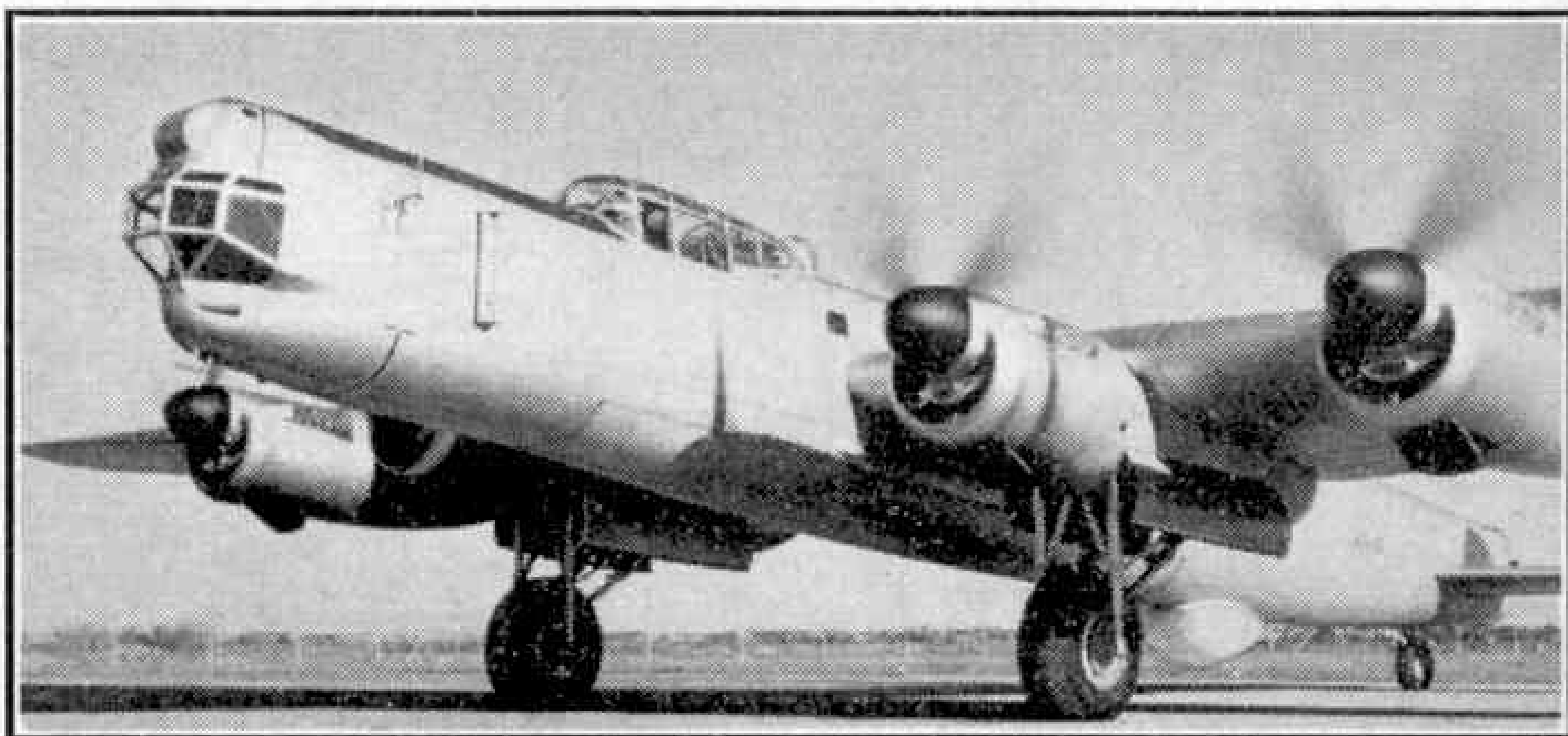
Longer Lincoln

The Avro Lincoln bomber shown in the bottom picture on this page is the first of several being converted at the Australian Government Aircraft Factory, Fisherman's Bend, Port Melbourne, for long-range anti-submarine patrol duties off Australia's North and East coasts. Its nose has been lengthened by 6 ft. to accommodate special radar search equipment and two additional radar operators.

Largest aircraft ever built in the Commonwealth, Lincolns have been in production for the Royal Australian Air Force at Fisherman's Bend for some years, and many of them have been in action against terrorists in Malaya. Their place on the assembly line has been taken by Canberra jet bombers, but two R.A.A.F. squadrons are scheduled for re-equipment with these specially modified Lincolns, the first being No. 10 Squadron, stationed at Townsville, Queensland.

Avro 698 Named

The name chosen by the Air Council for the Avro 698 delta-wing bomber (see pages 540-2) is Vulcan. A special article on this important aircraft, which is in production for R.A.F. Bomber Command, will appear in an early issue.



Avro Lincoln with 6 ft. longer fuselage, modified in Australia for anti-submarine duties. Photograph by courtesy of Royal Australian Air Force.

Inspection Train's A-Comin'

By George A. O'Brien

It was a big day at the old depot when the top brass roared through town. What this means you will see when you read this story, reproduced by kind permission of the Editor of Tracks, the magazine of the Chesapeake and Ohio Railway—The Editor.

THE blow fell one morning in early summer. The first notice was a tightly packed envelope addressed to the agent and marked "Important—Open at Once." The agent did so. And then the whole station rocked as though an earthquake had shaken it.

The envelope contained the information that a number of high officials—called brass collars by the vulgar—would descend on the division tomorrow at a certain time. The agent, being an excitable person, came tearing 'round to the baggage room. He routed the janitor and two baggagemen and stunned them with the information that they had twenty-four hours to scrub, wash, lave, sprinkle and remove all odour and contamination.

There was a concerted groan. The porter envisioned his ten-minute siesta blasted off the calendar. The baggagemen glared at each other and slowly unhooked themselves from their chair cushions.

By this time the agent was dancing, first on one foot, and then the other.

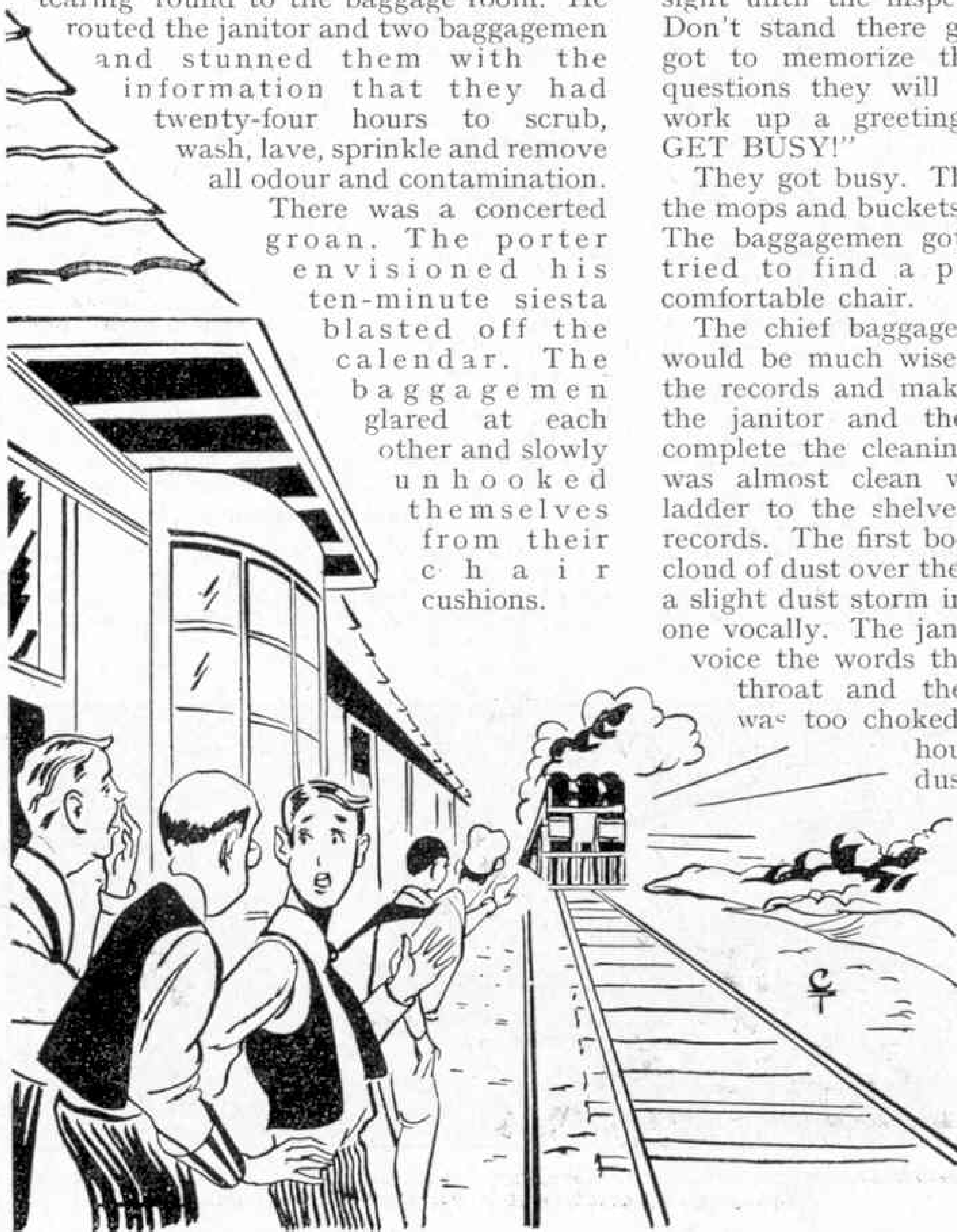
"Clean this place up. Get rid of all that trash and them boxes and that worn-out suitcase. Move that desk. Scrub the place. I want every window shining. I want a complete record of the number of pieces of baggage and mail handled and a comparison statement of the same time last year. I want a record of cash received to date, and one for all of last year. And I want you to get those two chairs out of sight until the inspection train has gone. Don't stand there gawking at me. I've got to memorize the answers to sixty questions they will ask me; I've got to work up a greeting, and memorize it. GET BUSY!"

They got busy. The janitor brought up the mops and buckets and window brushes. The baggagemen got the trash out, and tried to find a place to hide their comfortable chair.

The chief baggageman then decided it would be much wiser for him to look up the records and make the reports and let the janitor and the other baggageman complete the cleaning. The baggageroom was almost clean when he ascended a ladder to the shelves to secure the back records. The first book he moved raised a cloud of dust over the entire room, creating a slight dust storm in the air and a major one vocally. The janitor was too angry to voice the words that were crowding his throat and the other baggageman was too choked up.

Nearly half an hour passed before the dust settled and a truce partly calmed the place. But not before the chief baggageman, the one who had stirred up the tempest, received detailed, colourful descriptions of himself and all his family.

A big day at the old depot.



In the meantime, the nervous agent was trying to memorize the list of do's and don'ts included in the six-page questionnaire which the supervising agent had mimeographed and forwarded to him. He was as jittery as an amateur actress making her first appearance.

When the janitor opened the door he was standing in the lobby rehearsing the welcome. His hand was extended and his eyes were closed and he was saying:

"How do you do? Welcome to our community. I hope you will like it."

The bewildered janitor stood eyeing the agent as he repeated the formula and then, dropping his pail and cloth, he grasped the agent's outstretched hand and remarked warmly: "Thank 'ee sir. I do like it. I always did like it here."

He was pumping the agent's hand up and down vigorously when that astonished person tore loose and let out a squall that could be heard all over the station.

"Get out of here, you half-wit," he screeched at the now bemused janitor. "I wasn't talking to you. Get out there and get busy!"

The janitor beat a hasty retreat, muttering to himself, "The man's crazy. He says howdedo and do I like it here and shakes hands and then bawls me out. Then he says he's talking to himself and don't want no answer. Everybody's gone clear outright daffy."

The rest of the day he spent shaking his head in wonderment and dodging the agent.

The next morning was a bit calmer and the entire crew was on its toes, waiting. The agent was hopping from one thing to another, still carrying his questionnaire and glancing at it now and then. It was a bit hard to understand him, because right in the middle of an instruction to lock up all the trucks, he would glance at the paper and say:

"Yes sir. We have fourteen major industries, all of which are connected by

sidings with"—and then break off to ask—"who set that load of milk out in the sun?"

At ten fifteen the operator at the tower two miles down the line said, "Get on your toes. She's passing here with all of the division brass on the rear end."

The agent hopped faster than ever now. He hustled the entire station force out on the platform and lined them up, himself at the head, the ticket clerk next, the freight

and claims man and the two baggagemen next and the perspiring and worried janitor at the last. With a final look around, he threw out his chest, straightened his tie and brushed back his hair as the engine and one car came down the line toward them. When the engine reached the far end of the platform, he cleared his throat and prepared to stick out his hand. But it wasn't necessary. The engineman waved a friendly greeting and widened on his throttle. The train picked up speed and thundered past, leaving a

dumbfounded station crew staring after it.

The worried agent was chipper as a lark. "They didn't stop. Everything in sight was in order. More than likely the supervising agent will compliment us."

How wrong. An hour later he was dancing around in rage over the telegram he was reading.

He grabbed his hat, slammed it on his head and said: "I'm going up to Henry's Restaurant and I won't be back for two hours." As he left the station door he turned and shouted, "Here read this!" as he threw the crumpled yellow telegraph blank to the floor.

The chief baggageman picked up the paper, held it at arm's length, and slowly read it to the others:

"Agent at Jasper: Explain by wire why your baggagemen and janitor not wearing uniform caps specified by rules. This serious oversight your part."

The telegram was signed with the supervising agent's initials!



"Welcome to our community. I hope you will like it."

A Letter from Santa Claus!

By Joseph Castle

TOWARDS the end of the 1840s a small band of pioneers found themselves wandering amongst the rolling hills in the Spencer County of southern Indiana.

suggestions were made, each member thinking his the best and most suitable, but none met with all round approval. Just when the task seemed almost hopeless,

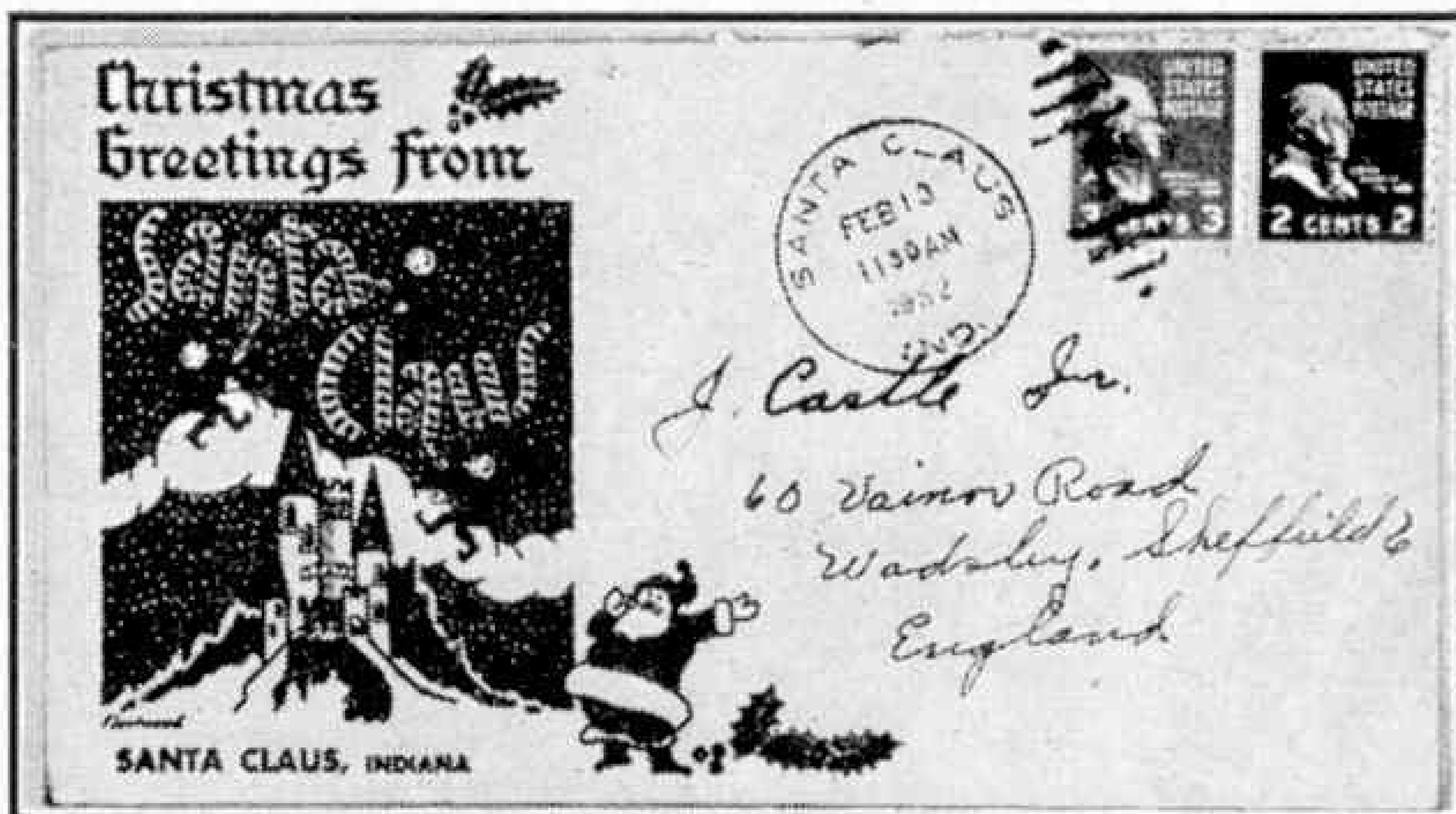
the door was suddenly flung wide open and into the room walked the bewhiskered, white-haired old gentlemen, Santa Claus himself, carrying on his back a sack full of gifts to be exchanged!

Then amidst all the excitement a very strange thing happened. Someone had an idea. Why not call the village after him? This was a most unusual suggestion, and indeed one that would never have been thought of in the normal course of events. The discordance previously voiced vanished, and there was

unanimous agreement.

So Santa Claus came into being, and is now 100 years old. Without a doubt these extraordinary circumstances will be recalled this Christmas Eve when the present 36 inhabitants celebrate the centenary of the naming of their village.

At this time of the year millions of letters and parcels arrive in Santa Claus, just to be franked with the famous postmark seen in our upper illustration and sent on to their happy recipients.



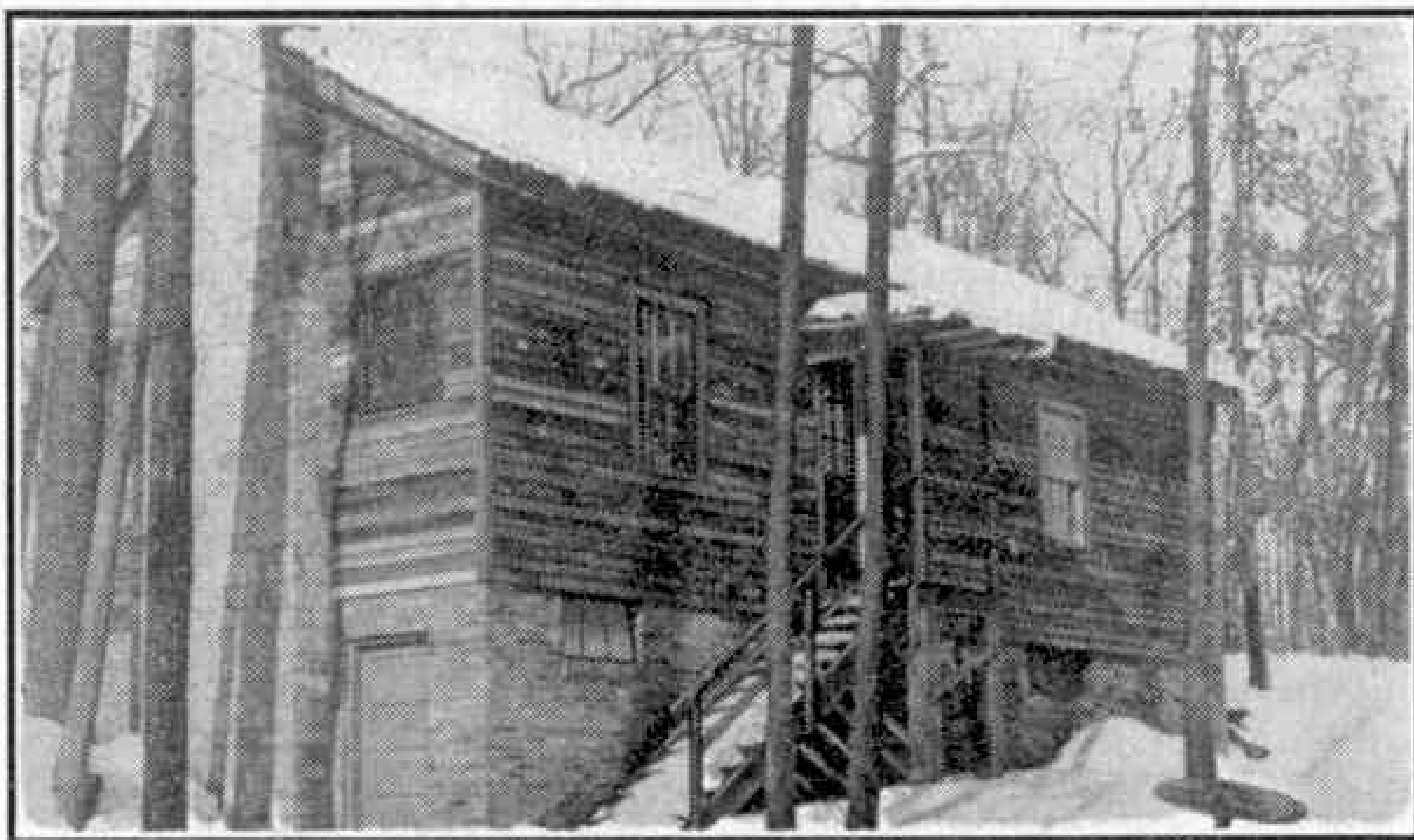
Look at the postmark of this letter. It could only have come from one place in the world, the village of Santa Claus in Indiana, in the United States. How this village got its name is told on this page.

They were farmers, and knew only too well that their very existence depended upon settling down in some suitable place where they could cultivate the land. Here they found it and from morning till night, month after month, the men and women toiled on the newly-won acres.

Life indeed was far from easy, but they were an industrious people who devoted all their energies to raising their first crops. In due season they reaped the fruits of their labours and were so encouraged by the result that they decided to settle in the area. There was still much hard work to be done, but even so the folk helped in the construction of a grist mill and actually built their own tiny church.

They were a happy self-contained community. Yet one very important thing they still lacked—a name for the village. From time to time the matter was discussed, but without anything definite being decided upon.

It was at the community party on Christmas Eve, 1852, that the topic was again raised. Many



Santa Claus is now 100 years old! This is the original post office of the village, built in 1856.

Photography at Christmas

By E. E. Steele

CHRISTMAS holidays provide plenty of opportunities for making pictures of the many festivities, with ample leisure to make full use of them, while a great many people owe their interest in photography to the most welcome gift of a camera on Christmas morning. It is not a bad plan to drop a gentle hint in family circles concerning one's photographic requirements, for some kindly person may be wrestling with the knotty problem of just what to give. For those who possess a camera, there are filters, developing outfits, and many interesting sundries, very acceptable to the budding photographer.

Things to photograph are everywhere at Christmas—the new and shining presents, the Christmas tree, the Christmas party, and so on—and there should be no difficulty in getting real happiness into snaps at this season. Many subjects will have to be taken indoors, and this always brings the problem of exposure to bother us. However, shots can be taken by daylight in well-lighted rooms if short "Time" exposures are given, with the camera on a firm support. Mixed lighting can be employed very successfully if a "Photoflood" lamp is used to supplement the daylight. These lamps cost only about two shillings each, and give a terrific light compared with the usual house lighting, while one lamp will serve for a great many exposures if it is



The carol singers. The illustrations to this article are from photographs by the author.

only used for the actual taking of the picture. The setting up and focusing of the camera can be done by ordinary room lighting.

When using different kinds of lighting, or two light sources, one of them should be made to predominate over the other. With two lamps this is arranged by placing one of them nearer to the camera than the other, the second lamp being set to one side of the subject to give good modelling.

It is assumed, of course, that you will be using fast panchromatic film, which is much more sensitive to artificial light and will shorten your exposures considerably. Indeed, with two photoflood lamps and fast film it is possible to take snaps with the camera held in the hand, provided that one has a camera with a fairly fast lens, say one with a maximum aperture of $f/4.5$. It is always wise to make a previous trial before running off a great many exposures.



New Friends.

Crater Made by Giant Meteor

An Exciting Canadian Discovery

PREPARATIONS are now being made for an expedition next spring to the bleak, barren hills of Northern Quebec to drill down through the black rock to the world's largest meteorite.

The colossal crater this made 15,000 years ago was found two years ago by a Canadian prospector named Chubb. He was looking for gold and diamonds—and he discovered what he called “an immense hole looking like a great tea cup tilted at a steep angle.” Chubb's crater proved to be two miles across and nearly 1,400 feet deep.

Up to then the Turukhansk Crater in Siberia was considered to be the largest in the world. The British astronomer, Professor Kirkpatrick, calculated that had the meteorite that made it fallen 5 hours 46 minutes earlier on that day in 1908, it would have completely destroyed the great city of St. Petersburg, or Leningrad, as it is called today. It would, indeed, have accomplished a great deal more than the destruction of Leningrad; scores of surrounding villages would have been obliterated!

It was fortunate that the Turukhansk district was almost uninhabited. The blast of the meteorite flattened trees 50 miles from the point of impact, blew men off their feet 100 miles away and rocked houses 400 miles distant. The roar of the “explosion” was heard 1,000 miles away, and the impact itself was recorded on seismic instruments at a distance of 12,000 miles!

The impact of the Chubb Meteorite must have been infinitely greater. For it made a crater twice the size of that at Turukhansk!

When prospector Chubb reported his discovery, Dr. Victor Meen, of the Toronto Royal Museum, fitted out an expedition to investigate the new crater. Flying northward in a Norseman fitted with skis, he and Chubb landed on the frozen surface of the lake at the bottom of the crater, and scrambled up the steep, broken rock towards its rim.

“The impact,” he reported later, “made a great depression 1,350 feet deep, threw up a circular rim of rock 550 feet in height and, as a stone causes ripples in water, so the impact of the Chubb Meteorite is recorded in ripples from 35 feet to 50 feet high extending for two miles from the centre of the crater.”

Meteorites usually explode as they enter the Earth's atmosphere, and the larger ones do so as they strike home. The Meen Expedition failed to find so much as one

meteoric fragment. This suggested that the great meteorite lay buried deep in the rock beneath the lake, and for three weeks Dr. Meen worked with magnetic instruments around the rim of the crater. But no! The magnetometers gave no indication of the presence of a meteorite.

The problem of what had happened to the immense missile that made the Chubb Hole remained unsolved until Dr. Meen ordered the magnetometers to be packed

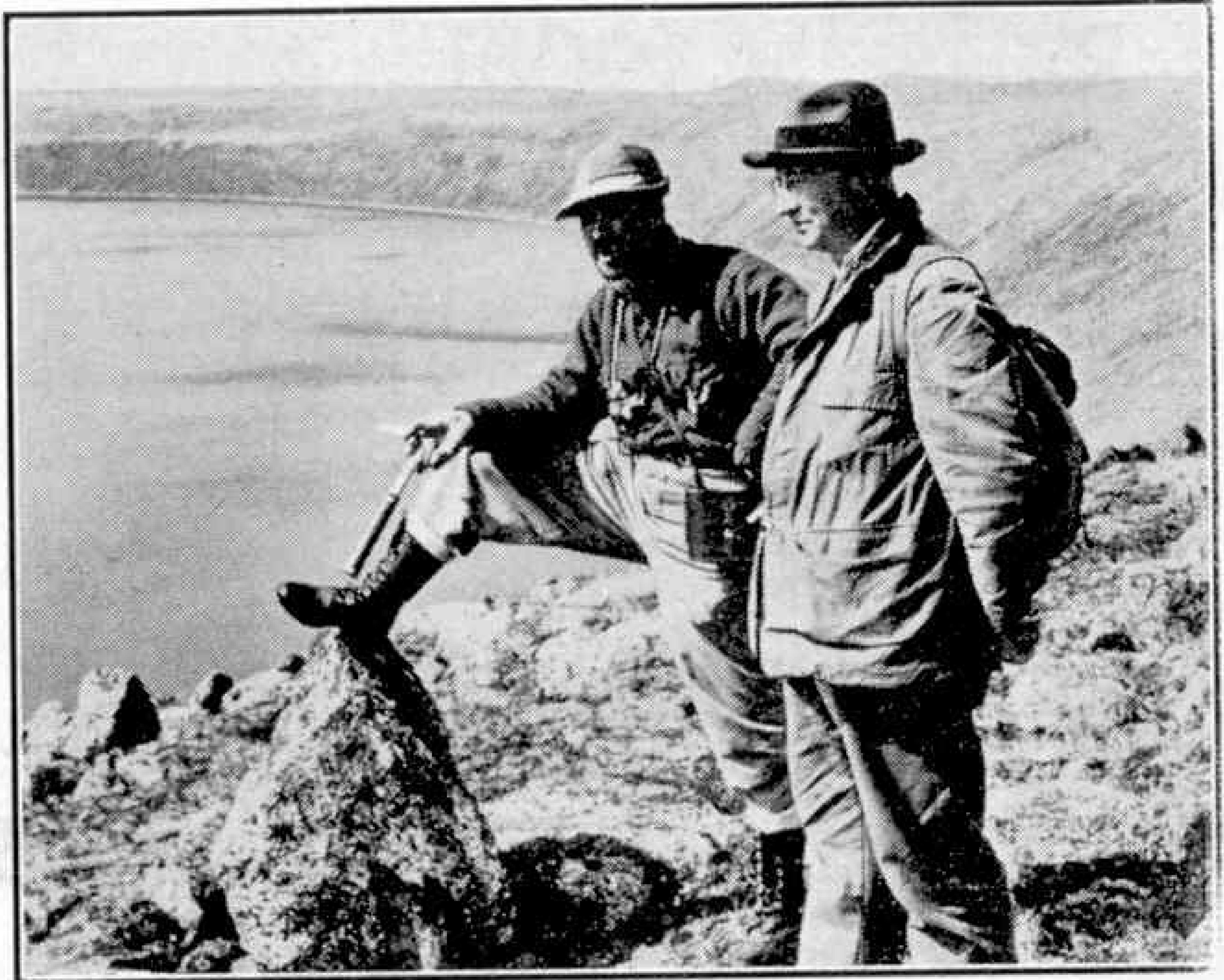
Chubb Crater, in the far north of the province of Quebec, Canada, is six and a half miles in circumference, and the water that has filled it is nearly 1,400 feet deep. It was made by a giant meteorite crashing into the solid granite of the region and is named after the prospector who discovered it. Our heading illustration shows the oval water-filled crater as it is seen from an aeroplane flying over its surroundings.

up and loaded into the expedition's aircraft.

"There we stood on the rim of the crater," he wrote in his official report, "gazing across a water-filled saucer with rock walls rising steeply in a slope of 45 degrees. No sound broke the silence except for the grinding of the ice on the surface of the lake and the wind blowing across the rim of the crater."

He was satisfied that the immense depression at his feet *had* been made by a meteorite. But he had failed to locate the meteorite itself. And he had actually given the order to "pack up and go home" when prospector Chubb reported that one of the magnetometers had "picked up something under the eastern rim of the crater."

Sure enough the magnetometers *were* reacting to "something under the eastern rim." There was no indication of mineral deposits in the area around the crater, but time and again the magnetometers vibrated over one small area on the crater's rim.



Mr. Chubb, the prospector who discovered the great Canadian meteorite crater, surveys it in the company of Dr. Meen, the scientist who led the expeditions that explored it.

Later it was found that the excavation, now filled with water, was 1,350 feet deep, and meteorite fragments, some weighing hundreds of pounds, were detected in the area around the crater. There can be little doubt that Meen had discovered what he had set out to discover—the greatest meteorite in the world.

The Chubb Meteorite may prove a valuable source of minerals. For in all probability it is almost pure iron and nickel—a vast chunk of metal buried deep in the black rock of Northern Quebec.

As such the Chubb Meteorite would be the largest single deposit of iron and nickel in the world, and these two are in high demand these days: hence the preparations to drill down to the meteorite to discover its size—and richness. A noteworthy point is that the crater that it made is the first discovered on Earth that is larger than the smallest crater detected on the Moon.



Members of the exploration party in camp alongside Chubb Crater. Photographs, Polar Photos.

Radar in 1904!

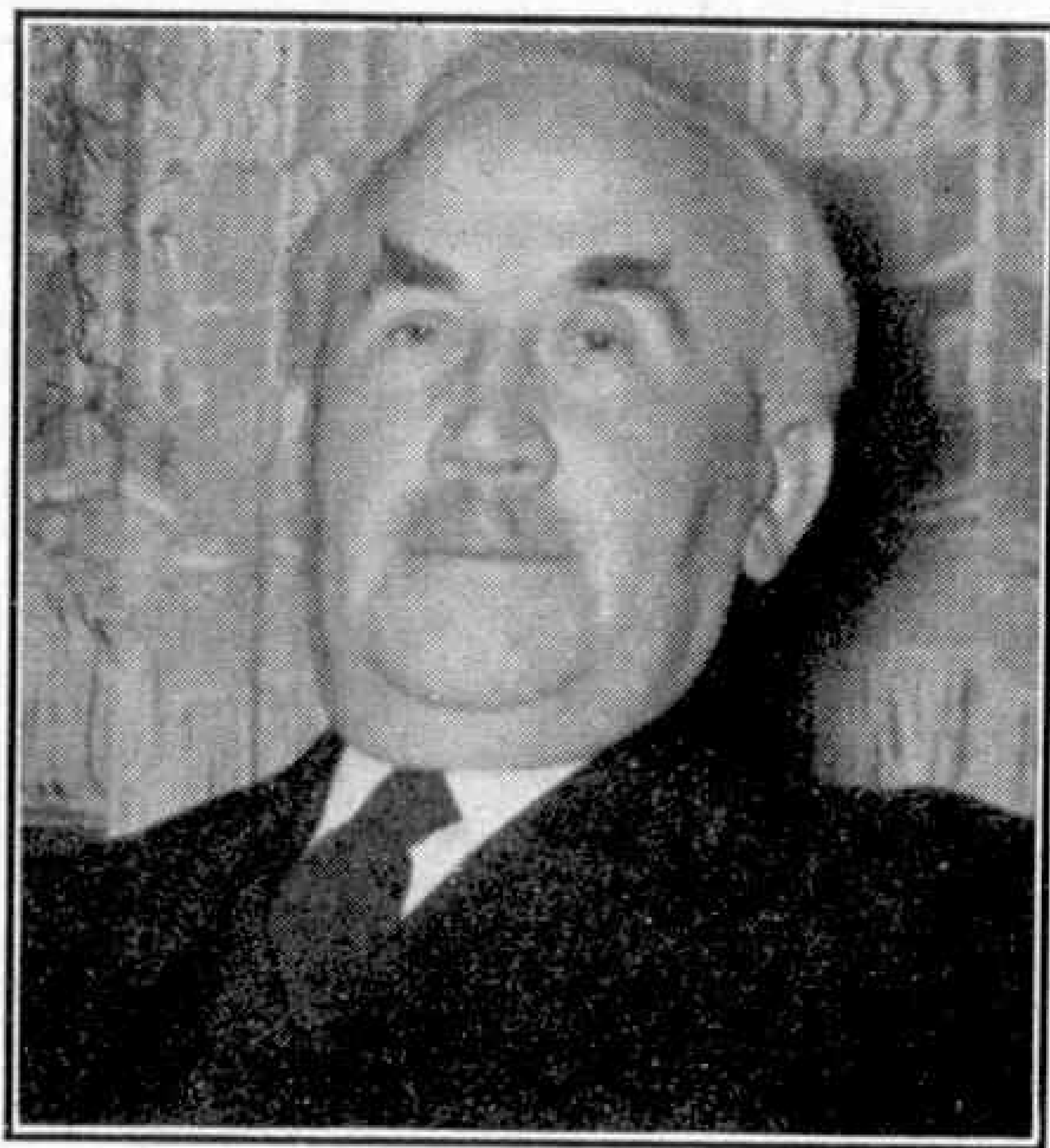
By S. V. Holroyd

A CROWD had collected around a young German and his piece of electrical apparatus, which he called his "Telemobiloscope," hard by the mighty Hohenzollern Bridge in Cologne. It was the 18th of May 1904. Some had come to report facts, and others to jeer. The young man, Christian Hülsmeier, was confident that his apparatus would work as he had said it would, and was there to prove it.

Hülsmeier had claimed that his apparatus would send out electrical impulses that on striking objects such as steel ships would return to be picked up and received as signals. Their reception would be shown by the ringing of an electric bell that formed part of his Telemobiloscope.

An excited cry went up when a ship was seen to be approaching the bridge. Hülsmeier gave his apparatus a final check as the press reporters held note-books and pencils ready. The crowd was hushed as the ship rapidly breasted the wide stream, pulling a long string of barges behind it. The distance between the Telemobiloscope and the ship was shortening. Hülsmeier leaned forward and switched the apparatus on. Not a sound was to be heard. He knew that his transmitter was sending out an electrical impulse in a straight line, and that the ship was now about to run into it, and the eyes of the press reporters were alternately focussed on the ship and on the Telemobiloscope's receiver's electrical bell.

Suddenly the electric bell shrilled! The ship, many hundreds of feet away on the broad Rhine, had gone through the electric field. Then the bell was still. A few seconds more, and the bell shrilled out again as the steel barge immediately

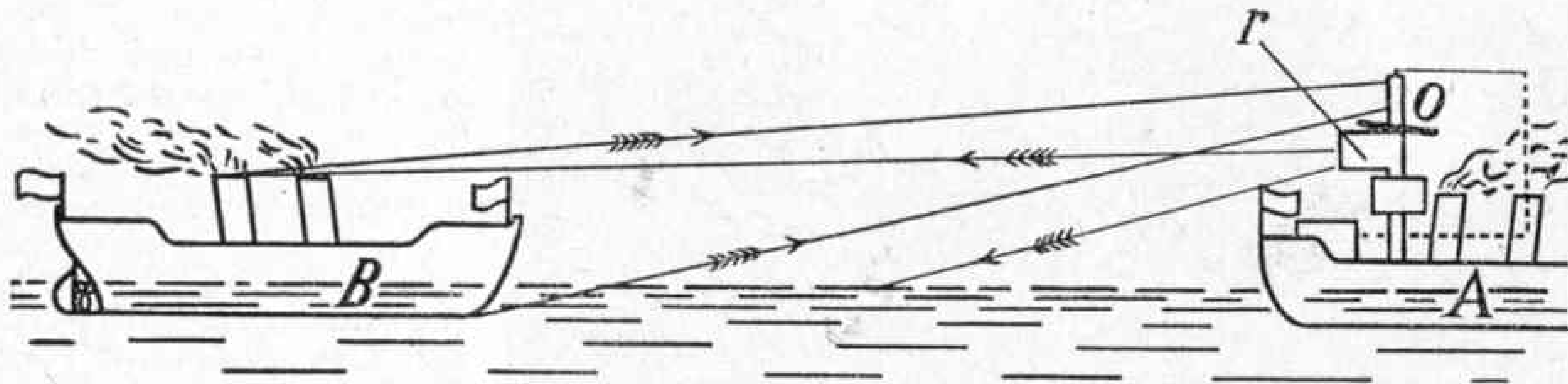


Christian Hülsmeier, who proved nearly 50 years ago that echoes of wireless waves could be used to detect ships passing along a river.

behind the ship broke the electric field, and so on until all had gone by.

Hülsmeier had won! A cheer from the crowd and handshakes from the press reporters, and the young German collected his apparatus and went home. Radar had been born! He had proved publicly that electric wave reflections were possible and that they could be used for the benefit of . . . yes? what? He was before his time. The world did not then realise of what great help his invention could be to mankind in general when developed.

Hülsmeier patented his invention in Germany, and in June 1904 the British Patent Office accepted it under the patent number 13170 with the specification as: "Hertzian-wave projecting and receiving apparatus adapted to indicate or give warning of the presence of a metallic body, such as a ship or train, in the line of projection of such waves."



This diagram is a simplified version of one in Hülsmeier's British patent specification of 1904. It shows how waves from a transmitter mounted on a ship can be reflected from another vessel directly ahead and so give warning of the second ship's presence at night or in fog and mist.

Engineering Notes

A Modern Road Roller

Most of us are attracted by road-making operations, especially when pneumatic breaking-up tools and heavy rollers are at work, and we would certainly be interested in the modern tandem road roller shown in the upper illustration on this page if we were to see it in action. This machine is one of the latest type made by Marshall Sons and Co. Ltd., Gainsborough. It is primarily intended for the surface rolling of asphalt, and is particularly useful in the making of earth roads, for which purpose it is popular overseas. It is specially suitable for this kind of work owing to the fact that its two rolls apply almost equal pressure, and so avoid the tracking and surface marks liable to be left by a three wheel machine.

With this type of Roller the driven roll is at the front of the machine and the steering roll at the rear. The power unit is a four-cylinder Perkins diesel engine, which drives the front roll through a two-speed gear-box unit and a bevel gear engaging a gear ring bolted to one end of the roll. Two special clutches are provided to enable the direction of the output drive to be reversed as desired.

The steering roll is mounted in a rectangular steel frame, to the centre of which is pivoted a "U" shaped steering fork. Steering is power operated from the engine, and dual hand control levers are fitted to allow the driver to steer and to reverse from whichever side of the machine best suits the work in hand.

The diesel engine is fitted with electric starting equipment and there is also a special electric induction heater for use in starting in extremely cold weather.

G.P.O. Van with Moving Floor

The lower illustration on this page shows an interesting vehicle designed by Glover, Webb and Liversidge Ltd., London, in conjunction with the G.P.O. Supplies Department. It is fitted with an ingenious moving floor, by means of which heavy



A modern tandem diesel road roller at work in Albert Square, Manchester. The driver is looking backward. It is a product of Marshall Sons and Co. Ltd., Gainsborough, to whom we are indebted for our photograph.

cases and other goods taken from a lifting truck can be carried forward into the interior of the van, or can be moved from the van on to the truck, thus eliminating heavy manual labour.

The floor and its mechanism are built into a box unit formed from pressed steel sections, which is mounted on the chassis frame. The floor itself consists of galvanised steel slats, linked together to form a conveyor. This is mounted on endless roller chains, which are driven by sprockets fixed on shafts at the front and rear ends of the vehicle. The front shaft is driven through a two-speed reduction gear, either by turning a handle fitted into the body, or alternatively by power drive taken from the chassis gear-box. The Post Office vehicle shown in the illustration is operated manually from the rear, so that the operator has full control of the work and is in easy communication with the lift truck driver.

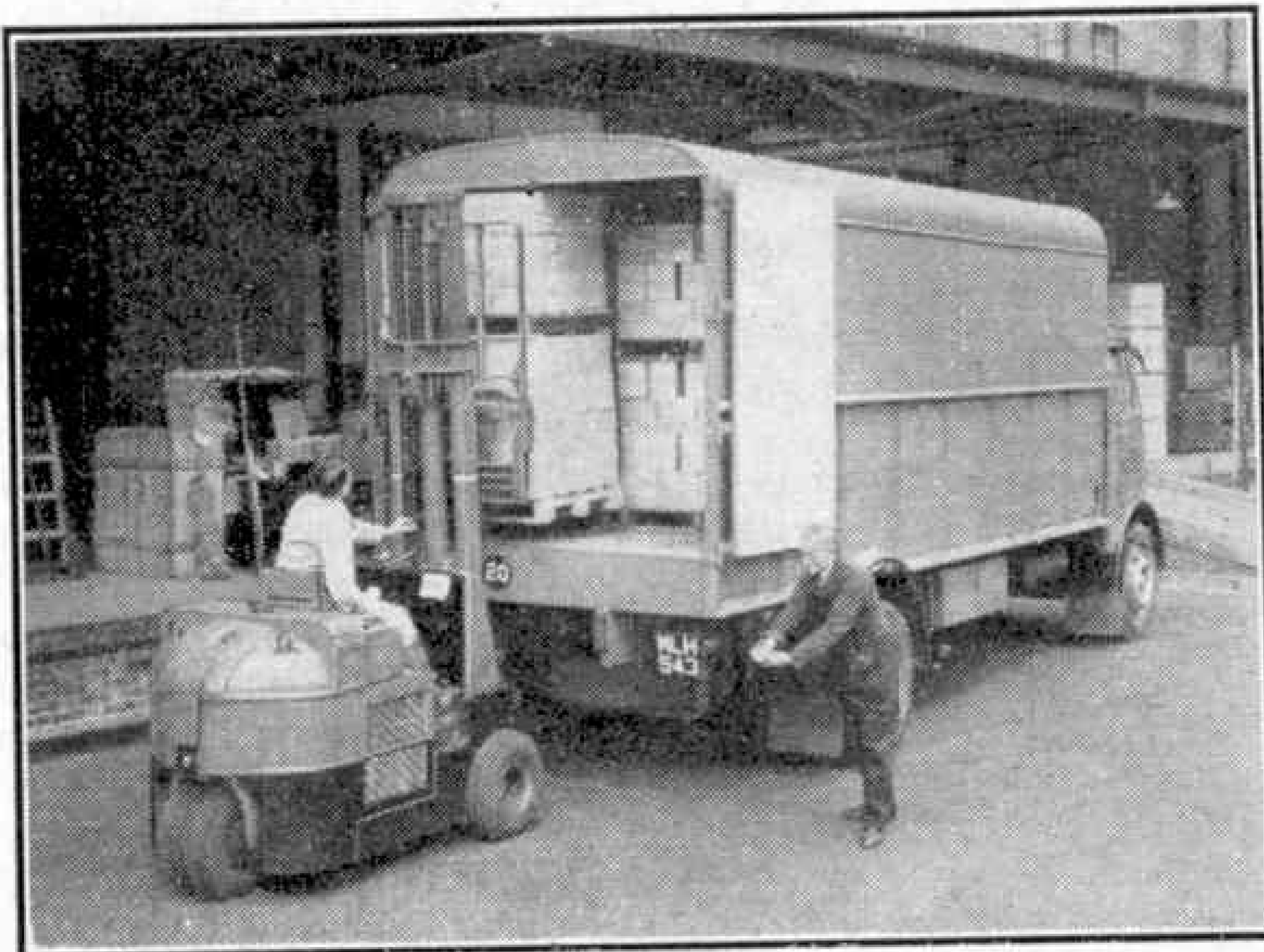
The moving floor is available for installation on any make of vehicle and can be supplied with various types of bodies as required.

A New Use for Electric Sparks

A novel method of "machining" or shaping extremely hard metals by means of electric sparks has been developed by Sparcatron Ltd., Gloucester. The sparks are produced by the discharge of a condenser connected in a direct current supply circuit. The metal is immersed in a non-conducting liquid, which carries away the particles of metal disintegrated by the sparks, and is connected to the positive pole of the current. Also immersed in the liquid is an electrode, which is connected to the negative pole. If the work to be machined is a bar it is held in a rotating chuck, or alternatively the electrode, which is in the form of a disc, may be rotated.

The temperature of the sparks reaches about 12,000 degrees Centigrade, but as their duration is extremely short no overheating of the metal occurs.

A control cabinet is provided to allow the operator to adjust the current so as to produce sparks of the required strength. A weaker spark is used for finishing than for roughing out.



The van shown here is fitted with a Pallet Loading Moving Floor Body, of the kind described on this page. Photograph by courtesy of Glover, Webb and Liversidge Ltd., London S.E.1.

Have you started to build your

MECCANO

INTERNATIONAL COMPETITION



£10000 in Cash Prizes

If you have not already started to build the model you are entering in this great Competition, do so immediately.

There are many handsome cash prizes to be won and every model-builder has a fair chance of securing one of these awards, as the Competition is divided into three sections according to the ages of competitors:

Section A—for competitors who will be not more than 10 years of age on 31st March 1953.

Section B—for competitors who will be between 10 and 16 years of age on 31st March 1953.

Section C—for competitors who will be 16 years of age or over on 31st March 1953.

A competitor may submit more than one entry, but no competitor will be awarded more than one prize.

Send your entries to International Model-building Competition, Meccano Limited, Binns Road, Liverpool 13, to arrive on or before 31st March 1953.

your model for the

NO

MPETITION?



THE PRIZES

SECTION A

(competitors not more than 10 years of age on 31st March 1953)

First Prize	£30
Second Prize	£15
Third Prize	£10
Fourth Prize	£5
50 Prizes each of ..	£2
100 Prizes each of ..	£1

SECTION B

(competitors between 10 and 16 years of age on 31st March 1953)

First Prize	£50
Second Prize	£25
Third Prize	£15
Fourth Prize	£10
20 Prizes each of ..	£5
50 Prizes each of ..	£2
60 Prizes each of ..	£1

SECTION C

(competitors 16 years of age or over on 31st March 1953)

First Prize	£50
Second Prize	£25
Third Prize	£15
Fourth Prize	£10
20 Prizes each of ..	£5
50 Prizes each of ..	£2
60 Prizes each of ..	£1

A separate set of Special Prizes will be awarded for models built collectively by members of Meccano Clubs and sent in as official Club Entries. These Prizes are as follows:

First Prize .. £10 Second Prize .. £5 Third Prize .. £3 10 Prizes each of £1

HOW TO ENTER

The Competition is open to every owner of a Meccano Outfit, and there is no Entrance Fee. All the competitor has to do is to think out a new model, and then build it in Meccano. The model may be of any subject, and there are no restrictions on the size of Meccano Outfit or the number of parts used in its construction.

Actual models must *not* be sent in by entrants in this great Contest. Instead, good photographs or sketches should be prepared and sent in along with a brief description of the model.

Get this special folder from your dealer

Full details of this Competition, with directions for preparing and sending in entries, are given in a special folder. Ask your dealer for a copy, or write for one to Information Service, Meccano Ltd., Binns Road, Liverpool 13.

Camera in the Clouds

By John W. R. Taylor

MANY of the fine aircraft photographs used in the *Meccano Magazine* in recent years were taken by Cyril Peckham. So when the Editor asked me recently if I would tell you something about the man behind the camera I replied that I should be delighted to do so, because few people realise the difficulties and dangers of taking photographs in the clouds, and Mr. Peckham is far too modest to describe them himself.

Take for example the head-on photograph of a Tiger Moth reproduced at the foot of the next page. It looks straightforward enough; but how do you think it was taken? The obvious, and usual way is from the rear gun-turret of a big aircraft like a Lancaster. But that was impossible in the case of the lightweight Tiger, which would have been tossed about like a cork on the sea by slipstream from the bomber's four powerful engines. Nor could you use anything like an Auster, because its tail would get in the way unless you made a hole in the bottom and hung out upside-down to take your photo!

How Cyril Peckham solved the problem is shown in the upper picture on the next page. Fortunately, it is seldom necessary to go to such lengths to get a particular photograph, and he takes most of his pictures from the open rear cockpit of Hawker's veteran Hart biplane, the side window of a Rapide or the rear turret of a Lancaster, depending on the speed of his subject.

Even these aircraft can provide a few thrills, however, and Mr. Peckham told me how one day, after he had exposed a

series of negatives from a Rapide, he sat down against the side of the fuselage to make room for another photographer. As the Rapide plodded gently along, he was rocked to and fro by the bumpy air. Suddenly he noticed one of his friends, apparently speechless with fright, waving madly in his direction. Looking downwards he saw why, because he was more than halfway out of an open door, his weight supported only by slipstream trying to blow the door shut.

And he was wearing no parachute at the time!

What sort of a man, then, is this photographer who faces such risks to bring back the world's finest air-to-air photographs? If you expect to find a tough youngster with nerves of steel and few responsibilities, you would be very wrong. Cyril Peckham is a quiet, sensitive family man, who lives in a cosy little home at Byfleet in Surrey with his wife and small daughter. He was trained as a publicity expert and made his name as an artist long before he started taking air photographs—



Cyril Peckham (left) and Wing Cdr. H. A. C. Stratton, A.F.C., Chief Flying Instructor of Air Service Training and pilot of the D.H. Tiger Moth from which Mr. Peckham photographed another machine of this type as shown on the next page.

which helps to explain why his pictures combine rare beauty with the finest possible "selling points" of his subject.

His first contact with aviation came during the 1914-18 war. The uncle of one of his school friends was C.O. of the airfield at Waddon, at a time when two young Princes who became King George VI and the Duke of Windsor were learning to fly there. He was able to visit the airfield whenever he liked and, in 1918, made his first flight in an Avro 504K trainer.

There were few jobs open in aviation



Cyril Peckham photographing the accompanying Tiger Moth.

after the war, so young Cyril Peckham apprenticed himself to an advertising agency, eventually leaving to set up in business on his own. From the start he specialised in aviation subjects, and was probably responsible more than any other person for raising the standard of aviation publicity. He painted covers for *Flight* and *The Aeroplane*, compiled sales brochures, designed prize-winning posters for Empire Air Day and *Daily Express* Air Displays.

Between times, when the depression hit the aircraft industry, he satisfied his taste for adventure by doing some archaeological digging in Palestine, first with Sir Flinders Petrie and then with John Starkey, whose expedition did much to prove the historical accuracy of the Bible.

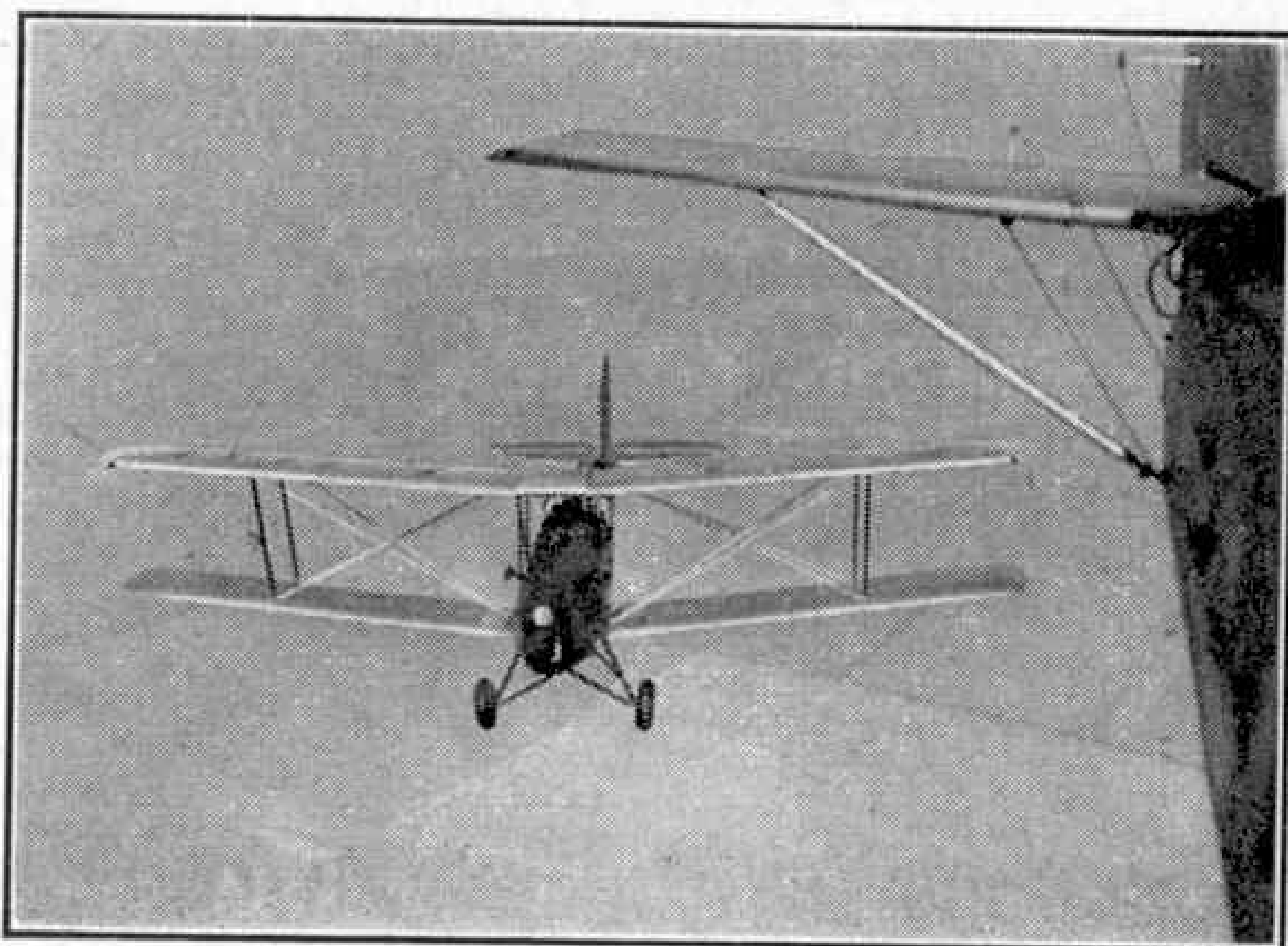
On his return, he entered the aircraft industry, qualified for his Private Pilot's Licence and became a professional photographer all in about three years, and eventually joined Hawkers as chief photographer in 1943. The combination of Sydney Camm's beautiful fighters and Cyril Peckham's superb photography soon became world-famous, and probably only he was surprised when, in 1946, one of his photographs of a Tempest was awarded first prize as the world's finest black-and-white air photograph in the Intava competition in America.

New problems introduced by the jet age represented the kind of challenge that Cyril Peckham

welcomes. Realising the inadequacies of existing cameras, he spent six years designing a new one of his own, which he has given me permission to describe briefly for the benefit of photographically-minded readers of the *M.M.* It is a solid unit, designed to hold easily, with quick reflex focussing and quickly interchangeable lens hoods with built-in filters. It has an f.4.5 Ross Express lens and he takes most of his pictures at about 1/250 sec. on Gevaert *Gevapan* 33 plates, measuring 9 x 12 cm.

Some of the results achieved with this new camera appear on pages 541 and 542, for Cyril Peckham is now chief photographer of the whole Hawker-Siddeley Group and his subjects range from Air Service Training Tiger Moths to the Javelin and Avro 698. Nor are such photographs useful only for publicity purposes. The air-to-air camera can be used to show designers what happens when cockpit hoods are jettisoned in flight, or to show airflow over a wing or fuselage by photographing tufts of wool stuck to the aircraft's skin.

Little wonder that Mr. Peckham finds his job so interesting. But he is already thinking beyond the revolutionary deltas of 1952, wondering how he will manage when fighters and bombers give way to guided missiles. Knowing Cyril Peckham, I am sure he will find the answer.



The head-on view that he obtained.

Railway Notes

By R. A. H. Weight

Western Tidings

New locomotives recently placed in service were 0-6-0Ts Nos. 8493-4 and 9482, built by contract. Allocations include Nos. 8491-2 to 82B, Bristol, and 8493-4 to 86A, Newport. Class 7, 4-6-2 No. 70025 *Western Star* was the first of a new series of Britannias constructed at Crewe for the Western Region.

Engines condemned included the former Midland and South Western Junction 2-4-0s, G.W.R. Nos. 1334-5 (there were three altogether) lately familiar round about Reading and Didcot. No. 1335 on 31st August last hauled a special train organised by the Stephenson Locomotive Society from Oxford to Moreton-in-Marsh and a return trip over the Shipston-on-Stour branch, which for a number of years has only been traversed by a daily goods train. Here it was necessary for the small locomotive to make three attempts before successfully "charging" an ascending gradient. The return to Oxford was by way of Yarnton Junction, the L.M.R. goods line and the route to Oxford North Signal Box used by Bletchley trains.

Withdrawn 4-6-0s were 2-cyl. No. 2950 *Taplow Court* and 4-cyl. Star class Nos. 4034 *Queen Adelaide* and 4059 *Princess Patricia*.

The Gas Turbine locomotives have been noted on various West of England and Bristol expresses to and from Paddington making two round trips per day. Reports received at the end of the summer season mentioned a number of interesting locomotive workings, including a King running through to Shrewsbury on the 11.10 a.m. from Paddington. Two Kings on one train have been seen, as well as many other combinations, when double-heading was necessary with heavy trains over the steep gradients between Newton Abbot and Plymouth.

Operation of the Britannias was extended to South Wales and to the haulage of some of the west-north through services by way of the Severn Tunnel and Hereford.

The centenary of Snow Hill station, Birmingham, occurred on 1st October last. It was merely a shed to begin with.

To cater for heavy coal and other freight traffic required by a new Power Station at Uskmouth, Newport (Mon.) additional running tracks, sidings and signal boxes have been constructed.

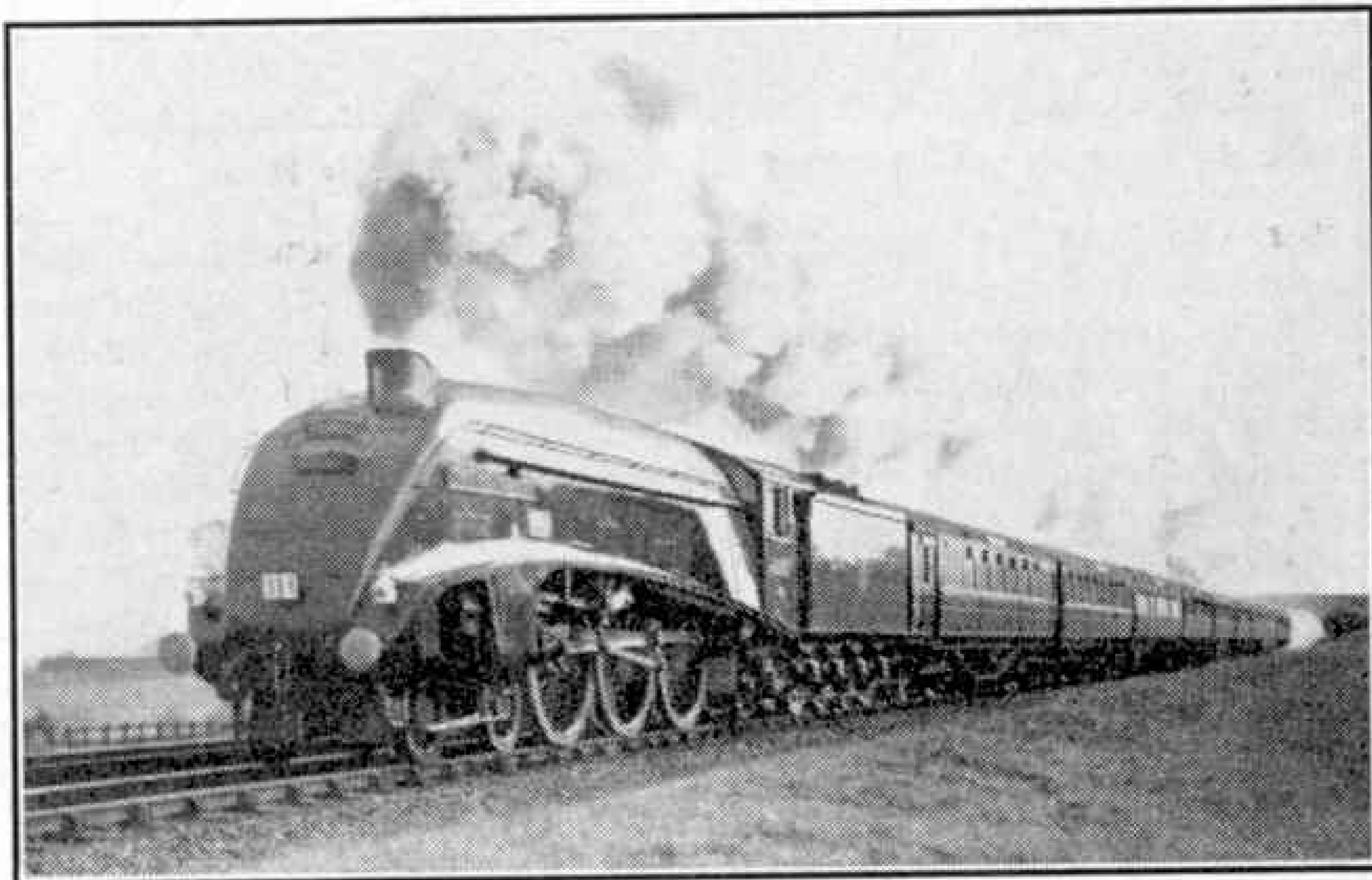
Great Northern Centenaries Special and Exhibition

To commemorate the centenary of the London-Doncaster main line as used today, and the hundredth birthday of King's Cross station, a special train tour was organised by a party of enthusiasts in conjunction with the E. and N.E. Regions on 28th September in which 400 passengers joined. A4 Pacific No. 60007 *Sir Nigel Gresley*, carrying a special headboard, with a fine 10-coach train including kitchen cars, slightly improved upon the quickest timing since 1939 of 3½ hr. for 188 miles from King's Cross to York, in spite of a dead stop and diversion at Doncaster and a severe slowing at Grantham due to track repair work.

From the start 153 miles were covered in 145½ min.; maximum speed was 86 m.p.h.

A fortnight later a remarkable exhibition was staged in two sections for a week at King's Cross station. Two veteran pioneer G.N.R. locomotives of their respective classes were to be seen. The Stirling 8-ft. "single-wheeler" No. 1 of 1870, the famous 4-2-2 that amazed us by appearing in steam on special trains in 1938 and large Atlantic No. 251, were hauled up from York and Doncaster to appear in company with the record-breaking Gresley streamlined Pacific *Mallard*. The corridor tender of the latter was open to inspection by the streams of visitors who passed over the footplates of the engines, as well as through the latest type of British Railways kitchen car and third-class corridor coach.

In most entertaining contrast, visitors could inspect an excellently preserved gas-lit "East Coast Joint Stock" corridor third brake with clerestory roof and ornate decoration, built at York by the North Eastern Railway over 50 years ago and repainted in original



The Centenaries Special near Bawtry headed by 60007 Sir Nigel Gresley. Photograph by T. G. Hepburn.

style, and a 12-wheeled G.N.R. first-class dining and kitchen car staffed and with some of the tables laid and L.N.E.R. decorative china on display.

There were trains running on a miniature railway; delightful models in various scales of G.N.R. and L.N.E.R. locomotives and rolling stock; photographs, old and new; and time tables and drawings representing the early and middle years of railway development under the influence of King's Cross and Doncaster. Many other attractions held our attention in the small exhibits section.

Interesting B.R. Exhibition at Battersea Wharf

Latest examples of freight rolling stock designed for the carriage of various specialised traffics, also of mechanical equipment aiding the work of goods depots, were displayed by British Railways at Battersea Wharf, London. New locomotive No. 70025 *Western Star*, No. 75019 class 4 4-6-0 and No. 12120, a diesel-electric shunter of E. and N.E. Region type, also were there.

Scottish Locomotive News

There has recently been a considerable exchange of 6P Jubilee 4-6-0s between L.M. Region and Scottish sheds. Two more ex-Great Eastern B12 4-6-0s condemned were Nos. 61521 and 61552. The principal duties on the Great North of Scotland section are now handled by B1 4-6-0s in well maintained condition and the B12s are disappearing. Caledonian 2P 0-4-4Ts withdrawn are Nos. 55139-40, 55144, and the former North Eastern G5 0-4-4T No. 67292, stationed

far from its original haunts at 61C, Keith.

Recorders on the West Highland line write that the ex-Great Northern K2 2-6-0s are still doing fine work among the grand scenery and wild terrain of the Fort William-Mallaig route. South of Fort William Glen 4-4-0s are still sometimes seen. The K1 Moguls were handling a lot of the difficult work, also B1 and class 5 L.M.R. 4-6-0s, but the specially built K4s appear to have been under repair a good deal lately. There is, of course, a lot of double-heading on account of the severe grading on this and other main lines in the Highlands.

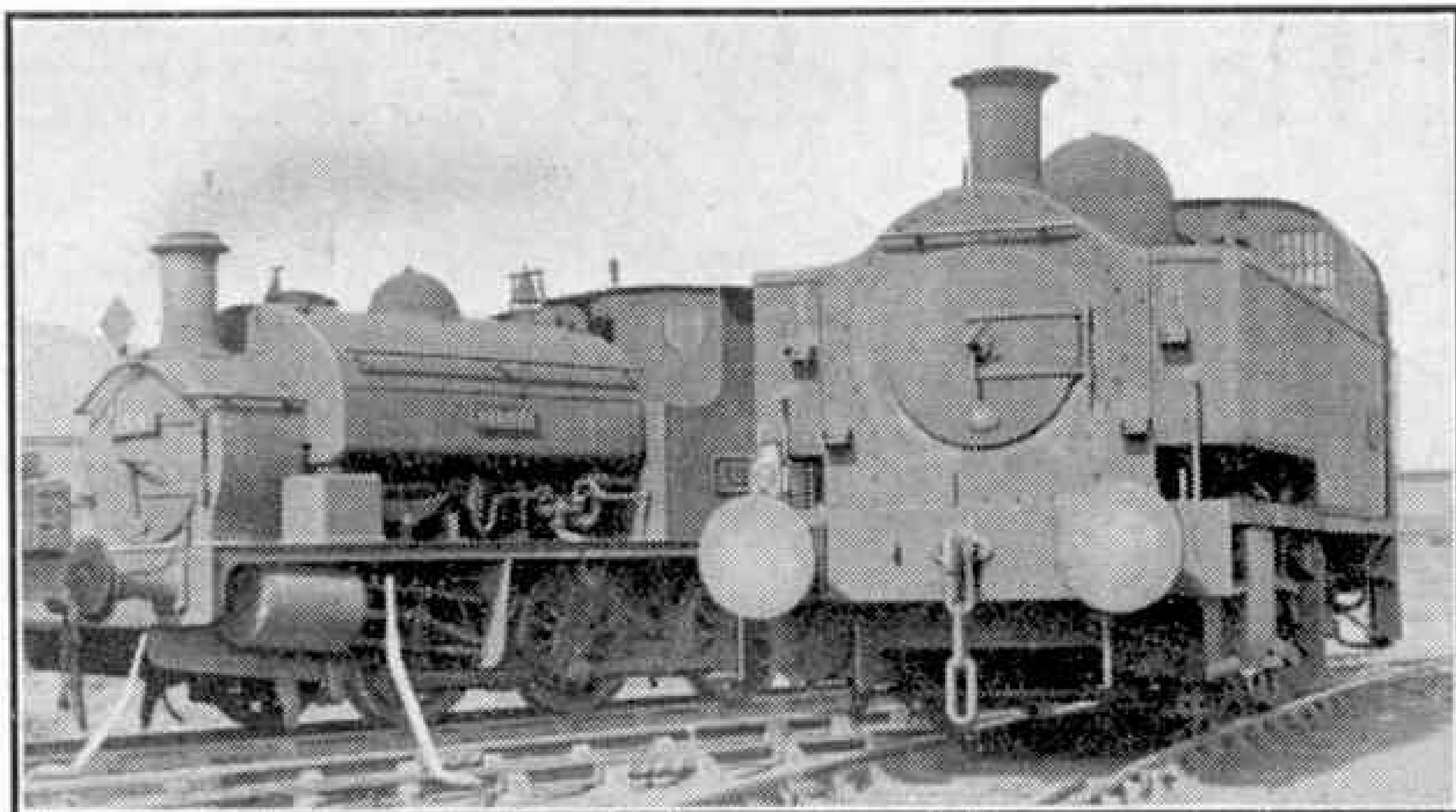
Class 5 engines handle the bulk of the trains on the former L.M.S. services to and from Oban, Inverness and elsewhere, but a much greater variety of ex-L.N.E.R. and L.M.S. types is to be found at Aberdeen, Dundee, and Perth, around Edinburgh, and in Glasgow and the south of Scotland.

London Midland Region

Standard 2-6-4Ts of class 4 continue to be placed in service. No. 80044 is stationed at 17A, Derby; No. 80045 at 15D, Bedford. The series numbered 80000-9 is in hand at Derby Works and No. 80000 has been allocated to the Scottish Region, shed 67C, Ayr. At the time of writing Nos. 80048-9 were complete at Brighton Works.

The last of the famous Midland type class 3 Belpaire 4-4-0s, No. 40726, has been condemned soon after running the Manchester-Hull special express illustrated and described last month. Once a mainstay of Midland express services, there were 80 of this class turned out between 1900 and 1905. It was behind one of them that as a young man I logged my first certain speed as high as 80 m.p.h. when running downhill between Luton and Bedford. Withdrawal has been spread over an unusually long period.

Another of the M.R. Compound 4-4-0s No. 41038, of the type that largely superseded the class 3s on



A contrast in Western Region shunting locomotives is afforded by this view of 0-6-0 saddle tank "Hilda," a former Llanelly and Mynydd Mawr engine, and No. 1101, Avonside-built 0-4-0T. This photograph was taken at Swansea Docks by J. N. Westwood.

principal express duties, also has been removed from the active list. I noted quite a number of Midland or Midland type locomotives while travelling a little while ago between Leeds and Sheffield. This is a main line affected by speed restrictions.

The 1952 Dreamliner

The British Region of the U.S.A. National Model Railroad Association Inc., recently chartered a special train to run from York to Doncaster to enable members to visit the Works.

The engine of this special train, No. 60022 *Mallard*, carried the headboard *The 1952 Dreamliner* with a small white flag at each side of the board, which in the U.S.A. denotes an "extra" train.

GEOFFREY OATES.

Southern Travels and Signalling

Recorded good runs for mention this month include an excellent performance by large Pacific No. 35018 *British India Line*, with a 12-coach, 425-ton train, on the exacting mile-a-minute *Atlantic Coast* timing from Waterloo to Salisbury. Actually the 83½ miles were covered in 82½ min. start to stop by steady running of a decidedly fast character. Basingstoke, 47½ miles, was passed in 48 min. and Andover, 66½ miles, in 65½ min. On the descent towards Tunnel Junction, Salisbury, 78 m.p.h. was touched. On to Sidmouth Junction and Exeter, the continuing fast schedule provides many thrills.

In striking contrast as regards load, distance and terrain, was a stirring run from Brighton to Eastbourne on the three-coach through portion from Birkenhead headed by a class 2, 2-6-2T of L.M.S. type, No. 41298. After passing Lewes cautiously in just under the allowed time, a signal stop and permanent way slack included, speeds as high as 72 and 68 m.p.h. were noted on each side of the slowing through Polegate. The whole run was completed in half an hour nett.

Another stage towards the continuous installation on the main Victoria-Brighton route of colour-light signalling was completed in October, between Battersea Park and Selhurst.



Gresley Pacific "Mallard" displays classification flags as used in American railroad practice to indicate that the train is running as an "extra." The train is the 1952 Dreamliner special referred to in the accompanying notes. British Railways (North Eastern Region) Official Photograph.

Homelands of Christmas Customs

By Arthur Gaunt

NO annual festival has a greater variety of customs attached to it than Christmas, for the season of goodwill is celebrated in many ways, from carol singing to the eating of roast turkey, and from fireside gatherings round the Yule Log to the giving of presents.

It is entertaining to try and discover just how — and particularly *where* — these traditional customs began. The touring cyclist especially might profitably make a note of these spots, with the idea of visiting some of them at a better time of the year.

The ancient city of York, one of the best-preserved historic places in Europe, can claim to have originated our Christmas celebrations in this country. Christmas Day was marked there in the year 627 by King Edwin and his court, to celebrate the monarch's conversion to Christianity by Paulinus. The event took place on the site of the present York Minster, in a tiny wooden church built by Edwin.

The Minster as it stands today dates from the 13th century, but a custom connected with the earliest church here is still observed at Christmas. Each Christmas Eve a quantity of mistletoe, originally a symbol of heathenism, is carried into the Minster as a reminder that the great edifice was originally founded to oust Druidism, mistletoe having figured largely in the pagan rites of the Druids 1,300 years ago. The plant was also used in witchcraft at that time.

Yorkshire comes prominently into the story of Christmas feasting, too.

Henry the Third and his court held a mammoth banquet at York on one occasion, the event being also a marriage feast. In the Middle Ages, indeed, Christmas feasting was often a big and long-drawn-out affair when "open house" was the rule for at least three weeks. The great barons threw open their castles to all who cared to come, and huge quantities of food were consumed.

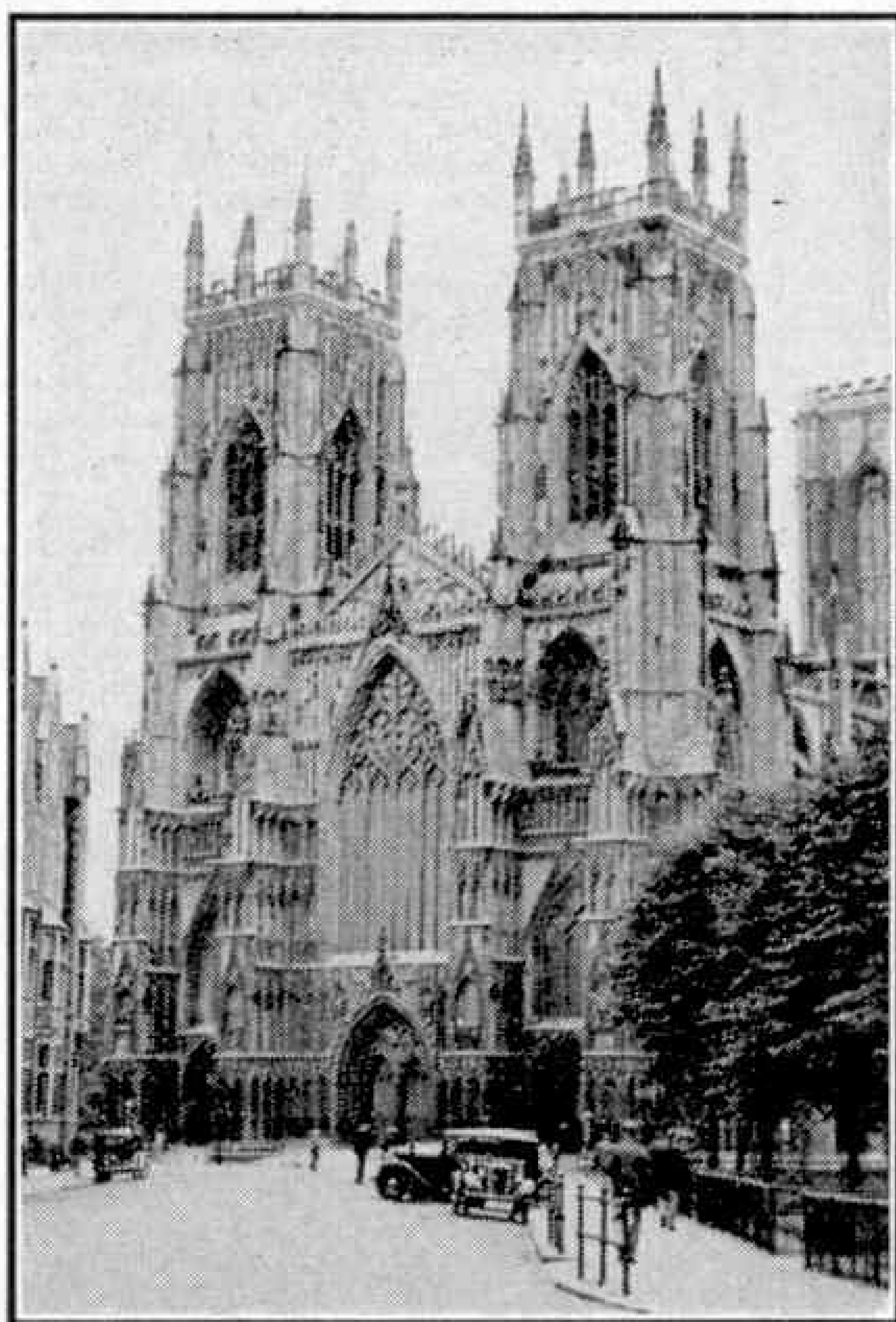
The biggest banquet ever held in Britain was probably one that took place at Cawood Castle, near Selby, in connection with the Christmas festivities there in 1465. Guests flocked to the locality for the occasion, and nobody who cared to attend was turned away. The feast lasted for days, and it is recorded that 104 oxen, six wild bulls, 1,100 sheep, 304 calves, and 301 wild boars were eaten, in addition to thousands of pigeons, geese, poultry, rabbits, and pheasants!

The remains of Cawood Castle can still be seen. The main surviving

part is the fine old gatehouse, on which are carved various crests.

The list of dishes just quoted includes several items that do not appear on our Christmas menus today. Pigeons, for instance, are not a Yuletide dish nowadays, but many links with the time when such birds were specially kept for the table can be seen up and down England in the form of old pigeon cotes.

The cotes were built to provide nesting-places for wild pigeons, the birds being caught and used for food as required, especially in winter, when other fresh



The first Christmas celebrations in Britain are believed to have been held on the site of York Minster, the great west front of which is shown in this picture.

meat was scarce. One of the oldest pigeon cotes in the country is just outside the churchyard at Sibthorpe, Notts. Another is on the village green at Clifton, near Nottingham, and the inner walls are fitted with no fewer than 2,300 nesting-boxes.

Our Christmas turkey is of more recent origin, the bird being unknown in Britain until Tudor times. Before that period the main dish was often a swan or cygnet, which was cooked and then made to appear as lifelike as possible before being placed on the table. It was cooked whole and the feathers were replaced, and often the beak was gilded!

Boynton, a hamlet near Driffeld and Bridlington, may be regarded as the "birthplace" of the traditional Christmas turkey. From this place went a youth called William Strickland, to serve as cabin boy aboard the ship of Sebastian Cabot the explorer. When the expedition returned, young Strickland brought back to Boynton a few turkeys which he had caught alive in the New World. These he carefully reared, and they became popular as a delicacy. They were, in fact, the first turkeys seen in Britain.

Later, William Strickland became prosperous and he designed a coat of arms for his family. It showed a turkey, and the crest is still used by the Stricklands of Boynton. Another reminder of the connection between Boynton and our Christmas dinner is in

Boynton Church, the lectern taking the form of a turkey with outspread wings.

As to our Christmas hymns and music, one of the best known is *Christians, awake*, and several places are associated with this popular hymn.

The verses were written by John Byrom, more than 200 years ago, and his quaint black-and-white house (known as Kersal Cell) is at Salford, Lancs.

The composer of the tune, John Wainwright, was organist at Stockport parish church and was buried there. A few bars of the tune are inscribed on his memorial. An oddity in the churchyard is part of his tombstone, for it wrongly states that he was

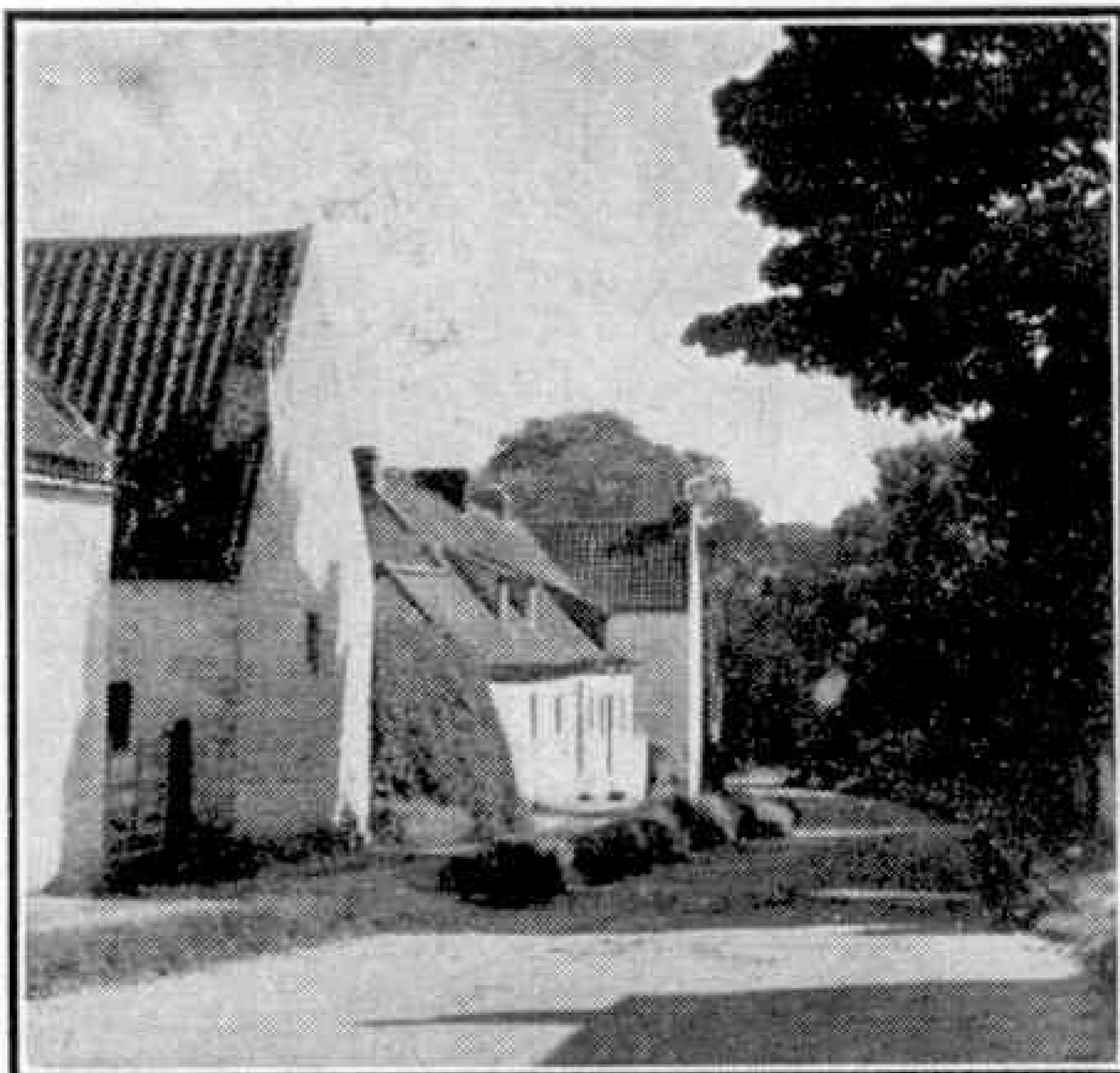
buried just outside the church.

This stone has had a curious history, too. When the church was being restored, many years ago, gunpowder had to be used to demolish part of it. The explosion

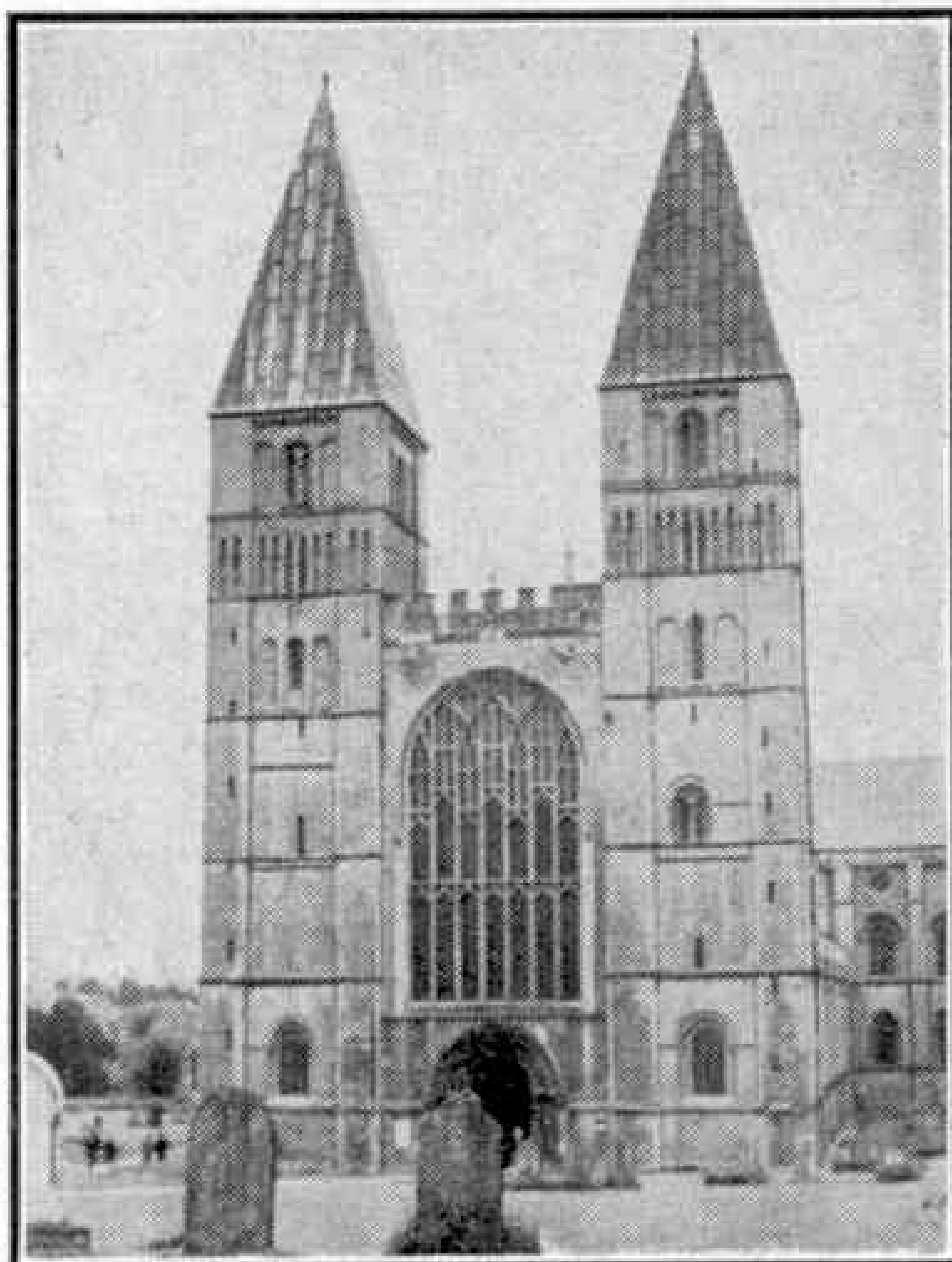
shattered several tombstones nearby, including John Wainwright's, and these were taken away as rubble. The composer's stone was lost for a long time, but it eventually turned up in a garden, where it was being used as a step. It was not quite complete, but the portion found in the garden was returned to the parish churchyard. It can now be seen there set into the ground a few feet from the church tower.

Hail, Smiling Morn is another popular Christmas tune, and it was composed by Reginald Spofforth,

(Continued on page 592)



Yorkshire also claims that it was the home of the first turkeys brought to England. This was the work of a youth of the village of Boynton, nr. Driffeld, shown in this illustration, who went to the New World with Cabot.



The twin towers of Southwell Minster. This building is associated with the name of the composer of the carol "Hail, Smiling Morn."

Among the Model-Builders

By "Spanner"

A NOVEL ANIMATED WINDOW DISPLAY

From far off New Zealand comes news of a novel use to which Meccano has been put in providing the operating mechanism for an animated shop display. The display was built by Mr. J. K. Fowler and Mr. Jones of Hawera, Taranaki, two Meccano enthusiasts, and can be seen in accompanying illustrations.

The display represents Father Christmas's Workshop, and comprises several figures of pixies, and one of Father Christmas himself. When the display is in motion the pixies are seen to be carrying out various tasks. One of them is in the act of painting a toy, while another staggers under a load of boxes. A third is riding a rocking horse, while Father Christmas wags his head to and fro in merriment and appreciation of their efforts. A background of flashing stars and a crescent moon, gives a very pleasing finish to the display.

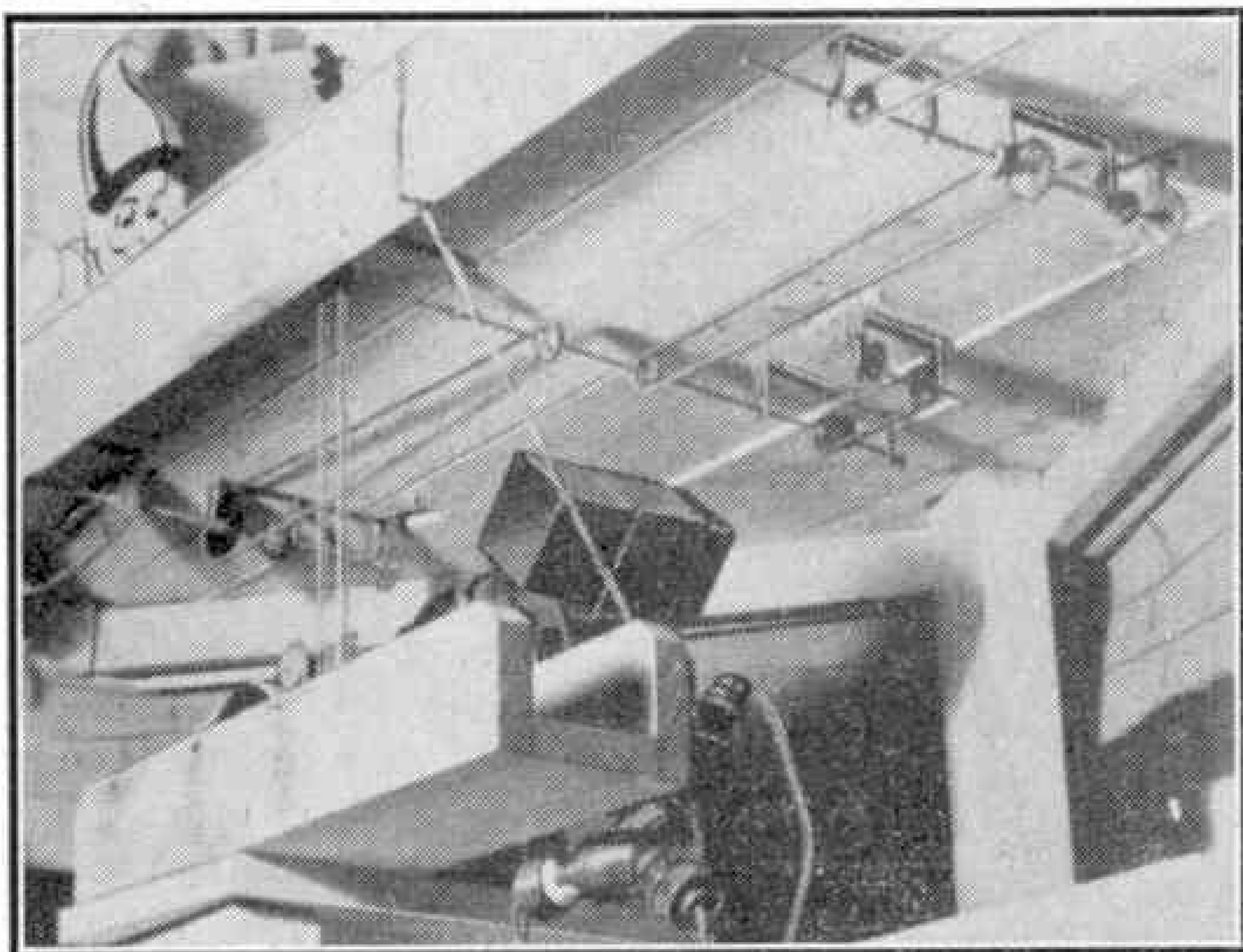
The operating mechanism is concealed below the base of the display and we understand from Mr. J. F. Parkinson of Hawera, who brought the display to our notice, that it has worked without trouble or breakdown over long periods.



This attractive animated display was built by Messrs. J. K. Fowler and Jones, Hawera, N.Z. It is operated by the Meccano mechanism seen in the illustration to the left, below.

A SIMPLE INTERMITTENT MOTION MECHANISM

Mr. J. T. Martin, Ashby-de-la-Zouch, tells me that



The operating mechanism of the animated window display.

a simple and compact intermittent motion device may be made by arranging for a Rod and Strip Connector on the driving shaft to engage a $\frac{1}{2}$ " Pinion fixed on the driven shaft, as shown in Fig. 1. The shafts should be parallel to each other and placed $\frac{1}{2}$ " apart. When the driven Rod rotates the Rod and Strip Connector "nudges" the Pinion twice during each revolution. The intermittent motion thus obtained is not quite regular because the Rod and Strip Connector's wing is not central with its shank. Any Gear that normally meshes with a $\frac{1}{2}$ " Pinion can be used.

The device should be useful in feed and similar mechanisms where regular motion is not essential.

A HEAVY DUTY CLUTCH

From time to time I have described clutch mechanisms of various kinds suitable for model vehicles. Most of these use a single Compression Spring to maintain contact between the driving and driven members, and while these are quite satisfactory in most models, a more powerful clutch is required in heavy vehicles. The clutch shown in Fig. 2 can be fitted with from two to eight Compression Springs, so that the pressure between the driving plates can be varied to suit almost any model.

The driving member is a 1" Pulley fitted with a Rubber Ring, and it is fixed on the input shaft 1. The shaft extends beyond the Pulley, and it passes through a Wheel Disc 2 and into part of the boss of a Bush Wheel 3. The Bush Wheel is fixed on the output shaft 4.

The Wheel Disc 2 is connected to Bush Wheel 3 by two Pivot Bolts. Each of these is first passed through the round hole of an Obtuse Angle Bracket 5, and through a hole in the Bush Wheel. A Compression

Spring is slipped over the Pivot Bolt, which is then attached to the Wheel Disc by two nuts, one on each side of the Disc.

The Obtuse Angle

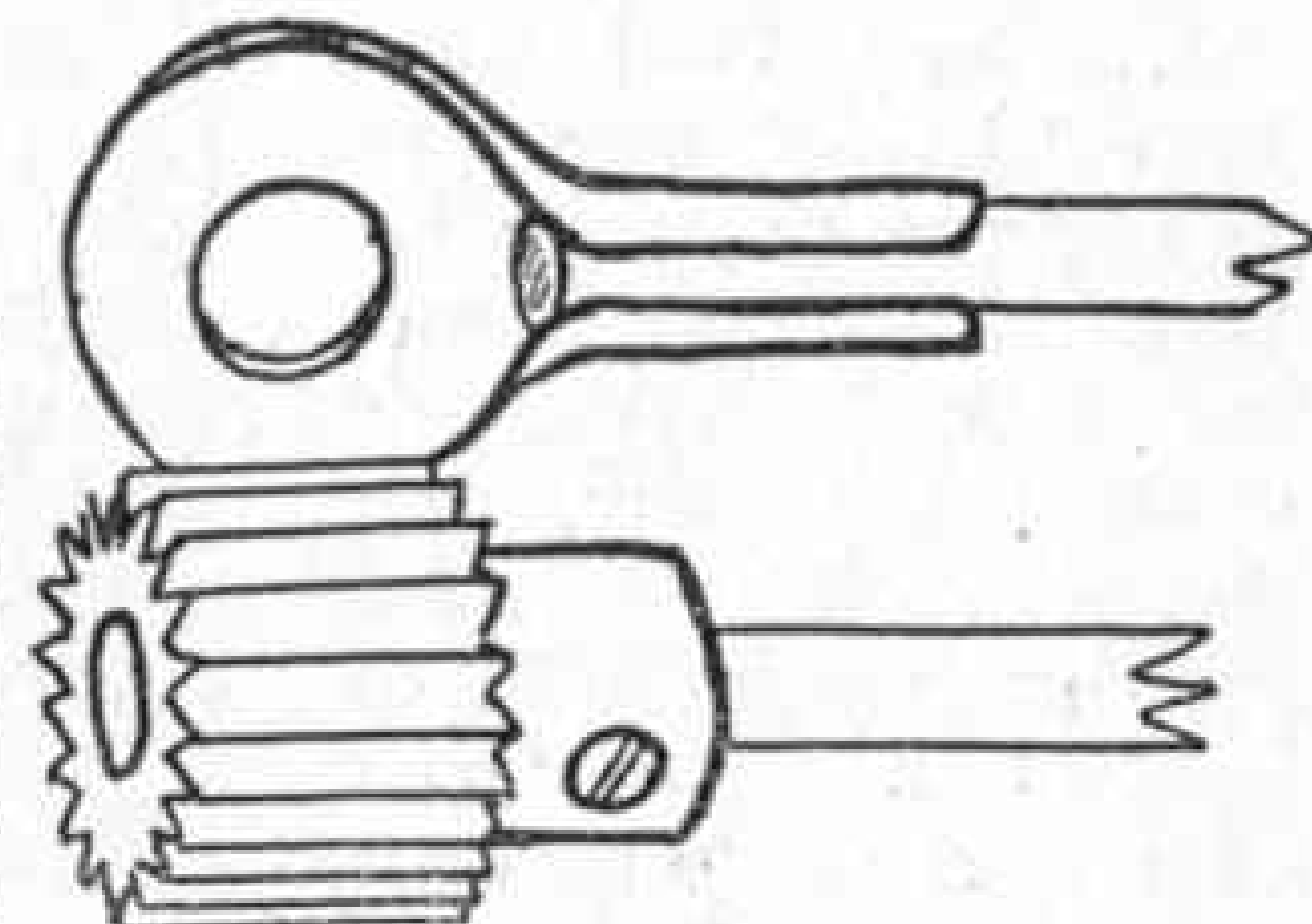
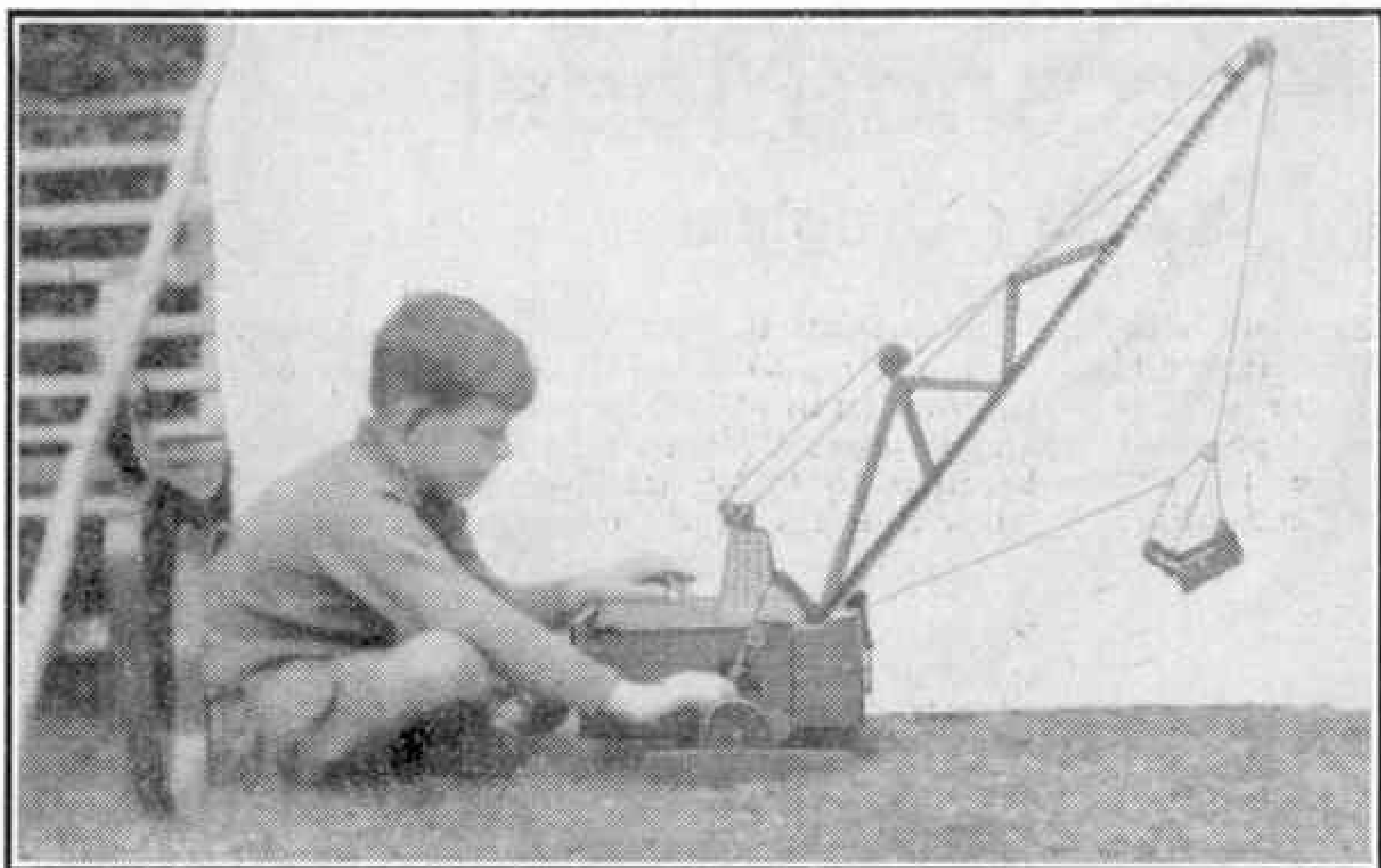


Fig. 1. A Rod and Strip Connector and a Pinion used in conjunction provide a useful intermittent motion device.



A model of the world's largest walking dragline, which was described and illustrated in the April 1952 M.M. It was built by Mr. M. A. Homphrey, Wootton-under-Edge, and is the delight of his young son, who is seen playing with it.

Brackets are arranged pointing in opposite directions, and they are linked by a short length of Cord that prevents them from flying outward as they rotate with the Bush Wheel. Further Compression Springs 6 can be placed between the Bush Wheel and the Wheel Disc, and they are slipped over the shanks of Bolts held by nuts in the Wheel Disc.

The clutch withdrawal race consists of a Wheel Disc 7, and a 1" loose Pulley 8 separated from the Wheel Disc by a Washer.

The clutch housing is assembled from a Boiler End fitted with four 2" Strips connected by Angle Brackets to a Wheel Disc 9. The input and output shafts are prevented from sliding in the housing by a Collar on each side of the Wheel Disc 9.

The operating levers are formed from two 2" Strips pivoted as shown on a short Rod mounted in a Double Bracket fixed to the housing. The levers are linked at their outer ends by a Double Bracket and a lock-nutted $\frac{1}{2}$ " Bolt. The inner ends of the levers bear against the face of the Pulley 8.

The clutch is adjusted by sliding the Bush Wheel 3 on its shaft until the Springs are

compressed slightly. When the levers are moved to the left, their action is transmitted through the withdrawal race to the Pivot Bolts, which slide to the left through the holes in the Bush Wheel and carry with them the Wheel Disc 2.

A COMPACT REVERSING MECHANISM

A compact reversing mechanism that is adaptable for use in all kinds of small mechanisms is shown in Fig. 3. It is suggested by N. Gottlob, Hjortekaer, Denmark, who also made the drawing reproduced.

A small housing consisting of two Triangular Plates 6 and a $1\frac{1}{2}$ " Strip 1 lock-nutted together by two 1" Screwed Rods (or $1\frac{1}{8}$ " Bolts) is free to turn on a Rod passed through the apex hole of the Plates. Three $\frac{1}{2}$ " Pinions are arranged in such a manner that the two Pinions on the Screwed Rods mesh with each other, but only one of them meshes with the Pinion fixed on the Rod. When the Pinions are rocked about the Rod (the free hole of the Strip 1

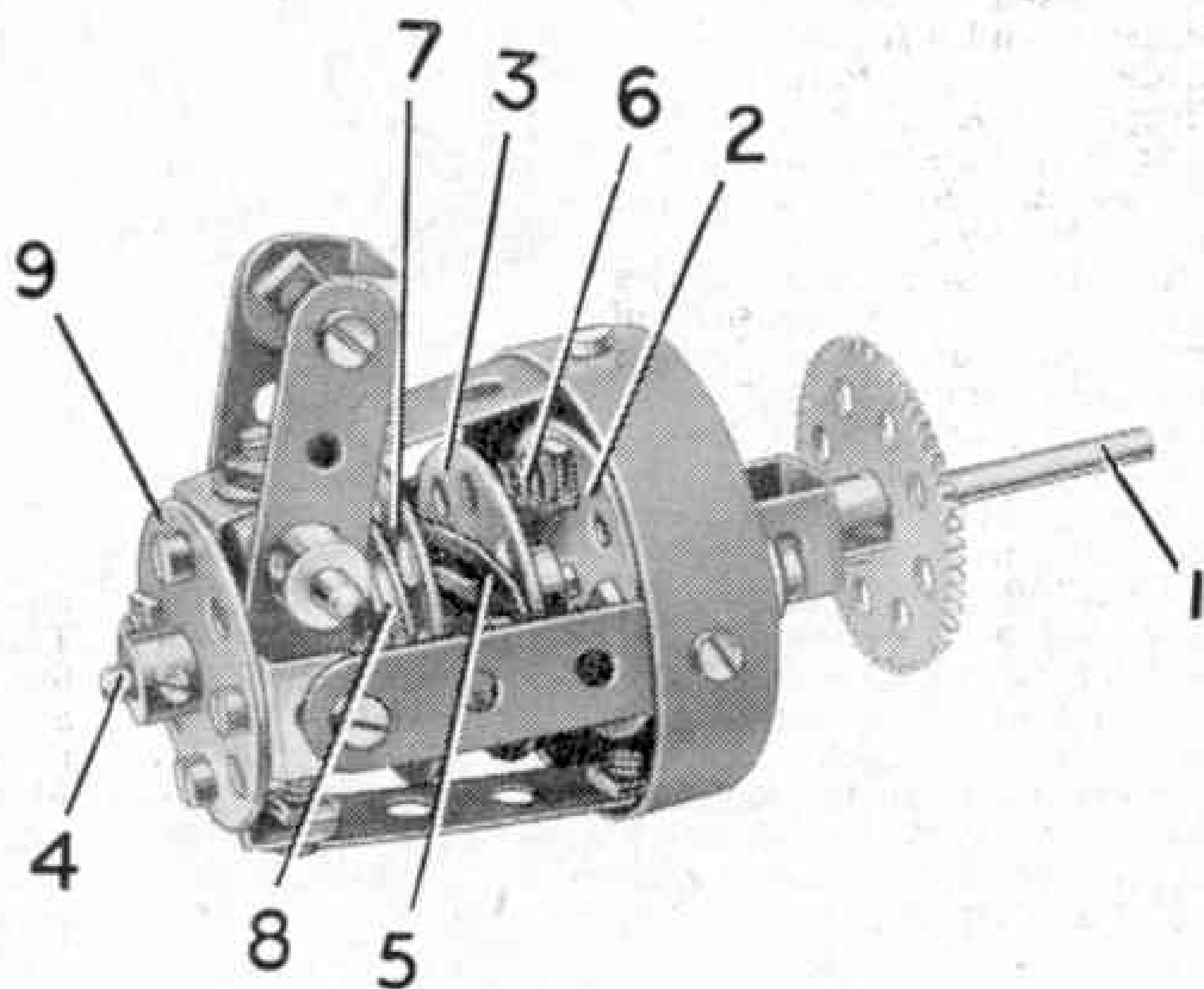


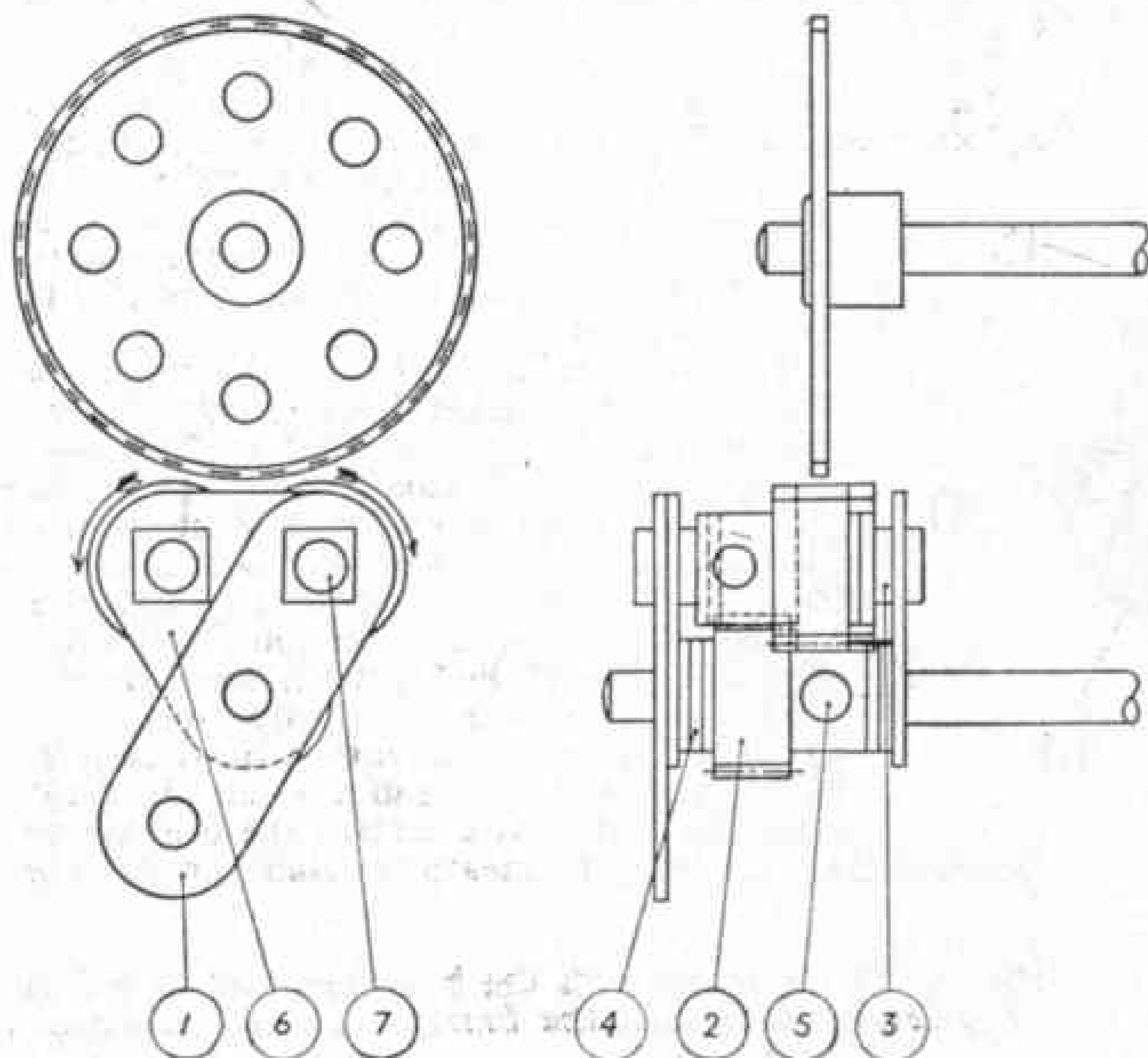
Fig. 2. A compact clutch unit suitable for heavy duty.

should be connected to a suitable lever for this purpose) either of them may be brought into engagement with any suitable Gear Wheel or Pinion placed above them in the manner shown. It should be noted, that any gear placed at a suitable distance from the rocking Pinions will do. This means that the limits are determined by the condition that a neutral position exists when the rocking Pinions are in their middle position, and that engagement is obtained when the Pinions are rocked.

When the Pinions rotate in the direction shown by the arrow they will tend to remain in the "on" position, and this tendency is greater the heavier the load on the driven shaft becomes. In view of this the mechanism works best at a comparatively high speed.

This compact mechanism resembles the rocking gear used in some lathes for reversing the direction of the feed movements, and it is adaptable for use in many different kinds of models where a reversing action is required.

Fig. 3. This compact reversing mechanism was designed by N. Gottlob, Hjortekaer, Denmark.



New Meccano Model

Giant Walking Dragline

THE giant walking dragline which forms our new model this month is one of exceptional interest. It has been designed as a subject for older model-builders who have good supplies of Meccano parts at their disposal. It is shown complete in Fig. 1.

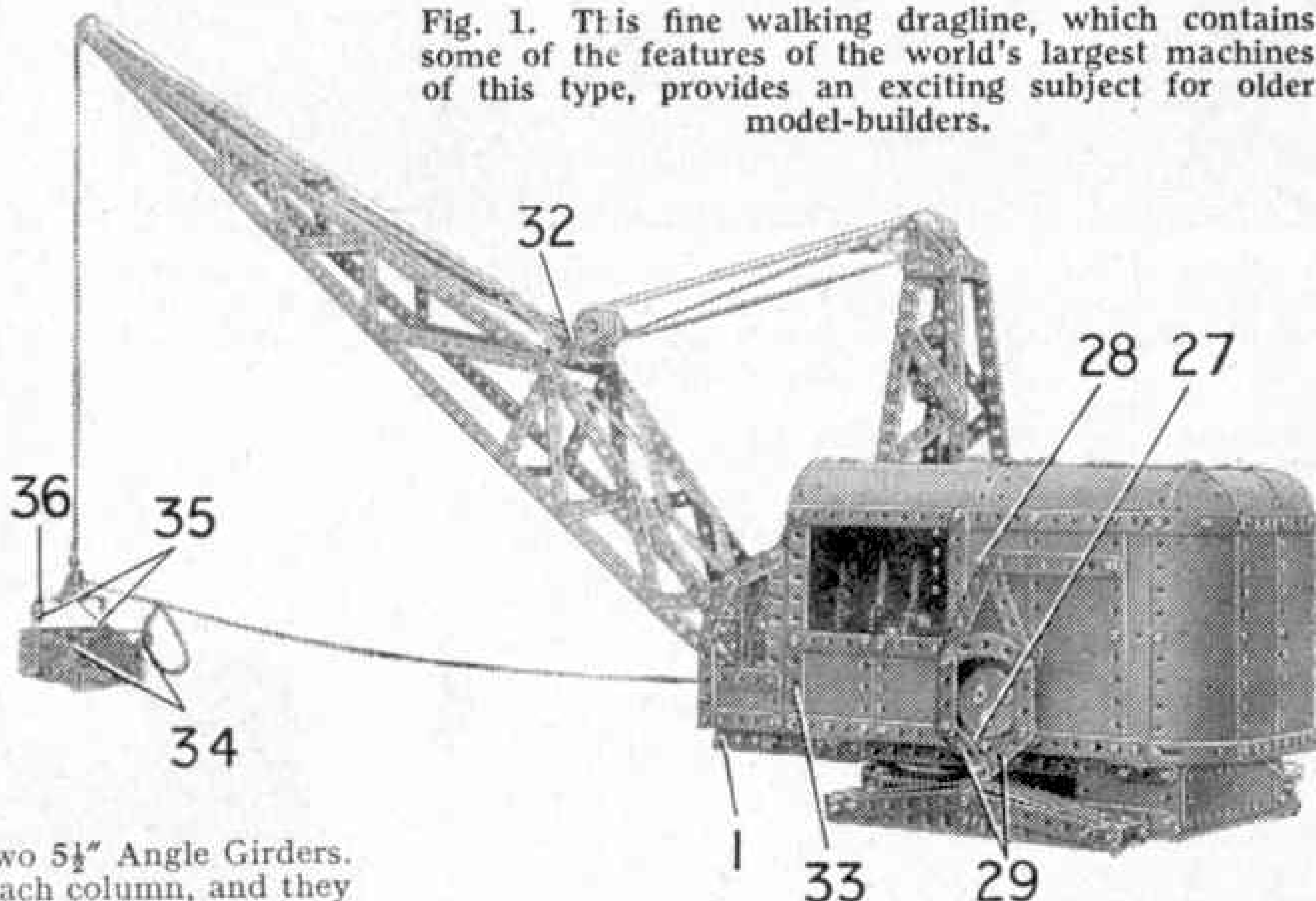
The cab base is made by bolting three $5\frac{1}{2}" \times 3\frac{1}{2}"$ Flat Plates between two $12\frac{1}{2}"$ Angle Girders 1 (Fig. 3). The assembly is strengthened by a $5\frac{1}{2}"$ Angle Girder at the rear, and by a similar Girder 2 positioned as indicated in Fig. 2. A Flanged Disc from a Ball Thrust Race is bolted to the underside of the base, and the Ball Cage is carried between the Flanged Disc and a $3\frac{1}{2}"$ Gear 3. Gear 3 is mounted between nuts on four $\frac{1}{4}"$ Bolts that are held by nuts in a $4"$ Circular Plate. This Plate is bolted to two $5\frac{1}{2}"$ Strips fixed across a Circular Girder 4, and a second Circular Girder is attached to the first by Fishplates. A $1\frac{1}{2}"$ Rod fixed in Gear 3 is passed through the bearing unit and the cab is held in position by a Collar.

The framework that carries the walking shafts consists of two columns 5 and 6. Column 5 is made by bolting a $5\frac{1}{2}"$ Angle Girder and a $5\frac{1}{2}"$ Strip to the base, and column 6 consists of two $5\frac{1}{2}"$ Angle Girders. A $3" \times 1\frac{1}{2}"$ Flat Plate is fixed to each column, and they are connected at the top by $5\frac{1}{2}"$ Strips.

An E20R Electric Motor is bolted to the rear of the base, and a $\frac{1}{4}"$ Pinion on the armature shaft meshes with a 50-tooth Gear on a $2\frac{1}{2}"$ Rod 7 (Fig. 4). A Worm on this Rod is in constant mesh with a 57-tooth Gear on a Rod 8, which is mounted in a $1" \times 1"$ Angle Bracket bolted to the Motor, and in a $2\frac{1}{2}"$ Flat Girder fixed to a $2\frac{1}{2}"$ Angle Girder that is also bolted to the Motor side-plate. Rod 8 carries a $\frac{1}{2}"$ Pinion 9 and a $\frac{1}{4}"$ Sprocket 10.

The drive to the walking motion is taken from Pinion 9 to a 57-tooth Gear on a $6\frac{1}{2}"$ Rod 11. This Rod is mounted in $1\frac{1}{2}"$ Strips bolted to the columns 5 and 6, and it is arranged so that it can slide about $\frac{1}{4}"$ in its bearings to bring the Gear into mesh with Pinion 9 when it is required to engage the drive. The sliding

Fig. 1. This fine walking dragline, which contains some of the features of the world's largest machines of this type, provides an exciting subject for older model-builders.



movement of Rod 11 is controlled by a lever 12. This consists of a Crank extended by a $2\frac{1}{2}"$ Strip and fitted with a Rod and Strip Connector, and it is fixed on a $2\frac{1}{2}"$ Rod mounted in $1\frac{1}{2}"$ Flat Girders bolted to the column 6. A Coupling on the Rod, between the Flat Girders, is fitted with a $\frac{1}{4}"$ Bolt, and the head of this Bolt engages between the boss of the 57-tooth Gear and a Collar on Rod 11. A $\frac{1}{2}"$ Pinion 13 on Rod 11 is in constant mesh with a 57-tooth Gear on the main walking shaft, which is an $8"$ Rod 14 mounted in $1\frac{1}{2}"$ Strips and Double Bent Strips bolted to columns 5 and 6.

The Electric Motor switch is operated by a lever 15.

The gear-box (see Fig. 5) is made by connecting two $3\frac{1}{2}" \times 2\frac{1}{2}"$ Flanged Plates together at each end by a $3\frac{1}{2}"$ Strip 16 and a $2\frac{1}{2}"$ Strip. The $2\frac{1}{2}"$ Strip is removed in Fig. 2, in order to show the gears clearly. The gear-box is attached to the cab base by two $1" \times \frac{1}{2}"$ and two $1" \times 1"$ Angle Brackets.

The drive from Sprocket 10 is taken by Chain to a $\frac{1}{4}"$ Sprocket on a Rod 17 mounted centrally in the Flanged Plates. This Rod is fitted with a $\frac{1}{4}"$ Pinion 18 and a $\frac{1}{2}"$ Pinion 19. Pinion 19 is in constant mesh with a 57-tooth Gear on a Rod 20, which carries also a $\frac{1}{4}"$ diam. $\frac{1}{4}"$ face Pinion 21. The latter engages a 50-tooth Gear on a slidable Rod 22. The $\frac{1}{2}"$ Pinion 23 is fixed on the Rod and is located centrally over a $\frac{1}{4}"$ Contrate 24. The Contrate is fixed on a $2"$ Rod mounted in the cab base and in a $1\frac{1}{2}"$ Strip 25 that is attached to the base by $\frac{1}{2}"$

Bolts, so that it is located beneath the Ball Thrust Race

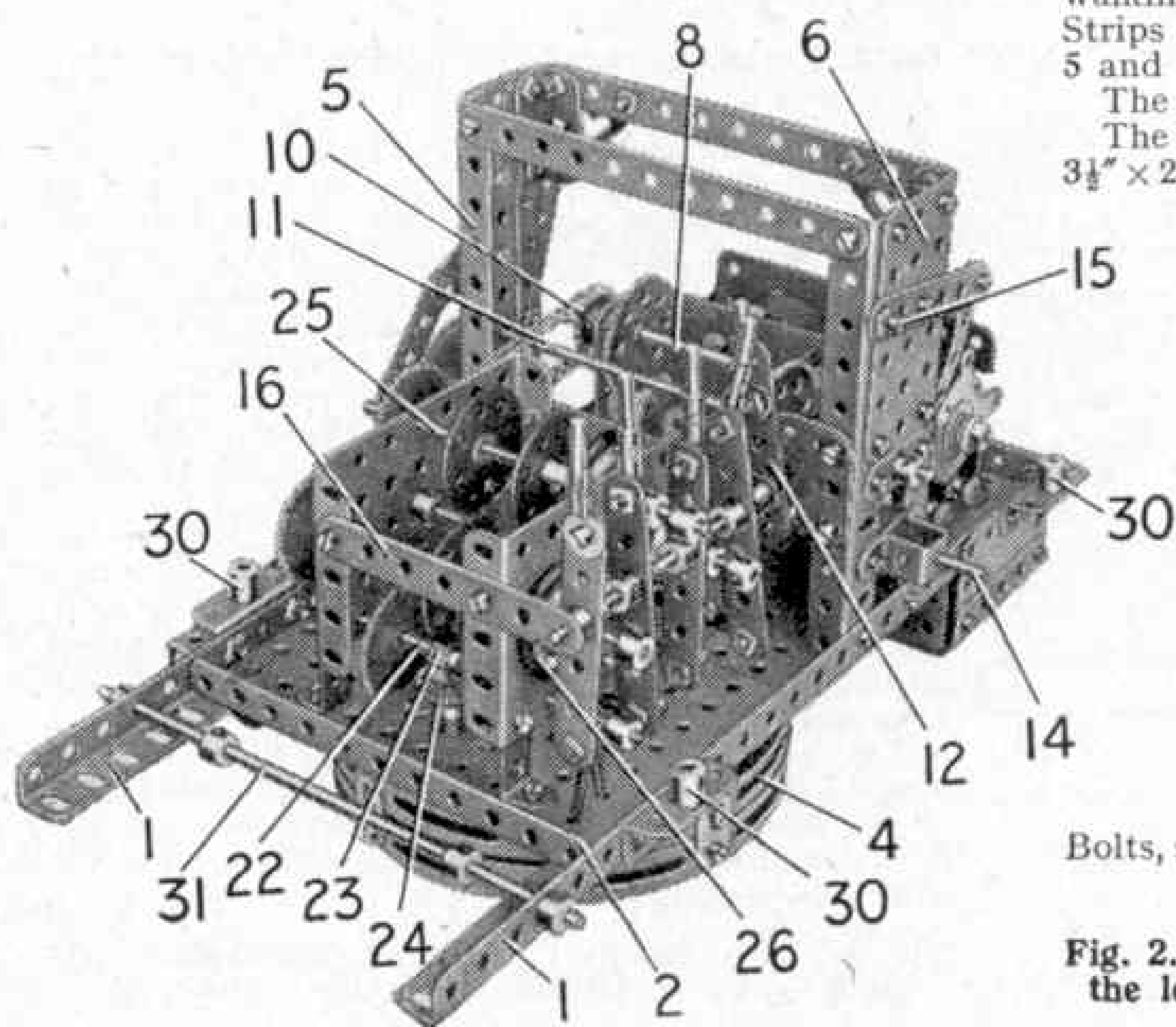


Fig. 2. The dragline with the body removed to reveal the levers controlling the four-movement gear-box.

Flanged Disc. The Contrate is spaced from the base by Washers so that it engages accurately with Pinion 23, and a $\frac{1}{2}$ " Pinion 24 is in constant mesh with the $3\frac{1}{2}$ " Gear 3. Pinion 23 can be engaged with either side of the Contrate to provide a reversible drive for the slewing motion.

The remaining three drives of the gear-box are each engaged by sliding a Rod 25 so that a 50-tooth Gear on the end of the Rod engages with Pinion 18. Each of the Rods 25 is fitted with a 1" Pulley and Rubber Ring 26, two Bush Wheels that form the winding drum, and two Collars on the outer end of the Rod.

The sliding Rods are controlled by levers formed by 3" Strips extended by Rod and Strip Connectors. Each lever is pivoted between Collars on a Rod mounted in the end holes of Strips 16, and carries a Bolt held by two nuts in the 3" Strip. The bolt heads engage between the Collars at the ends of the Rods.

The lever controlling the slewing drive is held vertically by a $2\frac{1}{2}$ " Driving Band looped over a bolt in the end hole of the lever and the base of the cab. Each of the levers operating the remaining three sliding shafts has a $2\frac{1}{2}$ " Driving Band looped between the gear-box and a bolt in the lever, so that it forces the Rubber Ring on the Pulley against the side of the gear-box to act as a brake. First movement of the lever releases the brake and its Rod is free to rotate, but further movement brings the 50-tooth Gear into mesh with Pinion 18 to engage the drive.

Each walking shoe consists of two $7\frac{1}{2}$ " Angle Girders joined at their ends and at the centre by $1\frac{1}{2}$ " x $\frac{1}{2}$ " Double Angle Strips. The central Double Angle Strip is connected to the Girders by Fishplates and $3\frac{1}{2}$ " Strips, and the shoe is completed by two $5\frac{1}{2}$ " x $1\frac{1}{2}$ " Flexible Plates attached to Fishplates bolted to the end Double Angle Strips. The shoes are operated by

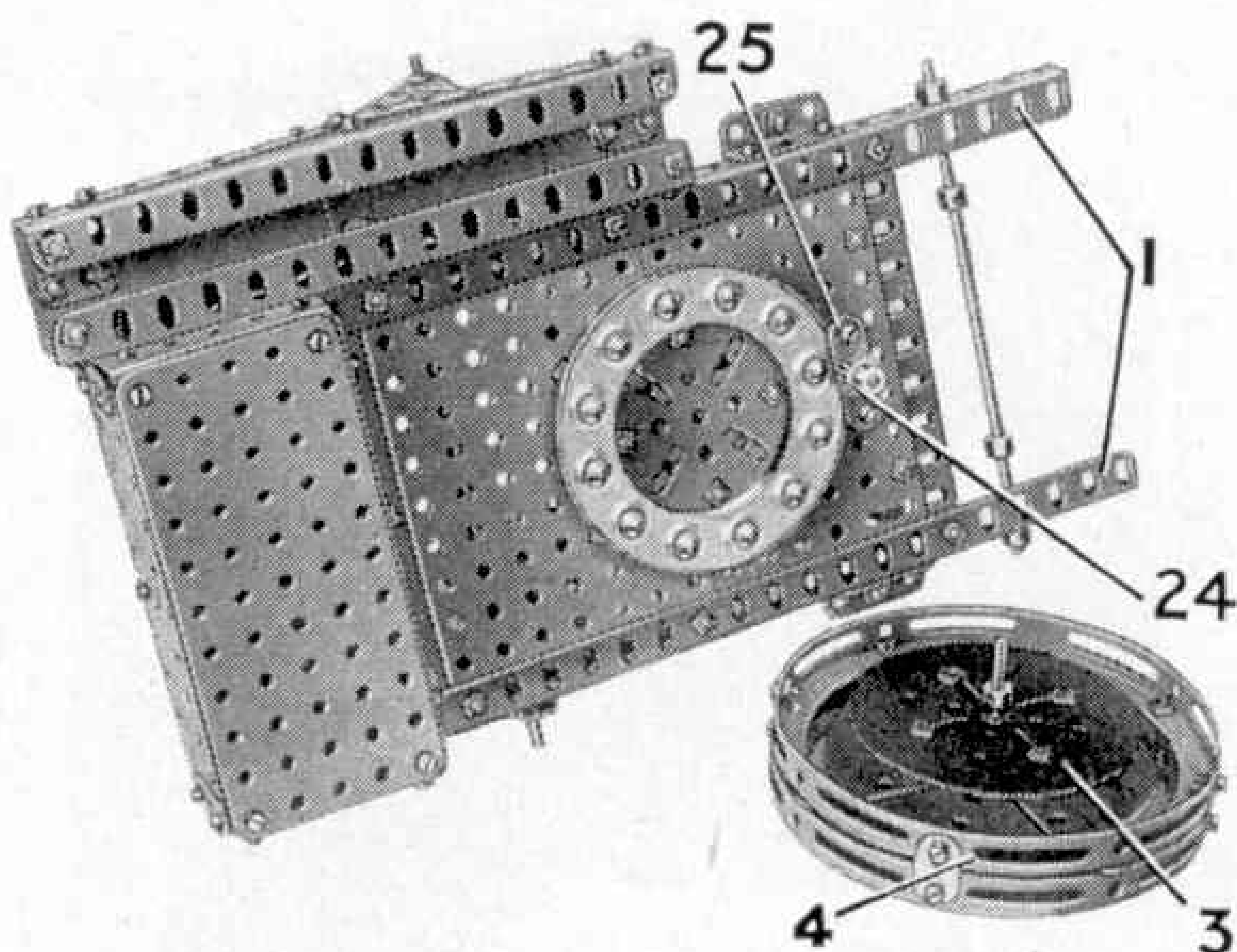


Fig. 3. The dragline seen from below, with the bearing and circular base partly dismantled.

Triple Throw Eccentrics fixed to the ends of Rod 14. A $2\frac{1}{2}$ " Stepped Curved Strip 27 is bolted to the strap of each Eccentric, and is linked to a further Curved Strip by two 2" Strips. Two 3" Strips are connected at their upper ends by a $\frac{3}{8}$ " Bolt 28, and two 2" Slotted Strips 29 are arranged so that a 1" Rod can be passed through their end holes and the Eccentric strap and through Angle Brackets bolted to the shoe.

The cab base is completed by fitting a box at the rear to house counterbalance weights, and the body bearer brackets. The sides of the box are $2\frac{1}{2}$ " x $1\frac{1}{2}$ " Flexible Plates, fitted at their lower edges with $2\frac{1}{2}$ " Angle Girders, and the bottom is a $5\frac{1}{2}$ " x $2\frac{1}{2}$ " Flat Plate. The front is a $5\frac{1}{2}$ " Flat Girder bolted to a $5\frac{1}{2}$ " Angle Girder, and the rear is a $5\frac{1}{2}$ " x $1\frac{1}{2}$ " Flexible Plate. The body bearer brackets are $1\frac{1}{2}$ " Angle Girders and each is fitted with a Rod Socket 30.

The sides of the jib are each made from six $12\frac{1}{2}$ " Strips bolted together as shown in Fig. 1. A vertical $3\frac{1}{2}$ " Strip is fixed between the apex and the base, and bracing Strips of various lengths are fitted. The sides are connected together by a Double Bracket at the jib head, by two $2\frac{1}{2}$ " x $\frac{1}{2}$ " Double Angle Strips at the ends of the vertical $3\frac{1}{2}$ " Strips, and by a 3 " x $1\frac{1}{2}$ " Double Angle Strip at the base of the jib. The complete jib pivots between Collars on a Rod 31 seen in Fig. 2. Three 1" Pulleys are mounted on a 2" Rod that passes through 1 " x $\frac{1}{2}$ " Angle Brackets 32.

The side of the cab seen in Fig. 1 is made by bolting two $9\frac{1}{2}$ " Strips to a $5\frac{1}{2}$ " Angle Girder 33. This side is filled by two $2\frac{1}{2}$ " x $2\frac{1}{2}$ ", one $5\frac{1}{2}$ " x $1\frac{1}{2}$ " and two $5\frac{1}{2}$ " x $2\frac{1}{2}$ " Flexible Plates, arranged to leave a gap to allow access to the control levers. The edges of the Plates are braced by Strips. The other side is constructed similarly, but the $2\frac{1}{2}$ " x $2\frac{1}{2}$ " Plates are replaced by $5\frac{1}{2}$ " x $2\frac{1}{2}$ " Flexible Plates to fill the side in completely.

A vertical $5\frac{1}{2}$ " x $2\frac{1}{2}$ " Flexible Plate is attached to each of the Angle Girders 33, and these Plates are connected at their upper ends by a $2\frac{1}{2}$ " x $2\frac{1}{2}$ " Flexible Plate. The front is completed by two Semi-Circular Plates and two $2\frac{1}{2}$ " x $1\frac{1}{2}$ " Flexible Plates. The sides are connected at the rear by Formed Slotted Strips joined by $4\frac{1}{2}$ " Strips, and the space between these parts is filled by four $5\frac{1}{2}$ " x $2\frac{1}{2}$ " Flexible Plates. The curved sides of the roof are made from $5\frac{1}{2}$ " x $2\frac{1}{2}$ " and $4\frac{1}{2}$ " x $2\frac{1}{2}$ "

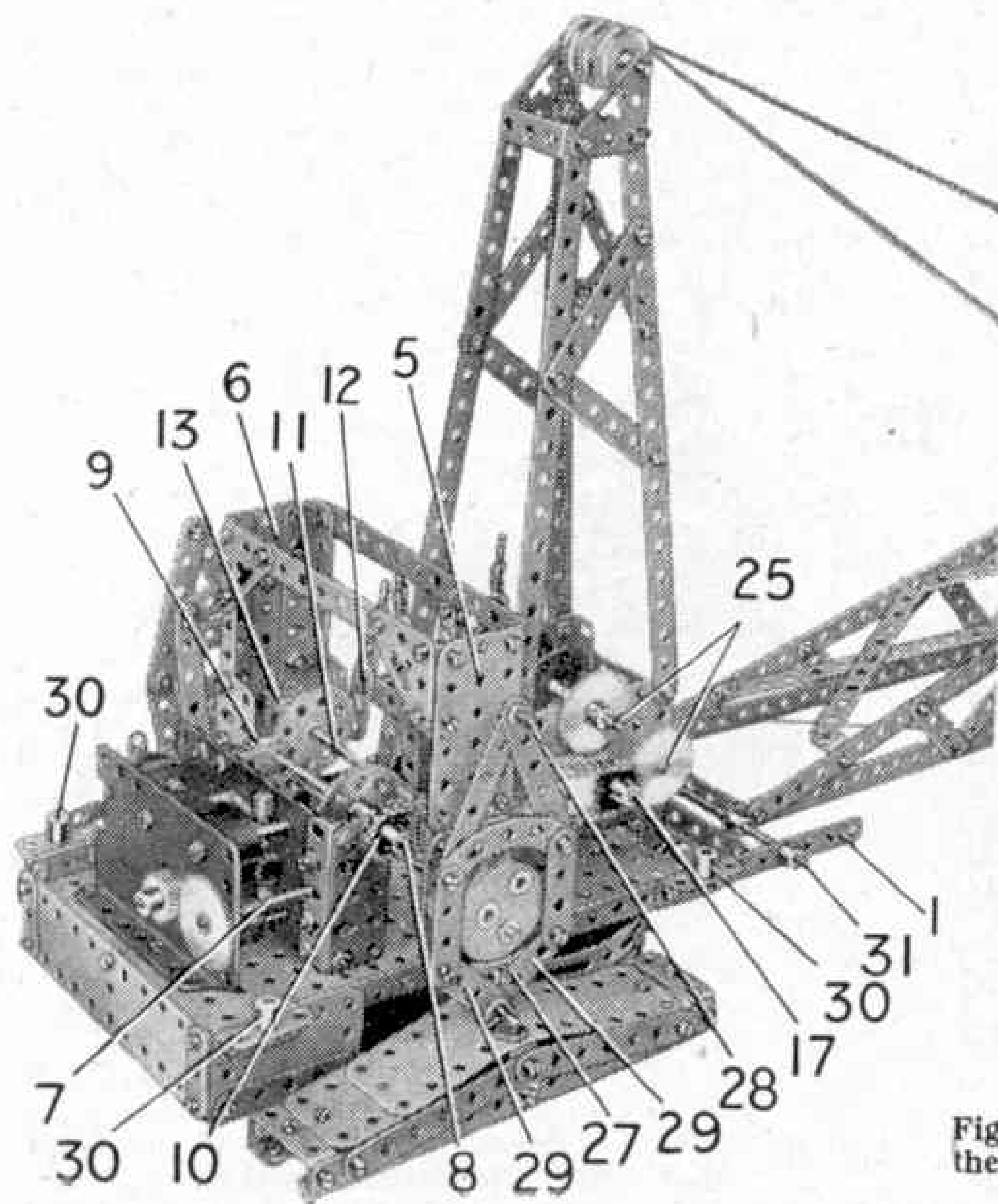


Fig. 4. The position of the E20R Electric Motor and the construction of the walking shoe and eccentric are shown clearly in this view.

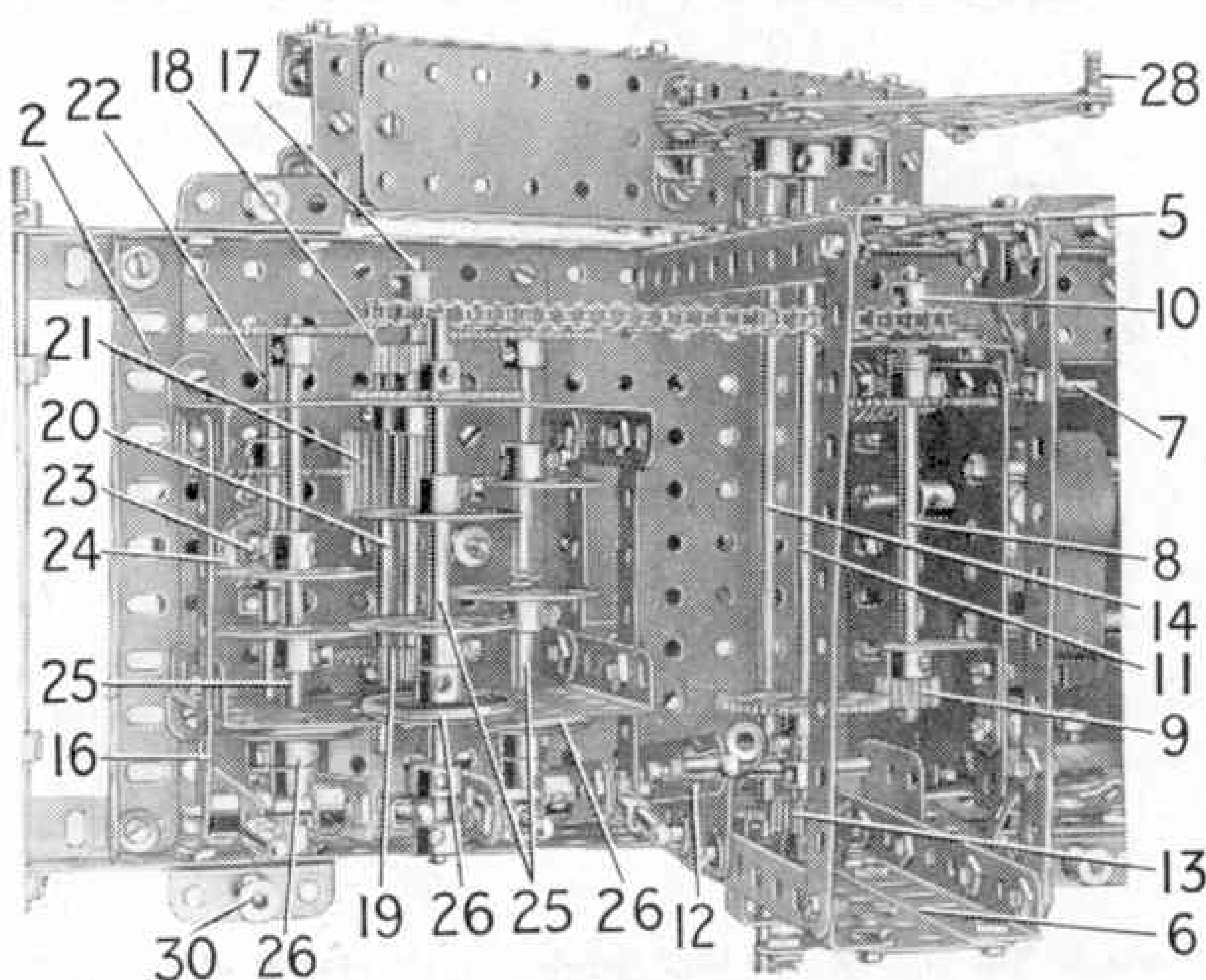


Fig. 5. An overhead view of the cab base that shows the arrangement of the winding drums in the gear-box.

Flexible Plates, and they are connected across by $4\frac{1}{2}'' \times 2\frac{1}{2}''$ Flexible Plates. The curved end is filled by two $1\frac{1}{8}''$ radius Curved Plates and two $2\frac{1}{2}'' \times 1\frac{1}{2}''$ Flexible Plates bent to shape.

A control cabin is fitted on either side of the jib, and each is assembled on two $4\frac{1}{2}''$ Angle Girders bolted $1\frac{1}{2}''$ apart at the front of the cab. Each side of the control cabin is assembled from a $2\frac{1}{2}'' \times 1\frac{1}{2}''$ Flexible Plate, three $2\frac{1}{2}''$ and two $2''$ Strips arranged as shown, and the roof is a $2\frac{1}{2}'' \times 1\frac{1}{2}''$ Flexible Plate attached to a $1\frac{1}{2}'' \times \frac{1}{2}''$ Double Angle Strip. The lower section of the front is filled by three $1\frac{1}{2}'' \times \frac{1}{2}''$ Double Angle Strips. When the cab is in position on the base a $3\frac{1}{2}''$ Strip is lock-nutted to each of the Bolts 28 and to the cab side.

The bucket (Fig. 6) is made by bolting $3\frac{1}{2}''$ Angle Girders to the edges of a $3\frac{1}{2}'' \times 2\frac{1}{2}''$ Flexible Plate, and the sides are $2\frac{1}{2}'' \times 1\frac{1}{2}''$ Flexible Plates edged by Strips, and connected at the rear by a $2\frac{1}{2}'' \times 1\frac{1}{2}''$ Flanged Plate. Two $2\frac{1}{2}''$ Strips 34 are bolted tightly to the sides and are joined by a $2\frac{1}{2}'' \times \frac{1}{2}''$ Double Angle Strip. Two further $2\frac{1}{2}''$ Strips 35 are pivoted on lock-nutted bolts and these are linked by a $2\frac{1}{2}'' \times \frac{1}{2}''$ Double Angle Strip 36. The pulley assembly is attached to this Double Angle Strip, and consists of two $1''$ Triangular Plates fixed to Angle Brackets with a $\frac{1}{2}''$ loose Pulley freely mounted on a lock-nutted $\frac{1}{2}''$ Bolt.

The jib luffing Cord is tied to the rear winding drum and is led over the outer pair of Pulleys at the top of the tower and the outer ones on the jib. The end of the Cord is fitted with a small Hook and this is attached to a Fishplate on the tower. The hoisting Cord is fastened to the upper winding drum and is led round the central Pulleys in the tower and the jib, and a small Hook is then slipped over a $\frac{1}{2}''$ Bolt in the $1''$ Triangular Plates.

The drag Cord is tied to the front winding drum, is led out through the base of the jib and round the $\frac{1}{2}''$ Pulley in the block. The end of the Cord is tied to the Double Angle Strip between Strips 34. A length of plaited Cord is fastened at each end to Strips 34, and is tied at the centre to the drag Cord.

The box at the rear of the base should be filled with suitable counterbalance weights, so that the machine remains stable when the bucket and its load is hoisted with the jib in its lowest working position.

The walking motion of the dragline is arranged so that the machine always steps backwards. Steering, and travel in the reverse direction, are controlled by turning the cab and jib bodily on the circular base.

The walking shoes are first raised clear of the ground and the drive is thrown out of gear. The slewing motion can then be engaged until the cab and jib are in line with the desired direction of travel.

In practice the jib is seldom luffed when the machine is working. It is usually set at the most convenient angle to suit the particular type of excavation required, and this arrangement can be followed with the model.

The sequence of excavating operations is as follows. The bucket is lowered to ground level and the drag Cord is hauled in to make the required length of "cut." The bucket is then raised, paying out the drag Cord as necessary, and the cab is slewed to the position where the spoil is to be unloaded. The drag Cord is then released completely, so that the bucket tilts to unload the excavated material.

With practice all the movements of an actual dragline can be carried out with the model, and it can be used to handle material such as sand. The bucket should be lined with thin cardboard when it is used for excavating.

Parts required to build the model Walking Dragline: 12 of No. 1; 6 of No. 1a; 6 of No. 1b; 14 of No. 2;

10 of No. 2a; 23 of No. 3; 20 of No. 4; 37 of No. 5; 16 of No. 6; 9 of No. 6a; 2 of No. 8; 4 of No. 8b; 8 of No. 9; 5 of No. 9a; 3 of No. 9d; 5 of No. 9f; 13 of No. 10; 1 of No. 11; 22 of No. 12; 3 of No. 12a; 4 of No. 12b; 1 of No. 13a; 2 of No. 14; 4 of No. 15a; 3 of No. 15b; 1 of No. 16; 3 of No. 16a; 1 of No. 17; 3 of No. 18a; 7 of No. 18b; 9 of No. 22; 1 of No. 22a; 1 of No. 23; 6 of No. 24; 2 of No. 25; 1 of No. 25b; 5 of No. 26; 5 of No. 27; 4 of No. 27a; 1 of No. 27b; 1 of No. 29; 1 of No. 32; 6 of No. 35; 394 of No. 37; 70 of No. 37a; 112 of No. 38; 2 of No. 40; 2 of No. 45; 1 of No. 47a; 18 of No. 48; 4 of No. 48a; 1 of No. 51; 3 of No. 52a; 2 of No. 53; 4 of No. 55a; 2 of No. 57c; 26 of No. 59; 1 of No. 62; 1 of No. 63; 4 of No. 64; 1 of No. 70; 2 of No. 73; 2 of No. 77; 4 of No. 90a; 1 of No. 94; 2 of No. 96a; 1 of No. 103; 1 of No. 103f; 2 of No. 103h; 5 of No. 111; 5 of No. 111a; 19 of No. 111c; 2 of No. 130; 4 of No. 133; 2 of No. 143; 1 of No. 146a; 3 of No. 155; 1 of No. 168a; 1 of No. 168c; 4 of No. 186; 15 of No. 188; 8 of No. 189; 3 of No. 190; 3 of No. 190a; 5 of No. 191; 11 of No. 192; 2 of No. 200; 5 of No. 212; 2 of No. 214; 4 of No. 215; 1 E20R Electric Motor.

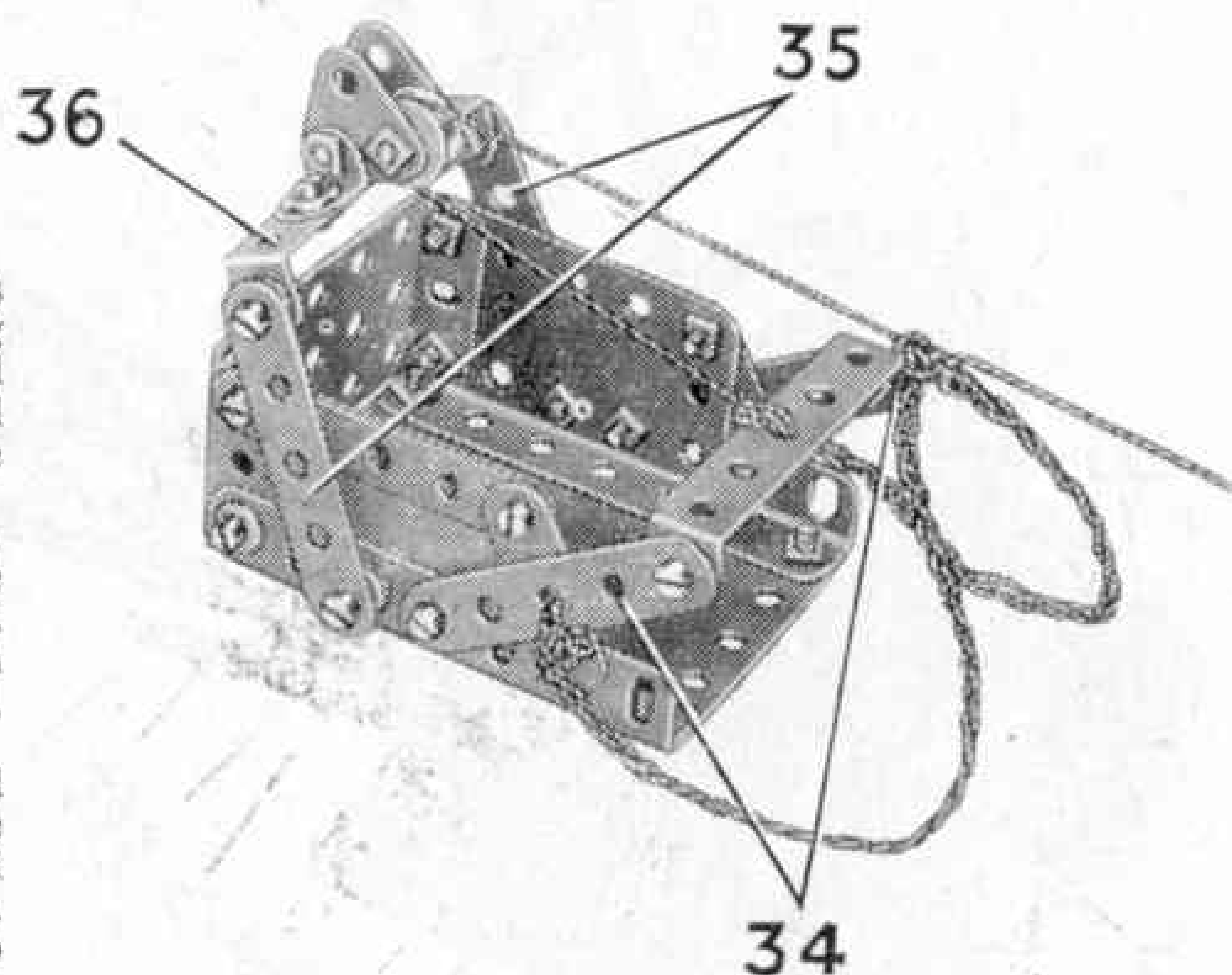


Fig. 6. This view shows the position of the Cords that control the dragline bucket,

Our International Model-Building Competition

By "Spanner"

How to Photograph Your Model

THE enthusiasm that greeted the first announcement of the great Meccano International Model-Building Competition grows as each day passes, and already model-builders in all parts of the world are busily

is best to use opal or pearl electric globes.

A plain background for the model should always be provided. Sometimes when a model is photographed out of doors the result is utter confusion, the model in the picture being mixed up with foliage, trellis work, or brickwork behind it. Similar difficulties may arise indoors, with furniture and window frames in place of trees or bricks. A typical example of a picture spoiled by not considering the background is seen in our upper illustration. In this instance the photograph of the model is really good, but the effect is ruined because the photographer failed to place a sheet of plain white or brown paper behind and underneath the model.

Dark shadows behind and under the model can be avoided by arranging sheets of white paper so as to reflect light on to the dark portions. The lens should be "stopped down" to the smallest aperture available. An exposure of from 1 to 3 seconds may be necessary, but lighting conditions vary so greatly that it is impossible for me to give definite advice on this point, and I advise readers to use an exposure meter.

The prints should be made on glossy paper, as this is best for competition purposes. They should be as large as possible and certainly not smaller than $3\frac{1}{2}'' \times 2\frac{1}{2}''$. Contact prints from miniature camera negatives are quite unsuitable. Pencil marks should not be put on the prints to draw attention to certain parts, unless it is possible to submit at the same time a second print without such marks.

Competitors are advised to give the preparation of their photographs or drawings as much care as they give to building their models. Remember, unless a photograph is sharp and clear the judges may miss some of the model's best features, no matter how carefully they scrutinise it, and so a really good model may fail to win a prize.

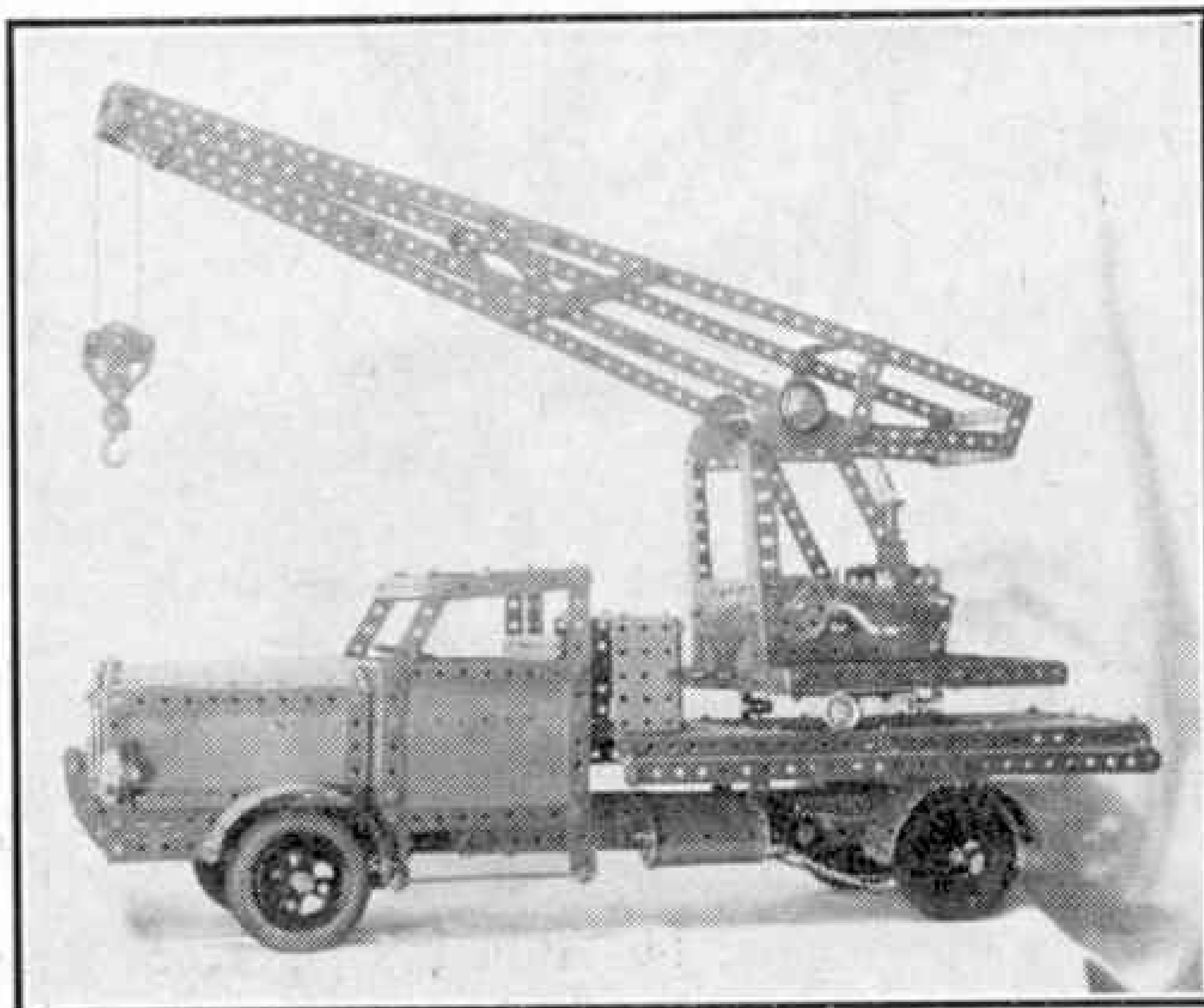
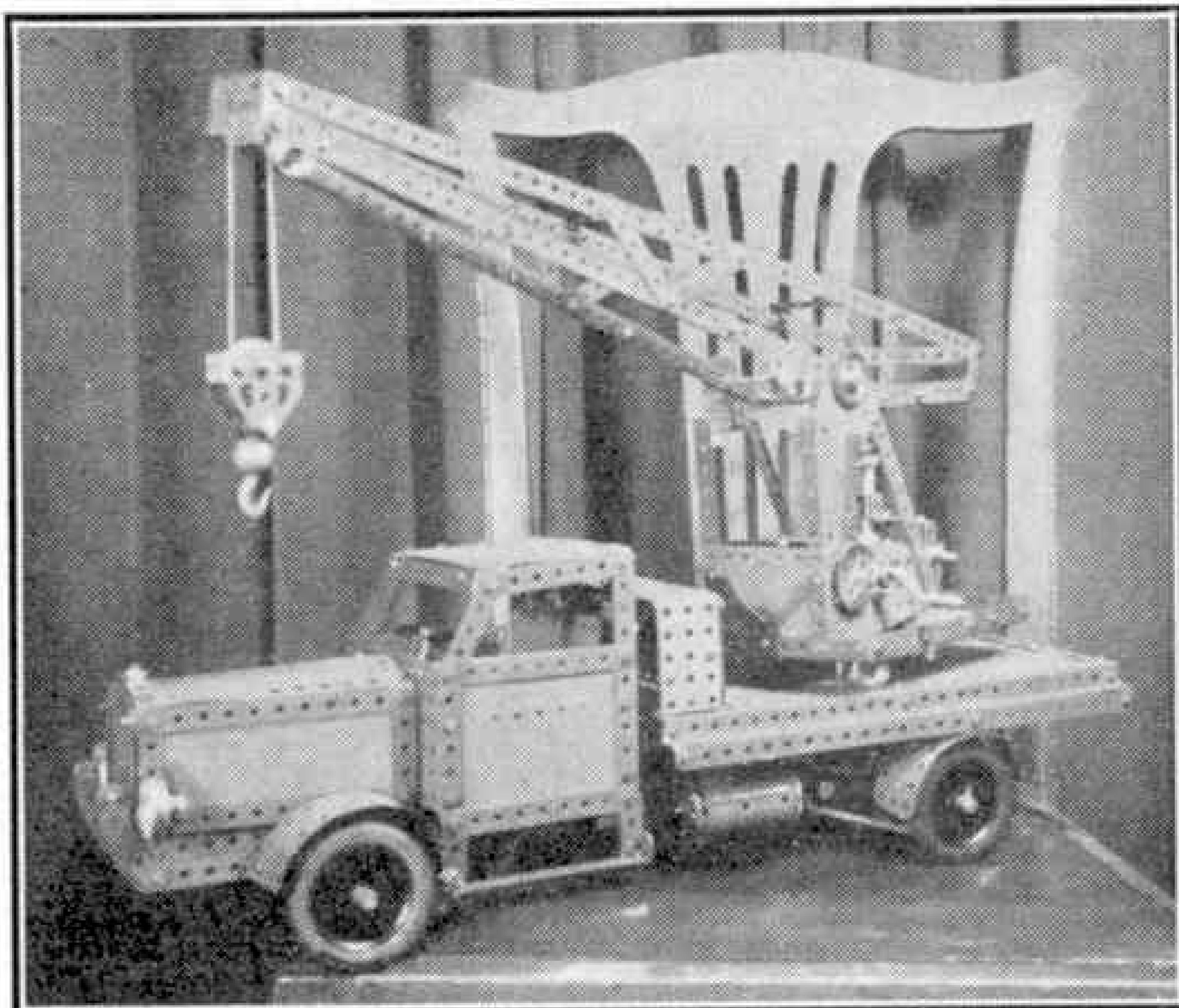
A typical example of an otherwise good photograph completely spoiled by an unsuitable background. Compare this with the illustration below.

at work on models that they hope will win them places in the prize list.

Readers will be aware that the actual model must not be sent and that photographs or drawings only are required. If a model is to have its best possible chance of success, therefore, it is important that the photograph or drawing of the model entered shall be as detailed and clear as possible. It is not given to all of us to make really satisfactory drawings of our models. For this reason it is better to send a photograph if at all possible.

Fortunately it is quite easy to take suitable photographs, and I am sure entrants will welcome a few hints. A camera that has focusing adjustments for photographing objects at close quarters is the best for the purpose, but fixed focus cameras can be used if a second or supplementary lens, commonly known as a "portrait attachment," is fitted over the camera lens. Such a lens can be purchased from a photographic dealer. A photograph taken with an ordinary box camera *without* a portrait lens will not be satisfactory, and if this is the only equipment available it will be better to employ a professional photographer or, if this is not possible, to make a drawing.

Generally it is best to photograph models indoors by artificial light. If only a single overhead electric or gas light is available, the model should be placed in such a position that the light falls on it from the front at an angle of about 45 degrees. If a second light, such as a table lamp, is available it should be placed a little to one side and slightly in front of the model. In order to avoid heavy shadows it



The plain white background used in this photograph helps considerably in making clear the details of the model.

A Dog's Life

By "Pawl"

HELLO everybody! This is Pawl korling. I'll bet wen yu paid yore shillin for this issue yu did not eggspeck the big thril of finding me among the kontributers to its pages! Wel this is how it orl came about.

T'other mornin I wus reclining grazeably with me feet upon the desk, tryin to decide weather to buy the Ed. a collar stud for a Krismas present or to give him a check, wen a timid nock came on the dorr of me sanctum. "Cum in," I sez, stickin me feet behind me ear, and drawin me pen in, and in cums the Ed. ("Pawl, with Boss"—ha, ha, sutle one that).

"To wot do I O this plessure?" sez I, turnin me Eye Pieces on the Boss.

"May I av a word with yu?" he sez in a dequityshush manner, and I nods me hed that he may proseed.

"Its like this" he sez. "The local Meccano deellers, Ratchet and Boltem Ltd., av just rung up to sey that their joonier assistant as got the flew and cannot cum to wurk. So I want you to go along and see wat yu can do."

"Do you mean," sez I, "that I ham to sell Meccano and Hornby Trains?"



"Yes," sez he, "and be quick about it or the Krismas rush wil be over."

"Right," sez I, "I'll show em how to sell the stuff" and I dons me hed Gear and bids the Boss add jew.

"Gud mornin, Mr. Ratchet," I sez wen I reached the shop. "I'm Pawl and I've cum to elp you out by takin the place of your hasshistant whose flew."

"Thats the Gear-Wheel never forget yore kindness" sez he, "Hile leave you to

it an I opes as ow yule do a lot of biz."

Well fokes, I addent bean in the shop a cuple of minits wen in cums a big chap wiv a fice lik a beetrut. He marche up to the kounter and sez "What av yu in the shape of Motor Tyres?"

"Lumme," thinks I, "He's in the wrong



shop, he wants the garage," but not to be did I luks round the shop seein what I cud find.

"Here," I sez, plantin a life-belt on the kounter, "how wil that do?"

"That's not wat I want" sez he, giving me a stony stair, "I want a Motor Tyre."

"Oh," sez I, "I thort you wanted summut in the shape of a Tyre."

"Well you thort rong," sez the beetrut, "I want a tyre for a Meccano mudle, I meen model, and be quik about it."

"Well, why didn't you say so at first," sez I. Anyway I found him a Tyre and got rid of him.

After this encounter a man with a mustash cums in who loked as tho he new his P's and Q's.

"Ello," I sez, "What dew want?"

"I have a two Hamper Motor" sez he, and I want another."

"Nice weather for picnics," I sez, but I am afraid you're in the rong department. Lunshun Baskets first kounter on the left."

"My deer boy, you mistake me," he replied, "I want an elektrical driving unit wiv two amperes."

"Two wot?" I asks.

"No, not wotts, hampers" sez he.

"Wel, I am sorry," I sez, "all our Motors take currants, and if you want Hampers you'll ave to buy em separatelee."

"I meen a Motor for drivin a model like that one on the shelf there" sez the man.



"Oh I see," sez I, "Pardon me errer." So I got the Motor down and putt it on the kounter. "Here you are, sir. A jolly gud Motor at the price, keeps perfect time and does thirty to the gallon."

"Where's the reverse lever?" sez he.

"There just at the rear of the tonoh" I sez, "Yu simply push it over and the whole jolly bag of tricks stops going in won direction and goes in the other."

"Very gud," sez he, "And does it have a Pinion?"

"A pinny on?" I asks, amaszed. "Its a Motor, not a kid."

"I mean a Gear Wheel," sez he, "from which I can drive a model."

"Oh, I'm sorry" sez I. "Yes, it has a Pinion. Here it is in the box, and mind you don't loose it!"

He gave a snort, pocketted the Motor, banged down the kash, and stamped out of the shop, and thats the last I hurd of the krasey chump. "Fancy eggspecktin to get a hamper wiv a Motor! Aint he ever hurd of food rashunin?"

Well, readers, the day wore on, I wore out; and by closin time I'd orlso sold out!

Wen Mister Ratchet kame back just befour it was time to klose the shop an sor awl those emtee sheelves, e cudent beeleeve is eyes. Wen a got over the shock e was that pleesd e neerlee gayve me arf a krown, butt at the last minnit e chainged is mind an gayve me a pat on me back insted.

But no more shop wurk for me, I wud rahther lik stamps and empty the Ed's hash tray than be a shop assistant. Butt even in the offiss I am orlways in the soop!

T'other day for eggsampul I was ast to stik stamps on a uuugge pile of letters and parsels. Thinkin to doo the job quikly, I deevided the stamps out equilly between them orl "Equil shares for evereebody is my motto." I karnt understand why I was putt on the karpet, butt I wos! The Ed. wos kwrite narsty about it. "Yule av to pay for misstakes lik this in fewture" Kwoth he. "I shall stop it out of yore Grub Screw!"

I reckon my wayges ort to be razed insted of lo-erd bekcoss even if I dont doo orl the wurk, I av too carry orl the blame! Wot a life!

Wel, me times up an I must rush off becos I ear the Ed. corlin, but befour I go I must tell yu about a bit of fun we ad in the offiss t' other day. Me an sum others desided to ave a offiss bouys Derby on skates. We planned a corse threw the rodes arownd the Offisses in Bins Rode, and their wear fore runners, amung em hour illustrerous Spanner. I wos the ownlee wun hoo finisht the corse, for Spanner hoo wus behind me hoo was in the leed, kame to greef, wen in is wiled eggsitement he fayuld to notiss that a gratin cuverin a large drain pipe was not in its place. Wiv a yelp and kry of disspear he dissapeered into the inkee deps foload by the uther too runers, leevin me to finish the corse at a trot. My prise wos a free copee of the M.M. So long, chums. Yors still lock-nutting. "Pawl."

* * *

After riting the abuv harticle I tuk it to the Ed. Yu shud av seen is face wen he red it. He sed the spellin was orful, but as he ad no time to korrekt it he ad to let it go as I rote it. Persunally I think it is a jolly gud hart'tickle, and I no hees only jellous he karnt rite as well as me. I am sure M.M. readers wil like it. If yu



dont yu dont no gud stuff wen yu see it. Ennyway I tender to yu orl my artyest gud wishes for a jolly gud Krismus, and ope yu orl av lots of Meccano and Hornby Trains hammung yor presants. Cheerio!

HORNBY RAILWAY COMPANY

By the Secretary

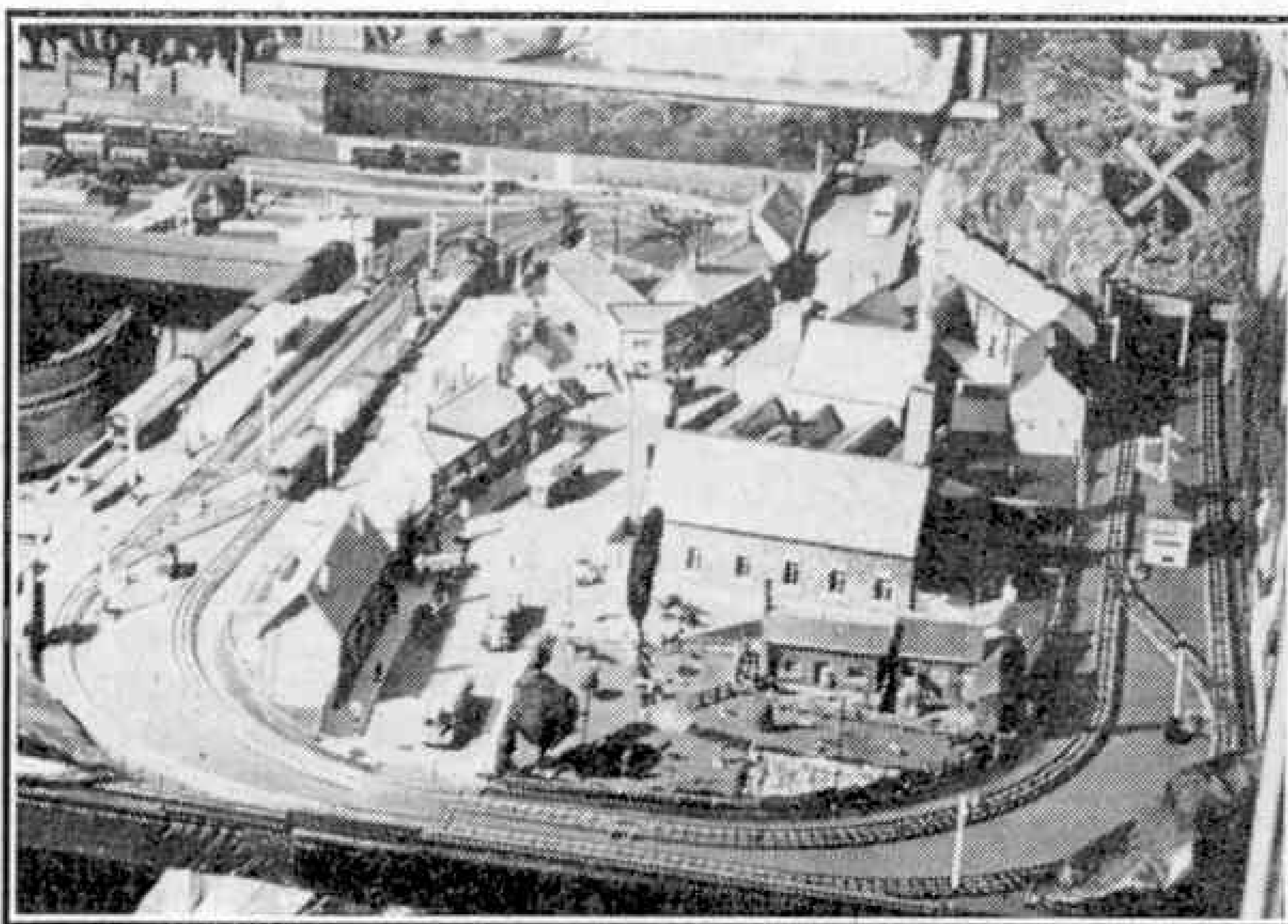
Learning from other Layouts

I AM able to include some fine pictures of readers' Hornby-Dublo layouts this month, and they are interesting in showing how different degrees of development are possible according to the space and material available. While the arrangements of individual layouts naturally vary, I am certain that their owners all agree on the vast amount of enjoyment that they get from their train running and railway operation generally.

Let us look at the upper illustration on this page. Here we have a spacious system arranged on a baseboard, with a considerable amount of lineside development. A point of special interest in the track arrangement is that the up and down main lines are set at a fair distance apart from one another, at least along the long straight stretches. This gives plenty of room between the tracks and readily allows such items as signals, a signal cabin, or even a loop line to be placed there when convenient.

It will be noticed that plenty of scenic items are provided, either as actual modelled features or as parts of a scenic

background. A point to which I would like to draw attention is that the houses and so on are not merely placed symmetrically within the main oval, as often happens.



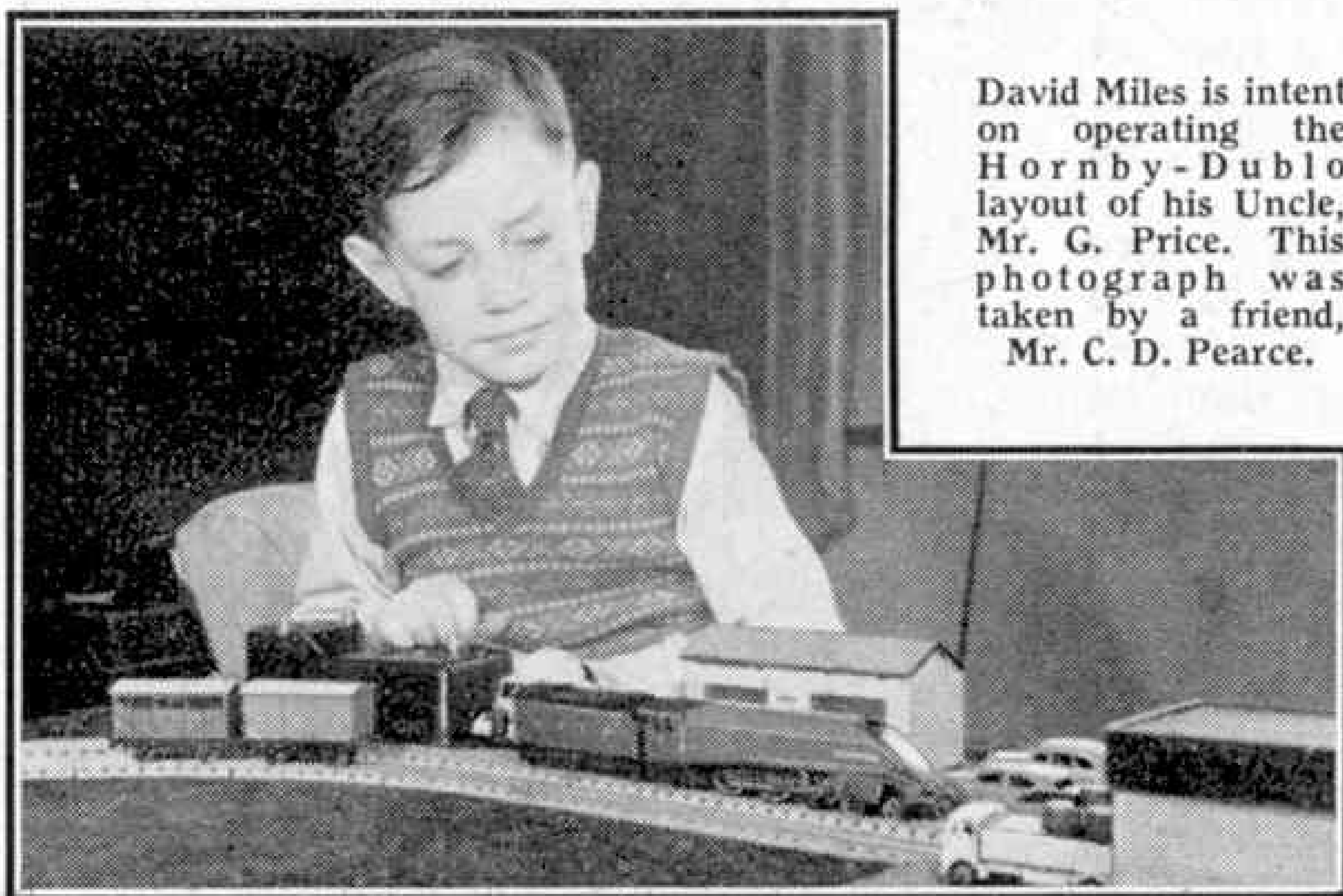
On the well-developed Hornby-Dublo railway of B. Massey, Dublin, special attention is given to lineside and other scenic features. Photograph by The Winton Photographies, Shankhill, Co. Dublin.

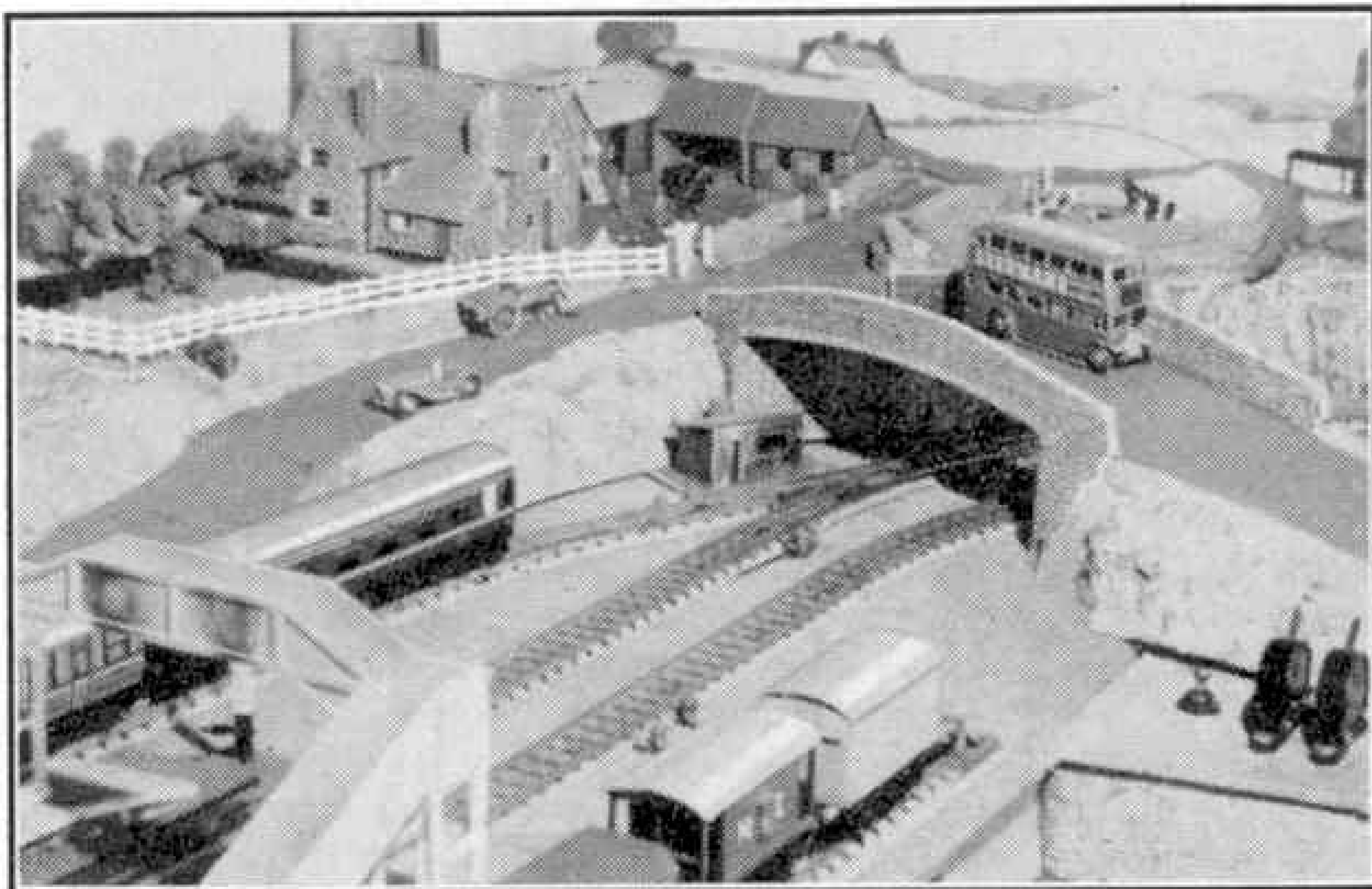
Instead, there is what I may call an "ordered irregularity" about them that makes them look natural. There has been no attempt to crowd too much into the space, either on the railway with its wide "right of way" or among the buildings that make up the miniature township.

Careful operation is the keynote of the second picture and the attention that is obviously being given to moving the engine can be followed with advantage by all Hornby-Dublo "drivers." The ease and comfort of the operator is assured from the fact that the layout is permanently installed on a table in a living room. It provides its owner, Mr. G. Price, of Uxbridge, and his nephew David Miles, whom you see in our picture, with a great deal of entertainment.

In addition to the usual railway features special attention has been given to the lineside. Thus the

David Miles is intent on operating the Hornby-Dublo layout of his Uncle, Mr. G. Price. This photograph was taken by a friend, Mr. C. D. Pearce.





This is how one corner on the layout of Mr. D. G. Crocker, Llanelly, is effectively filled. A Dinky Toys Motor Bus is making its way over the bridge.

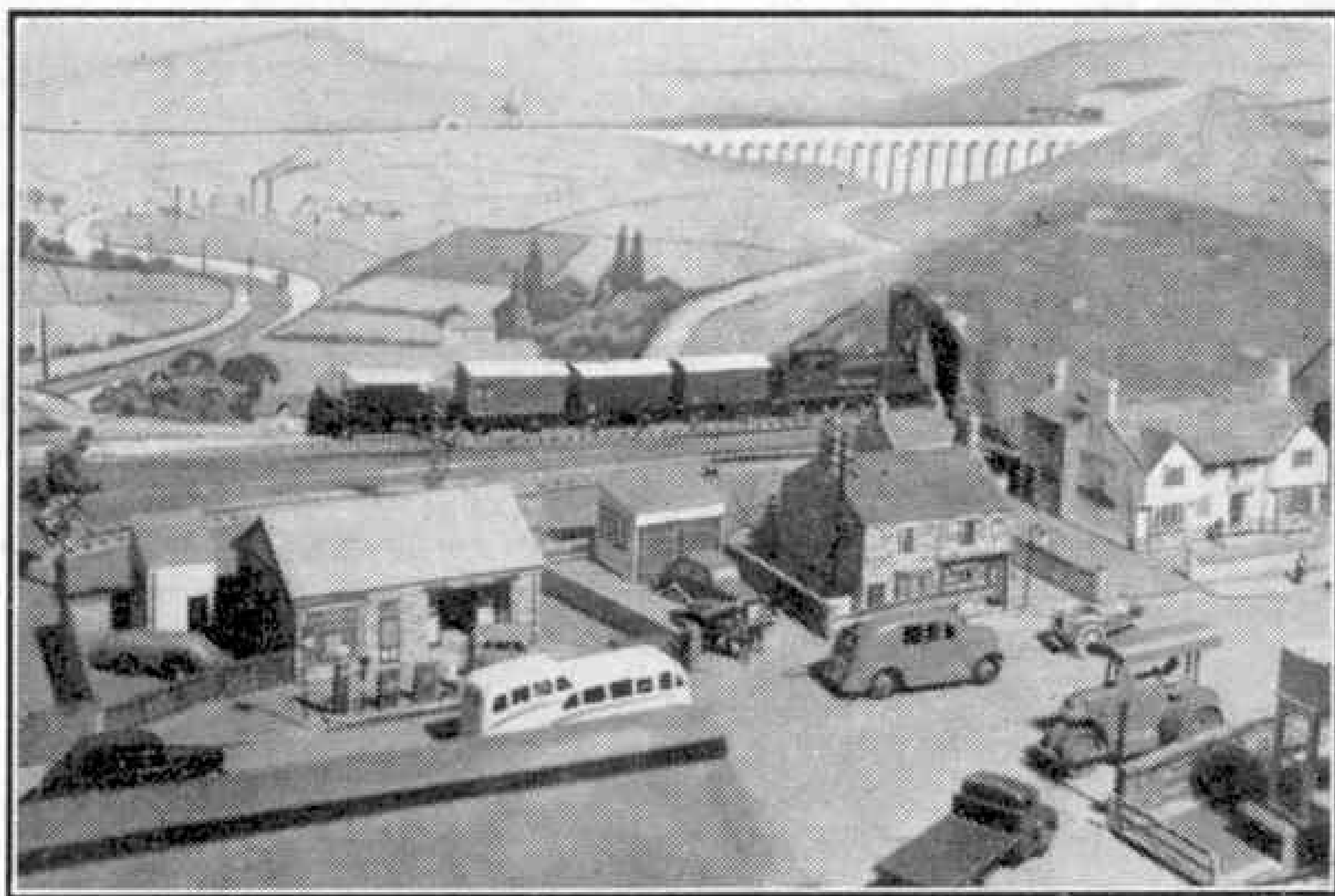
various railway and industrial buildings that have been modelled are supplemented by a miniature village, with a church and an inn, the latter appropriately known as *The Railwayman's Arms*. At one end of the oval track the railway passes through a well-modelled tunnel, in the construction of which plaster has been used most effectively.

A question that almost every miniature railway owner asks himself sooner or later is: "*How shall I fill in the corners?*" Most miniature railway sites are roughly square-cornered, but the railway has to curve round in order to change direction. This leaves an awkward space outside the track that it is not always easy to use to the best advantage. One Hornby-Dublo owner who seems to have found the secret is Mr. D. G. Crocker, of Llanelly, and an effective corner on his layout is shown in the upper picture on this page. The corner effect is avoided by the careful planning and placing of actual lineside features and a scenic background. In the corner itself, on a slight hill, there are various farmyard buildings and beyond them the background suggests that the countryside stretches well into the distance. The curving of the railway away from the corner is relieved by the road overbridge shown in the picture.

The result on the whole is very pleasing, and in keeping with the rest of the detail of the railway in question. At the opposite end of the baseboard the "square corner" effect is largely avoided by the presence of a locomotive yard and shed. The station that lies between these two ends of the system is of home construction and is specially interesting in having been modelled on the real station at Aston Rowant, on the Watlington branch of the Western Region.

This Hornby-Dublo system consists of a double track oval main line with appropriate sidings and connections. It is housed in a shed in the garden and at the moment it occupies a space of 10 ft. by 6 ft. It has been constructed largely for the use of Mr. Crocker's three sons, all of whom are H.R.C. members.

A well-arranged foreground and a



A fine view "across country" on the Hornby-Dublo layout of K. W. J. Austin, Taunton. The blending of lineside and background scenery is very effective.

splendid effect of distance "across country" are features of my fourth picture. This shows part of a layout that has already been described in the *M.M.*, in the issue for August last. The many-arched viaduct in the background gives the impression that the railway system stretches for miles and does away with the idea that outside the township is "just country."

Fun for All

On a Hornby Railway

THERE is no boredom in the miniature railway hobby! Its interests are too deep, and its variety too great for that. Building up a layout and running trains on it keep its owner well and truly occupied to begin with, and there are countless other activities, either of a direct railway type or associated in some way with railways, that add to the fun.

After operations with a train set have been in progress for a time it becomes clear that more rails and points will help things along splendidly, either by providing a bigger and better layout or by allowing a new layout to be planned that will give opportunities for different and perhaps more exciting train movements.

Now one of the advantages of the Hornby track system is that the individual sections can readily be put together to form a layout, and can be taken apart just as easily so that a new one may be built up. The limit of this kind of alteration and extension is not reached until all the space available has been taken up. Where this is ample, there is no end to the possibilities of variety.

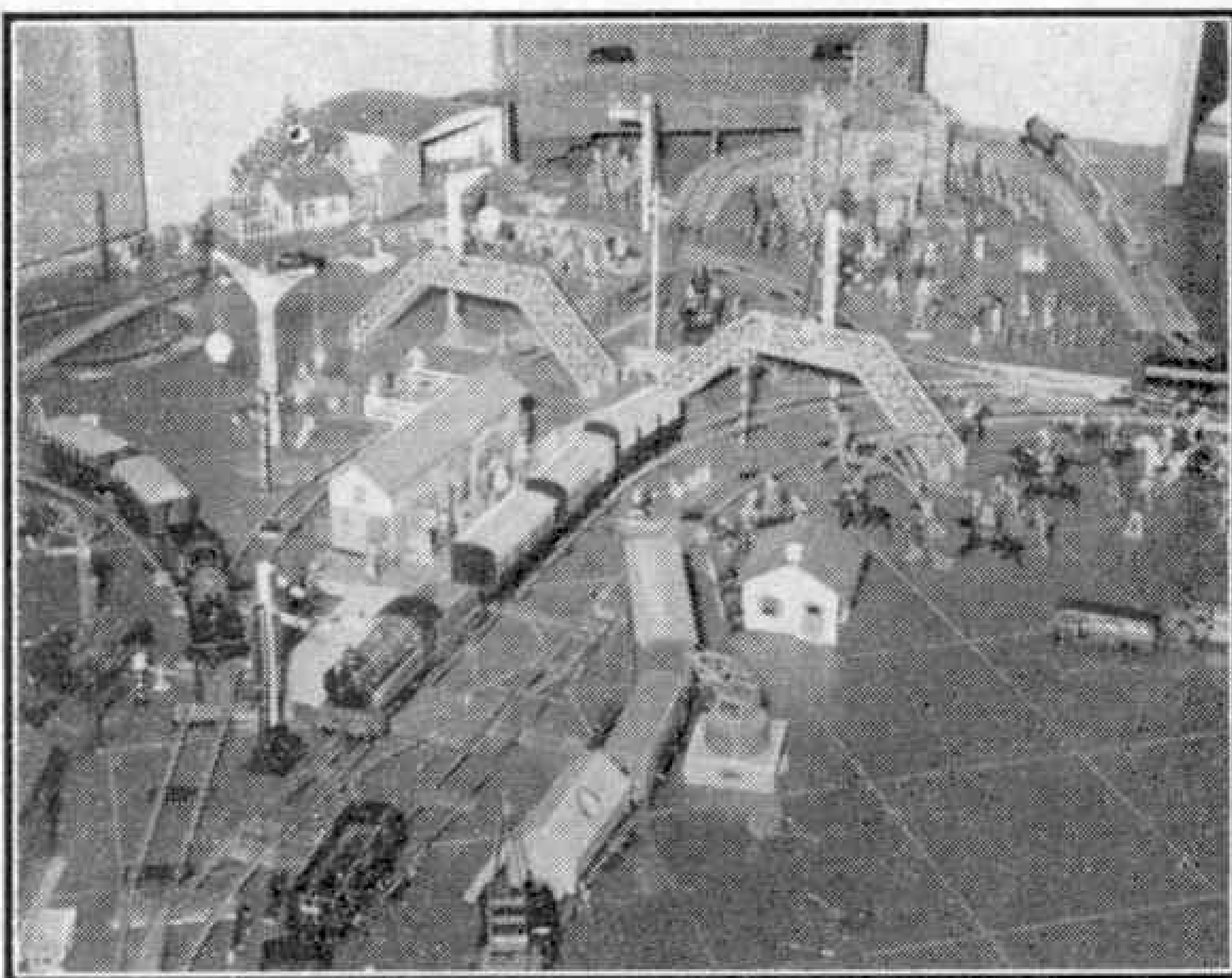
What happy results can follow from this sort of miniature railway engineering is well shown in the accompanying pictures of parts of the Hornby layout arranged by Mr. S. P. Quadros, of Bombay. This was designed to give pleasure to his children, all of whom thoroughly enjoy the fun along with him. The track is laid down on a spacious floor. It is an extensive system with miniature loop lines and alternative routes, so that a busy service of connecting trains can be run. The main point of the system is the junction shown in the illustration on this page, in which one train can be seen held at the station platform while another comes curving in from the loop line to the left.

This indeed is a railway that one can get down and play with, for there are engines and rolling stock to be moved, points to be operated, signals to be worked, goods to be loaded into wagons and vans or taken out,

and so on. There are jobs for every member of the family, in fact, and jobs too that carry real enjoyment with them.

As with most layouts, there are accessories and lineside effects of various kinds, with figures on the platforms, on the roads and in the fields, and a Dinky Toys road service in operation, all making up a really lively scene. The Quadros Railway has been growing for a long time and has given real pleasure to many persons both old and young in the process.

Continuous running is almost always



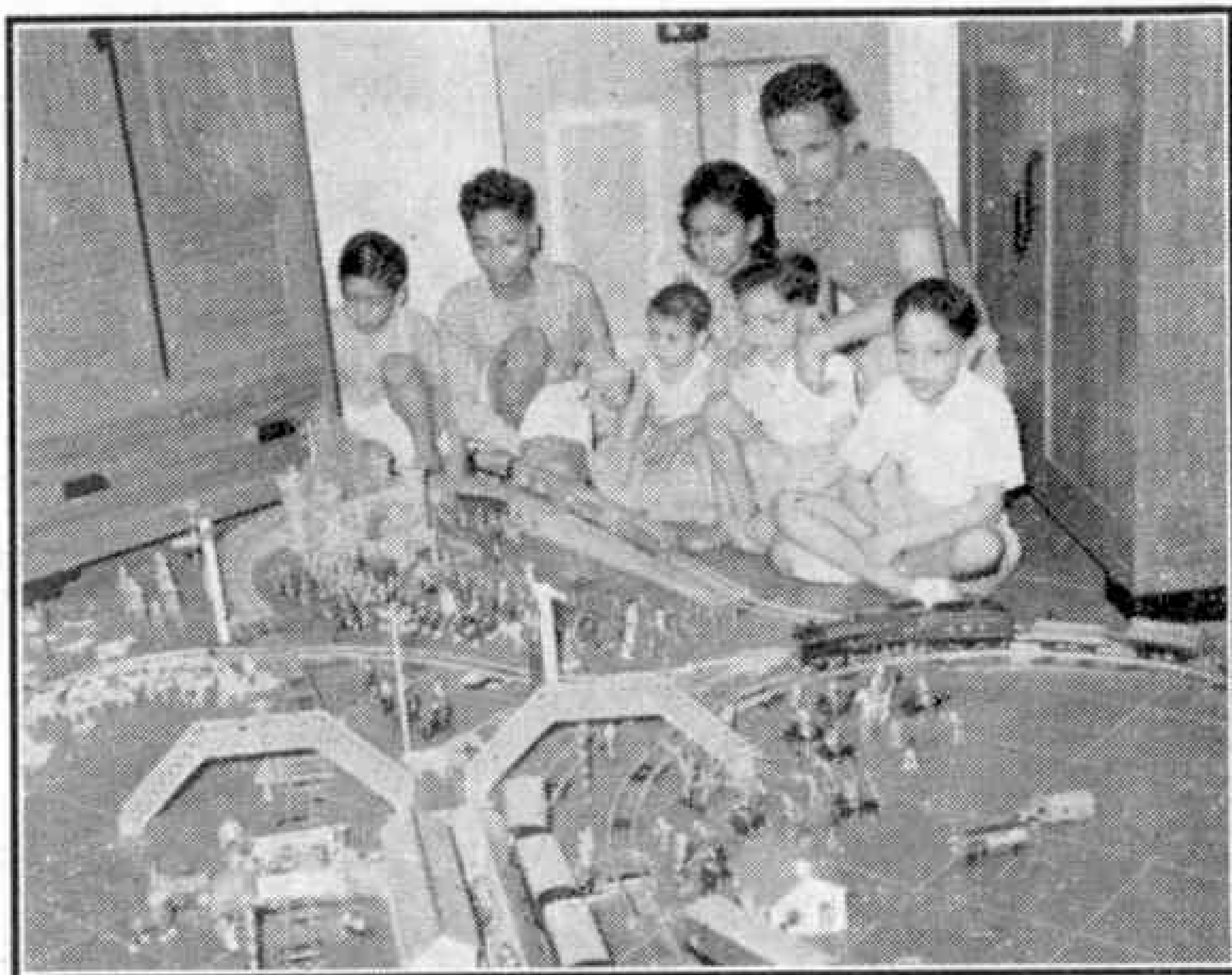
A view of the Hornby layout in the home of Mr. S. P. Quadros, of Bombay. One train is waiting at the Station while the other approaches the main track from an outer loop. This and the upper illustration on the next page are from photographs by Pearl Photo Service, Bombay.

practised on a system of this kind and, although train movements to a timetable may not be the rule, a regular scheme of operations can be carried out with successful results. Hornby clockwork engines are ideal for such work, their regular performance and ease of handling helping considerably in making operations smooth and controllable. Again, the rolling stock of the Hornby system allows plenty of variety in the make up of trains themselves. Thus the No. 1 Coaches can form either fast expresses or stopping trains. Engines for the former type of train will almost invariably be of the No. 501 tender type, while for the latter the No. 101 Tank is very suitable.

When organising train services in this way, it must not be forgotten that the real clue to the class of trains we are running is found in the headlamp indication on the front of the train. All Hornby locomotives, except the M types, are fitted with lamp brackets and detachable headlamps, so that their owners will have no difficulty in placing the lamps in the correct position for any class of train. The headlamp code is shown in the H.R.C. booklet, and any enthusiast who cannot learn it easily has only to write to the Secretary to get full information.

Apart from passenger trains, or the ordinary mixed goods trains, there are many types of train that can be assembled for special freight traffic. Refrigerator and Milk Vans are included in the Hornby range, and we can assemble fast freights with these and similar vehicles. Another good idea is to attach an odd Van for fast traffic to a passenger train from time to time. There is a lot of fun to be had in the operations involved in putting such trains together, in shunting the vehicles into the correct order, and finally in coupling up, before sending them on their way.

To complete our trains we attach a Passenger Brake Van or a Goods Brake Van

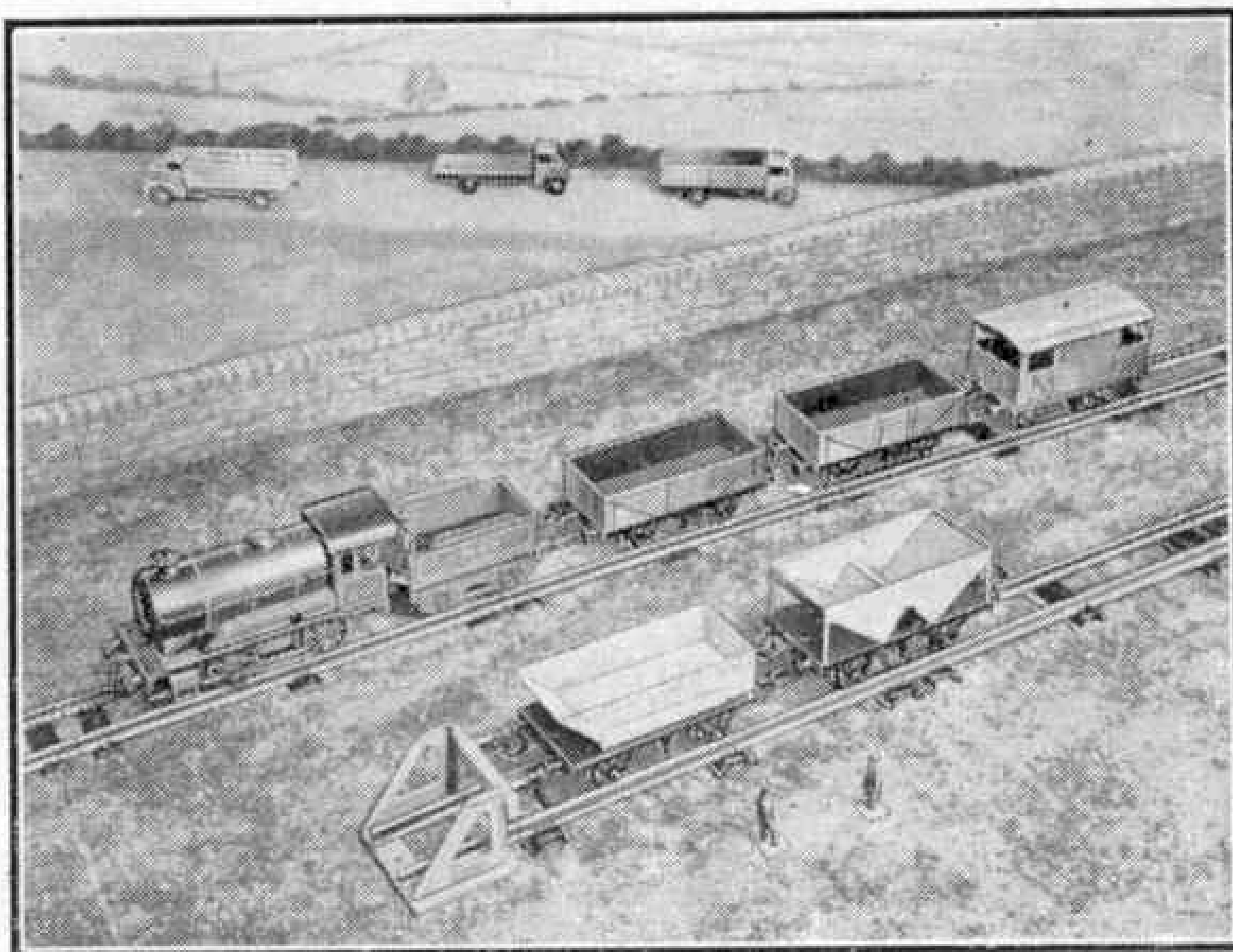


All members of the Quadros family enjoy train operations on their Hornby layout. Loop lines, crossings and lineside effects add to the fun of working this extensive system.

in the rear, according to the type of traffic we are dealing with. This last vehicle, whichever it is, should display a tail lamp to show that the train is complete. If a goods train is involved the Goods Brake Van should carry side lamps as well. The Hornby Goods Brakes are provided with these small but important accessories, so that their owners can have the satisfaction of doing their job thoroughly and correctly.

Speaking of freight wagons and freight trains suggests the subject of loads for our wagons. One of the first things that the youthful owner of a goods train does is to pop a few odds and ends into his "trucks," as he is sure to call them. Not all of these goods need to be carried all the time in the wagons. Some of them can quite well be stacked around the goods platform, or by the side of the track where the wagons normally stand for loading and unloading.

Watching the trains go by on real railways reveals the fact that not all goods trains run loaded all the time. So it is quite in order to run a train of "empties" for a change. Such a train is shown in the lower illustration on this page. Empty wagons are often found stored in sidings and we can follow the same practice.



A simple but effective section on a Hornby layout. Dinky Toys motors use the road alongside the background scenery.



Club and Branch News



WITH THE SECRETARY

THE CHRISTMAS PARTY

It again gives me great pleasure to wish a Merry Christmas to all members of the Guild and the H.R.C., and of Meccano Clubs and H.R.C. Branches. I do not claim to be a prophet, so cannot foretell whether members in this part of the world will have the snow-white Christmas often pictured so beautifully on Christmas cards, complete with robins, or whether those on the other side of the world will have a fine, sunny day for their midsummer Christmas picnics. Everywhere, and in any weather, Christmas will be a season of kindness and festivity, however, and in Clubs and Branches this will find expression in a jolly Christmas party.

For this great occasion the Club or Branch room should be brightened with decorations, plenty of refreshments should be on hand—here the parents of members will be glad to help—and games or some other entertainment should be arranged. It is nice to invite the parents and friends of members to come along and enjoy the fun; or instead they can be invited to an end-of-session Open Night and Exhibition, when they will have an opportunity of seeing for themselves exactly what is done at the regular meetings.

RECENTLY INCORPORATED BRANCH

Branch No. 542—STAINLAND PROVIDENCE BRANCH—*Chairman:* Rev. H. R. Coombs, The Manse, Stainland, Halifax.

CLUB NOTES

LEITH ACADEMY PRIMARY SCHOOL M.C.—Model building is the main activity. The membership is divided into several groups, each about six strong, and meetings are held at the Leader's home each week, the groups attending two at a time on a rota basis. It is hoped to stage a models display at the School at Christmas. Club roll: 17. *Leader:* Mr. K. Gray, 51, Captain's Road, Liberton, Edinburgh, 9.

HORNSEA M.C.—In addition to model-building meetings recent activities have included several interesting Film Shows and Evenings devoted to playing Mah-Jongg. The Club now have two sets of this game, so more members are able to take part in it. Club roll: 9. *Secretary:* D. M. Stevenson, 29, Southgate Gardens, Hornsea, E. Yorks.

BURY GRAMMAR SCHOOL M.C.—At one meeting, held in the workshop, members brought their Hornby Gauge 0 trains. An extensive Hornby-Dublo layout is being laid down. Club roll: 40. *Secretary:* J. A. Strafford, 13, Maple Grove, Prestwich, nr. Manchester.

EASTWOOD SCHOOL (GLASGOW) M.C.—A visit to the Glasgow Central Fire Station has been arranged. Membership is being limited to 25 to ensure that there will be something for every member

to do in constructing the extensive layout now in hand. The members are divided into groups, each group being allotted a definite task. Club roll: 25. *Secretary:* D. Huddleston, 30, Merryton Avenue, Giffnock, Glasgow.

BRANCH NEWS

MILE END (PORTSMOUTH) M.C.—Interesting track meetings have been held, and an experimental track laid down one evening was so successful that it was adopted for the subsequent Branch Exhibition. One meeting was set aside for cardboard model-making for this Exhibition, and very realistic model houses and shops were constructed. The Exhibition was opened by the Manager of the Fratton Goods Depot and was a great success. Club funds benefited by £3 6s. 6d., and new members were enrolled. *Secretary:* M. Powell, 92, Renny Road, Fratton, Portsmouth.

MAGDALEN COLLEGE (OXFORD)—Two meetings were devoted to preparing for the Branch Exhibition during Commemoration week. An excellent layout was laid down on benches, with extensive scenery and Dinky Toys vehicles as road traffic. A rota of six trains was worked, including expresses, a "local" and several goods trains. *Secretary:* M. Gibbs, 41, Ramsay Road, Headington, Oxford.

NEW ZEALAND

TRINITY (INVERCARGILL)—A very successful Exhibition has been held, the main feature of which was a layout with about 200 ft. of track, including a scissors crossing, sidings and three stations. Colour light signalling worked on the block system was installed. Operations on the layout were a great attraction to the many visitors, trains being worked to timetable and a running commentary broadcast over a loudspeaker system. *Chairman:* Mr. S. W. Booth, 75, Melbourne Street, Invercargill, South Island, New Zealand.



Members of the Belgrave Union (Leicester) M.C. with Mr. C. S. Smith, Leader, in the background. This happy photograph was taken on the occasion of the Club outing to London in June last, when a visit to the Science Museum proved immensely popular—as also did the dinner on the homeward journey! This enthusiastic and go-ahead Club was affiliated with the Meccano Guild in April 1950.

From Our Readers

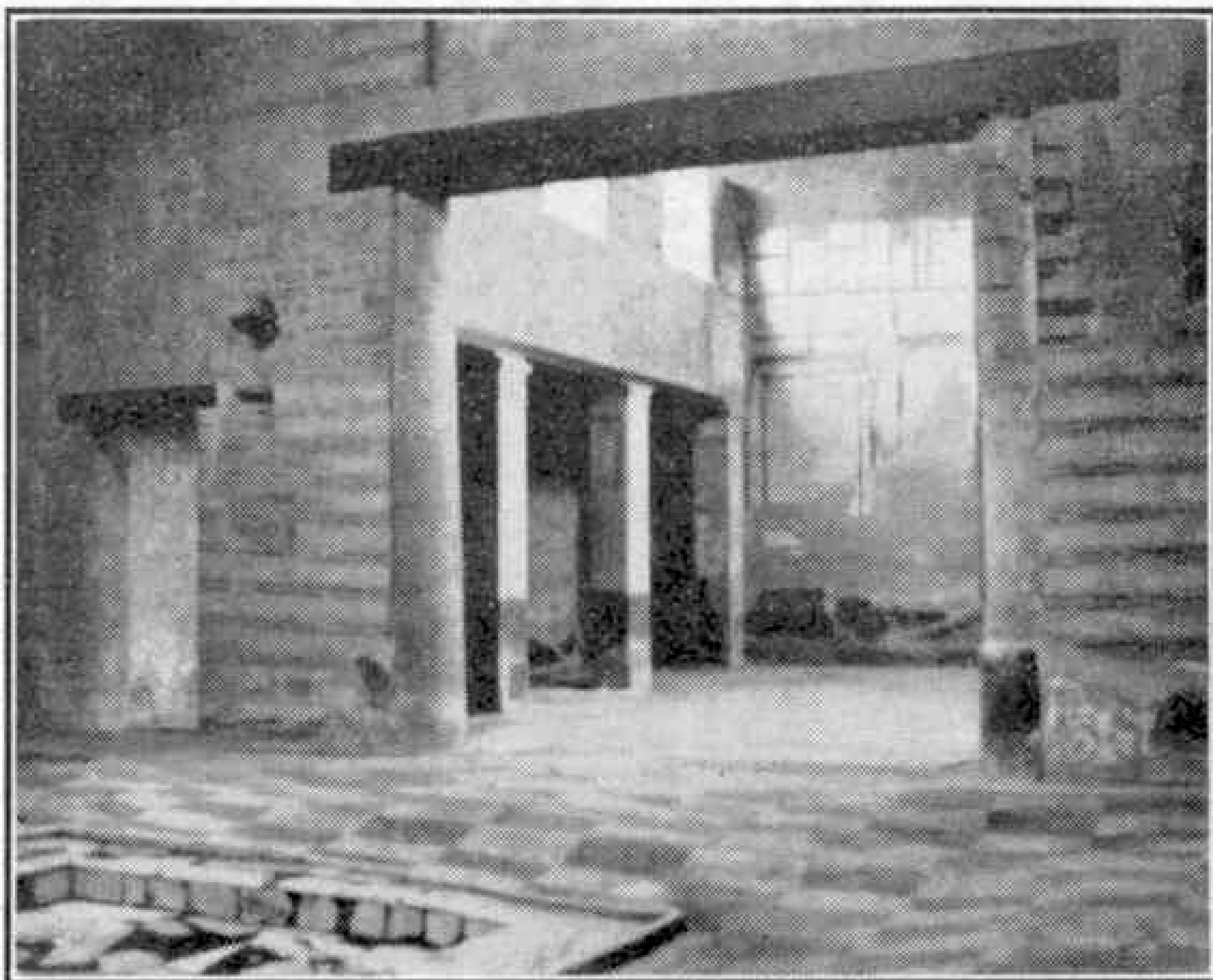
This page is reserved for articles from our readers. Contributions not exceeding 500 words in length are invited on any subject of which the writer has special knowledge or experience. These should be written neatly on one side of the paper only, and should be accompanied if possible by original photographs for use as illustrations. Articles published will be paid for. Statements in articles submitted are accepted as being sent in good faith, but the Editor takes no responsibility for their accuracy.

THE LEANING TOWER OF BRISTOL

Everyone has heard of the Leaning Tower of Pisa and has seen pictures of it, even if he has not actually been to Pisa and seen the Tower itself, but few people realise that it is not unique. Every Bristolian, and many who have visited that city, will know the leaning tower of Temple Church, shown in the accompanying photograph. A curious feature about the tilt of this tower is that it appears very much greater than it really is and consequently many people consider it dangerous. This is an optical illusion; the tilt is not uniform and the tower becomes more nearly perpendicular towards the top.

The lower two thirds of the tower, up to the trefoil band, belong to the year 1397, and the tower was completed some 60 years later. During the addition of the upper storey the foundations of the earlier portion began to sink, but later the sinking suddenly stopped and the work was continued. An attempt was made to build the upper portion perpendicular and so now the tower is really curved!

Temple Church was destroyed by bombing during the war, but fortunately the leaning tower survived.
J. C. D. SMITH (Bristol).



In the streets of a city of 2,000 years ago. This is a view in Herculaneum, overwhelmed by lava from Vesuvius. Photograph by A. Weston, London N.3.

THE MOST BEAUTIFUL BAY IN THE WORLD

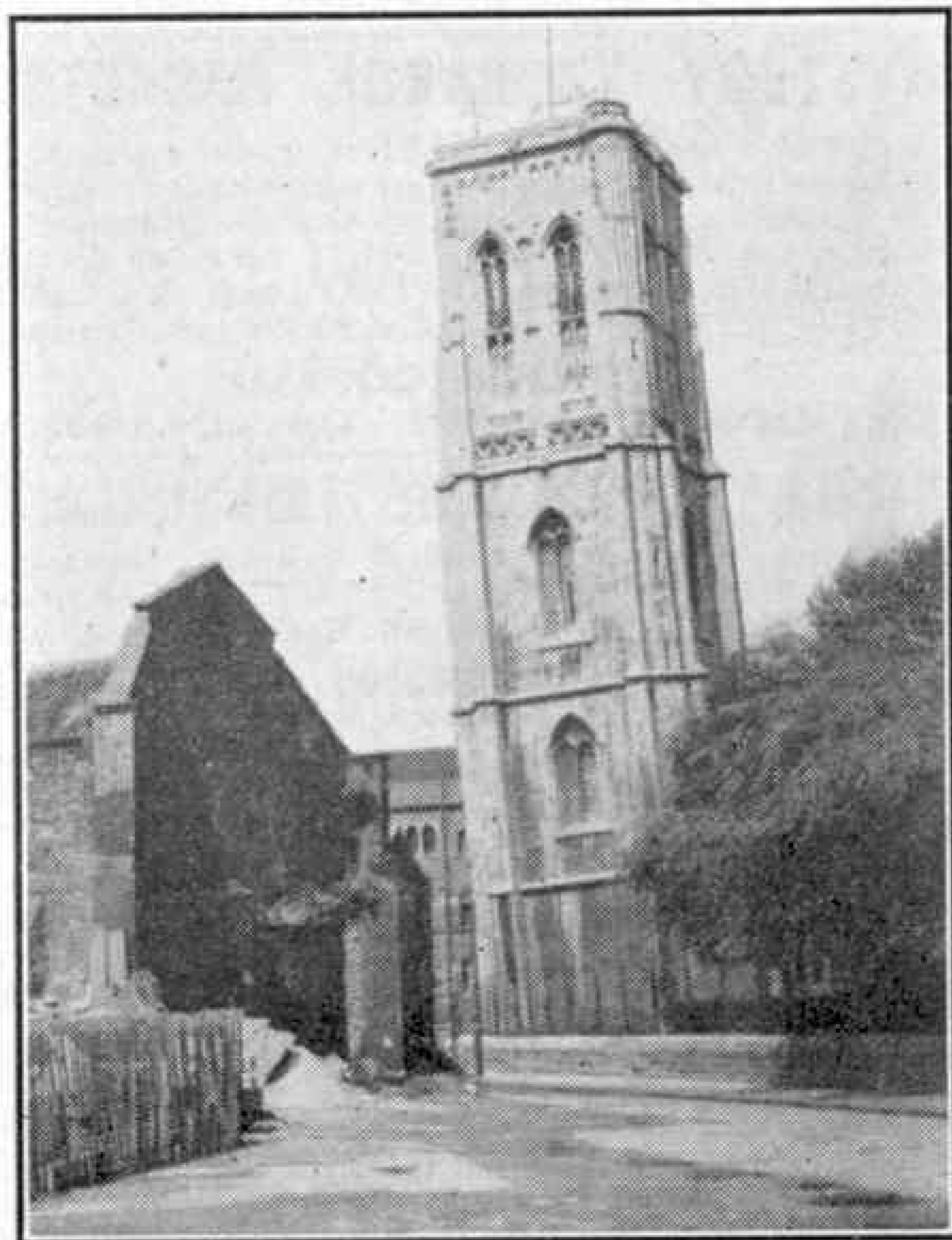
Many people consider the Bay of Naples, in Southern Italy, to be the most beautiful in the world. Clustered round it are a number of small villages. Opposite Naples is Sorrento, a picturesque small town and a favourite holiday resort, chiefly because of its beauty. The heat is so great in Summer that oranges, lemons, peaches, grapes and melons are grown easily. The fact that the climate is sub-tropical is evidenced by the cacti, some of which are 8 to 10 ft. high, and the palm trees.

Towering over the bay is Mt. Vesuvius, the volcano that shoots forth molten lava and boiling mud at intervals of about four years. Near Vesuvius is Pompeii, a Roman town of about 2,000 years ago. Despite its age, it is in fairly good preservation, and consequently, one can get a good idea of what it was like when the Roman people walked in the streets.

Not far from Pompeii is Herculaneum, which used to be the richer district in Roman times. Part of the Roman town is buried under the present-day village of Resina, and the villagers will not leave their homes just to let archæologists dig up the buried town. Although there is not so much to see at Herculaneum, it is, I think, in a better state of preservation than Pompeii. In many houses the doors are still intact, and in one house there is even a loaf of bread, although it has been put into a glass case to prevent it from crumbling into dust. Pompeii is better-known and visited by many more people than is Herculaneum, but the latter is well worth a visit.

From Sorrento or Naples one can board a steamer to go to the little island of Capri. The island is probably world-famous for the Blue Grotto. On Capri there is also a Green Grotto and a White Grotto, but neither of these is quite as beautiful as the Blue Grotto.

A. WESTON (London N.3).



The leaning tower of Temple Church, Bristol.
Photograph by J. C. D. Smith, Bristol.

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For other Stamp Advertisements see also pages 590 and xx.

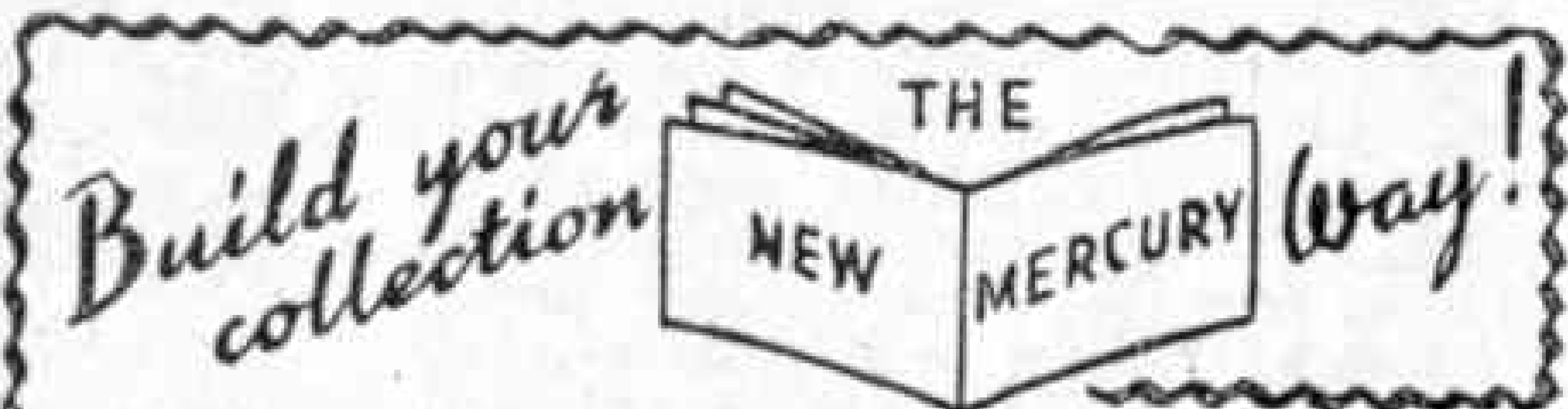
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Stamp Collectors' Corner

By F. E. Metcalfe

SPAIN AND ITS STAMPS

AT the time of writing I am just back from a wonderful holiday in Spain. I have never referred much to its stamps, which by the way, are really worth collecting by one who likes nice stamps, and does not

want to spend much. I am therefore taking this opportunity to do so though, to be quite candid, I would rather write about the country itself, such is the spell that it casts on one.

I cannot resist a brief reference to the people, however. They make the best of things and enjoy life just as much as we do. For instance, we had just crossed over the border from France, and stopped in a small town



to change some money. There was a small plaza or square near, and into it came about half a dozen musicians. They started to play a sandana, in which the dancers join hands and move in rings, and in no time the square was full of happy figures and all care seemed forgotten. This, remember, was in mid-morning. After a short while the musicians moved away, and the dancers went about their business, no doubt all the better for the break.

On another occasion we went after dinner to sit in the plaza in a northern town. There was a bus rapidly filling, but apparently some of the party were late in turning up. One member, with an accordion, climbed on the top of the bus and started to play. Instantly all tumbled out of the vehicle, and danced with anybody in the plaza. The laggards arrived in due course, and off the bus went to a nearby village, where a marriage was to be celebrated.

One could go on giving instances to show that the Spaniards know how to enjoy themselves, but we must really get down to stamps! It is already over 100 years since Espana, which is the name Spaniards give to their country, first issued postage stamps. They bore a portrait of Queen Isabella II, who has figured recently on a number of stamps issued in her honour by various American countries. This lady, while agreeing that her profile should appear in stamps, was very adverse to having that profile defaced by a cancellation, and permission was given only after one had been evolved that left only curved lines on the august face. This accounts for the rather peculiar marks that Spain's early stamps bore.

Specialists find a lot of material in these old stamps. Moreover, a lot of them can be bought for coppers, or even a single penny, but it must be admitted that only a philatelist may find them of interest, for the designs are dullness itself. Yet there is always a certain charm about stamps issued so long ago, and while the average collector will want to concentrate on the more colourful issues of a later date, a few of these old timers should be included in one's collection, particularly as they can be picked up for such a small sum.

We get next the overprinted issues of 1868, but as these are rather costly, we will have to be satisfied with an odd copy or so. The cheapest is catalogued at



restored, and this brought Alfonso XII to the throne. Again the stamps, bearing his portrait, were dull in appearance, but once more we can illustrate this historical event in our album for a few coppers. In 1876 a nice little line-engraved set was issued. It was in 1889 that we got the first set that is of most interest to the average collector, for on it appeared the portrait of Alfonso XIII as a tiny tot. He appeared as a cadet in 1900, but it was after this, in 1905, that we got the very interesting commemorative Don Quixote set. During my recent holiday I passed through the territory that was the scene of the famous romance, and no place on Earth could be more suitable for such a fantasy.

More stamps showing King Alfonso XIII as a man appeared and then we get a lot of stamps that are colourful enough but, to be quite candid, are simply trash. It is said that the printing plates of these are still in private hands, and printing after printing can be, and is, prepared for collectors who are foolish enough to spend good money on them. So my advice is to leave the pictorials from 1927 to 1930 alone.

The Republic was proclaimed in 1931 and the ordinary postage stamps were then overprinted REPUBLICA. These overprinted stamps are of great interest, and some very interesting varieties can be picked up if one keeps an eye open. Another set worth attention is the one issued in 1932. Various portraits appear on these stamps, and again we can get a lot for very little cash.

And now we come to the real philatelist's headache—the provisional issues of the civil war. Here is enough material to keep a collector busy for the next ten years, and as a matter of fact all succeeding stamps, right up to the present day, are worth attention. There is just one point to bear in mind. Modern Spanish stamps are very badly centred as a rule, so take care to get those which are all right in this respect. They are to be found, and are well worth the finding.

General Franco issues of course are current. Recently a complete change has taken place in the appearance of Spanish stamps, as machinery for printing by the photogravure process has been installed. It is already obvious that very attractively designed stamps can be expected from now on.

To sum up, no country can provide more philatelic fun for so little expenditure than Spain, and this is surely a point to consider in these days. Collecting these stamps also will help to remind us of the happy people of the country, who know so well how to enjoy themselves.





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Stamp Gossip

"A BEAUTY"

THIS is how a reader describes the Portuguese stamp illustrated here, which he says he intends to put in his collection of Sports stamps. He wants to know more about it. I agree that it is a beauty for a Sports collection. It is one of two values issued a month or two ago by Portugal to commemorate an annual event held in Lisbon, and called the World's Rink Hockey Championship.



Roller skating is an accepted sport nowadays. Rinks are to be found in all the big cities at least. It's a fairly old sport too. The Dutch had wheeled skates two centuries ago, but four wheelers became popular

in the U.S.A. about the middle of the last century.

A TIP

Collectors really do like a tip, and here is one about a very attractive little stamp. You all know the one issued in June of last year by St. Lucia to help provide funds for the Castries reconstruction. Well, copies can be obtained for a shilling at present, but one day they may cost several times that small sum, for the Crown Agents have recently published the number sold and it only amounted to 137,343. This is very little for a low-priced stamp, particularly when that stamp is in the West Indian orbit. You see the West Indies are very popular in the U.S.A., as well as with British collectors.

POPULAR REVOLUTIONS

If revolution broke out in our country I wonder if we would like it enough to issue a set of stamps to celebrate it! Well, Salvador has issued a set of stamps, or rather two sets for ordinary postage and air, to commemorate a couple of revolutions. One took place in 1948 and the other in 1950.

There are six stamps in the ordinary set and eight for air mail. Printed in the slick manner one associates with all the work of the Swiss firm of Courvoisier, they make quite a nice addition to a collection of Central America.

CORONATION STAMPS

Though the Coronation itself is a good few months off yet, collectors are all agog regarding what the authorities have up their sleeves. As far as the stamp for Great Britain is concerned, we shall probably have to wait some time yet before the secrets of design, etc., are out. But the Crown Agents have very kindly released a photograph of the design chosen for the colonies. By the look of it, this is going to be one of the most popular stamps issued for a long time. Pictorial stamps are all very well in their place, but nothing could be more fitting for such an occasion than a portrait of the Queen without trimmings, and that is precisely what we are going to get.



Apparently each colony will have one stamp, and with certain unspecified exceptions, the value will be that of the local inland letter rate. So we look like getting a set that will be within the reach of all pockets. Let us hope that all the overbuying that has hitherto been associated with such sets in series will be absent on this occasion. Then indeed collectors will have a set worth having. I will refer to this aspect later on.

There is news that Ceylon is to have a single stamp and New Zealand a set of five. Some exciting designs are promised. One will show Buckingham Palace and another a stage coach. The 6d. stamp will feature Westminster Abbey, with "Big Ben" in the distance, and the top value will show the Crown and Royal Sceptre. This incidentally is one of the designs selected originally for the Royal Visit. A grand lot, for no doubt that colourful artist J. Berry will have had a hand in it all, and his designs could never be dull. New Zealand's Health stamps and the Peace and Otago Centennial issues are proofs of that.

And by the way, when the Coronation stamps have been withdrawn new ordinary stamps bearing a portrait of the Queen will be issued. If these stamps are as delightful as the present "King's Head" set, we'll all be very satisfied.

CANADA

What a fascination geese—the wild kinds, of course—have for British people. Perhaps Peter Scott's broadcasts may have had something to do with it.



Anyhow, whatever the reason, there can be no doubt about the reception that Canada's latest 7c. stamp will have. The date of issue was 3rd November and while it will pay the internal air mail rate, it is not an air stamp. It is important to remember this, for hitherto stamps of the same denomination have been of the air category. The designer was Emanuel Hahn, R.C.A., of Toronto. This gentleman is a prominent sculptor, and incidentally the goose depicted is of the *Branta Canadensis* family. The colour of the stamp is blue.

On the same day two more "Prime Minister" stamps appeared. The 3c. bears a portrait of Sir John J. C. Abbot (16th June 1891–5th December 1892). It is purple in colour. The 4c. pictures the Hon. Alex. Mackenzie (7th November 1873–16th October 1878). The colour of this one is orange.

Apparently it is the intention of the Canadian Post Office to bring out at intervals two new stamps each bearing a portrait of one of Canada's Prime Ministers. These can be classified as Special Stamps. The Commonwealth Catalogue lists these separately, and this is a very popular way of collecting them, for by keeping them apart from ordinary postage stamps, not only are the lists clearer and more easy to understand, but having all the special stamps together facilitates greatly the work in finding them. They are well worth collecting by themselves.



Competitions! Open To All Readers

Prize-winning entries in "M.M." competitions become the property of Meccano Ltd.
Unsuccessful entries in photographic, drawing and similar contests will be returned if
suitable stamped addressed envelopes or wrappers are enclosed with them.

Familiar Names in Disguise

THIS is the time of the year when readers, with Christmas in mind, scan our advertisement pages more closely than ever. Just to give an added spice of adventure to this scrutiny, we have based our chief contest this month on the names of advertisers or advertised products appearing in this issue.

The panel in the centre of this page shows 80 letters which have been arranged so that the names of certain advertisers or products can be read in them. The plan is to pass from one letter to the one above it, below it or to one side. No diagonal moves are possible, but movement in any other direction, up, down or sideways, is allowed. Every letter in the rectangle must be used at least once. Many are used twice, and in some instances a letter actually appears in three different names. Initials are used in certain cases, but this is

N	I	R	A	E	P	O	E	D	O
S	L	U	R	T	S	L	N	H	F
M	A	C	A	S	E	D	U	O	R
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B	E	W	O	L	L	F	E	C	A
L	E	Y	E	S	L	E	B	P	M

only done when they are distinctive and actually appear in the advertisements concerned.

In their solutions entrants are asked to give the names of the advertisers or products that can be read in the rectangle, together with the numbers of the pages on which the advertisements referred to appear.

As usual there will be two sections, for readers at Home and Overseas respectively. In each there will be prizes of 21/-, 15/- and 10/6 for the best entries in order of merit, and

Consolation Prizes also will be awarded for other good efforts. In the event of a tie, the judges will take novelty and neatness into consideration. Entries must be addressed *December Advertisement Contest, Meccano Magazine, Binns Road, Liverpool 13*. Closing dates: Home Section, 31st January 1953; Overseas Section, 30th April 1953.

The Toy You Want Most for Christmas

This is the time of year when you press your nose against the toy shop window and try to make up your mind which of the scores of fascinating things it contains you would like best to receive on Christmas morning. Below we give a list of 10 different articles, and each entrant in this contest is invited to state on a postcard: A, which he would like most to receive as a Christmas gift, and B, the numbers and names of the 10 placed in the order of popularity in which he thinks the votes of competitors will put them.

1. Model Steam Engine
2. Building Set
3. Microscope
4. Pedal Car
5. Model Aeroplane
6. Cowboy Outfit
7. Plasticine
8. Bicycle
9. Fretwork Outfit
10. Chemistry Set

There will be the usual two sections, for Home and Overseas readers respectively,

and in each there will be prizes of 21/-, 15/- and 10/6. There will be Consolation prizes for other deserving efforts.

Competitors must remember to put their name, address and age on their entry, which should be addressed *December Gift Voting Contest, Meccano Magazine, Binns Road, Liverpool 13*.

The closing dates are 31st January 1953 in the Home Section and 30th April 1953 in the Overseas Section.

December Photographic Contest

The twelfth of our 1952 series of photographic contests is a general one in which we invite readers to submit prints of any subject. Each competitor may submit only one photograph, which must have been taken by him, and on the back of his print must be stated exactly what the photograph represents.

The competition will be in two sections, A for readers aged 16 and over, and B for those under 16. Each competitor must state in which section his photograph is entered. There will be separate Overseas Sections, and in each section prizes of 21/-, 15/- and 10/6 will be awarded. Entries should be addressed: *December Photographic Contest, Meccano Magazine, Binns Road, Liverpool 13*. Closing dates: Home Section, 31st December; Overseas Section, 31st March 1953.

Fireside Fun

"I dropped my watch in the Thames last year and it's running yet."

"My, that must be a good watch."

"No, a good river!"

* * * *

"Do you know you have two large holes in your socks?"

"Nonsense. There are no holes."

"How do you get them on, then?"

* * * *



Recruit: "Shall I mark time with my feet, Sergeant?"

Sergeant: "Did you ever hear of it being done with hands?"

Recruit: "Just look behind you, sarge."

* * * *

"Yes, Johnny is clever," said his proud father. "Clearly he got his brains from me."

"He must have," gently added his mother. "I've still got mine."

* * * *

"How did you like the ventriloquist, sonny?"

"Oh, he wasn't up to much. He said scarcely anything, but the little boy with him was very clever."

* * * *

"I see you've got a new job, Pat. Is it a good one?"

"Sure it is. I just carry a lot of bricks up a ladder an' there at the top is a bricklayer who does all the work."

* * * *

"Why are you looking so sadly at my nice cake?"

"You see, I'm dying to try it, but trying to diet."

* * * *

The actor had been kept waiting for his lunch, so he added a halfpenny to the bill.

"You've made a mistake, haven't you, sir?" asked the slow waiter.

"Oh, no," was the reply. "I never give less for a tip."

BRAIN TEASERS

ROAD WORK

Suppose we number the letters of the names of three well-known makes of heavy lorry in order, as shown below:

1,2,3,4,5,6,7,8 9,10,11,12,13 14,15,16,17,18,19,20

Here each number of course represents a letter. A word made up of the letters represented by the numbers 17,18,13,3 and 16 means tall and thin; one represented by the numbers 6,1,2,4 and 19 is a silken fabric; 14,10,8,11,7 and 5 yield the name of a British city; and the meaning of the word formed by 11,12,9,15,5 and 20 is to shield from harm. What are the names of the three heavy lorries?

M.S.

* * * *

SQUARING THE RECTANGLE

Draw a rectangle twice as long as it is wide. Now cut this into eight pieces, and with these form four equal squares, the diagonals of which are equal to the width of the rectangle.

A.P.H.

* * * *

AND HOW MUCH A BUN?

A large party of boys went on an excursion by train. The boys of course became hungry, and in the refreshment room at one station where the train stopped the Leader in charge bought each of them a bun. Then he asked how much he was to pay.

"I'll put them in at wholesale rate," was the answer.

"Leaving out the odd farthing it will cost you 13/6."

How many boys were there in the party?

* * * *



"What are you crying for, my boy?" asked the kindly old gentleman.

"I'm not crying for anything. I've just had it."

SOLUTIONS TO LAST MONTH'S PUZZLES

The key to our first puzzle last month is the substitution of numbers for the letters of the alphabet, A being represented by 1, B by 2, and so on. The five words resulting from re-substitutions are Ports, Opera, Resin, Tried and Sandy. I wonder how many readers overcame the little obstacle provided by the inclusion of the number 17 in place of 15 in the first line?

The distance from the point half way between the 2 and the 10 on the clock face and that half way between the 2 and the 4 is equal to the radius of the clock face itself. The fly of our second puzzle therefore would take a third of a minute to complete its journey.

Something that becomes half as much again when turned upside down? Why, the number 6 of course!

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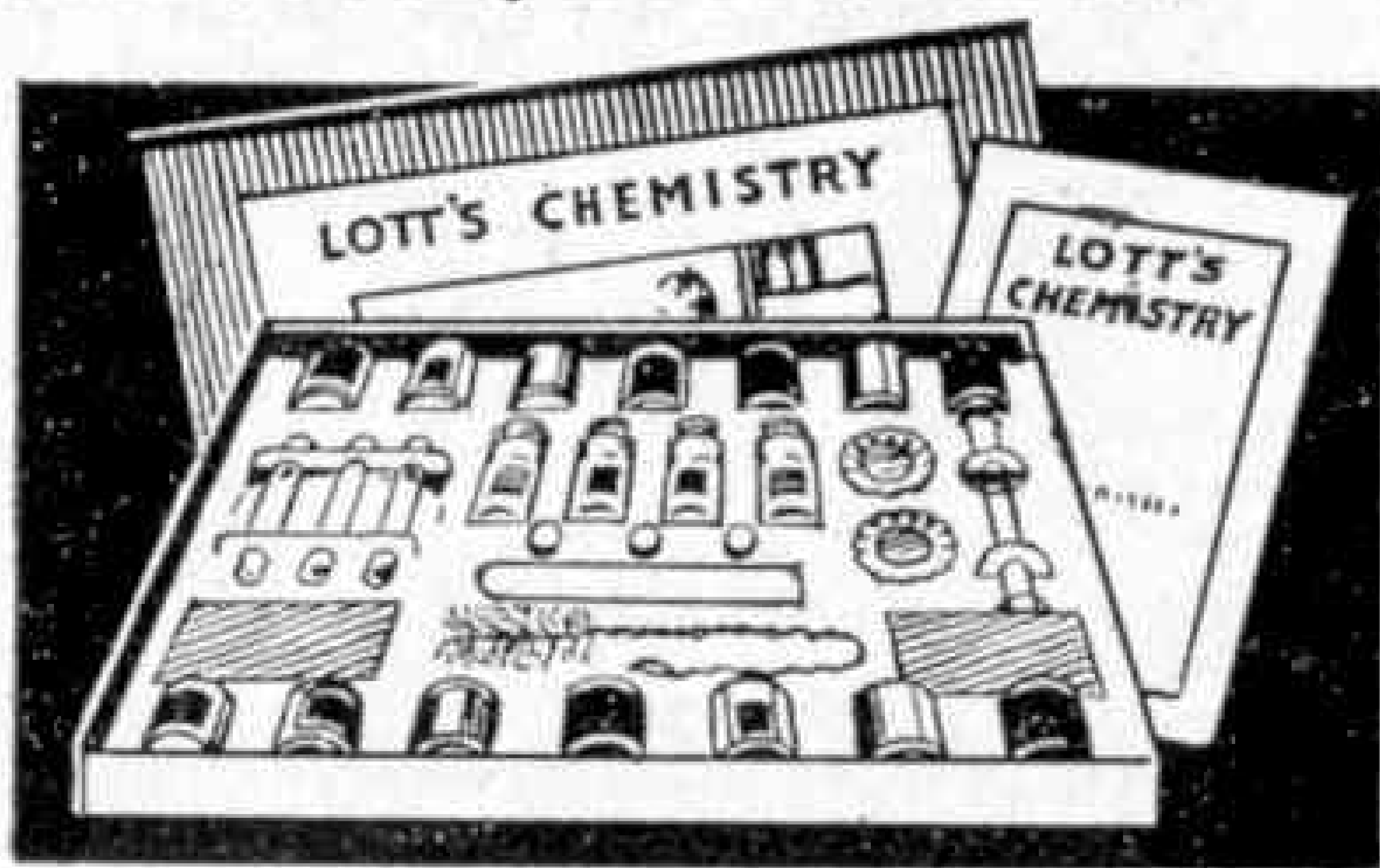
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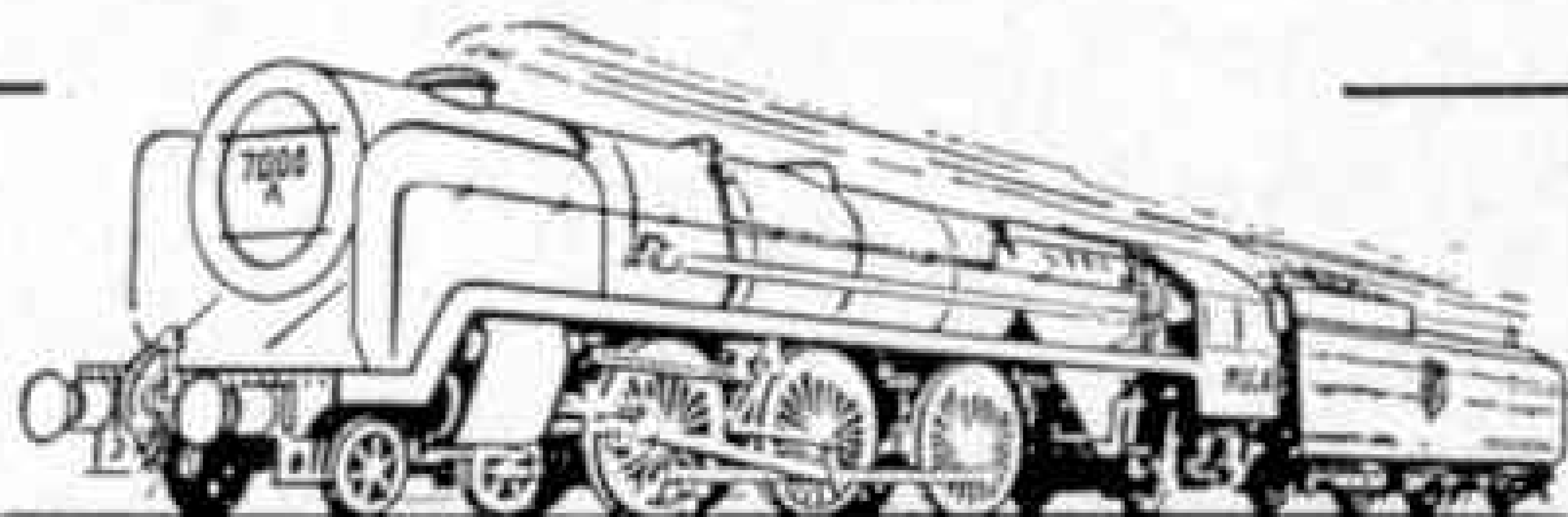
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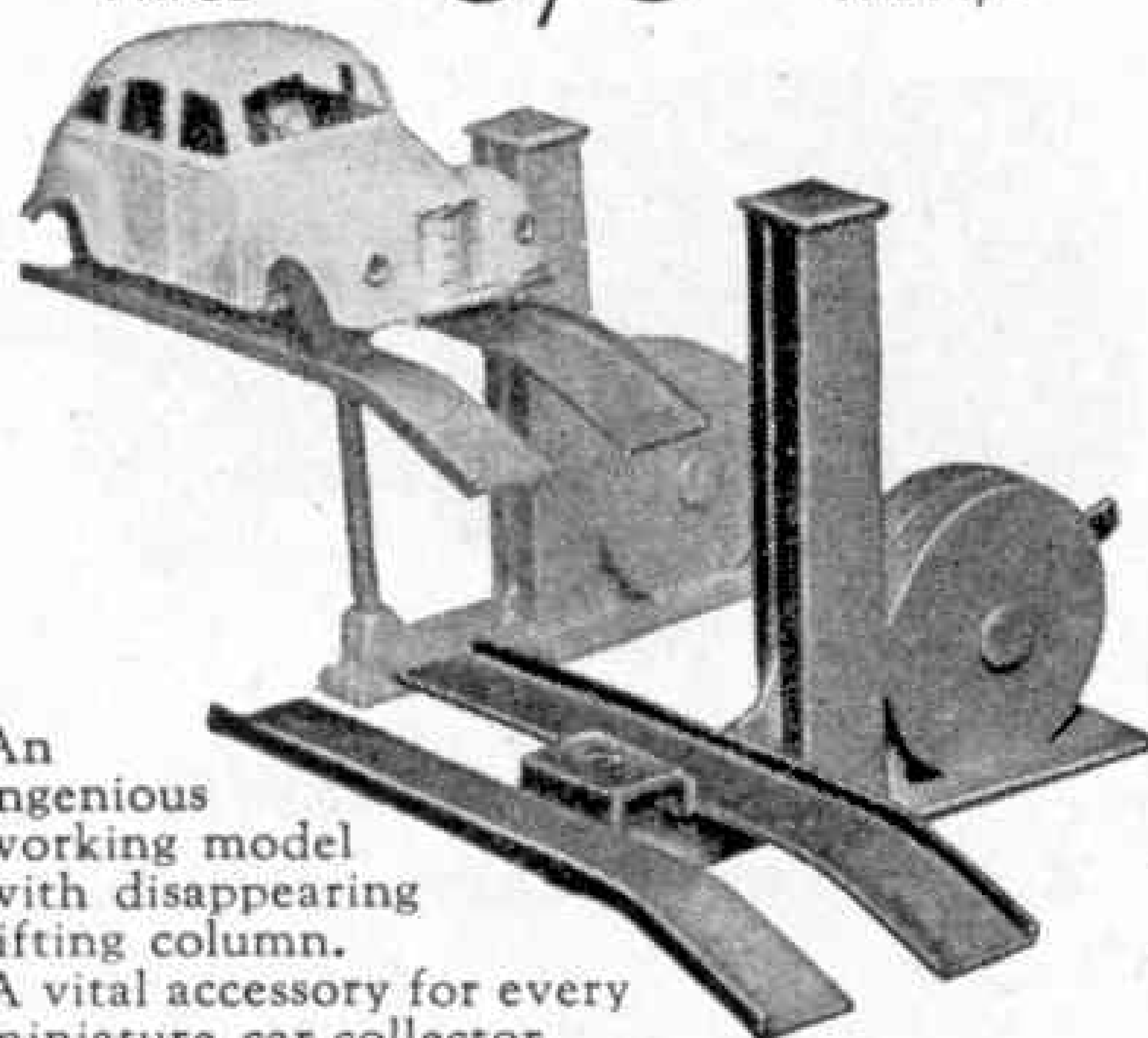
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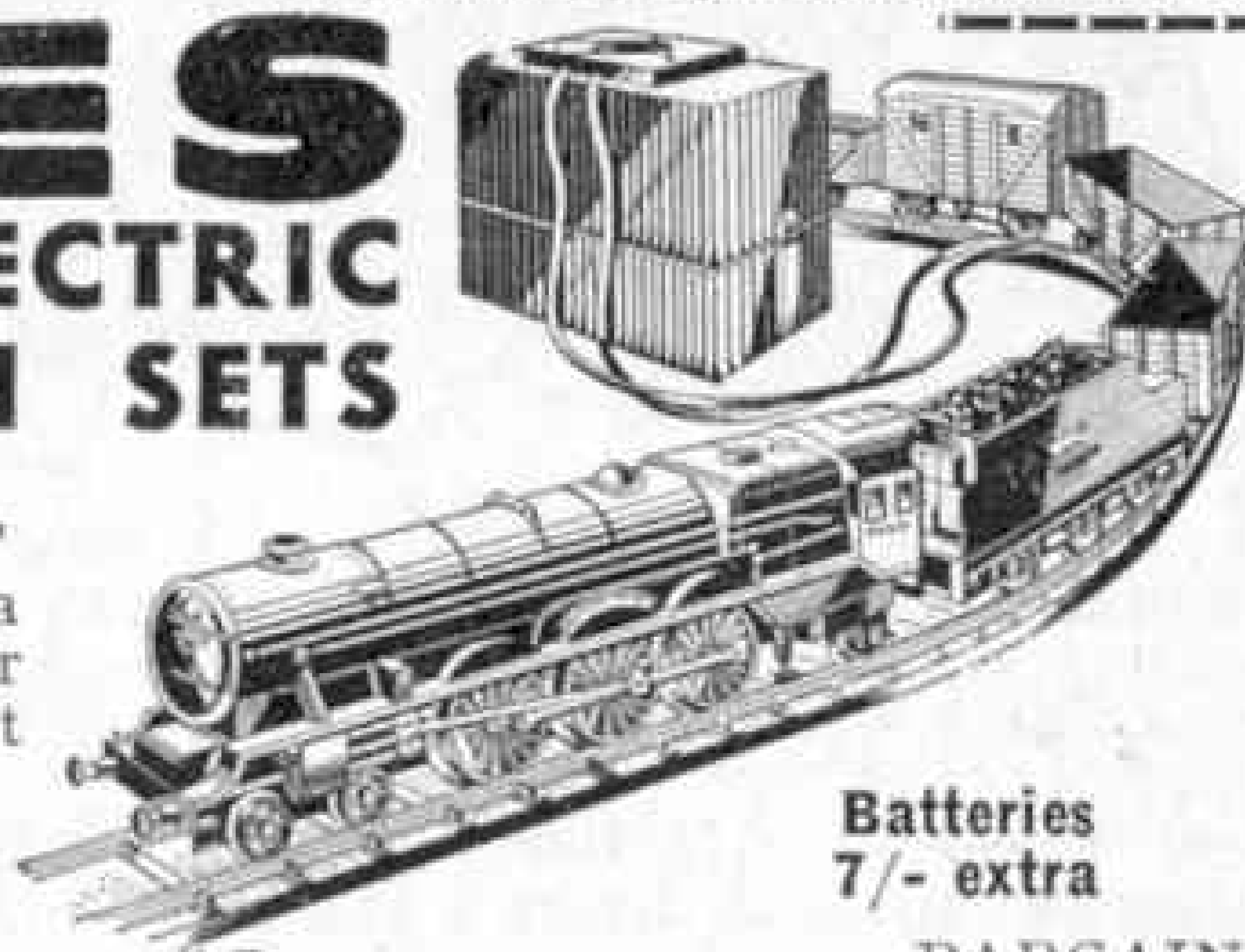
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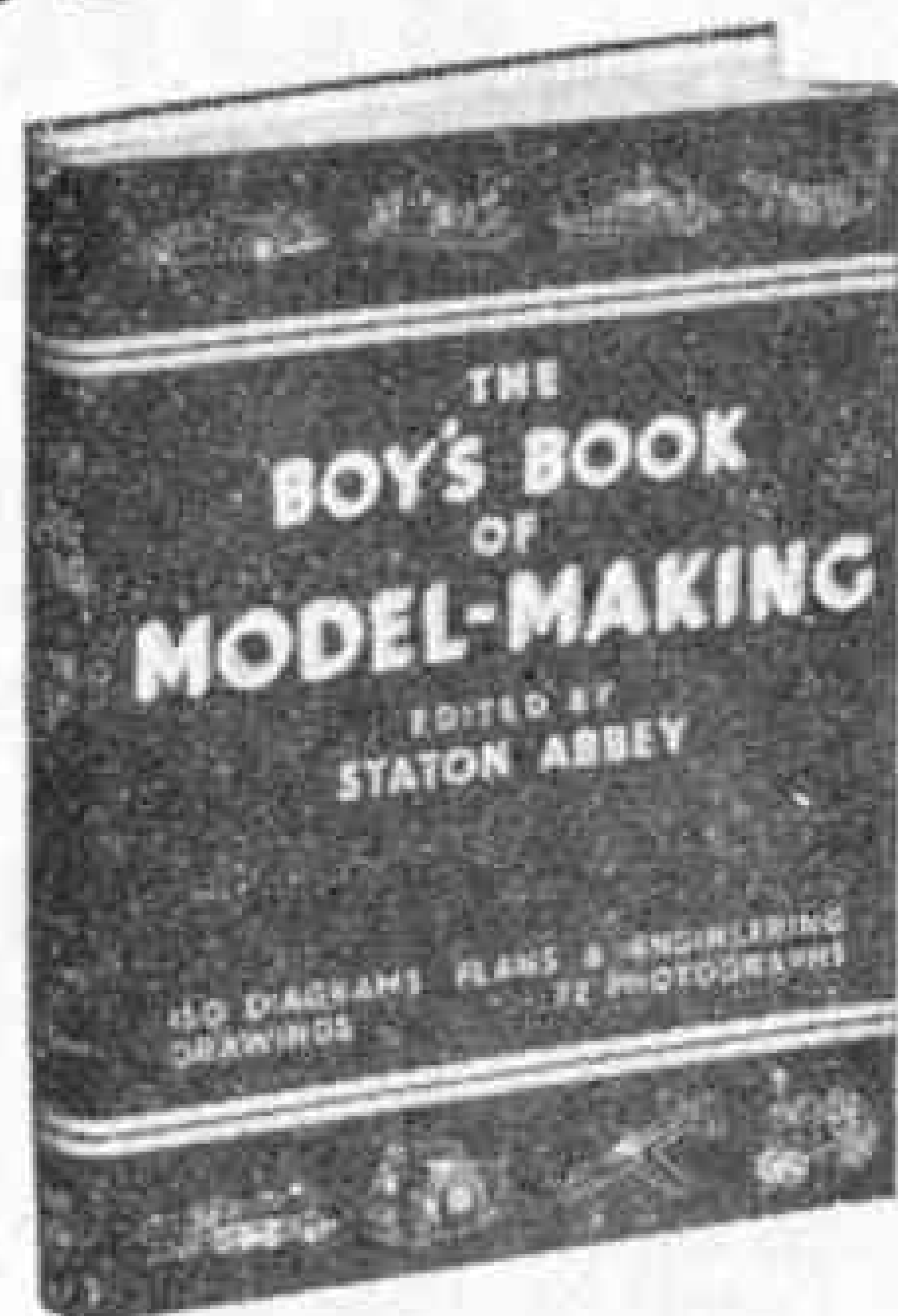


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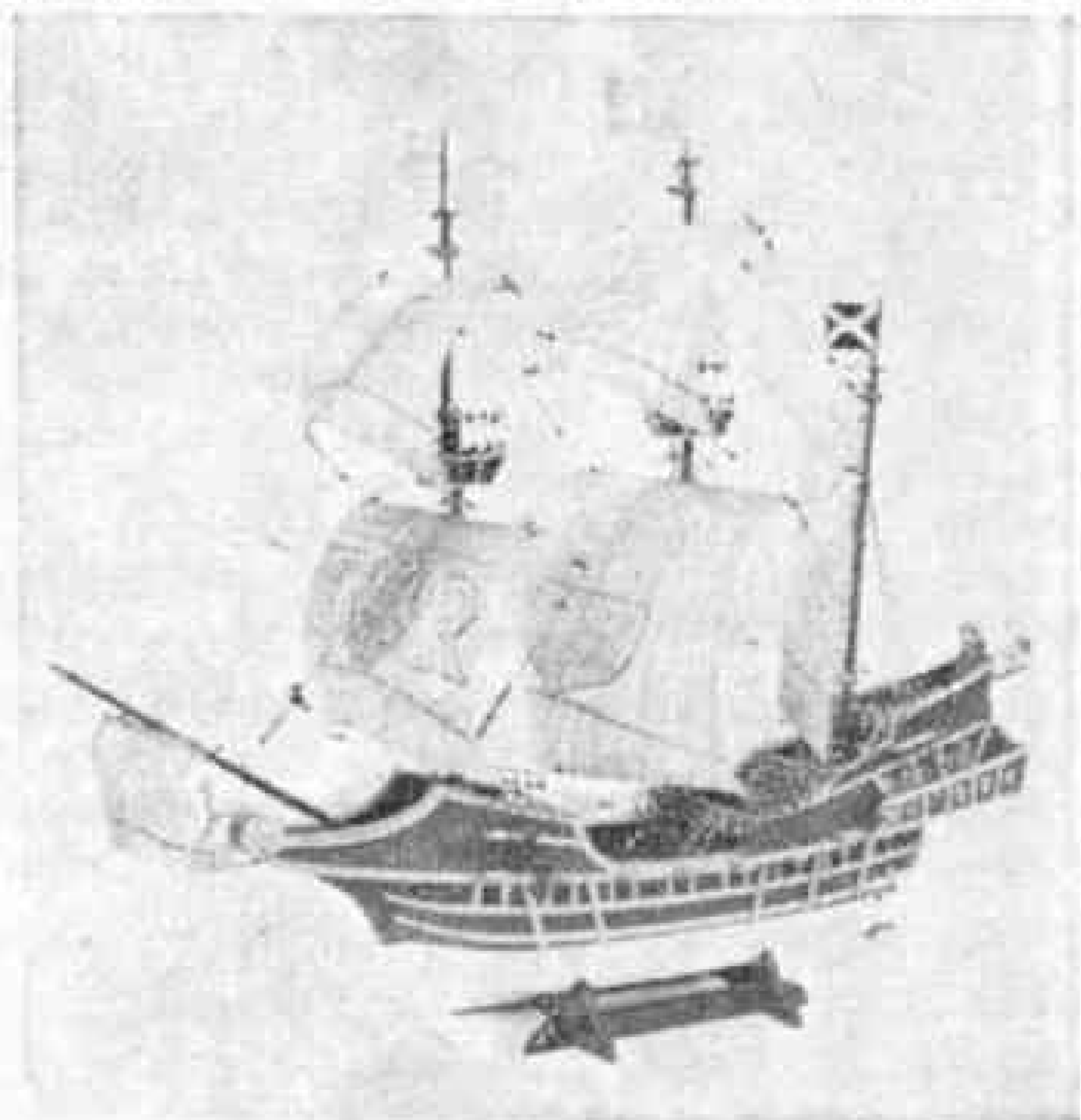
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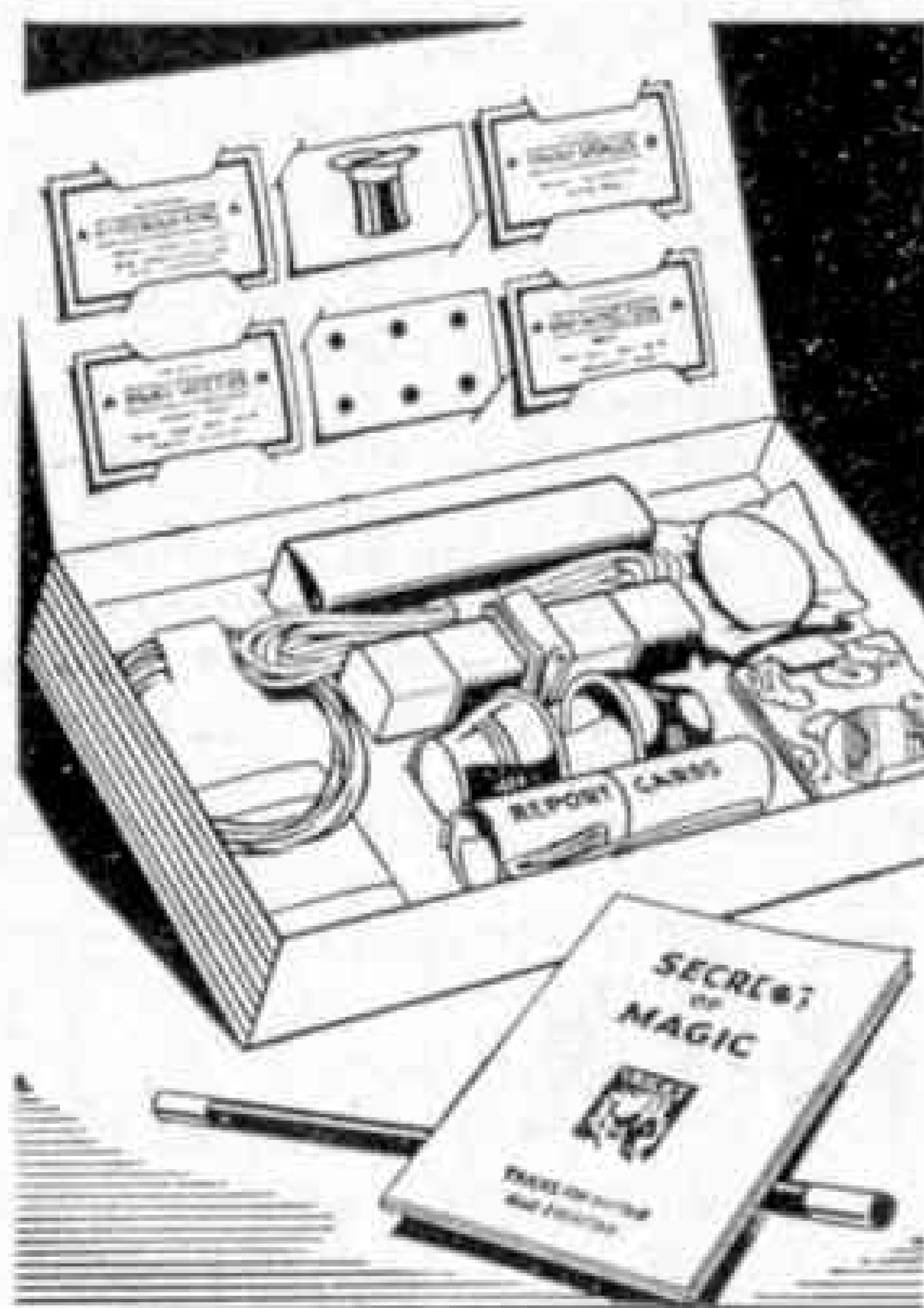
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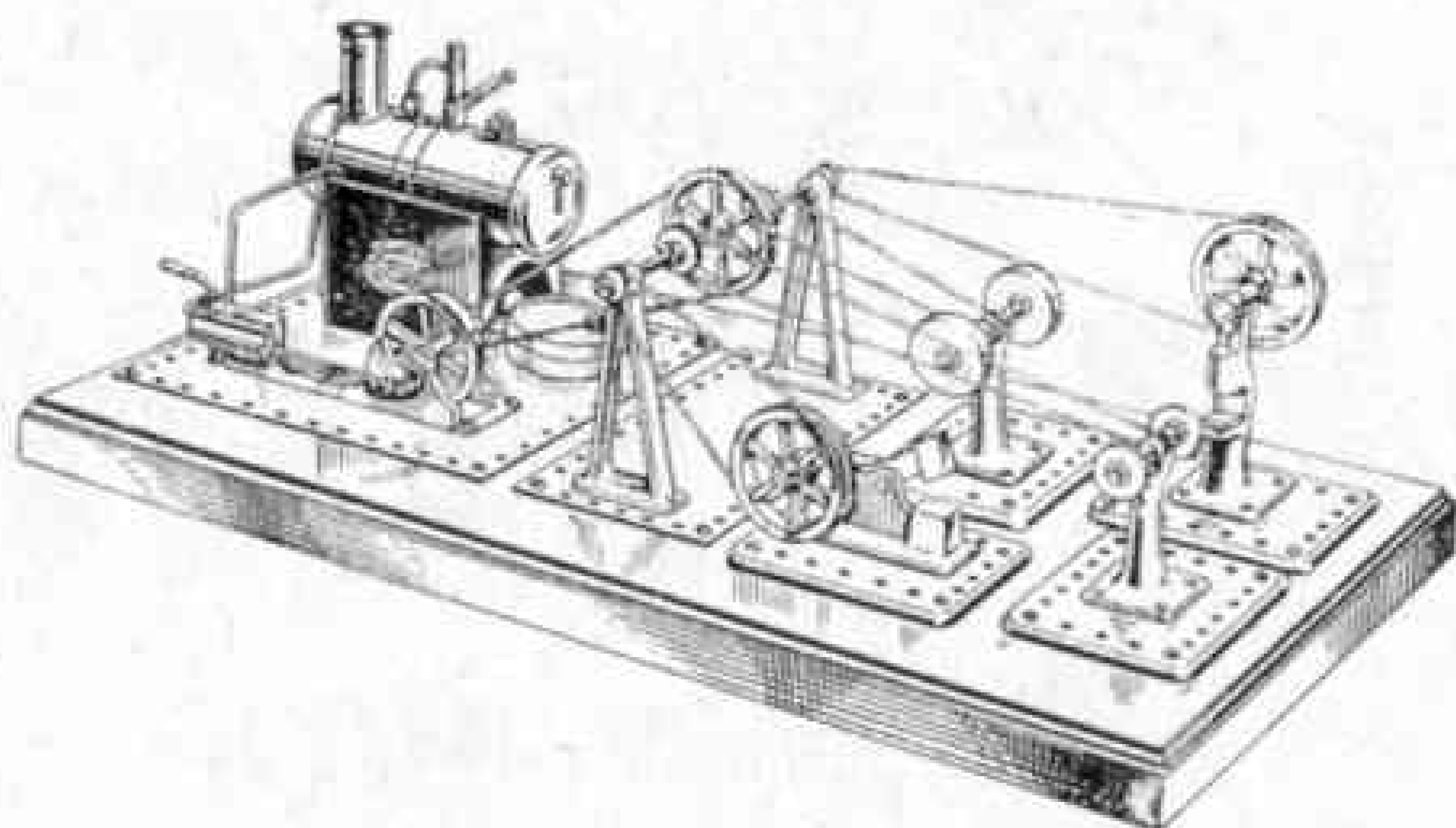
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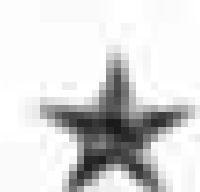
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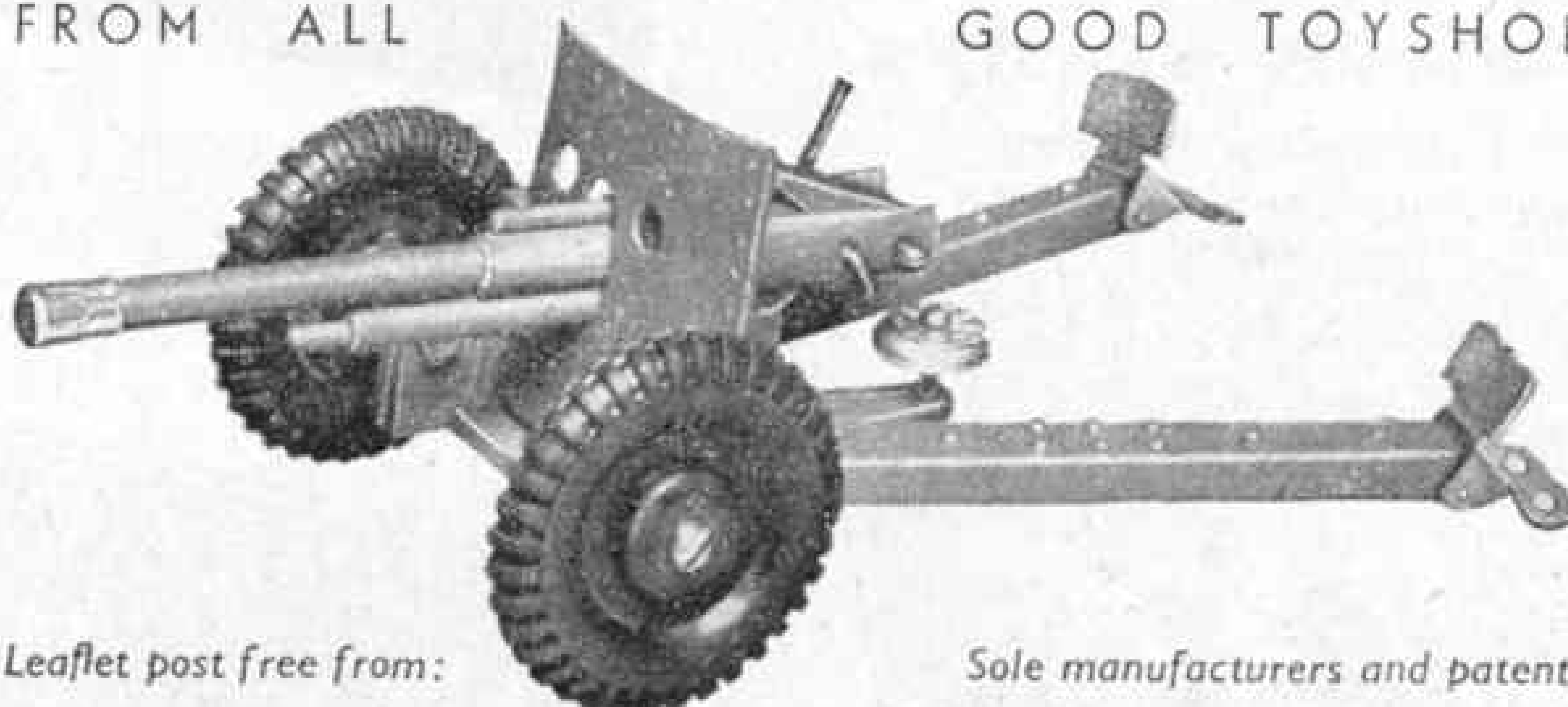
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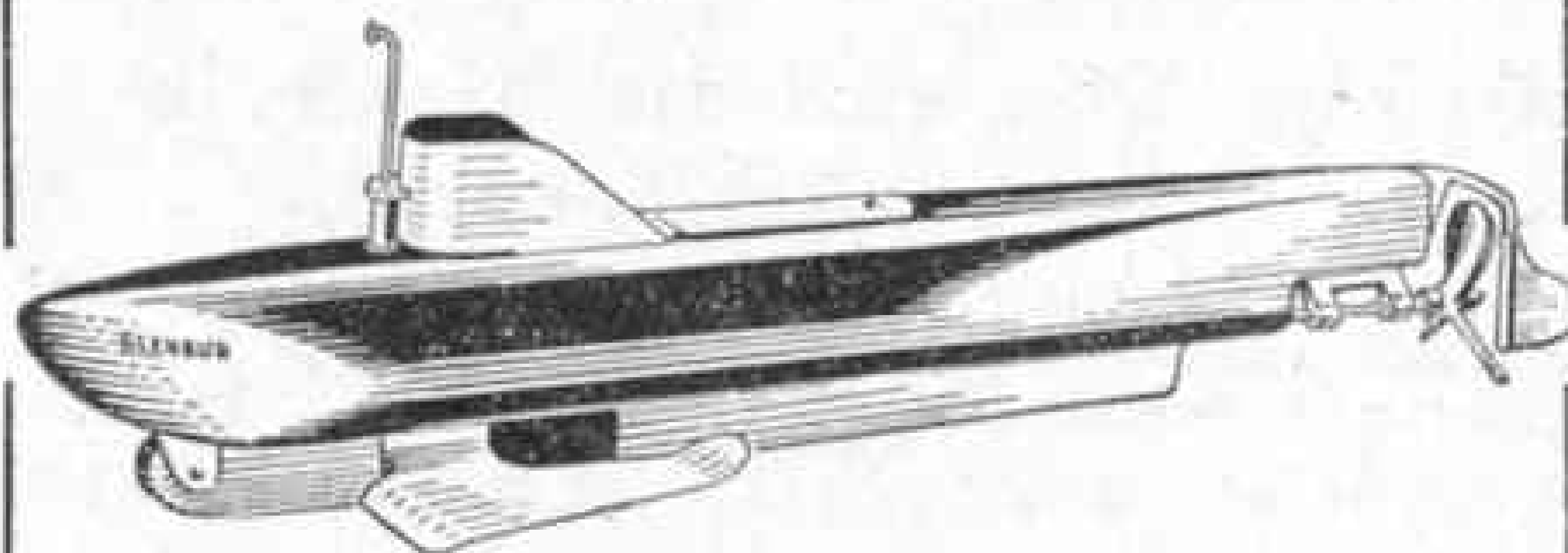
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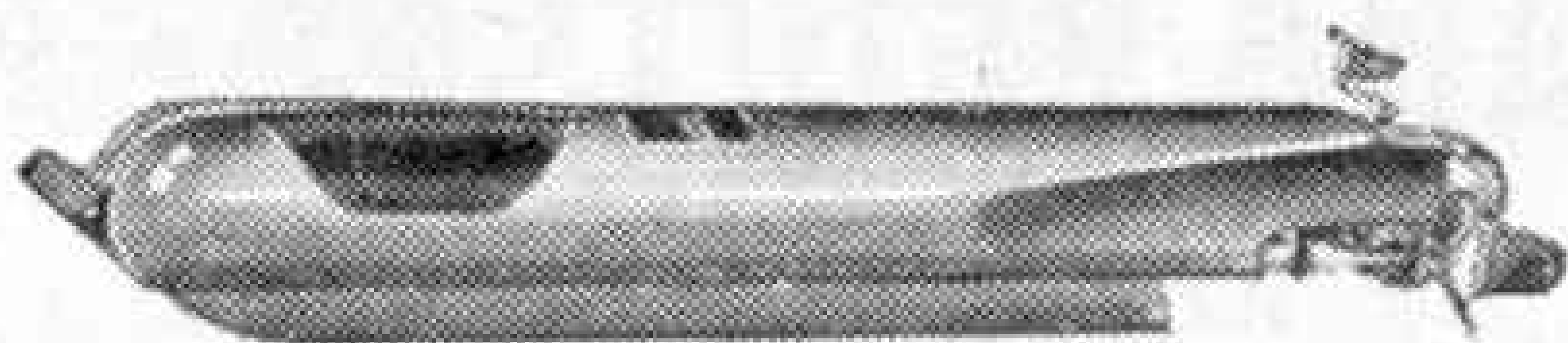
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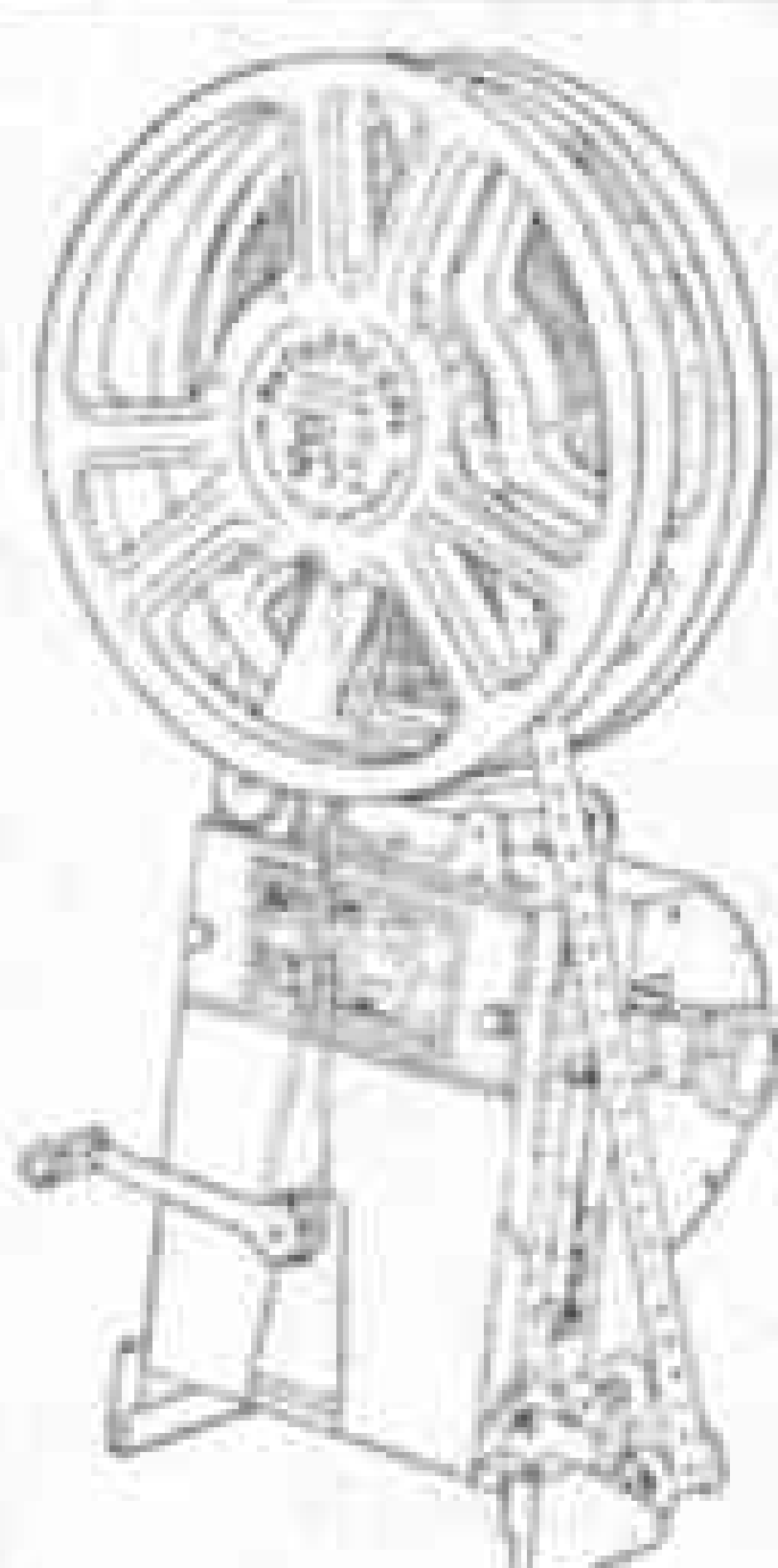
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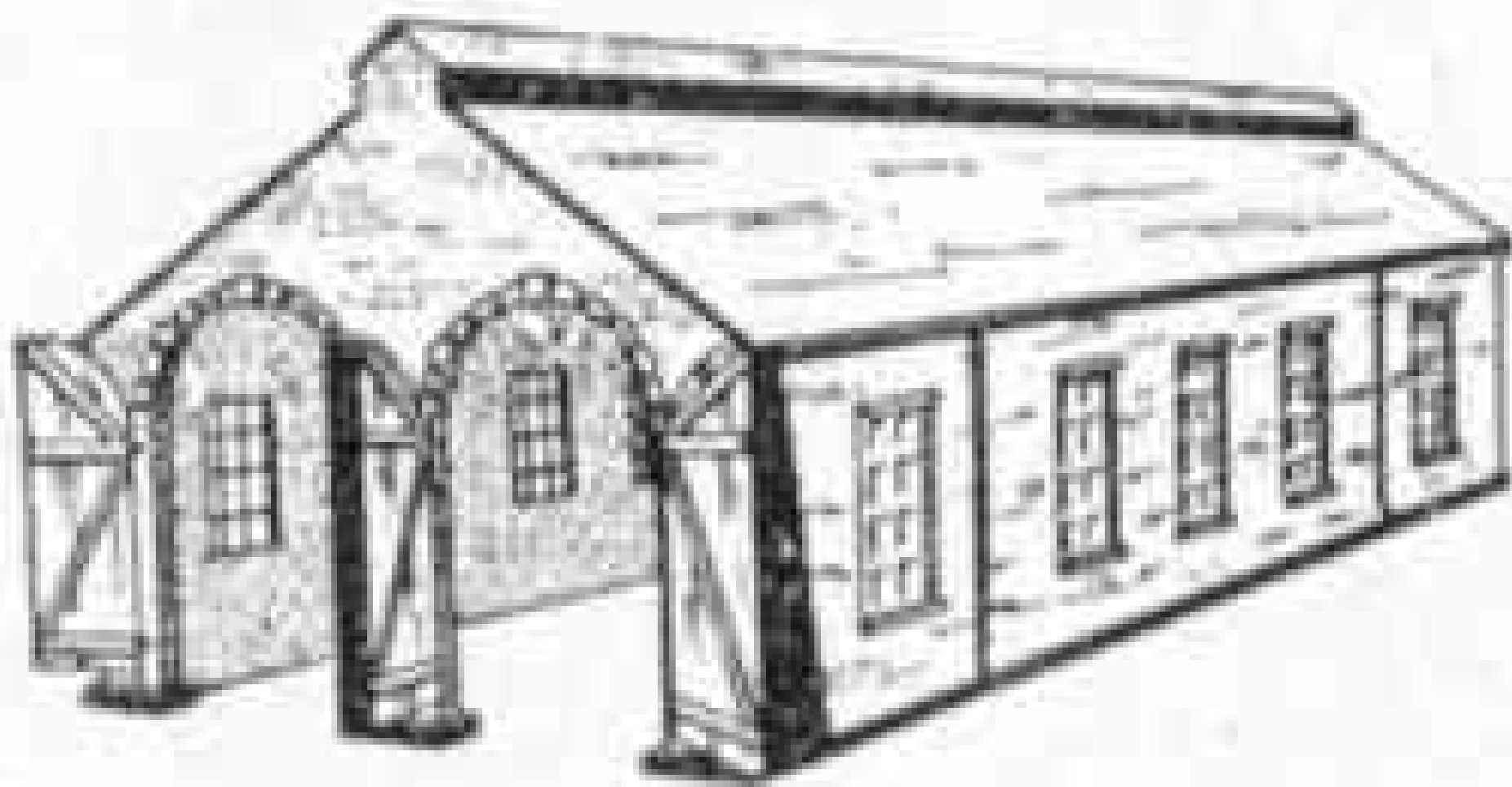
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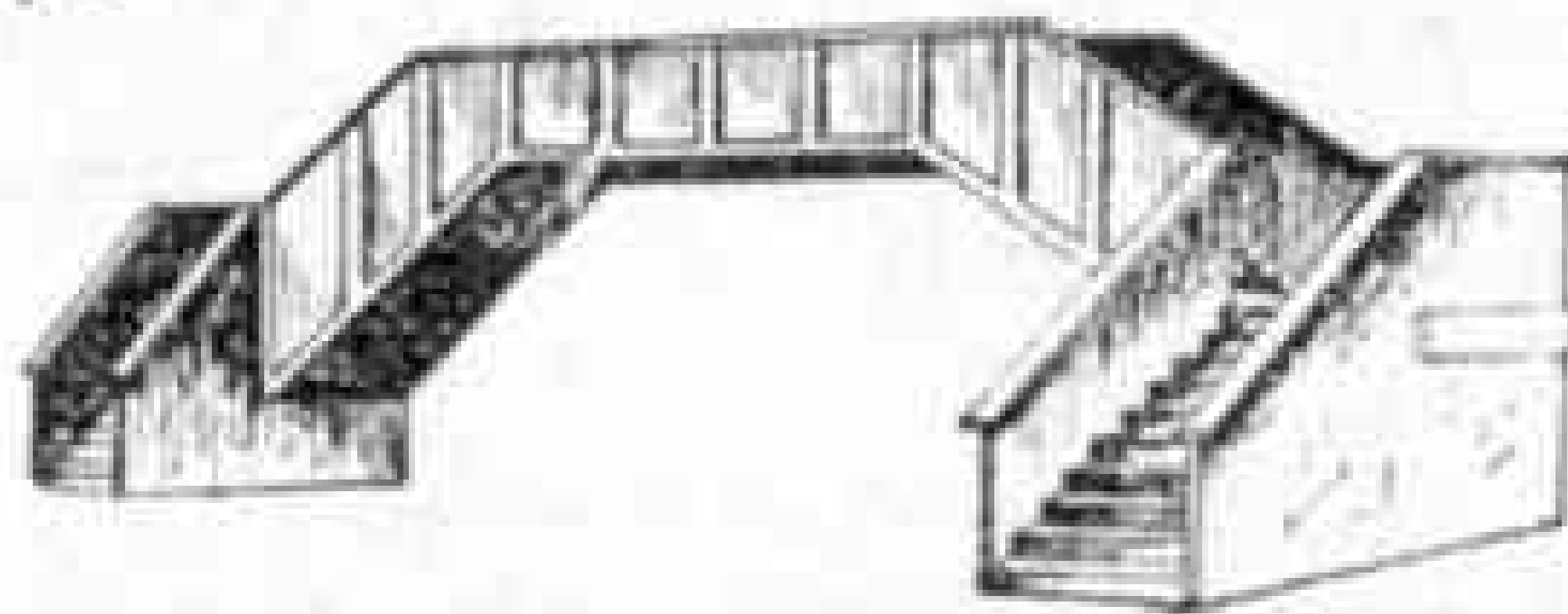
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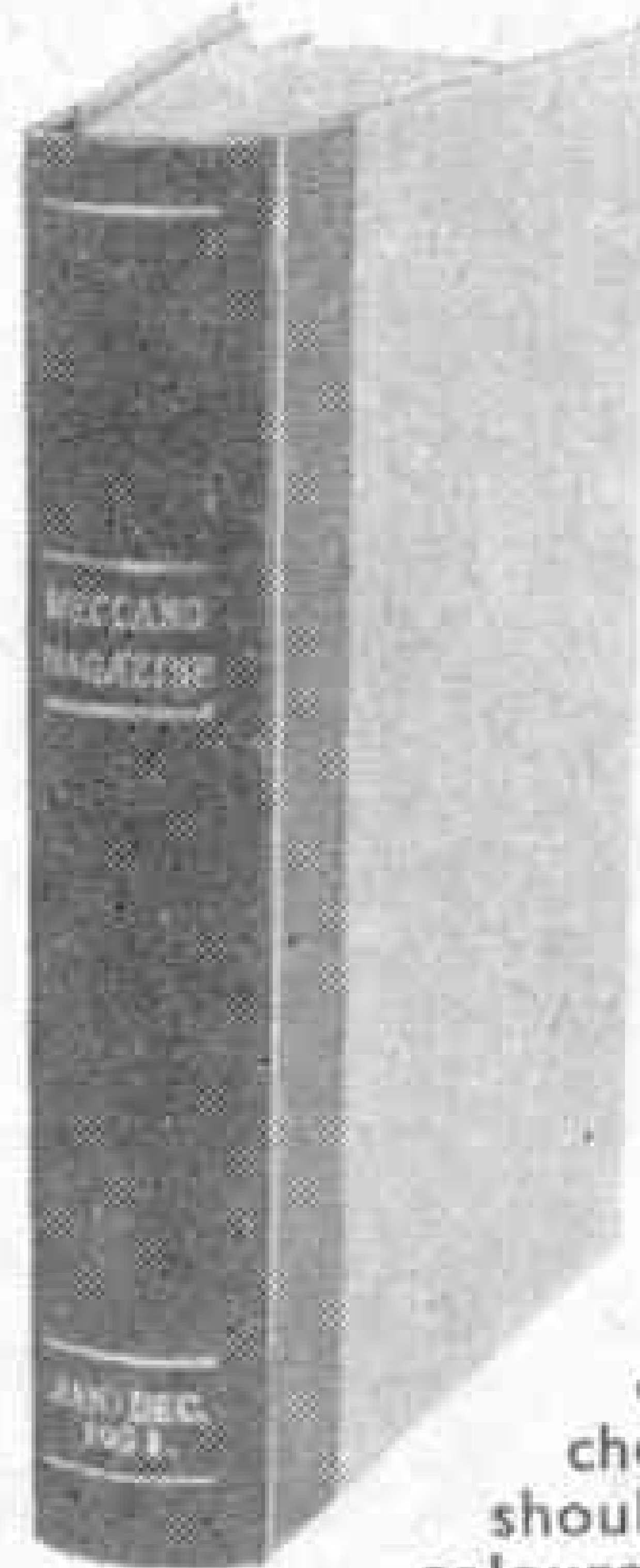
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Meccano Outfit No. 10 with spares, bought during last year. Many parts still unwrapped, used twice, in perfect condition. Also Gears Outfit "A," Magic Motor, No. 2 Clockwork Reversing. E020 and E20R Electric Motors, T20 Transformer, 6 volt Meccano Motor reversing with 6 volt S.E.L. Transformer. The above items are brand new with the exception of the 6 volt Meccano Motor. Cost over £40, would accept £30 for quick sale, or would consider 00 Gauge Electric Train Set as full or part exchange with cash adjustment. —Chatterton, 39, Corhampton Crescent, Leigh Park, Havant, Hants.

Meccano No. 5, Extras, Magic Motor £2; Steam Engine 10/-. Lot £2/7/6.—Lane, 78, Richmond Hill, Langley, Birmingham.

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(See also pages 588 and 590)

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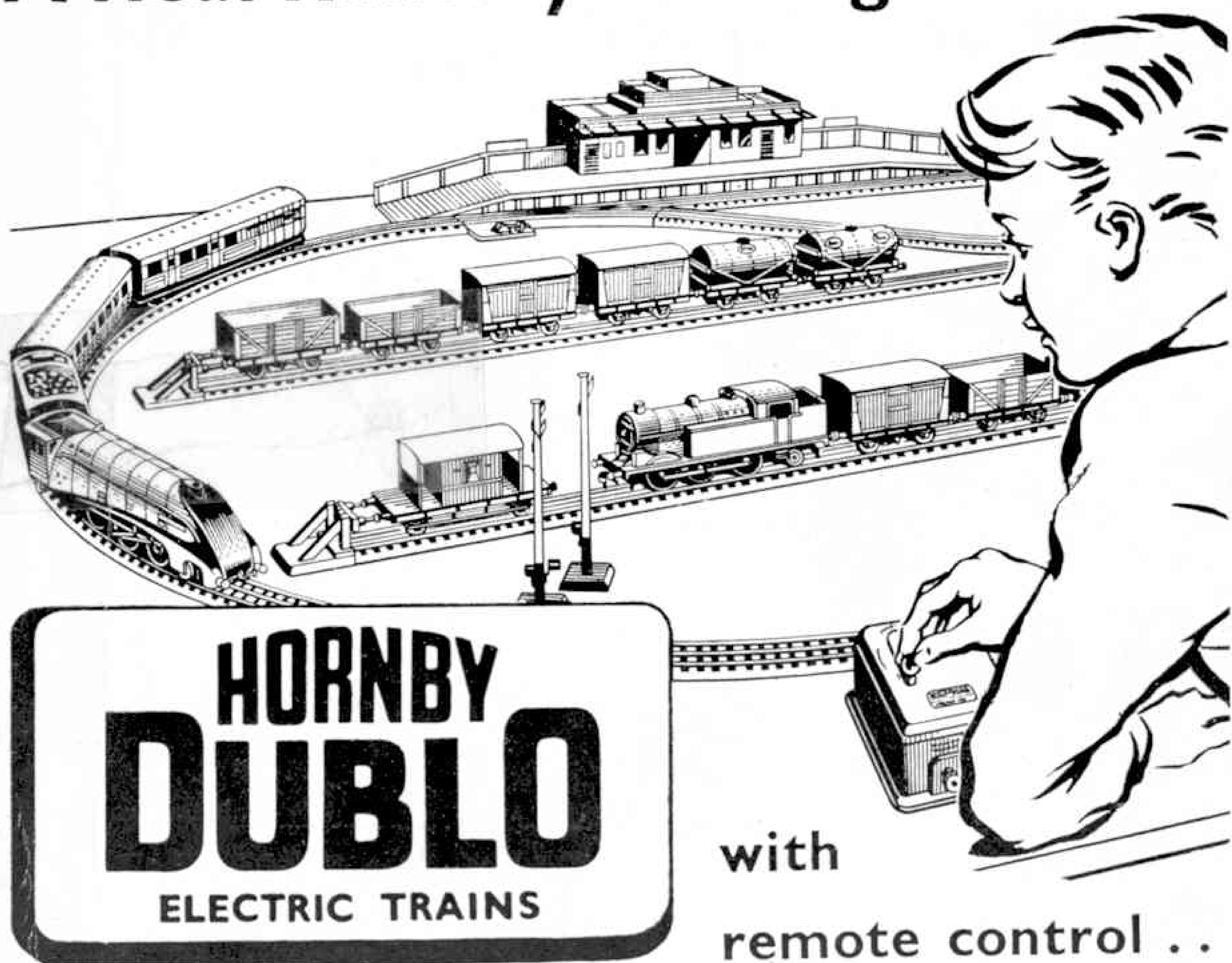
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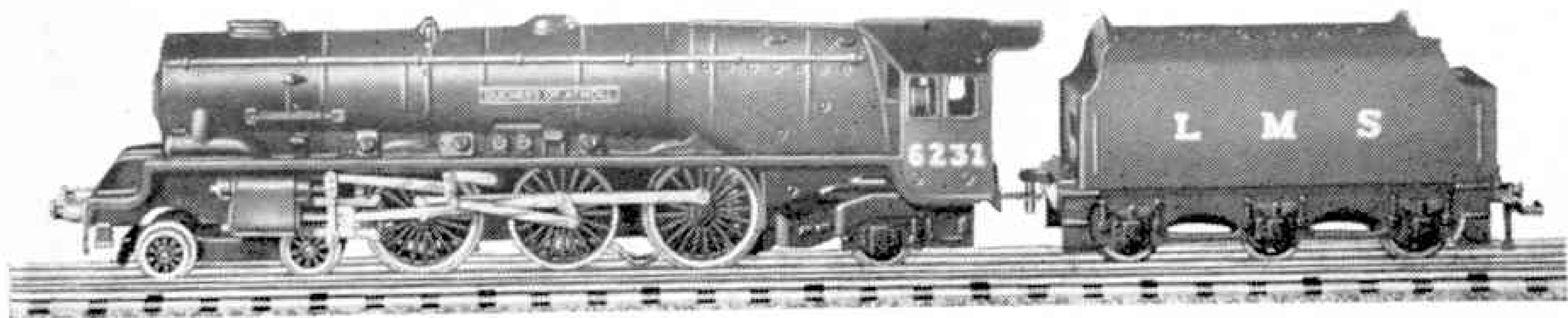
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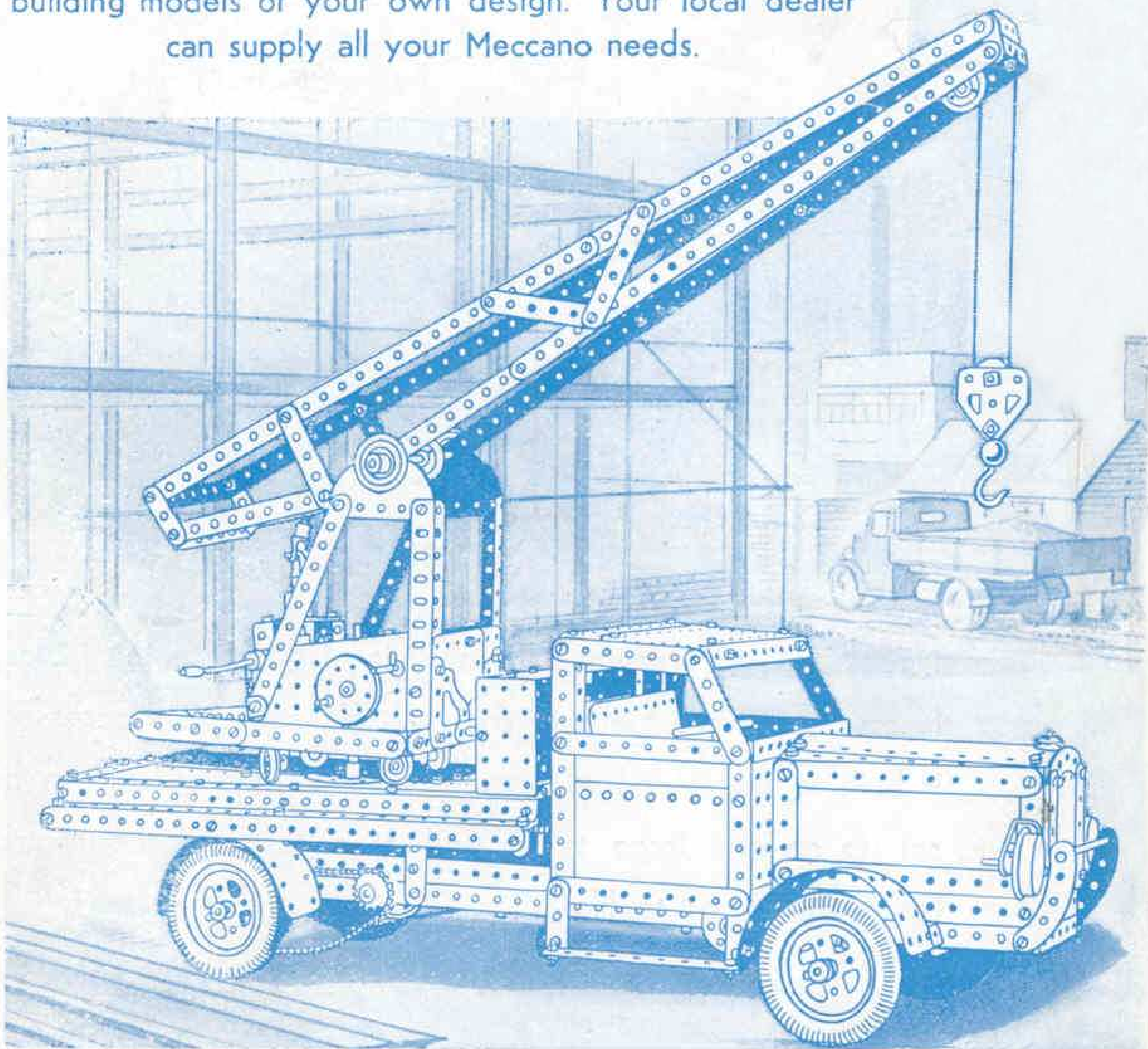
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