

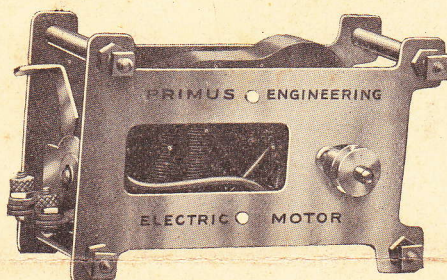
# PRIMUS ENGINEERING

*BRITISH MADE*

Price

21/-

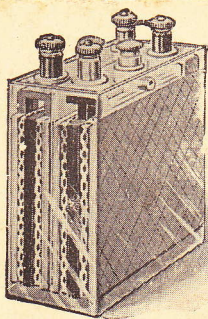
Electric



Motor

THE Primus Electric Motor has been specially designed for use in connection with Primus Engineering. It is exceedingly compact and comparatively small, considering its power and wonderful efficiency. Furthermore, it is unique in so far as it uses less current than probably any other Motor of its kind on the market.

It is fitted with a reversing Switch which adds tremendously to its utility and its design is such that it can readily be fixed into position on any Primus Model which it is intended it should operate.



## Primus Engineering Motor Accumulator

Type No. 420. 4 Volts 20 Ampere Hours.

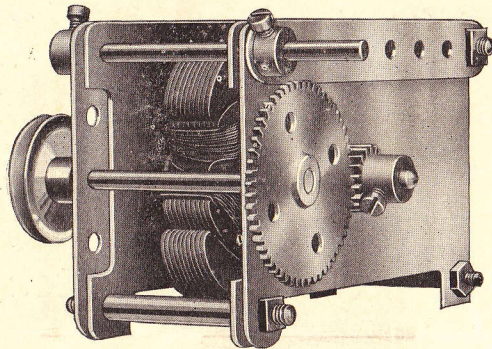
THE accompanying illustration shows the new Primus Motor Accumulator which is fitted with non-corroding Terminals and anti-splash Vents, and we strongly recommend it for use with the Primus Engineering Electric Motor. We have given this Accumulator very severe tests indeed, and in consequence have no hesitation in recommending it for use with the above or any other make of Toy Electric Motor.

Height  $6\frac{1}{2}$ " Width  $4\frac{1}{4}$ " Depth 2"

Price 22/6



# PRIMUS ENGINEERING ELECTRIC MOTOR



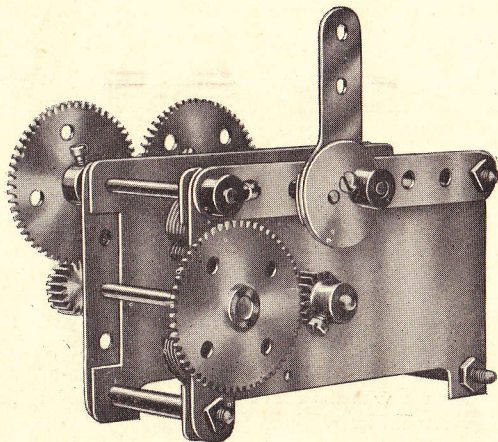
This illustration shows Motor with Driving Pulley geared down to 1/3rd. of Motor Speed.

## Construction

THE Primus Electric Motor is mounted between two Steel End Plates which are strongly braced together, making for strength and compactness. It is constructed with four Stay Bolts, one at each corner and these Bolts are so pitched that they will fit into the holes of any Primus Engineering Strips or Angle Bars. Furthermore, the Stay Bolts are so made that any one of them can be removed and a rod replaced in the hole for fixing Gear Wheels or Pulleys.

## Armature

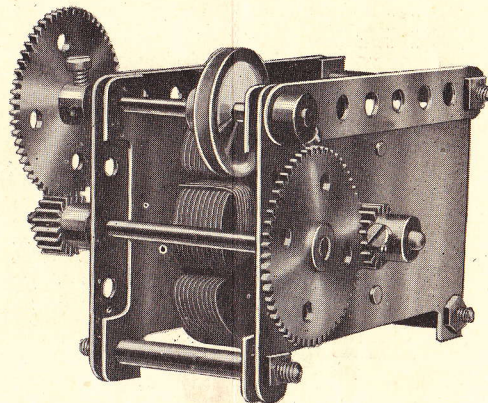
THE Armature Shaft is also made from a standard sized rod so that any Primus Engineering Gear Wheels or Pulleys can be attached to this point of the motor in addition to the Stay Bolts referred to above.



Shows arrangement for gearing down to 1/9th. of Motor Speed.

## Design

THE Primus Electric Motor has been designed in such a way that it will fit into models in every conceivable position. It can be geared up with Primus Engineering Gear Wheels and thereby made to work Cranes, propel Trains, and in fact, convert endless Primus Toys into working models. The number of ways in which this motor can be utilized are too numerous to illustrate, but four alternative methods of gearing are shown in this leaflet. The motor has been designed for use with four Volt Batteries or Accumulators, but can be safely used with a voltage of six or even eight—the higher the voltage the greater the power that can be obtained from the motor.



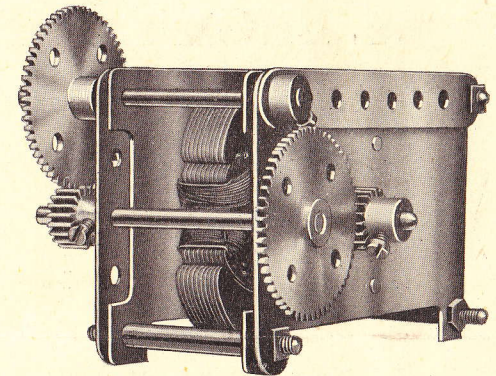
Shows arrangements for gearing down to 1/9th of Motor Speed and fitting with Pulley.

## Terminals

THE Terminals are insulated from the Side Plates which eliminate the risk of short circuiting when built into models.

## Current Consumption

THE Primus Electric Motor has an exceedingly small current consumption both when running light and when fully loaded, which makes it one of the most efficient, powerful and cheapest motors on the market.



Illustrates method of gearing down to 1/9th for direct coupling to Models.

## Brushes

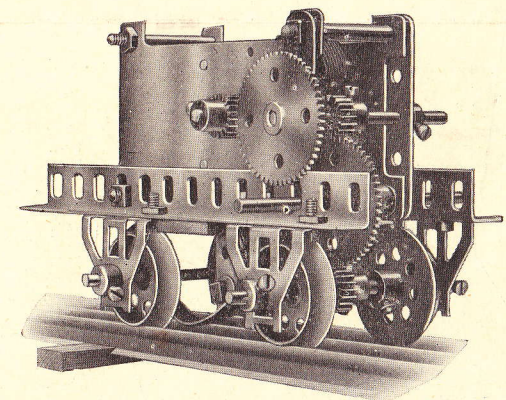
THE Brushes of the Primus Electric Motor are of the Copper Gauze type and are fitted with adjusting Screw and Spring in order to insure correct tension.

## Armature Core & Field Magnets

THESE are made from laminations which are largely responsible for the efficiency and power of the motor.

## Switch

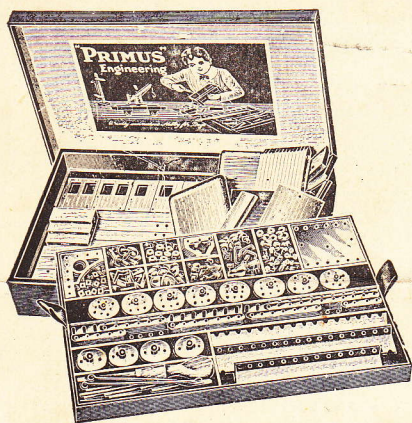
THE Motor is fitted with a reversible switch, so that it can be run in either direction, for working such models as Cranes, Lifts, Railway Waggon, etc.



Illustrates Motor geared down and fitted direct to Bogie.



# PRIMUS ENGINEERING



PRIMUS Engineering is in a class by itself, for it is the only Constructional Toy which comprises both Wood and Metal parts, thereby enabling children to build Models which are an exact duplicate in miniature of the real thing.

No. 0	Contains	122 parts of wood and metal	7/6
1	140	.. ..	10/6
2	267	.. ..	25/-
3	473	.. ..	45/-
4	649	.. ..	65/-
5	1131	.. ..	105/-
6	1189	.. ..	
in polished oak 3-drawer cabinet			210/-

## Primus Supplementary Outfits.

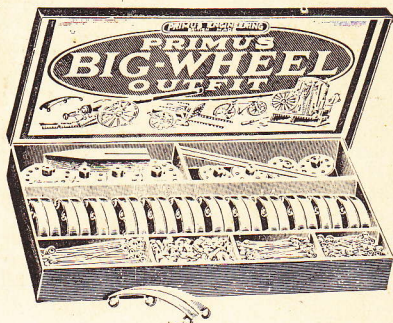
These Outfits are sold to enable an Outfit of smaller capacity to be enlarged and made equal in number of parts to that of the next higher price.

No. 1s	converts the No. 1 into the No. 2	14/6
2s	.. .. 2 .. .. 3	22/6
3s	.. .. 3 .. .. 4	22/6
4s	.. .. 4 .. .. 5	45/-

## Big Wheel Outfit

THE Primus Big Wheel Outfit contains a number of patented parts for building wheels of 4", 6" and 8" in diameter. It is designed for use with Standard Primus Engineering.

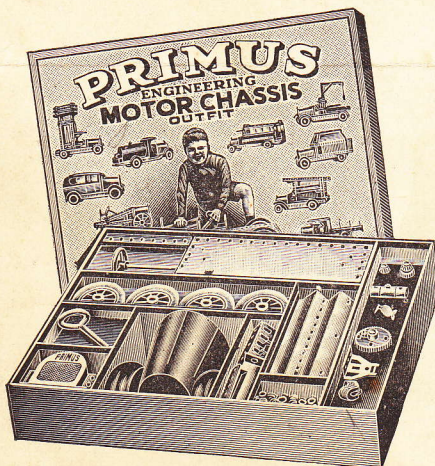
Price 17/6



## PRIMUS ENGINEERING Motor Chassis Outfit.

HERE is something new and good—a Constructional Toy which is entirely different from anything else on the market—well made, handsomely boxed and fascinating to a degree which so far has not been reached by any other educational Toy. The set consists of 148 parts which enables a child to build a magnificent and most realistic Model of a Standard Motor Car Chassis and with the aid of a regular Primus Engineering Outfit or separate Primus parts a boy can build really beautiful Touring Cars, Motor Buses, Lorries, etc.

Price complete with Instruction Manual 27/6



**W. BUTCHER & SONS, LTD.**

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