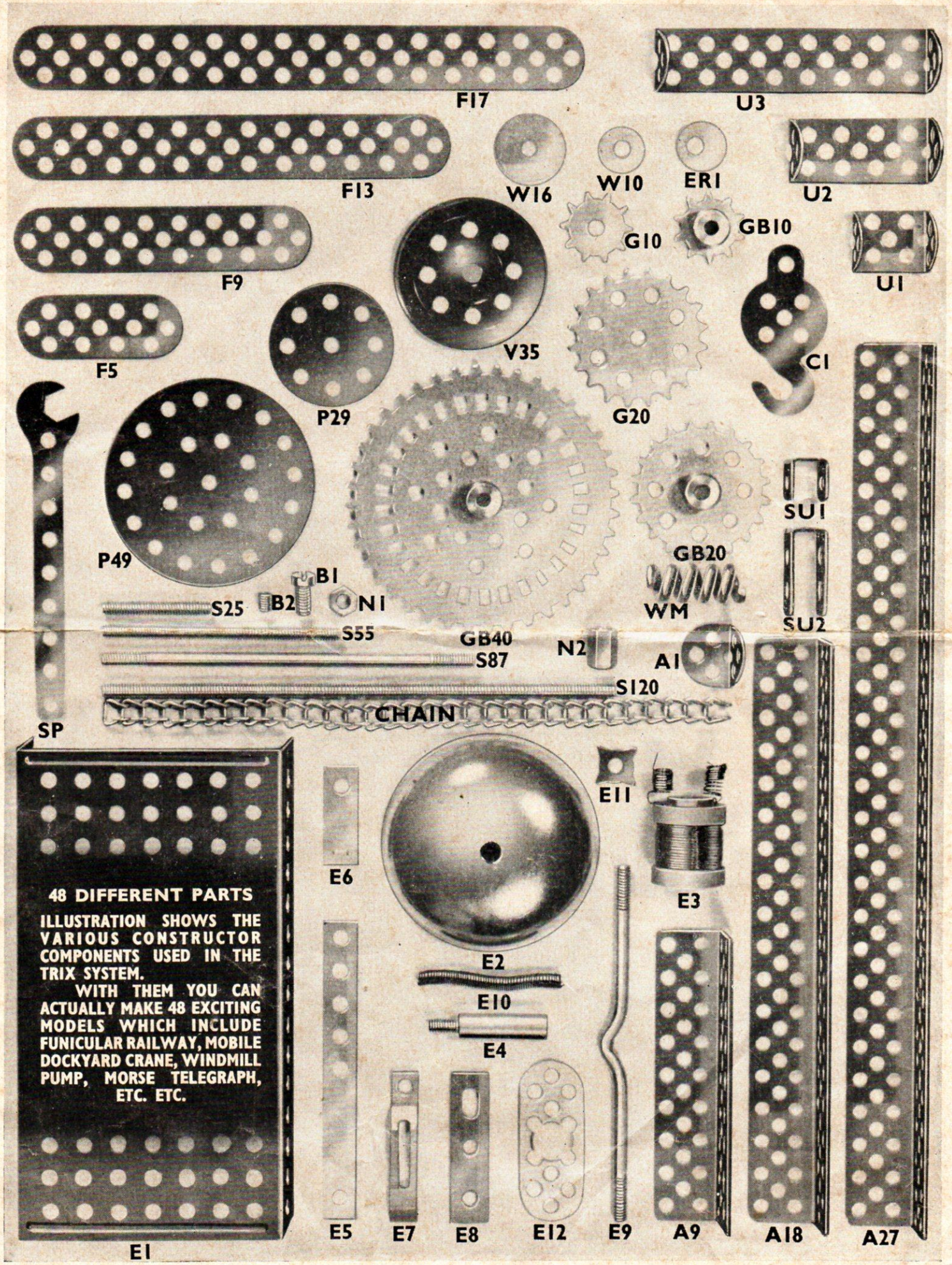
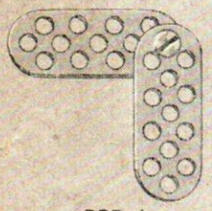
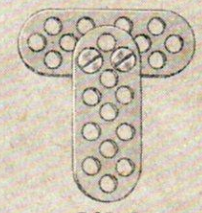


STANDARD CONSTRUCTION DETAILS



SCD 1
SIMPLE BOLTED JOINT



SCD 2
DOUBLE BOLTED JOINT
(secured against side movement)

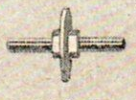
SCD 3
ANGLE BOLTED JOINT

SCD 4
LAP BOLTED JOINT

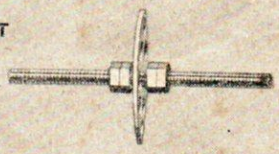
SCD 5
BUTT JOINT

SCD 6
DOUBLE BUTT JOINT

SCD 7
STRIP JOINED IN U-PIECE

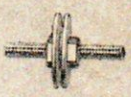


SCD 8
FIXED WHEEL



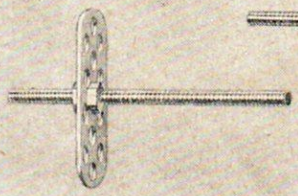
SCD 9
LOOSE WHEEL

SCD 10
PULLEY (large)

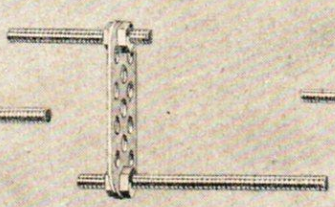


SCD 11
PULLEY (small)

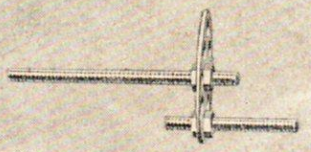
SCD 12
SHAFT COUPLING



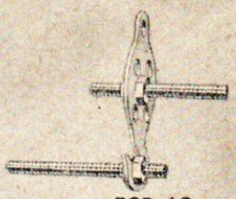
SCD 13
FIXED SHAFT IN STRIP



SCD 14
CRANK MADE WITH STRIP

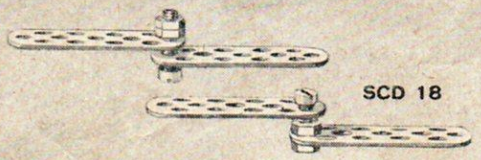


SCD 15
CRANK MADE WITH DISC



SCD 16
CRANK MADE WITH HOOK

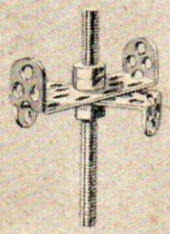
SCD 17



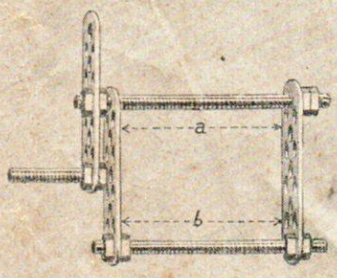
SCD 18

LOOSE JOINT ON STUB AXLE

SCD 19
LOCK NUTS

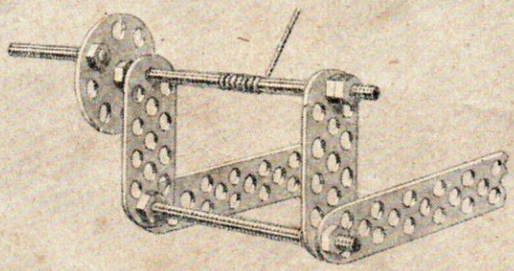


SCD 20
REVOLVING BASE

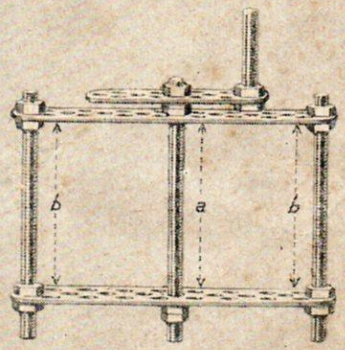


SCD 21
BRAKE

Tighten up lock nuts on crank spindle so that distance *(a)* is less than distance *(b)*. The strips then act as brakes.



SCD 22
HOIST MECHANISM

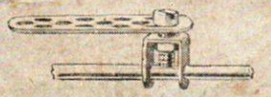


SCD 23
HOIST MECHANISM WITH BRAKE

Tighten up lock nuts on crank spindle so that distance *(a)* is less than distance *(b)*. The strips then act as brakes.

STANDARD CONSTRUCTION DETAILS

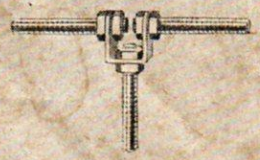
SCD 24
ADJUSTABLE U-PIECE



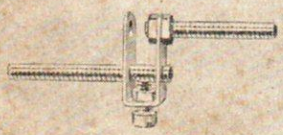
SCD 25
JOINT COUPLING

SCD 26
SHAFT COUPLING

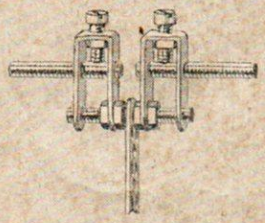
SCD 27
DOUBLE SHAFT COUPLING



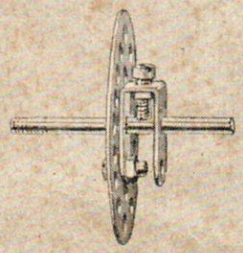
SCD 28
T-COUPLING



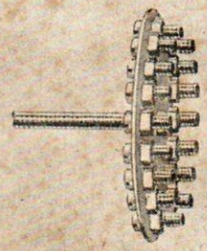
SCD 29
CRANK



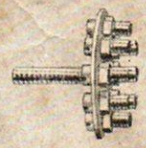
SCD 30
DOUBLE CRANK



SCD 31
DISC FASTENING

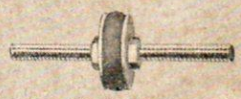


SCD 32
CROWN WHEEL (large)

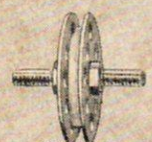


SCD 33
CROWN WHEEL (small)

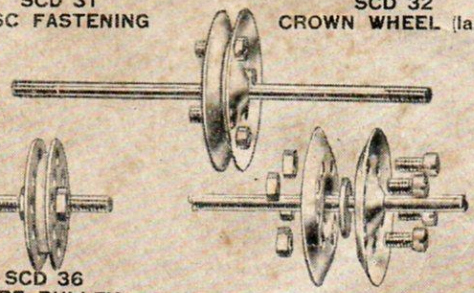
SCD 34
TOOTHED BAR



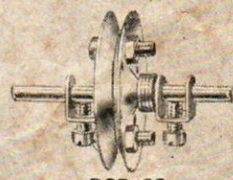
SCD 35
FRICTION WHEEL
(distance washers between discs)



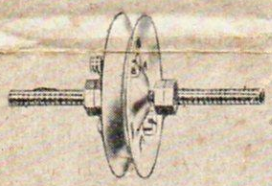
SCD 36
ROPE PULLEY
(distance washers between discs)



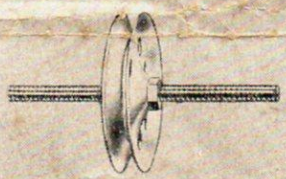
SCD 37
FIXED V-PULLEY (exploded view)
(ER 1 between V 35's)



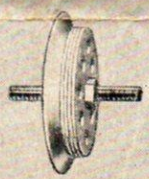
SCD 38
LOOSE V-PULLEY
(secured by SU 1's)



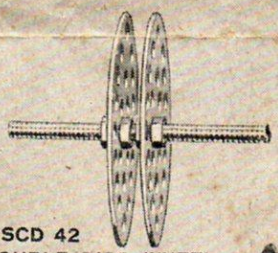
SCD 39
LOOSE V-PULLEY
(secured by locknuts)



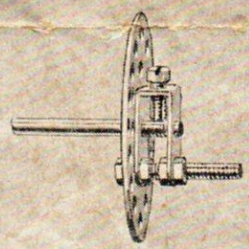
SCD 40
FIXED V-PULLEY
(held by nuts)



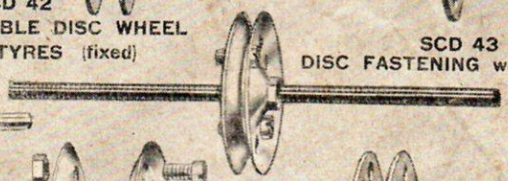
SCD 41
FLANGED WHEEL



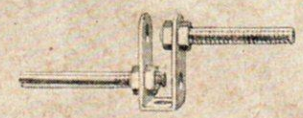
SCD 42
DOUBLE DISC WHEEL
for TYRES (fixed)



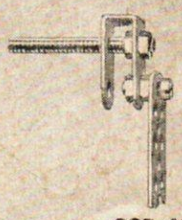
SCD 43
DISC FASTENING with CRANK



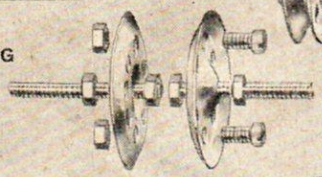
SCD 46
SHAFT COUPLING



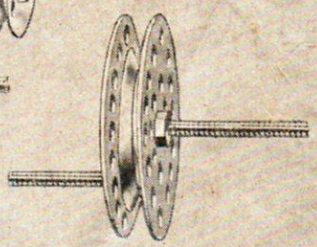
SCD 44
CRANK



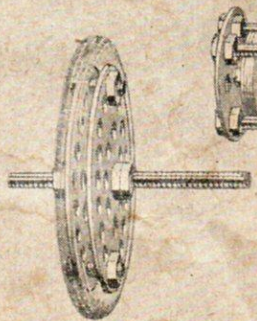
SCD 45
CRANK with JOINT FASTENING



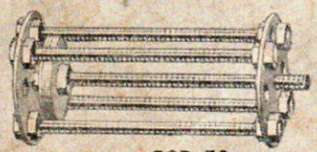
SCD 47
V-PULLEY (exploded view)
(held by 2 half-shafts)



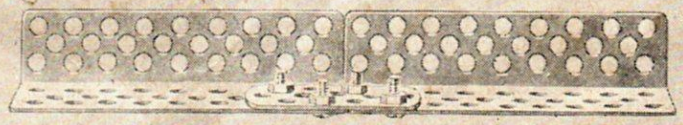
SCD 48
CRANK and PULLEY



SCD 49
DOUBLE DISC WHEEL for TYRES (loose)

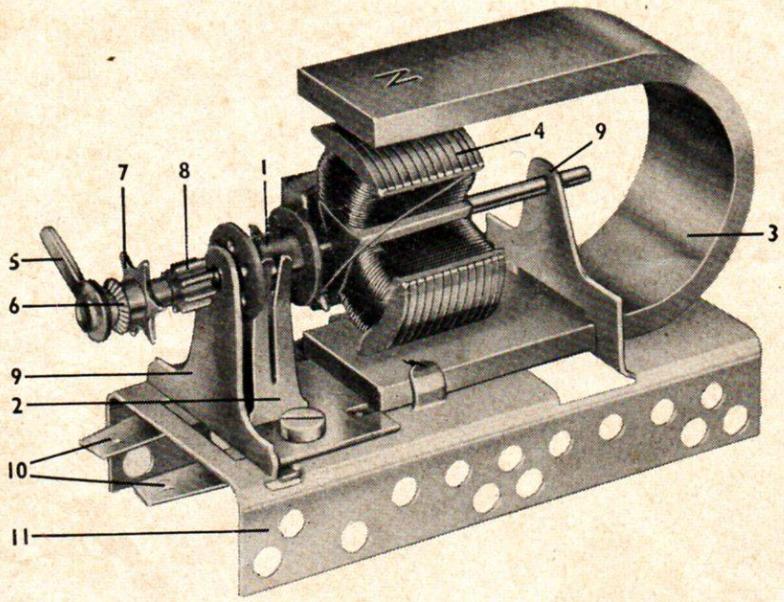


SCD 50
PISTON and CYLINDER



SCD 51
BUTT-JOINT for ANGLE STRIPS

Permag ELECTRIC MOTOR 2051



KEY

1. Commutator.
2. Contact Brushes.
3. Magnet.
4. Armature.
5. Driver.
6. Pulley Wheel.
7. Chain Sprocket Wheel.
8. Small Gear Wheel.
9. Bearing.
10. Terminals.
11. Base.

HERE is the sturdy and surprisingly powerful Trix " Permag " motor which is used to drive and operate many of the ***TRIX*** models.

It is mounted on a girder-type base which enables it to be bolted in position within the framework of the model it is working. It can be used with Trix or with other types of Constructional Sets and it is quite literally the " little motor of a thousand and one uses ".

The powerful permanent magnet gives a strong " field " and the tripolar laminated armature revolves in sturdy bearings, giving only minimum air gap between the pole-pieces and the magnet. This means that the motor is very economical in current.

For light model work it will run from a single pocket flash lamp battery (4½ volts), but for heavy work (such as driving cranes or lifting heavy loads) it is better to use batteries with a bigger capacity, e.g., bell batteries or accumulators. Any battery giving between 4 and 8 volts is suitable. The motor should *never*, of course, be connected up to the house lighting mains, whether A.C. or D.C.

One of the great features of this motor is that it can be used to drive by belt, by chain, by gear or by direct shaft drive. It is very light in proportion to the power it develops and every boy who runs models will want to have one.

Instructions for the construction of a power pack to operate this motor will be found inside the motor carton.

DRIVES

Whichever type of drive you use make sure that the driven gear wheel or pulley is in the same plane as the driver and that the drive is free without being too slack.

BELT DRIVE

A good belt can be made by cutting off a very narrow strip of an old car inner tube. Better still is a piece of thin leather boot lace. Cut to desired length, pierce at each end with a needle and join ends with wire. Avoid clumsy knots.

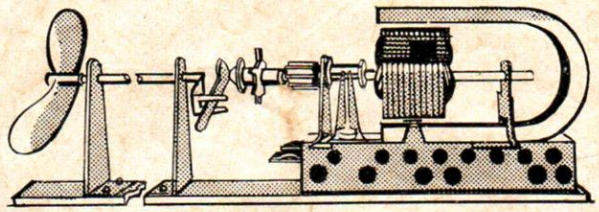
CHAIN DRIVE

Chain Drive is " positive ", but it cannot slip like belt drive. Lengths of suitable chain are supplied in the Auxiliary packets and with the aid of small pliers, any number of links can be detached to give desired length of drive.

GEAR DRIVE

Many Constructor models can be driven by direct gearing. A train of gears (as in clock) can be used to step up or step down the speed.

BOAT DRIVE



The illustration shows how the Permag Motor can be used to drive a motor boat. The drive on the end of motor spindle engages in the fork on the propeller shaft and transmits the rotary motion.

Reference number of this sheet is No. H/48/SCD

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