PrOP-M

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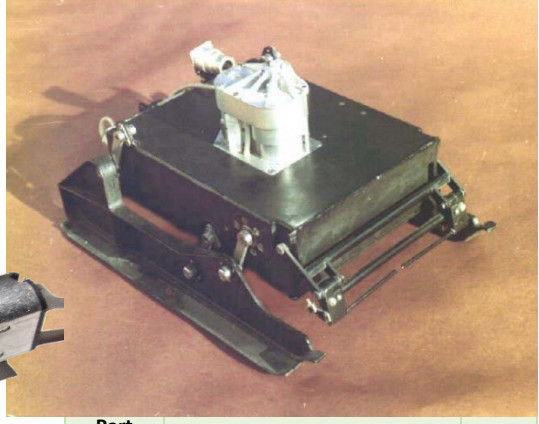

PrOP-M (Russian: **Пр**ибор **о**ценки **п**роходимости — **М**арс (**ПрОП-М**), Passability Estimating Vehicle for Mars or Device Evaluation Terrain—Mars[1]) were two Soviet Mars rovers that were launched on the unsuccessful Mars 2 and Mars 3 missions in 1971. PrOP-M were the first rovers to be launched to Mars, 26 years before the first successful rover mission of NASA's *Sojourner* in 1997. Because the Mars 2 and Mars 3 missions failed, the existence of the rovers was kept secret for nearly 20 years.

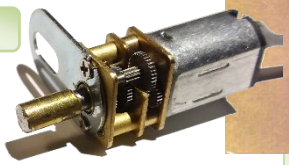

Fig. 1.

Fig. 2.

Part No.	Description	Qty
2	Strip 5½"	2
5	Strip 2½"	1
9	Angle Girder 5½"	2
12	Angle Bracket	4
15b	Rod 4"	2
21	Pulley 1½"	2
24	Bush Wheel 8 hole	1
24b	Bush Wheel 6 hole	1
26	Pinion 19t	1
27a	Gear Wheel 57t	1
45	Double Bent Strip	4
48a	Double Angle Strip 2½"x½"	4
111	Bolt ¾"	4
154a	Corner Angle Bracket	1
186b	Drive Band 10"	1
235g	Narrow Strip 3 hole	4

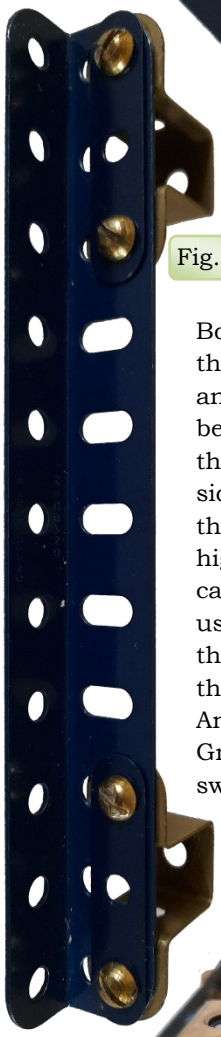

Fig. 3.

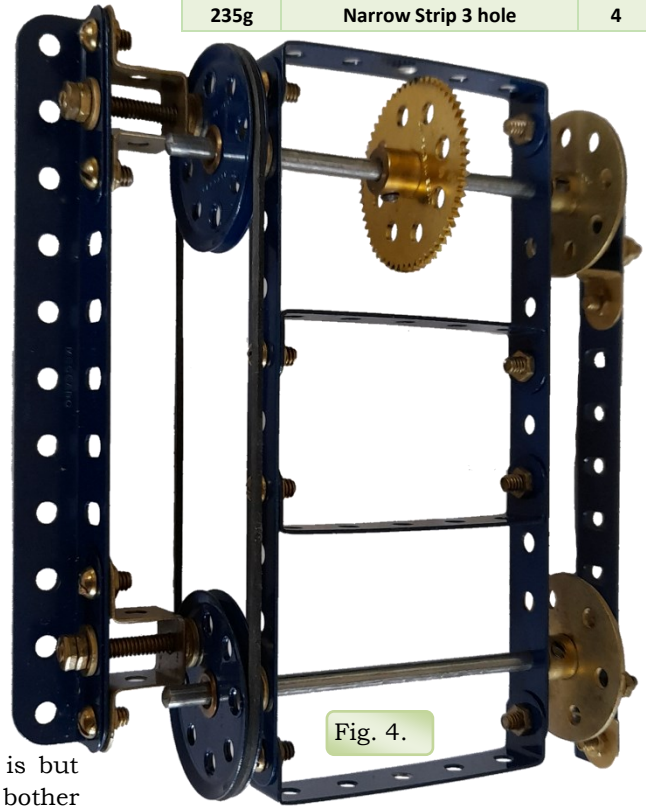

Fig. 4.

Bolt 2 x 11-hole Strips together with 4 x DAS then journal the Rods through as shown and put 2 x Pulleys on one side and the Bush Wheels on the other side. Use Washers between the Strips and the bosses. Secure 4 x ¾" bolts to the Bush Wheels and the Pulleys making sure that the port side is 90 degrees out of phase to the starboard side. Make the skis as shown in Fig 3. Place the Double Bent Strips as high as possible in the slot. Use as much wiggle room as you can. The higher, the better. Secure the skis to the ¾" Bolts using locknuts making sure they are free to move. Attach the Drive Belt as shown in Fig 4. Make sure you can turn the 57t Gear freely. Mount the N20 motor, Fig 1, on a Corner Angle Bracket as shown in Fig 2. Adjust using the slots. Grab an old Angle Bracket and file the slot to fit a toggle switch. Make a battery mount as shown in Figs 5 and 6.

It's a bit tricky trying to get Nuts in where the switch is but persevere and ye shall be triumphant. You can see I didn't bother with the top bolt. The 5-hole Strip stays put without it anyway.

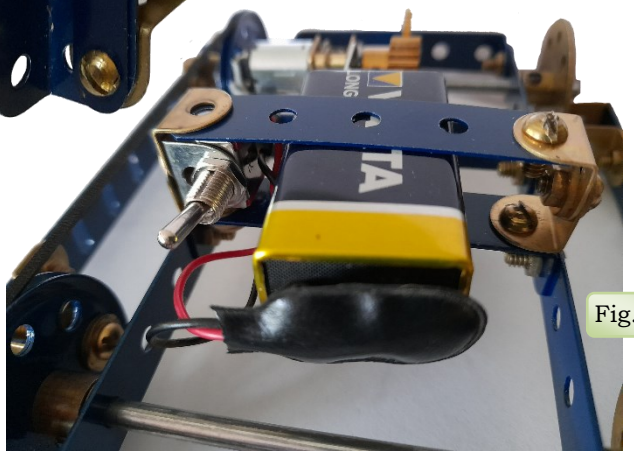

Fig. 5.

Connect one wire from the motor to the centre lug of the switch and connect the red battery snap wire to the top lug. Connect the black wire of the battery snap to the motor.

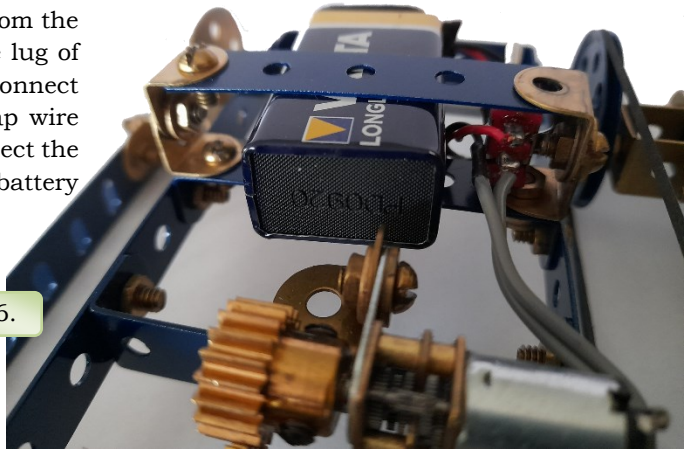

Fig. 6.