

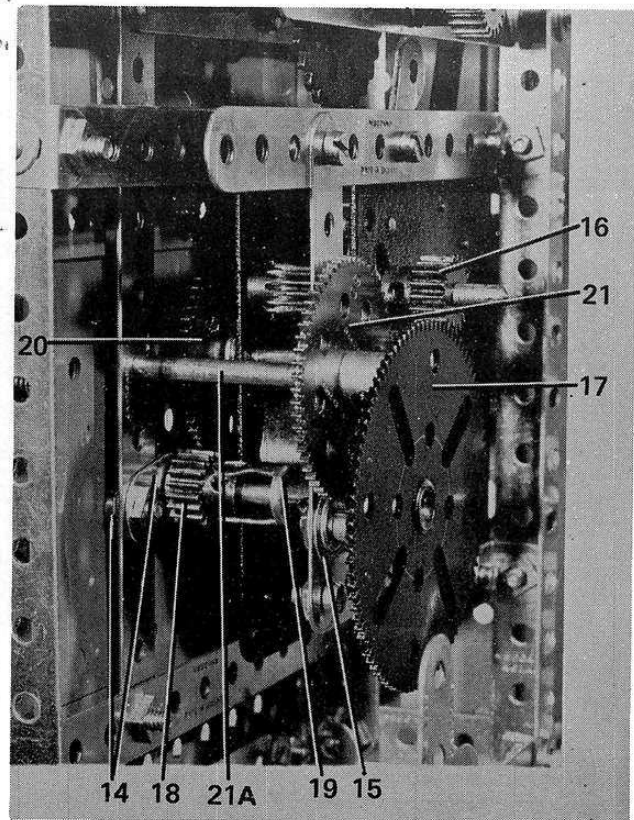
With the clock face fitted, Rod 21A should project through a hole in the face. Fixed on the end of this Rod is a  $\frac{1}{2}$ " Pinion 30 which drives a 57-teeth Gear Wheel, loose on the minute hand shaft which also projects through the clock face. Bolted to the face of this Gear is a  $2\frac{1}{2}$ " Narrow Strip, spaced from the Gear by two Washers, which serves as the hour hand. The minute hand is a  $3\frac{1}{2}$ " Narrow Strip, mounted on a Rod Socket fixed on the end of the minute hand shaft. The clock digits are  $\frac{1}{2}$ " Bolts held in the rim of the Hub Disc by Nuts. Their correct positions are found by placing the two hands at the twelve o'clock position and fixing the first Bolt. One revolution of the minute hand will show the hour hand pointing to the position where the next digit is to be placed, and so on round the full twelve-hour circle.

The sides of the face are completed by  $7\frac{1}{2}$ " Angle Girders 31 which are bolted to the  $2\frac{1}{2}$ " Strips projecting from the clock mechanism. The upper and lower sections of the face are framed by two  $5\frac{1}{2}$ " Angle Girders fixed by Angle Brackets to the uprights of the mechanism.

Each side of the clock head is similar in construction, consisting of a  $7\frac{1}{2}$ " x  $2\frac{1}{2}$ " compound flexible plate (built up from one  $5\frac{1}{2}$ " x  $2\frac{1}{2}$ " and one  $2\frac{1}{2}$ " x  $2\frac{1}{2}$ " Flexible Plate), edged at top and bottom by  $3\frac{1}{2}$ " Strips attached to the ends of nearby Angle Girders 31 by Angle Brackets. The Bolts fixing the  $3\frac{1}{2}$ " Strips to the Angle Brackets also secure a vertical  $7\frac{1}{2}$ " Strip 32 between the two  $3\frac{1}{2}$ " Strips. The rear ends of the  $3\frac{1}{2}$ " Strips are connected by a vertical  $7\frac{1}{2}$ " Angle Girder 33, the compound plate being attached to this and the  $7\frac{1}{2}$ " Strip by strategically-placed Fishplates. Two  $\frac{1}{2}$ " Reversed Angle Brackets 34, bolted one through the second hole from the rear of each  $3\frac{1}{2}$ " Strip, help to fix the head sides to the mechanism frame. At the rear of the clock, Angle Girders 33 at each side are connected, at the top, by two overlapping  $5\frac{1}{2}$ " Strips and, at the bottom, by one  $5\frac{1}{2}$ " Strip braced by Corner Gussets.

The top of the clock head is built up from two  $6\frac{1}{2}$ " compound strips (provided by two overlapping  $5\frac{1}{2}$ " Strips), connected together at each end by a  $3\frac{1}{2}$ " Strip. A  $2\frac{1}{2}$ " x  $2\frac{1}{2}$ " Flexible Plate 35 is bolted to each  $3\frac{1}{2}$ " Strip, a  $2\frac{1}{2}$ " x  $\frac{1}{2}$ " Double Angle Strip being bolted to the top of the inner edge of this Flexible Plate. Bolted on to the lugs of the Double Angle Strips are two Semi-circular Plates 36, then the top is completed by two  $2\frac{1}{2}$ " x  $2\frac{1}{2}$ " Curved Plates

Another close-up view of the clock mechanism as seen more from the side, with the  $3\frac{1}{2}$ " Gear and nearside corner Angle Girder still removed to allow a clearer view. Note Pinion 18 held in the arms of Small Fork Piece 19, this arrangement serving as a friction clutch to permit the hands of the clock to be turned without damaging the mechanism. Note also that Fishplates 14 and 15 must be set absolutely accurately to ensure that the dependent gears mesh correctly.



attached to the Double Angle Strips by Angle Brackets and arranged to follow the contours of the Semi-circular Plates. Decoration is provided by a  $\frac{3}{4}$ " Washer bolted to the centre of the front Semi-circular Plate, and by two Chimney Adaptors, one at each front corner, as shown.

It now only remains to complete the pendulum, which consists of a 9" Pendulum Rod from the Clock Kit, a  $3\frac{1}{2}$ " Axle Rod and an Adaptor for Screwed Rod, all joined together by Rod Connectors. The pendulum is extended downwards by a 6" Screwed Rod held in the Adaptor and mounted on the Screwed Rod is the bob weight. This is built up from six Wheel Discs fixed by  $\frac{3}{4}$ " Bolts to a Bush Wheel, the Threaded Rod being screwed through the tapped bores in the boss of this Bush Wheel.

The completed pendulum is inserted through the Angle Bracket attached to the previously-mentioned  $5\frac{1}{2}$ " pendulum Strip 28, and an End Bearing 37 is fixed on the upper end of the pendulum rod. Finally, a Tension Spring is attached to the End Bearing, the other end of the Spring being fixed by a  $\frac{1}{2}$ " Bolt to the centre of the compound  $6\frac{1}{2}$ " strip at the rear of the clock head.

The completed clock can now be tested by winding the Motor and setting the pendulum swinging, after

ensuring that the clock is standing firm and upright by adjusting the  $5\frac{1}{2}$ " Angle Girder at the rear of the base. If the setting-up procedure described previously has been carefully followed, the tick of the escapement should be found to be regular and even. Any discrepancy should be removed by slightly adjusting the relationship between the pendulum and the escapement. A careful study of the escapement Angle Brackets in motion, particularly as the Motor runs down, should detect any minor adjustments that may be needed.

#### PARTS REQUIRED

2-1	1-16b	2-51	1-166
5-1b	4-17	3-53	1-173a
17-2	1-24	2-53a	1-179
5-2a	6-24a	8-59	2-188
9-3	4-26	1-63	4-189
4-4	1-26c	1-79a	7-190
18-5	2-27a	2-90a	4-191
1-6	1-27b	1-95a	5-192
1-6a	1-27c	2-108	1-194a
2-7a	1-27d	8-111	1-194d
4-8	243-37b	14-111a	2-194e
9-8b	275-37a/c	6-111c	2-197
3-9	134-38	1-116a	2-200
26-10	4-38d	1-118	2-213
30-12	1-43	4-125	2-214
1-12b	2-48a	4-126a	1-235
1-16	1-50	2-164	1-235b
1-16a			1-252

1 No.1 Clockwork Motor.