



DEPARTMENT OF TRADE AND COMMERCE
STANDARDS BRANCH

OTTAWA, August 2, 1963.

TYPE APPROVAL

CANADIAN AUTOMATIC CHART CHANGER

The apparatus specified and illustrated herein has been duly approved by the Standards Branch under the provisions of the Gas Inspection Act, Chap.129, R.S. 1952, and may be admitted to verification in Canada.

Apparatus Approved: Automatic Chart Changer manufactured by the Mullins Mfg. Co. Inc., Dallas, Texas for the Canadian Meter Company, Milton, Ontario and distributed in Canada by the latter.

Rating of Apparatus:

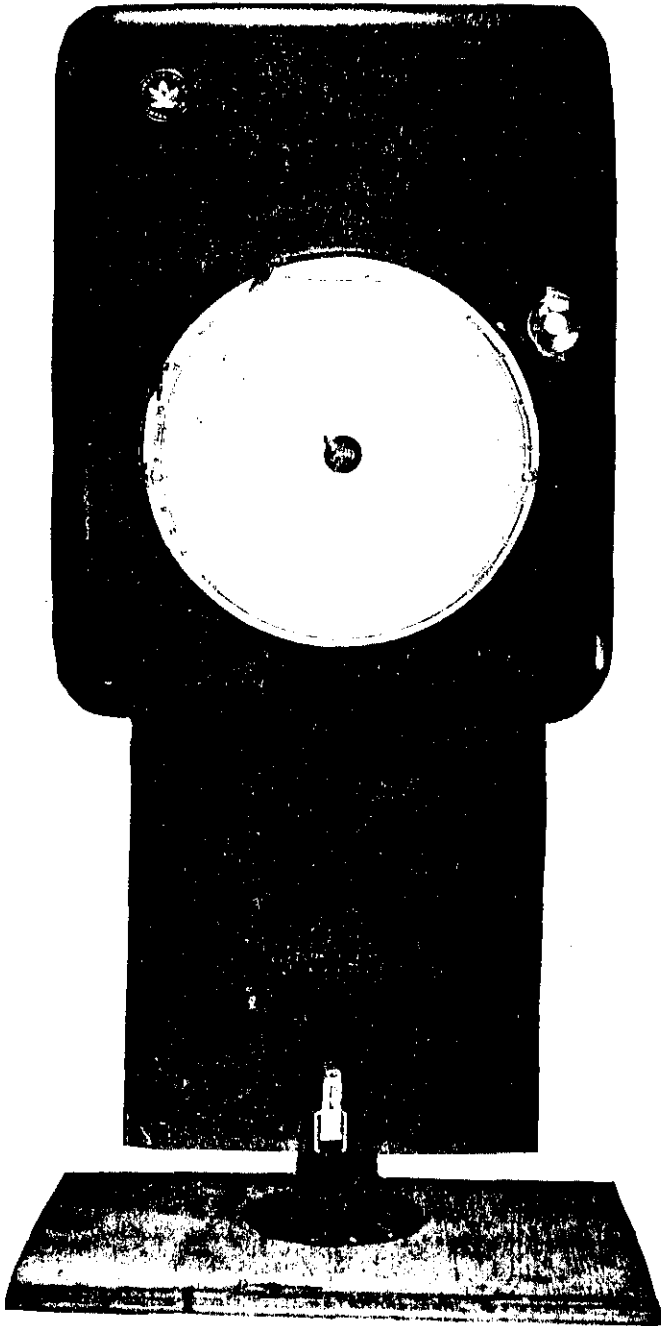
Chart Size, circular-----	12" diameter
Timing Device-----	24 hour rotation, 7 day wind or 7 day rotation, 31 day wind.

Description: The chart changer is basically the Rockwell type Macnick timing device combined with the Mullins Dial-O-Graph automatic chart changing mechanism. For adopting to rectangular case recorders, a receptacle, a plexiglass circular plate and a chart guide plate with suitable spacers is necessary. The 24 hour and 7 day rotation timing devices are referred to as Models 23-1 and 23-3 respectively.

The chart changer is designed to change circular charts automatically at the same time once every revolution. The change time is set by adjusting the calibrated dial on the face of the timing device. A special loader is used to ensure the proper placing of the charts on the chart plate and to prevent any damage to the charts which could affect the changing operation. The charts are specially slotted to fit this type of changer and they must slide freely forward to rest flat against the rear of the release button. The chart plate can be rotated manually in a counter clockwise direction without doing any harm, but clockwise manual rotation can only be made until a zero point is reached just before chart change time. The clutch which rotates the chart plate does not function unless the chart drive is wound at least enough to run.

In operation, as the chart plate rotates, one extra wind is added to the flyback spring at the rear of the chart drive. Each complete rotation instantly releases one extra wind to the flyback spring furnishing power to revolve the release button 360° to peel off the top chart and thrust it into the receptacle. The flyback spring should have a prewind of only one wind. If it is prewound too tightly, it can stop the chart drive and if

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