



NATIONAL STANDARDS COMMISSION

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CERTIFICATE OF APPROVAL No 2/1/2

This is to certify that the pattern of the

Metronic Leather-measuring Instrument

submitted by Fraho & Son Pty Ltd,
184 Bobbin Head Road,
Turramurra, New South Wales, 2074,

has been approved under the Weights and Measures (Patterns of Instruments) Regulations as being suitable for use for trade.

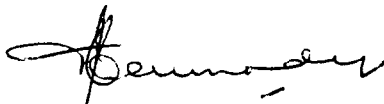
Date of Approval: 22 July 1974

The pattern is described in Technical Schedule No 2/1/2, and in drawings and specifications lodged with the Commission.

The approval is subject to review on or after 1 August 1979.

All instruments conforming to this approval shall be marked with the approval number "NSC No 2/1/2".

Signed



Executive Officer



NATIONAL STANDARDS COMMISSION

TECHNICAL SCHEDULE No 2/1/2

Pattern: Metronic Leather-measuring Instrument

Submittor: Fraho & Son Pty Ltd,
184 Bobbin Head Road,
Turramurra, New South Wales, 2074.

Date of Approval: 22 July 1974

All instruments conforming to this approval shall be marked "NSC No 2/1/2".

Description:

The pattern (see Figure 1) is an instrument for measuring the area of opaque sheets of leather. The area of the leather is determined by passing the leather between a row of photo-cells and a fluorescent light source, and scanning the photo-cells once for every 4,5-mm advance of the leather past the measuring head. At each scan a number of pulses, proportional to the number of photo-cells covered by the leather at the scanned position, is counted. The total number of pulses counted during the passage of the leather past the measuring head is divided by a scaling factor in the measuring unit (see Figure 2) to produce an indication in dm^2 on the nixie-tube indicator (see Figure 3).

The measuring unit is sealed by a lead-and-wire seal which passes through drilled studs which retain the cover on the unit.

The measuring head comprises 2,4 metres of 20-cm diameter glass tube which contains a fluorescent lamp and a row of photo-cells along the length of the glass tube. The glass tube rotates together with a series of belts so as to carry the leather between the rotating glass tube and the photo-cells, thus blocking the light from the fluorescent lamp to some of the photo-cells. A slotted disc driven by the gear train on the end of the glass tube generates a photo-cell scanning pulse for every 4,5 mm of leather movement (see Figure 4). A notice advising the number of teeth in the crown wheel and cogs, and the number of slots in the disc, is sealed to the instrument.

A ticket printer (see Figure 5) and a leather printer (see Figure 6) are provided.

A sign on the front of the instrument is marked:

"place leather with any straight edge at an angle to the direction of conveyor movement"

Test Procedure:

Measurement of the templets in the combination of areas listed in Table 1 within the following tolerance will establish that the instrument performance is in conformity with the approved pattern:

The acceptance tolerance is $\pm (1 \text{ dm}^2 \text{ up to } 25 \text{ dm}^2, + 1 \text{ dm}^2 \text{ for each additional } 50 \text{ dm}^2 \text{ or part thereof})$ for each test area, and for the mean of 20 measurements of the same test area when repositioned between each measurement $\pm (0,25 \text{ dm}^2 \text{ up to } 25 \text{ dm}^2, + 0,5 \text{ dm}^2 \text{ for each additional } 50 \text{ dm}^2 \text{ or part thereof})$.

Note: The service tolerance is the same as the acceptance tolerance.



NATIONAL STANDARDS COMMISSION

CANCELLATION OF CERTIFICATE OF APPROVAL No 2/1/2

This is to certify that Certificate of Approval No 2/1/2 for the pattern of the
Metronic Leather-measuring Instrument

submitted by Fraho & Son Pty Ltd
184 Bobbin Head Road
Turramurra, New South Wales, 2074

was cancelled in respect of new instruments on 1 March 1983.

Instruments which were verified before 1 March 1983 may, with the concurrence of
the State or Territorial verifying authorities, be submitted for reverification.

Signed


Acting Executive Director

Instruments conforming to the pattern do not comply with the latest design rules.

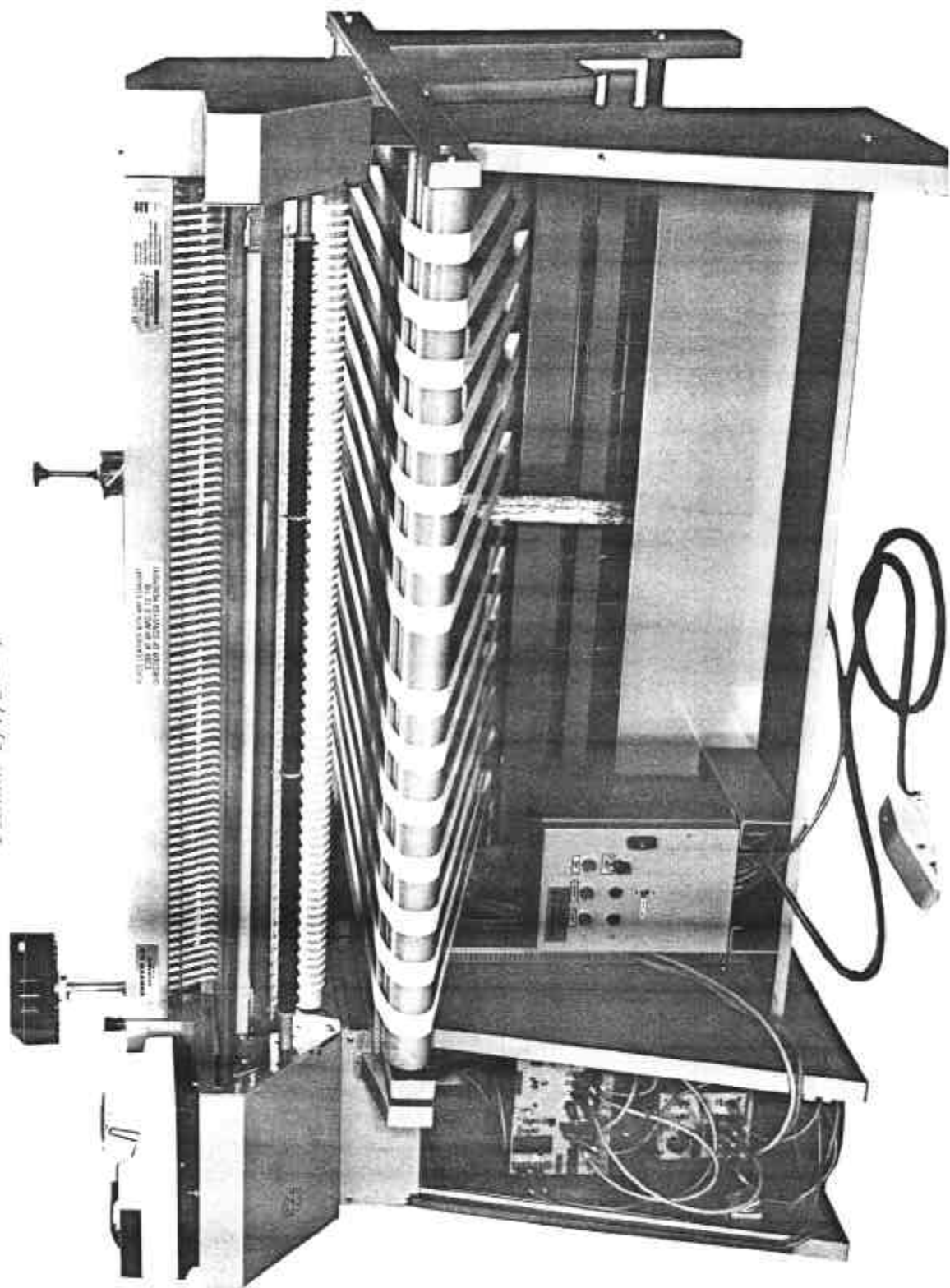
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TABLE 1

Test area	Templets	Tolerance on each of 20 measurements	Tolerance on mean of 20 measurements
dm ²	dm ²	dm ²	dm ²
20	20	± 1	± 0,25
30	10 + 20	± 2	± 0,75
70	20 + 50	± 2	± 0,75
80	10 + 20 + 50	± 3	± 1,25
100	100	± 3	± 1,25
120	20 + 100	± 3	± 1,25
130	10 + 20 + 100	± 4	± 1,75
170	20 + 50 + 100	± 4	± 1,75

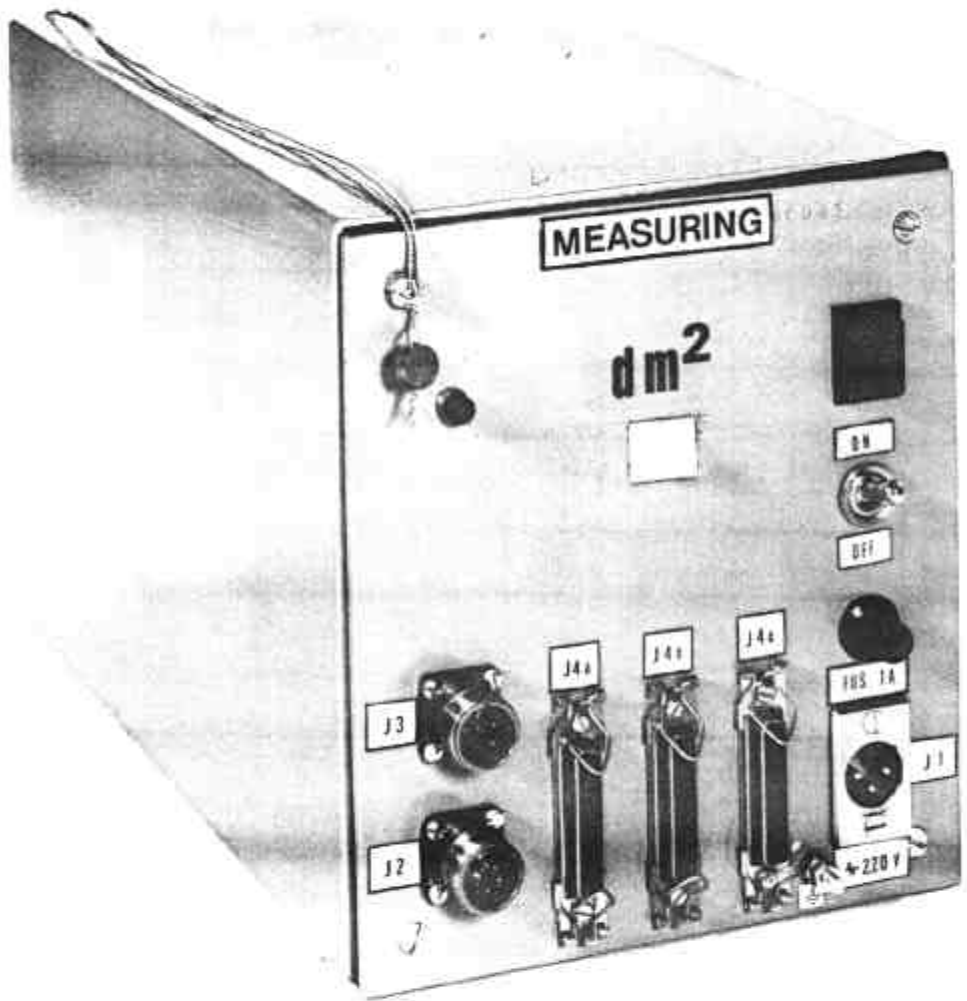
Test Procedure — Metronic

FIGURE 2/1/72 - 1



Metronic Leather-measuring Instrument

FIGURE 2/1/2 - 2



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Measuring Unit

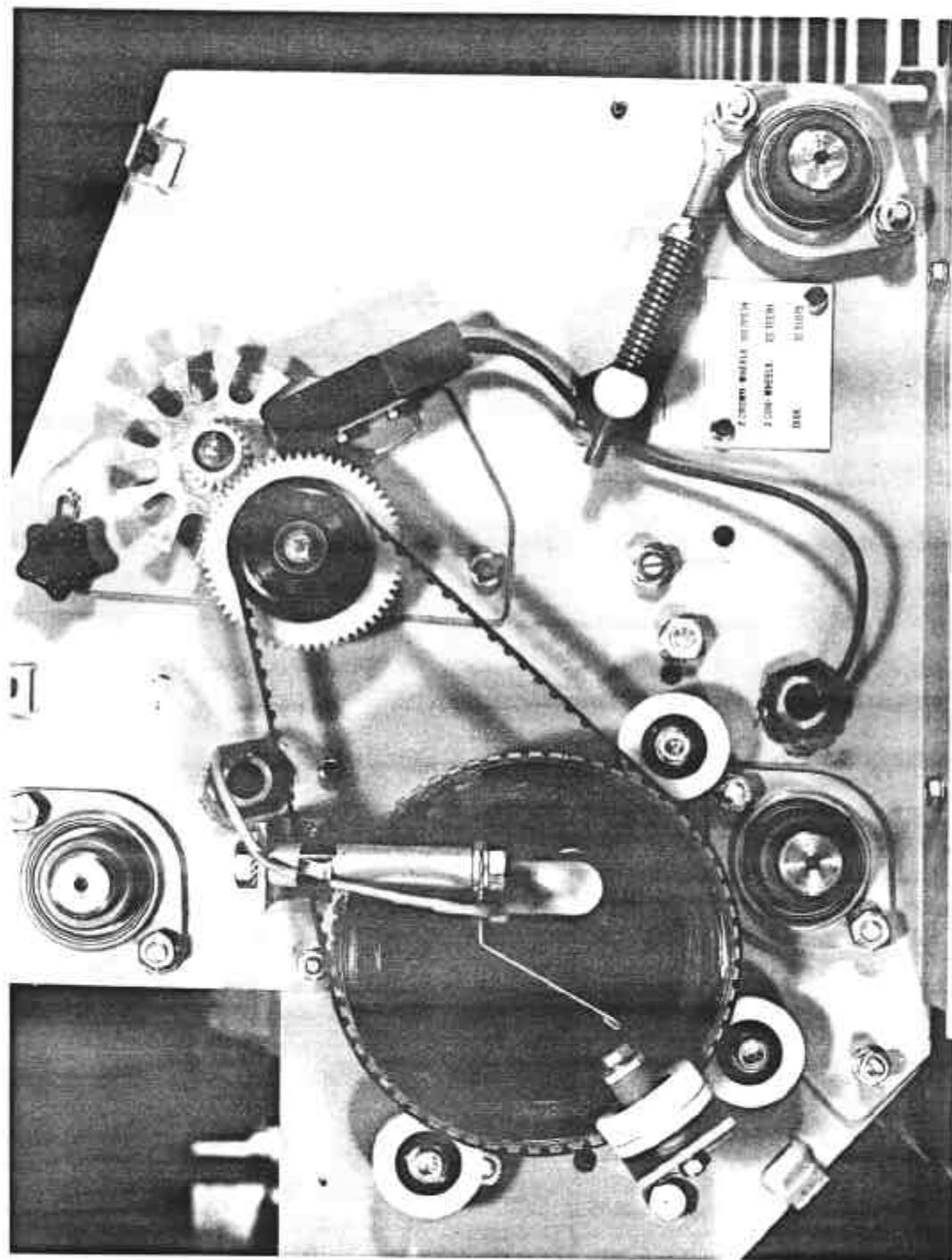
FIGURE 2/1/2 - 3



Area Indicator

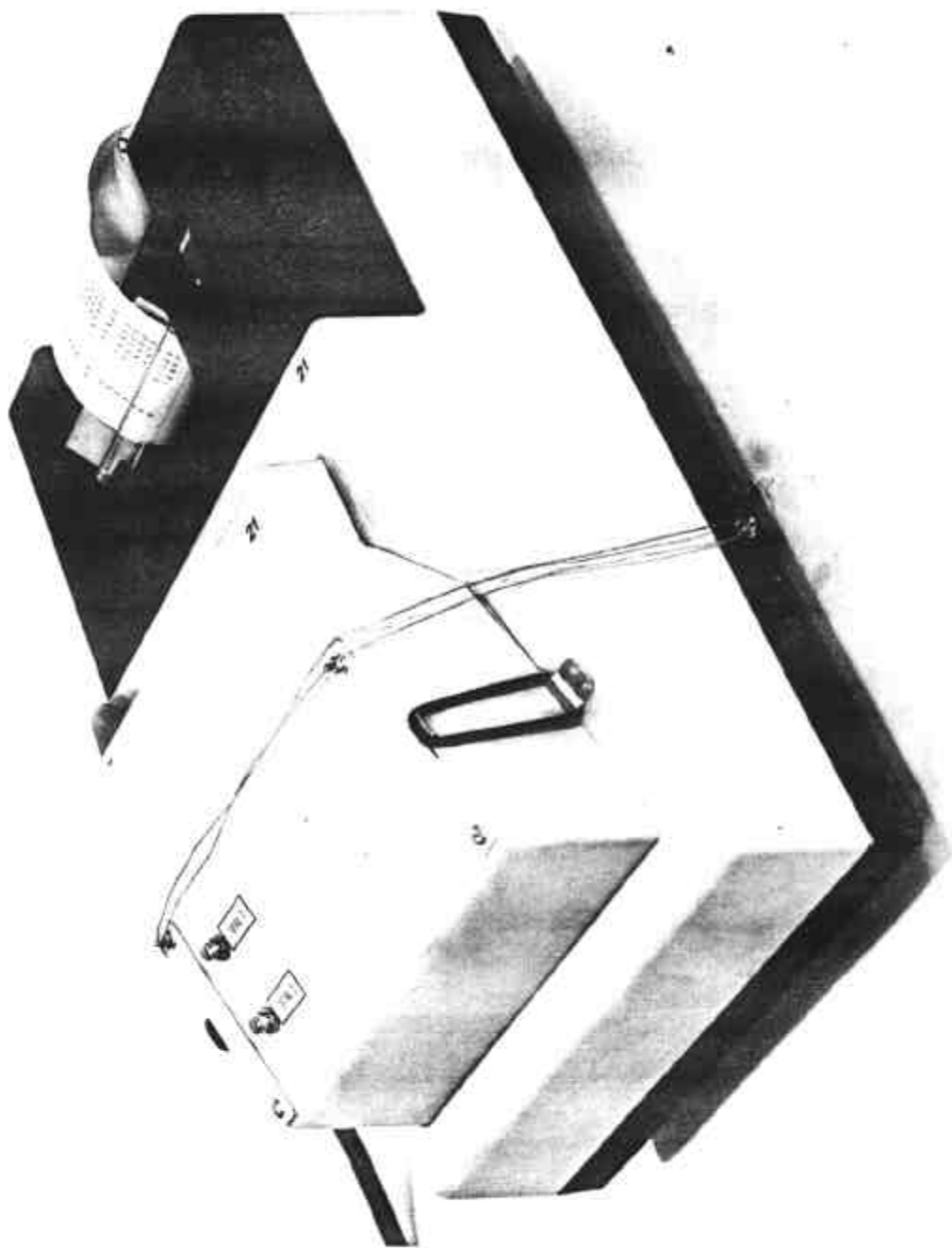
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FIGURE 2/1/2 - 4



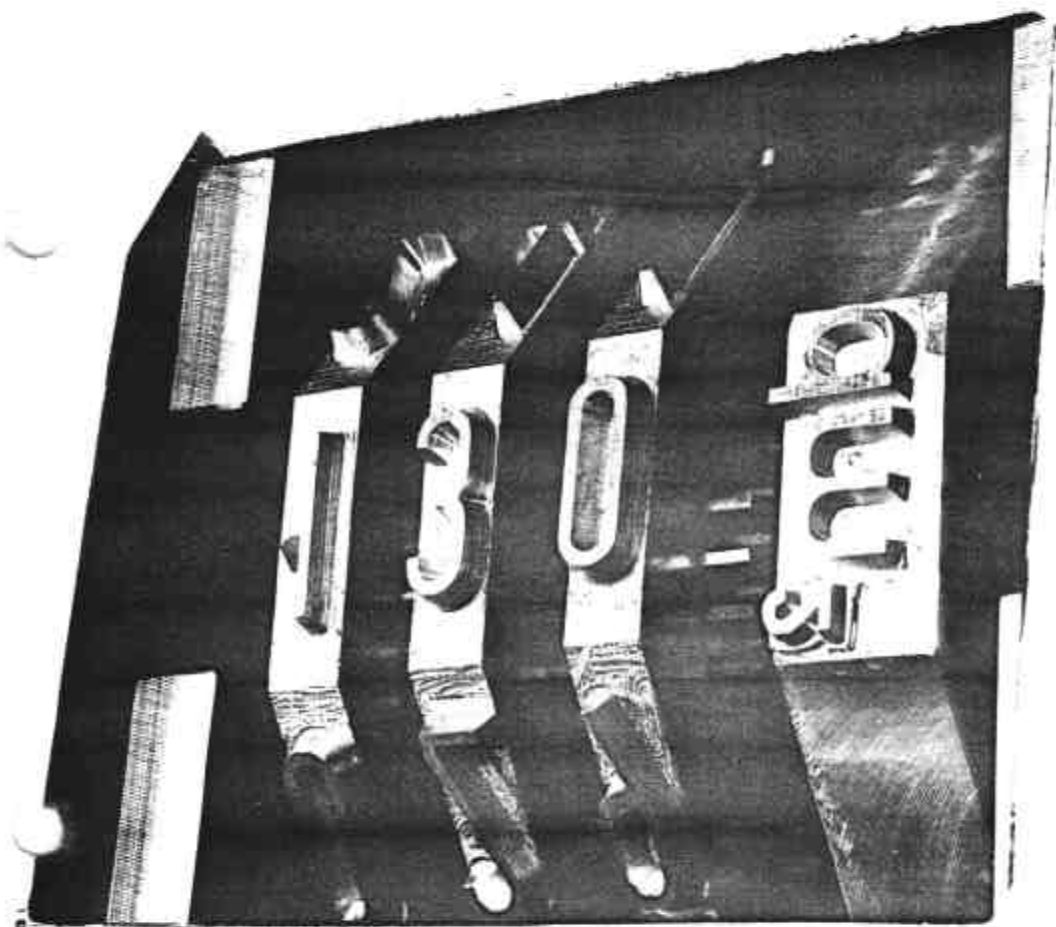
Drive Gear Train with Notice Sealed to the Instrument

FIGURE 2/1/2 - 5



Ticket Printer

FIGURE 2/1/2 - 6



Leather Printer

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