



# NATIONAL STANDARDS COMMISSION

## CERTIFICATE OF APPROVAL No 6/9C/67

This is to certify that the pattern and variant of the  
Mercury Weighing Instrument SM 100/479/522D

submitted by Mercury Scale Co. Pty Ltd,  
32 Dew Street,  
Thebarton, South Australia, 5031,

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

Pattern: approved 28/5/80

- . Platform weighing instrument of capacity 500 kg by 0,2 kg, with 45 kg  
SM 100 load cell.

Variant: approved 28/5/80

- . With other Commission - approved baseworks.

The pattern and variant are described in Technical Schedule No 6/9C/67,  
and in drawings and specifications lodged with the Commission.

The approval is subject to review on or after 28/2/85.

All instruments conforming to this approval shall be marked with the  
approval number "NSC No 6/9C/67".

Signed

A handwritten signature in cursive script, appearing to read 'J. Pelny'.

Executive Director

13/6/80



# NATIONAL STANDARDS COMMISSION

## TECHNICAL SCHEDULE No 6/9C/67

Pattern: Mercury Weighing Instrument Model SM 100/479/522D

Submittor: Mercury Scale Co. Pty Ltd,  
32 Dew Street,  
Thebarton, South Australia, 5031.

### I. Description of Pattern:

A permanently installed weighing instrument (Figure 1)

Maximum capacity	500 kg
Minimum capacity	10 kg
Scale interval	0,2 kg

#### 1.1 Basework:

Lever basework with Interface SM 100 load cell of capacity 45 kg, (Figures 2, 3 and 4) connected to the indicator either:

- (a) directly, with cable  $1,5 \pm 0,1$  m long, or
- (b) through a connecting plug, in which case the lengths of cable are:
  - (i)  $1,5 \pm 0,1$  m between the load cell and connecting plug,
  - (ii) not greater than 10,0 m between the connecting plug and indicator,

and provided remote sensing leads are used.

#### 1.2 Indicator:

Mercury Model 479 (Figure 5) with the following features:

- (1) tool-operated zero,
- (2) test switch with three positions:
  - (a) off,
  - (b) all indicators illuminated,
  - (c) all indicators blank.

**1.3 Sealing:**

- (1) The cable from the load cell is internally connected to the indicator.
- (2) The indicator-cover retaining screws are sealed with lead-and-wire as shown in Figure 6.
- (3) If a connecting plug is installed the connection is sealed (Figure 7).

**1.4 Marking:**

The nameplate is marked with the following data:

Manufacturer's name	
Serial number of instrument	
NSC approval number in the form:	NSC No 6/9C/67
Accuracy class in the form:	III
Maximum capacity in the form:	Max .....*
Minimum capacity in the form:	Min .....*
Verification scale interval in the form:	$d_a = e$ .....*

\*These markings are repeated on the reading face of the instrument.

**2. Description of Variants:**

The pattern having other Commission-approved baseworks in which case the load cell may be mounted as shown in Figures 8, 9, 10 and 11, provided that:

- (i) the mass indication does not display more than 2500 scale intervals and,
- (ii) the distance from the centre of the lever connection to the centre of the load cell support on the base frame is not less than 100 mm,
- (iii) the basework is permanently installed.

**3. Test Procedure:**

**3.1 Accuracy requirements:**

The maximum permissible errors are:

- ± 0,5e for loads between 0 and 500e;
- ± 1e for loads between 501e and 2000e;
- ± 1,5e for loads above 2000e.

3.2 Zero range - check that the range of the zero adjustment is not more than 4% of the capacity and that when the instrument indicates zero the adjustment is within 10% of the centre of its range.

3.3 Zero balance - check by means of the Commission's digital zero test (Design Manual No 1, Document 104, Testing Procedure for the Elimination of Rounding Error for Weighing Instruments with Digital Indication) that, when the "zero light" is illuminated, zero is set within 0,25e of zero.

3.4 Range of indication -

(a) The maximum mass indicated should not exceed the maximum capacity (Max); above this indicated mass the indicator should be blank.

(b) The minimum mass indicated should be zero; below this indicated mass the indicator should be blank.

3.5 Load-cell creep - leaving a maximum-capacity load on the load receptor for a period of 30 minutes should not cause the mass indicated to be incorrect, and on removal of the load the mass indicated should be zero  $\pm$  0,25e.

3.6 Test loads - the application of the test loads specified in Table 1 and the display of these loads within the applicable tolerance checks that the instrument operates in accordance with the approved design.

TABLE 1

Test Load in Scale Intervals\*

0	10	25	60	120	250	698,5
1	12	30	70	140	300	798,5
2	14	35	80	160	350	898,5
3	16	40	90	180	400	998,5
4	18	45	100	200	450	1198,5
5	20	50			500	1398,5
6						1598,5
7						1798,5
8						1998,5
9						2498

\*Test Load - Number of scale intervals x scale interval

Note: The test load should include a test at capacity, less the tolerance and less 0,5 scale interval.

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# NATIONAL STANDARDS COMMISSION

NOTIFICATION OF CHANGE

CERTIFICATE OF APPROVAL No 6/9C/67

CHANGE No 1

The description of the

Mercury Weighing Instrument Model SM 100/479/522D

given in Technical Schedule No 6/9C/67 issued on 13/6/80 is altered by:

- 1. Insert in Paragraph 2. Description of Variant

"2.1 Marking

In addition to the markings listed in 1.4 above the nameplate shall include the approval for the base-works in the form:

Headworks NSC No .....

Baseworks NSC No ....."

Signed

Executive Director



25/3/88

# NATIONAL STANDARDS COMMISSION

## NOTIFICATION OF CHANGE

### VARIOUS CERTIFICATES OF APPROVAL

The following changes are made to the approval documentation for the approvals listed overleaf

submitted by Mercury Weighing and Control Systems Pty Ltd  
32 Dew Street  
Thebarton SA 5031.

In the Certificates and Technical Schedules listed, the following changes should be made:

- 1) The submittor should be changed to read;

A & D Mercury Pty Ltd

(the address remains unchanged)

- 2) Any Mercury instrument or component of an instrument approved in the documentation, may now also be known as "AND Mercury" or similar.

Signed

Executive Director

APPROVAL      PATTERN**TYPE:** weighing instruments counter scales6/3/007      Model 92  
6/3/008      Model 131**TYPE:** counter machines semi-self-indicating

6/4A/012      Model 304A

**TYPE:** counter machines freely-suspended < 30 kg (spring scales)

6/5/011      Model 211 DA

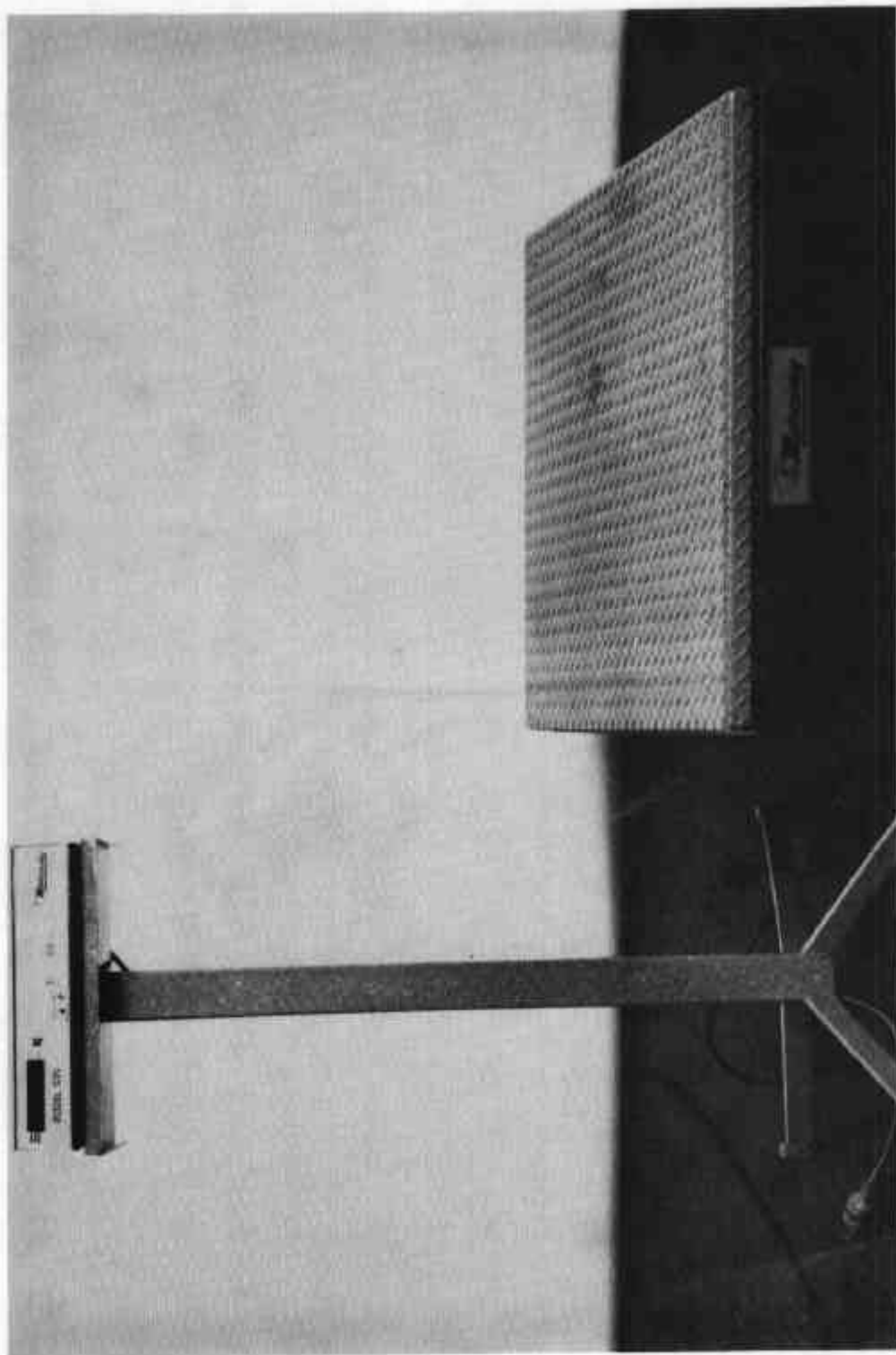
**TYPE:** weighing instruments non-self-indicating6/9A/001      Models 692 and 682  
6/9A/004      Model 522D  
6/9A/007      Model 211  
6/9A/008      Model 600**TYPE:** weighing instruments self-indicating6/9C/005      Model 211D  
6/9C/013      Up to 2500 lb or 1200 kg  
6/9C/066      Model 522 AL  
6/9C/067      Model SM100/479/522D  
6/9C/081      Model SB-LP 1200  
6/9C/088      Model 522D LT-10K**TYPE:** weighbridges self-indicating6/10B/040      Model WB-LT  
6/10B/045A      Model RVB-H20**TYPE:** automatic weighing instruments (except belt conveyors)

6/14B/012      Model HSD automatic hopper

**TYPE:** overhead weighing instrument (suspended load or receptor)6/18/005      With 211DA headwork  
6/18/017      Model OHT 500**TYPE:** digital indicatorsS114      Model 579  
S128      Model 1300  
S132      Model 900  
S161      Model AD4316  
S199      Model AD-4321**TYPE:** load cellsS117      Interface model SM25-12 kg  
S163      Transducers model B5112.1K  
S221      HBM model TRT-50 (Mercury model TRT3K-50)



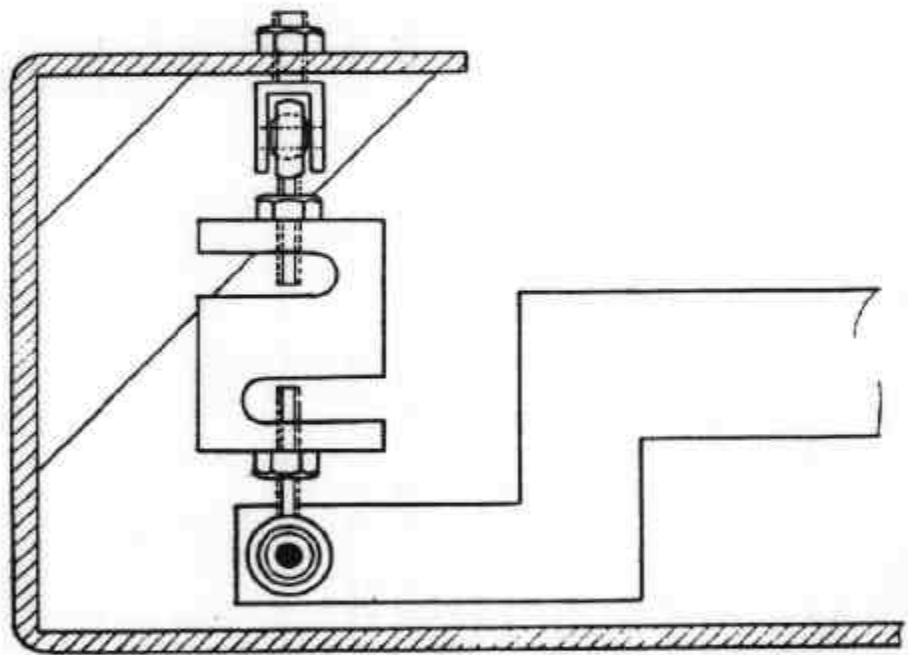
FIGURE 6/9C/67 - 1



Mercury Model SM 100/479/522D  
Note: The basework is permanently installed

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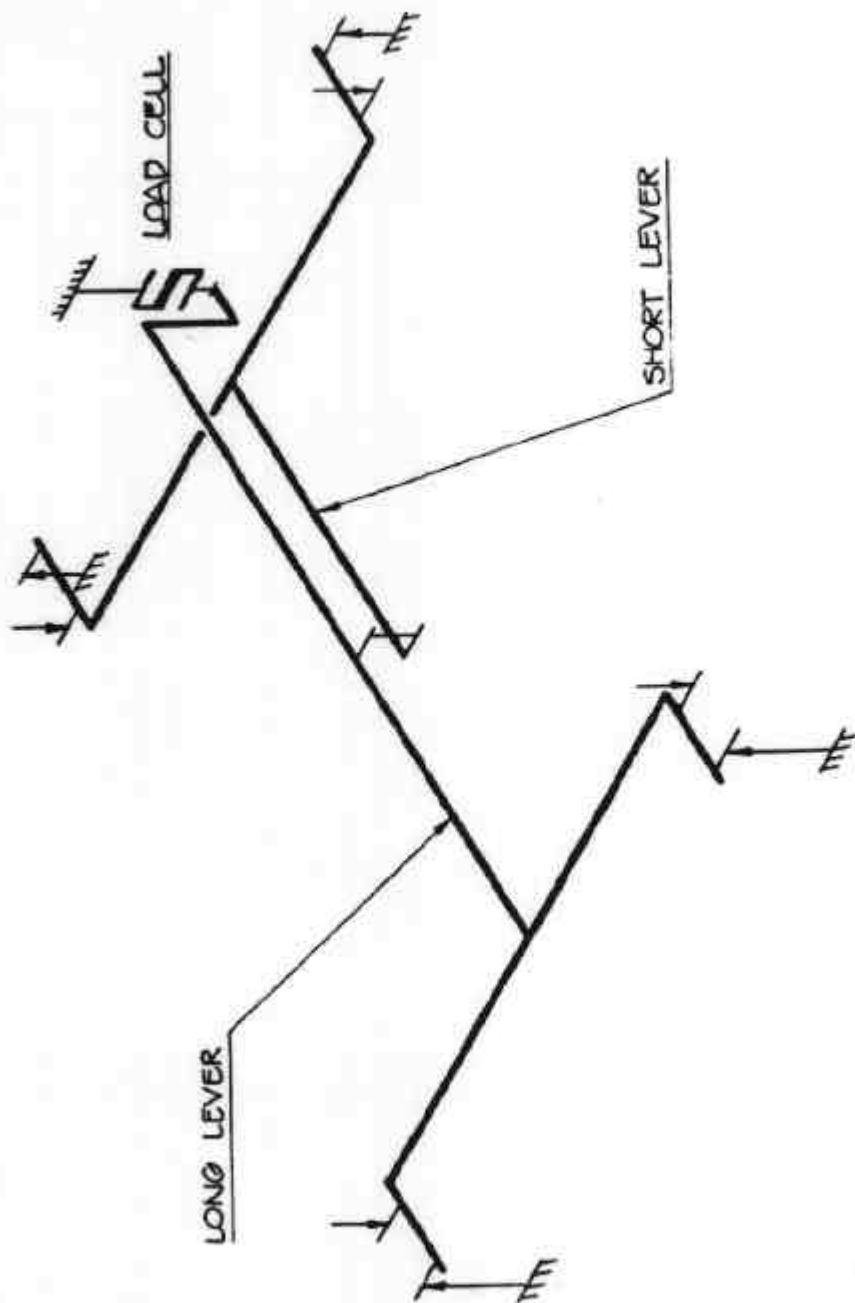
FIGURE 6/9C/67 - 2



Load Cell Mounting

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FIGURE 6/9C/67 - 3



Basework Lever System and Load Cell - Schematic Diagram

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FIGURE 6/9C/67 - 4



Load Cell Mounting

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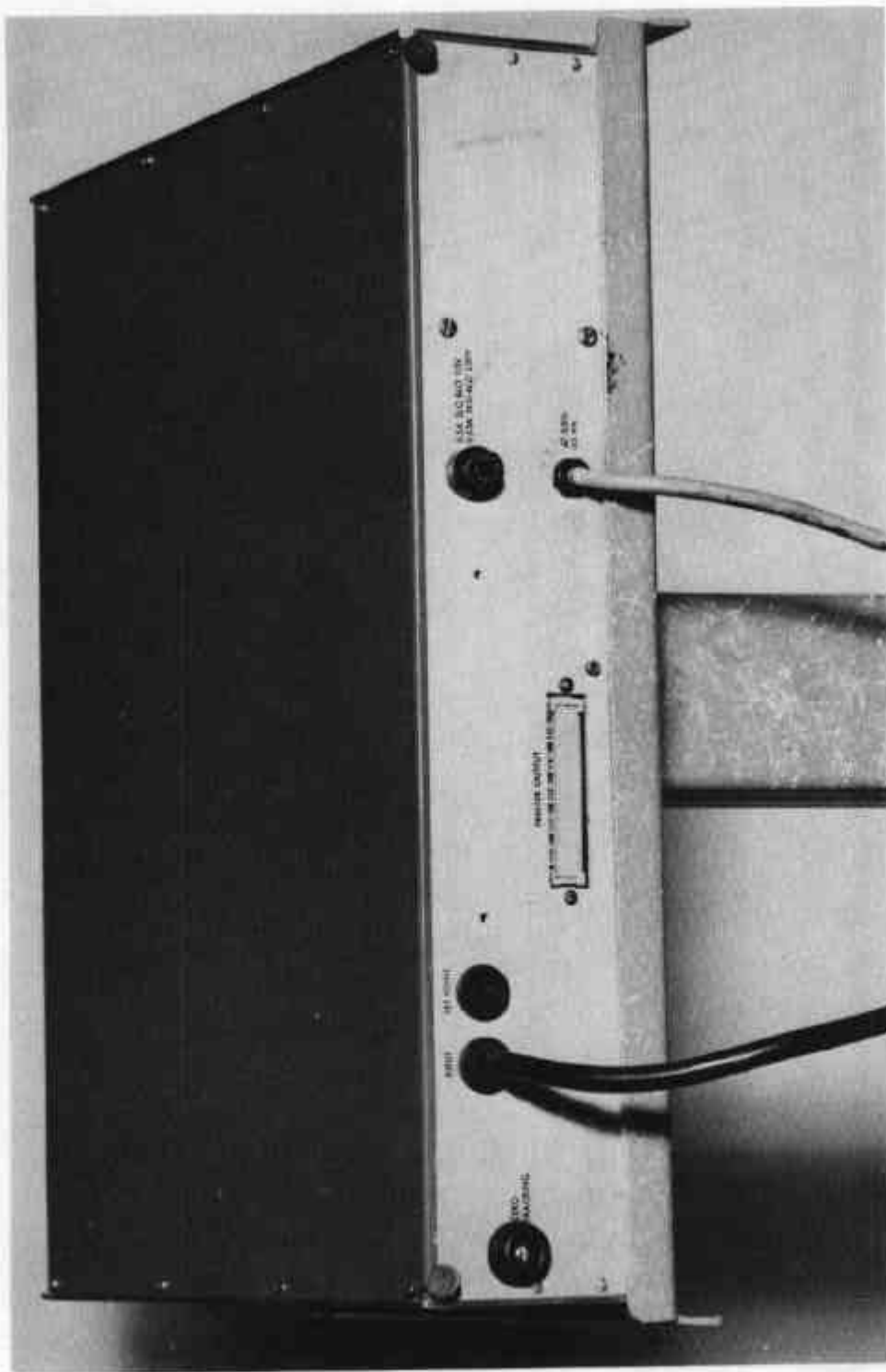
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FIGURE 6/9C/67 - 5



Mercury Model 479 Indicator

FIGURE 6/9C/67 - 6



Model 479 Indicator - Rear View Showing Sealing

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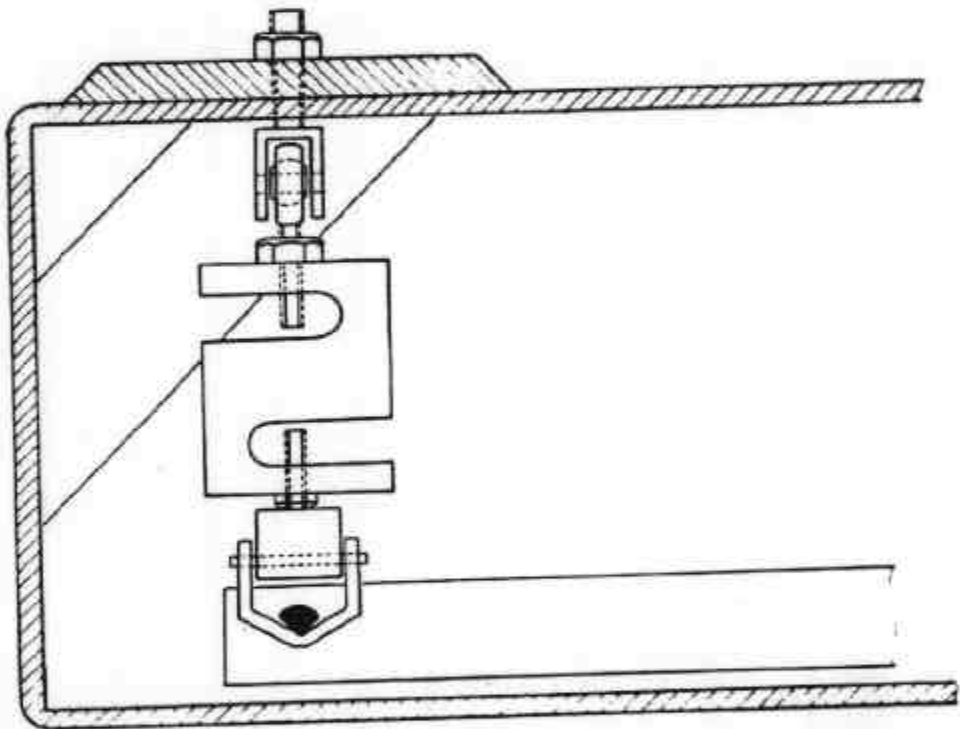
FIGURE 6/9C/67 - 7



Load Cell Output Cable Showing Sealing

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FIGURE 6/9C/67 - 8

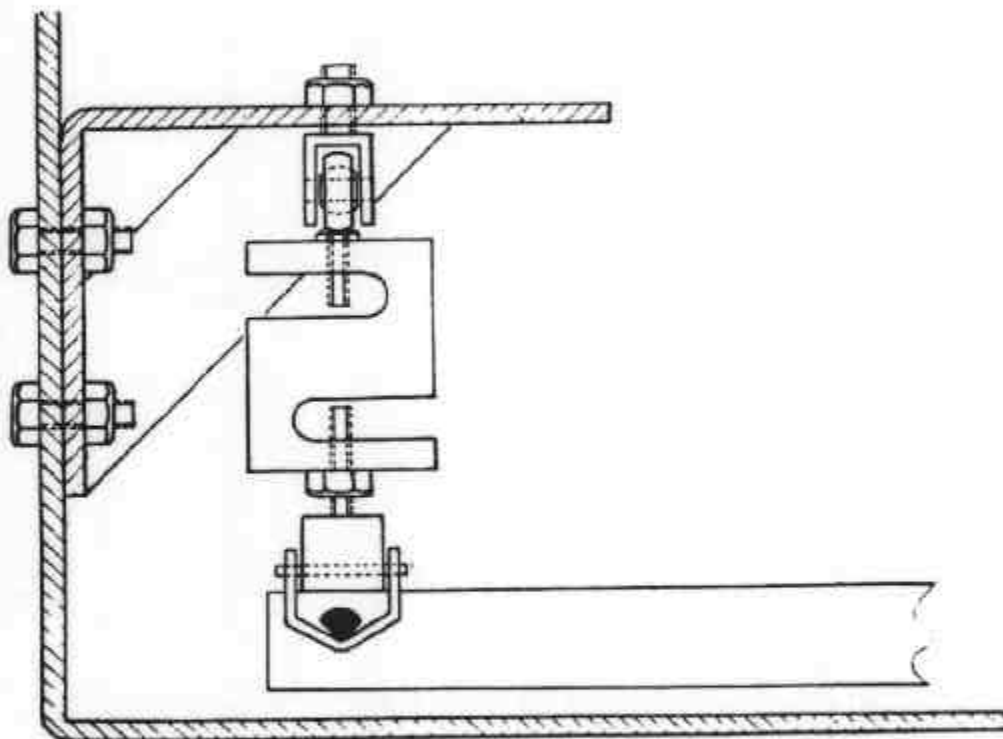


Load Cell Mounting

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FIGURE 6/9C/67 - 9



Load Cell Mounting

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FIGURE 6/9C/67 - 10

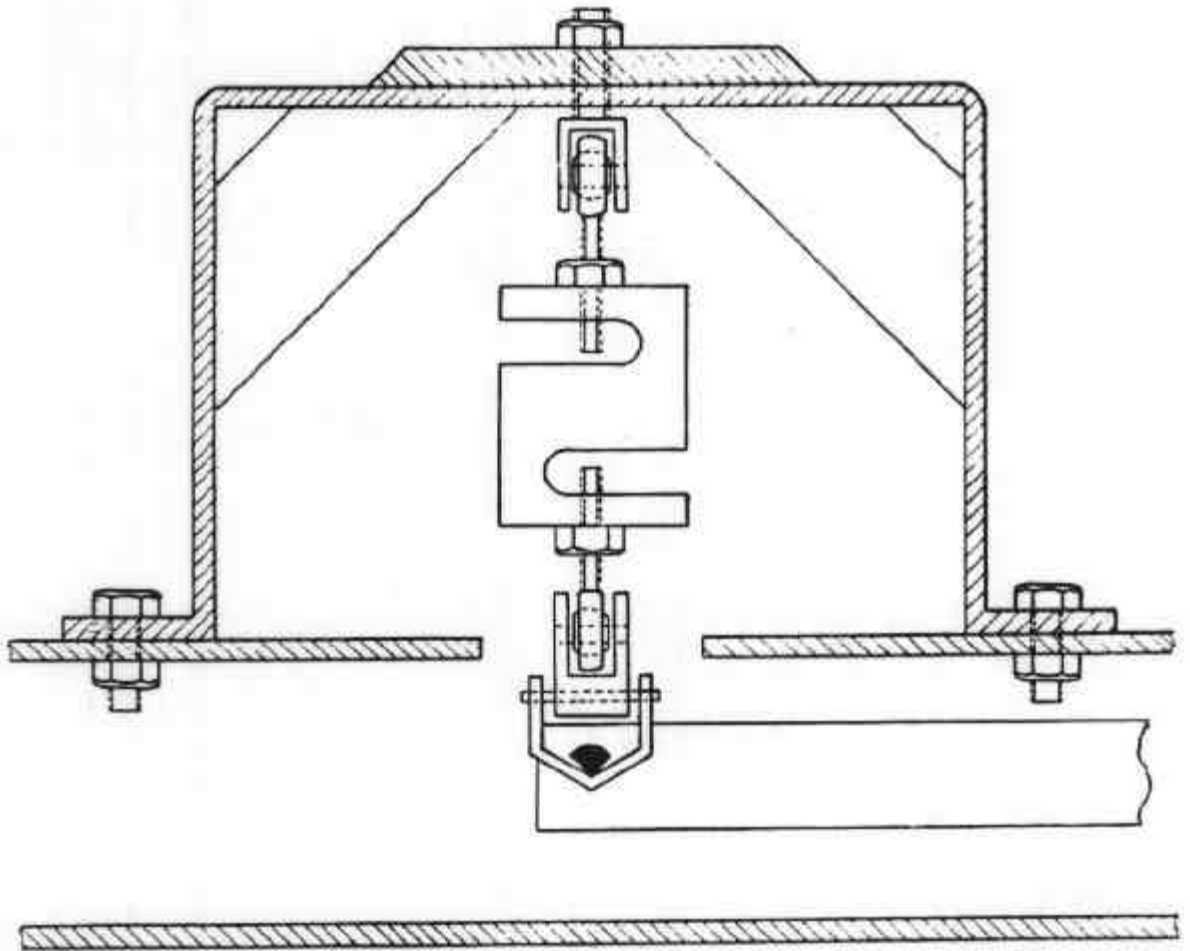
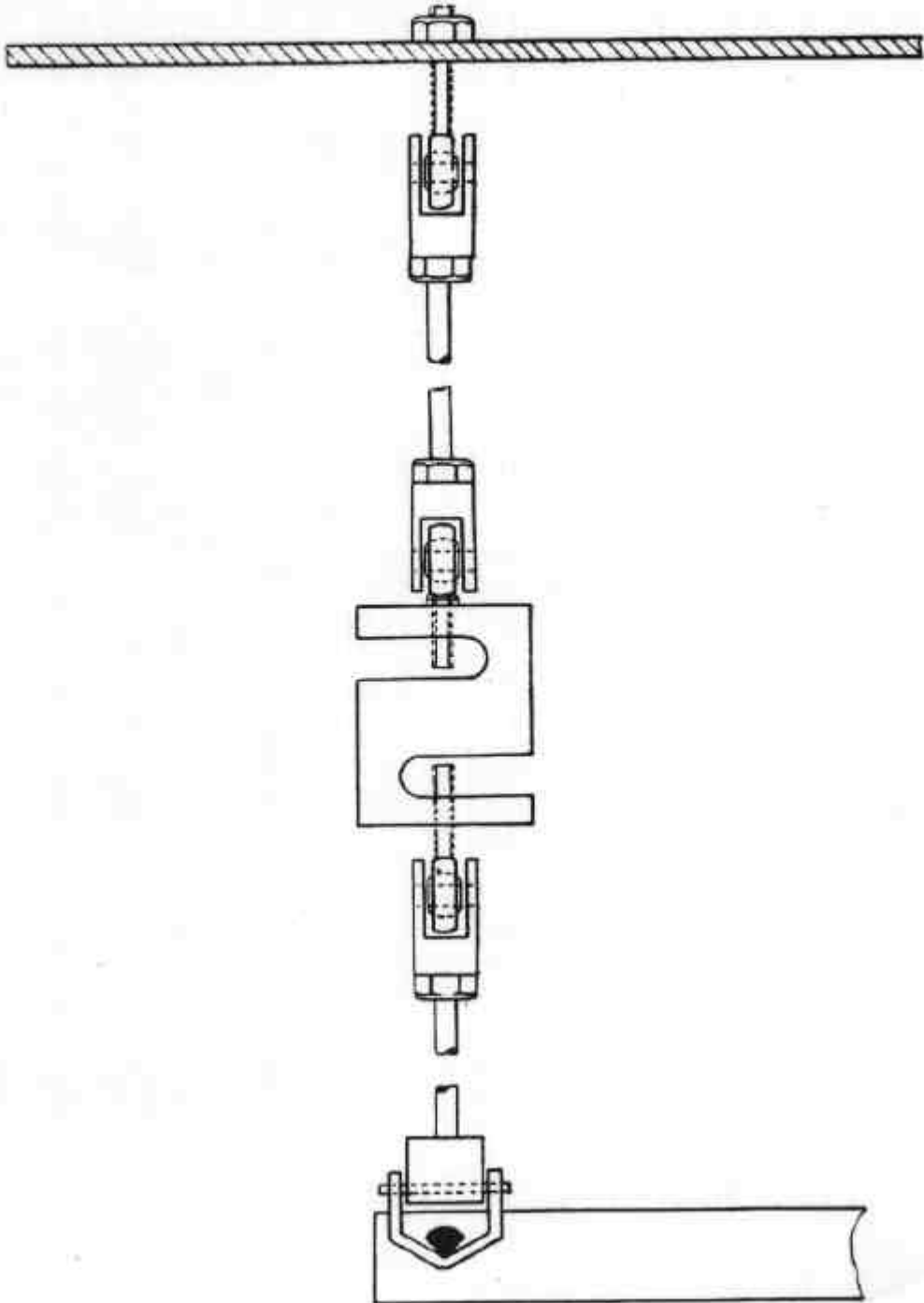


FIG. 4

Load Cell Mounting

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FIGURE 6/9C/67 - 11



Load Cell Mounting

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