



# NATIONAL STANDARDS COMMISSION

## WEIGHTS & MEASURES (PATTERNS OF INSTRUMENTS) REGULATIONS

### REGULATION 9

#### CERTIFICATE OF APPROVAL No 5/6S/2

This is to certify that an approval has been granted by the Commission that the pattern and variants of the

E.D.I. (Alcoholic Liquor) Flowmeter

submitted by Electronic Dispensers International,  
400 Edison Way,  
Reno, Nevada, 89502, USA

are suitable for use for trade.

The approval of the pattern and variants is subject to review on or after 1/9/83.

All instruments purporting to comply with this approval shall be marked NSC No 5/6S/2.

Relevant drawings and specifications are lodged with the Commission.

Signed

Executive Director

#### Descriptive Advice

Pattern: approved 8/9/78

- . A pump-operated liquor dispenser for the measurement of brandy, whisky, vodka, gin or rum.

Variants: approved 8/9/78

1. Delivering 60 mL only, 30 mL only or 15 mL only.
2. With reserve liquor rack.
3. With 12-outlet nozzle.
4. The nozzle with other letters or symbols identifying the liquor.
5. The nozzle dispensing other liquids from non-verified sources.

Technical Schedule No 5/6S/2 dated 13/11/81 describes the pattern and variants 1 to 5.



# NATIONAL STANDARDS COMMISSION

## TECHNICAL SCHEDULE No 5/6S/2

Pattern: E.D.I. (Alcoholic Liquor) Flowmeter

Submittor: Electronic Dispensers International,  
400 Edison Way,  
Reno, Nevada, 89502, USA.

### 1. Description of Pattern

- 1.1 The pattern is a gas-operated positive-displacement pump liquor dispenser for the measurement of brandy, whisky, vodka, gin or rum (Figures 1 and 2). It comprises a cabinet containing up to six liquor reservoirs and six pump units, a nozzle fitted with up to six liquor-select buttons and six liquor outlets (Figure 1), a size-of-pour indicator (Figure 3), and a constant-pressure gas supply (Figure 4).
- 1.2 The liquor to be dispensed and the size of pour are selected by buttons on the nozzle which provide electrical signals to the pump unit. The size of pour is selected by:
  - (a) For a 15 mL pour, pressing the required liquor-select button. The buttons are marked B (brandy), W (whisky), V (vodka), G (gin) and R (rum);
  - (b) For a 30 mL or a 60 mL pour, pressing the 30 mL or 60 mL button before pressing the required liquor button.
- 1.3 Lights on the size-of-pour indicator panel will indicate pour size, remaining illuminated until a pour of a different size is selected, or going out momentarily between two pours of the same size.\*
- 1.4 In the pump unit, a solenoid opens a valve which allows carbon dioxide (CO<sub>2</sub>) at pressure to drive a piston in a cylinder to force liquor through a valving arrangement and tubes to the nozzle (Figure 1).
- 1.5 Depending on the size of pour selected, one of 3 adjustable stops set to 15 mL, 30 mL and 60 mL operates a microswitch to open the solenoid valve stopping the supply of CO<sub>2</sub> and allowing the piston to return to its datum point under the action of a spring. The valving mechanism allows the chamber to refill from the reservoir during the piston's return to its datum point. A time delay and interlocks prevent a second delivery until the cylinder has had time to refill and prevent a second delivery from a different pump until the first delivery is completed.
- 1.6 A float-operated switch in the liquor reservoir stops the instrument from operating before the level of liquor falls to a height which would allow air to be drawn into the pump. The reservoir is kept filled from a bottle which is inverted into it. Each pump and each reservoir is marked with the liquor for which the pump unit and associated reservoir is verified.
- 1.7 The pump unit is operated by gas from the constant-pressure gas supply comprising a gas-storage tank, pressure regulator, pressure monitor and pressure gauge (Figure 4). The pressure monitor is adjusted to allow the instrument to operate only when the pressure is within 10 kPa of the pressure at verification. A pressure gauge graduated in not more than 5 kPa increments is fitted.

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\* Weights and Measures inspectors should ensure that the size-of-pour indicator is installed so that there is a self-evident association between the indicator and the nozzle and so that the indicator is clearly visible to a purchaser.

## 1.8 Marking

The instrument is marked with the following data on a data plate:

Manufacturer's name	
Serial number of the instrument	
NSC approval number in the form	NSC No 5/6S/2
Types of liquors to be dispensed	
Quantities in the form	"To deliver 15 mL, 30 mL or 60 mL"

## 1.9 Sealing

- (a) The cabinet housing the pump units and reservoirs is sealed with lead and wire (Figure 5), or similar method.
- (b) The cabinet housing the gas supply unit is sealed with lead and wire (Figure 4), or similar method.

## 2. Variants

### 2.1 Variant 1

Each liquor reservoir being supplied with liquor from a reserve liquor rack which contains several bottles of the same liquor; the reserve liquor rack is marked with the liquor corresponding to the liquor reservoir to which it is connected. A seal on the cover of each reservoir prevents access to the float-operated switch and seals the product label (Figure 6).

### 2.3 Variant 3

The nozzle with provision for up to 12 liquor-select buttons and 12 liquor outlets (Figure 7); the corresponding liquor reservoirs and pump units may be contained within one or two sealed cabinets (Figure 8).

### 2.4 Variant 4

The nozzle with other letters or symbols on the liquor-select buttons to identify the liquor - that is, brandy, whisky, vodka, gin and rum - for which the corresponding pump unit is verified. In this case the marking of the liquor reservoir and pump unit with the liquor for which it is verified will include the letter or symbol used on the nozzle to identify the liquor.

### 2.5 Variant 5

The nozzle also dispensing other liquids, such as drink mixes, in measured or unmeasured amounts, and obtained from sources other than the verified liquor pump units.

TEST PROCEDURE No 5/6S/2

1. Maximum permissible errors are:

± 0.6 mL for 15 mL deliveries  
± 1.0 mL for 30 mL deliveries  
± 1.5 mL for 60 mL deliveries

In 10 consecutive deliveries not more than one delivery should exceed the maximum permissible error, and the mean should not be less than the nominal capacity.

2. (a) For each pump unit, remove the liquor supply bottle and continue dispensing until the float switch stops the instrument delivering that liquor.

Check by visual inspection that the reservoir has not emptied.

- (b) During these tests, whilst a delivery is being made, select a second button and hold it down. No further delivery should take place until the initial delivery is completed and the second button is released and re-pressed.

3. Check that the size-of-pour indicator indicates the size of pour, remains on after a delivery, and momentarily goes out between two deliveries of the same size.

4. Record the pressure indicated on the pressure gauge, then by means of the pressure regulator increase the pressure until the power-indication light on the constant-pressure gas supply goes out. Check that the button lights on the nozzle are out and the instrument will not operate. The pressure monitor should operate and the power-indicator light should extinguish before the pressure increases by more than 10 kPa.

5. Reduce the pressure by means of the pressure regulator and bleeding gas from the gas-storage tank. The power-indicator light will illuminate and then extinguish again before the pressure falls to 10 kPa less than the pressure recorded in 4.

Reset the pressure regulator to the pressure recorded in 4.



# NATIONAL STANDARDS COMMISSION

## NOTIFICATION OF CHANGE

CERTIFICATE OF APPROVAL No 5/6S/2

CHANGE No 1

The following change is made to the description of the E.D.I. (Alcoholic Liquor) Flowmeter.

given in Test Procedure No 5/6S/2 dated 13/11/81.

In paragraph 1., delete the sentence "In 10 consecutive .... nominal capacity", as this requirement is now obsolete.

Signed

Executive Director

5/6S/2  
3/4/85



## NATIONAL STANDARDS COMMISSION

### CANCELLATION OF CERTIFICATE OF APPROVAL No 5/6S/2

This is to certify that Certificate of Approval No 5/6S/2 for the pattern and variants of the

EDI (Alcoholic Liquor) Dispenser

submitted by Electronic Dispensers International  
400 Edison Way  
Reno Nevada 89502 USA

expired in respect of new instruments on 18/3/85.

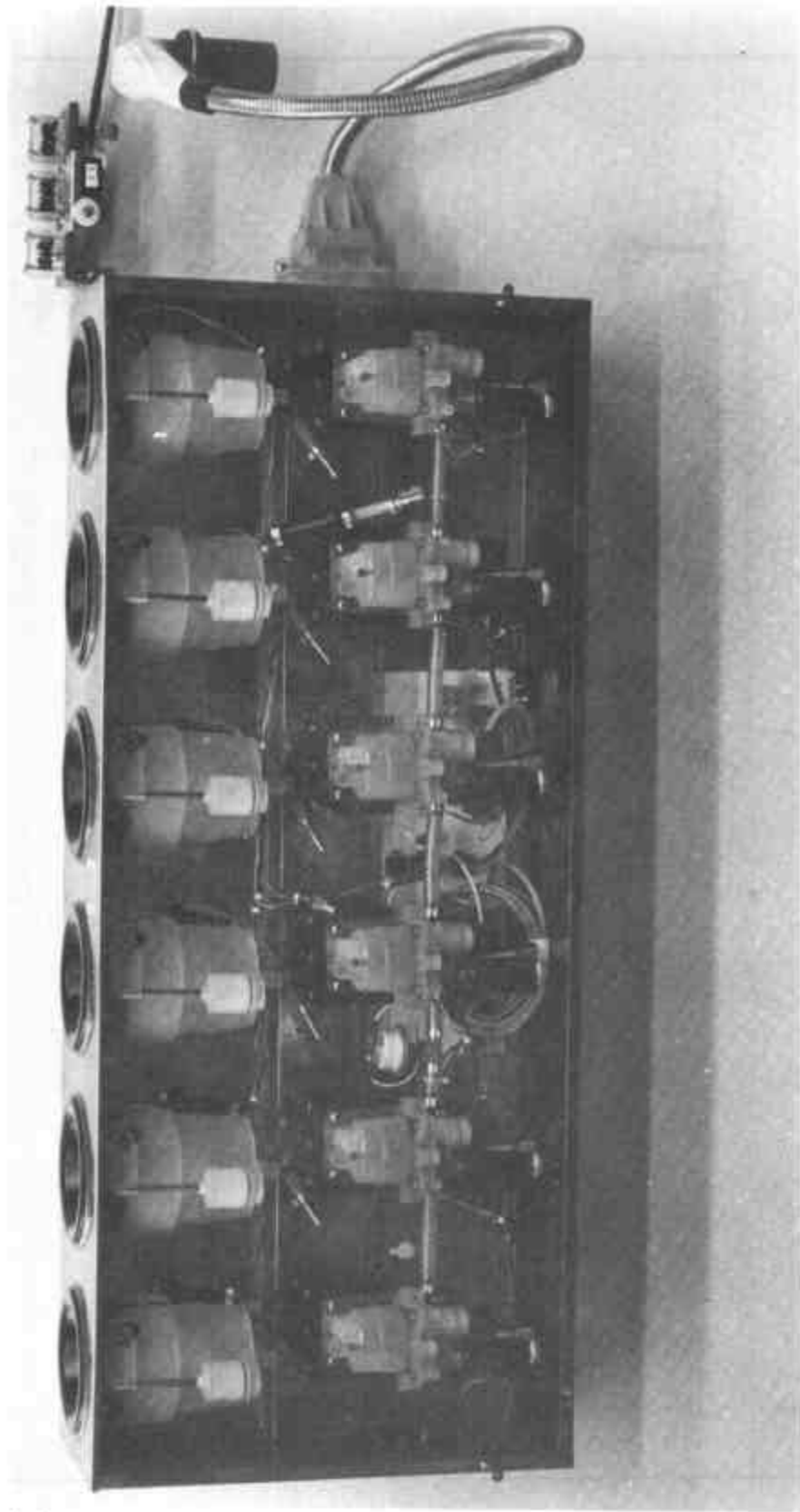
Instruments which were verified before that date may, with the concurrence of the State or Territorial verifying authorities, be submitted for reverification.

Signed

A handwritten signature in black ink, appearing to read 'J. Pelin'. The signature is written in a cursive style with a large, prominent 'P'.

Executive Director

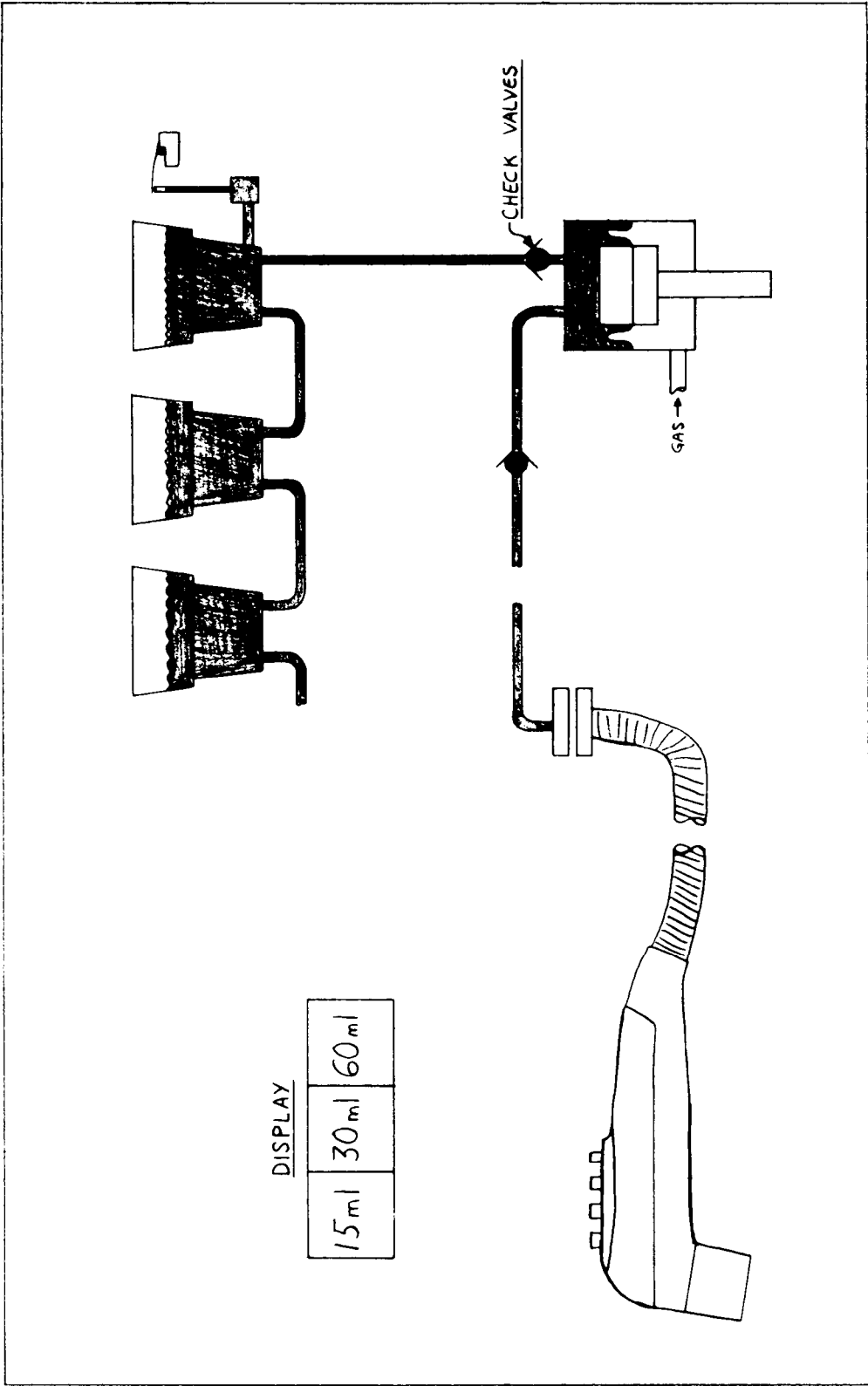
FIGURE 5/6S/2 - 1



E.D.I. Flowmeter Cabinet with Front Cover Removed

13/11/81

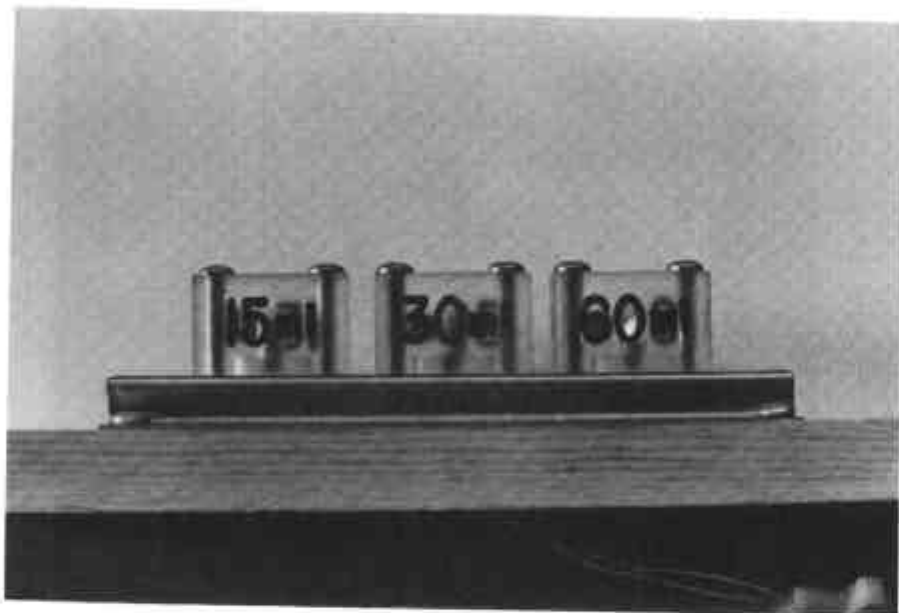
FIGURE 5/6S/2 - 2



E.D.I. Flowmeter - Schematic Diagram



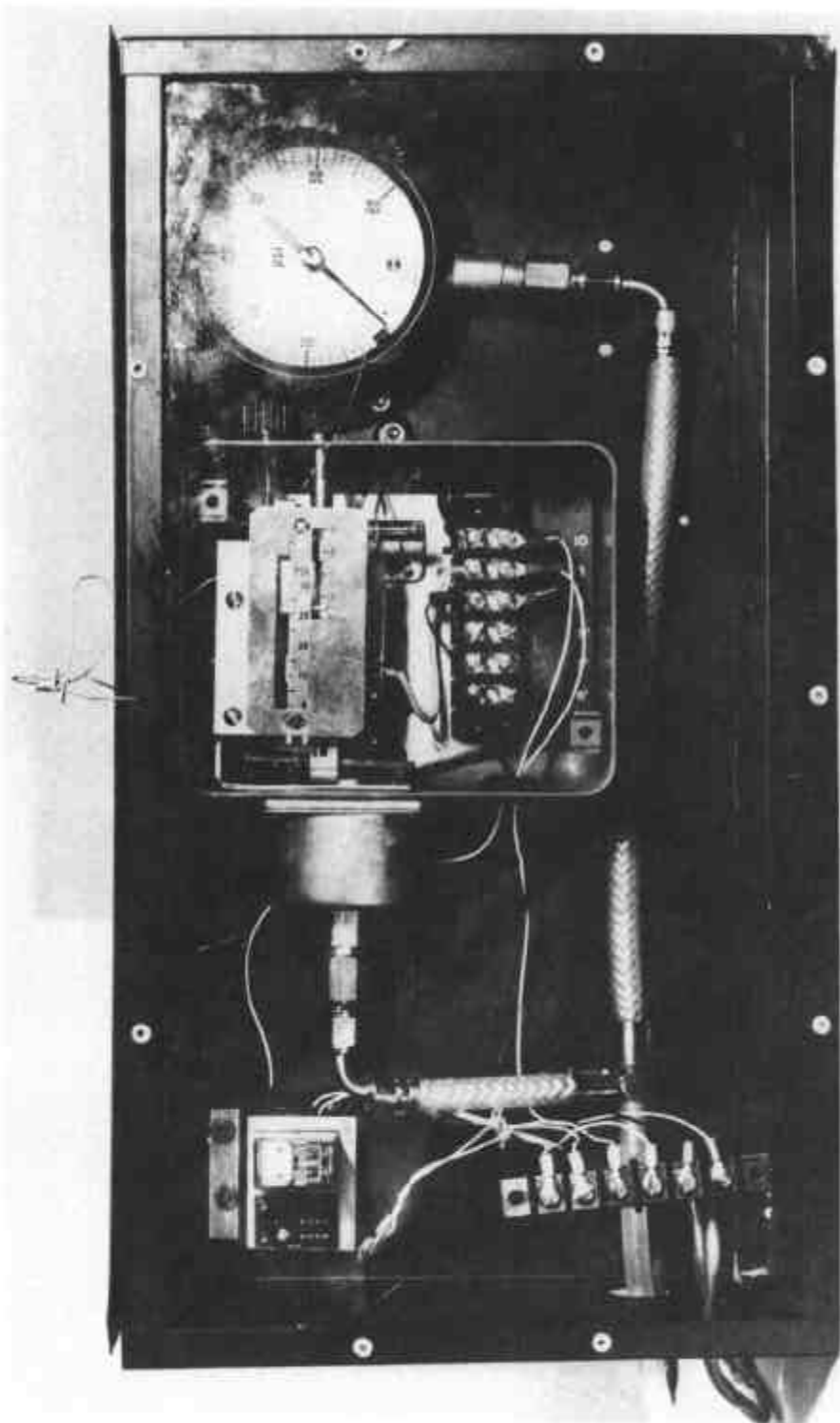
FIGURE 5/6S/2 - 3



Size-of-pour Indicator

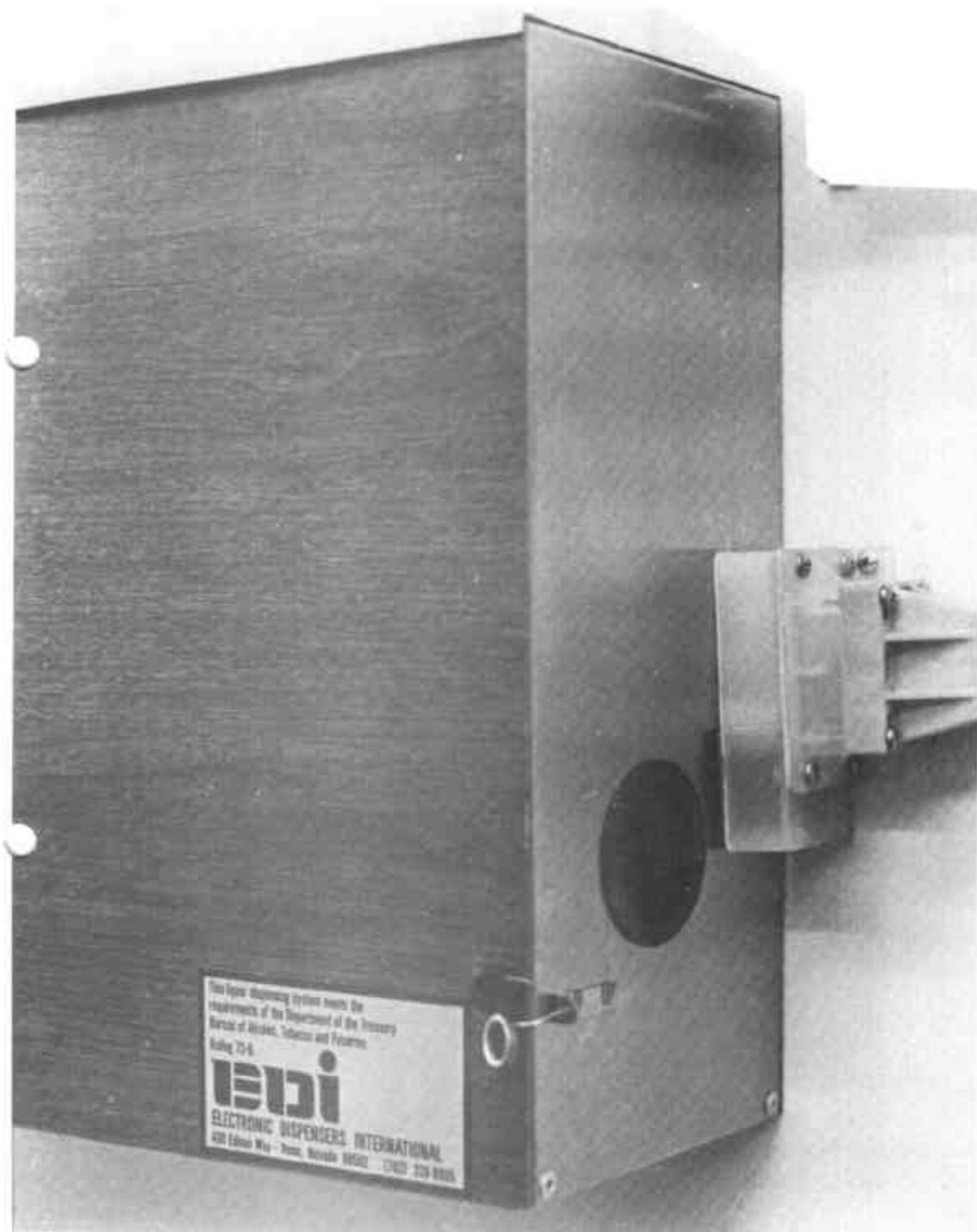
13/11/81

FIGURE 5/6S/2 - 4



Gas Supply Unit

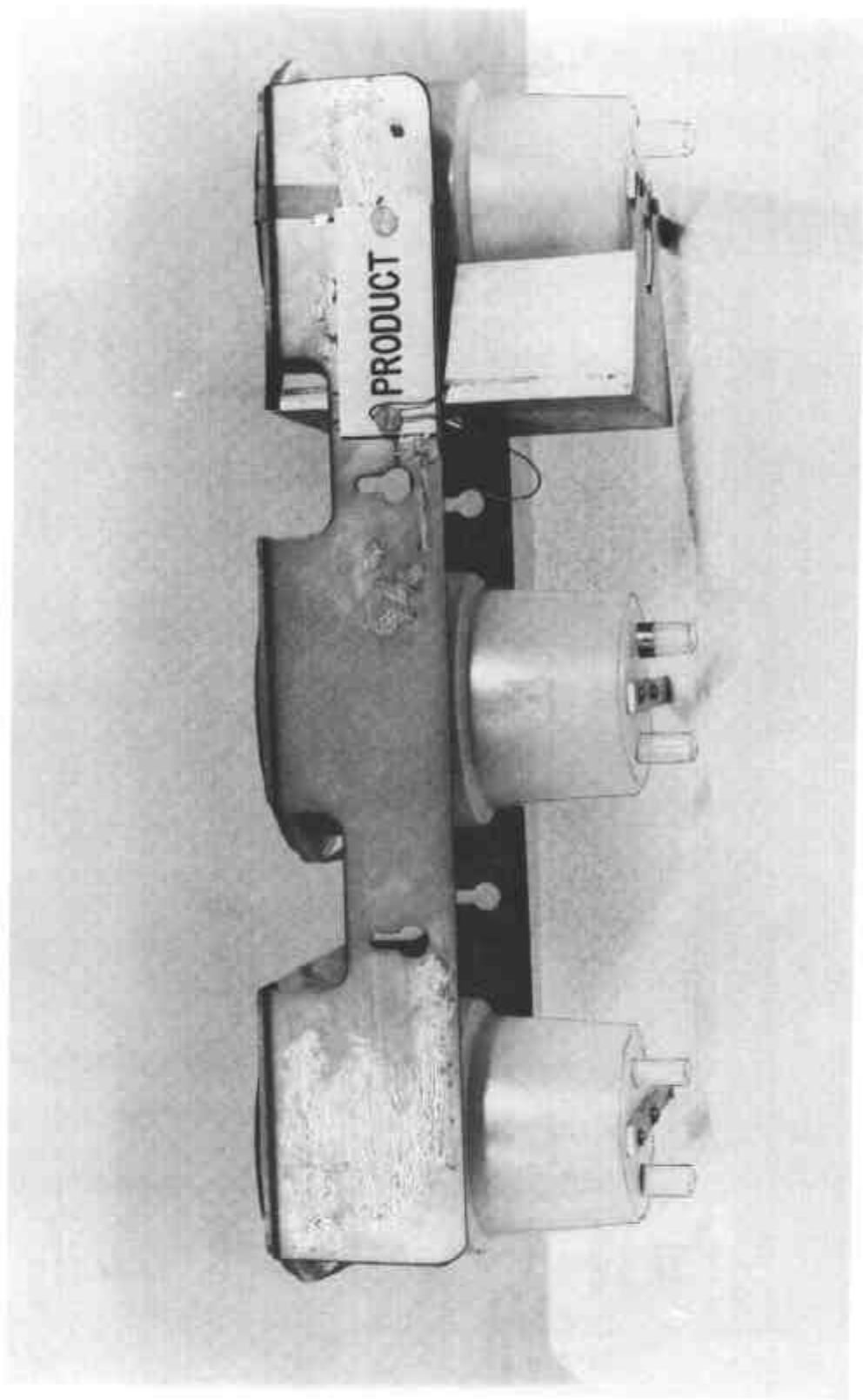
FIGURE 5/6S/2 - 5



Sealing of Pump Unit Cabinet

13/11/81

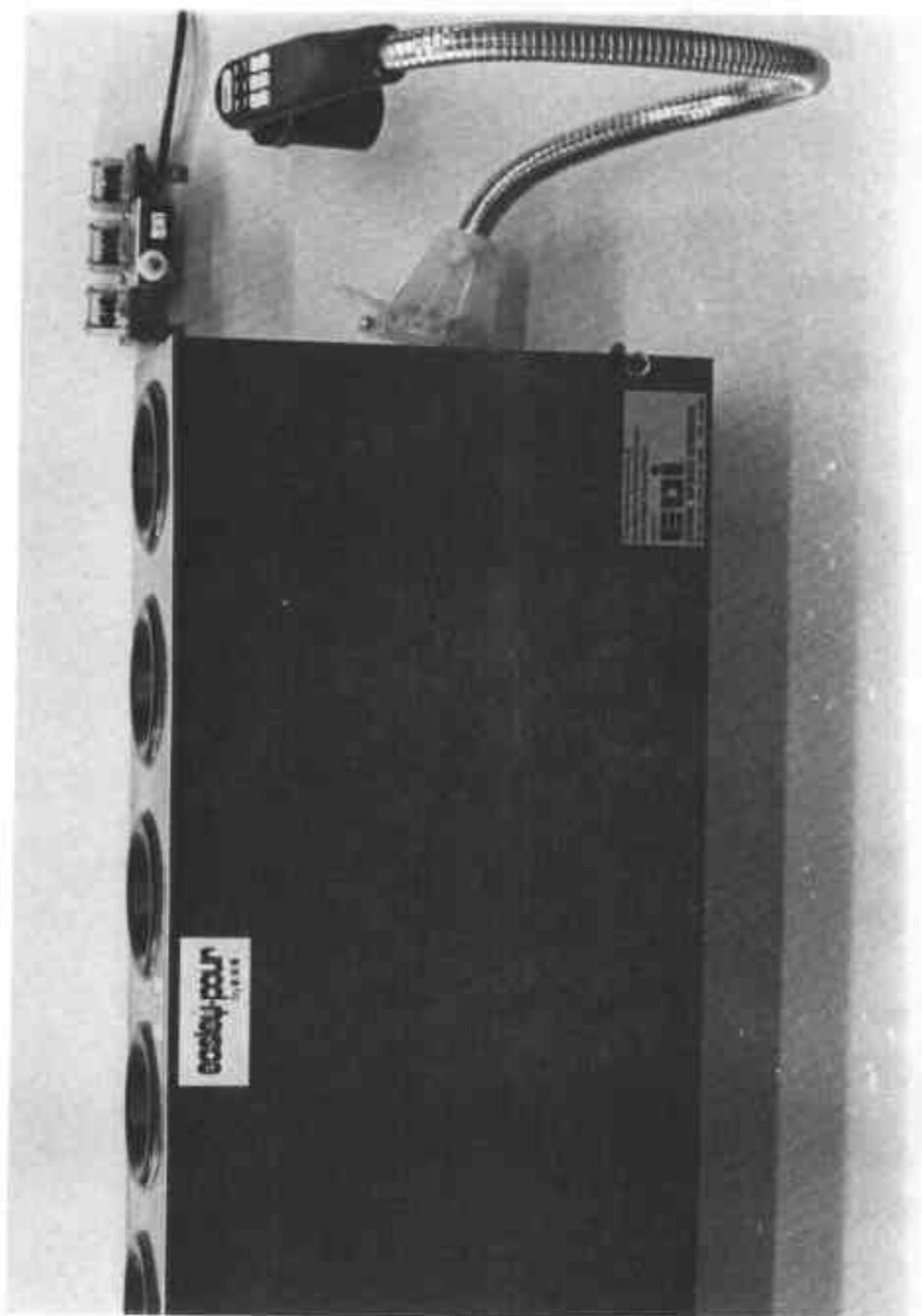
FIGURE 5/6S/2 - 6



Reserve Liquor Rock showing Sealing

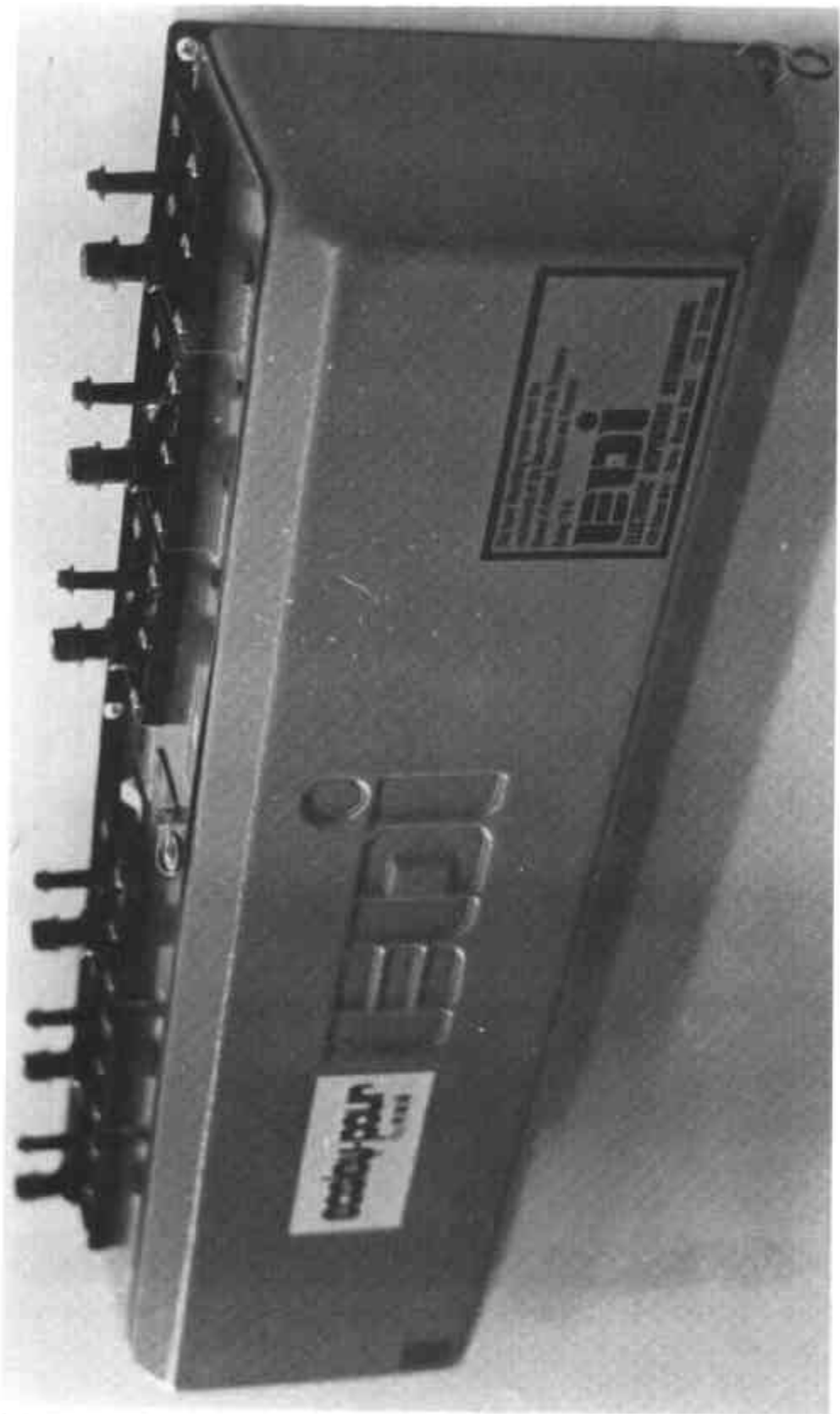
13/11/81

FIGURE 5/6S/2 - 7



12-outlet Nozzle

FIGURE 5/65/2 - B



Separate LIQUOR Cabinet