

**HORN****AIR HORN (LESLIE)****PLATE A2940-1**

Ref. No.	Part Number	Number Required					Description
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**HORN .. Air**

1	8193426	A	-	-	-	-	HORN .. Air - S-25 - Single bell
* 2	8196313	-	B	-	-	-	HORN .. Air - S-2M - Two bell - #31 and #44 horn bell forward
3	8219708	-	-	C	-	-	HORN .. Air - S-2M-R - Two bell - #31 horn bell forward and #44 horn bell reverse
4	8197499	-	-	-	D	-	HORN .. Air - S-3L-R - Three bell - #25 and #31 horn bell forward and #44 horn bell reverse
* 5	8236618	-	-	-	-	E	HORN .. Air - S-5T-R - Five bell - #31 and #55 horn bell forward and #25, #37 and #44 bell reverse

**BASE .. Air Horn**

6	8253321	1	-	-	-	-	BASE .. Single horn
7	8221697	-	1	1	-	-	BASE .. Dual horn
8	8218606	-	-	-	1	-	BASE .. Three horn
* 9	8217124	-	-	-	-	1	BASE .. Five horn

**HORN BELL .. Air Horn**

10	8217129	1	-	-	1	1	HORN BELL .. #25 with .125 orifice
11	8217128	-	-	-	1	1	HORN BELL .. #31 with .109 orifice
12	8221696	-	1	1	-	-	HORN BELL .. #31 with .125 orifice
*13	8217127	-	-	-	-	1	HORN BELL .. #37 with .095 orifice
14	8217126	-	1	1	1	1	HORN BELL .. #44 with .080 orifice
*15	8217125	-	-	-	-	1	HORN BELL .. #55 with .080 orifice
16	8211999	1	2	2	3	5	GASKET .. Horn bell to base
17	179850	3	6	6	9	15	BOLT .. Horn bell to base and diaphragm housing - 3/8-16 x 2-3/4 hex. head
18	103456	3	6	6	9	15	WASHER .. Lock - 3/8

**DIAPHRAGM AND HOUSING .. Air Horn**

19	8198938	1	2	2	3	5	DIAPHRAGM ASSEMBLY .. Horn
20	448301	3	6	6	9	15	SCREW .. Machine - Diaphragm retaining - 6-4 x 1/4 rd. head
21	8217123	1	2	2	3	5	HOUSING .. Diaphragm
22	8211999	1	2	2	3	5	GASKET .. Diaphragm housing to base

**COVER .. Back**

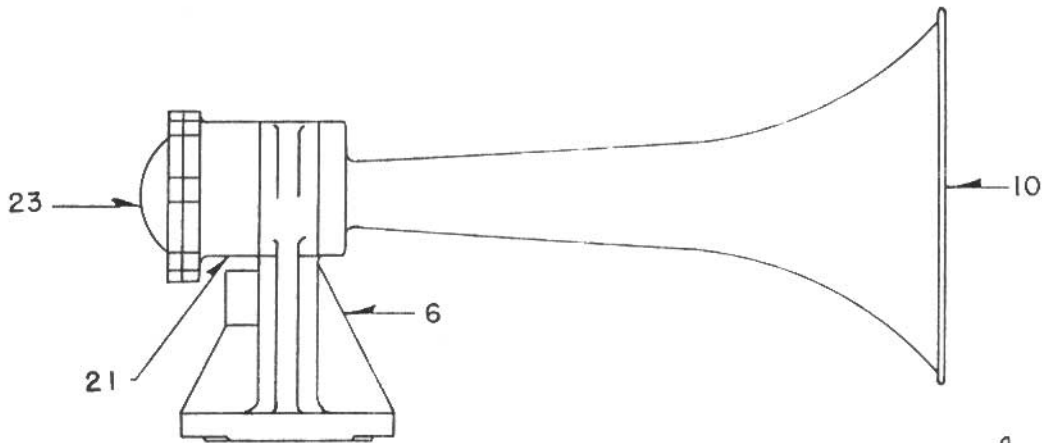
23	8211998	1	2	2	3	5	COVER .. Back
24	180080	6	12	12	18	30	BOLT .. Back cover to diaphragm housing - 5/16-18 x 1-1/8 hex. head
25	9414962	6	12	12	18	30	NUT .. Lock - 5/16 hex.

**HORN MOUNTING**

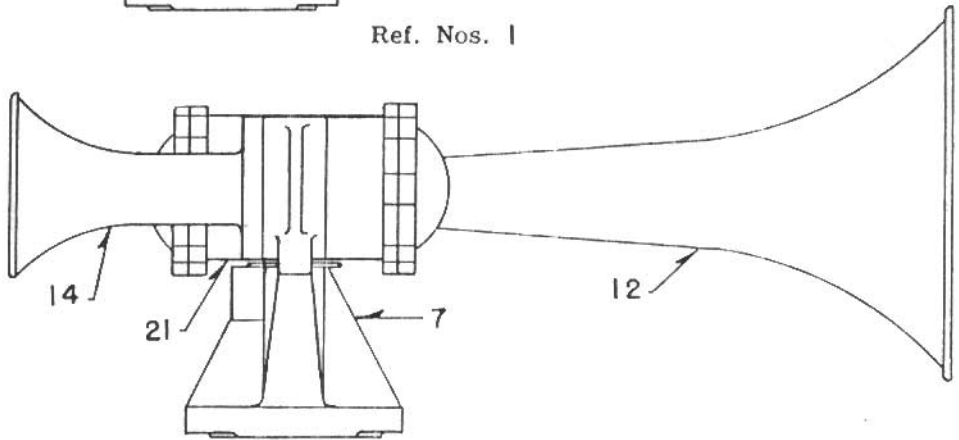
*26	8185843	1	1	1	1	1	INSULATOR .. Pad - Horn mounting
*27	179889	4	4	4	4	4	BOLT .. Horn mounting - 1/2-13 x 2 hex. head
*28	103323	4	4	4	4	4	WASHER .. Lock - 1/2

P. L. No. A2940

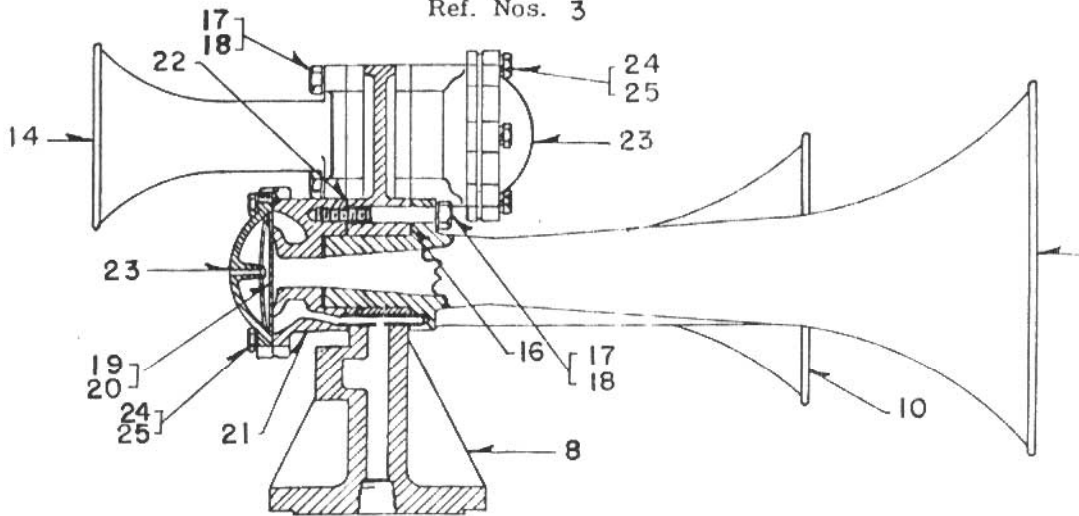
HORN



Ref. Nos. 1



Ref. Nos. 3



Ref. No. 4

AIR HORN (LESLIE)

PLATE A2940-1



TRADE  
**TYFON** AIR WHISTLES FOR RAILROAD SERVICE  
MARK



Fig. 1  
A-200-L RR

### Improved Sound Signalling

Safe and efficient railroad operation requires adequate warnings by sound indication. The Leslie-Tyfon whistle provides this essential on steam, electric, diesel locomotives and cars, and on electric railways.

It is a distinctive whistle, entirely different from the ordinary types of air or steam whistles. Its principle of design has been acknowledged as an important advance in the making of sound signals and is protected world wide by letters patent.

The Tyfon whistle has an unparalleled international record of extensive use including installations on vessels of all types and sizes, on submarines, in fire alarm and industrial service.

Manufactured exclusively in the United States, by the makers of the well-known Leslie Steam Heat Reducing Valve, Leslie-Tyfon whistles are unconditionally guaranteed of highest grade material and workmanship and users are assured expert service and satisfactory results, born of the knowledge and familiarity with railroad problems acquired by their sponsors through many years of extensive experience.

Ordinary steam whistles on locomotives cannot readily be designed or located for scientifically placing sounds where they are needed. Engine crews, passengers and people living adjacent to the railroad are continually objecting to their shrill and deafening noises. Leslie-Tyfon whistles have none of these shortcomings.

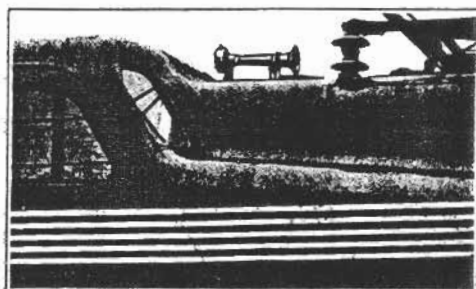
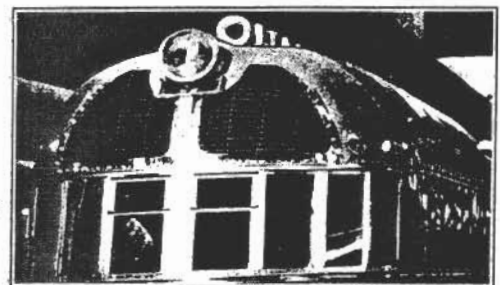


Fig. 2  
Typical Installations  
Most Modern  
Electric  
Locomotive ←  
Modern  
Streamlined  
Diesel Locomotive →  
Performing Perfectly



## Advantages

Sound is instantaneous and compels attention. Beginning and end of each signal blast is very clear and sharply defined. The tone is powerful, but pleasing to all who hear it. Sound quality is such that Leslie-Tyfon whistles are not confused with other sound warnings on highways or elsewhere. They have a distinctive note of long range audibility and are invariably preferred by engine and train crews.

Operation is economical. Steam whistles use excessive quantities of steam. A single A-200-L RR or Dual Tone A-125-H & M RR air oper-

ated, consumes only about 25% of the steam to compress the air to blow it that would be required to blow a steam whistle, and savings in fuel soon pay for same.

Leslie-Tyfon whistles are highly dependable, and will operate over extended periods of service, with no maintenance, and are not affected by unfavorable weather conditions.

Being air operated, it is never necessary to blow down the boiler of a steam locomotive to inspect a Leslie-Tyfon whistle or its whistle valve.



*Fig. 3  
Dual Tone  
A-125-H & M RR*

## Construction

All Leslie-Tyfon whistles are ruggedly built of high grade cast bronze, and have a pleasing appearance.

There are no moving parts other than a sturdy multiple leaf vibrating diaphragm, insuring extremely long life.

When the whistle valve is opened, the oper-

ating force is admitted to the diaphragm, causing it to vibrate, and this force escapes in the form of sound waves through the horn. At each vibration of the diaphragm the inlet is opened and closed completely.

Leslie-Tyfon whistles are readily adaptable to all types of locomotives, steam and electric, as well as diesel, and rail motor cars.



*Fig. 4  
Steam Locomotive  
Installations  
Giving Unsurpassed  
Results*



## Installation

On steam locomotives Leslie-Tyfon whistles should be placed well forward. Attachment to the smoke box alongside of smoke stack is desirable. On diesel or electric locomotives, and on gas rail cars install on roof at front. They should clear all appurtenances.

Horns must be securely braced, but any supporting brackets, sleeves, etc., must be carefully applied to prevent damage to horn due to friction and vibration. Sufficient clearance should be provided so that back cover and

diaphragm may be removed for examination, etc.

On steam locomotives, take air supply connection from crossover pipe or main reservoir. *The whistle or operating valve and strainer must be located as close to Leslie-Tyfon whistle as possible, never more than three feet away.*

Single A-75 whistles of all lengths require  $\frac{1}{4}$ " air supply pipe, operating valve and strainer. All other Leslie-Tyfon whistles, single and dual tone, require  $\frac{1}{2}$ " air supply pipes.

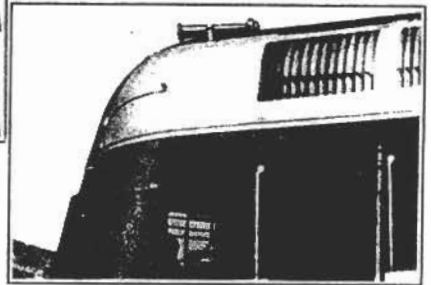
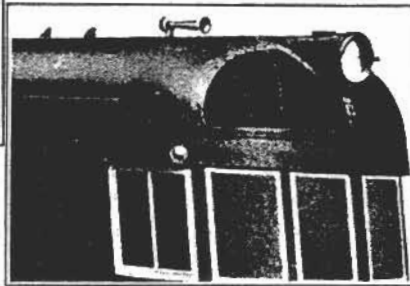
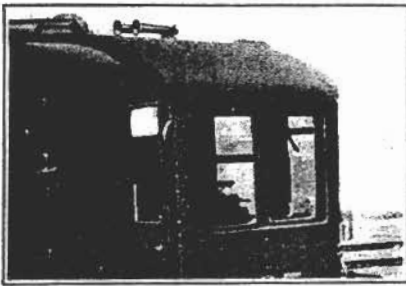


Fig. 5  
Installations on  
Various Types of  
Diesel Locomotives  
and Cars

## Operation

When placing Leslie-Tyfon whistles in service, proceed as follows:

1. Loosen lock bolt, unscrew back cover, remove diaphragm, and blow out pipe lines thoroughly with full open inlet valves.
2. Each Leslie-Tyfon whistle is equipped with a diaphragm, consisting of three loose leaves of heavy metal. These three leaves constitute a unit or complete diaphragm, capable of operating under pressure range of 75 to 150 lbs. per sq. inch. Each leaf is slightly curved or "dished" and must be installed with convex side against air inlet nozzle (toward front of horn). Use a straight edge on each leaf, to

determine which is the convex side. Also note instructions indelibly stamped on each diaphragm leaf.

3. Replace diaphragm and screw up back cover on diaphragm to point where sound is loud and clear, then back it off slightly before tightening lock bolt and secure nut with cotter pin. If back cover is screwed too tightly it will interfere with proper sound.

4. Always test with air pressure 25 lbs. below that normally carried. *Never set at maximum pressure.* The sound should now be instantaneous, even, and of a very powerful and pure tone.

Fig. 6. Dual Tone A-75-L & LL RR

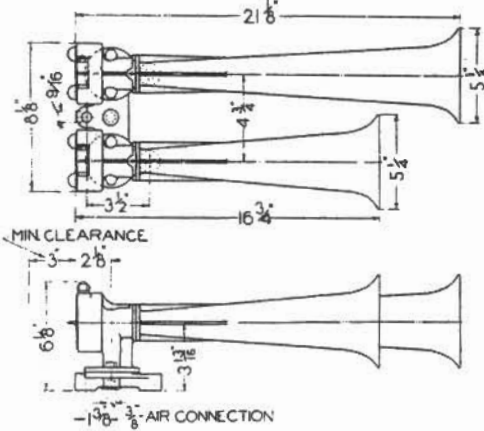


Fig. 7. Dual Tone A-125-H & M RR

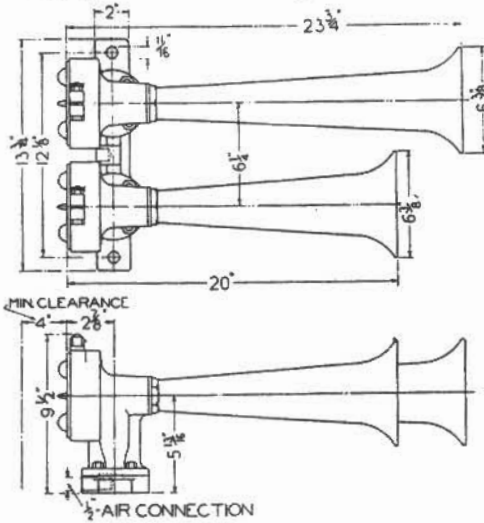
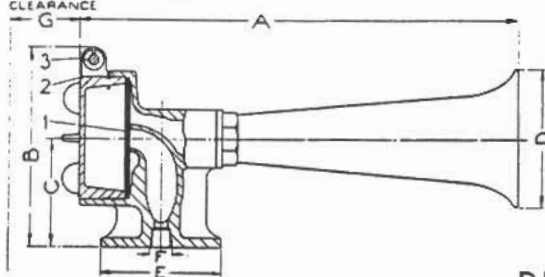


Fig. 8. Sectional View



DIMENSIONS

	A	B	C	D	E	(F) Pipe	G	INLET FLANGE	
								Bolt Holes	Bolt Circle
A-75-HH RR	10 <sup>7</sup> / <sub>16</sub> "	5 <sup>1</sup> / <sub>16</sub> "	2 <sup>3</sup> / <sub>4</sub> "	3 <sup>1</sup> / <sub>2</sub> "	3 "	<sup>1</sup> / <sub>4</sub> "	3 "	Two <sup>1</sup> / <sub>2</sub> "	2 <sup>1</sup> / <sub>16</sub> "
A-75-L RR	16 <sup>3</sup> / <sub>4</sub> "	5 <sup>1</sup> / <sub>16</sub> "	2 <sup>3</sup> / <sub>4</sub> "	5 <sup>1</sup> / <sub>4</sub> "	3 "	<sup>1</sup> / <sub>4</sub> "	3 "	Two <sup>1</sup> / <sub>2</sub> "	2 <sup>1</sup> / <sub>16</sub> "
A-75-LL RR	21 <sup>1</sup> / <sub>8</sub> "	5 <sup>1</sup> / <sub>16</sub> "	2 <sup>3</sup> / <sub>4</sub> "	5 <sup>1</sup> / <sub>4</sub> "	3 "	<sup>1</sup> / <sub>4</sub> "	3 "	Two <sup>1</sup> / <sub>2</sub> "	2 <sup>1</sup> / <sub>16</sub> "
A-125-H RR	20 "	8 <sup>7</sup> / <sub>16</sub> "	4 <sup>3</sup> / <sub>4</sub> "	6 <sup>3</sup> / <sub>8</sub> "	4 "	<sup>1</sup> / <sub>2</sub> "	4 "	Four <sup>9</sup> / <sub>16</sub> "	3 "
A-125-M RR	23 <sup>3</sup> / <sub>4</sub> "	8 <sup>7</sup> / <sub>16</sub> "	4 <sup>3</sup> / <sub>4</sub> "	6 <sup>3</sup> / <sub>8</sub> "	4 "	<sup>1</sup> / <sub>2</sub> "	4 "	Four <sup>9</sup> / <sub>16</sub> "	3 "
A-200-L RR	25 "	12 <sup>5</sup> / <sub>16</sub> "	7 <sup>3</sup> / <sub>32</sub> "	9 <sup>7</sup> / <sub>8</sub> "	4 "	<sup>1</sup> / <sub>2</sub> "	5 "	Four <sup>9</sup> / <sub>16</sub> "	3 "
Dual A-75-L & LL RR on Base (See Fig. 6)									
Dual A-125-H & M RR on Base (See Fig. 7)									

Ordering

Specify Leslie-Tyfon whistles for railroad use as follows:

For road locomotives, steam, electric, diesel or heavy rail motor cars—

A-200-L RR —most distinctive and powerful single tone railroad whistle made.

Dual A-125-H & M RR —two tone whistle of commanding and pleasing chime tone.

For yard locomotives of all types, or light rail motor cars—

A-75-L RR, A-125-H RR or Dual A-75-L & LL RR.

For back up whistle permanently applied to observation end of unit trains or to standard observation cars,—

A-75-HH RR.

When ordering diaphragm or other parts specify whether for A-75, A-125 or A-200 size.

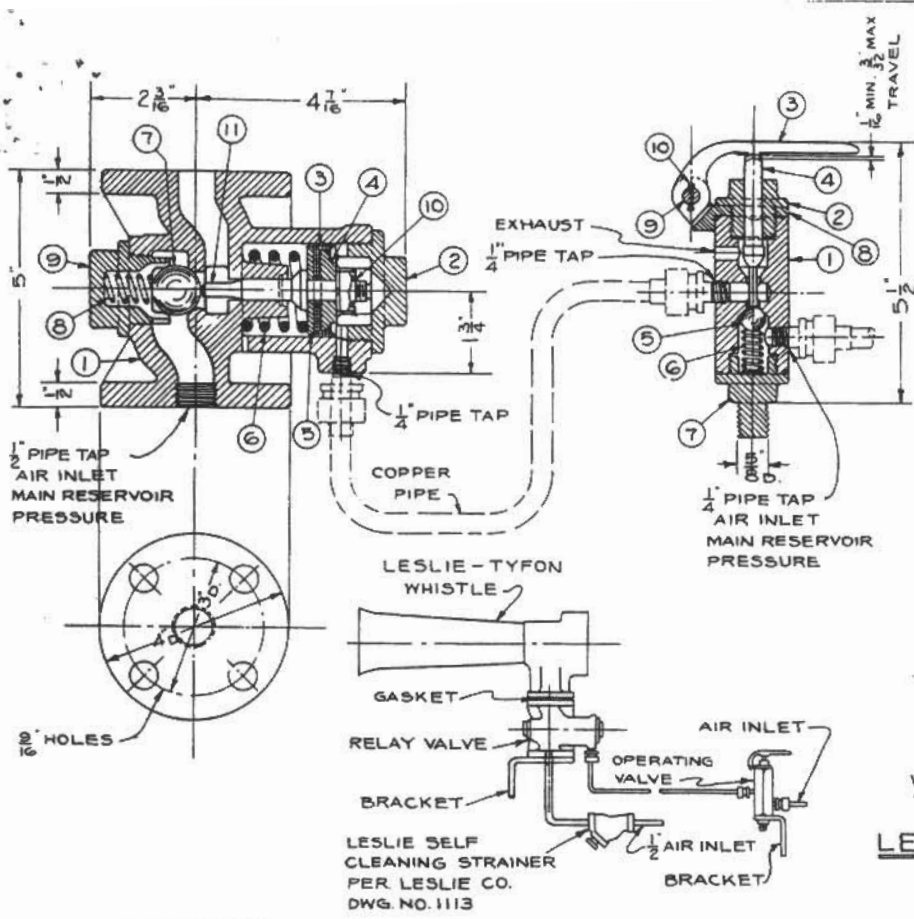
Always order operating valve and strainer with every Leslie-Tyfon whistle to insure satisfactory results.

Leslie-Tyfon whistles are available in a wide variety of sizes, tones and capacities, for both air and steam operation, for use as fire alarms, shop signals, boat whistles or warning signals for track workers. Write for diagram showing musical notation of various types.

Parts List

1. Diaphragm.
2. Back Cover.
3. Lock Bolt, including nut, lock washer and cotter pin.





LIST OF PARTS (RELAY VALVE)		
NO.	DESCRIPTION	PC N <sup>o</sup> . DRG N <sup>o</sup>
1	BODY	AW-130 963
2	CYLINDER CAP	S-26 4271
3	PISTON CUP	S-27 4271
4	TOP WASHER	S-28 4271
5	BOTTOM WASHER	S-29 4271
6	PISTON SPRING	S-31 4271
7	BALL 1" D. S.S.	—
8	BALL SPRING	BO-41 3111
9	BALL CAP	BO-35 3111
10	NUT, WASHER & COTTER	—
11	PISTON ROD	S-30 4271

LIST OF PARTS (OPERATING VALVE)		
N <sup>o</sup> .	DESCRIPTION	PC N <sup>o</sup> . DRG N <sup>o</sup>
1	BODY	AW-31 853
2	VALVE GUIDE	AW-48 853
3	LEVER	AW-47 853
4	VALVE	AW-44 853
5	1/2" D. BALL (STEEL)	AW-35 —
6	SPRING	AW-36 853
7	BOTTOM PLUG	AW-37 853
8	LEVER FULCRUM	AW-46 853
9	LEVER PIN	AW-45 853
10	COTTER (1/8" x 3/4")	—

**VILOCO RELAY VALVE &  
VILOCO OPERATING VALVE  
FOR USE WITH  
LESLIE-TYFON AIR WHISTLE**

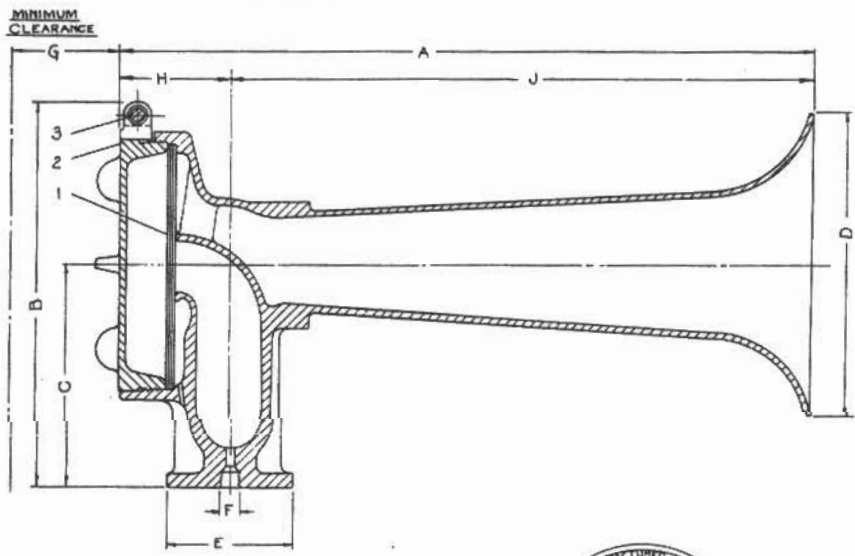
**VILOCO RY. EQUIP. CO.  
CHICAGO**

**SUPERSEDES DRG. 964-A  
DATED 7-29-37**

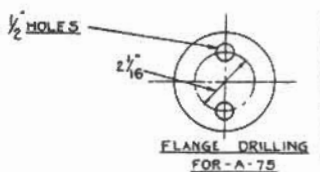
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**964**

B 9-8-37
REVISION



PART NO.	NAME OF PART	NO. REQD.
1	DIAPHRAGM (LEAVES)	3
2	BACK COVER	1
3	LOCK BOLT, COMPLETE	1



SIZE	DIMENSIONS									
	A	B	C	D	E	F PIPE	G	H	J	
A-75-HH	10 7/16	5 1/16	2 3/4	3 1/2	3	1/4	2	2 1/16	6 3/8	
A-75-L	16 3/4	5 1/16	2 3/4	5 1/4	3	1/4	2	2 1/16	14 1/16	
A-125-H	20	8 7/16	4 3/4	6 3/8	4	1/2	3	3 3/8	16 3/8	
A-200-L	25	12 9/16	7 3/32	9 3/8	4	1/2	3 1/2	3 3/8	21 3/8	

**LESLE  
CO.  
LYNDHURST, N.J.**

**LESLE-TYFON  
AIR-(RAILROAD)  
OUTLINE DIMENSIONS**

DATE-2-17-37