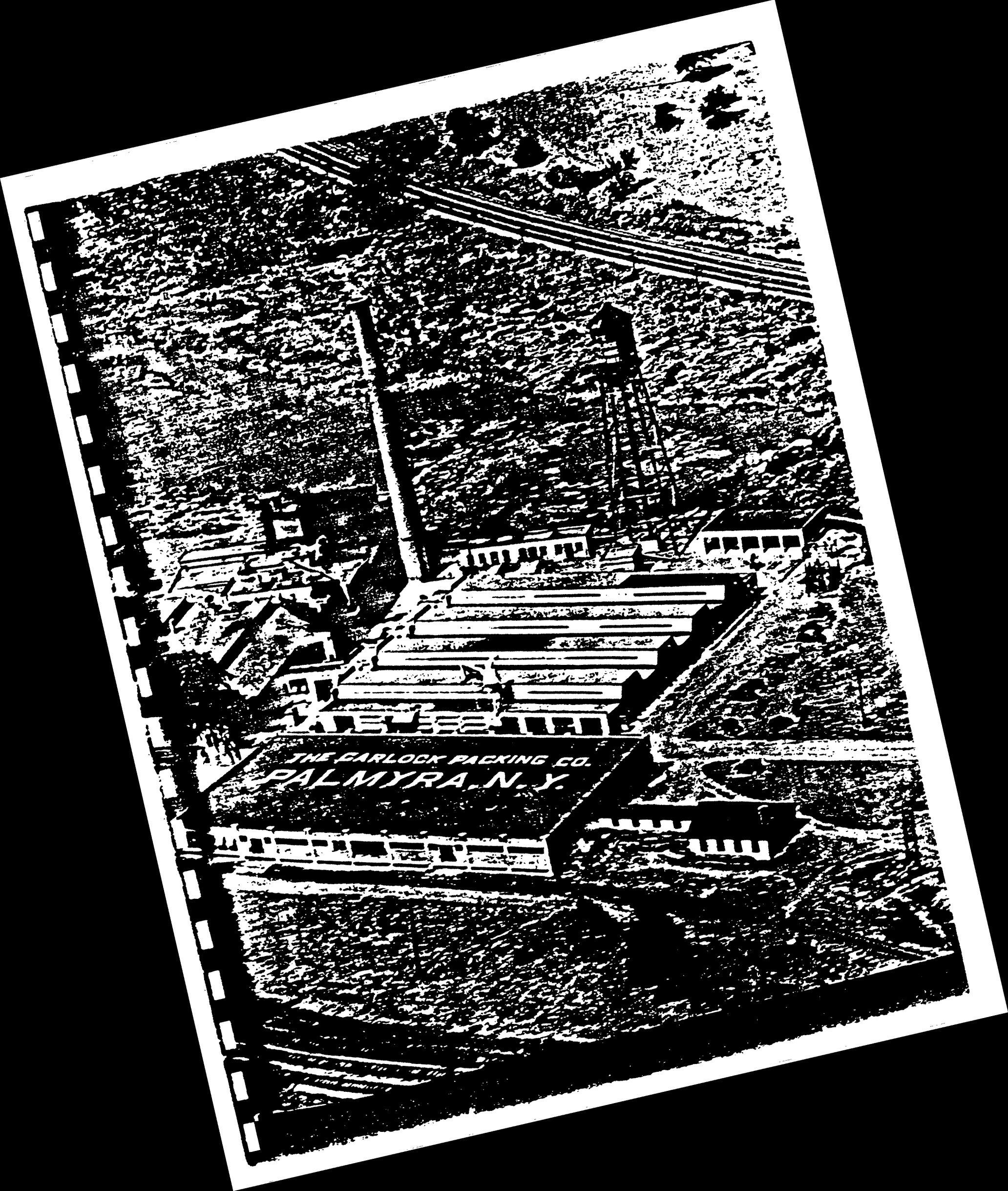
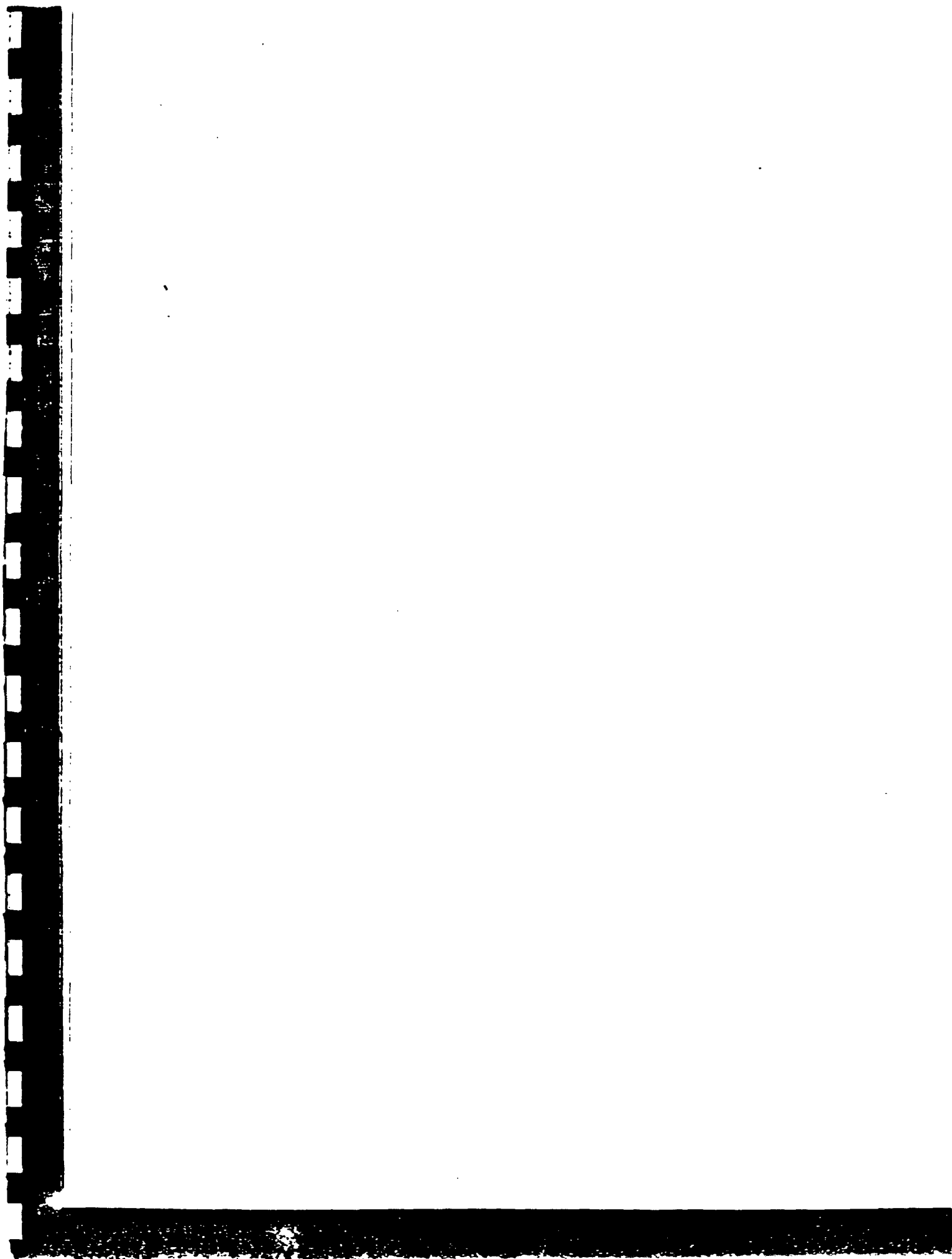


PLAINTIFF'S
EXHIBIT
G-435

AERIAL
PHOTOGRAPH
•
MAIN FACTORY
BUILDINGS



THE FARLOCK PACKING CO.
PALMYRA, N.Y.



INTRODUCTION

SINCE 1887 The GARLOCK Packing Company has been identified prominently with the manufacture and sale of high-grade mechanical packings and immediately allied materials. Its Quality Controlled products, sold only under the registered GARLOCK name and the caliper and scale trade-mark emblem, are known in every civilized country.

In this catalog are illustrated and described those styles and types of GARLOCK materials for which there is general usage and demand. It is hoped that the book will serve the user as a complete guide and reference book for mechanical packing materials. Reference to the text and to the recommendation tables should permit the selection of a satisfactory GARLOCK product for any regular packing job.

For special equipment, or for unusual operating conditions, packings other than standard frequently are desirable or necessary. A comprehensive line of special GARLOCK materials, each designed and intended for some specific and out-of-the-ordinary equipment or service, therefore, has been developed. These special GARLOCK materials are not shown in this catalog. To include them would require a book cumbersome in size and confusing to the user.

When confronted with a condition on which satisfactory packing service is not being obtained, and for which none of the products included in this catalog appears to be suitable, the packing user is invited to call a GARLOCK Representative. Members of this corps of competent men, fully qualified by training and experience for consultation concerning packing problems, are available everywhere.

A survey by a GARLOCK Representative will determine whether the line of regular or special products contains one exactly suited to the condition on which trouble is being experienced. If not, a new material, designed to meet that condition, will be developed in the GARLOCK laboratories and manufactured in the GARLOCK factories.

To the packing users of the world this catalog and the services of the extensive field organization of GARLOCK Representatives are dedicated.

GARLOCK PACKINGS

THE GARLOCK Packing Company consistently makes every effort to place in the hands of its customers packings that are standard in every way. Through the Company's Quality Controlled method of manufacture the finished products are right in quality of material, uniform in excellence of workmanship, correct in measurements, and in general conformity with the Company's established standards.

The actual application and care of packings are responsibilities of the user. The few simple suggestions set forth below may save annoyance, trouble and expense if followed out carefully.

ROD PACKINGS Rod packings should be applied to a clean stuffing box. Each ring should be firmly seated, by tamping, as it is applied. When the stuffing box is full, the gland should be tightened with a wrench to seat the packing properly; then slacken off and retighten by hand, locking the gland a quarter turn with a wrench. Care should be taken to avoid cocking the gland.

Ammonia compressor rod packings contract during a "freeze back," making it necessary sometimes to tighten the gland to stop leakage. With the returning heat following the "freeze back" the packing expands, and unless the gland then is slackened off to compensate for this expansion the packing may be damaged. Most of the packing failures on ammonia compressors are caused by the failure to adjust the packing after a "freeze back."

Packings applied to hot water pumps sometimes cause trouble because of expansion as the temperature of the water increases. In this service packing should be watched carefully for a few days after application and the gland slackened off from time to

time if expansion or swelling of the packing has occurred.

Proper lubrication is essential. A liberal application of one of the lubricating compounds described on pages 136 and 137 to all surfaces of rod packings before installation is strongly recommended. Rods should also be swabbed with the same compound at frequent intervals. Observance of the above practice will reduce friction, prevent scored rods and add life to the packing.

GASKETS Before applying gaskets the flanges should be cleaned thoroughly. Gaskets should be cut and centered so that no portion of the inner diameter or flange of the gasket projects beyond the flange of the pipe or equipment on which the gasket is being applied.

Many gasket users wish to coat gaskets with a paste before applying them to pipe lines or equipment handling hot or cold gasoline, oil or petroleum derivatives. Inasmuch as the pastes sometimes used for this purpose actually are harmful to the gaskets, the Company developed GARLOCK Gasket Paste, Compound No. 1, for this service. Compound No. 1, which is described on page 137, has the correct body for a seal, expands under heat, will not discolor gasoline and is not harmful to gaskets.

When tightening the gasket in the flange make sure that the bolts are drawn up evenly all around. Unless this is done trouble will follow.

In the event of apparent failure of any packing at any time the Company will gladly have a competent GARLOCK Representative investigate all of the plant conditions as applying to packings, and make suitable recommendations for future packing usage.

GARLOCK PACKINGS

THE recommendations appearing on the following pages must be employed with due regard for the explanations and qualifications set forth in the succeeding paragraphs.

In preparing recommendations, the obviously simple and desirable procedure would embody the naming of one style of material for each kind of service condition described. This Company, however, has determined on the basis of its experience over the past fifty years that no single packing can be flatly and definitely recommended for universal usage with the maximum of economy and service on any given condition. The principal reasons for this situation are:

1. Variations in operating methods in relation to one installation as compared with another.
2. Variations in operating conditions as between two apparently similar installations.
3. Variations in operating requirements to be met in different installations for same service.
4. Variations in contributory service factors surrounding one installation on a certain condition as compared with another apparently duplicate installation.
5. Personal preference of individual operators for a certain type of design or material.

These circumstances have necessitated the extension of the GARLOCK recommendations to include several styles of packing for each service named. Otherwise the user might be misled in making his selection.

In making a choice of packings from the recommendation lists, the user will bear in mind the following points:

1. Each of the several styles named for a given service is in successful employment for that particular usage in hundreds of installations all over the world.
2. The style first named in each list is the one most widely used for the stated condition.
3. The styles named later in each list are successfully used for the condition stated approximately in the order of their listing.

We suggest that the intending user, who is not familiar with the proper GARLOCK product to employ for a stated condition, select the material named first in the list for that service. In so doing, he is invited to accompany his inquiry or order with a detailed statement of conditions that the correctness of his choice may be checked.

The Company maintains a record, constantly under revision, of thousands of actual installations under all kinds and classes of service ranging from the ordinary everyday applications to those of most infrequent and unusual occurrence. The information relative thereto is at the disposal of the Company's district offices and sales representatives for the benefit of all packing users.

The experience of this Company over a period of many years proves that in the great majority of cases, the best selection of a packing product can be made by affording a GARLOCK representative an opportunity to survey carefully the requirements of the job. It is recommended, therefore, that a representative of the Company be consulted concerning the selection of GARLOCK products whenever the convenience of the user will permit.

14 GENERAL SERVICE RECOMMENDATIONS

Types and Styles of Garlock Packings Commonly Used on RECIPROCATING PISTON RODS, VALVE RODS, OUTSIDE PACKED PLUNGERS and RAMS

TYPE OF PACKING	STEAM High Pressure		STEAM Low Pressure		WATER Hot		WATER—Cold High Pressure		WATER—Cold Low Pressure		GASOLINE and OIL—Hot	
	GARLOCK Style	Page	GARLOCK Style	Page	GARLOCK Style	Page	GARLOCK Style	Page	GARLOCK Style	Page	GARLOCK Style	Page
FIBROUS	800	21	333	54	333	54	430	81	99	07	331	81
	330	81	430	81	430	81	50	70	430	81	8199	81
	146	24	712	57	712	57	99	67	26	68	930	93
	732	77	255	59	255	59	26	68	31	69	928	92
	731	76	926	91	926	91	31	69	751	79	238	29
	245	22	929	92	929	92	333	54	66	73	732	77
	235	23	87	95	87	95	183	73	67	94	1003	49
	377	25	368	01	368	01	440	84	926	91	7279	139
	256	34	446	82	443	85	926	91	440	84		
	928	92	449	83	1900	86	87	95	980	87		
	931	93			1906	86	980	87	43	71		
	107	96			1907	86	960	87	35	72		
	358	27			Leather	127	965	87	Leather	127		
							Leather	127				
SEMI- METALLIC	935	144	7050	142	7050-C	143	7050	142	7050	142	935	144
	934	144	962	141	7050	142	962	141	962	141	934	144
	7050	142	968	141	962	141	968	141	968	141	915	146
	962	141	969	141	968	141	969	141	969	141	7050-C	143
	968	141	944	145	969	141	944	145	944	145	7050	142
	969	141	945	145	944	145	945	145	945	145	962	141
	944	145	916	146	945	145	916	146	916	146	968	141
	945	145			916	146					969	141
	916	146										
CASE METAL	821	148	805	148								
	805	148	808	148								
	808	148	809	148								
	809	148	861	148								
	861	148	806	148								
	806	148										

CENTRIFUGAL and ROTARY SHAFTS

FIBROUS	239	28	239	28	239	28	239	28	239	28	238	29
	249	28	249	28	730	75	646	30	640	30	930	93
	730	75	730	75	646	30	249	28	249	28	928	92
	646	30	646	30	249	28	99	67	26	68		
	928	92	926	91	926	91	926	91	31	69		
	931	93	929	92	929	92	929	92	926	91		
SEMI- METALLIC			991	98	991	98	751	79	751	79		
							66	73	66	73		
							991	98				
	935	144	7050	142	7050	142	7050	142	7050	142	935	144
	934	144	962	141	962	141	962	141	962	141	934	144
	7050	142	968	141	968	141	968	141	968	141	915	146
	962	141	969	141	969	141	969	141	969	141	7050	142
	968	141	944	145	944	145	944	145	944	145	962	141
	969	141	945	145	945	145	945	145	945	145	968	141
	916	146	916	146	916	146	916	146	916	146	969	141

Before selecting a style of packing from the above list please note carefully the introduction to these recommendations, which appears on Page 13 of this catalog.

GARLOCK  **THE STANDARD PACKING OF THE WORLD**

GENERAL SERVICE RECOMMENDATIONS 15

Types and Styles of Garlock Packings Commonly Used on RECIPROCATING PISTON RODS, VALVE RODS, OUTSIDE PACKED PLUNGERS and RAMS

TYPE OF PACKING	GASOLINE and OIL—Cold		AIR		ACIDS (Weak) and CAUSTICS		ACIDS Strong		GAS		AMMONIA	
	GARLOCK Style	Page	GARLOCK Style	Page	GARLOCK Style	Page	GARLOCK Style	Page	GARLOCK Style	Page	GARLOCK Style	Page
FIBROUS	431	81	222	26	239	28	231	30	331	81	334	34
	7256	81	330	81	245	22	736	78	330	81	337	36
	927	91	245	22	235	23	924	93	731	76	336	33
	930	93	235	23	731	76			800	21	712	37
	238	29	731	76	991	98			350	35	253	39
	732	77	931	93	924	93						
	99	67			930	93						
	255	39			231	30						
	7279	139										
SEMI- METALLIC	7050-C	143	7050-C	143	7050	142	7050	142	7050-C	143	7050-C	143
	7050	142	7050	142	962	141	962	141	7050	142	7050	142
	962	141	962	141	968	141	968	141	944	145	944	145
	968	141	968	141	969	141	969	141	945	145	945	145
	969	141	969	141	916	146	916	146	916	146	916	146
	915	146	944	145								
			945	145								
			916	146								
CASE METAL			875	148	870	148	870	148	875	148	800	148
			803	148								
			808	148								
			809	148								
			861	148								
			806	148								
			821	148								

CENTRIFUGAL and ROTARY SHAFTS

FIBROUS	238	29	239	28	239	28	231	30	239	28	239	28
	927	91	931	93	245	22	736	78	731	76		
	930	93	731	76	235	23						
	99	67			731	76						
	731	79			991	98						
SEMI- METALLIC					930	93						
					231	30						
	7050	142	935	144	7050	142	7050	142	7050-C	143		
	962	141	7050	142	962	141	962	141	7050	142		
	968	141	944	145	968	141	968	141	962	141		
	969	141	945	145	916	146	916	146	968	141		
									969	141		
	915	146	916	146					941	147		
									944	145		
									945	145		
									916	146		

Before selecting a style of packing from the above list please note carefully the introduction to these recommendations, which appears on Page 13 of this catalog.

THE STANDARD PACKING OF THE WORLD  GARLOCK

16 GENERAL SERVICE RECOMMENDATION

Types and Styles of Garlock Packings Commonly Used on GLOBE and ANGLE VALVE STEMS

TYPE OF PACKING	STEAM High Pressure		STEAM Low Pressure		WATER Hot		WATER—Cold High Pressure		WATER—Cold Low Pressure		GASKET OI
	GARLOCK Style	Page	GARLOCK Style	Page	GARLOCK Style	Page	GARLOCK Style	Page	GARLOCK Style	Page	
FIBROUS	1700	37	117	31	117	31	117	31	117	31	170
	17	32	115	31	115	31	115	31	115	31	100
	256	34	646	30	646	30	646	30	646	30	93
	117	31	926	91	926	91	926	91	926	91	92
	115	31	929	92	929	92	929	92	333	34	33
	646	30	333	34	333	34	333	34	161	36	93
	928	92	160	36	160	36	160	36			117
	931	93	163	36	163	36	163	36			117
	166	35	166	35	166	35	161	36			166
	160	36					166	35			
	163	36									
SEMI- METALLIC	933	144	962	141	962	141	962	141	962	141	933
	934	144	968	141	968	141	968	141	968	141	934
	962	141	944	143	944	143	944	143	944	143	915
	968	141	945	143	945	143	945	143	945	143	7050
	944	143	916	146	916	146	916	146	916	146	962
	945	143									968
	916	146									

SHEET PACKINGS and GASKETS

SERVICE	SHEET PACKING		GASKET	
	GARLOCK Style	Page	GARLOCK Style	Page
STEAM High Pressure	900	99	553	112
	7021	100	950	99
	902	102	7022	100
			932	102
	603	101	604	113
			607	101
			601	114
STEAM Low Pressure			602	114
	623	102	6007	114
			627	102
	22	103	122	103
AIR High Pressure	24	104	124	104
	333	105	933	105
AIR Low Pressure	900	99	553	112
	902	102	950	99
			952	102
COLD WATER High Pressure	333	105	933	105
	22	103	122	103
	19	106	219	106
COLD WATER Low Pressure	22	103	122	103
	333	105	933	105
	660	108	661	108
	159	107		
	169	107		
	179	107		

Before selecting a style of packing from the above list please note carefully the introduction to these recommendations, which appears on Page 13 of this catalog.

GARLOCK  **THE STANDARD PACKING OF THE WORLD**

GENERAL SERVICE RECOMMENDATIONS 17

Types and Styles of Garlock Packings Commonly Used on GLOBE and ANGLE VALVES

TYPE OF PACKING	GASOLINE and OIL—Cold		AIR		ACIDS (Weak) and CAUSTICS		ACIDS Strong		GAS		AMMONIA	
	GARLOCK Style	Page	GARLOCK Style	Page	GARLOCK Style	Page	GARLOCK Style	Page	GARLOCK Style	Page	GARLOCK Style	Page
FIBROUS	238	29	117	31	239	28	231	30	117	31	117	31
	927	91	115	31	1700	37	924	93	115	31	115	31
	930	93	17	32	924	93	160	36	1700	37	239	28
	1700	37	239	28	160	36	163	36	235	23	334	34
	117	31	160	36	163	30			239	28	160	36
	115	31	163	36					335	34	163	36
	431	81							160	36	161	36
	99	67							161	36		
	162	30										
	160	35										
SEMI-METALLIC	7050	142	7050	142	7050	142	7050	142	7050	142	7050	142
	902	141	902	141	902	141	902	141	902	141	902	141
	908	141	908	141	908	141	908	141	908	141	908	141
	915	140	944	145	916	146	916	140	944	145	944	145
			945	145					945	145	945	145
			910	146					910	146	910	146

SHEET PACKINGS and GASKETS

SERVICE	SHEET PACKING		GASKET	
	GARLOCK Style	Page	GARLOCK Style	Page
HOT WATER High Pressure	22	103	333	112
	24	104	122	103
	333	103	124	104
			933	105
HOT WATER Low Pressure	22	103	122	103
	333	103	933	105
OIL or GASOLINE Cold	902	102	932	102
	060	108	061	108
	333	103	933	105
	7601	138	7601	138
	7300	139	7300	139
	7797	139	7797	139
	7986	139	7986	139
OIL or GASOLINE Hot	7228	139	7228	139
	7300	139	7300	139
	7797	139	7797	139
	7986	139	7986	139
AMMONIA and VARIOUS ALKALI SOLUTIONS High Pressure	900	99	333	112
	902	102	930	99
			952	102
AMMONIA and VARIOUS ALKALI SOLUTIONS Low Pressure	333	103	933	105
	22	103	122	103
GAS High Pressure	7021	100	333	112
	900	99	7022	100
	902	102	930	99
	025	102	952	102
			027	102

Before selecting a style of packing from the above list please note carefully the introduction to these recommendations, which appears on Page 13 of this catalog.

THE STANDARD PACKING OF THE WORLD  GARLOCK

18 GENERAL SERVICE RECOMMENDATION

GARLOCK PACKINGS Commonly Used on Services Indicated

PUMP PISTON PACKING

SERVICE	GARLOCK Style	Page
HOT WATER	261	63
	153	123
	33 Special	46
	33	64
COLD WATER	261	63
	33 Special	46
	33	64
	153	123
CRUDE OIL, GASOLINE, MINERAL SEAL OIL	261	63
	153	123
	33 Special	46

PUMP VALVES

SERVICE	GARLOCK Style	Page
HOT WATER—High Temperatures and Pressures	108	121
	156	121
	153	121
WARM and COLD WATER—From 125 Pounds to 300 Pounds Pressure	188	121
	7393	119
COLD WATER—From 75 Pounds to 125 Pounds Pressure	182	121
	339	121
	7862	119
COLD WATER—From 50 Pounds to 75 Pounds Pressure	130	121
	173	121
	189	121
	7790	119
	7303	119
GASOLINE, SYRUPS, AKLALI, LYE, etc.—High Temperatures and Pressures	108	121
HOT or COLD OIL—High Pressures	108	121
	156	121
	153	121
COLD OIL—From 75 Pounds to 125 Pounds Pressure	339	121
	7797	139
CONDENSER	154	121
	151	121
	152	121
	197	121
	7224	119

DIAPHRAGM SHEETS

SERVICE	GARLOCK Style
AIR, WATER, DRY NATURAL GAS—High Pressure	7677
	7104
AIR, AMMONIA—High Pressure	7348
GASOLINE, OIL, WET NATURAL and MANUFACTURED GAS up to 150° F.—Medium Pressure	7398
	7992
AIR, WATER, DRY NATURAL GAS—Medium Pressure	7713
	819
GASOLINE, OIL, WET NATURAL and MANUFACTURED GAS up to 150° F.—Low Pressure	7603
	7992
AIR, WATER, DRY NATURAL GAS—Low Pressure	7381
	7343

LUBRICATING and GASKET COMPOUND

SERVICE	GARLOCK Style
For Application to all kinds of Gaskets operating against Steam, Hot or Cold Gasoline, Oil, or Water	Compound No. 1
For Lubricating Rod Packings working against Steam, Hot or Cold Water and Water Solutions	Compound No. 2
For Lubricating Rod Packings working against Oil, Gasoline, Benzene, Ether, Carbon Tetrachloride and all Vapors and Chemicals of an Oily Nature	Compound No. 3
For Lubricating Rod Packings working against Steam or Water at temperatures up to 500° F.	Luball

Before selecting a style of packing from the above list please note carefully the introduction to these recommendations, which appears on Page 13 of this catalog.

GARLOCK  THE STANDARD PACKING OF THE WC

GENERAL SERVICE RECOMMENDATIONS 19

GARLOCK PACKINGS commonly used in RAILROAD SERVICE

SERVICE	GARLOCK Style	Page
Locomotive Cab Cock and Valve Stem Packing	1700	37
Locomotive Throttle Packing	530 2000 3200	38 39 39
American Multiple Throttle Packing	8001	40
Locomotive Air Pump Packing	377 2200 2243 928	42 41 41 42
Locomotive Gauge Cock Discs	7751	50
Power Reverse Gear Cylinder Packing	1200 812 813-A Cups	44 44 44
Power Reverse Gear Piston Rod and Trunk Packing	530 Modified 1225 449-S 430	43 43 43 43
Locomotive Front End Tape	616 617	48 48
Standard Stoker Packing	377 343 7367	47 47 47
Feed Water Heater Piston Rod Packing	377 330 7091	45 45 45
Feed Water Heater Cylinder Packing	33 Special R.H. 108 Rings 261 260 R.H.	46 46 46 46
Locomotive and Booster Engine Ball Joint Packing	1010 and 1020 7114 Filler Rings	51 51
Locomotive Expansion Joint Packing	530 1003 and 1015 5250 5270	49 49 50 50
Insulation Tape	7771 7066	53 53
Gaskets for Railroad Service— Tank Hose Booster Engines Power Reverse Gears Feed Water Heaters	122 950 952 7022 7597 7158	52 52 52 52 52 52
Tank Car Dome Head and Outlet Cap		

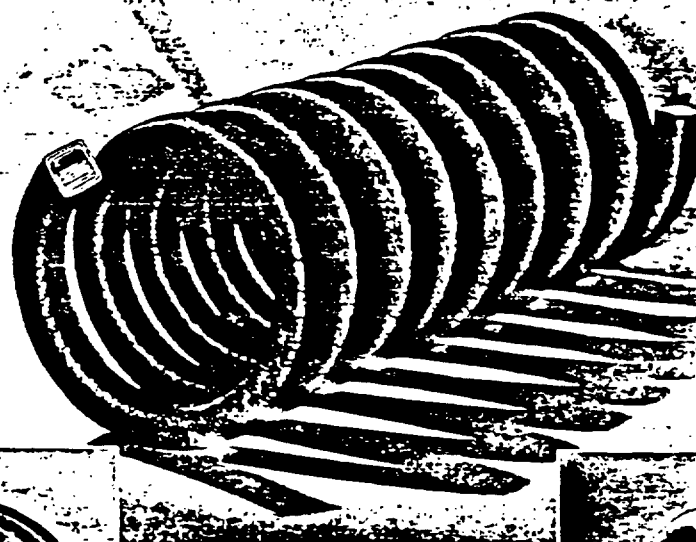
Before selecting a style of packing from the above list please note carefully the introduction to these recommendations, which appears on Page 13 of this catalog.

THE STANDARD PACKING OF THE WORLD  GARLOCK

THE GARLOCK WARRANTY. THE GARLOCK PACKAGING COMPANY GUARANTEES TO ITS CUSTOMERS THAT IT WILL REPAIR OR REPLACE FREE OF CHARGE INCLUDING TRANSPORTATION CHARGES BUT NOT THE COST OF INSTALLATION, ANY GARLOCK PRODUCT CLAIMED TO BE DEFECTIVE EITHER IN MATERIAL OR WORKMANSHIP WHEREBY IT IS NOT SUITABLE UNDER PROPER USAGE AND SERVICE FOR THE PURPOSE FOR WHICH DESIGNED, IF SO FOUND DEFECTIVE UPON EXAMINATION BY ITS REPRESENTATIVE.

HIGH PRESSURE PACKING

21



GARLOCK 150 SPIRAL



GARLOCK
125 COIL



GARLOCK
200 RINGS

Construction—This high-pressure packing consists of a core of formed asbestos cloth and resilient rubber, wrapped with a cover of specially woven GARLOCK asbestos cloth. The packing is treated with a heat-resisting rubber friction and lubricated with a high-grade lubricant compounded to withstand extreme temperatures; it is furnished with an external coating of graphite.

Service—For general use against high temperatures. It is specially recommended for application to piston rods of steam engines, pumps, compressors and other similar equipment; for expansion joints, and for any other service against steam pressures up to 300 pounds per square inch.

Form—This material is obtainable in the three forms illustrated above—GARLOCK 150 Spiral, GARLOCK 125 Coil and GARLOCK 200 Ring.

GARLOCK 200 Rings are furnished cut and formed in any size to fit rod and stuffing box dimensions. When ordering, specify inside diameter, outside diameter, and quantity required.

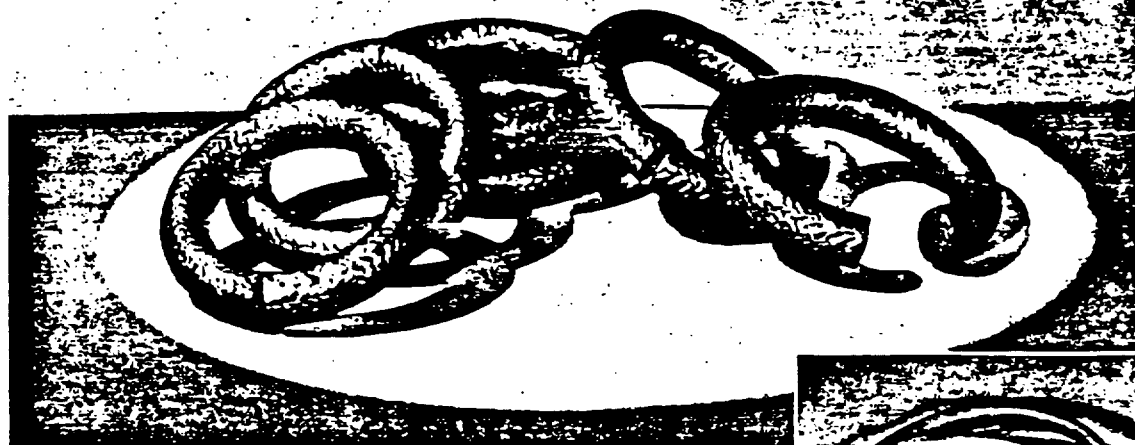
GARLOCK 125 Coil and GARLOCK 150 Spiral are furnished in standard 12½-foot lengths and are manufactured in all packing sizes from ¼" to 1½", advancing by sixteenths. Approximate footage and approximate weight per box of a few standard sizes are shown below:

GARLOCK 125 Coil		
Size	Feet per Box	Weight per Box
¼"	75 ft.	4½ lbs.
⅜"	50 ft.	6½ lbs.
½"	30 ft.	11 lbs.
⅝"	27½ ft.	12½ lbs.
¾"	25 ft.	14½ lbs.
7⁄8"	12½ ft.	8½ lbs.
1"	12½ ft.	10½ lbs.

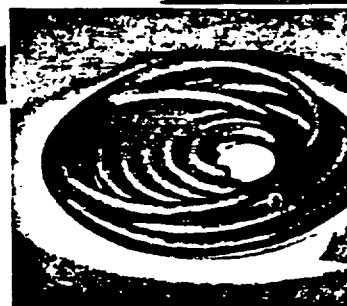
GARLOCK 150 Spiral		
Size	Feet per Box	Weight per Box
¼"	12½ ft.	3½ lbs.
⅜"	12½ ft.	1½ lbs.
½"	12½ ft.	2½ lbs.
⅝"	12½ ft.	4½ lbs.
¾"	12½ ft.	6½ lbs.
7⁄8"	12½ ft.	8½ lbs.
1"	12½ ft.	10½ lbs.

THE STANDARD PACKING OF THE WORLD  GARLOCK

GARLOCK



GARLOCK 245 RINGS

GARLOCK
243 COIL

Construction—GARLOCK Round Derby Packing is manufactured from Canadian long fibre asbestos yarn by the braid over braid method. It receives a lubrication and graphite treatment which, by a special process, is impregnated into every strand, making a soft and pliable material.

Service—Recommended for service on piston rods of pumps handling steam, acids, gas, lye or caustic soda.

Form—GARLOCK Round Derby Packing is obtainable in the two forms illustrated above—GARLOCK

243 Coil and GARLOCK 245 Ring.

GARLOCK 245 Rings are cut from GARLOCK 243 in any specified size to fit rod and stuffing dimensions.

GARLOCK 243 Coil is manufactured in sizes $\frac{1}{4}$ " to $1\frac{3}{8}$ ". Can be furnished in coil lengths continuous length on a reel.

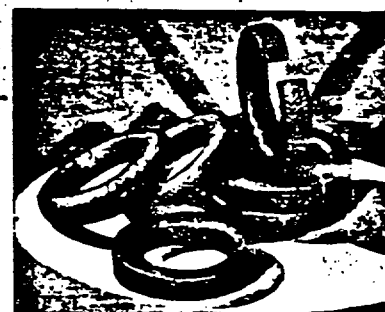
The table below indicates the number of coils, number of feet and approximate weight per box of standard sizes:

GARLOCK 243 Coil			
Size	Coils per Box	Feet per Box	Weight per Box
$\frac{1}{4}$ "	4	152 ft.	5 lbs.
$\frac{3}{8}$ "	3	60 ft.	5 lbs.
$\frac{1}{2}$ "	4	68 ft.	10 lbs.
$\frac{5}{8}$ "	3	51 ft.	10 lbs.
$\frac{3}{4}$ "	3	31½ ft.	10 lbs.
$\frac{7}{8}$ "	3	21 ft.	10 lbs.
1"	2	21 ft.	10 lbs.

GARLOCK  THE STANDARD PACKING OF THE WORLD



GARLOCK 233 COIL



GARLOCK
235 RINGS

Construction—GARLOCK Square Derby Packing is manufactured from Canadian long fibre asbestos yarn by the braid over braid method. It receives a lubrication and graphite treatment which, by a special process, is impregnated into every strand, making a soft and pliable material.

Service—Recommended for service on piston rods of pumps handling steam, acids, gas, lye or caustic soda.

Form—GARLOCK Square Derby Packing is obtainable in the two forms illustrated above—GARLOCK 233 Coil and GARLOCK 235 Ring.

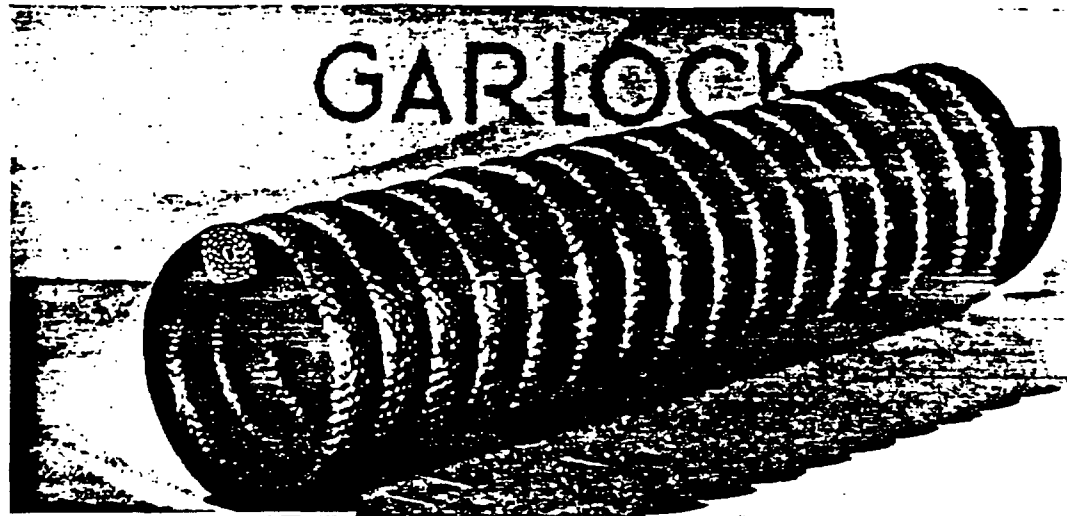
GARLOCK 235 Rings are cut from GARLOCK 233 Coil in any specified size to fit rod and stuffing box dimensions.

GARLOCK 233 Coil is manufactured in all packing sizes from $\frac{1}{4}$ " to $1\frac{1}{4}$ ", advancing by sixteenths. Can be furnished in coil lengths or in continuous length on reel.

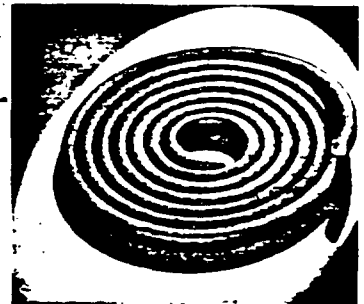
The table below indicates the number of coils, number of feet and approximate weight per box of a few standard sizes:

GARLOCK 233 Coil			
Size	Coils per Box	Feet per Box	Weight per Box
$\frac{1}{4}$ "	4	132 ft.	5 lbs.
$\frac{3}{8}$ "	3	60 ft.	5 lbs.
$\frac{1}{2}$ "	4	60 ft.	10 lbs.
$\frac{5}{8}$ "	3	30 ft.	10 lbs.
$\frac{3}{4}$ "	3	25 ft.	10 lbs.
$\frac{7}{8}$ "	3	21 ft.	10 lbs.
1"	2	15½ ft.	10 lbs.

THE STANDARD PACKING OF THE WORLD  GARLOCK



GARLOCK 145 SPIRAL

GARLOCK
146 RINGSGARLOCK
144 COIL

Construction—This high-pressure packing consists of a center core of a resilient red rubber wrapped with covers of specially woven GARLOCK asbestos cloth. The packing is treated with a heat-resisting rubber friction and lubricated with a high-grade lubricant, compounded to withstand extreme temperatures; it is finished with a surface coating of graphite.

Service—For general use against high temperatures. Particularly recommended for service against saturated steam pressures up to 300 pounds per square inch, and in stuffing boxes in which condensation is present in considerable quantity.

Form—This material is obtainable in the three forms illustrated above—GARLOCK 145 Spiral, GARLOCK 144 Coil and GARLOCK 146 Ring.

GARLOCK 146 Rings are furnished cut and for in any specified size to fit rod and stuffing dimensions.

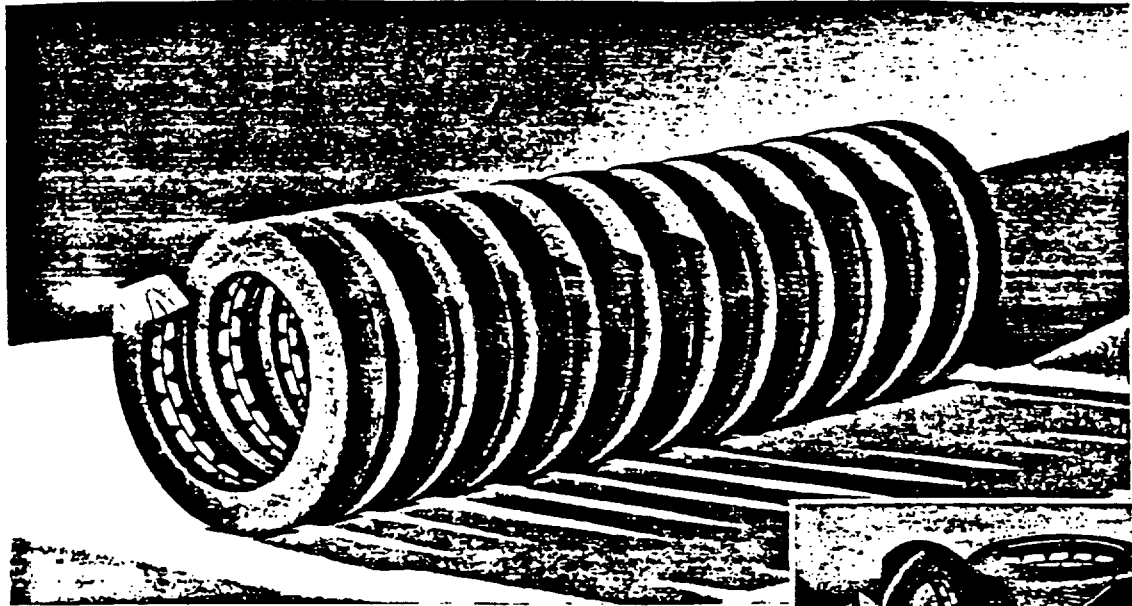
GARLOCK 145 Spiral and GARLOCK 144 Coil are furnished in standard 12½-foot lengths and are manufactured in all packing sizes from ½" to 1½", varying by sixteenths.

Approximate footage and approximate weight per box of a few standard sizes are shown below:

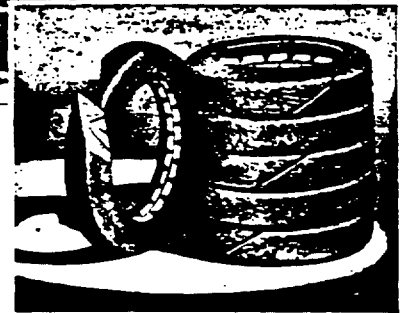
GARLOCK 144 Coil		
Size	Feet per Box	Weight per Box
½"	75 ft.	4½ lbs.
¾"	50 ft.	6½ lbs.
1"	50 ft.	11½ lbs.
1¼"	37½ ft.	12 lbs.
1½"	25 ft.	11½ lbs.
1¾"	12½ ft.	7½ lbs.
2"	12½ ft.	10½ lbs.

GARLOCK 145 Spiral		
Size	Feet per Box	Weight per Box
½"	12½ ft.	4½ lbs.
¾"	12½ ft.	1½ lbs.
1"	12½ ft.	2½ lbs.
1¼"	12½ ft.	4 lbs.
1½"	12½ ft.	5½ lbs.
1¾"	12½ ft.	7½ lbs.
2"	12½ ft.	10½ lbs.

GARLOCK  **THE STANDARD PACKING OF THE WORLD**



GARLOCK 377 SPIRAL



GARLOCK
377 RINGS

Construction—GARLOCK Metalmarine Packing consists of a nonfrictional, soft metal core with side walls, back and cushion of rubberized asbestos cloth. The special design of the metal core provides a number of small wearing surfaces so staggered as to give a pressure tight bearing on the rod. This material is supplied lubricated and with a surface graphiting.

Service—Recommended for general steam engine service, particularly on piston rods of main engines on steamships, deck engines, hoisting engines, steam shovels and dredges, steam hammers and kickers and steam niggers in the lumber industry.

Form—This material is obtainable in the two forms illustrated above—GARLOCK 377 Spiral and GARLOCK 377 Ring.

GARLOCK 377 Rings are furnished cut and formed in any specified size to fit rod and stuffing box dimensions.

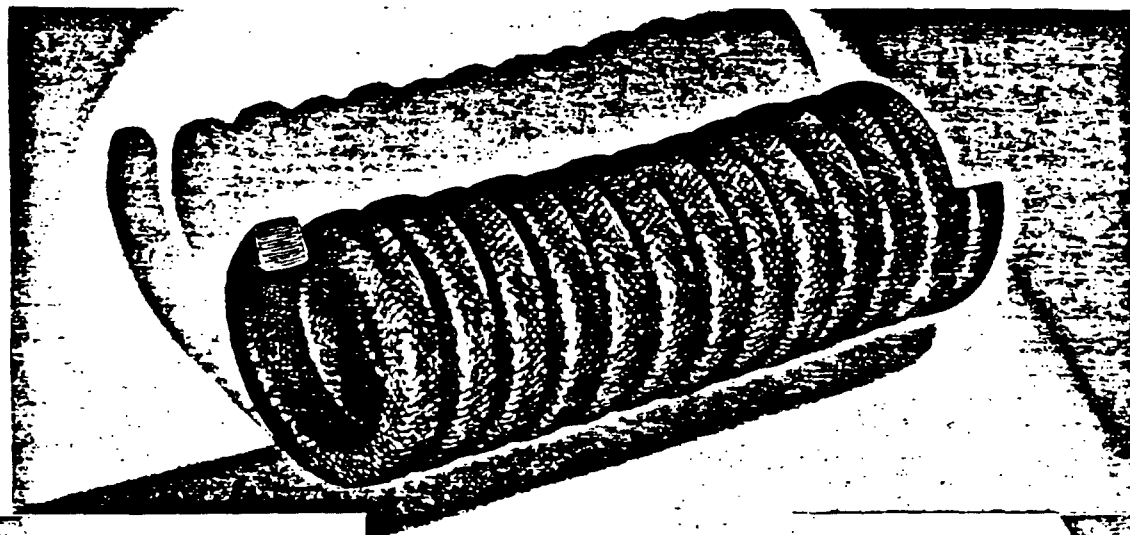
GARLOCK 377 Spiral is furnished in standard 12½-foot lengths and is manufactured in all packing sizes from ¼" to 1½", advancing by sixteenths.

Packed one spiral per box, the following list indicates the approximate net weights of a few standard sizes:

GARLOCK 377 Spiral			
Size	Weight per Box	Size	Weight per Box
¼"	1¼ lbs.	¾"	10½ lbs.
⅜"	3½ lbs.	1"	14 lbs.
½"	5½ lbs.	1½"	19½ lbs.
¾"	7½ lbs.		

THE STANDARD PACKING OF THE WORLD  GARLOCK

COMPRESSOR PACKING



GARLOCK 221 SPIRAL

GARLOCK
220 COILGARLOCK
222 RING

Construction—GARLOCK Compressor Packing consists of a core of formed asbestos fabric, wrapped with a cover of specially woven GARLOCK asbestos cloth. The packing is treated with a heat-resisting rubber friction and lubricated with a special lubricant compounded to withstand extreme temperature; it is furnished with an external coating of graphite.

Service—For general use against high temperature. Particularly constructed for the severe service encountered in air and gas compressor work.

Form—GARLOCK Compressor Packing is produced

in three forms—GARLOCK 221 Spiral, GARLOCK 220 Coil and GARLOCK 222 Ring.

GARLOCK 222 Rings are furnished cut and fitted in any specified size to fit rod and stuffing dimensions.

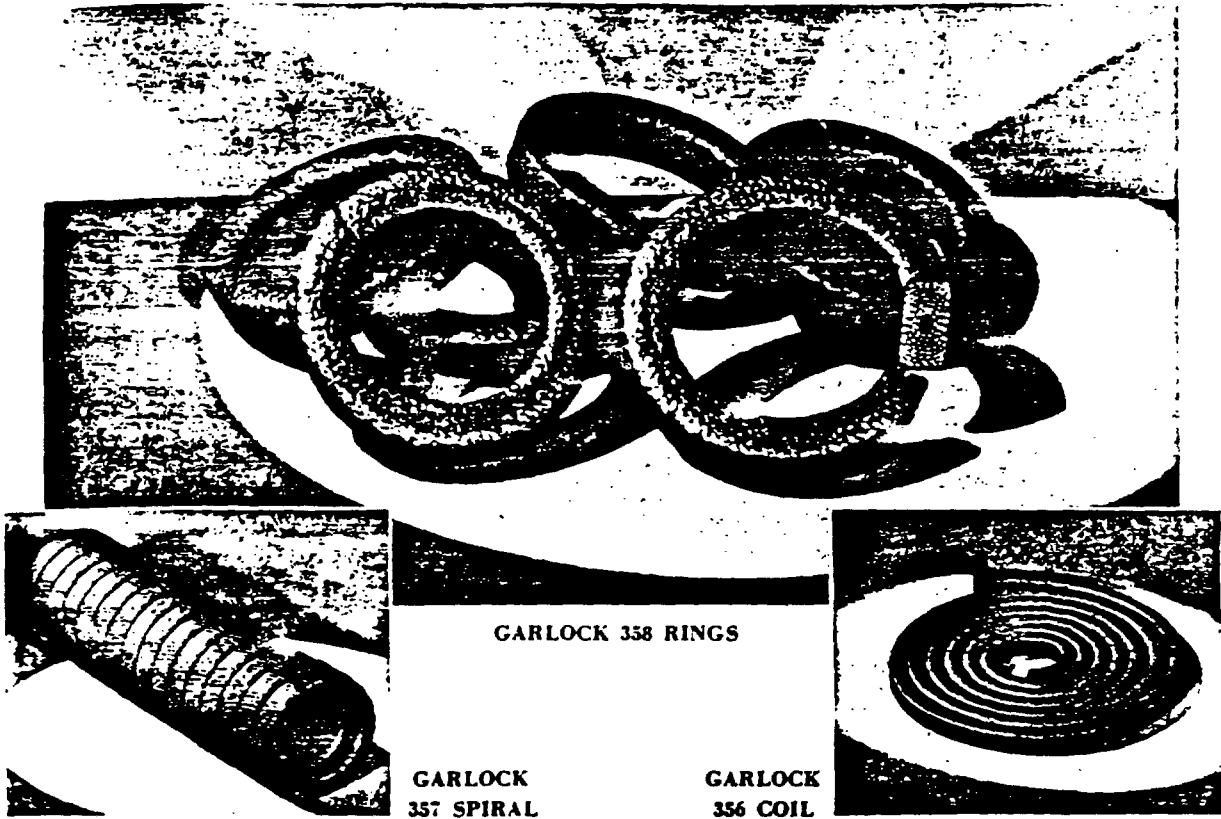
GARLOCK 220 Coil and GARLOCK 221 Spiral are furnished in standard 12½-foot lengths and are manufactured in all packing sizes from 1/8" to 1½" varying by sixteenths.

Approximate footage and weight per box of standard sizes are indicated in the following table

GARLOCK 220 Coil		
Size	Feet per Box	Weight per Box
1/8"	75 ft.	4 3/4 lbs.
3/16"	50 ft.	6 1/4 lbs.
1/4"	50 ft.	11 lbs.
5/16"	37 1/2 ft.	12 lbs.
3/8"	25 ft.	11 lbs.
7/16"	12 1/2 ft.	6 3/4 lbs.
1"	12 1/2 ft.	9 1/2 lbs.

GARLOCK 221 Spiral		
Size	Feet per Box	Weight per Box
1/8"	12 1/2 ft.	3 1/2 lbs.
3/16"	12 1/2 ft.	1 3/4 lbs.
1/4"	12 1/2 ft.	2 3/4 lbs.
5/16"	12 1/2 ft.	4 lbs.
3/8"	12 1/2 ft.	5 1/2 lbs.
7/16"	12 1/2 ft.	6 3/4 lbs.
1"	12 1/2 ft.	9 1/2 lbs.

GARLOCK  THE STANDARD PACKING OF THE WC



GARLOCK 358 RINGS

GARLOCK 357 SPIRAL

GARLOCK 356 COIL

Construction—GARLOCK "O" Center Forge Packing is constructed of specially woven GARLOCK asbestos cloth frictioned with a tenacious rubber cement and formed with a hollow center. It is lubricated with a high-grade lubricant compounded to withstand high temperatures, and is finished with an external coating of graphite.

Service—Recommended for use against high temperatures particularly where extreme vibration or lateral motion, requiring a resilient packing, is encountered. Extensively used on the rods of steam hammers.

Form—This material is obtainable in the three forms

illustrated above—GARLOCK 357 Spiral, GARLOCK 356 Coil and GARLOCK 358 Ring.

GARLOCK 358 Rings are furnished cut and formed in practically any size to fit rod and stuffing box dimensions.

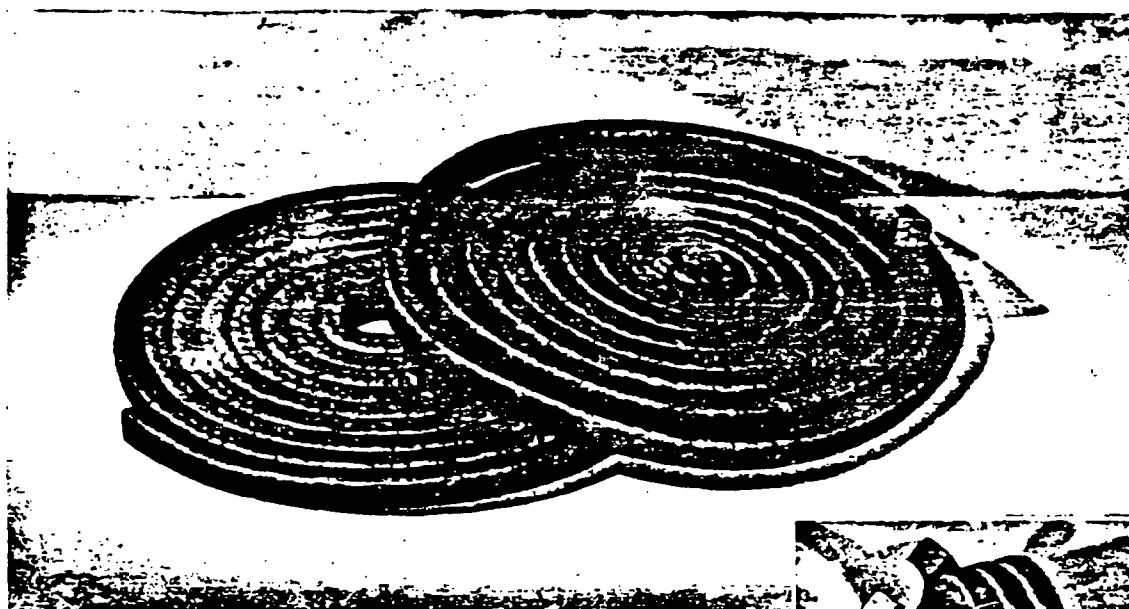
GARLOCK 356 Coil and GARLOCK 357 Spiral are furnished in standard 12½-foot lengths and are manufactured in all packing sizes from ¼" to 1½", advancing by sixteenths.

Approximate footage and approximate weight per box of a few standard sizes are shown below:

GARLOCK 356 Coil		
Size	Feet per Box	Weight per Box
¼"	75 ft.	4½ lbs.
⅜"	50 ft.	5½ lbs.
½"	30 ft.	10½ lbs.
⅝"	37½ ft.	11½ lbs.
¾"	25 ft.	10½ lbs.
7⁄8"	18½ ft.	6½ lbs.
1"	12½ ft.	9½ lbs.

GARLOCK 357 Spiral		
Size	Feet per Box	Weight per Box
¼"	12½ ft.	¾ lbs.
⅜"	12½ ft.	1½ lbs.
½"	12½ ft.	2½ lbs.
⅝"	12½ ft.	3½ lbs.
¾"	12½ ft.	5½ lbs.
7⁄8"	12½ ft.	6½ lbs.
1"	12½ ft.	9½ lbs.

THE STANDARD PACKING OF THE WORLD  GARLOCK



GARLOCK 234 COIL
GARLOCK 244 COIL (with wire)



GARLOCK 239 RINGS
GARLOCK 249 RINGS
(with wire)

Construction—GARLOCK Rotopac Packing is manufactured from long fibre asbestos yarn, either with or without fine wire insertion, braided square by the same method used in producing flax packing. It receives a lubrication and graphite treatment which, by a special process, is impregnated into each strand of the material.

Service—Rotopac is a high-grade centrifugal or rotary pump packing recommended for service against hot or cold water, caustic solutions and weak acids.

Form—GARLOCK 234 Coil, without wire, and GARLOCK 244 Coil, with wire insertion, are manufactured

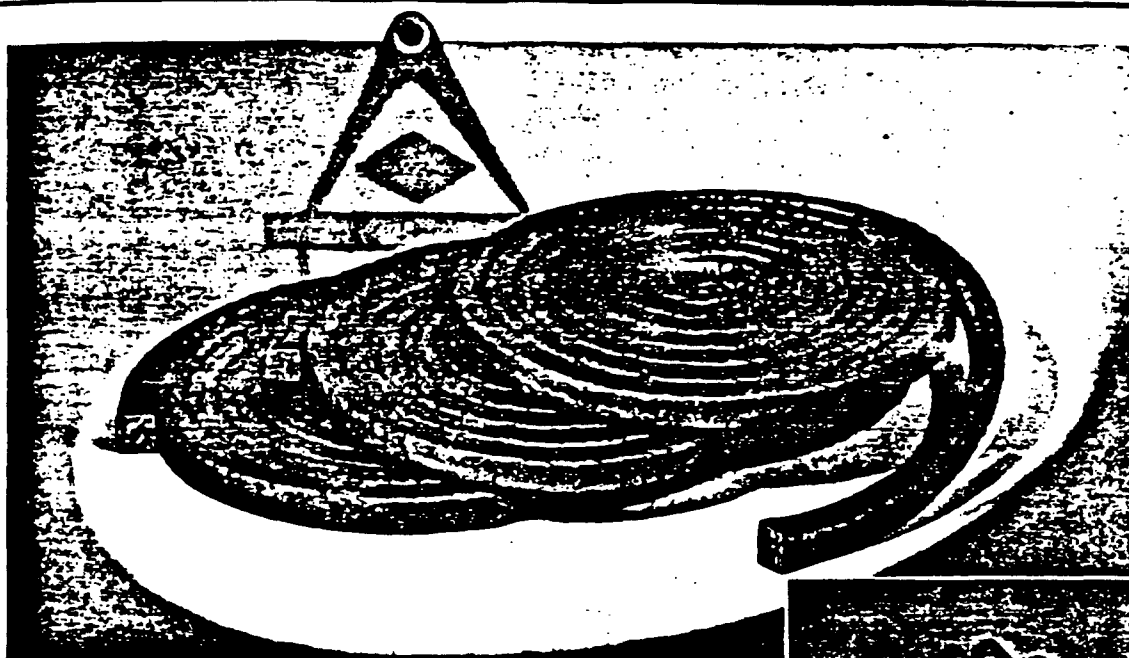
in all packing sizes from $\frac{1}{8}$ " to $1\frac{1}{4}$ ", advancing by sixteenths. Both GARLOCK 234 and GARLOCK 244 can be furnished in continuous lengths on reels.

GARLOCK 239 Ring, without wire, and GARLOCK 249 Ring, with wire insertion, are cut, respectively, from GARLOCK 234 and GARLOCK 244 Coil. These rings are furnished in any specified size to fit rod and stuffing box dimensions.

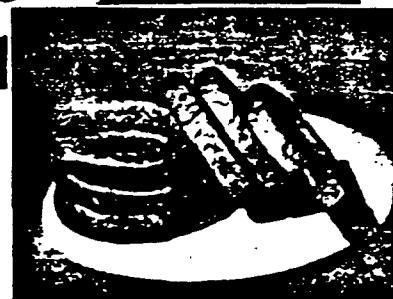
The table below indicates the number of coils, approximate footage and weight per box of a few standard coil sizes:

ROTOPAC Coil						
Size	Coils per Box		Feet per Box		Weight per Box	
	234	244	234	244	234	244
$\frac{1}{4}$ "	5	5	120 ft.	120 ft.	5 lbs.	6 $\frac{7}{8}$ lbs.
$\frac{3}{8}$ "	4	5	108 ft.	81 ft.	10 $\frac{1}{2}$ lbs.	10 $\frac{3}{4}$ lbs.
$\frac{1}{2}$ "	3	3	80 ft.	60 ft.	10 $\frac{1}{2}$ lbs.	13 $\frac{1}{2}$ lbs.
$\frac{5}{8}$ "	3	2	48 ft.	32 ft.	13 $\frac{3}{8}$ lbs.	11 lbs.
$\frac{3}{4}$ "	2	2	28 ft.	28 ft.	10 lbs.	13 $\frac{3}{8}$ lbs.
$\frac{7}{8}$ "	2	2	24 ft.	24 ft.	11 $\frac{1}{2}$ lbs.	15 $\frac{3}{4}$ lbs.
1"	1	1	19 ft.	19 ft.	15 $\frac{1}{2}$ lbs.	16 $\frac{1}{2}$ lbs.

GARLOCK  THE STANDARD PACKING OF THE WORLD



GARLOCK 237 COIL



GARLOCK
238 RINGS

Construction—GARLOCK Thorndyke Packing is manufactured from long fibre asbestos, braided square by the same method used in producing flax packing. It is lubricated and graphited throughout.

Service—Developed and recommended for service on the shafts of centrifugal and rotary pumps handling cold oil or gasoline.

Form—GARLOCK Thorndyke Packing is obtainable in two forms—GARLOCK 237 Coil and GARLOCK 238 Ring.

GARLOCK 238 Rings are cut from GARLOCK 237 Coil in any specified size to fit rod and stuffing box dimensions.

GARLOCK 237 Coil is manufactured in sizes from $\frac{1}{8}$ " to $1\frac{1}{4}$ ", advancing by sixteenths. Can be furnished in coil lengths or in continuous length on reel.

The table below indicates the number of coils, number of feet and approximate weight per box of a few standard sizes:

GARLOCK 237 Coil			
Size	Coils per Box	Feet per Box	Weight per Box
$\frac{1}{4}$ "	5	115 ft.	5 lbs.
$\frac{3}{8}$ "	4	108 $\frac{3}{4}$ ft.	10 $\frac{1}{2}$ lbs.
$\frac{1}{2}$ "	3	65 ft.	10 $\frac{1}{2}$ lbs.
$\frac{5}{8}$ "	3	44 $\frac{1}{4}$ ft.	12 $\frac{1}{2}$ lbs.
$\frac{3}{4}$ "	2	27 ft.	9 $\frac{1}{2}$ lbs.
$\frac{7}{8}$ "	2	22 $\frac{3}{4}$ ft.	10 $\frac{1}{2}$ lbs.
1"	1	19 $\frac{1}{4}$ ft.	13 $\frac{1}{2}$ lbs.

THE STANDARD PACKING OF THE WORLD  GARLOCK

ROTARY PUMP PACKINGS

PACIFIC SEMI-METALLIC PACKING

GARLOCK 644 COIL

GARLOCK 646 RING

Construction—Pacific Semi-Metallic Packing is manufactured from long fibre asbestos yarn and soft metal strands, braided square by the same method used in producing flax packing. It is thoroughly lubricated and graphited.

Service—Recommended for general service on centrifugal pumps.

Form—This material is supplied in two forms, GARLOCK 644 Coil and GARLOCK 646 Ring.

GARLOCK 646 Rings are cut from GARLOCK 644 and are furnished to fit any rod and stuffing box dimensions.

GARLOCK 644 Coil is manufactured in all pack sizes from $\frac{3}{8}$ " to $1\frac{1}{4}$ ", advancing by sixteenths.

The table below indicates the number of coils, number of feet and approximate weight per box of a standard sizes.

GARLOCK 644 COIL			
Size	Coils per Box	Feet per Box	Weight per Box
$\frac{1}{4}$ "	1	74 ft.	9 $\frac{1}{2}$ lbs.
$\frac{3}{8}$ "	1	36 ft.	10 $\frac{1}{2}$ lbs.
$\frac{1}{2}$ "	1	25 ft.	11 $\frac{1}{2}$ lbs.
$\frac{3}{4}$ "	1	14 $\frac{1}{2}$ ft.	10 lbs.
$\frac{1}{2}$ "	1	13 $\frac{1}{2}$ ft.	12 $\frac{1}{2}$ lbs.
$\frac{3}{4}$ "	1	10 ft.	12 $\frac{3}{4}$ lbs.

HORNBLLENDE ACID PACKING

GARLOCK 230 COIL

GARLOCK 231 RING

Construction—GARLOCK Hornblende Acid Packing is manufactured from pure Blue Cape asbestos, braided square by the same method used in producing flax packings. It receives a thorough lubrication and graphite treatment.

Service—Developed and recommended for service on the shafts of centrifugal and rotary pumps handling acids and strong chemical solutions.

Form—GARLOCK Hornblende Acid Packing is obtainable in two forms—GARLOCK 230 Coil and GARLOCK 231 Ring.

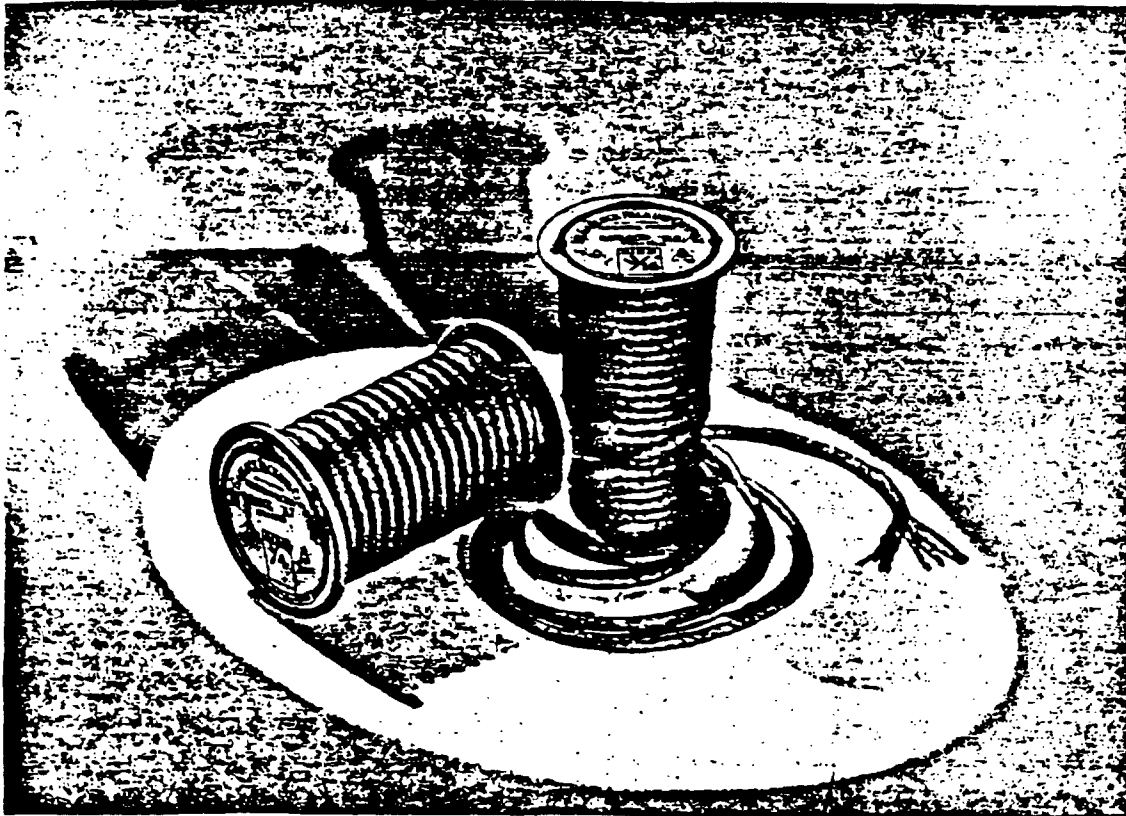
GARLOCK 231 Rings are cut from GARLOCK 230 Coil in any specified size to fit rod and stuffing box dimensions.

GARLOCK 230 Coil is manufactured in all pack sizes from $\frac{3}{8}$ " to $1\frac{1}{4}$ ", advancing by sixteenths. Can be furnished in coil lengths or in continuous length on reel.

The table below indicates the number of coils, number of feet and approximate weight per box of a standard sizes:

GARLOCK 230 COIL			
Size	Coils per Box	Feet per Box	Weight per Box
$\frac{1}{4}$ "	4	90 $\frac{1}{2}$ ft.	3 $\frac{3}{4}$ lbs.
$\frac{3}{8}$ "	3	81 ft.	10 $\frac{1}{2}$ lbs.
$\frac{1}{2}$ "	3	63 ft.	12 $\frac{1}{2}$ lbs.
$\frac{3}{4}$ "	2	32 ft.	11 $\frac{1}{2}$ lbs.
$\frac{1}{2}$ "	2	28 ft.	10 $\frac{1}{4}$ lbs.
$\frac{3}{4}$ "	2	22 ft.	13 $\frac{1}{2}$ lbs.
$\frac{1}{2}$ "	1	19 $\frac{1}{4}$ ft.	12 $\frac{3}{4}$ lbs.

GARLOCK  THE STANDARD PACKING OF THE WORLD



GARLOCK 117 ROUND BEAVER PACKING
GARLOCK 115 SQUARE BEAVER PACKING

Construction—GARLOCK Beaver Packing is manufactured from long fibre asbestos yarn, thoroughly lubricated with a heat-resisting compound and graphite.

Service—Recommended for use on stems of globe and angle valves operating against high-pressure steam, hot or cold water, or oil.

Form—GARLOCK 117 Round Beaver Packing is furnished either braided or twisted as specified. GARLOCK 115 Square Beaver Packing is furnished braided

only. All styles are made in standard sizes from $\frac{1}{8}$ " to $\frac{3}{4}$ ", advancing by sixteenths.

GARLOCK 117 and GARLOCK 115 are packaged on 1-pound, 2-pound and 5-pound spools. Maximum size packaged on 1-pound spools is $\frac{3}{8}$ "; maximum size on 2-pound spools is $\frac{1}{2}$ "; sizes in excess of $\frac{1}{2}$ " are packaged on 5-pound spools.

Approximate weight per hundred feet of some standard sizes of GARLOCK 117 Round Beaver Packing, both braided and twisted, are listed below:

GARLOCK 117 Braided	
Size	Weight per Hundred Feet
$\frac{1}{8}$ "	.25 lbs.
$\frac{1}{16}$ "	.875 lbs.
$\frac{3}{16}$ "	3.5 lbs.
$\frac{1}{4}$ "	7.125 lbs.
$\frac{5}{16}$ "	14.125 lbs.
$\frac{3}{8}$ "	20.125 lbs.
$\frac{1}{2}$ "	28.125 lbs.

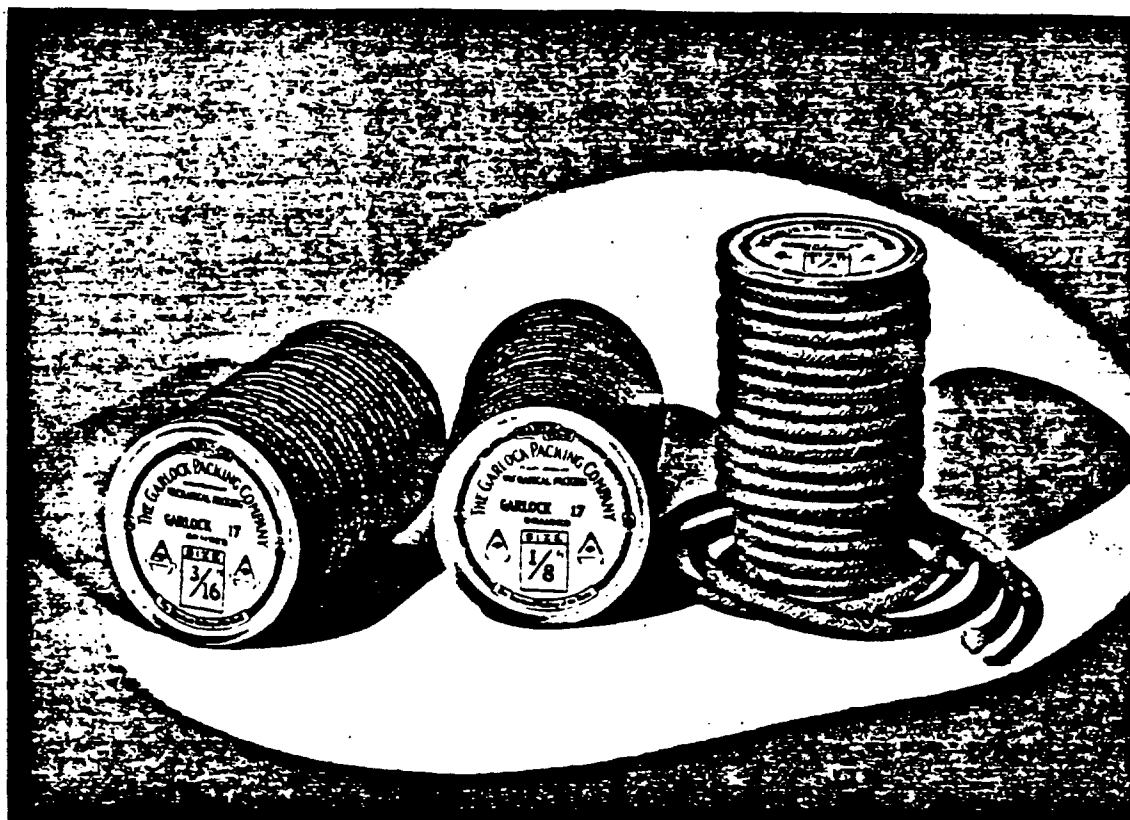
GARLOCK 117 Twisted	
Size	Weight per Hundred Feet
$\frac{1}{8}$ "	.3125 lbs.
$\frac{1}{16}$ "	1.125 lbs.
$\frac{3}{16}$ "	4.0625 lbs.
$\frac{1}{4}$ "	7.575 lbs.
$\frac{5}{16}$ "	12.75 lbs.
$\frac{3}{8}$ "	19.875 lbs.
$\frac{1}{2}$ "	30.0625 lbs.

THE STANDARD PACKING OF THE WORLD



GARLOCK

ALABESTINE PACKING



GARLOCK 17

Construction—GARLOCK 17 is a braided asbestos packing, produced from Canadian long fibre asbestos yarn. It is treated with a heat-resisting compound and is regularly supplied with a surface lubrication of graphite.

Service—A satisfactory valve stem packing for use on small angle and globe valves, or any mechanical equipment where the stuffing boxes are small and difficult to keep steam tight. Will give long service in high-pressure work.

Form—This material is regularly furnished round in cross section. It can be furnished, however, in square form if desired; standard sizes from $\frac{1}{8}$ " to $1\frac{1}{4}$ ", advancing by thirty-seconds.

Usual method of packaging is on 1, 2 or 5-pound spools. Maximum size supplied on 1-pound spools $\frac{3}{8}$ "; maximum size on 2-pound spools is $\frac{1}{2}$ ". All sizes in excess of $\frac{1}{2}$ " are furnished on 5-pound spools.

Approximate weights per hundred feet of a few standard round sizes are listed below:

GARLOCK 17			
Size	Weight per Hundred Feet	Size	Weight per Hundred Feet
$\frac{1}{16}$ "	.1875 lbs.	$\frac{3}{8}$ "	14.375 lbs.
$\frac{1}{8}$ "	.5 lbs.	$\frac{7}{16}$ "	21.5 lbs.
$\frac{3}{16}$ "	2.375 lbs.	$\frac{1}{2}$ "	29.125 lbs.
$\frac{1}{4}$ "	5.125 lbs.	$\frac{9}{16}$ "	37.875 lbs.
$\frac{5}{16}$ "	7.875 lbs.	1"	

GARLOCK  **THE STANDARD PACKING OF THE WORLD**

MILL PACKING—WIRE COVERED

GARLOCK 247 COIL

GARLOCK 250 RING

Construction—GARLOCK Mill Packing—Wire Covered—consists of a braided core of wire inserted asbestos yarn, with a cover of fine copper wire. Both the core and the copper wire cover are made by the braid over braid method. The packing is regularly supplied lubricated and graphited.

Service—Recommended for steam and oil conditions at high temperatures and for the piston rods of gas engines.

Form—GARLOCK Mill Packing—Wire Covered—is

produced in two forms—GARLOCK 247 Coil and GARLOCK 250 Ring.

GARLOCK 250 Rings are cut from GARLOCK 247 Coil in any specified size to fit rod and stuffing box.

GARLOCK 247 Coil is furnished in all packing sizes from $\frac{1}{4}$ " to $1\frac{1}{2}$ ", advancing by sixteenths. In addition to coil lengths, it can also be furnished in continuous length on reels.

Approximate footage and weight per box of a few standard sizes are listed below:

GARLOCK 247 COIL			
Size	Coils per Box	Feet per Box	Weight per Box
$\frac{1}{4}$ "	4	128 ft.	10 lbs.
$\frac{3}{8}$ "	3	57 ft.	10 lbs.
$\frac{1}{2}$ "	3	39 $\frac{1}{4}$ ft.	10 lbs.
$\frac{5}{8}$ "	3	27 ft.	10 lbs.
$\frac{3}{4}$ "	2	18 ft.	10 lbs.
$\frac{7}{8}$ "	2	13 ft.	10 lbs.
1"	2	10 $\frac{1}{2}$ ft.	10 lbs.

MILL PACKING

GARLOCK 248 COIL

GARLOCK 251 RING

Construction—GARLOCK Mill Packing is manufactured from high-grade, wire inserted asbestos yarn. It is braided square by the braid over braid method and is regularly supplied lubricated and graphited.

Service—Recommended for steam and oil conditions at high temperatures and for the piston rods of gas engines.

Form—GARLOCK Mill Packing is produced in two forms—GARLOCK 248 Coil and GARLOCK 251 Ring.

GARLOCK 251 Rings are cut from GARLOCK 248 Coil in any specified size to fit rod and stuffing box dimensions.

GARLOCK 248 Coil is furnished in all packing sizes from $\frac{3}{8}$ " to $1\frac{1}{2}$ ", advancing by sixteenths. In addition to coil lengths, it can also be furnished in continuous length on reels.

Approximate footage and approximate weight per box of a few standard sizes are indicated below:

GARLOCK 248 COIL			
Size	Coils per Box	Feet per Box	Weight per Box
$\frac{1}{4}$ "	5	190 ft.	10 lbs.
$\frac{3}{8}$ "	3	84 ft.	10 lbs.
$\frac{1}{2}$ "	3	46 $\frac{1}{2}$ ft.	10 lbs.
$\frac{5}{8}$ "	3	30 ft.	10 lbs.
$\frac{3}{4}$ "	2	20 ft.	10 lbs.
$\frac{7}{8}$ "	2	15 $\frac{1}{2}$ ft.	10 lbs.
1"	2	13 ft.	10 lbs.

THE STANDARD PACKING OF THE WORLD  GARLOCK

ASBESTOS PACKINGS WITH WIRE

FURNACE DOOR PACKING

GARLOCK 252

Construction—GARLOCK 252 consists of a braided core of wire inserted asbestos yarn with a braided cover of fine copper wire. It is unlubricated.

Service—Recommended for use on furnace doors in

steel mills, glass plants, blast furnaces and foundries.

Form—GARLOCK 252 is furnished in all packing sizes from $\frac{1}{4}$ " to $1\frac{1}{2}$ " advancing by sixteenths; supplied in coil lengths or in continuous lengths on reels.

EXPANSION JOINT AND VALVE PACKING

GARLOCK 256

Construction—GARLOCK 256 is a copper wire inserted asbestos packing braided square and lubricated with a high-grade mineral oil and graphited throughout. The amount of lubricant in the packing is carefully controlled, providing ample for lubrication of moving parts but eliminating excess lubrication which is undesirable in service against high temperatures and pressures.

Service—GARLOCK 256 is recommended for general high temperature service, particularly on expansion joints and as a stem packing on steel valves.

Form—GARLOCK 256 Coil is supplied in all packing sizes from $\frac{3}{8}$ " to $1\frac{1}{4}$ " advancing by sixteenths. GARLOCK 256 Rings are supplied in any specified size.

WIRE WOUND PACKING

GARLOCK 114 COIL

GARLOCK 116 RING

Construction—GARLOCK 114 is a high-grade asbestos packing having a non-vulcanizing rubber core and a cover of braided copper wire.

Service—Recommended for service on all engines exposed to the weather, such as deck engines in marine service.

Form—GARLOCK 114 Coil is regularly furnished oval

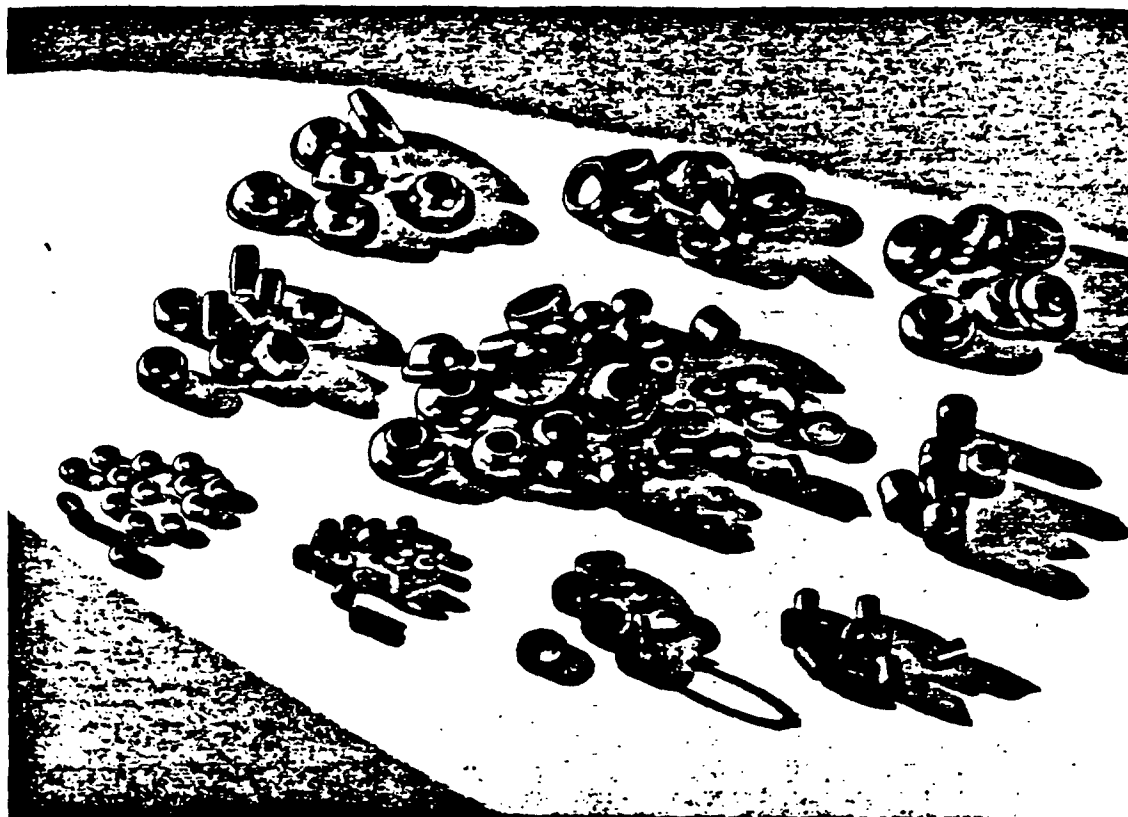
in cross section, but is also obtainable in round or square cross section. Standard sizes from $\frac{1}{4}$ " to

GARLOCK 116 Rings, cut from GARLOCK 114 Coil, furnished in any specified size.

Approximate weight and footage per box of standard sizes are shown below:

GARLOCK 114 COIL			
Size	Coils per Box	Feet per Box	Weight per Box
$\frac{1}{4}$ "	3	180 ft.	10 lbs.
$\frac{3}{8}$ "	3	60 ft.	10 lbs.
$\frac{1}{2}$ "	2	32 ft.	10 lbs.
$\frac{5}{8}$ "	2	27 ft.	10 lbs.
$\frac{3}{4}$ "	2	20 ft.	10 lbs.
$\frac{7}{8}$ "	2	17 $\frac{1}{2}$ ft.	10 lbs.
1"	1	11 $\frac{1}{2}$ ft.	10 lbs.

GARLOCK  THE STANDARD PACKING OF THE WORLD



GARLOCK 166 RINGS

Construction—GARLOCK 166 Silvex Molded Rings are manufactured from a combination of asbestos, powdered aluminum, graphite and neoprene, molded into accurately sized rings with exceedingly smooth surface finish. The dense, semiflexible compound from which these rings are formed is an exclusive development of The GARLOCK Packing Company.

Service—Because of their noncorrosive qualities, their resistance to hot and cold water, steam, gasoline, kerosene, oils, refrigerating gases and mild acids, and their ability to withstand temperatures up to 750° F., GARLOCK 166 Rings are suitable for universal application on almost any equipment requiring an accurately fitting, easily assembled packing. Common usages for these rings are on electric refrigerators; gas, gasoline and kerosene lamps, stoves, heaters and other

appliances; automobile fittings; and small valves, faucets or cocks of every description.

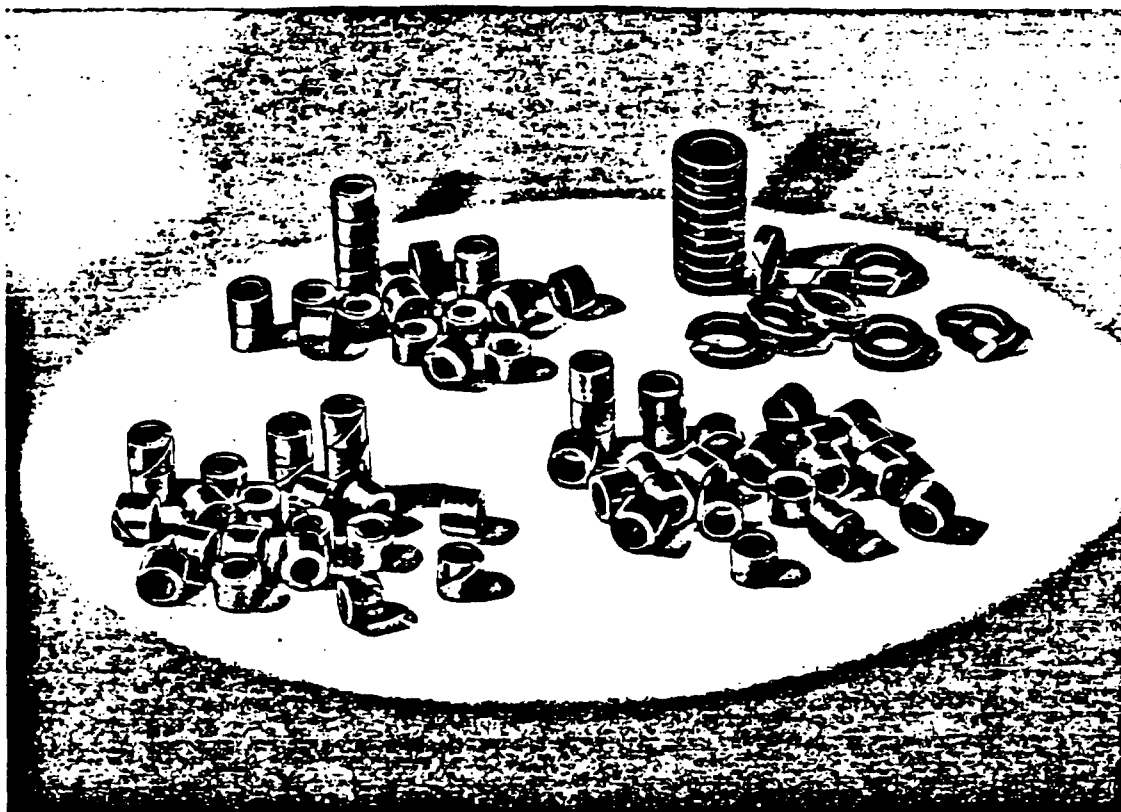
Form—GARLOCK 166 Silvex Rings are furnished in solid rings only. They are not furnished cut open. Size limitations applying to these rings are: minimum inside diameter $\frac{5}{16}$ "; maximum inside diameter $1\frac{1}{2}$ "; minimum outside diameter $\frac{3}{16}$ "; maximum outside diameter 2"; minimum wall thickness (packing space) $\frac{3}{16}$ "; minimum ring thickness (depth) $\frac{1}{8}$ ".

Beveled rings, and rings with radii or curved surfaces to fit contours of curved fittings, are obtainable. Odd shapes, which are practicable from a manufacturing standpoint, are obtainable.

GARLOCK 166 Rings are supplied in minimum quantities of 500 rings of one size on a single order.

THE STANDARD PACKING OF THE WORLD  GARLOCK

MOLDED VALVE RINGS



GARLOCK 160—RUBBERIZED
GARLOCK 161—WAXED

GARLOCK 162—FOR GASOLINE
GARLOCK 163—OIL AND GRAPHITE

Construction—GARLOCK 160, 161, 162, and 163 Molded Valve Rings are manufactured from braided, wire inserted asbestos stock, formed around a crinkled lead center. Each ring is molded to exact size and shape. All rings have graphite finish.

Service—These molded valve rings are recommended for use on valves, faucets, steam traps and power appliances or specialties of all kinds.

GARLOCK 160 Rings are suitable for steam, hot or cold water, and acids.

GARLOCK 161 Rings, which are relatively soft, are recommended for cold water applications.

GARLOCK 162 Rings are specially treated for gasoline service.

GARLOCK 163 Rings are for application to brass valves or fittings in steam, hot or cold water, or acid

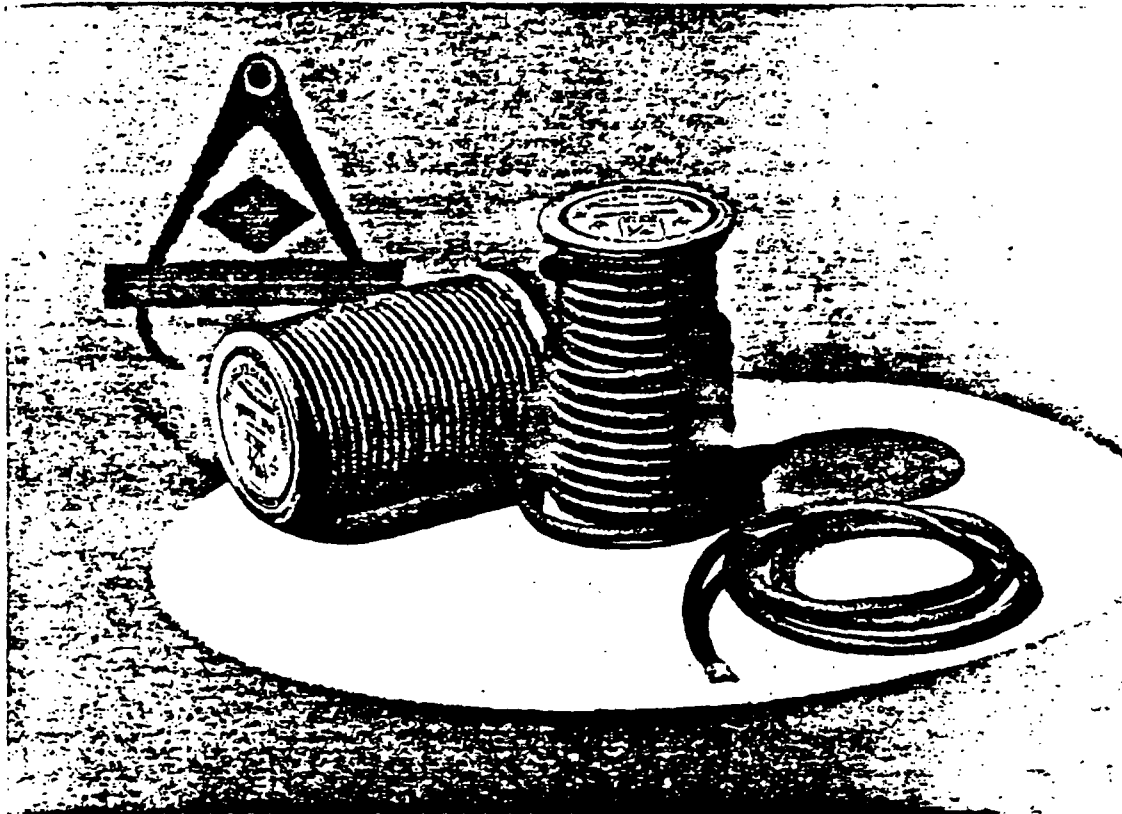
service.

Form—All types of these rings are available in large range of sizes. All rings are cut open with a bevel joint. Solid rings are not furnished.

Orders for small quantities are accepted subject to a special charge to cover the expense of machine setup.

Coil Form—GARLOCK 160, 161, 162 and 163 material is also available in coil form, packaged on one-pound, two-pound and five-pound spools. Coil is furnished square or rectangular in cross section and is governed by the following size limitations: minimum packing space is $\frac{1}{8}$ "; minimum thickness is $\frac{1}{8}$ "; maximum packing space is $\frac{1}{4}$ "; maximum thickness is not less than the width of the packing space and may be increased within reasonable limitations.

GARLOCK  **THE STANDARD PACKING OF THE WORLD**



GARLOCK 1700

Construction—GARLOCK 1700 is braided from Canadian long fibre asbestos yarn. It receives an external graphite treatment.

Service—Recommended for service on locomotive cab cocks and on other valve stems handling high-temperature and superheated steam and oils. It is also recommended for use on valve stems operating on acid lines.

Form—GARLOCK 1700 is furnished round in cross

section; standard sizes from $\frac{1}{8}$ " to $1\frac{1}{4}$ ", advancing by thirty-seconds.

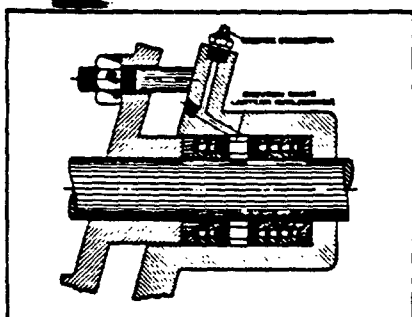
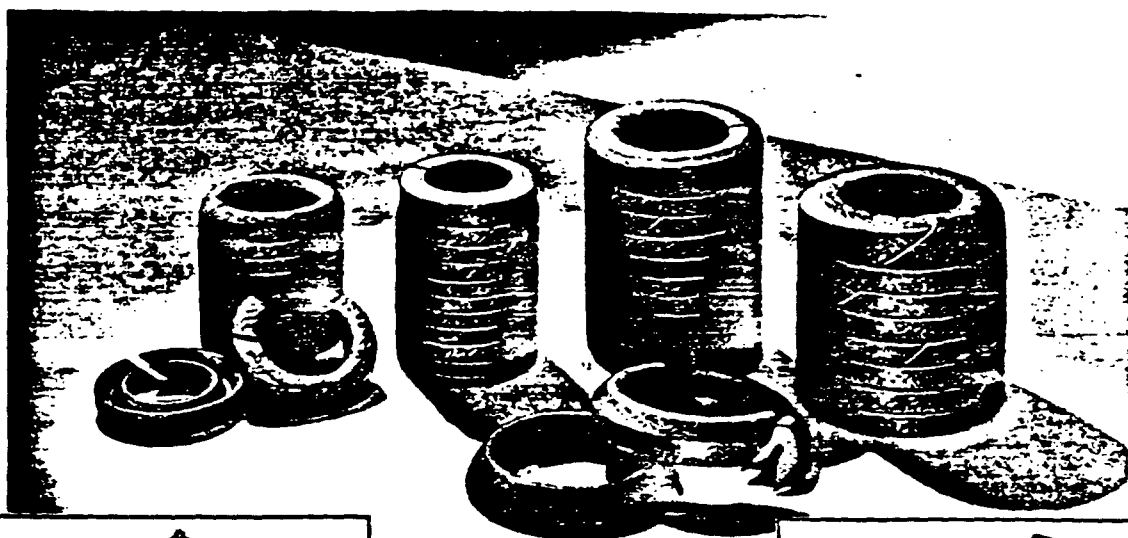
Regularly furnished on 1-pound, 2-pound or 5-pound spools. Maximum size packaged on 1-pound spools is $\frac{3}{8}$ "; maximum size on 2-pound spools, $\frac{1}{2}$ ". Sizes in excess of $\frac{1}{2}$ " are furnished on 5-pound spools.

Approximate weights per hundred feet of a few standard sizes of GARLOCK 1700 are listed below:

GARLOCK 1700			
Size	Weight per Hundred Feet	Size	Weight per Hundred Feet
$\frac{1}{8}$ "	.25 lbs.	$\frac{1}{2}$ "	7.625 lbs.
$\frac{1}{4}$ "	.5625 lbs.	$\frac{3}{4}$ "	12. lbs.
$\frac{3}{8}$ "	2.375 lbs.	$\frac{1}{2}$ "	18.875 lbs.
$\frac{1}{2}$ "	4.75 lbs.		

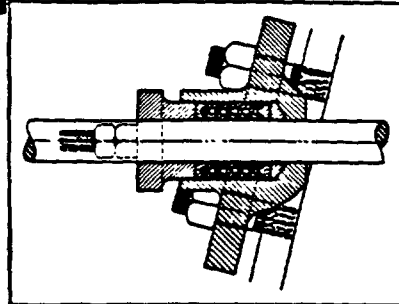
THE STANDARD PACKING OF THE WORLD  GARLOCK

CHEVRON THROTTLE PACKING



CHEVRON
THROTTLE
PACKING
WITH
GREASE
LANTERN

GARLOCK 530 CHEVRON



TYPICAL
APPLICATION
OF
CHEVRON
THROTTLE
PACKING

Construction—GARLOCK 530 Chevron Throttle Packing is manufactured only by The GARLOCK Packing Company. Special asbestos cloth and GARLOCK rubber friction are molded under heavy pressure into the unique and exclusive Chevron shape. The hinge-like design of Chevron results in a packing entirely automatic in action. The greater the pressure on Chevron rings the tighter they pack.

Form—Chevron Throttle Packing is furnished only in sets to exact throttle stem and stuffing box sizes. Each set contains a top and bottom adapter ring and a sufficient number of intermediate Chevron rings to produce a set of the specified depth. The top and bottom rings are formed to adapt themselves either to flat or beveled gland and stuffing box.

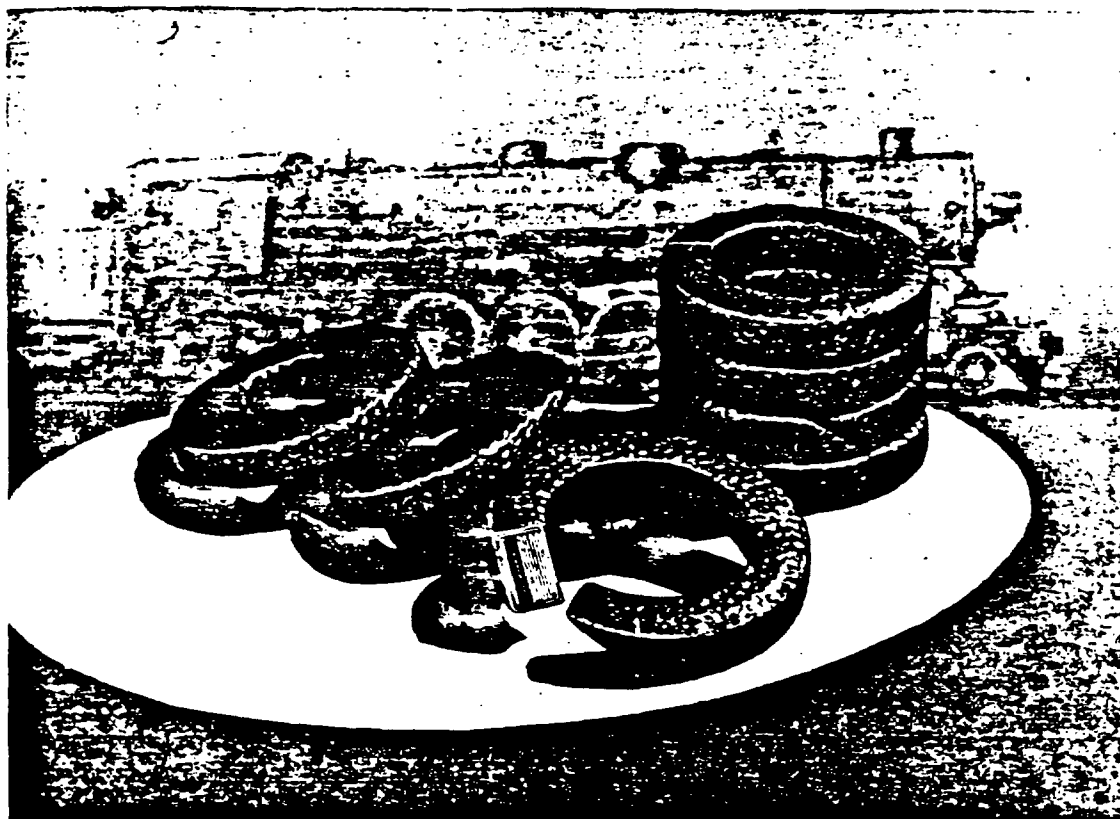
For best service on locomotive throttles, Chevron sets should not exceed 3" in depth. When applying Chevron, therefore, it is recommended that deeper boxes be bushed to 3" in depth. This will result in the best Chevron installation and will effect a reduction

in the amount of throttle packing required per locomotive.

Chevron Throttle Packing is frequently installed with a grease lantern ring and a connection for a grease gun. An installation of this type, which permits the introduction of lubricant into the stuffing box, results in longer packing life and easier operation of throttles. It represents the most desirable locomotive throttle packing arrangement.

Application—Because Chevron packing is automatic in action, heavy gland pressure is not required. After applying bottom ring, the Chevron rings should be applied one at a time and rings seated individually by using a flat tool or stick. The recess or V in the Chevron rings must be toward the pressure. Complete the application by adding the top ring. Draw up enough on gland to make sure the entire set is firmly seated in the stuffing box but do not apply excessive gland pressure on the packing at any time. To do so interferes with its automatic action.

GARLOCK  THE STANDARD PACKING OF THE WORLD



GARLOCK 2000

LOCOMOTIVE THROTTLE PACKING

GARLOCK 2000

Construction—GARLOCK 2000 is a set packing composed of rings of GARLOCK 200 High Pressure Asbestos Packing.

Service—Recommended for application to throttle stuffing boxes on locomotives. It is particularly suitable for throttle boxes located above the water line.

Form—GARLOCK 2000 is furnished in a complete range of sizes for locomotive throttle installations.

In ordering, the diameter of the rod, the inside diameter of the stuffing box and depth of stuffing box should be given.

LOCOMOTIVE THROTTLE DUO PACKING

GARLOCK 3200

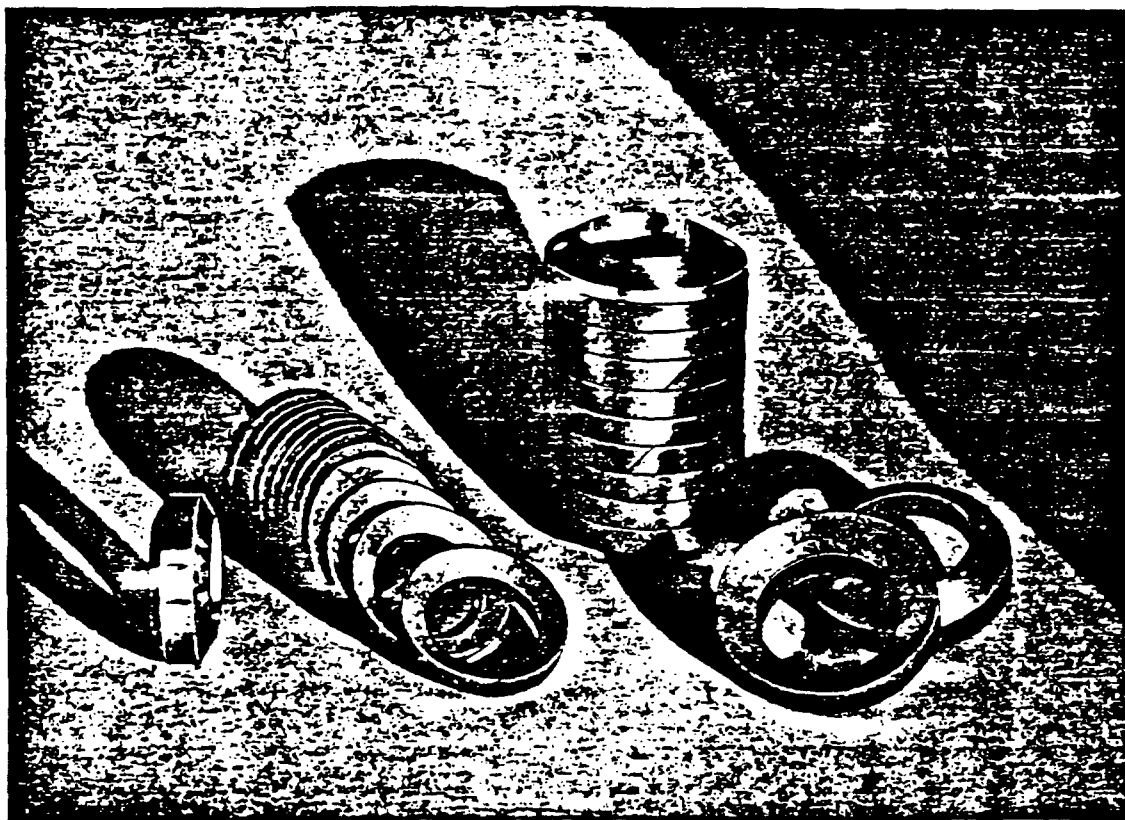
Construction—GARLOCK 3200 is a combination packing consisting of GARLOCK 200 High Pressure Asbestos Packing with a soft metal insertion, duck and rubber ring at the bottom of the set.

Service—Recommended for service in throttle stuffing boxes on locomotives. It is particularly suitable for throttle boxes located below the water line.

Form—GARLOCK 3200 is furnished in a complete range of sizes for locomotive throttle installations.

In ordering, the diameter of the rod, the inside diameter of the stuffing box and depth of stuffing box should be given.

THE STANDARD PACKING OF THE WORLD  GARLOCK



GARLOCK 9001

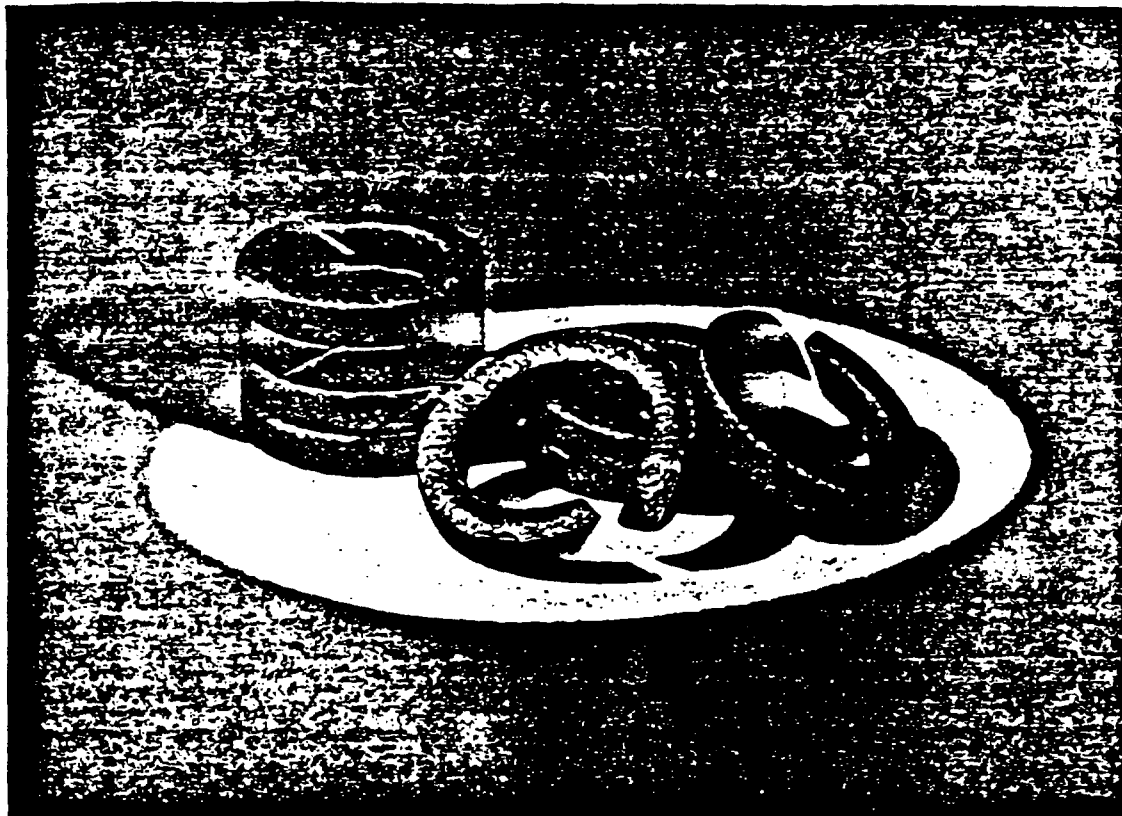
Construction—GARLOCK 9001 is a special packing put up in sets, each complete set consisting of a series of concave-convex shredded metal rings, molded from strands of metal floss suitable for service against temperatures up to 1500° F., and a throat or adapter ring made either of bronze or of the regular 9001 material, as specified.

Service—GARLOCK 9001 was developed and is intended specifically for service on American Multiple Throttles.

Form—Complete sets of GARLOCK 9001 are supplied in the several sizes required to pack properly the various American Multiple Throttles designated respectively, Types A, B, C, D, E and F. Types A, C and D are furnished with bronze adapter or throat rings, and Types E and F are furnished with adapter rings made of 9001 material unless otherwise specified. Orders should show Superheater Company blueprint or card number.

For replacement service, additional 9001 concave-convex rings are obtainable without adapter rings.

GARLOCK  THE STANDARD PACKING OF THE WORLD



GARLOCK 2200

LOCOMOTIVE AIR PUMP PACKING

GARLOCK 2200

Construction—GARLOCK 2200 is a set packing composed of rings of GARLOCK High Pressure Asbestos Packing.

Service—Recommended for application to either the air or steam end of Westinghouse and New York Air Pumps.

Form—GARLOCK 2200 is furnished in all standard sizes for Westinghouse and New York Air Pumps. In

ordering GARLOCK 2200 for Westinghouse equipment, the size of the pump should be specified; for New York equipment, the number of the pump should be specified.

A package of GARLOCK 2200 contains sufficient packing for one stuffing box only. When ordering for a complete pump installation, it, therefore, is necessary to indicate that a complete set is desired.

GARLOCK 2245

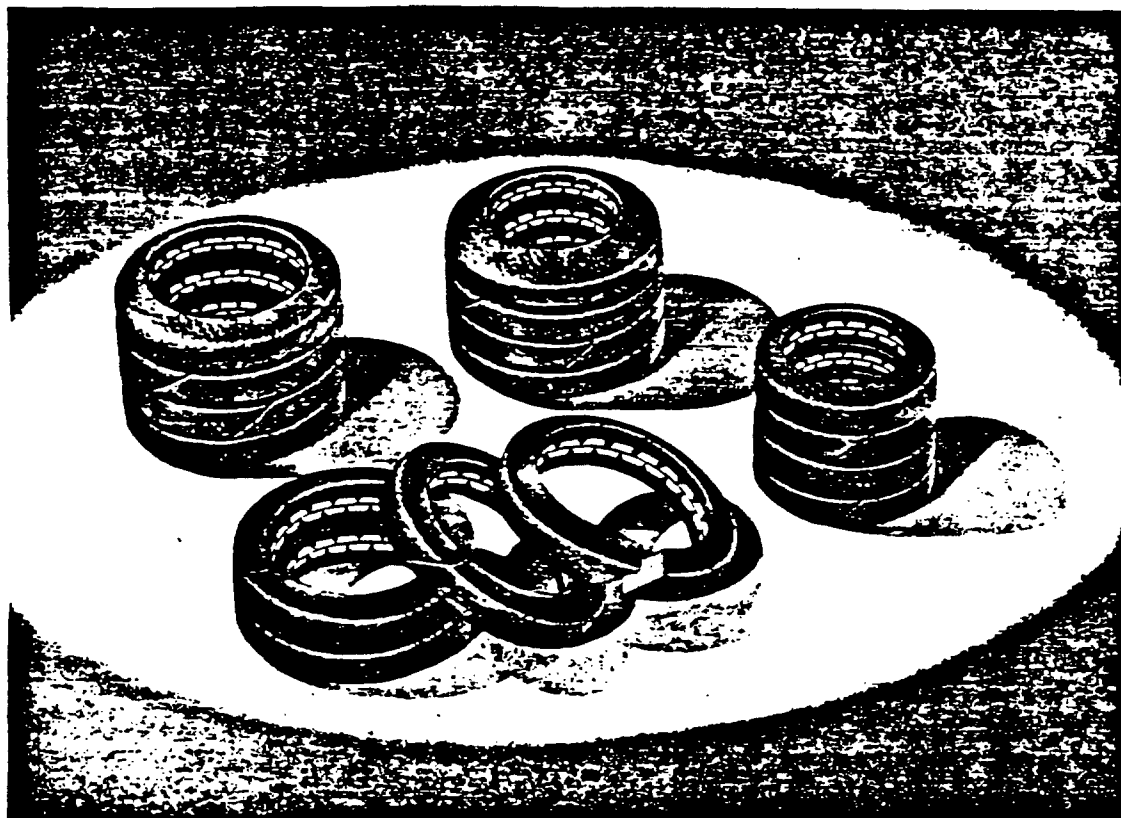
Construction—GARLOCK 2245 is a set packing composed of rings of braided asbestos construction. The inner braiding of these rings consists of wire inserted yarn, and the outer braid is woven from pure asbestos yarn. The lubricating and graphite treatment which this material receives results in a flexible packing capable of withstanding high temperatures.

Service—Recommended for service on either the air or steam end of Westinghouse and New York Air Pumps.

Form—GARLOCK 2245 is furnished in all standard sizes for Westinghouse and New York Air Pumps. In ordering GARLOCK 2245 for Westinghouse equipment, the size of the pump should be specified; for New York equipment, the number of the pump should be specified.

A package of GARLOCK 2245 contains sufficient packing for one stuffing box only. When ordering for a complete pump installation, it, therefore, is necessary to indicate that a complete set is desired.

THE STANDARD PACKING OF THE WORLD  GARLOCK



GARLOCK 377

LOCOMOTIVE AIR PUMP PACKING

GARLOCK 377

Construction—GARLOCK 377 sets for air pumps are composed of rings of the asbestos and soft metal packing described on page 25.

Service—Recommended for service on air and steam rods of Westinghouse and New York Air Pumps.

Form—GARLOCK 377 Air Pump Packing is furnished in standard size sets for all Westinghouse and New York Pumps. When ordering for Westinghouse equipment the size of the pump should be specified; for New York equipment, specify the number of the pump. Each package contains sufficient packing for one stuffing box only.

GARLOCK 928
(Copper Jacketed)

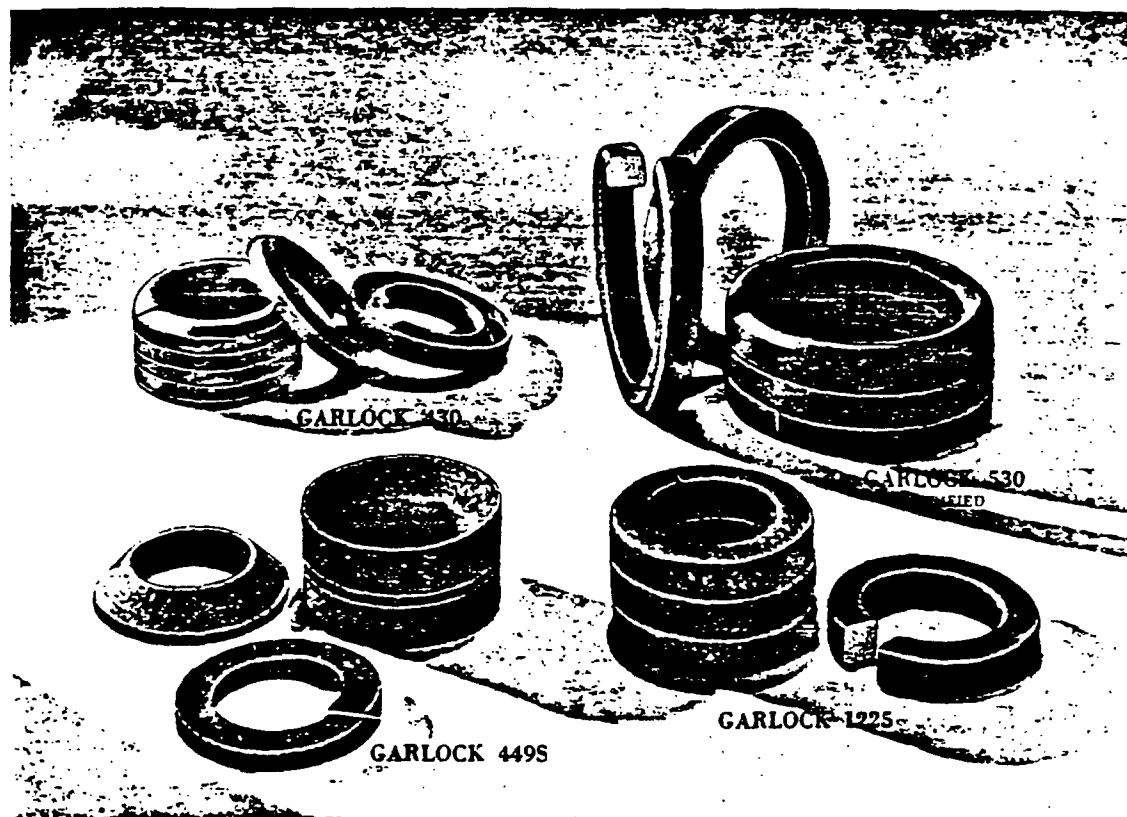
Construction—GARLOCK 928 Locomotive Air Pump Packing is made from the special, heat resistant, plastic material described on page 92, over which has been braided a strong, single cover or jacket of copper wire.

Service—This material is recommended for application to steam and air rods of Westinghouse and New

York air pumps and is particularly durable in the severe service.

Form—GARLOCK 928 Air Pump Packing is furnished in complete sets for all locomotive air pumps. When ordering for Westinghouse equipment the size of the pump should be specified; for New York pump specify the number of the pump. Each package or set contains sufficient packing for one stuffing box only.

GARLOCK  **THE STANDARD PACKING OF THE WORLD**



LOCOMOTIVE POWER REVERSE GEAR ROD AND TRUNK PACKINGS

GARLOCK packings are packaged in sets to fit all types of locomotive power reverse gears. Set packings particularly recommended for use on the several different gears are listed below.

Alco Gears—GARLOCK 449S, which is a combination of GARLOCK 333 and 550 duck and rubber rings, has been used on Alco gears for many years.

For types E, G and H Alco gears, GARLOCK 430 Chevron packing is highly recommended. For Type K Alco, GARLOCK 530 modified Chevron is recommended.

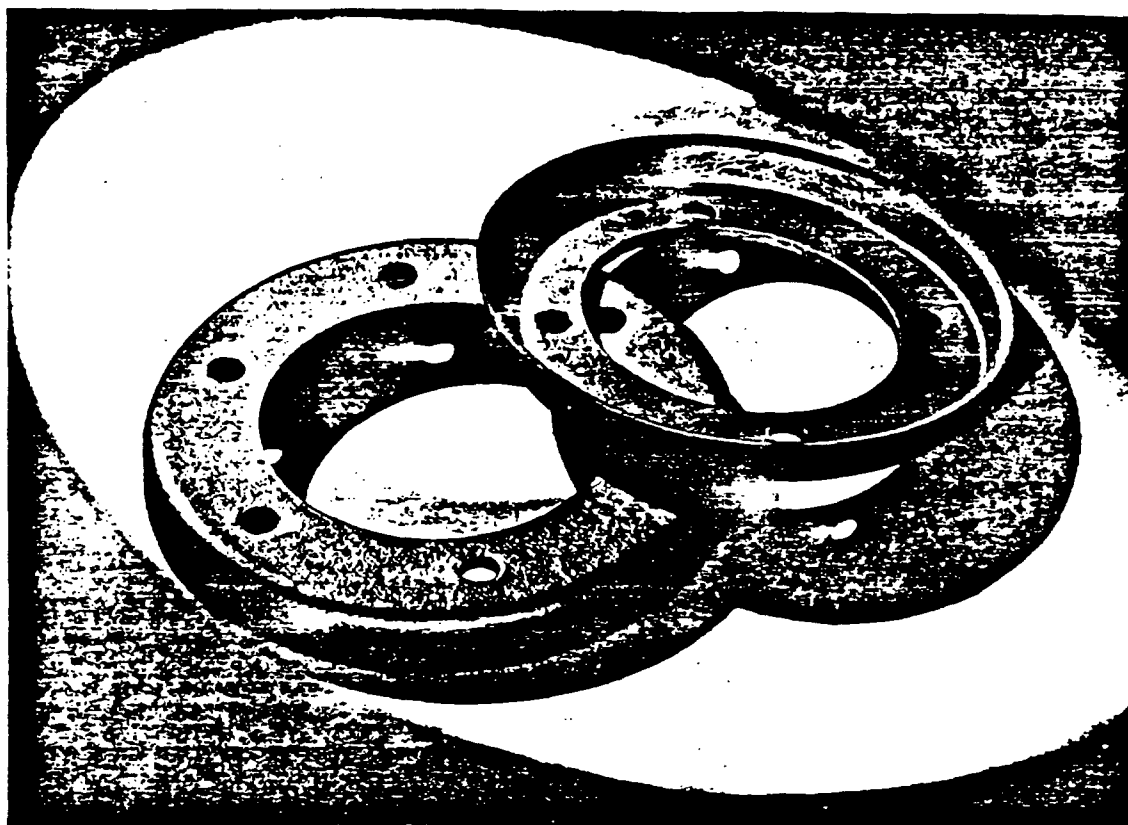
Barco Gears—For Barco gears GARLOCK 530 modified Chevron is recommended.

Franklin and Precision Gears—For Precision gears and for Franklin Types E and G gears, GARLOCK 530 modified Chevron is recommended and extensively used.

Ragonnet Gears—GARLOCK 1225 has been used extensively on Ragonnet gears for many years. This packing is a combination of GARLOCK 222 and GARLOCK 235 asbestos ring packings. An improved packing for both Type A and B Ragonnet gears is GARLOCK 430 Chevron. This material is recommended for these gears.

When ordering packing for any reverse gear specify the kind and type of gear, style of packing and number of sets required.

THE STANDARD PACKING OF THE WORLD  GARLOCK



GARLOCK 813-A

POWER REVERSE GEAR CUPS

Construction—GARLOCK 813-A Cups are manufactured from GARLOCK asbestos cloth, frictioned with a high-grade heat and oil resistant compound. They are molded to the desired size and shape.

Service—Recommended for service on all types of reverse gear pistons.

Form—GARLOCK Power Reverse Gear Cups are furnished in a complete range of sizes to fit all reverse gears, including Ragonnet, Precision, Alco and Lewis.

When ordering, the size of cylinder and make of the reverse gear should be specified.

POWER REVERSE GEAR CYLINDER PACKING

GARLOCK 812

Construction—GARLOCK 812 is a duck and rubber packing constructed with diagonal plies and molded rectangular in cross section. It is lubricated and graphited.

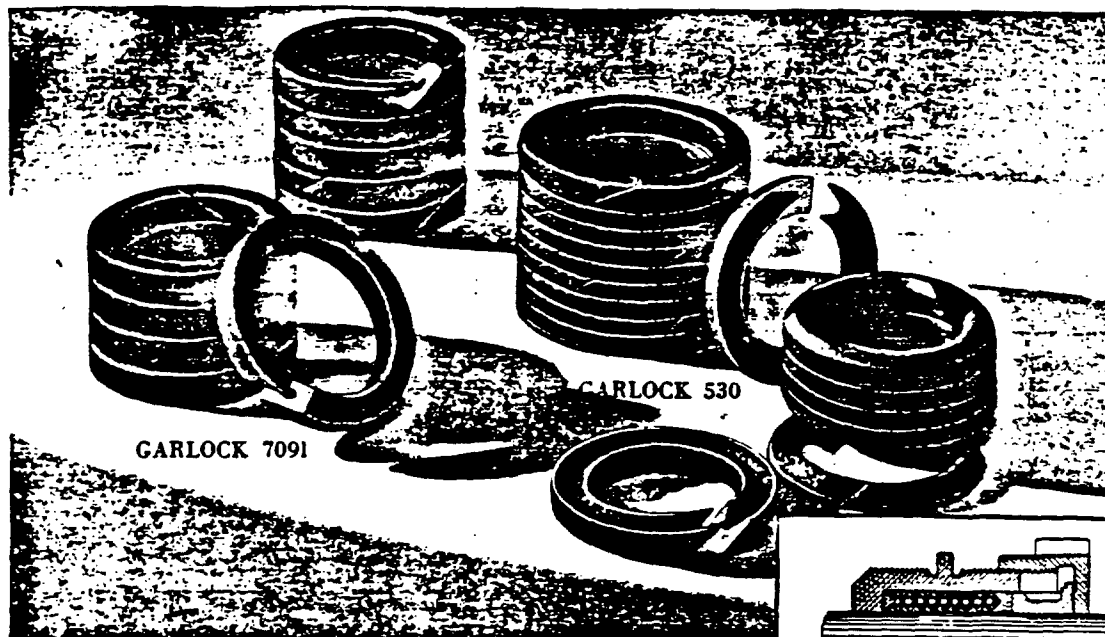
Form—GARLOCK 812 is furnished in ring form, molded to proper sizes to fit reverse gear cylinders. It is obtainable either in single rings or in sets to the proper depth.

GARLOCK 1200

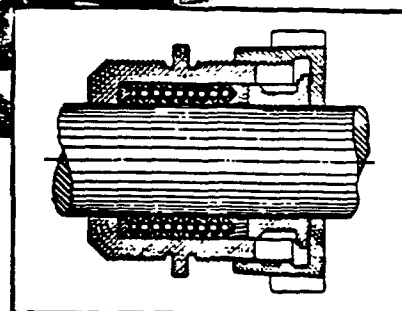
Construction—GARLOCK 1200 is a braided asbestos packing molded rectangular in cross section and lubricated with a heat-resisting compound and graphite.

Form—GARLOCK 1200 is furnished in ring form, molded to proper sizes to fit reverse gear cylinders. It can be obtained either in single rings, or in sets to the proper depth.

GARLOCK  **THE STANDARD PACKING OF THE WORLD**



GARLOCK 530
APPLIED TO FEED
WATER PUMP



LOCOMOTIVE FEED WATER HEATER PUMP ROD PACKINGS

ELESCO PUMPS GARLOCK 530

GARLOCK 530 Chevron packing is recommended for the steam and water rods of Elesco Pumps. This material is fully described on page 81.

For Elesco pumps, GARLOCK 530 is packaged in sets of exact size to fit the rod and stuffing box. When ordering specify whether for standard or undersize rod. If for undersize rod advise whether diameter is $\frac{1}{8}$ ", $\frac{1}{8}$ " or $\frac{1}{4}$ " undersize.

GARLOCK 377

GARLOCK 377 is also used extensively on Elesco pumps. This packing, which is fully described on page 25, has a soft metal wearing surface with asbestos back and side walls. For this service GARLOCK 377 is packaged in sets to rod and stuffing box sizes.

WORTHINGTON PUMPS GARLOCK 530

GARLOCK 530 Chevron packing, as fully described on page 81, is recommended for steam and water rods of Worthington pumps.

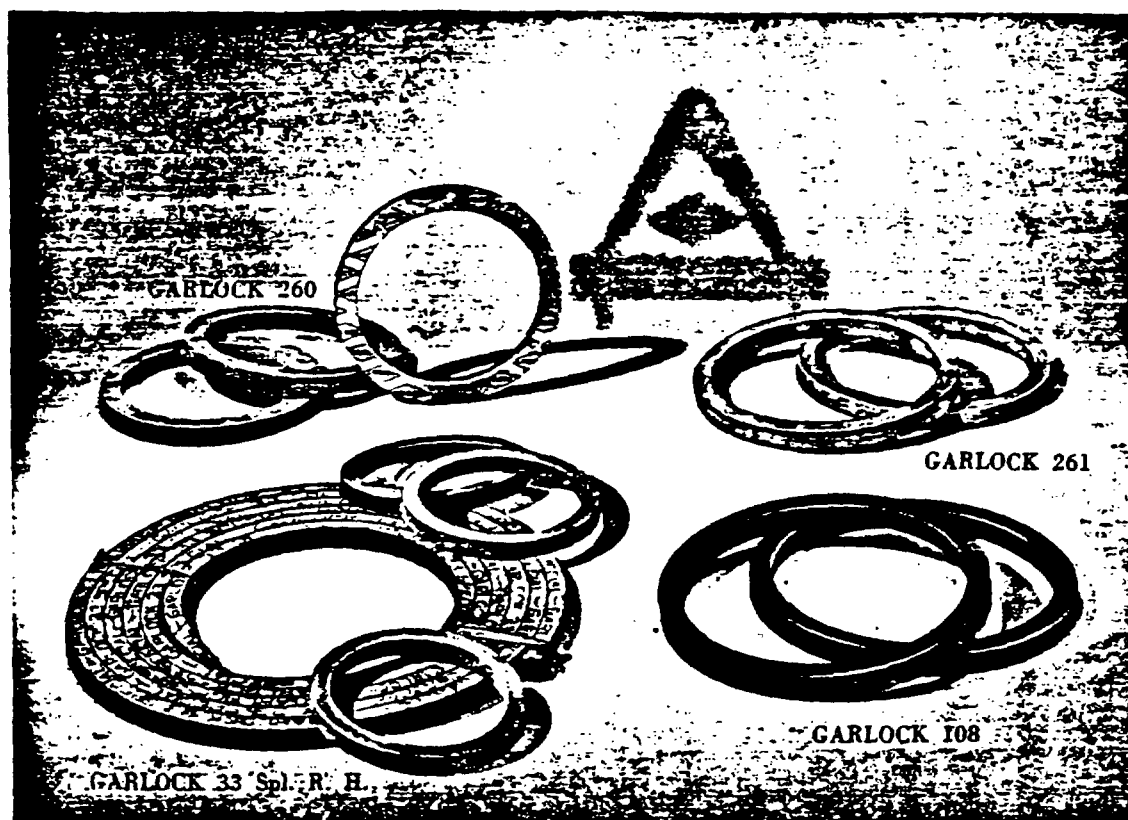
GARLOCK 530 is packaged in sets to fit standard and undersize rods of all Worthington pumps. When ordering specify type of pump and give rod diameter.

GARLOCK 7091

GARLOCK 7091 also is used on these pumps. This is a square duck packing with red rubber core and is lubricated and graphited. Furnished in coil or spiral, or in rings cut and formed to specified rod and stuffing box dimensions.

THE STANDARD PACKING OF THE WORLD  GARLOCK

46 FEED WATER PUMP CYLINDER PACKINGS



ELESCO PUMPS

For follower type pistons GARLOCK 261 Cut Open Rings or GARLOCK 33 Special Rock Hard Coil or Rings are used. Rings are packaged in sets of 3 rings each to fit CF-1, CF-2 or W-6½ pumps, either for standard or oversize cylinders.

For grooved type pistons GARLOCK 260 Rock Hard

Solid Rings are recommended. These rings are made of the same material as GARLOCK 261 except that they are cured rock hard. Packaged in 3-ring sets to fit CF-1, CF-2 and W-6½ pumps, standard or oversize cylinders. Before applying, rings must be machined to proper cylinder fit, then cut open and soaked in hot water.

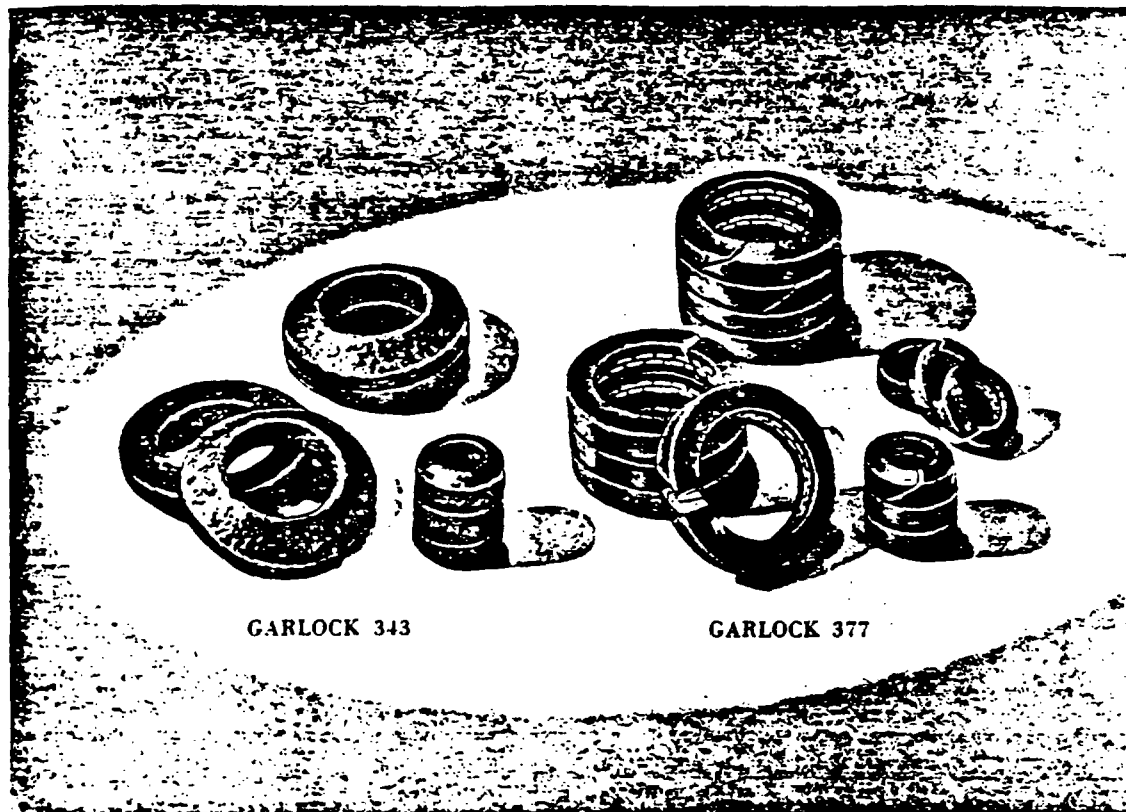
WORTHINGTON PUMPS

For follower type pistons GARLOCK 33 Special Rock Hard is recommended. This packing is produced of special materials and by carefully controlled methods which result in a product having minimum expansion in hot water service. GARLOCK 33 Special Rock Hard is furnished approximately square in cross section in ring, coil or spiral form. Rings are supplied in any

specified sizes to fit cylinders. Coils and spirals are made in all sizes from 1/8" to 1¼" and are furnished in standard 15-foot lengths.

For grooved type pistons GARLOCK 108 Rings are recommended. These are very hard, glossy, black rubber, molded to exact specified sizes for standard or oversize cylinders.

GARLOCK  THE STANDARD PACKING OF THE WORLD



GARLOCK 343

GARLOCK 377

STANDARD STOKER PACKINGS

STEAM END

GARLOCK 377

GARLOCK 377 is recommended for service on the steam pistons and valve rods of Standard Stoker engines. This material, which provides a soft metal wearing surface on the rod combined with an asbestos channel back, is fully described on page 25.

For Stoker Engine service GARLOCK 377 is packaged in sets, sized exactly to fit rod and stuffing box.

OIL END

GARLOCK 343

For the piston and valve rods on the oil end of Stand-

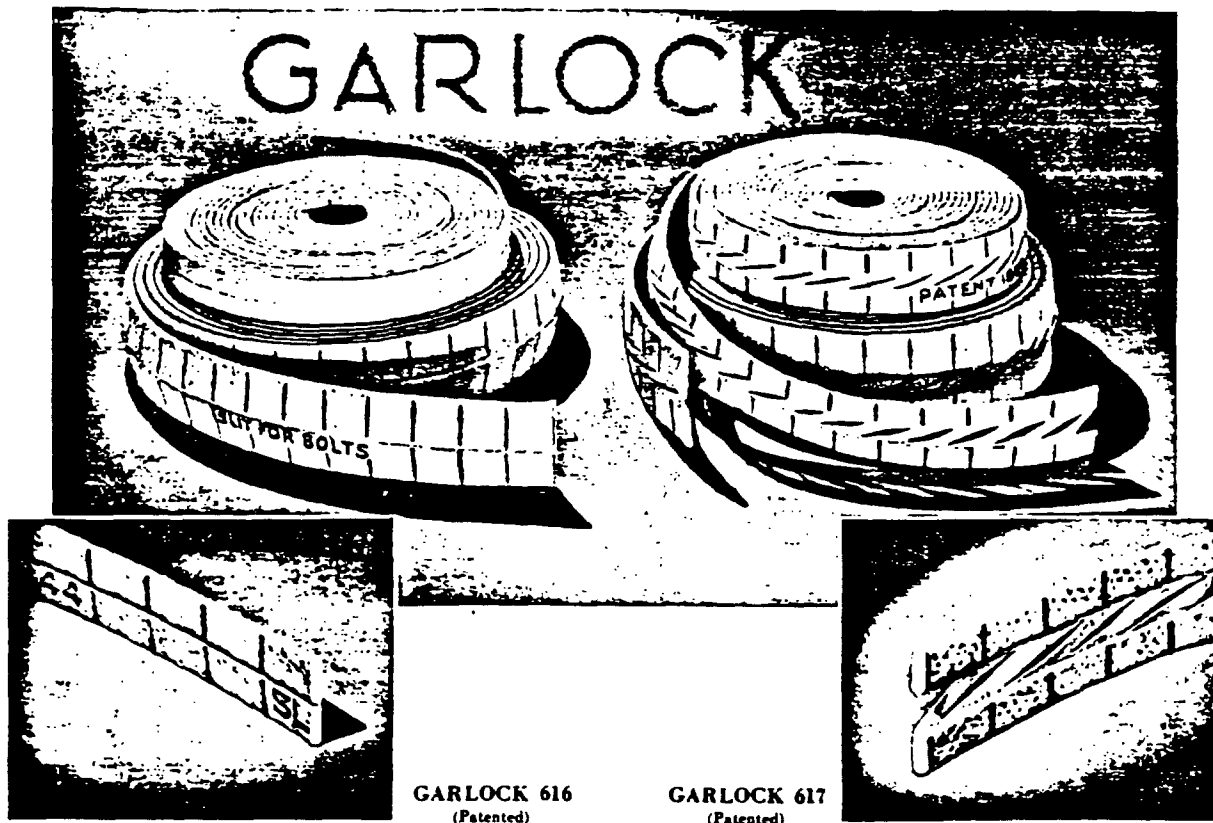
ard Stoker engines, GARLOCK 343 is recommended. This is a laminated packing in which a specially treated GARLOCK asbestos cloth is the base. GARLOCK 343 is put up in sets to fit piston and valve rods of these engines.

GARLOCK 7567

GARLOCK 7567 also gives splendid service on the oil end of piston and valve rods of Standard Stoker engines. This packing is made of special, heavy duck, plied with a binder having high resistance to oils. GARLOCK 7567 is supplied in sets to fit piston and valve rods of these stoker engines.

THE STANDARD PACKING OF THE WORLD  GARLOCK

LOCOMOTIVE FRONT END TAPE



GARLOCK 616
(Patented)

GARLOCK 617
(Patented)

LOCOMOTIVE FRONT END TAPE

GARLOCK 616

Construction—GARLOCK 616 Button Hole Tape is constructed of two parallel courses of GARLOCK wire inserted asbestos cloth, folded and joined together closely by a single ply of bonding fabric. The tape is treated with a high-grade, heat-resisting compound.

Application—When applying this tape, bolt holes are made by inserting a knife blade in the bonding fabric. One inch graduation marks printed on the tape permit holes to be cut at the bench, providing the bolt spacing is known.

Service—GARLOCK 616 is recommended for application to locomotive front ends and to large flanged tanks or other joints subject to high temperatures and pressures.

Form—This tape is obtainable in continuous lengths and in almost any width and thickness.

GARLOCK 617

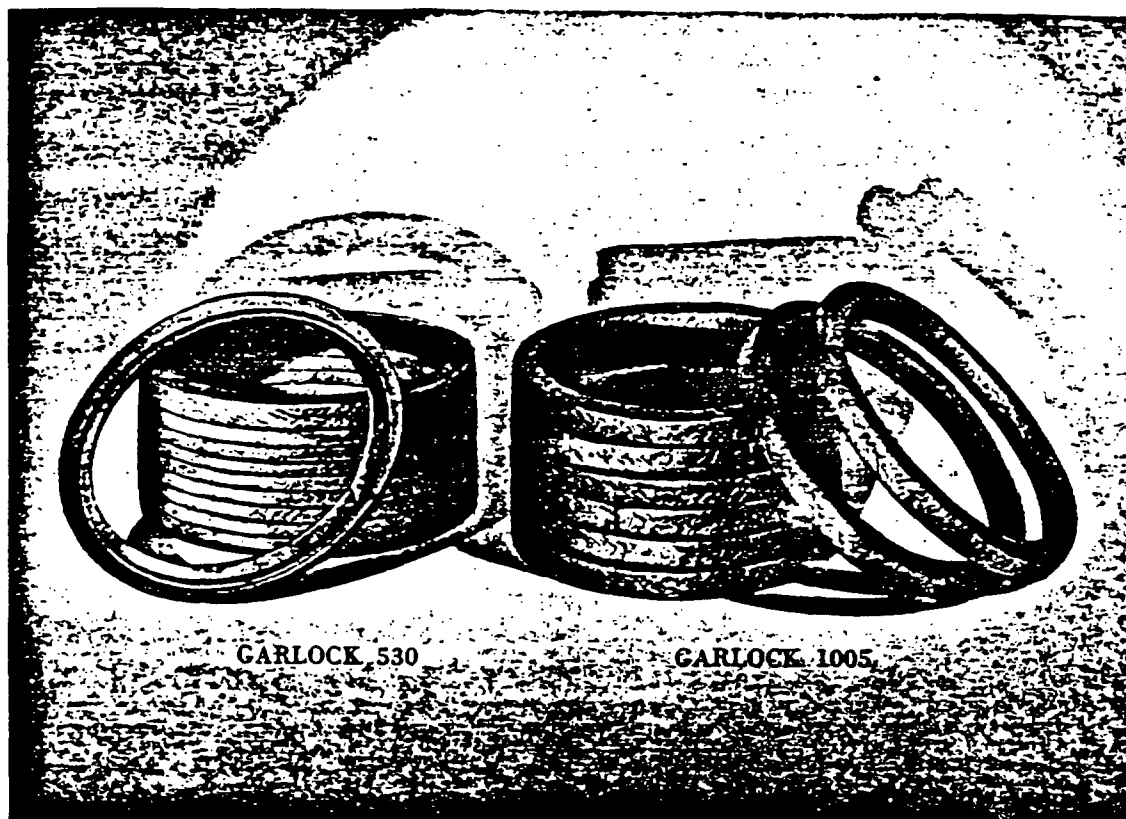
Construction—GARLOCK 617 Slotted Asbestos Tape is made of two courses of GARLOCK wire inserted folded asbestos cloth, joined together by a fabric connecting member in which is cut a multiplicity of diagonal slots.

Application—The diagonal slots provided in the connector of this tape permits it to be applied readily over bolts or studs. It is not necessary to cut additional holes in the tape, regardless of the bolt spacing.

Service—GARLOCK 617 is recommended for use on front ends of locomotives and on flanged joints of large tanks of any kind where high temperatures and pressures are encountered.

Form—This tape is obtainable in continuous length and in practically any width or thickness, except the provision for the $\frac{1}{8}$ " wide connector must be made when specifying width.

GARLOCK  **THE STANDARD PACKING OF THE WORLD**



EXPANSION JOINT PACKINGS

GARLOCK 1005

Construction—GARLOCK 1005 Ring and GARLOCK 1015 Coil Packings for locomotive expansion joints are made from wire inserted asbestos yarn braided hard, and given an external graphite treatment with no lubrication. The same material, lubricated and graphited, is supplied as GARLOCK 1005-A in ring form and GARLOCK 1015-A in coil.

Service—This material was developed specially for use on Mallet locomotive slip joints. It is also used on

old type ball joints and for any expansion joints operating against steam or oil.

Form—In ring form GARLOCK 1005 or GARLOCK 1005-A is furnished to any specified size. Coil forms of this material—GARLOCK 1015 and GARLOCK 1015-A are made in sizes from $\frac{1}{8}$ " to $1\frac{1}{4}$ ", and are regularly packaged in boxes of approximately 10 pounds net weight. It is also available in continuous lengths on reels.

GARLOCK 530

Construction—GARLOCK 530 Chevron Packing, which is fully described on page 81, is formed from sturdy asbestos cloth into the distinctive and exclusive Chevron shape.

Service—The ability of GARLOCK Chevron to adjust itself automatically to pressure changes and to vibra-

tion and lateral movement such as is encountered on locomotive expansion joints makes it a particularly effective packing for that severe service.

Form—GARLOCK 530 Chevron is manufactured in ring form only and is generally supplied in complete sets with top and bottom adapter rings.

THE STANDARD PACKING OF THE WORLD  GARLOCK

LOCOMOTIVE EXPANSION JOINT PACKING

GARLOCK 5250

Construction—GARLOCK 5250 is constructed of wire inserted asbestos yarn braided very hard in a square cross section by the lamination or braid over braid method. It receives an oil lubrication treatment and a thorough graphiting between each braid.

Service—Recommended for locomotive expansion joint service.

Form—GARLOCK 5250 is obtainable in two forms—Coil and Ring.

GARLOCK 5250 Rings are cut from GARLOCK 5250 Coil in any specified size.

GARLOCK 5250 Coil is manufactured in all packing sizes from $\frac{1}{4}$ " to $1\frac{1}{4}$ ", advancing by sixteenths.

GARLOCK 5270

Construction—GARLOCK 5270 is manufactured from wire inserted asbestos yarn and is braided very hard in a square cross section by the same method as used in producing flax packing. It receives a lubrication and a very heavy graphite treatment which is impregnated into every strand of the material.

Service—Recommended for locomotive expansion

joint service.

Form—GARLOCK 5270 is obtainable in two forms—Coil and Ring.

GARLOCK 5270 Rings are cut from GARLOCK 5270 Coil in any specified size.

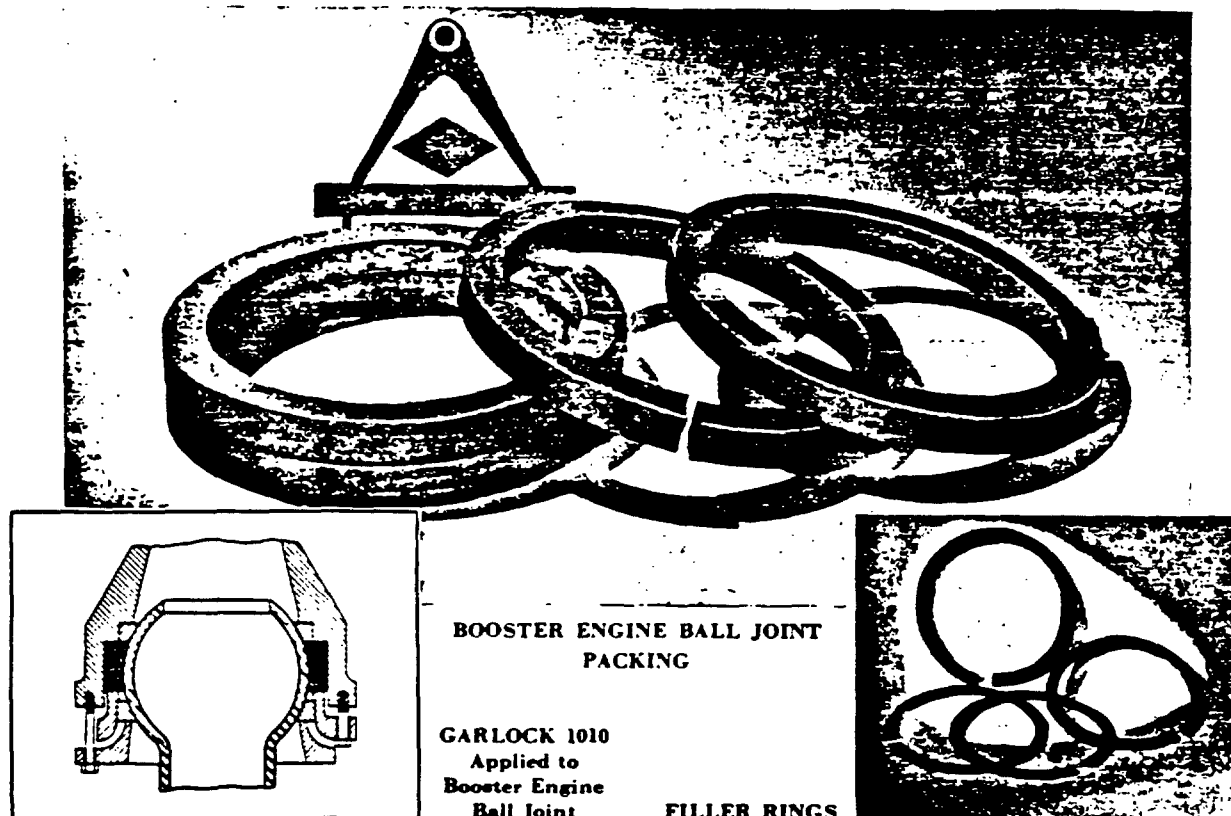
GARLOCK 5270 Coil is manufactured in all packing sizes from $\frac{1}{8}$ " to $1\frac{1}{4}$ ", advancing by sixteenths.

LOCOMOTIVE GAUGE COCK DISCS

GARLOCK 7751

GARLOCK 7751 Gauge Cock Discs are recommended for use on standard locomotive gauge cocks. They are manufactured from a special compound developed

specifically to withstand the severe operating conditions existing in locomotive service for which ordinary gauge cock discs are not suitable.



GARLOCK 1010 RING
GARLOCK 1020 COIL

Construction—GARLOCK Locomotive Ball Joint Packing is made of a special asbestos cloth, folded and formed square in cross section. It receives an external treatment of lubrication and graphite.

Service—This material was developed for use on the ball joints of locomotive booster engines and on new type ball joints of Mallet locomotives. It has also been used successfully as piston rings in steam hammers and for general steam service.

Form—In ring form this material is designated GARLOCK 1010. It is also obtainable in coil—GARLOCK 1020.

For booster engine and Mallet joint service, ring form only is recommended. For that service GARLOCK 1010 is furnished in ring sets molded to the exact size and contour of the ball.

GARLOCK 1020 Coil is manufactured in all sizes above $\frac{1}{2}$ " and in any desired length.

GARLOCK 7114 FILLER RINGS
FOR BOOSTER ENGINE BALL JOINTS

GARLOCK 7114 Filler Rings for booster engine ball joints are supplied in standard $\frac{1}{8}$ " thickness to fit 3" or $3\frac{1}{2}$ " joints.

These rings are intended for use in conjunction with

GARLOCK 1010 Ball Joint Packing for the purpose of taking up slack in the joint packing due either to wear of the metal parts or compression of the packing in service.

THE STANDARD PACKING OF THE WORLD  GARLOCK

GASKETS FOR BOOSTER ENGINES

GARLOCK Gaskets are standard on many railroads for every gasket application on locomotive booster engines. GARLOCK 950 Gaskets are recommended for some locations and GARLOCK 7022 for others. Gaskets are furnished plain or graphited.

When ordering booster engine gaskets it is only necessary to furnish the builder's part or drawing number and description. We have complete drawings and will furnish gaskets of the proper style, thickness and fit.

POWER REVERSE GEAR GASKETS

GARLOCK 952 Gaskets, as described on page 102, are recommended for use on locomotive power reverse gears. These gaskets are standard on many railroads. If desired, graphited gaskets will be supplied.

Orders for power reverse gear gaskets should specify the builder's part and drawing number, and state type of gear. This information will permit us to furnish gaskets to exact size and fit.

LOCOMOTIVE FEED WATER HEATER GASKETS

GARLOCK Gaskets are furnished cut to exact size and shape for use on Elesco and Worthington feed water heaters. For most applications on these pumps GARLOCK 7022 gaskets are recommended, plain or graphited as specified. For some locations on Worthington

pumps, however, GARLOCK Special 7597 gaskets are used. When ordering gaskets for feed water pumps specify builder's drawing and part number, and type of pump.

TANK CAR GASKETS

GARLOCK 7158 Gaskets are made of a special black rubber compound which has the characteristics necessary for tank car dome head and outlet cap service. These gaskets are soft enough to permit easy application but sufficiently hard to resist cutting. They re-

tain their high strength even after being soaked in gasoline and do not swell excessively.

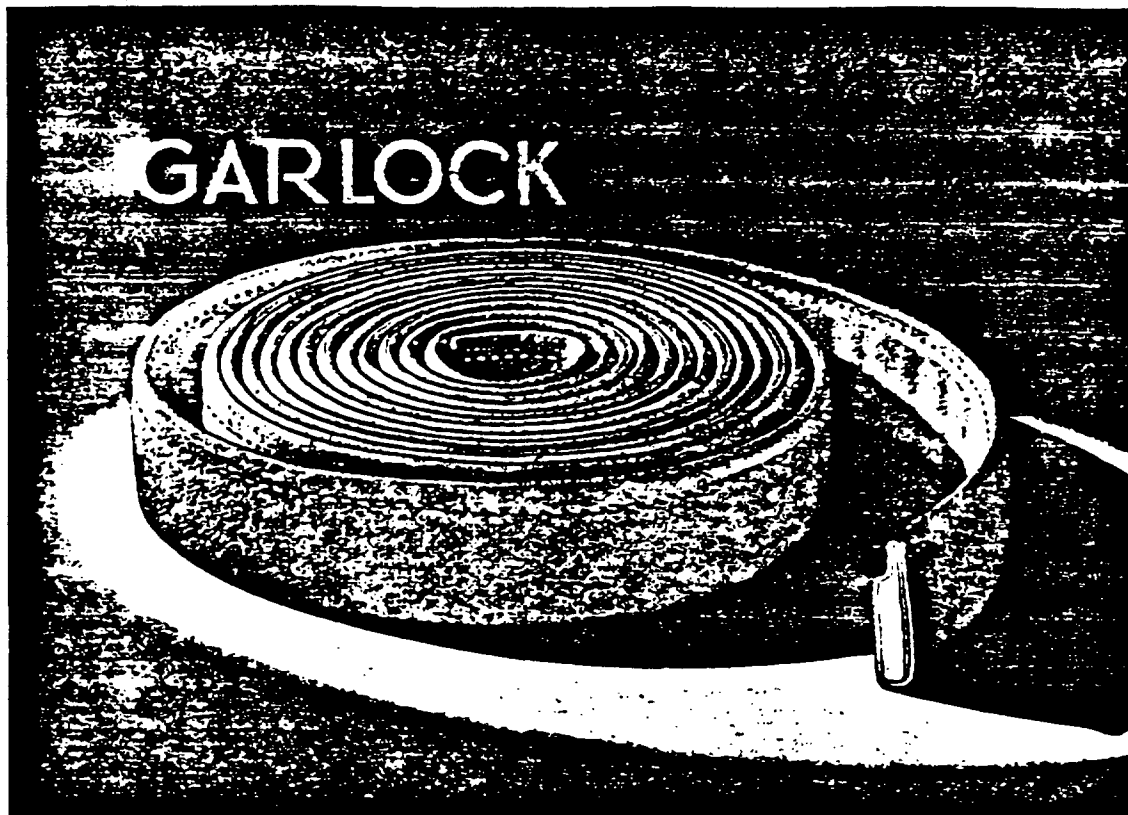
GARLOCK 7158 Gaskets are furnished in any specified size and thickness to fit dome heads or outlet caps.

TANK HOSE GASKETS

GARLOCK 122 Gaskets, as described on page 103, are recommended for tank hose connections between tender and locomotive.

These gaskets are furnished in any specified size and thickness.

GARLOCK  **THE STANDARD PACKING OF THE WORLD**



GARLOCK 7771 TAPE

GARLOCK INSULATION TAPE

GARLOCK 7771

Construction—GARLOCK 7771 Insulation Tape consists of a center core or ribbon of asbestos fibre encased in a cover of GARLOCK asbestos cloth. In forming the cover a flap is provided along one edge through which the tape is stitched.

Service—This tape is particularly recommended for use on locomotive steam pipes. In wrapping the tape around the pipe the flap overlaps the next adjoining

course of tape $\frac{3}{8}$ ", making a smooth and complete insulating cover.

Form—GARLOCK 7771 is made in thicknesses from $\frac{3}{8}$ " up and in any suitable width. When specifying width the $\frac{3}{8}$ " flap is not included. Thus a tape having a nominal width of 2" will be $2\frac{3}{8}$ " wide including the flap. GARLOCK 7771 Tape is obtainable in continuous lengths.

GARLOCK 7066

Construction—GARLOCK 7066 Insulation Tape is made with a center ribbon of asbestos fibre encased in a core of GARLOCK asbestos cloth, stitched down the center. This tape is not made with the overlapping flap.

Service—GARLOCK 7066 is intended for application

to steam pipes on locomotives or in power plants.

Form—This tape is obtainable in any desired width and in thicknesses from $\frac{3}{8}$ " up. Furnished in continuous lengths if desired.

THE STANDARD PACKING OF THE WORLD  GARLOCK

PLASTIC PACKINGS

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GARLOCK 926

GARLOCK 926 Plastallic is for use against water, steam or air at temperatures below 550° F.

GARLOCK 926 in loose or bulk form is packaged in 2½-pound tin cans, each containing a coil of shredded metal for forming bottom rings in stuffing boxes. Coil form is supplied in the sizes indicated in the

table and may be identified by the red and yellow strands in the open-braided, black cover. Rings are furnished to specified diameters and thicknesses.

Size designations, nominal cross-sectional dimensions and approximate weight and footage per box of GARLOCK 926 Coil are shown below:

GARLOCK 926 COIL				
For Packing Spaces Measuring	Specify Size	Nominal Size of Packing	Feet per Box	Weight per Box
3/8" or smaller	OX	1/4" round	205 ft.	5 lbs.†
1/4" to 3/8" inclusive	X	1/4" x 3/8"	50 1/2 ft.	5 lbs.*
3/8" to 1/2" inclusive	3-8X	3/8" x 1/2"	24 ft.	5 lbs.*
1/2" to 3/4" inclusive	2X	1/2" x 3/4"	51 ft.	20 1/4 lbs.
3/4" to 1" inclusive	3X	3/4" x 1"	26 ft.	21 3/4 lbs.
1" and above	4X	1" square	20 ft.	25 1/2 lbs.

†This size packaged on 1-lb., 2-lb., and 5-lb. spools.

*Packaged on spool.

GARLOCK 927

GARLOCK 927 Plastallic is a durable packing for general use and is specially recommended for service against gasoline, kerosene, oils, ether, carbon tetrachloride, methyl chloride, mild acids and alkalis where operating temperatures do not exceed 550° F.

Loose or bulk form of GARLOCK 927 is packaged in 2½-pound tin cans, each containing a coil of shredded metal for forming bottom rings for stuffing boxes.

Coil form is made in the sizes shown in the table and may be identified by the single red strand in the black, open-braided cover. Rings are furnished to specified diameters and thicknesses.

Size designations, nominal cross-sectional dimensions and approximate weight and footage per box of GARLOCK 927 Coil are indicated below:

GARLOCK 927 COIL				
For Packing Spaces Measuring	Specify Size	Nominal Size of Packing	Feet per Box	Weight per Box
3/8" or smaller	OX	1/4" round	200 ft.	5 lbs.†
1/4" to 3/8" inclusive	X	1/4" x 3/8"	49 ft.	5 lbs.*
3/8" to 1/2" inclusive	3-8X	3/8" x 1/2"	23 1/4 ft.	5 lbs.*
1/2" to 3/4" inclusive	2X	1/2" x 3/4"	51 ft.	21 lbs.
3/4" to 1" inclusive	3X	3/4" x 1"	26 ft.	22 1/4 lbs.
1" and above	4X	1" square	20 ft.	26 lbs.

†This size packaged on 1-lb., 2-lb., and 5-lb. spools.

*Packaged on spool.

THE STANDARD PACKING OF THE WORLD  GARLOCK

PLASTIC PACKINGS

GARLOCK 928

GARLOCK 928 Plastallic is a high temperature plastic for use against steam or oil where temperatures are in excess of 550° F.

In loose or bulk form GARLOCK 928 is packaged in 2-lb. tin cans. Coil form is furnished in the sizes indicated in the table and may be identified by the

single yellow strand in the open-braided, black cover. Rings are furnished to specified diameters and thicknesses.

Size designations, nominal cross-sectional dimensions and approximate weight and footage per box of GARLOCK 928 Coil are shown below.

GARLOCK 928 COIL

For Packing Spaces Measuring	Specify Size	Nominal Size of Packing	Feet per Box	Weight per Box
$\frac{1}{8}$ " or smaller	OX	$\frac{1}{8}$ " round	225 ft.	5 lbs.†
$\frac{1}{8}$ " to $\frac{1}{4}$ " inclusive	X	$\frac{1}{4}$ " x $\frac{3}{8}$ "	54½ ft.	5 lbs.*
$\frac{1}{4}$ " to $\frac{3}{8}$ " inclusive	3-8X	$\frac{3}{8}$ " x $\frac{7}{8}$ "	25¾ ft.	5 lbs.*
$\frac{3}{8}$ " to $\frac{1}{2}$ " inclusive	2X	$\frac{1}{2}$ " x $\frac{5}{8}$ "	51 ft.	18½ lbs.
$\frac{1}{2}$ " to $\frac{3}{4}$ " inclusive	5X	$\frac{3}{4}$ " x $\frac{7}{8}$ "	26 ft.	20 lbs.
1" and above	4X	1" square	20 ft.	23½ lbs.

†This size packaged on 1-lb., 2-lb., and 3-lb. spools.

*Packaged on spool.

GARLOCK 929

GARLOCK 929 Plastallic is a general service plastic for service against steam or water where operating temperatures do not exceed 550° F.

Loose or bulk form of GARLOCK 929 is packaged in 2½-lb. tin cans, each containing a coil of shredded metal for use in forming bottom rings in the stuffing boxes. Coil form is made in the sizes indicated in the

table and may be identified by the single green strand in the black, open-braided cover. Rings are furnished to specified diameters and thicknesses.

Size designations, nominal cross-sectional dimensions and approximate weight and footage per box of GARLOCK 929 Coil are shown below.

GARLOCK 929 COIL

For Packing Spaces Measuring	Specify Size	Nominal Size of Packing	Feet per Box	Weight per Box
$\frac{1}{8}$ " or smaller	OX	$\frac{1}{8}$ " round	215 ft.	5 lbs.†
$\frac{1}{8}$ " to $\frac{1}{4}$ " inclusive	X	$\frac{1}{4}$ " x $\frac{3}{8}$ "	53¼ ft.	5 lbs.*
$\frac{1}{4}$ " to $\frac{3}{8}$ " inclusive	3-8X	$\frac{3}{8}$ " x $\frac{7}{8}$ "	26 ft.	5 lbs.*
$\frac{3}{8}$ " to $\frac{1}{2}$ " inclusive	2X	$\frac{1}{2}$ " x $\frac{5}{8}$ "	51 ft.	19 lbs.
$\frac{1}{2}$ " to $\frac{3}{4}$ " inclusive	5X	$\frac{3}{4}$ " x $\frac{7}{8}$ "	26 ft.	20½ lbs.
1" and above	4X	1" square	20 ft.	24 lbs.

†This size packaged on 1-lb., 2-lb., and 3-lb. spools.

*Packaged on spool.

GARLOCK  THE STANDARD PACKING OF THE WORLD

PLASTIC PACKINGS

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GARLOCK 930

GARLOCK 930 Plastallic is a nonmetallic, plastic packing for use against gasoline, oils, kerosene, gases and mild acid or alkali solutions either at high or low operating temperatures.

GARLOCK 930 is not made in loose or bulk form. Coil form is furnished in the sizes shown in the table. Spiral form also is available, packaged one 12½-ft. spiral per box. Both coil and spiral forms may be

identified by the two red strands in the black, open-braided cover. Rings are furnished to specified diameters and thicknesses.

Size designations and nominal cross-sectional dimensions of coil and spiral forms and approximate weight and footage per box of GARLOCK 930 Coil are shown in the table below.

For Packing Spaces Measuring	Specify Size	Nominal Size of Packing	Feet per Box	Weight per Box
¾" or smaller	OX	¾" round	373 ft.	5 lbs.†
¾" to 1" inclusive	X	1" x ¾"	92 ft.	5 lbs.*
1" to 1½" inclusive	3-8X	1½" x 1"	44 ft.	5 lbs.*
1½" to 2" inclusive	2X	2" x 1½"	51 ft.	11½ lbs.
2" to 2½" inclusive	3X	2½" x 2"	26 ft.	11½ lbs.
2½" and above	4X	1" square	20 ft.	14 lbs.

†This size packaged on 1-lb., 2-lb., and 5-lb. spools.

*Packaged on spool.

GARLOCK 931

GARLOCK 931 Plastallic is a nonmetallic, plastic packing for service against steam, water or air at high or low temperatures.

This material is not supplied in loose or bulk form. Coil form is furnished in the sizes indicated in the table and may be identified by the two green strands

in the black, open-braided cover. Rings are supplied to specified diameters and thicknesses.

Size designations, nominal cross-sectional dimensions and approximate weight and footage per box of GARLOCK 931 Coil are shown below.

For Packing Spaces Measuring	Specify Size	Nominal Size of Packing	Feet per Box	Weight per Box
¾" or smaller	OX	¾" round	300 ft.	5 lbs.†
¾" to 1" inclusive	X	1" x ¾"	88 ft.	5 lbs.*
1" to 1½" inclusive	3-8X	1½" x 1"	42 ft.	5 lbs.*
1½" to 2" inclusive	2X	2" x 1½"	51 ft.	11½ lbs.
2" to 2½" inclusive	3X	2½" x 2"	26 ft.	12¼ lbs.
2½" and above	4X	1" square	20 ft.	14½ lbs.

†This size packaged on 1-lb., 2-lb., and 5-lb. spools.

*Packaged on spool.

GARLOCK 924

GARLOCK 924 is a nonmetallic, plastic packing made with pure blue asbestos fibre, recommended for use against acids and strong chemical solutions.

In loose or bulk form GARLOCK 924 is packaged in tin cans of approximately 13¼ lbs. net weight. Each can contains a coil of twisted lead strands for use in forming bottom rings in the stuffing box. Coil form is made in the sizes indicated below and may be

identified by the one yellow and one green strand in the black, open-braided cover. Rings are furnished to specified inside and outside diameters and to approximate specified thicknesses.

Size designations and nominal cross-sectional dimensions of GARLOCK 924 Coil and approximate weight and footage per box are shown below:

For Packing Spaces Measuring	Specify Size	Nominal Size of Packing	Feet per Box	Weight per Box
¾" or smaller	OX	¾" round	350 ft.	5 lbs.†
¾" to 1" inclusive	X	1" x ¾"	83 ft.	5 lbs.*
1" to 1½" inclusive	3-8X	1½" x 1"	42 ft.	5 lbs.*
1½" to 2" inclusive	2X	2" x 1½"	51 ft.	11½ lbs.
2" to 2½" inclusive	3X	2½" x 2"	26 ft.	12¼ lbs.
2½" and above	4X	1" square	20 ft.	14½ lbs.

†This size packaged on 1-lb., 2-lb., and 5-lb. spools.

*Packaged on spool.

THE STANDARD PACKING OF THE WORLD



GARLOCK