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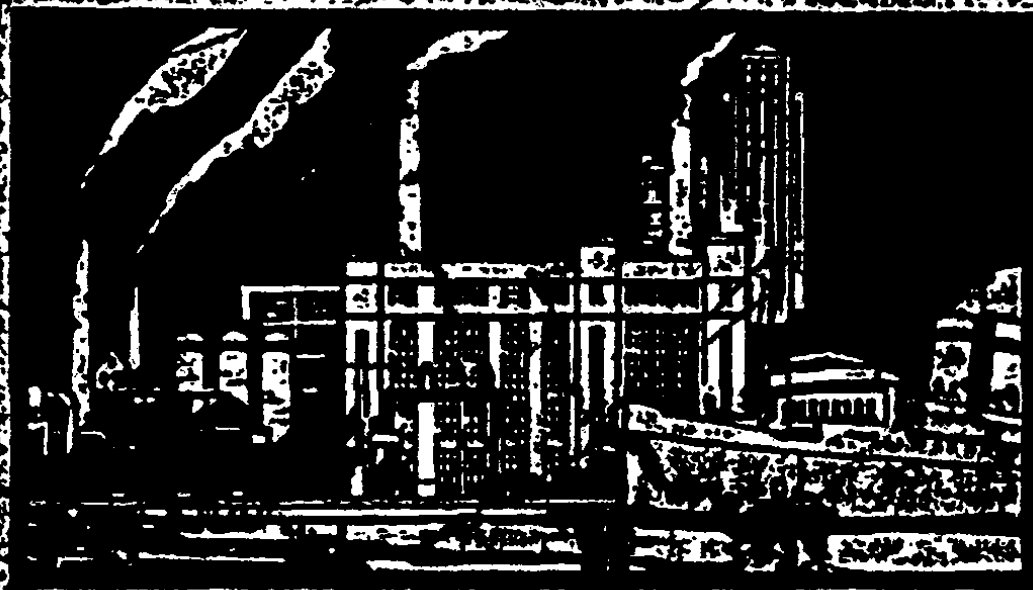
DATE: 1931

DOC#: JC053

DOCUMENT DESCRIPTION: Crane Sales Catalogue

F.B.I.

"John Crane" **FABRIC** **PACKINGS**



catalog No 20

PLAINTIFF'S
EXHIBIT

JC-225

Copyright 1931
Crane Packing Company
Chicago, U. S. A.



CRANE PACKING COMPANY

Factory and General Offices

1800 Cuyler Avenue, Chicago, Ill.

BRANCHES

Prompt service through any of the following branches:—

New York
Baltimore
Pittsburgh
St. Louis
New Orleans
San Francisco
Portland

Philadelphia
Norfolk
Cleveland
Oklahoma City
Fort Worth
Los Angeles

Boston
Buffalo
Detroit
Tulsa
Houston
San Pedro
Seattle

CANADA

Vancouver

Toronto

"John Crane"

REG. U. S. PAT. OFF.

Introduction



IN this Catalog we introduce to our numerous clients, our general line of Fabric Packings, Mechanical Rubber Goods, and Engineering Specialties.

Our modern facilities for research, design and manufacture, from the crude materials to the finished product under true craftsmen's standards, represent years of experience and progressive advancement in the art of packing manufacture.

The Trade Mark "John Crane" guarantees Quality, Service and Satisfaction to our customers.

Diversified packing problems requiring consultation, will receive personal attention from our experienced sales and service engineers.

"John Crane"

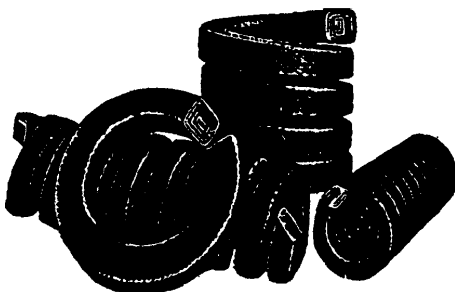
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CRANE PACKING COMPANY
1800 Cuyler Avenue :: :: Chicago, Ill.

Fabric **"John Crane"** Packings

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High Pressure Asbestos Steam Packing



Spiral Form.....Style 800
Ring Form.....Style 801

A High Pressure Asbestos Steam Packing for industrial and marine service. Successfully packs high speed engines, expansion joints, air compressors and all auxiliary piston and valve rods.

Manufactured from imported long fibre asbestos, with heat resisting expansion rubber back, carefully treated with special lubrication.

(Sizes $\frac{1}{4}$ to $1\frac{1}{2}$ inches)

*Furnished without expansion rubber
back when specified.*

High Pressure Asbestos Steam Packing with Expansion Center

Spiral Form.....Style 802
Ring Form.....Style 803

Identical in construction with Style 800 (above), but with expansion core center instead of back.

(Sizes $\frac{1}{4}$ to $1\frac{1}{2}$ inches)

Made with copper wire insertion when specified.

Our Research Laboratories are Always at Your Service

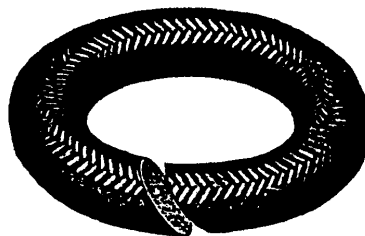
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Fabric **"John Crane"** Packings

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Braided Asbestos Packing *Jacket Construction*



*long
fibre*

Steam — Air — Gas

Coil Form, Square.....	Style 804
Ring Form, Square.....	Style 805
Coil Form, Round.....	Style 806
Ring Form, Round.....	Style 807

This packing is made from long fibre asbestos, each strand lubricated and graphited separately, and tightly braided, one jacket over the other. Contains no rubber or friction compound.

Ideally suited for steam, air and gas services, dealing with pressures not exceeding 300 lbs., and maximum temperatures of 600° F. Will not harden in stuffing box, and operates with a minimum of friction.

(Sizes $\frac{3}{8}$ to 1½ inches)

Hot Oil Service

High Pressure

High Temperature

Coil Form.....	Style 808
Ring Form.....	Style 809

A braided asbestos packing developed to meet the demand for high pressure and high temperature oil service. Identical in construction with Style 804, except the inner asbestos jackets are treated with a special compound which prevents permeation of the hot vapors and gases.

Can be used for wiper rings, in combination with metallic packing sets. Recommended for all pressures and temperatures of modern cracking processes.

(Sizes $\frac{3}{8}$ to 1½ inches)

For Economy—Efficiency—Satisfaction—Use "John Crane" Packings

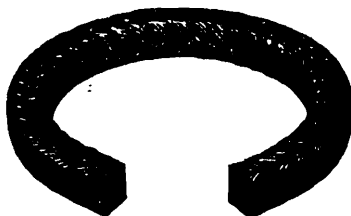
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Fabric **"John Crane"** Packings

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Braided Asbestos Packing

Plaited Braid Construction



Rotary Service

Coil Form.....Style 810
Ring Form.....Style 811

The plaited braiding of long fibre asbestos produces a resilient packing for use on all rotary services. This packing is thoroughly impregnated with "John Crane" insoluble lubricating compound, which adds to the service hours, and reduces frictional wear on pump shafts and sleeves. The softness of the packing allows it to conform readily to beveled stuffing boxes without using extreme gland pressure.

Recommended for all rotary services. Especially adapted for boiler feed and circulating pumps using bronze or steel shafts. Maximum pressure 300 lbs. per square inch.

(Sizes $\frac{1}{4}$ to $1\frac{1}{2}$ inches)

#896 is 812 with 2. special sulphuric acid lub.

Chemical Service

Coil Form.....Style 812
Ring Form.....Style 813

To resist the corrosive action of acids and chemicals, African Blue Asbestos is carefully selected for its acid resisting qualities, and plaited into square form similar to the square flax construction.

This packing is impregnated with "John Crane" insoluble lubricant, the base of which is made from an acid resisting compound, which contributes to the life of the packing. This insoluble lubricant possesses anti-frictional qualities, preventing wear of pump rods, shafts and sleeves.

Highly recommended for caustic, sulphuric acid, nitric acid and concentrated chemical services.

(Sizes $\frac{1}{4}$ to $1\frac{1}{2}$ inches)

When ordering, state class of service so that special lubrication adapted to the chemical may be supplied.

There is a "John Crane" Packing Specially Adapted for Every Service

CRANE PACKING CO. Chicago, Ill.

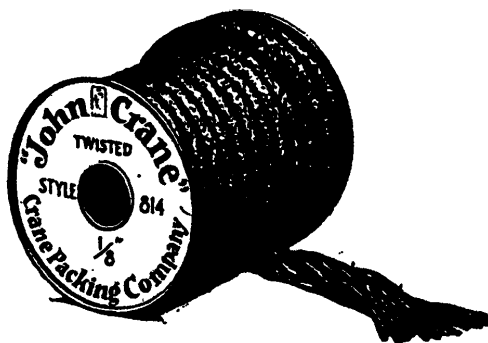
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blue
asbestos

Fabric **"John Crane"** Packings

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Asbestos Valve Stem Packing



*Pure
long
fibre*

Twisted Type.....Style 814

Braided Type.....Style 815

"John Crane" Asbestos Valve Stem Packing is twisted or braided from commercially pure, long fibre, Canadian Asbestos Yarn, the strands of which are treated with a high heat resisting lubricant, and then graphited.

This packing is soft, easily installed in small stuffing boxes, and will not harden when carried in stock over long periods.

Can also be furnished with rubber and graphite compound for special services.

Recommended Uses

This packing is recommended for all styles of globe, angle and stop valves, small pump shafts and rods handling steam, air, oil and water, at any pressures or temperatures.

(Sizes $\frac{5}{16}$ " and under.....1 lb. spools)

(Sizes $\frac{3}{8}$ " and larger.....5 lb. spools)

*Also furnished in continuous lengths on
reels of any weight required.*

Only the Finest Lubricants Used in "John Crane" Packings

CRANE PACKING CO. " Chicago, Ill.

Fabric **"John Crane"** Packings

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Diagonal Expansion Packing



High Pressure Steam

Coil Form.....Style 816
Ring Form.....Style 817

"John Crane" High Pressure Diagonal Packing combines a high grade cushion of asbestos yarn with a diagonal split wedge base of high quality duck and rubber, thoroughly lubricated throughout. Recommended for high pressure steam service, and especially adapted for worn equipment.

(Sizes $\frac{1}{8}$ inch and larger)

Low Pressure Steam

Coil Form.....Style 818
Ring Form.....Style 819

"John Crane" Low Pressure Diagonal Packing is constructed from excellent quality duck and rubber materials, treated with a special lubricant. Recommended for medium and low pressure steam service, on vibrating equipment with slightly worn rods.

(Sizes $\frac{1}{8}$ inch and larger)

Hydraulic Service

Coil Form.....Style 820
Ring Form.....Style 821

"John Crane" Diagonal Packing for hydraulic service is constructed with a high grade flax cushion, combined with a duck and rubber diagonal split wedge base, lubricated throughout. This packing is exceptionally resilient, and is recommended for hydraulic work on new and old equipment.

(Sizes $\frac{1}{16}$ inch and larger)

Prompt Service Through Our Branches Located in All Principal Cities

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Fabric **"John Crane"** Packings

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Moulded Packings



Hollow Core

Spiral Form.....Style 822

Ring Form.....Style 823

The design of this packing with a hollow center permits expansion and contraction, compensating for temperature changes during operation.

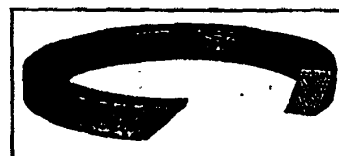
A splendid packing when used in combination with other styles for diversified services.

Moulded from asbestos cloth with a heat resisting compound for high temperatures; duck and rubber for low temperatures.

Channel

Spiral Form.....Style 824

Ring Form.....Style 825



"John Crane" Channel Packings are made for many services. Vulcanized casings of asbestos or duck and rubber can be furnished with channels of fabric or metal construction, sewed into the casing and vulcanized into a one piece ring, ready for installation.

Furnished in combination sets when specified.



Lip

Spiral Form.....Style 826

Ring Form.....Style 827

Standard Lip Packing, manufactured from asbestos cloth or cotton duck, vulcanized with a heat resisting rubber compound, is based upon an engineering principle, and functions automatically. The exerted pressure against the lip seals all leakage.

Recommended for hydraulic service, and especially adapted for worn equipment.

Special Moulded Rings for Standard Equipment

A diversity of moulded and die formed rings for standard equipment requirements can be manufactured on a production basis.

Small rings or packing sets are accurately die formed under careful inspection, and are manufactured within close tolerances. All rings are thoroughly lubricated and graphited to prevent wear. Manufacturers of equipment are invited to inspect this Department.

All "John Crane" Packings Accurately Moulded to Close Tolerances

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Fabric **"John Crane"** Packings

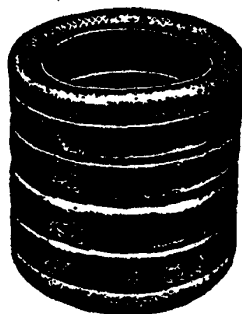
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Special Hydraulic Packing

"John Crane" Special Hydraulic Packing is designed to work automatically and effectively seal high pressures without undue gland adjustment. The pressure enters the cavity, forcing the lip against the rod or plunger. On the return stroke the pressure is released, reducing the friction.

Developed for Heavy Duty Service

This packing is manufactured from a heavy duck fabric, impregnated with a rubber compound and moulded to size. Can also be made from asbestos cloth impregnated with special compounds to meet high temperature conditions.

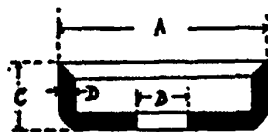


Style 828

When ordering state pressure, temperature and service.

Leather Hydraulic Packings

"John Crane" Leather Packings are made from the finest selected heavy hides, tanned to meet requirements, in both oak and mineral chrome. We select only the heart of the hide, and our perfect workmanship insures the best results in service.

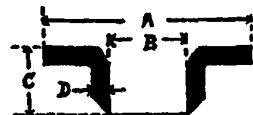


CUP PACKING
Style 829

We will furnish metallic, leather or square flax filler for the glands of "U" packings, to suit conditions.



U PACKING
Style 830



FLANGE PACKING
Style 831

When ordering, specify conditions and give complete dimensions.

A—Outside Diameter
B—Inside Diameter
C—Depth, Outside
D—Thickness of Stock

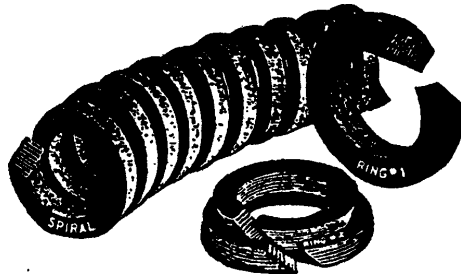
All "John Crane" Salesmen are Experienced Service Engineers

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Fabric **"John Crane"** Packings

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Medium and Low Pressure Expansion Packing



Duck and Rubber

Spiral Form.....Style 832

Ring Form, Plain.....Style 833

Ring Form, Sectional.....Style 834

"John Crane" Duck and Rubber Expansion Packing is made from selected heavy duck, closely woven, built up layer upon layer, and frictioned together with a heat resisting rubber compound. The finished packing is thoroughly lubricated throughout and ideally suited for low pressure steam, water and ammonia services.

Rings of various designs, of which the plain and sectional types are most popular, when cut from slab stock expansion packing, result in perfect fit to stuffing box specifications.

Recommended Uses

Plain rings, slab cut, are recommended for ammonia service. Sectional rings, slab cut, are desirable for steam hammer rods, and for rams and plungers slightly out of alignment. For low pressure steam service, pressures not exceeding 100 lbs., the spirals make a handy packing.

(Sizes $\frac{1}{4}$ to $1\frac{1}{2}$ inches)

Can be carried in stock without affecting its resiliency.

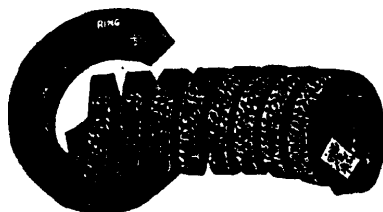
"John Crane" Packings Used Throughout the World

CRANE PACKING CO. :: Chicago, Ill.

Fabric **"John Crane"** Packings

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Medium and Low Pressure Cross Expansion Packing



Duck and Rubber

Spiral Form.....Style 835

Ring Form.....Style 836

"John Crane" Duck and Rubber Cross Expansion Packing is made from a high grade duck, the plies of which are built up diagonally and frictioned together with a resilient, heat resisting, rubber compound. The packing is thoroughly lubricated and graphited throughout.

Designed for Equalized Expansion

The construction of this style of packing permits it to make contact with the rod at an angle of 45°, assuring expansion in all directions, with a minimum of friction.

Recommended for steam, water, and ammonia services, where the rods or plungers have a lateral motion.

Stuffing boxes packed with "John Crane" Cross Expansion Packing require little follow up attention during operation.

(Sizes $\frac{1}{4}$ to 1 $\frac{1}{2}$ inches)

Only the Highest Quality of Raw Materials Used in "John Crane" Packings

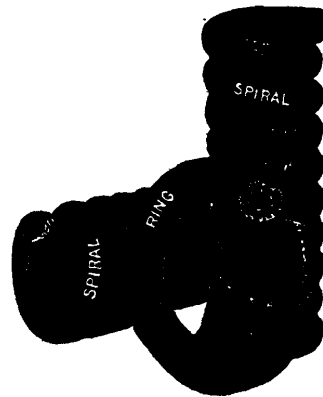
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Fabric **"John Crane"** Packings

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Red Core Duck Packing



Spiral Form.....Style 837

Ring Form.....Style 838

"John Crane" Red Core Duck Packing is made with a soft, non-vulcanizing red rubber core, around which is wrapped closely woven frictioned duck, thoroughly lubricated and graphited.

Important Features

The soft red rubber core permits the packing to easily adjust itself in the stuffing box, and the round section readily forms a water seal around the rod.

Recommended Uses

Recommended for high speed engine pistons and valve stems operating at medium steam pressures, hot and cold water, and services requiring a resilient type of packing.

Particularly adapted for use in combination with other styles of packings.

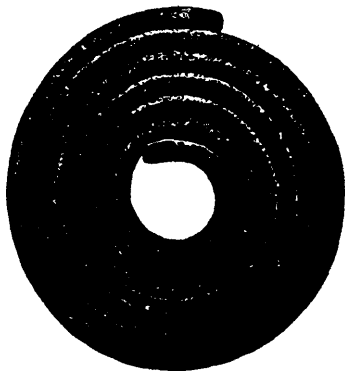
(Sizes $\frac{3}{16}$ to $1\frac{1}{4}$ inches)

All "John Crane" Packings Made According to Approved Engineering Principles

CRANE PACKING CO. " Chicago, Ill.

Fabric **"John Crane"** Packings
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Gum Core Packing *Round or Oval*



Coil Form, Oval.....	Style 839
Ring Form, Oval.....	Style 840
Coil Form, Round.....	Style 841
Ring Form, Round.....	Style 842

"John Crane" Gum Core Packing is manufactured either in oval or round form. The core is of a high grade gum rubber, exceptionally resilient, and will not deteriorate when carried in stock.

It is jacketed with braided plies of long fibre flax, the number of plies depending on the size of packing.

Special Lubrication

A high quality tallow and soapstone lubricant, impregnated with pulverized graphite, is applied between each jacket of braided flax and the outside cover is given a special treatment with an insoluble lubricant.

Recommended Uses

Particularly recommended for mine pumps, slush pumps, and for other services where rapid corrosion of plungers is prevalent.

(Sizes $\frac{1}{8}$ inch and larger)

Quality, Experience, Expert Workmanship, in All "John Crane" Packings

CRANE PACKING CO. :: Chicago, Ill.

Fabric "John Crane" Packings

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Fine Duck Hydraulic Packing

Manufactured from the finest quality cotton sheeting with white friction compound, specially cured to minimize swelling and expansion while in service.

Special Stitching

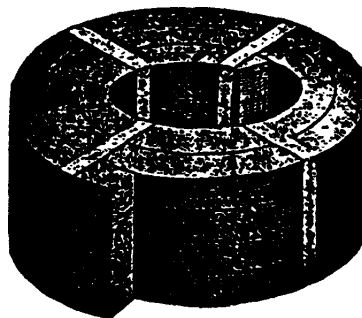
For heavy duty service, this packing is stitched with one or two rows of linen thread to prevent brush edge effect.

Recommended Uses

Recommended for inside packed pistons handling either hot or cold water.

(Sizes $\frac{1}{4}$ inch and larger)

Furnished in 15-ft. lengths.

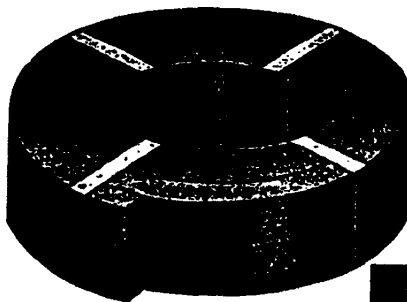


Coil.....Style 843
Ring.....Style 844

Made Rockhard When Specified

Coil (Rockhard).....Style 845
Ring (Rockhard).....Style 846

Square Tucks Packing



Manufactured from best quality duck with black rubber friction compound, making a strong hydraulic packing, but softer than the fine duck type.

Recommended for rods handling either hot or cold water.

(Sizes $\frac{1}{4}$ inch and larger)

Furnished in 15-ft. lengths.

Coil.....Style 847
Ring.....Style 848

The Name "John Crane" is Your Assurance of Quality and Value

CRANE PACKING CO. Chicago, Ill.

Fabric **"John Crane"** Packings

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Round Tucks Packing

Manufactured with a soft, high quality black rubber core, around which is wrapped a good quality duck held together with a special black rubber friction.

This construction insures great elasticity.

Recommended Uses

Recommended for elevator plungers and all hydraulic work, hot or cold.



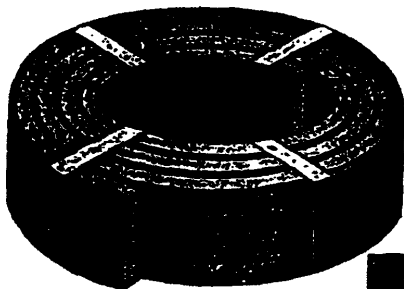
Coil.....Style 849
Ring.....Style 850

(Sizes 1/4 inch and larger)

Furnished in 15 ft. lengths.

Rubber Back Tucks Packing

Manufactured from best quality duck, with black rubber friction compound, reinforced with a soft rubber cushion back to give maximum resiliency.



Recommended Uses

Recommended extensively on hydraulic conditions where plungers have an excessive lateral motion.

(Sizes 1/4 inch and larger)

Coil.....Style 852
Ring.....Style 853

Furnished in 15-ft. lengths.

Tell Us Your Packing Problems and Let Us Submit Recommendations

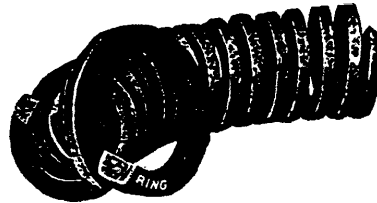
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Fabric **"John Crane"** Packings

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Channel Flax Hydraulic Packing



Coil Form.....Style 854

Spiral Form.....Style 855

Ring Form.....Style 856

"John Crane" Channel Flax Hydraulic Packing is composed of long fibre flax as a channel, reinforced on three sides with a high quality duck and rubber casing. The flax channel is vulcanized within the casing, preventing it from separating when conforming to small size rods.

Long Wearing Water Resisting

The design of this packing produces a wearing surface combining the effect of a duck and flax packing. Ordinary flax packings do not possess the long wearing qualities of duck, but their water resisting properties are unequaled. The combination of flax and duck offers the valuable features of both materials in one packing, and gives flexibility, coupled with a cushioning effect.

Covers a Wide Range of Services

This type of packing is highly recommended for hydraulic work on rams, plungers, elevators, accumulators, mine pumps, water pumps and all reciprocating hydraulic services.

(Sizes $\frac{3}{8}$ inch and larger)

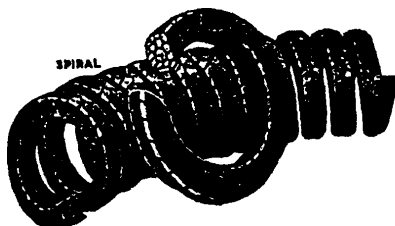
We are Vitrally Interested in the Success of Every "John Crane" Installation

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Fabric **"John Crane"** Packings

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Waterproof Flax Hydraulic Packing



3 grades 857 858 859

Coil Form.....Style 857
Spiral Form.....Style 858
Ring Form.....Style 859

"John Crane" Waterproof Flax Hydraulic Packing is manufactured from long fibre flax of the best quality, thoroughly impregnated with a waterproof compound, making a finished packing harder than the ordinary flax packing.

Special Treatment Preserves Packing

Flax treated in this manner results in long service and insures against disintegration of the fibre when subjected to polluted water conditions.

Adapted to Heavy Duty Service

Recommended for use on heavy duty hydraulic apparatus, such as rams, accumulators, hydraulic pumps, elevator plungers and outside packed pumps handling cold water and cold oil under high pressures.

(Sizes $\frac{1}{4}$ inch and larger)

You Can Depend Upon the Interested Co-operation of Our Sales Engineers

CRANE PACKING CO. :: Chicago, Ill.

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Fabric **"John Crane"** Packings

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Square Flax Packings



Coil Form

Style 862—

No. 1 Quality Square Flax Packing.

Guaranteed finest grade of pure extra long imported flax fibre, entirely free from hemp, jute or other adulterants.

Style 863—

No. 2 Quality Square Flax Packing.

Guaranteed pure flax, but contains medium long fibre.

Style 864—

No. 3 Quality Square Flax Packing.

Same as No. 2 quality, but of a shorter fibre.

Style 865—

Special "Square Flax" Packing (selected hemp), of long fibre throughout.

These flax packings are uniformly braided, and thoroughly impregnated with an extra high grade lubricant.

(Sizes $\frac{1}{8}$ inch and larger)

Pul up in flat square dust-proof boxes, or on wooden reels when required.

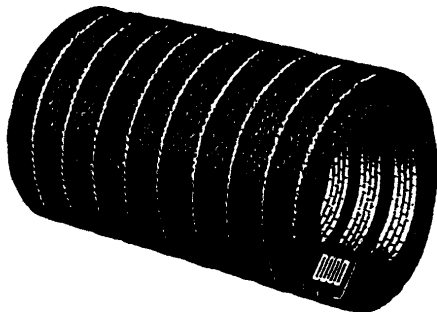
Only the Finest Lubricants Used in "John Crane" Packings

CRANE PACKING CO. :: Chicago, Ill.

Semi-Metallic **"John Crane"** Packings

REG. U. S. PAT. OFF.

Semi-Metallic Packing



Spiral Form..... Style 320
Ring Form..... Style 321

Flexible—Anti-Frictional

"John Crane" Semi-Metallic Packing consists of a flexible metallic insert of assembled babbitt strips securely fastened to asbestos cloth channel of heat resisting qualities, forming a resilient packing with a metallic wearing face. The metallic insert is thoroughly filled with graphite lubrication. This packing is very flexible and easily conforms to the smallest rod diameter.

Recommended Uses

Recommended for all reciprocating steam, air, ammonia and gas rods; also expansion joints. Temperatures not exceeding 450° F.

In combination with other styles, "John Crane" Style 320 may be used on many additional services.

Furnished in spiral form, in 12-foot lengths, or rings cut to size when specified.

(Sizes $\frac{3}{4}$ to $1\frac{1}{2}$ inches)

When ordering rings or sets give exact diameter of rod or plunger, and inside diameter and depth of stuffing box.



Set of "John Crane" Style 321 Rings of Semi-Metallic Packing. Easily cut and moulded from Style 320 Spiral.

Put Your Difficult Packing Jobs Up to "John Crane" Engineers

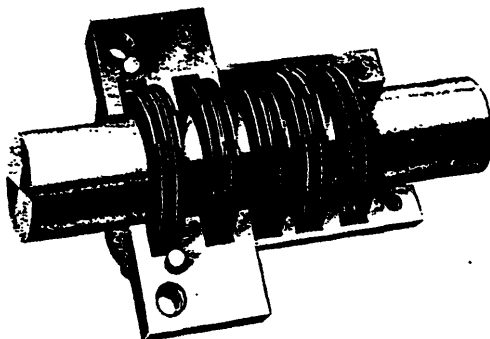
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Metal **"John Crane"** Packings
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Metal Packings

Steam — Air — Gas



"John Crane" Metal Packings are designed by our engineers and machined to exact specifications. All metals entering into the manufacture of the rings and casings for various services are carefully selected and alloyed to withstand the prevailing conditions where this type of packing is selected.

Inside Split Case Type

Style 866

This style can be furnished to fit stuffing boxes where the packing space is $\frac{5}{8}$ -inch or larger, with a minimum depth of $3\frac{1}{2}$ inches.

Easily installed without alterations to stuffing box.

Maximum pressure, 250 lbs.

Outside Split Case Type

Style 867

For small piston rods and valve stems, where stuffing boxes will not accommodate an inside packing, the outside type is most practical.

Maximum pressure, 250 lbs.

"John Crane" Service

Write for our specification sheet which covers complete information required to furnish the proper types of metal packings for various services. All inquiries will receive, without obligation, the personal attention of our Sales and Engineering Departments.

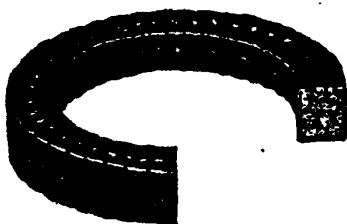
We are Vitally Interested in the Success of Every "John Crane" Installation

CRANE PACKING CO. :: Chicago, Ill.

Metallic "John Crane" Packings

REG. U. S. PAT. OFF.

Braided Copper Wire Packing



Illustrating Style 551 Ring Form. These rings can be easily cut and formed from Style 550 Spiral.

Spiral Form.....Style 550

Ring Form.....Style 551

This packing consists of many strands of soft copper wires braided together. It has the ability to resist high temperatures, up to 1000° F. Often used as a bushing ring where there is excessive clearance between the rod and the packing gland or throat.

Recommended Uses

Used on steam, hot or cold oil, hot or cold water, as a bushing ring at bottom of stuffing box or next to gland. Also used as a reinforcing member in combination sets and very often used with fabric packings as a bushing ring.

(Sizes $\frac{1}{4}$ to $1\frac{1}{2}$ inches)

Furnished in spirals, coils or reels; also in rings cut to size when specified.

White Metal Asbestos Packing

Coil Form.....Style 868

Ring Form.....Style 869

"John Crane" White Metal Asbestos Packing is manufactured from a pure asbestos cloth of high quality, interwoven with numerous soft white metal wires. The finished packing is lubricated and thoroughly graphited.

The construction of this type of packing results in a metallic wearing face possessing anti-frictional qualities, resiliency and remarkably long life.



Illustrating Style 869 Ring Form. These rings can be easily cut and formed from Style 868 Coil.

Recommended Uses

Adapted for worn and scored rods and gives splendid results when used in combination with other styles of packing. Chiefly recommended for steam rods, temperatures not exceeding 450° F.

(Sizes $\frac{1}{4}$ inch and up)

Furnished in coils of $12\frac{1}{2}$ ft. or rings cut to size, when specified.

Our Research Department is Constantly Working on New Developments

CRANE PACKING CO. " Chicago, Ill.

Page Twenty-three

Metallic **"John Crane"** Packings
REG. U. S. PAT. OFF.

Shredded Metallic Packing



Style 870

"John Crane" Shredded Metallic Packing is composed of long strands of non-friction metal, thoroughly lubricated with our special insoluble compound.

An Ideal Rod and Valve Stem Packing

This packing is popular for small rods and valve stems, and its uses are similar to the asbestos valve stem types of packing.

One Can Makes All Sizes

Any number of strands can be twisted together to make the required size of packing, one can serving for all sizes. Its anti-frictional and heat-resisting qualities make it desirable for high temperature steam and Diesel engine work.

Put up in five and ten pound cans

We Can Show Many Unusual Service Records Made by "John Crane" Packings

CRANE PACKING CO. :: Chicago, Ill.

Insoluble **"John Crane"** Lubricant

REG. U. S. PAT. OFF.

Insoluble Lubricant

*Insoluble in
Gasoline and
All Petroleum
Products*



*Insoluble in
Water and
All Aqueous
Solutions*

Throughout this catalog we have referred to the "John Crane" Insoluble Lubricant with which our packings are impregnated. It preserves fabrics, such as flax, duck and asbestos, and may be used to great advantage on equipment operating in contact with high or low test gasoline, casing head or natural gasoline. It will not discolor the gasoline.

Equally Insoluble in

Naphtha	Kerosene	Mineral Oil	Methyl Alcohol
Benzine	Fuel Oil	Petrolie Ether	Alcohol

and the ideal lubricant for these services.

Also highly recommended as a lubricant on equipment handling

Formaldehyde	Hydrogen Peroxide	Nitric Acid	Muriatic Acid
Ammonium Sulphid	Hydrochloric Acid	Sulphuric Acid	Caustic

It reduces friction and increases efficiency. It reduces fire hazard. It will not harden or dry up and is ready for use at all times. There is nothing in its composition that will attack iron, steel, brass, lead or any other metal.

Where to Use

1. Shafts, plungers, rods and valve stems in contact with gasoline and all other products listed.
2. Impregnating flax, duck, asbestos or metallic packings used in all above services.

Put up in convenient 1-lb. and 10-lb. cans

Also supplied in barrels to large users.

Our Research Laboratories are Always at Your Service

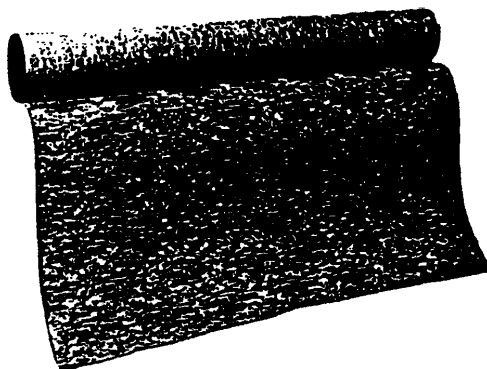
CRANE PACKING CO. :: Chicago, Ill.

Page Twenty-five

Sheet **"John Crane"** Packings

REG. U. S. PAT. OFF.

Asbestos Sheet Packing *High Pressure Service*



Style 333

"John Crane" Style 333 Compressed Asbestos Sheet Packing is designed for high pressure steam and superheat service. Carefully selected long fibre asbestos, combined with a minimum quantity of binding compound, compressed under tremendous pressure, results in a homogeneous sheet, possessing great tensile strength and the ability to sustain pressures at 30,000 lbs. per square inch.

Toughness, resiliency, and resistance to the action of acids, chemicals, ammonia, brine, gas and alkali, are commendable features.

Insures Tight Joints

Joints gasketed with "John Crane" Asbestos Sheet Packing require no following up, and remain tight under diversified conditions without burning, blowing or pressing out.

This packing will not deteriorate or dry out when carried in stock.

When a New Condition Arises Requiring Special Service, Call Upon Us

CRANE PACKING CO. :: Chicago, Ill.

Sheet **"John Crane"** Packings

REG. U. S. PAT. OFF.

Table of Specifications

Asbestos Sheet Packing

Style 333

Standard Sheet Sizes

40 x 40 50 x 50
40 x 120 50 x 100
50 x 150

Special Sheet Sizes—for Large Gaskets

60 x 60 60 x 120

Approximate Weight Per Square Yard

$\frac{1}{16}$ " Thick.....	1.3 lbs.	$\frac{3}{8}$ " Thick.....	7.8 lbs.
$\frac{1}{8}$ " Thick.....	2.7 lbs.	$\frac{1}{2}$ " Thick.....	10.8 lbs.
$\frac{3}{16}$ " Thick.....	5.4 lbs.	$\frac{5}{8}$ " Thick.....	16.2 lbs.
$\frac{1}{4}$ " Thick.....	21.6 lbs.		

Finish of Sheets

1. Natural Color (Yellow)
2. Graphited One Side
3. Graphited Both Sides
4. Graphited Throughout Sheet (Gray)
5. Red One Side, Graphite on Other Side

Die Cut Gaskets

We are in position to furnish gaskets of any design and size, die cut from any of the above sheets in accordance with your blue print specifications or samples submitted.

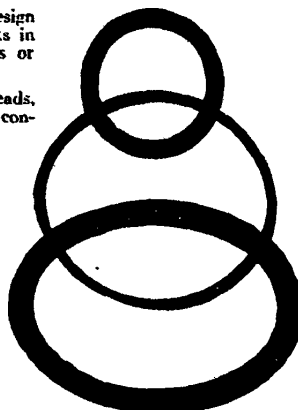
These gaskets are adapted for use on cylinder heads, pumps, manifolds, water, steam, air or gas connections.

Flange Gaskets

For standard and extra heavy flanged valves and fittings we carry a complete stock in all sizes for immediate delivery.

On new construction field work these cut gaskets are both practical and economical.

For sizes and list prices see Pages 32 and 33.



Die Cut Gaskets

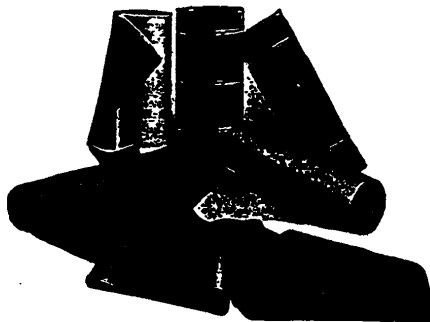
For Economy—Efficiency—Satisfaction—Use "John Crane" Packings

CRANE PACKING CO. Chicago, Ill.

Page Twenty-seven

Woven Asbestos, Wire Inserted Sheet Packings

*Gas
Engines*



*Diesel
Engines*

Style 222

High Temperatures

"John Crane" Style 222 Woven Asbestos Wire Inserted Sheet Packing is made under rigid specifications, from yarn containing not less than 95% long fibre asbestos, spun and twisted around fine brass wires, and woven into a semi-metallic cloth of close weave. The finished cloth is then impregnated with a heat resisting filler under pressure, resulting in a uniform thickness throughout.

The heat resisting qualities of this sheet make it adaptable for air, gas, and steam services, where high pressures and superheat temperatures are encountered.

Made in rolls, 40 inches wide, of approximately 250 lbs. per roll, and finished in natural color (white) or coated red on one side, with a graphited surface on the other side. Each roll is wrapped in waterproof paper and packed in a substantial shipping case.

Thickness.....	$\frac{1}{16}$ "	$\frac{1}{8}$ "	$\frac{1}{4}$ "	$\frac{3}{8}$ "	$\frac{1}{2}$ "
Approx. wt. 36 x 40 in...	3.125 lbs.	6.25 lbs.	12.5 lbs.	18.75 lbs.	25. lbs.

"John Crane" Packings in Use in Every Department of the Engineering Field

CRANE PACKING CO. :: Chicago, Ill.

Sheet **"John Crane"** Packings

REG. U. S. PAT. OFF.

Oil Proof Fibre Sheet Packing



Style 444

"John Crane" Fibre Sheet is made from special plant fibre, chemically treated to prevent decomposition. The finished sheet has a tensile strength of over 3000 lbs. per square inch, and is tough and resilient.

Oil—Gasoline—Volatile Liquids

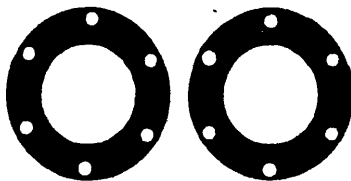
Recommended for use on water, oil, gasoline, benzine and other volatile liquids.

Furnished in Sheets and Rolls

Sheets—36" x 36" and 40" x 40".

Rolls—50 yards and 100 yards each.

Thicknesses— $\frac{1}{64}$ ", $\frac{1}{32}$ ", $\frac{1}{16}$ ", $\frac{3}{32}$ ", $\frac{1}{8}$ ", and $\frac{1}{4}$ "



Cut Gaskets

Gaskets cut from this sheet can be furnished to specifications. Estimates submitted on quantity lots.

"John Crane" Service Engineers in All Principal Ports

CRANE PACKING CO. :: Chicago, Ill.

Page Twenty-nine

Sheet **"John Crane"** Packings

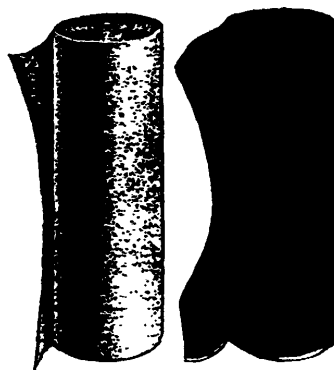
REG. U. S. PAT. OFF.

Rubber Sheet Packing

Plain — Wire Inserted — Cloth Inserted

Made in rolls of approximately 250 lbs., 36 inches wide.

Thicknesses, $\frac{1}{32}$ ", $\frac{1}{16}$ ", $\frac{3}{32}$ ", $\frac{1}{8}$ " and $\frac{1}{4}$ ".



When ordering any of these styles of sheet packing, specify plain, wire inserted, or cloth inserted.

Style 555—Plain Red Sheet

"John Crane" Plain Red Sheet Packing is recommended for medium steam pressure, hot or cold water, ammonia, and air service. It is compounded from best quality Para, and is not affected by temperature changes. This packing is tough and resilient, and conforms readily to face of flange.

Style 666—Wire Inserted Red Sheet

To give additional strength for extra heavy pressures, and vibrating joints, "John Crane" Style 666 is reinforced with a fine brass wire insertion. Especially recommended for marine service.

Style 777—Cloth Inserted Sheet Packing

"John Crane" Style 777 Black Rubber, Cloth Inserted Sheet Packing is recommended for low pressure steam, hot or cold water, and all hydraulic service. Made of high grade rubber with one ply of selected cotton cloth to every $\frac{1}{16}$ " thickness.

Also furnished with cotton cloth one side, or both sides, when specified.

Prompt Service Through Our Branches Located in All Principal Cities

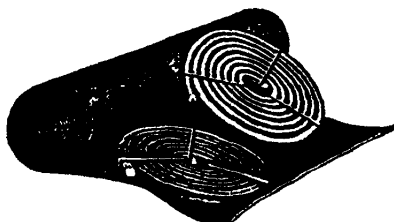
CRANE PACKING CO. :: Chicago, Ill.

Rubber **"John Crane"** Packings

REG. U. S. PAT. OFF.

Pure Rubber Packing

Sheet — Strip — Cord



Sheet

"John Crane" Pure Gum Slab Stock is made in thicknesses from $\frac{1}{32}$ inch to $1\frac{1}{2}$ inches. Furnished in roll lots 36" wide, or in quantity specified. Stocks can be made to meet all requirements.

Our standard grade used for cutting valves, washers, marine gaskets, and for sugar mill, cold water, milk, brine and chemical services.

Strip

Square section pure Gum strip, cut in all sizes from $\frac{1}{8}$ inch to $1\frac{1}{2}$ inches, in lengths of 15 feet. Recommended for all services requiring a soft, flexible and elastic packing.

Cord

Round section pure rubber, furnished in all sizes from $\frac{1}{8}$ inch to $1\frac{1}{2}$ inches, in lengths as follows:

$\frac{1}{8}$ to $\frac{3}{4}$ inch inclusive.....	50 ft. lengths
$1\frac{1}{16}$ to $1\frac{1}{2}$ inch inclusive.....	3 ft. lengths

When ordering any of above styles, specify all dimensions, and nature of service.

U. S. Government specification rubber is furnished when specified.

All "John Crane" Packings Accurately Moulded to Close Tolerances

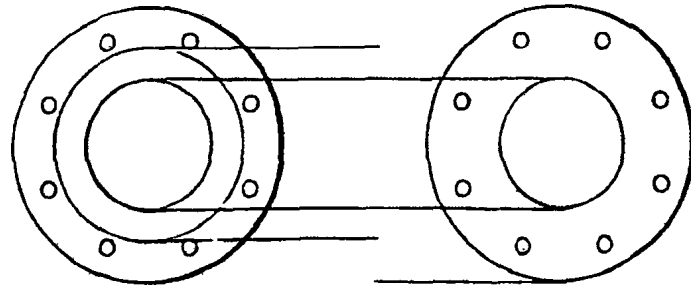
CRANE PACKING CO. :: Chicago, Ill.

Page Thirty-one

Fabric **"John Crane"** Packings

REG. U. S. PAT. OFF.

Flange Gaskets For Standard Flanges



Style 871—"John Crane" Flange Gaskets, cut from $\frac{1}{16}$ " compressed asbestos sheet packing.

A. S. M. E. Standard

Ring Style For installation inside of bolt holes			Full Face Style To cover flange faces	
Pipe Size Inches	Size Gaskets Inches	List Price Each	Size Gaskets Inches	List Price Each
$\frac{3}{4}$	$\frac{3}{4} \times 2\frac{1}{8}$	80.06	$\frac{3}{4} \times 3\frac{1}{2}$	80.12
1	1 x $2\frac{1}{4}$	.06	1 x 4	.12
$1\frac{1}{4}$	$1\frac{1}{4} \times 2\frac{1}{2}$	.08	$1\frac{1}{4} \times 4\frac{1}{2}$	.16
$1\frac{1}{2}$	$1\frac{1}{2} \times 3\frac{3}{8}$	.10	$1\frac{1}{2} \times 5$	.20
2	2 x $4\frac{1}{8}$	.12	2 x 6	.24
$2\frac{1}{2}$	$2\frac{1}{2} \times 4\frac{7}{8}$	.15	$2\frac{1}{2} \times 7$	.30
3	3 x $5\frac{3}{8}$	.19	3 x $7\frac{1}{2}$	.38
$3\frac{1}{2}$	$3\frac{1}{2} \times 6\frac{3}{8}$	.25	$3\frac{1}{2} \times 8\frac{1}{2}$	.50
4	4 x $6\frac{7}{8}$	.30	4 x 9	.60
$4\frac{1}{2}$	$4\frac{1}{2} \times 7$	.32	$4\frac{1}{2} \times 9\frac{1}{4}$	.64
5	5 x $7\frac{3}{4}$	.35	5 x 10	.70
6	6 x $8\frac{3}{4}$	.41	6 x 11	.82
7	7 x 10	.50	7 x $12\frac{1}{2}$	1.00
8	8 x 11	.55	8 x $13\frac{1}{2}$	1.10
9	9 x $12\frac{1}{2}$	.65	9 x 15	1.30
10	10 x $13\frac{3}{8}$	.80	10 x 16	1.60
12	12 x $16\frac{1}{8}$	1.00	12 x 19	2.00
14	14 x $17\frac{3}{4}$	1.25	14 x 21	2.25
15	15 x 19	1.50	15 x $22\frac{1}{4}$	2.75
16	16 x $20\frac{1}{4}$	1.75	16 x $23\frac{1}{2}$	3.25
18	18 x $21\frac{5}{8}$	1.90	18 x 25	3.50
20	20 x $23\frac{7}{8}$	2.10	20 x $27\frac{1}{2}$	3.75
22	22 x 26	2.50	22 x $29\frac{1}{2}$	4.50
24	24 x $28\frac{1}{4}$	2.80	24 x 32	5.00

Full face gaskets furnished with bolt holes at extra cost.

The Name "John Crane" is Your Assurance of Quality and Value

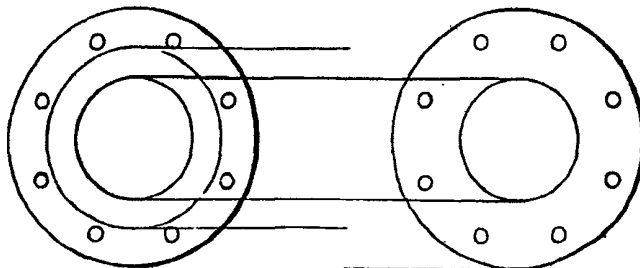
CRANE PACKING CO. :: Chicago, Ill.

Fabric **"John Crane"** Packings

REG. U. S. PAT. OFF.

Flange Gaskets

For Extra Heavy Flanges



Style 872—"John Crane" Flange Gaskets, cut from $\frac{1}{16}$ " compressed asbestos sheet packing

A. S. M. E. Standard

Ring Style For installation inside of bolt holes			Full Face Style To cover flange faces	
Pipe Size Inches	Size Gaskets Inches	List Price Each	Size Gaskets Inches	List Price Each
1	1 x $2\frac{3}{4}$	\$0.08	1 x $4\frac{1}{2}$	\$0.18
1 $\frac{1}{4}$	1 $\frac{1}{4}$ x $3\frac{1}{4}$	.10	1 $\frac{1}{4}$ x 5	.22
1 $\frac{1}{2}$	1 $\frac{1}{2}$ x $3\frac{7}{8}$	.12	1 $\frac{1}{2}$ x 6	.27
2	2 x $4\frac{3}{8}$	.15	2 x $6\frac{1}{2}$	.35
2 $\frac{1}{2}$	2 $\frac{1}{2}$ x $5\frac{1}{8}$	.19	2 $\frac{1}{2}$ x $7\frac{1}{2}$	.38
3	3 x $5\frac{7}{8}$	.24	3 x $8\frac{1}{4}$	.50
3 $\frac{1}{2}$	3 $\frac{1}{2}$ x $6\frac{1}{2}$	.27	3 $\frac{1}{2}$ x 9	.60
4	4 x $7\frac{1}{8}$	.33	4 x 10	.75
4 $\frac{1}{2}$	4 $\frac{1}{2}$ x $7\frac{3}{4}$	.35	4 $\frac{1}{2}$ x $10\frac{1}{2}$	.80
5	5 x $8\frac{1}{2}$	.45	5 x 11	.90
6	6 x $9\frac{1}{8}$	.55	6 x $12\frac{1}{2}$	1.10
7	7 x 11	.70	7 x 14	1.35
8	8 x $12\frac{1}{8}$	.75	8 x 15	1.45
9	9 x 13	.85	9 x $16\frac{1}{4}$	1.70
10	10 x $14\frac{1}{4}$	1.00	10 x $17\frac{1}{2}$	1.90
12	12 x $16\frac{3}{8}$	1.25	12 x $20\frac{1}{2}$	2.50
14	14 x $19\frac{1}{8}$	1.65	14 x 23	2.75
15	15 x $20\frac{1}{4}$	1.80	15 x $24\frac{1}{2}$	3.35
16	16 x $21\frac{1}{4}$	2.10	16 x $25\frac{1}{2}$	3.50
18	18 x $23\frac{1}{2}$	2.40	18 x 28	4.00
20	20 x $25\frac{3}{4}$	2.75	20 x $30\frac{1}{2}$	4.25
22	22 x $27\frac{3}{4}$	3.00	22 x 33	5.50
24	24 x $30\frac{3}{4}$	3.50	24 x 36	6.00

Full face gaskets furnished with bolt holes at extra cost

"John Crane" Packings Used Throughout the World

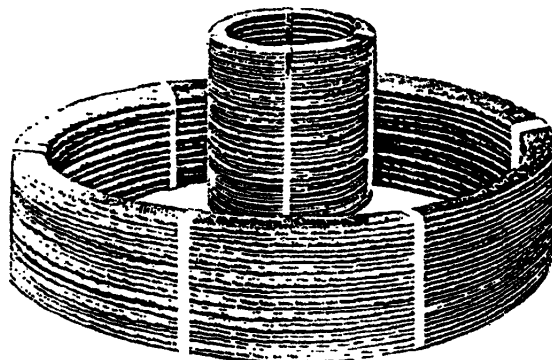
CRANE PACKING CO. :: Chicago, Ill.

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Fabric **"John Crane"** Packings

REG. U. S. PAT. OFF.

High Pressure Asbestos Gaskets



Style 873

"John Crane" High Pressure Asbestos Gaskets are manufactured from a high quality asbestos metallic cloth, conforming to U. S. Government specifications, treated with a heat resisting compound, and folded and moulded to sizes specified.

Made for general manhole and small handhole plates, other than water tube boilers.

These gaskets are furnished round, oval, or any shape required.

High Pressure Folded Asbestos Gaskets for Water Tube Boilers

Made from materials same as Style 873.

Style 874—Heine, Round— $3\frac{1}{2}'' \times 4\frac{1}{4}'' \times \frac{1}{8}''$ thick.

Style 875—Heine, Oval— $3\frac{1}{2}'' \times 4\frac{1}{4}'' \times \frac{3}{8}'' \times \frac{1}{8}''$ thick.

Style 876—B. & W., Oval— $4\frac{3}{8}'' \times 5\frac{3}{8}'' \times \frac{5}{16}'' \times \frac{1}{8}''$ thick.

Style 877—B. & W., Square— $4\frac{3}{4}'' \times 4\frac{1}{4}'' \times \frac{1}{4}'' \times \frac{1}{8}''$ thick.

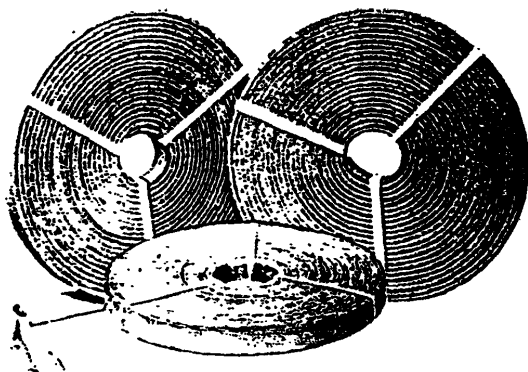
Our Research Department Always at Your Service

CRANE PACKING CO. :: Chicago, Ill.

Fabric **"John Crane"** Packings

REG. U. S. PAT. OFF.

High Pressure Asbestos Metallic Tape



Style 878

"John Crane" High Pressure Folded Tape is manufactured from an asbestos metallic cloth conforming to U. S. Government specifications, folded into tape form and treated with a heat resisting compound.

Recommended for gasketing all steam pressures. Generally stocked by engineers for emergency purposes.

*Furnished in rolls of 50 and 100-ft. lengths.
All widths and thicknesses.*

Tubular Gasketing

Style 879

A High Pressure tubular gasket, manufactured from asbestos metallic cloth, wrapped around an asbestos core and frictioned by a heat resisting compound. This type of gasket is recommended for severe service where plates are pitted, requiring a heavier body than the standard thickness of asbestos tape.

All "John Crane" Packings Made According to Approved Engineering Principles

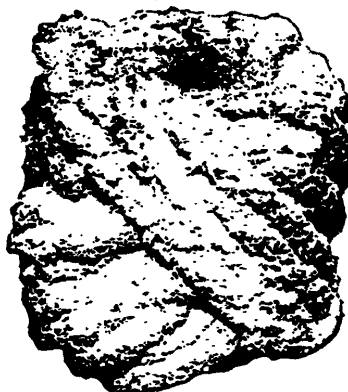
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Page Thirty-five

Fabric **"John Crane"** Packings

REG. U. S. PAT. OFF.

Asbestos Wick and Rope Packing



Asbestos Wick

Style 880

"John Crane" Pure Asbestos Twisted Wick Packing consists of long fibre pure asbestos, containing no foreign substance, spun into separate strands, which may be separated if desired.

(Sizes $\frac{1}{4}$ inch and $\frac{3}{8}$ inch)

Put up in $\frac{1}{2}$ lb., 1 lb. and 2 lb. balls.

880 $\frac{1}{2}$ - Twisted by Asbestos Cord. - (Pat. NYC. # 7005)

Asbestos Rope

Style 881

"John Crane" Pure Asbestos Rope Packing consists of long fibre pure asbestos, twisted or braided into rope form. It is high temperature resisting and economical due to its light weight and great bulk.

Recommended for insulating steam and exhaust pipes. Joints can be easily broken and the rope lagging removed and replaced without trouble.

(Sizes $\frac{3}{4}$ inch and larger)

Furnished on reels 25 lbs. or larger.

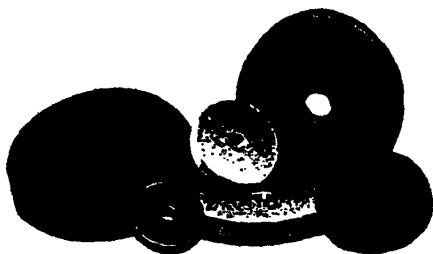
Quality, Experience, Expert Workmanship in All "John Crane" Packings

CRANE PACKING CO. Chicago, Ill.

Pump **"John Crane"** Valves

REG. U. S. PAT. OFF.

Rubber Pump Valves



Hot Water

- Style 882—Hard valve, for water up to 150 lbs., 175° F.
Style 883—Hard valve, for water up to 250 lbs., 212° F.
Style 884—Hard valve, for fluids up to 500 lbs., any temperatures. Is especially adapted for acids, alkalies, chemicals, syrups, etc.

Cold Water

- Style 885—Medium hard valve, recommended for general service and cold fluids, at pressures up to 150 lbs.
Style 886—Medium hard valve, recommended for general service and cold fluids, at pressures up to 350 lbs.
Style 887—Hard valve, recommended for cold fluids at pressures up to 500 lbs., and for diversified services.

Marine Service

- Style 888—Soft red valve, recommended for condenser and air service.
Style 889—Soft valve, recommended for general service. Tough and durable.

Specify style number, outside diameter, size of hole, and thickness.

All "John Crane" Salesmen are Experienced Service Engineers

CRANE PACKING CO. Chicago, Ill.

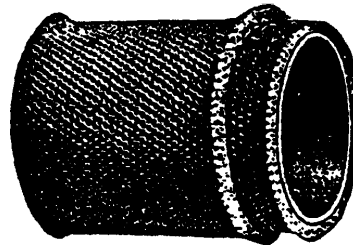
Page Thirty-seven

Fire **"John Crane"** Hose

REG. U. S. PAT. OFF.

Fire Hose

Cotton, Rubber Lined—Linen Unlined



Double Jacket Cotton, Rubber Lined

"John Crane" Double Jacket, Rubber Lined Fire Hose is unexcelled for heavy duty service. Both jackets are made of the very best selected long staple cotton, tightly woven, into which is frictioned a high quality rubber tube. This hose is designed for severe and continuous service.

Size	Per Ft.	Size	Per Ft.
1½"	\$0.80	2½"	\$1.00
2"	.90	3"	1.90

Single Jacket Cotton, Rubber Lined

"John Crane" Single Jacket Rubber Lined Mill Hose is designed for lighter duty and is adapted for mill, mine and marine service. The inner rubber tube is compounded from a stock which will resist the deleterious action of sea and polluted river waters. Will withstand pressures far in excess of Underwriter's specifications.

Size	Per Ft.	Size	Per Ft.
1½"	\$0.45	2"	\$0.65
1¾"	.50	2½"	.80

Unlined Linen Hose

Recommended for indoor general service due to lightness, compactness and convenience of handling for emergency use. Must be carefully dried out before storing to prevent disintegration of linen fibres.

Prices on Application.

Always Glad to Have You Send Us Your Problems

CRANE PACKING CO. :: Chicago, Ill.

Water **"John Crane"** Hose

REG. U. S. PAT. OFF.

Water Hose
Rubber Covered



"John Crane" Water Hose is made with a seamless tube of fine quality Para rubber, around which is wrapped and strongly frictioned, plies of heavy duck.

The outside rubber is applied and vulcanized to prevent deterioration of the duck, also making it impervious to oil, acid, moisture and steam.

The finished product results in a tough but flexible hose, light in weight and easy to handle. Recommended for rough usage, and where a hose is required for constant service.

(Furnished in standard 50 ft. lengths.)

Standard Water Hose List

Inside Diam.	Price Per Foot				
	2-Ply	3-Ply	4-Ply	5-Ply	6-Ply
1"	\$0.33	\$0.40	\$0.50	\$0.62	\$0.75
1 1/4"	.42	.50	.62	.77	.93
1 1/2"	.50	.60	.75	.93	1.12
1 3/4"	.58	.70	.87	1.08	1.30
2"	.66	.80	1.00	1.25	1.50
2 1/4"	.75	.90	1.12	1.40	1.68
2 1/2"	.83	1.00	1.25	1.56	1.87
2 3/4"	.92	1.10	1.37	1.71	2.05
3"	.99	1.20	1.50	1.87	2.25
4"	1.32	1.60	2.00	2.50	3.00

"John Crane" Service Engineers in All Principal Ports

CRANE PACKING CO. :: Chicago, Ill.

Page Thirty-nine

Steam **"John Crane"** Hose

REG. U. S. PAT. OFF.

Steam Hose For Heavy Duty Service



"John Crane" Steam Hose is made expressly for heavy duty service. The tube is of non-vulcanizing rubber stock, reinforced with plies of strong duck and high grade friction, with an outside cover of para rubber applied to resist abrasion and wear under rough usage. Scrupulous care is used in making this hose, and satisfactory service may be expected from its use.

Outside wire winding, when specified, may be furnished round, half-round, or of the flat type.

Standard Steam Hose List

Inside Diam.	Price Per Foot						
	2-Ply	3-Ply	4-Ply	5-Ply	6-Ply	7-Ply	8-Ply
1/2"	\$0.38	\$0.47	\$0.56	\$0.70	\$0.84	\$0.98	\$1.12
3/4"	.47	.57	.71	.87	1.05	1.23	1.41
1"	.57	.70	.87	1.07	1.28	1.50	1.70
1 1/4"		.85	1.04	1.30	1.56	1.82	2.08
1 1/2"		1.02	1.25	1.56	1.87	2.18	2.50
1 3/4"		1.18	1.45	1.81	2.17	2.53	2.90
2"		1.34	1.66	2.07	2.49	2.90	3.32
2 1/4"		1.50	1.87	2.33	2.80	3.27	3.74
2 1/2"		1.66	2.08	2.60	3.12	3.64	4.16
3"		2.00	2.50	3.50	4.50	4.90	5.60

You Can Depend Upon the Interested Co-operation of Our Sales Engineers

CRANE PACKING CO. :: Chicago, Ill.

Adamant Gauge Glasses

Priced in Lots of a Dozen

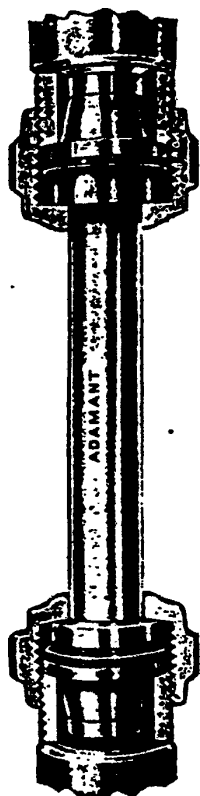
Length	$\frac{1}{2}$ & $\frac{3}{4}$	$\frac{3}{4}$	$\frac{1}{2}$	1 in.
10"	\$3.00	\$3.60	\$5.04	\$6.12
11"	3.24	3.96	5.64	6.72
12"	3.60	4.32	6.12	7.32
13"	3.84	4.80	6.60	7.92
14"	4.20	5.16	7.08	8.52
15"	4.44	5.52	7.56	9.12
16"	4.80	5.88	8.16	9.72
17"	5.04	6.24	8.64	10.32
18"	5.40	6.60	9.12	10.92
19"	5.64	7.08	9.60	11.52
20"	6.00	7.44	10.20	12.12
21"	6.30	7.80	10.68	12.75
22"	6.60	8.16	11.16	13.44
23"	6.90	8.60	11.63	14.05
24"	7.20	8.88	12.12	14.64
30"	9.00	11.16	15.24	18.24
36"	10.80	13.44	18.24	21.96
48"	14.52	18.00	24.36	29.16
60"	18.12	22.56	30.48	36.48
72"	21.84	27.12	36.48	43.80

Fractions of an inch charged as one inch.

Sight Feed Lubricator Glasses

$\frac{1}{2}$ in., $\frac{3}{4}$ in., $\frac{1}{2}$ in. Diameter

Length	Per Doz.
3 in. and under	\$1.80
Over 3 in. and including 4 inch	2.40
Over 4 in. and including 5 inch	3.00
Over 5 in. and including 6 inch	3.60



Gauge Glass Washers and Rings

A complete stock of Gauge Glass Washers and Rings in all sizes and designs are carried in stock. All washers are made of the best quality rubber, and will withstand the action of high temperature.



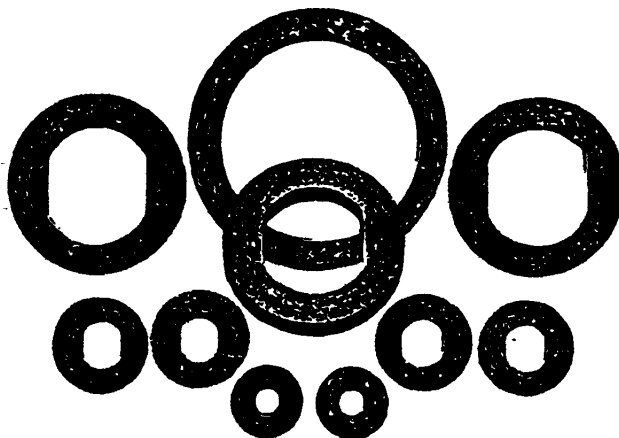
The Trade Mark "John Crane" Guarantees Quality, Service and Satisfaction

CRANE PACKING CO. :: Chicago, Ill.

Valve **"John Crane"** Discs

REG. U. S. PAT. OFF.

Valve Discs



Oval Hole.....Style 890
Round Hole.....Style 891

"John Crane" Valve Discs are moulded from a specially prepared heat resisting compound containing a sufficient filler of asbestos fibre to insure great tensile strength and prevent swelling, warping or cracking under high steam pressures and temperatures.

Highly recommended for hot oil, hot water, acid and other chemical services.

These discs are made in standard and special shapes of all sizes.

Table of Standard Sizes and Prices

Size	Each	Size	Each
1 1/2"	\$0.08	5"	\$1.60
1 3/4"	.10	6"	2.00
1 7/8"	.12	7"	2.40
2"	.14	8"	2.80
2 1/4"	.16	10"	3.50
1 1/2"	.24	12"	4.00
1 3/4"	.32	14"	6.00
2"	.48	16"	9.00
2 1/2"	.64	18"	12.00
3"	.80	20"	16.00
3 1/2"	1.00	22"	20.00
4"	1.20	24"	24.00

We are in position, through our research department, to develop and manufacture discs of special compounds to meet unusual conditions.

Put Your Difficult Packing Jobs Up to "John Crane" Engineers

CRANE PACKING CO. :: Chicago, Ill.

Inside Packed Pump Rings and Sleeves



Style 892

Hydraulic Service

"John Crane" Hydraulic Piston Rings are developed for use against high pressure and high temperature service.

The material from which these rings are constructed will not swell, warp, crack or soften under the action of heat. Fully resistant to the deleterious effects of acids, oil, ammonia, hot water or any lubricants.

Rings made from the "John Crane" compound are highly recommended for inside packed pistons. Also for valves and gauge glass washers.

This type of hydraulic ring is most popular with the marine trade. Sleeves of this material can be supplied in any length, from which engineers may make rings to suit varying conditions in pump chambers.

Bakelite Valves

Style 893

"John Crane" Bakelite Treated Fabric Valves are highly recommended for gasoline service, hot or cold. They are oilproof, waterproof, unbreakable, resilient and silent. Possess a tensile strength of 12,640 lbs. per sq. in. Highly recommended for pumps operating under the most varying conditions.

To Insure Accurate Service. Please Order by Style Numbers

CRANE PACKING CO. Chicago, Ill.

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Miscellaneous

In addition to the lines illustrated and described on preceding pages, we are also in position to furnish many other specialties. The following represents a partial list:

Asbestos Cement for Boiler Covering
Asbestos Cloth
Asbestos Gloves and Mittens
Asbestos and Magnesia Pipe Covering
Asbestos Mill Board
Asbestos Paper
Asbestos Yarn
Braided Asbestos Tubing
Cotton Wicking
Manganesite Jointing Paste
Corrugated Rubber Matting
Perforated Rubber Matting

Hose Accessories

Clamps
Expansion Ring Couplings
Nozzles
Racks
Reducing Couplings
Shank Couplings
Spanner Wrenches
Washers

Tools

Condenser Packing Insertion Tools
Condenser Packing Removal Tools
Condenser Tube Belling Tools
Condenser Tube Expanders
Condenser Tube Ferrule Wrenches
Gauge Glass Cutters
Packing Hooks
Packing Sticks

Prices on Application

Our Research Department is Constantly Working on New Developments

CRANE PACKING CO. :: Chicago, Ill.

Fabric **"John Crane"** Packings

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There is a "John Crane" Packing Specially Adapted for Every Service

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Our Research Laboratories are Always at Your Service

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Fabric **"John Crane"** Packings

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We Can Show Many Unusual Service Records Made by "John Crane" Packings

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