



Mine Safety Appliances Co.

BRADDOCK, THOMAS AND MEADE STREETS

Pittsburgh, Pa.

(8)

February 15, 1944

IN REPLY PLEASE
REFER TO

Dr. Robert A. Kehoe
Kettering Laboratory of Applied Physiology
University of Cincinnati
Eden Avenue 19
Cincinnati, Ohio

Dear Dr. Kehoe:

This is in reply to your letter of February 9 regarding the Hose Mask with special facepiece similar to one which we designed for the Ethyl Corporation for use in repairing tanks.

This mask consisted of a facepiece similar to the one used on our Abrasive Mask illustrated in the enclosed bulletin CS-10. The flip front frame which is usually equipped with a screen for protecting the facepiece lens from sand and shot was equipped with a welding plate and cover lens. A short fireproof duck hood fitted over the head down to the shoulders with snaps for attaching to the facepiece. An air hose connection at the bottom of the facepiece permitted this to be attached to our standard hose mask in place of the regular all-vision facepiece. We manufactured several of these special facepieces for the Ethyl Corporation prior to the war. However, the standard flip front frame did not provide sufficient clearance for easy mounting of the welding lens and cover lens, and it was our intention to make a special flip front frame suitable for this special type of mask. However, this would necessitate a new mold and because of the war, this mold was never built.

It is our intention to complete the tools and molds necessary for building a satisfactory facepiece of this type as soon as conditions will permit. However, if there is a special need for such a facepiece in a number of industries, we could probably arrange to start work on the necessary mold and tools soon.

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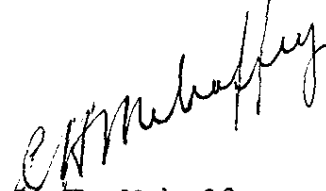
KE 0012327

I am not sure from your letter whether the repair of lead-lined receptacles in the chemical industry involves welding. Of course, you are familiar with our standard Hose Mask with all-vision facepiece shown in the enclosed bulletin. For protection against lead fumes, etc. such a mask would be entirely satisfactory. It was necessary for the Ethyl Corporation to do considerable welding in their repair work which made it necessary to use a special facepiece equipped with a welding lens and with some protection to the exposed parts of the head and face from light and heat.

Our Cincinnati representative, Mr. M. L. Moll, is familiar with the type of equipment made up for the Ethyl Corporation, and we are sending him a copy of this correspondence and request that he call and discuss this matter with you in detail.

Very truly yours,

MINE SAFETY APPLIANCES COMPANY


C. H. Mehaffey
Industrial Department

CHM:KS

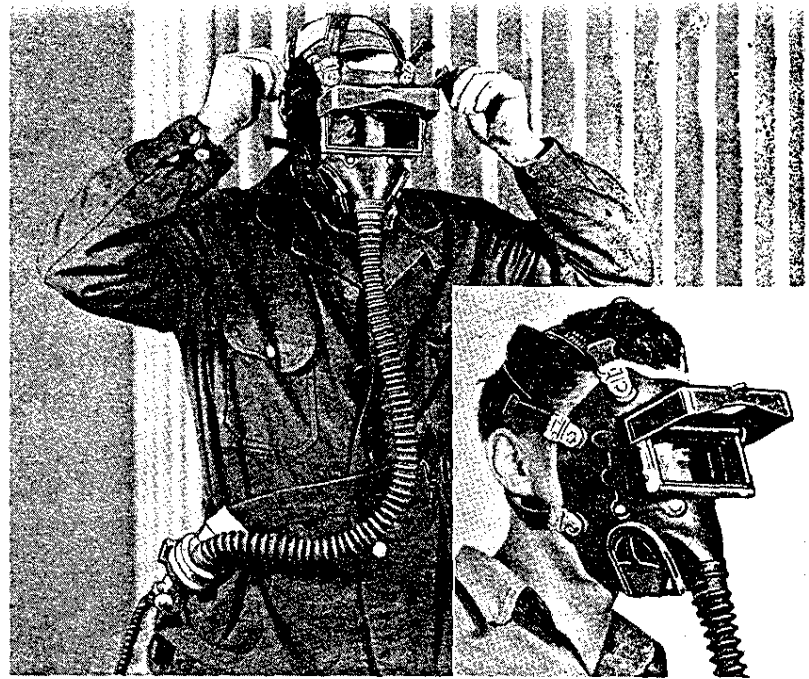
KE 0012328

The M·S·A ABRASIVE MASK

**Safe, comfortable, durable protection
for shot or sand-blast operators**
U.S. Bureau of Mines Approval No. 1907

Weighing less than four pounds, the M.S.A. Abrasive Mask gives complete protection to the wearer from the heavy concentrations of fine dust present in shot or sandblasting rooms, yet is sturdy enough to show remarkable endurance under the impact of high velocity abrasives. The complete assembly comprises a hood, facepiece and connecting tube, flow control valve with "bump-proof" adjustment, quick release connection and optional air filter, and a web belt to carry the valve and filter.

The mask is furnished with either a lightweight or heavy duty hood. The lightweight hood which is recommended for light sand blasting is made from latex-covered silk, and the crown is reinforced with heavy rubber, since wear is greatest at this point. The heavy duty hood is made from sheet rubber reinforced with duck, with vulcanized seams. This hood will wear well under the most extreme conditions and is recommended for all shot blasting or where sand blast conditions are severe. Both hoods



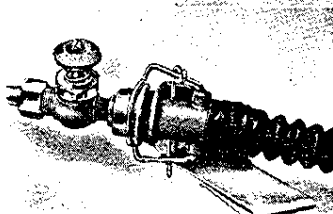
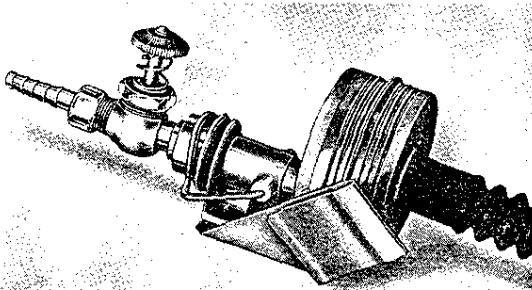
Views of Assembly with Hood Removed.

fit neatly over the head and shoulders and extend well down in front to form a protective apron. Hoods are fastened to the mask by snap fasteners so that they may be easily detached. A special ring is provided at the top of the hood so that the mask may be hung upright when not in use. (Note: Hoods can also be made upon special order from chrome leather, fireproof duck and other materials).

The gas-mask type, all rubber facepiece is absolutely dust-tight and quickly adjustable to fit any face. Air is fed into the facepiece through a corrugated tube, and ingeniously deflected from the wearer's eyes. The air is exhausted from the facepiece through twin exhalation valves and circulates under the hood, thereby providing a cooling effect. The wide-vision lens is made from safety-glass and is protected from pitting by an alloy steel screen cover, mounted in a rubber frame. This screen and frame can be flipped upward when clearer vision is desired for inspection of work. Lens and screen are quickly removable.

The Air-Flow Control Valve attached to the end of the corrugated tube has a "bump-proof" adjustment. The setting cannot be changed accidentally, since the handle is normally held in a released, or "free-wheeling" position by means of a spring, and must be pushed in by the operator to an "engaged" posi-

Below—Valve and quick release assembly, without cartridge filter.



Above—"Bump-proof" Flow Control Valve, with quick Release connection and Cartridge Filter

KE 0012330

M.S.A. Abrasive Masks and Auxiliary Equipment

PRICE LIST AND SPECIFICATIONS

applying to

BULLETIN No. CS-10

FEBRUARY 15, 1944

(Prices F. O. B. Pittsburgh, Pa.
Subject to change without notice)

MSA ABRASIVE MASKS

(U. S. Bureau of Mines Approval No. 1907)

CS-10907	Abrasive Mask Complete with Lightweight Hood, Cartridge Filter, and 15 Ft. of 5/16" Air Hose	\$35.00
CS-10908	Abrasive Mask Complete with Heavy Duty Hood, Cartridge Filter, and 15 Ft. of 5/16" Air Hose	35.00
CS-10909	Abrasive Mask Complete with Lightweight Hood, Yablick Connection and 15 Ft. of 5/16" Air Hose	35.00
CS-10910	Abrasive Mask Complete with Heavy Duty Hood, Yablick Connection and 15 Ft. of 5/16" Air Hose	35.00
CS-10819	Abrasive Mask, less Hood, with Cartridge Filter, and 15 Ft. of 5/16" Air Hose	30.00
CS-10820	Abrasive Mask, less Hood, with Yablick Connection, and 15 Ft. of 5/16" Air Hose	30.00
CS-9961	Belt, Web	1.00
CS-41596	Bracket, Belt	.35
CS-51090	Buckle for Headbands	.10
CS-10018	Cartridge, Filter	.30
CS-15713	Cartridge Holder, Upper Half with Insert for Corrugated Tube	1.50
CS-15712	Cartridge Holder, Lower Half with Clamp and Belt Bracket	2.70
CS-14491	Clamp, Wire	.25
CS-10817	Connection for Corrugated Tube	1.00
CS-15707	Connection, Quick Release, Cartridge Type Complete with Filter, Control Valve, Hose Insert and Nut	8.00
CS-10913	Connection, Quick Release, Yablick Type Complete with Control Valve, Hose Insert and Nut	5.00
CS-17080	Connection, Half, with Wire Clamp and Belt Bracket for Yablick	1.50
CS-51898	Coupling, for Air Line	.25
CS-11309	Facepiece, Complete with Headbands, Exhalation Valves and Insert, but less Lens, Lens Frames, Cover Screen and Supply Tube	15.00
CS-10672	Facepiece, Complete with Headbands, Exhalation Valves, Insert, Lens, Lens Frames, Cover Screen, and 30" Corrugated Tube	20.50
CS-10893	Facepiece with Buckles and Reinforcements	10.00
CS-10648	Frame, Only, for Cover Screen	1.50
CS-10559	Frame, Lower, for Lens	.35
CS-11133	Frame, Upper, for Lens	.80
CS-15672	Gasket, for Corrugated Tube Side of Cartridge Retainer	.15
CS-15695	Gasket, for Valve Side of Cartridge Retainer	.15
CS-3316	Gasket, for Yablick Connection	.03
CS-9322	Guard, for Exhalation Valve	.50
CS-3288	Headbands	Per Set 1.50
CS-14088	Hood, Chrome Leather	8.00
CS-10821	Hood, Heavy Duty (Moulded Rubber)	7.50
CS-10670	Hood, Lightweight (Coated Cloth)	5.00
CS-14773	Hood, Fireproof Duck	6.00
CS-10890	Hose, Air, Non-kinking, 15 Ft. Long and 5/16" Inside Diameter with 5/8" Machine Thread Coupling on One End and 1/4" Pipe Thread on Other End	3.50
CS-42392	Hose, Air, Non-kinking, 25 Ft. Long and 5/16" Inside Diameter with 5/8" Machine Thread Coupling on One End and 1/4" Pipe Thread on Other End	5.00
CS-42393	Hose, Air, Non-kinking, 50 Ft. Long and 5/16" Inside Diameter with 5/8" Machine Thread Coupling on One End and 1/4" Pipe Thread on Other End	8.75
CS-10056	Hose, Air, Non-kinking, 5/16" Inside Diameter with 1/4" Pipe Thread Couplings on Each End (for extension on 10890, 42392, 42393 hose) Specify Length: .15 per Foot plus \$1.25 per Set Couplings.	

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MSA ABRASIVE MASKS (Continued)

CS-51893	Insert, for Air House, Coupling End	\$.25
CS-10673	Insert, for Air Hose, Valve End	.25
CS-10652	Insert, for Angle Tube of Facepiece	1.25
CS-3924	Insert, for Exhalation Valve	.30
CS-10782	Lens, Glass, Shatterproof	.30
CS-51892	Nut, Connection, for Air Hose, Coupling End.....	.15
CS-3638	Nut, Connection, for Air Hose, Valve End	.15
CS-3925	Nut, Lock, for Exhalation Valve	.25
CS-10675	Nut, Valve Stem	.30
CS-52059	Rivet for Hood Snap.....	.01
CS-51028	Rivet for Facepiece Buckle.....	.01
CS-10651	Screen, Duralloy, 30 Mesh	.30
CS-15293	Screen, Duralloy, 60 Mesh	.40
CS-53045	Screen, Perforated Metal.....	.30
CS-51979	Socket for Hood Snap.....	.01
CS-51980	Stud for Facepiece Buckle.....	.01
CS-50320	Screw, for Valve Wheel	.01
CS-10680	Spring, for Valve	.05
CS-10676	Stem, Valve	.25
CS-10650	Tube, Corrugated Breathing, 30 Inch	2.25
CS-10927	Valve, Air Control, Complete with Half Connection.....	3.50
CS-10818	Valve, Air Control, less Half Connection	2.50
CS-3922	Valve, Exhalation	.50
CS-3926	Washer, Lock Nut, for Exhalation Valve	.15
CS-912	Washer, Valve Stem	.03
CS-10674	Wheel, Valve	.35

MSA CLEANAIR BLOWERS

Cat. No.	Capacity In Masks	Air Delivery Per Minute	Motor H.P.	Prices AC Motor	
				3 phase	1 phase
CS-32029	1	5.3 Cu. Ft.	1/2	\$235.75	\$235.75
CS-32030	2	12.9 " "	1	265.00	267.00
CS-32055	3 to 4	25 " "	2	365.00	380.00
CS-32056	5	38 " "	3	383.00	410.00
CS-32057	10	60 " "	5	478.00	

Prices above are for CleanAir Blower Unit directly coupled to an electric drive motor, and include inlet silencer, water separator, seal water control valves, and relief valve, but no piping or motor starting switches.

PRESSURE REGULATING AND FILTERING EQUIPMENT

CS-32816	M. S. A. Porous-Stone Air-Line Filter.....	\$18.00
CS-32817	Automatic Trap for CS-32816 Filter.....	7.00
CS-10323	Air Pressure Regulator Complete with Gauge	5.00
CS-10322	Air Pressure Regulator, less Gauge	4.00
CS-52608	Diaphragm, for Air Pressure Regulator	.25
CS-10235	Gauge, Air Pressure, for Regulator	1.00
CS-52497	Valve, M. S. A. Pressure Release	3.50

GLOVES—SLEEVES—LEGGINGS

Write for prices on these and other items of protective clothing.

MINE SAFETY APPLIANCES COMPANY

Braddock, Thomas and Meade Streets, Pittsburgh, Pa.

District Representatives in Principal Cities

tion and then turned to change the flow of air. This valve is constructed so that at least 3 cubic feet of air per minute flows into the mask when completely shut off. In this way the wearer is assured of sufficient air for complete protection. (A regular air valve must be installed on the air line to shut off air when mask is not in use. See diagram below).

A lever at the air-supply nipple immediately detaches the mask from the air line when pulled upward by the operator. In the event of an air-supply failure, the operator can break the connection, breathe through the filter on the free end, and leave the confined space.

A replaceable charcoal cartridge filter for removing objectionable odors and foreign matter, such as dirt or oil, from the incoming air, is optional equipment at no increase in price.

The air hose supplied with this mask has been tested at 150 lb. working pressure and kinking the hose will not decrease the air flow by more than 10%. Hose and couplings are further subjected to a pull test of 200 pounds. A 15 ft. length of hose complete with couplings is furnished with each mask as standard, but any length up to 50 ft. can be supplied if desired.

AIR SUPPLY

The M.S.A. Abrasive Mask must be supplied continuously with respirable air within the pressure range of 8 to 15 pounds per square inch gauge. As a source of air supply, low-pressure externally-lubricated blowers are preferable to conventional high-pressure, internally lubricated compressors. Fig. 1 (see page 4) shows installation diagram of the M.S.A. CleanAir Blower while Fig. 2 shows recommended equipment for filtering and reducing ordinary shop compressed air.

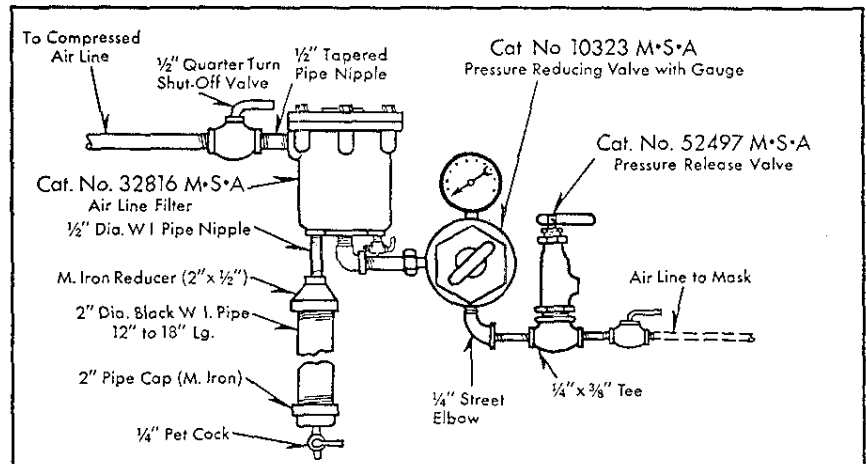


Fig. 2—Recommended air filtering and cleaning equipment for shop compressed air.

M. S. A. COMPRESSED AIR REGULATING AND CLEANING EQUIPMENT

The equipment shown in Figure 2 is sufficient for supplying from 1 to 3 masks.

M.S.A. POROUS-STONE AIR LINE FILTER

Removes oil mists and excess moisture from compressed air by a combination of centrifugal separation and diffusion through porous stone. Suitable for pressures up to 150 pounds per square inch.

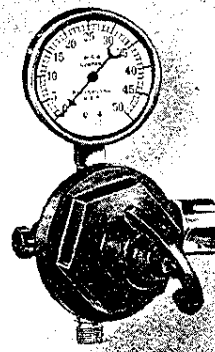
M.S.A. AIR PRESSURE REGULATOR

For reducing high pressure air to a safe value. Can be set to any desired pressure on low pressure side and will maintain that value unattended until readjusted. Suitable for pressures up to 150 lbs. per square inch.

M.S.A. PRESSURE RELEASE VALVE

For limiting maximum pressure in respiratory air supply systems. Not intended to replace Pressure Regulator, but acts as an additional safeguard. Standard valve preset to blow-off at 15 lbs. per square inch.

Right—M.S.A. Porous-Stone Air Line Filter.



Above—M.S.A. Air Pressure Regulator.

Right—M.S.A. Pressure Release Valve.



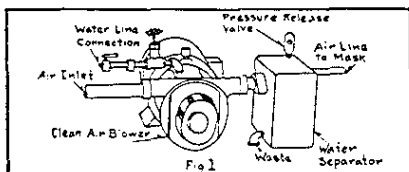
KE 0012333

M·S·A ACCESSORY PRODUCTS FOR THE SHOT AND SAND BLAST OPERATOR

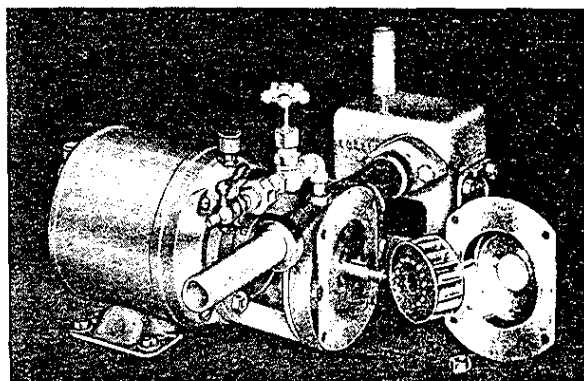


M. S. A. CLEANAIR BLOWER

The M.S.A. CleanAir Blower uses no internal lubricant, thus there is no possibility of contamination of the delivered air. A small, constant flow of water through the rotor chamber maintains the compression seal, inasmuch as there is no metal to metal contact between the rotor and housing. The air is actually washed, cooled and humidified.

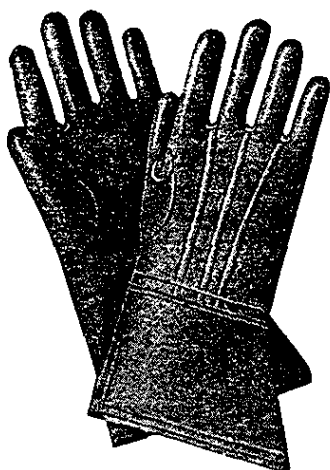


Installation diagram of CleanAir Blower



M.S.A. CleanAir Blower, with end plate removed to show rotor.

GLOVES

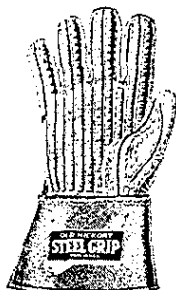


These rubber gloves are ideally adapted for sand blasting operations. They bend readily with the hand to pick up small parts; are non-conductors of static; will not cut or snag easily. Net Lined. Color, Black.

CF-30611—Black Rubber Gloves, Gauntlet Length $5\frac{3}{4}$ ". Overall Length $15\frac{1}{2}$ ".

CF-30805—Reinforced Heavy Black Rubber Glove, with 5" Gauntlet, size 14. Also available with longer Gauntlets.

CF-31401—Glove Steel Sewed and Reinforced. Recommended for the handling of rough castings. Uniform-weight grain horsehide leather throughout, reinforced on palm and fingers with steel ribbons over strips of tough leather. Entire glove closed with steel thread for long life and maximum protection. Glove is flexible and comfortable to wear.



Bulletin No. CS-10

SLEEVES

The Shoulder Length Chrome Leather Sleeve gives full protection to the entire arm and shoulder. It is held in place by tie cords at the shoulder and snap buttons at the wrist. Overall Length 23".

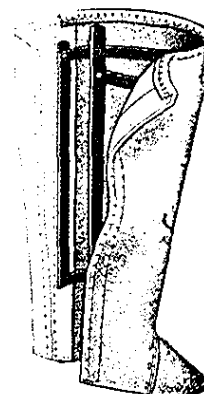
CF-32210—Shoulder Length Chrome Leather Sleeve.



SPRING TYPE LEGGINGS

These leggings have a form-fitting flare that fits perfectly and will not curl. Perfect comfort is assured due to the placing of the spring, and the flexible joint between spring and ankle. Either the spring or covering may be renewed, separately, whenever necessary.

CF-30624—Chrome Leather Model.



Printed in U.S.A.
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M. S. A. Products include Breathing Apparatus . . . Inhalators . . . Comfo Respirators . . . Masks of all Types
 . . . Gas Indicators . . . Gas Detectors . . . Safety Goggles . . . Protective Hats and Caps . . . Edison Electric
 Cap Lamps . . . Safety Clothing . . . First Aid Equipment . . . Descriptive Bulletins will be sent on request.

KE 0012334