

"American" Automatic Rotary Sand Blast Tables

For sand blasting articles
requiring unusual care



The American Foundry Equipment Co.
INCORPORATED

~~366 Madison Avenue, New York~~

MISHAWAKA, INDIANA

PHILADELPHIA

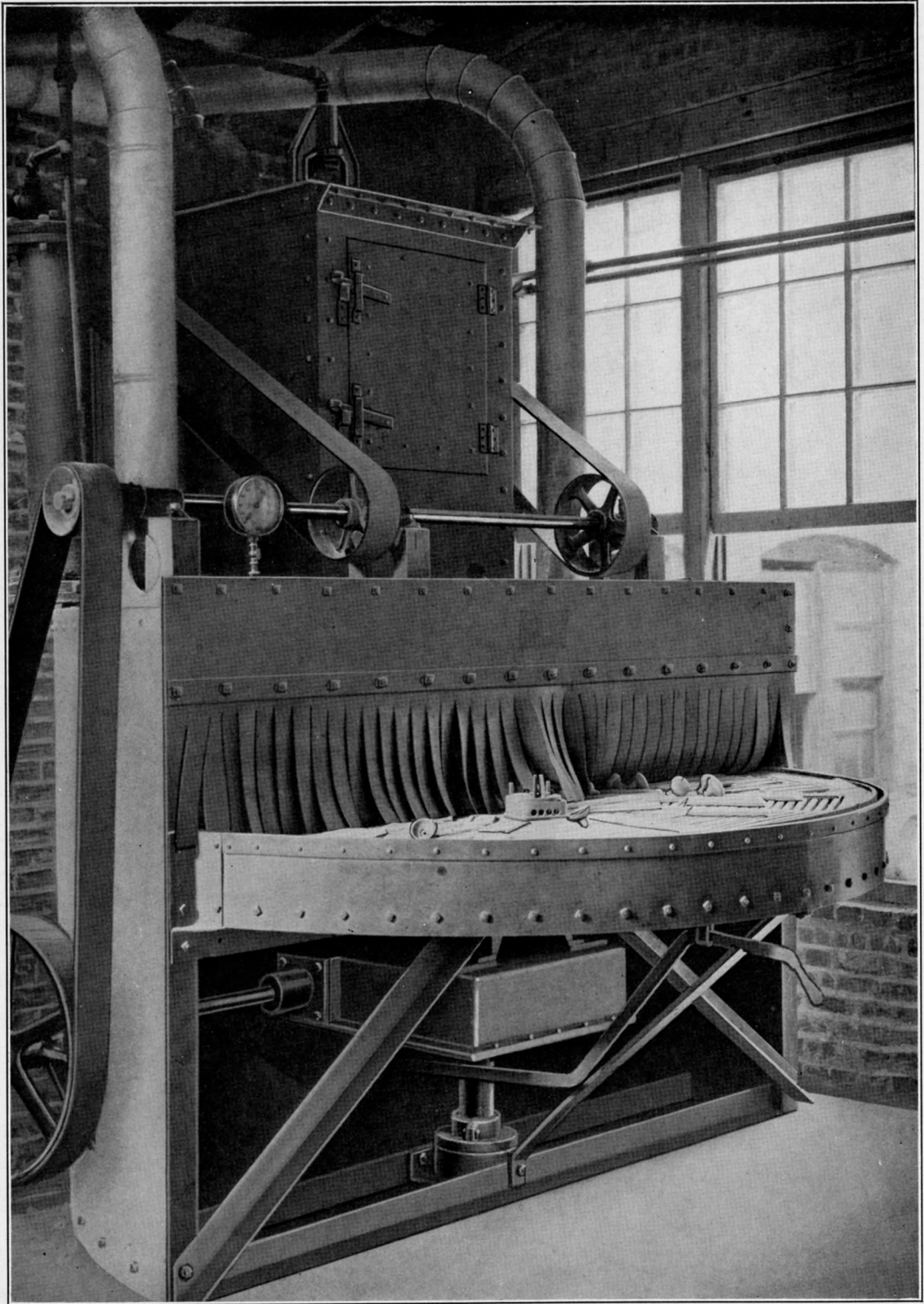
CLEVELAND

PITTSBURGH

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YORK

CHICAGO



84-inch Automatic Rotary Table Sand Blast Machine, Gravity Type.

"American" Automatic Rotary Table Sand Blast Machines Gravity Type

ARTICLES requiring special care to prevent breakage, denting, scratching, or blunting can be sand blasted with entire safety in an "American" Automatic Rotary Table Sand Blast Machine. There is no rolling, bumping, nor jostling as in the barrel type of equipment. The process is rapid, thorough, convenient, economical, and of broad usefulness.

A great variety of work is done in these automatic table machines, for example base plates, gears, machine tool cutters, hardware, crank shafts, connecting rods, and carburetors. The blast effectually removes molding sand, scale, oil, or rust, leaving a matt finish, excellent for enameling, plating, painting, paraffining, or rust-proofing.

The revolving table is loaded with as many pieces as it will accommodate at one time. They are turned over, and removed by hand, without the necessity of stopping the table as they appear at the front portion of the housing which is open and accessible. The table moves slowly, usually not over 1/3 r.p.m., and there is no danger of injury to the operator.

Triple slit rubber curtains screen the blasting area, permitting the work to pass beneath the curtains but protecting the operator and surroundings from dust annoyance.

As the pieces emerge from the blasting chamber to the exposed portion of the table the operator turns them to present fresh surfaces to the blast action. Two or more passes through the machine are usually necessary.

Substantial Dust-Proof Construction

A dust-tight sheet steel housing, substantially braced, forms the blasting chamber and encloses the whole blast system.

High grade materials and workmanship are used throughout, with special provision for lubrication and easy running.

The inside of the blast chamber is lined with rubber sheeting which will withstand the action of the blast for a long time.

All gearing is housed and covered to protect it from dust and sand. There are no gears within the blast area.

Rotary Table on Ball and Roller Bearings

This is a cast iron grating of removable sections, supported and operated entirely by a central shaft driven by enclosed bevel gearing. This shaft is supported on a ball thrust bearing and held at top and bottom by Hyatt roller bearings.

Sand Operation

In starting the machine for the first time or renewing the sand supply, the sand is dumped upon the exposed portion of the table. It drops through the gratings, down a chute, to the foot of an enclosed bucket chain elevator, thence it is carried to the top of the casing and dumped, feeding downward



*Rotary Table Machine for Cleaning China-ware
Connected to an "American" No. 3 Dust Arrester.*

by gravity through screens into a centrifugal sand-and-air mixing apparatus, and thence to the blast nozzles. Spent sand from the nozzles takes the same identical course, automatically and continuously, as long as the power and air are on. The flow of abrasive stops automatically whenever the table stops revolving.

Any of the ordinary abrasives may be used, including shot and steel grit, as well as sand.

Low Air Consumption

Air from the compressor first passes through a moisture separator to free it from water and oil, then enters the machine at the top by way of a hollow vertical shaft leading downward to the sand and air mixing chamber.

In this machine the consumption of compressed air at any certain pressure remains constant regardless of the condition of wear of the blast nozzles, for

the abrasive does not come in contact with the air nozzle.

Any usual air pressure, high or low, may be used, pressures from 40 to 100 pounds being common. An air valve, air pressure gauge, and moisture separator are provided.

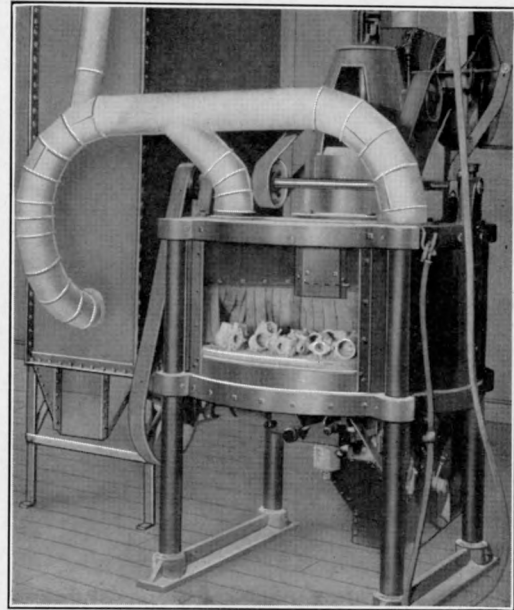
Uniform Application of Blast

Downwardly inclined nozzles deliver the blast to the work. There are four in the 84-inch machine, and two in the 48-inch size. Nozzles are carried in a revolving head sufficiently high above the table for clearance. This head revolves in such a manner that all pieces are uniformly blasted—the fastest moving pieces at the outer edge of the table receiving the same duration of blast as the pieces near the center.

Dust Separation and Removal

Dust is drawn off as fast as it is formed, through two exhaust ports leading from the blasting area to a separate "American" Dust Arrester and exhaust fan, or into the factory exhaust system. A third exhaust port takes the dust from the elevator housing. By means of these the float dust is effectively separated and removed, leaving all good abrasive cleaned and ready for use over again.

Dust separation has been carried too far in some sand blast systems, with considerable extra cost for power and



48-inch Automatic Rotary Table Machine, Gravity Type, Connected to a No. 1 "American" Dust Arrester.

an actual waste of usable abrasive. Our system removes only the useless float dust, saving you both power and extra mechanism, and making your supply of abrasive last longer.

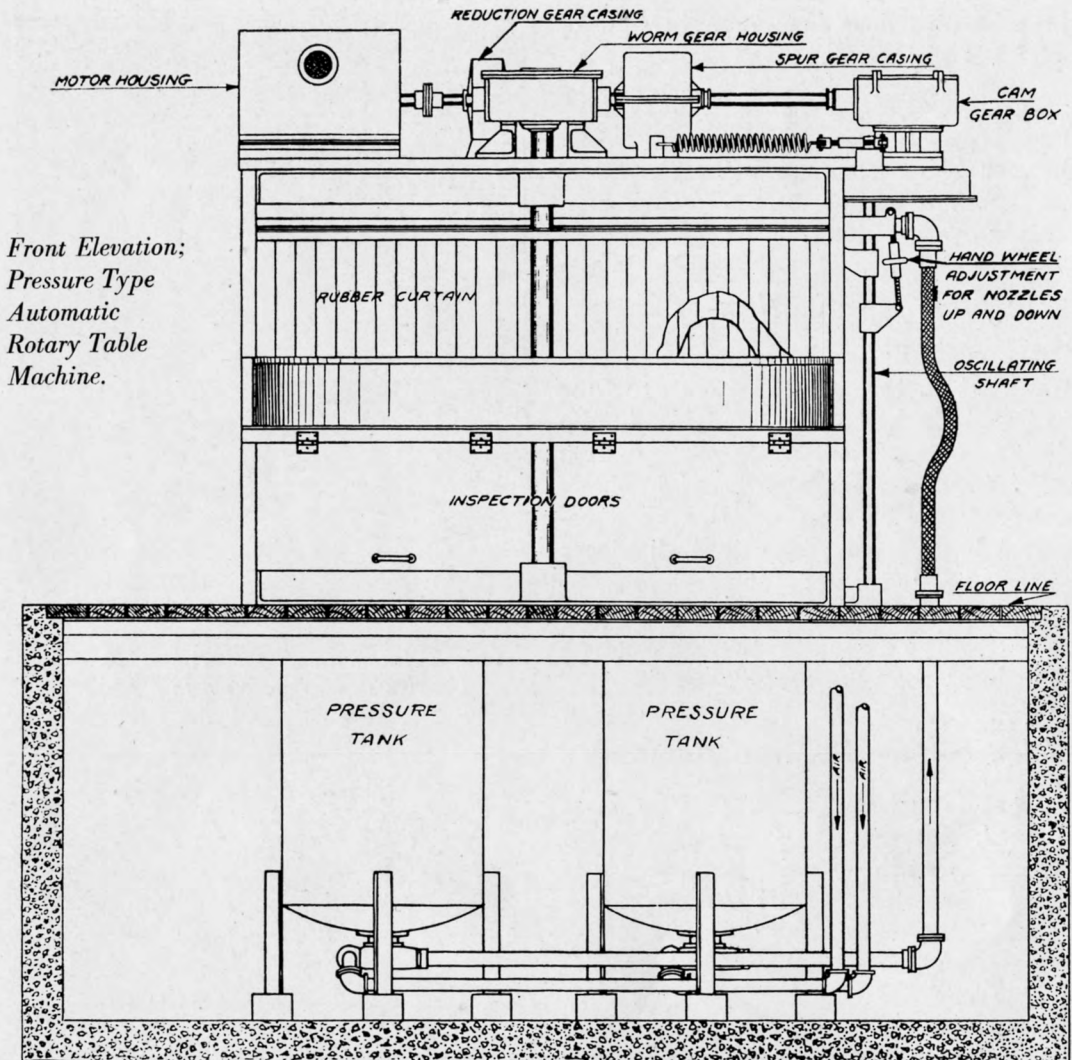
Power Application

Power is applied by belt from line shaft or motor to a clutch pulley. The pulley shaft operates the bucket elevator, and transmits by belt to a fixed countershaft, which in turn distributes power to operate the nozzle apparatus and the table shaft.

SPECIFICATIONS OF GRAVITY TYPE AUTOMATIC TABLES

Size	Revolving Table				Table Area Net	Floor Space			Clutch Pulley			
	Diam.	Height	Clearance	Speed		Width	Depth	Height	Diam.	Face	R.P.M.	H.P.
48-inch	4'0"	3'0"	8"	1/3 r.p.m.	12 sq. ft.	4'8"	6'6"	8'2"	20"	3"	52	2 1/2
84-inch	7'0"	3'5"	12"	1/5 r.p.m.	35 sq. ft.	7'6"	8'7"	10'0"	20"	3"	52	5

Dimensions in feet and inches.



Front Elevation;
Pressure Type
Automatic
Rotary Table
Machine.

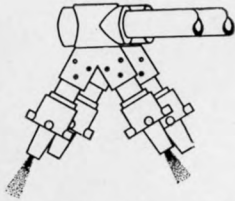
"American" Automatic Rotary Table Sand Blast Machines Pressure Type

MANY users of sand blast equipment prefer the pressure type of blast action because the abrasive material is driven with higher velocity and consequently greater cleaning efficiency. The pressure type automatic machine meets this need for

quickly cleaning in quantity classes of work in which stubborn scale or other difficult conditions require a high sand velocity and unusual blasting efficiency. It will also handle the lighter grades of work such as usually done on the Gravity Type if the air pressure is reduced.

The automatic pressure machine is ideal in its field. It is offered to the discriminating buyer who wants something out of the ordinary—not to the competitive buyer.

Double Blast System



Nozzle Arrangement for Double Blast System.

Our 84-inch Pressure Type Automatic Rotary Table has two separate and distinct blast systems, each composed of an air controlled steel

tank located in a pit beneath the machine, and each having a blast line leading to two nozzles.

These systems operate alternately, one tank automatically filling with abrasive while the other blasts.

The operating tank is under pressure and the sand feeds from it into a patented mixing chamber where it is caught by the main air jet and whirled through the blast line.

Nozzles Blast Uniformly

The nozzles have a mechanical oscillating motion over the work table, timed to compensate accurately for the various speeds along the radius of the table. A 5 H.P. enclosed motor on top of the machine case revolves the table through enclosed reduction and worm gearing, and also operates the oscillating arms of the nozzles through an enclosed cam motion. The vertical clearance of these nozzles is adjustable.

Housing and Table Built for Severe Service

The nature of pressure blasting makes the wear on the apparatus more

severe than the gravity system. To offset this and give the pressure type housing long life the inside of the operating chamber where the action of the abrasive is strongest, is lined with 1/8-inch rubber sheeting.

The table is built in sections to facilitate replacement. The weight is carried on a ball thrust bearing and guided at top and bottom with Hyatt roller bearings.

Dust-proof doors are built in the housing to enable the operator to reach the nozzles and change them with little delay.

The Pressure Type Automatic Rotary Table is not shown in this bulletin except by diagram opposite, but further information on it will be furnished upon request.

Blast Accessories

We can also supply suitable accessory equipment of standard manufacture, such as air compressors, receiver tanks, sand, shot, grit, blast hose, etc. We are glad to advise concerning the selection of these items, whether ordered from us or not.

“American” Cloth Screen Dust Arresters, built by us, are especially suited for sand blast, grinder, and tumbling mill service.

Other Sand Blast Items

Our line includes all approved forms of sand blast apparatus, such as sand blast barrels, sand blast rooms of various types, machines for blasting bar stock and tube stock, chinaware cleaning machines, portable sand blast pressure tanks, and cloth screen type dust arresters.

AMERICAN EQUIPMENT

Sand Cutters

For any size of floor
and all kinds of sand

Sand Blast

Barrels
"Humane" Rooms
Down Draft Rooms
Rotary Tables
Cabinets
Tanks
Guns

Dust Arresters and Fans

Core Machines and Accessories

Molding Machines

Pattern Compound

Pattern Frames

Snap Flasks

Pouring Jackets

Steel Flask Bars

Charging Buckets

Oven Trucks