Steam Traps
Air Traps
Strainers

WRIGHT-AUSTIN CO.
DETROIT, MICH., U. S. A.

Wright Austin Company

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SEPARATORS		EXHAUST HEADS
Steam	Air	Cast Iron
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TRAPS		STRAINERS
Steam	Air	Steam, Water
Grease		Oil

WATER COLUMNS—Alarm Type

PUMP GOVERNORS

FEED WATER REGULATORS—For Boilers

Steam Traps and Your Coal Pile

Read It!

Probably no one device in all your steam plant—cost for cost—carries anything like such enormous steam wasting possibilities as your Steam Trap, if not given proper attention, yet it is often the most abused and neglected article about the plant.

And probably no one thing so vitally affects the operation of your Steam Trap as does scale and grit from the pipe lines, and it is amazing how few operating engineers take this problem seriously.

Thousands of Steam Traps are today connected up to important steam headers, heating apparatus, cookers, etc., without as much as a shut off valve, making it impossible to shut off the trap, so they get no attention, and are never cleaned out, until finally at the expense of the coal pile, they go out of business.

Many engineers think of a Steam Trap as a sort of rough and ready, low priced device, and that it doesn't matter where it is located or how it is piped up.

Too often they are the last to be installed and crowded down in a pit, or some inaccessible place, where it is almost impossible to get at them.

But your Steam Trap is one of the hardest working units in your entire plant. Even when most of the machinery is shut down your little trap is working nights and Sun-

days, 24 hours a day without a stop, going through thousands of operations automatically discharging the condensation and saving the steam. Perhaps you have never thought about Steam Traps in this way before, but it's a pretty important unit of your steam plant, isn't it?

Then make it a point to have your trap getatable. Install it in a convenient and accessible place. Your trap will likely be neglected soon enough, without contributing to the neglect by improper installation.

Always have a shut off valve on the inlet pipe to trap, and better still is to have a by-pass, as shown on page 14, so you can give the trap proper attention any time.

Every trap should be blown off frequently to keep it clean from dirt and scale, same as you blow off your boilers, so make it handy to open the blow off valve on your trap.

The proper installation of a Steam Trap at the lowest point to be drained, makes it the natural receptacle for all the scale and foreign matter in the entire system.

Either you must blow off and clean out your trap frequently, or stop the debris from getting into it.

The latter method is preferable and most economical. A simple inexpensive Wright-Austin Strainer on the inlet pipe to your trap will remedy nine-tenths of all trap ills.

Every part on every Wright Trap can be renewed should occasion require.

With just a little attention and care your trap will give you a lifetime of satisfaction.

Take good care of your trap. It's worth it, and will prove its worth to you by saving tons of fuel.

The Wright "Emergency" High Pressure 3-Valve Steam Trap Is Practically Three Traps in One

By opening wide each valve in turn as needed in the 1-2-3 order, accomplishes four great advantages in one simple compact trap:

1—Enormous discharge capacity provided by three valves—equal to three ordinary traps.

2—Automatically regulates the trap to any service heavy or light.

3—Eliminates almost entirely the throttling effect and wear on valves and seats.

4—Perfectly adapted for any working pressure up to 200 lbs. without adjustment or change of any parts.

The trap operates on the principal of three separate units, by putting into service each unit or valve in succession, one after the other, as the amount of condensation requires, whether great or small. Or, all three valves will instantly open wide for "emergency" slugs or floods of condensation. When the rate of condensation decreases and the water level in the trap recedes,—the valves are closed steam tight, one at a time.

It is adjusted automatically to any degree of load, and, as the amount of water every steam trap must handle necessarily varies greatly from one extreme to the other, it will be seen how naturally the three valves of the Wright "Emergency" Trap are adapted to all conditions of service automatically regulated.

When each valve operates, or leaves its seat, it opens practically wide without wire drawing or throttling effect, almost entirely eliminating wear on the valves and seats, and insuring steam tight valves for a longer period than any other trap in similar service.

As illustrated on page 7, the float has a straight direct pull on each valve to open it by means of the levers. The pressure within the trap holds each valve tight against the seat, resisting the buoyancy of the float, until by being partially submerged, the buoyancy is increased sufficiently to overcome the resistance of the pressure against the valve—and open it. The instant the valve leaves the seat, the resistance on the float is released so it rises slightly out of the water, thus instantly opening the valve full width, without throttling effect or cutting.

The 3-valve feature makes the "Emergency" Trap adapted for varying pressures up to 200 lbs. without change of any parts. No spares and no adjustments of any kind.

Whether on steam separators, heating coils, drying systems, cooking apparatus, stills or evaporators the Wright 3-valve Trap is 100% efficient. By continuously removing all condensation the steam is maintained at its highest temperature and the apparatus at top heat.

How the Wright "Emergency" 3-Valve Steam Trap Is Constructed

The valves are controlled by the 3-step stirrup attached to the float.

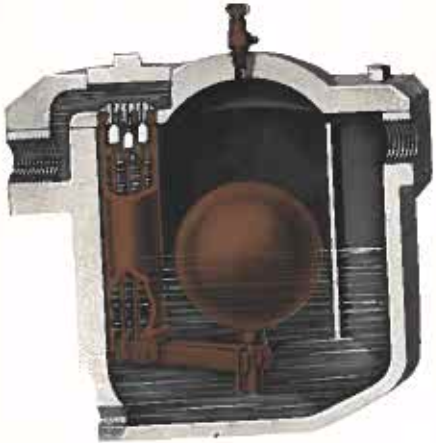
No. 1 valve is rigid with the float.

No. 2 and No. 3 valves have a little lost motion in the stirrup causing each to open at slightly later intervals.

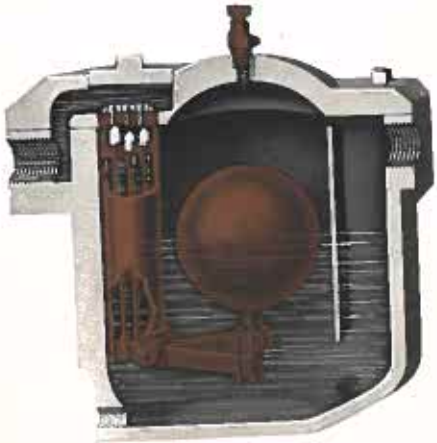
As the trap fills the float rises, opening first number 1 valve

then number 2 valve

then number 3 valve, depending upon the height of the water (and float) in the trap.



Showing Position of No. 1 Valve handling Normal Conditions



No 2 Valve opens wide when the flow exceeds capacity of No. 1 Valve

Then No. 3 Valve opens, giving full Emergency capacity of Trap

The valves and valve seats are *Genuine Monel Metal*—already well known to most engineers as the toughest steam metal yet discovered to withstand high velocities and corrosion.

Wright "Emergency" One-Two-Three Valve. Constructed of Monel Metal

Furthermore, they are located in the *top of the trap* away from the scale and sediment and by opening *wide each time* make a combination of three valuable features found in no other steam trap, which greatly increases the life and durability of the valves and seats.

Easy access to the *valve seats* is provided. Simply unscrew the test plug, located right over them and remove them with an ordinary screw driver.

By providing easy access to all working parts the maintenance of the "Emergency" Trap is a very simple matter.

The inside parts are all attached to the cover and may be removed intact to the workbench or light by simply lifting off the cover—*without breaking any pipe connections.* The empty body of the trap remains in place with pipe connections undisturbed.

A Perfect Water Seal is maintained which prevents any possible escape or waste of steam. *The Valves* of the trap are closed so that the discharge tube is submerged in four to seven inches of water, according to the size of the trap.

A round, seamless, strong, high pressure copper float is used in the Emergency Trap. All other inside parts are brass, except the valves and seats which are *monel metal.* The body and cover of the trap are cast iron of heavy design for high pressures.

The use of a water gauge is optional, though the necessary openings are tapped and plugged in every trap.

This Simple Test of a *Wright Trap* can be made in a few seconds:

First close the valves on both the inlet and discharge lines of the trap to shut off the pressure, then partially open the blow-off valve and keep it open just enough to carry away the condensation.

Next remove the test plug and then turn on full steam pressure by opening the valve on the inlet pipe. Should any steam be escaping through the trap valves it can be detected instantly.

The one best way to tell what the Wright "Emergency" 3-valve Trap will do in your plant is to install it alongside of any other type in the same service and watch results.

Fit Your Trap to Your Job

Select your "Emergency" Trap on a capacity basis. The table on opposite page will help you.

List Price and Dimensions of "Emergency" Trap

Size No.	Pipe Size of Inlet and Outlet	Face to Face Inlet and Outlet	Height	Diameter	Wgt. Lbs.	1920 List Price *	Code Word
1	½"	11¼"	10¾"	9"	70	$28.00	Frame
2	¾"	12"	12"	10"	100	32.00	Foyer
3	1"	12¾"	13¾"	11¼"	120	38.00	Fresh
4	1¼"	13¾"	13⅞"	11¾"	140	45.00	Femur
5	1½"	15¼"	15"	12¾"	160	63.00	Foist
6	2"	16½"	16⅜"	14¼"	220	85.00	Fancy
7	2½"	18"	17¼"	15⅛"	260	132.00	Folio
8	3"	19½"	18½"	16½"	320	150.00	Forge

*Price Includes Air Vent.

Water Gauge—List $3.00—Code Word "Fauge." Specify wanted.

NOTE

CORRECT LIST PRICE TRAP No. 6 $86.00

CORRECT PIPE SIZE TRAP No. 7—2½ "

Capacity of "Emergency" High Pressure Steam Trap

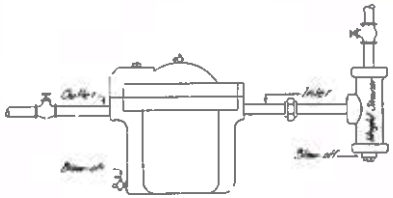
Size No.	1	2	3	4	5	6	7	8
Pipe Size of Inlet and Outlet	½"	¾"	1"	1¼"	1½"	2"	2½"	3"
10 Lbs.	2000	2400	3100	4000	5500	7000	11500	16100
20 Lbs.	2500	3200	4050	5960	7800	10300	16500	22800
30 Lbs.	2900	3700	4800	7000	9300	12400	20200	28000
40 Lbs.	3200	4200	5300	7800	10500	13800	22600	31500
50 Lbs.	3500	4500	5700	8400	11300	15000	24900	34800
75 Lbs.	4000	5100	6400	9500	13100	17400	29200	41000
100 Lbs.	4400	5600	7100	10400	14400	19200	32500	45900
125 Lbs.	4700	6000	7600	11200	15600	20800	35300	49800
150 Lbs.	4900	6300	8100	12000	16700	22400	38000	53700
175 Lbs.	5100	6700	8600	12800	17800	23900	40700	57600
200 Lbs.	5300	7000	9000	13700	19000	25500	43500	61500
Intended for Sq. Ft. of Radiating Surface	3000	3700	4600	7800	12600	20100	29000	42000
Intended for Lineal Feet of 1" Pipe	9000	11100	13800	23400	37800	60300	87000	126000

Maximum discharge in pounds of water per hour at pressures of:

NOTE.—Every Trap carefully tested before shipment and fully guaranteed.

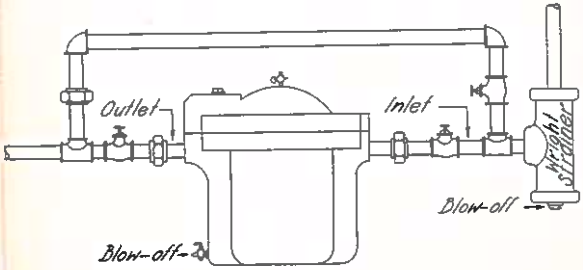
How to Install the Wright "Emergency" High Pressure Trap

Having straight line pipe connections, it is very simple, convenient and inexpensive to install.



No. 1

No. 1 installation shows clearly the proper pipe arrangement at inlet and discharge end of trap.



No. 2

Installation No. 2 provides a bypass for uninterrupted passage of condensation whenever necessary to remove trap from pipe line. Close valve in "inlet" and "discharge" pipe, unscrew the unions and lift out trap.

Always locate the "Emergency" Trap at the lowest point to be drained.

In making pipe connection, see that the diameter of pipe corresponds with opening at inlet and outlet of the trap.

Turn on the steam leaving the blow-off open long enough to thoroughly cleanse the trap and pipe line. This also serves to heat the trap, a necessary condition to successful operation.

Leave the air valve on top of cover slightly open at all times in order to vent the trap of air.

When the blow-off is closed the trap will fill to about one-half, thus forming a perfect water seal, which prevents the passage of steam through the trap.

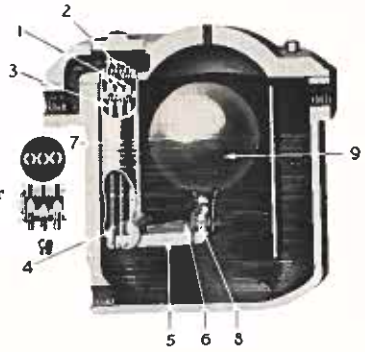
The discharge is automatic and continuous.

Being located at the low point of a piping system, the Steam Trap becomes the natural receptacle for all scale, grit, etc., ever present in pipe lines, and which causes 90% of all trap troubles.

Instead of making your Steam Trap a collector for all this debris, stop this scaly grit from passing into your trap and cutting out the valves and seats, by placing a W-A Strainer on the inlet pipe to trap as illustrated on opposite page. Strainer is shown on page 33.

Nine Interior Parts

Wright "Emergency" Traps never wear out. All parts are interchangeable and renewable.



1—Valves
2—Seats
3—Stems
4—Clevises
5—Outside Lever
6—Center Lever
7—Tube
8—Stirrup
9—Float

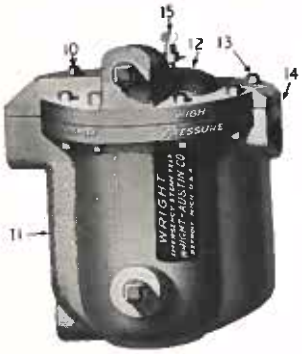
Tube complete, factory assembled and adjusted, ready to attach to cover and float consisting of parts number:

1—Valves
2—Seats
3—Stems
4—Clevises
5—Outside Lever
6—Center Lever
7—Tube
8—Stirrup

Separate parts can be furnished if desired.

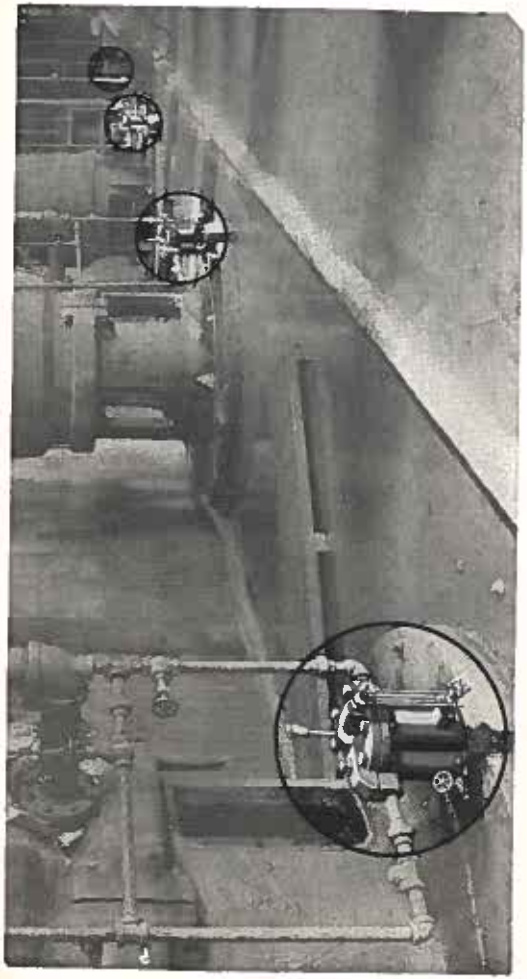
In ordering, please give NAME and NUMBER of part, and SIZE NUMBER of Trap cast on cover.

Six Exterior Parts



10—Plug (test)
11—Body
12—Cover
13—Bolts
14—Gasket
15—Air Vent

Wright Traps Need Never be Discarded.



Wright "Emergency" Traps on Vulcanizers in plant of a nationally known rubber manufacturing company

The Wright "Victor" Low Pressure Steam Trap

(For Pressures from 0 to 20 Lbs.)

Extreme simplicity and great capacity are dominant features. The "Victor" Trap has but three working parts—a round, seamless, strong, copper float—one lever—one large valve.

Especially adapted for continuously draining large volumes of condensation from low pressure apparatus such as heating systems, coils, evaporators, etc., or, as an Oil or Grease Trap for draining Oil Separators, because the large valve is practically the same area as the pipe size, and will easily handle anything that will flow through the pipe.

Wherever possible we recommend the selection of the size of all steam traps be based on capacity alone and not on pipe size. The pipe connection of a steam trap is no more indication of the work it will do than a large steam connection on a small boiler. It is the size of valve opening that counts.

Having so much greater capacity than other traps, it is often possible to install smaller sizes of Wright "Victor" Traps than other makes for the same service—a very distinct economy in first cost.

Operation and Construction of Wright "Victor" Steam Trap

The W-A "Victor" Trap is distinctly a low pressure design. The large valve opens above the seat *with* the pressure, (not against it) and in the same direction as the outgoing flow of condensation. Operating in the same manner as lifting off a lid, the condensation simply overflows freely and unobstructed.

This construction permits the use of a very large valve providing enormous capacity at extremely low pressures.

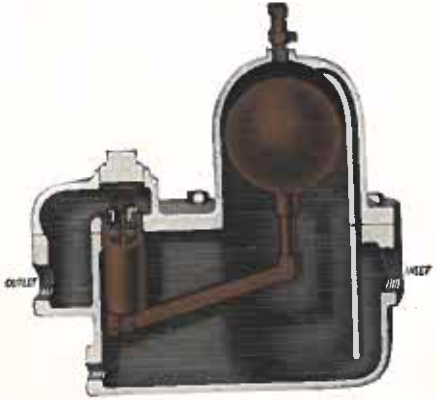
The "Victor" will discharge the full capacity of the inlet pipe, without any head or steam pressure. Absolutely no pressure is required to operate the trap—it will give perfect results under any working pressures from 0 to 20 pounds. Or, it will operate

properly against any pressure less than the initial pressure on the inlet of the trap.

Carrying a deep water seal of several inches completely submerges the outlet tube and absolutely prevents escape or waste of any steam.

Straightway pipe connections to the body of both inlet and outlet make the "Victor" very simple and inexpensive to install. The 3 working parts are attached to the cover of the trap, which may readily be removed to the workbench or light—if necessary—just lifting off the cover—without breaking any pipe joints to the trap.

The valve and seat are located directly under the test plug and may be removed



after unscrewing the plug. These two strong features alone take the bother and cost out of your trap maintenance.

Only the highest grade of materials and workmanship are used on the Wright

"Victor" Trap. Each one, before leaving the factory, is carefully tested and inspected and is fully guaranteed.

It is the size of the valve opening that gives the "Victor" such enormous capacity for a low pressure trap.

Base your selection on capacity alone—not on pipe size.

The table on opposite page will help you fit your trap to your job.

Sizes and Dimensions Wright "Victor" Trap

Size No.	Pipe Size of Inlet and Outlet	Distance Inlet to Outlet	Height of Trap Overall	Weight	List Price	Code Word
0	½"	9¼"	9¼"	45	$22.00	Kutch
1	½"	12¾"	11¼"	70	28.00	Knout
2	¾"	14"	12½"	80	32.00	Knife
3	1"	15½"	14½"	100	38.00	Knead
4	1¼"	18"	15¼"	120	45.00	Kodak
5	1½"	19½"	17½"	160	63.00	Kamis
6	2"	22"	20"	200	86.00	Kopje
7	2½"	23"	21"	255	132.00	Koran
8	3"	24"	22"	260	150.00	Krone

Price includes air vent. Water Gauge, List $3.00. Code Word "Keyon." Specify if wanted.

Capacity of Wright Victor Steam Trap at Various Pressures

Size Number	0	1	2	3	4	5	6	7	8
Pipe Size of Inlet and Outlet	½"	½"	¾"	1"	1¼"	1½"	2"	2½"	3"
Maximum discharge in pounds of water per hour at pressures of:									
1 Lb.	1125	2020	3040	3700	6880	9550	11400	14580	19920
3 Lbs.	1945	3495	5260	6400	11900	16520	19720	25220	34460
5 Lbs.	2500	4500	6770	8250	15340	21290	25420	32510	44420
7 Lbs.	2925	5250	7900	9620	17885	24830	29640	37900	51790
10 Lbs.	3540	6360	9575	11650	21670	30080	35910	45920	62745
12 Lbs.	3825	6865	10335	12580	23390	32470	38760	49570	67725
15 Lbs.	4340	7795	11735	14280	26555	36860	44000	56275	76890
18 Lbs.	4770	8565	12890	15690	29170	40490	48335	61820	84460
20 Lbs.	5015	9000	13555	16500	30685	42590	50845	65025	88840

To find the approximate number of square feet of radiation each size trap will handle, multiply results in table for any given pressure by: 3 for direct heating surface for heating buildings; by 2 for dry kilns; by 0.33 for paper machines; 0.4 for most types of heater coils.

How to Install the Wright "Victor" Continuous Flow Trap

Always locate the "Victor" Trap below the lowest point to be drained. In making pipe connections see that the diameter of pipe corresponds with opening at inlet and outlet of trap.

Turn on the steam, leaving the blow-off open long enough to cleanse the trap and pipe line. This also serves to heat the trap —a condition necessary to successful operation.

Leave the air valve on top of trap slightly open at all times, just enough to prevent air binding.

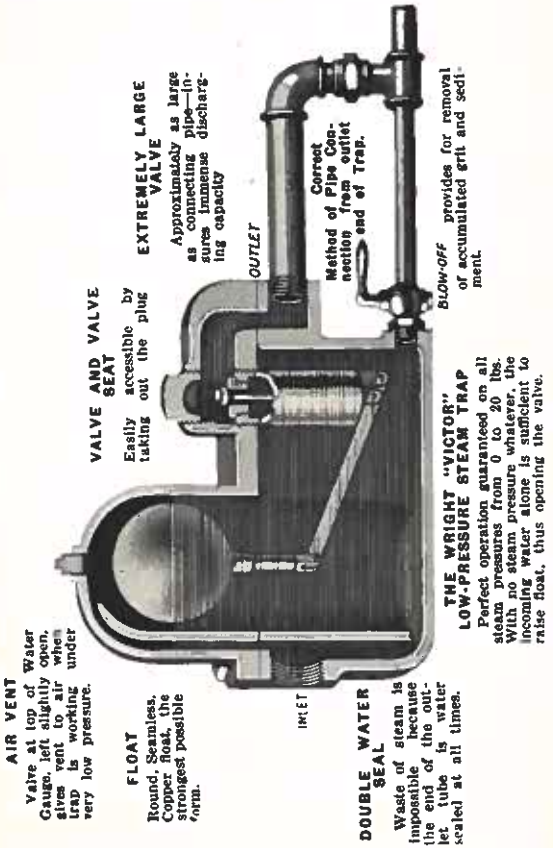
When the blow-off is closed, the trap will fill to about two-thirds—thus forming a water seal at both inlet and outlet.

If the proper size is specified and the trap is correctly installed, the operation will be perfect at all times regardless of small flows or floods of condensation.

The trap should be blown off daily to keep it free from sediment.

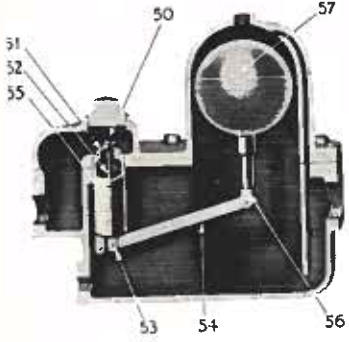
In the majority of cases you can trace Steam Trap trouble to dirt, scale or other foreign matter getting into the trap.

We recommend a complete installation of *Wright Strainers* as a sure cure. Try it at our risk of satisfaction. (See page 33 for illustrations).



See Page 14 for Proper Piping Arrangements.

"Victor" Traps last a life time. All parts are interchangeable and renewable. Very accessible.



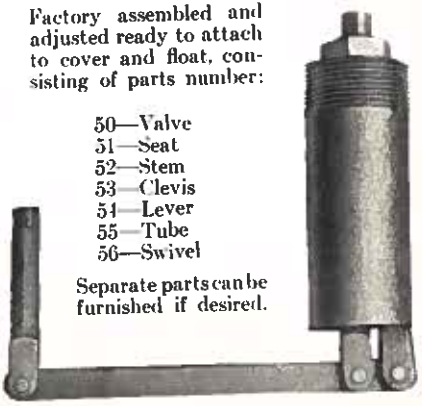
50—Valve
51—Seat
52—Stem
53—Clevis
54—Lever
55—Tube
56—Swivel
57—Float

Tube Complete

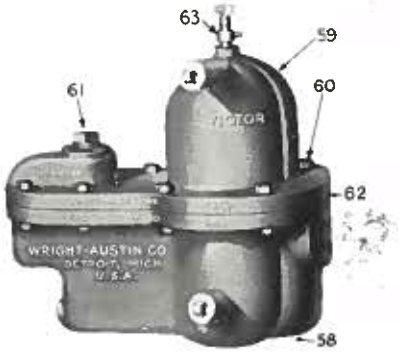
Factory assembled and adjusted ready to attach to cover and float, consisting of parts number:

50—Valve
51—Seat
52—Stem
53—Clevis
54—Lever
55—Tube
56—Swivel

Separate parts can be furnished if desired.

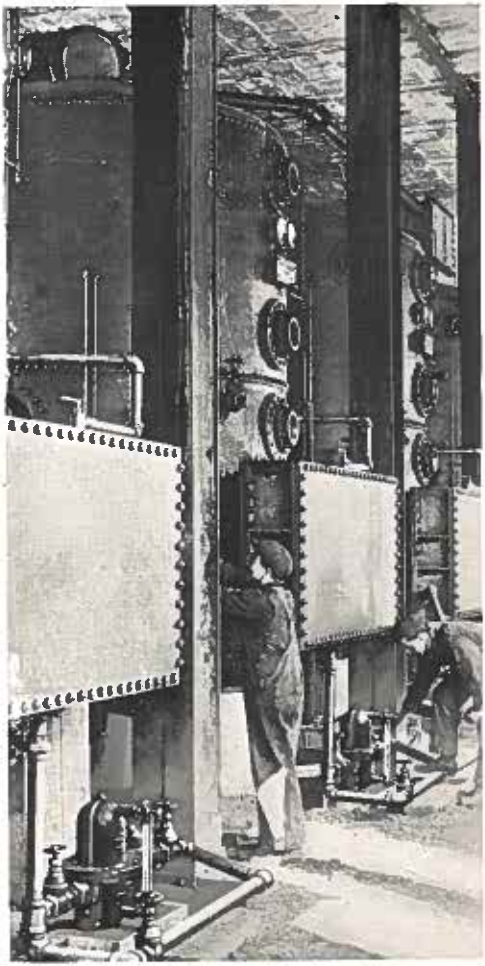


In ordering, please give NAME and NUMBER of part, and SIZE NUMBER of Trap cast on cover.



58—Body
59—Cover
60—Bolts
61—Plug (test)
62—Gasket
63—Air Vent

"Victor" Traps need never be discarded.



"Victor" Traps on Zaremba quadruple effect evaporators in plant of J. Bancroft Sons Co., Wilmington, Del.

Memorandum

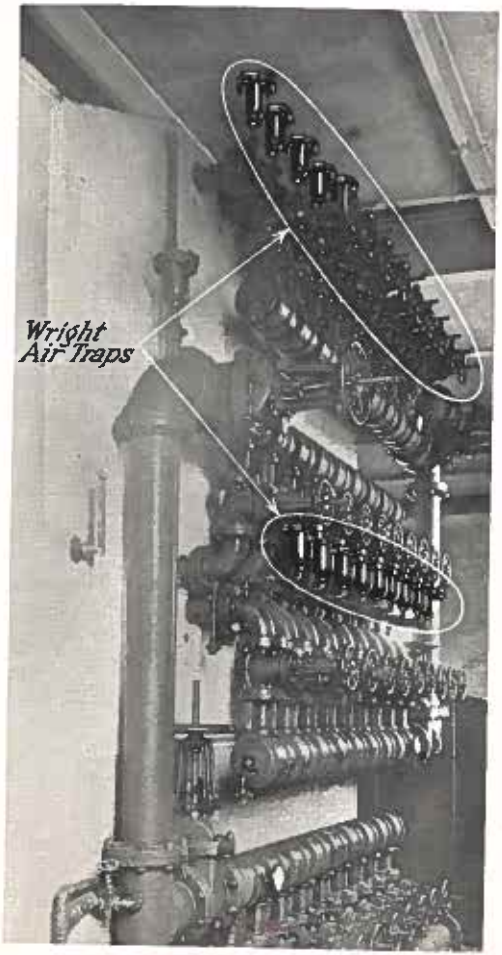
The "W-A" Air Trap Removes Air From Water Under Pressure

Extensively and very successfully used on hot water heating systems, closed water tanks and receivers, water supply lines, centrifugal pumps, etc.

When desired it is furnished with a whistle for sounding an alarm when the water reaches a certain level in a tank or receiver.

It is positive in action, entirely dependable and requires no attention. Extremely simple and well built, and fully guaranteed. Operates under any working pressure up to 150 lbs. The trap is 6″ in diameter by 7″ high. Weight 15 lbs.

List price, $15.00. Liberal discount. Whistle extra.



Just a few of many thousand Wright Air Traps in Ford Motor Plant, Detroit, on various service.

The "W-A" Strainer for Steam, Air, Gas, Oil or Water

Stops all foreign matter, scale, packing, etc., in pipe lines, from passing into receptacles of all kinds—Steam Turbines, Steam Traps, Pressure Reducing Valves, Oil Burners and many other devices.

It takes the teeth out of your steam, that constantly gnaws away and cuts out your Trap Valves, Reducing Valves, etc. Nine-tenths of all trap ills are caused by scaly grit getting into the traps and this can be positively prevented by a "W-A" Strainer, thus eliminating your greatest trap troubles.

A W-A Strainer should be placed on the steam inlet pipe to every steam trap and steam turbine. It is also very effective on water supply lines, pump suctions and vacuum returns.

There is absolutely no friction loss in the "W-A" Strainer, as the collective area of the small holes through the large basket screen is many times the area of the pipe connection—a glance at the table shows the large over-all dimensions.

The screen is made from finely perforated sheet brass, and is attached only to the plug in bottom of strainer.

It has top inlet and side outlet, thereby collecting all foreign matter on the inside of the screen, and is provided with bottom blow-off connection or clean-out.

As the illustration shows, the screen or strainer tube is tapered, which makes the

strainer self-cleaning when blown off at the bottom under pressure, as it thoroughly flushes the inside of the screen clean of all debris. It is all done in an instant—a simple blow-off valve screwed into the plug does the work.

Another way is to simply remove the bottom plug to which the screen is attached, shake out the dirt and replace the screen and plug.

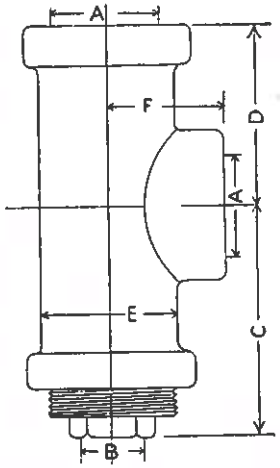
There is nothing to get out of order—very simple, practical and durable. It is low priced and will pay for itself in a short time.

Try it out on approval, at our expense.

(Continued on next page

Dimensions and Price List
Wright Strainer

Adapted for all pressurers up to 250 pounds.



Size No.	A	B	C	D	E	F	1920 List Price	Wgt. Lbs.	Code Word
1	½	½	3¾	3	2⅝	2 1/16	$ 3.00	7	Twine
2	¾	½	3¾	3	2⅝	2 1/16	3.00	7	Topon
3	1	½	3¾	3	2⅝	2 1/16	3.00	7	Tefom
4	1¼	½	3¾	3	2⅝	2 1/16	4.00	7	Tabin
5	1½	½	4¼	3½	2⅝	2 1/16	6.00	12	Tilew
6	2	¾	5¼	4⅜	4 1/16	2⅞	8.00	20	Tharp
7	2½	¾	6¼	5	4 11/16	3⅛	11.00	28	Trime
8	3	¾	7½	6	6	3⅝	14.00	50	Tweed

Suitable for all pressures up to 250 pounds.