

steel rods, one end of which was screwed to the floor, the vanner resting on the upper end free to float around in any direction. The belt is stretched over rollers in the usual arrangement and below it is supported, on a short vertical shaft, an unbalanced weight. When this weight is caused to revolve by a two-inch belt the amount that it is out of balance causes the vanner to swing around in a circle, whose radius multiplied by the weight of the table equals the radius of gyration of the unbalanced weight multiplied by the amount that it is out of balance. In practice it has been found desirable to use a gyration about three-quarters of an inch in diameter, and to run the table at a speed of about two hundred and twenty-five shakes per minute. Owing to the fact that the table is just balanced by the amount the gyrator is out of balance, no jar or shake is transmitted to the floor, and no racking strain is set up in the vanner itself. The feed of the belt is obtained from a Challenge feed clutch on the head roll. The tail of this clutch is attached by a flexible link to a point on the floor, the gyration of the table furnishing the necessary movement. By changing the point of attachment of the link to the floor, the feed of the belt can be altered from nothing up to twenty-five feet per minute. The heavy frame of the Frue vanner, the side shaft with its three eccentrics, and the complicated "G" spring feed is avoided. From the vanners the tailings are divided over two more sets of gyrating copper plates, each four feet wide by six feet long supported in a similar manner on flexible steel rods, and gyrated by the revolution of an unbalanced weight supported below each.

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#### THE D'ESTE AND SEELEY COMPANY'S STEAM TRAPS.

Every high pressure heating plant or any heating pipe not returning to the boiler should not be allowed to run a moment without a steam trap. No sane man would think for a moment of opening a pipe direct from his boiler to the atmosphere and try to get steam, and yet that is just what is done when a pipe is not drained by a trap. The amount of money wasted in this way on an ordinary steam plant in one season would pay for traps enough to last for years, and thus be one of the very best instruments which the owner or engineer could possibly make. While any trap is far better than no trap, it is always well to remember that a good trap costs little, if any, more than a poor one, and a purchaser with a little care in making a selection can assure himself that he is getting the best the market affords.

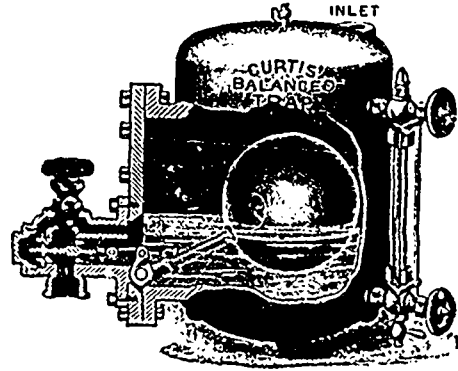
Four things should be required: First, efficiency; second, simplicity of parts; third, durability; and fourth, ease of making repairs when necessary. In all four of these points the Curtis balanced trap stands high, as may be seen by the following description:

The full prospective view shows a cylindrical pot with rounded ends, of the strongest form to resist pressure. On the side is a neck or nozzle of sufficient diameter to admit the float. This nozzle is covered with a strong plate, to which is bolted the composition valve. It will be seen that when the plate is removed it brings away the float and valve with it, which can be taken, altogether, to any suitable place to be examined or repaired, or can be shipped

to the manufacturers, leaving the pot in place and connected.

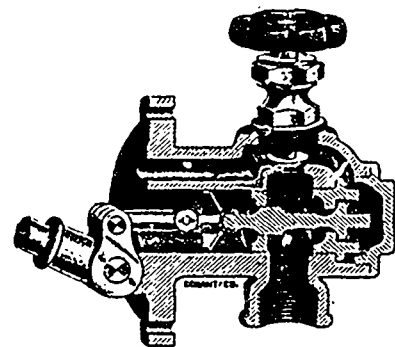
The composition valve can be removed without removing the cover, by taking out the four tap bolts by which it is fastened; then the float steam can be pulled out far enough to unscrew it from the knuckle, leaving the float inside and cover joint intact.

The sectional view shows a valve body cast with strong ears to bolt it on to the cover of the trap. The valve consists of two discs of equal area on a single stem, one with



a short sliding fit, and the other with a ground seat taper fit, which guides it onto its seat, while the valve stem is guided by a spider with three arms, and is loosely connected by a knuckle joint and stem to the float. The valve stem is in two parts, the outer one carrying the discs screwed into the inner one; and when unscrewed the valve can be taken out for repairs or grinding.

By removing the cap from the end of the valve body, the valve can be taken out without starting a joint, pipe, bolt or gasket. This is claimed by the makers as an entirely new, as it certainly is a valuable, form of construction. It is also provided with an independent passage or passby, and is the only trap, so far as known, with the valve so easily accessible from the outside. It is also provided with an independent passage or passby controlled by a stop valve, and work can be continued and the water drained off, even if the discharge valve should remain closed for any reason. The float is very large, perfectly rounded, so hard that it cannot be dented, nor can it be collapsed at 200 lbs. pressure. It is made by a special process of an alloy with aluminium, and is practically indestructible. It is hermetically sealed as a glass globe, and is so located in the trap that the outlet is always sealed by several inches of water.



These steam traps have acquired their reputation in the last eight years simply on their merits. This is presented as a strong, plain, serviceable machine, and is warranted to work correctly under any disadvantage to which a steam trap can be subjected. They will work against any head or back pressure less than the direct pressure in the trap. Some of them are now working with 75 pounds in the trap, against 30 pounds pressure on the outlet, and deliver hot water into the second and third story or into a closed tank.