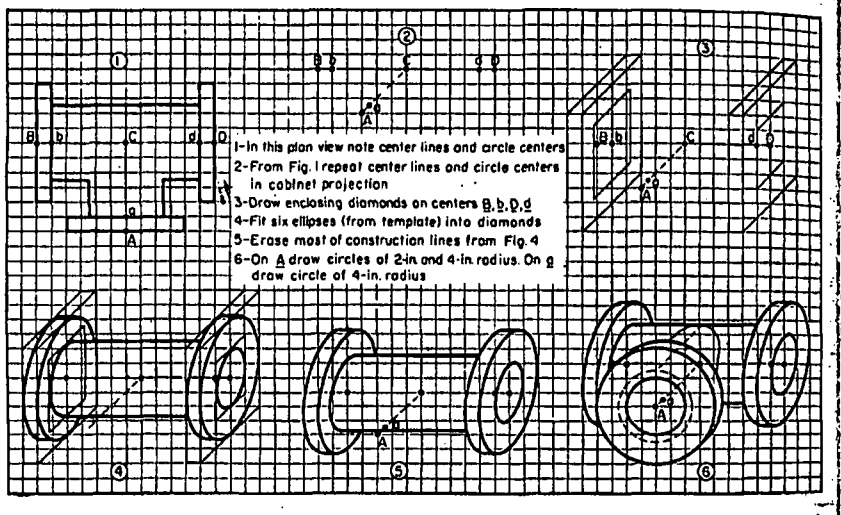


HEADWORK

PHIL SWAIN BRINGS ENGINEERING THEORY DOWN TO EARTH



Easy Sketching System—10

► FIG. 1 is a plain top view of a flanged tee. No matter how you look at this tee in cabinet, either one or two flanges will be seen obliquely as ellipses. For the best-looking shot, let's select the side outlet for the facing view. Then the circles in this outlet will appear in their true shape. Don't draw these until the last; otherwise, they may confuse the more difficult construction for the ellipses.

In Fig. 1, note the center lines and *the points B, b, d, D,* and *A, a,* which serve as centers for the flanged edges. Fig. 2 repeats these center lines and these centers in cabinet projection to scale.

Next, imagine the flanges to be enclosed in square-cornered boxes, centering on the center lines that have been drawn in, and the indicated center points. Fig. 3 shows the sketch at this stage. The large diamonds are for the flanged edges. The small diamond at the right has the dimensions of the hole diameter. The small diamond at the left has the dimensions of the body diameter of the tee.

Next, Fig. 4, use template to find ellipses that will just fit into the diamonds. Trace them in as shown.

Fig. 5 is the same as Fig. 4, with construction lines erased, except center lines. Note that points *A* and *a* will be centers for the circles of facing flange.

In Fig. 6, use *A* as center for circles of 2-in. and 4-in. radius. Draw another 4-in. radius circle around *a*.

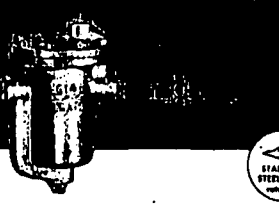
The dotted circle drawn outside the small circle represents the place where the body would penetrate the near face of the flange if extended. This circle sets the line of the body, most of which is hidden.

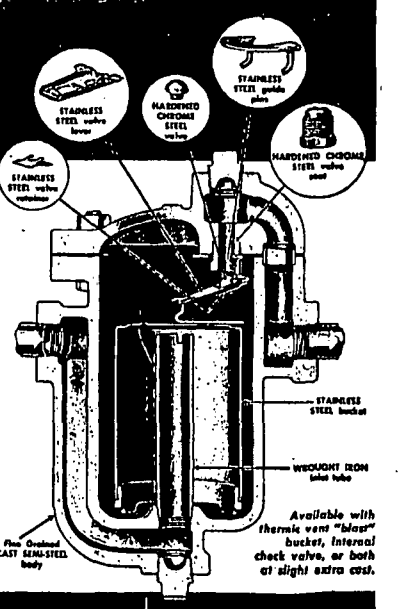
NOTE: *We suggest getting Dietzgen Tru-way ellipse templates from a drafting-supply store, or directly from Eugene Dietzgen Co, 218 E 23rd St, New York, N. Y. For a template of 20 ellipses, ⅛ in. long to 2 in. long, order No. 2275-25, price about $2.00. For 12 ellipses, 3/16 in. to 4 in. long, order 2275L-25, price about $3.50.*

NEW

ARMSTRONG No. 814

... a side inlet-side outlet steam trap with ½" or ¾" pipe connections!





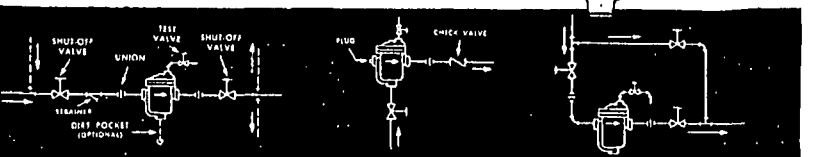
Available with thermic vent "blast" bucket, internal check valve, or both at slight extra cost.

NOW, with the addition of the No. 814, you have a choice of five sizes of Armstrong side inlet-side outlet traps from ½" to 1¼" for use wherever horizontal and opposite pipe connections will make the simplest hookups. Bottom inlet-top outlet traps are available in the same size range, so that for the majority of all condensate loads you can use the body style that best suits the job.

Capacity of the new No. 814 is 6500 lbs./hr. at 125 psig.; height 13⅜"; face to face dimension 8"; weight 45 lbs.; price $46.00 list.

For complete data on the No. 814 and other Armstrong traps, call your Armstrong Representative or mail the coupon today.

ARMSTRONG MACHINE WORKS
812 Maple St., Three Rivers, Mich.



HOW TO ORDER:

Refer to Armstrong Catalog J, Sweets' Plant Engineering or Industrial Construction Files or Chemical Engineering Catalog. Capacities of the 814 are identical to the 814 trap listed in these Catalogs. Other data are given above. Specify trap number, pipe connections and maximum operating pressure.

ARMSTRONG MACHINE WORKS
812 Maple St., Three Rivers, Mich.

- ☐ Send complete data on No. 814 trap.
- ☐ Send Catalog J listing all Armstrong traps.
- ☐ Have Representative call.

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