

POWERFAX

A magazine of information for engineers and operators of steam and electric power plants, devoted mostly to the field covered by power equipment as manufactured by Elliott Company and its associates, The Lagonda Manufacturing Company, and Liberty Manufacturing Company.

FRONT COVER

TYING UP WITH THE PAPER presented before the Association of Iron & Steel Electrical Engineers this month, by Messrs. Thompson & Nippes, and which is reproduced in this issue, our front cover depicts photographically "The Romance of Steel". An appropriate title, for the picture has the feeling and tall stature which we attribute to this giant industry which in the near past enacted an industrial drama involving titans of management and finance who developed a few makeshift enterprises into world leadership in a single generation.

R. H. CARTER

WITH SORROW, we report the death on April 9, 1932, of Mr. R. H. Carter, sales engineer in the Detroit Office of Elliott Company and associates. He had been ill for two months with pneumonia and pleurisy. Mr. Carter joined the Elliott organization a little more than five years ago. He was an experienced construction and operating engineer, both marine and stationary. During the war, he was with the New York Shipbuilding Company at Hog Island; after the war, with the Munson Steamship Line in South American passenger service as chief engineer. He constructed and put into operation a new turbine station for the Illinois Steel Company at Gary, Indiana. Under the Detroit

Office of Elliott Company, he maintained a sub-district office in Grand Rapids.

NEW PUBLICATIONS

RECENT ACTIVITY in bulletin publications has been centered in tube cleaners.

The Liberty Manufacturing Company, Jeannette, Pa., has put out a 4-page Bulletin Z-9 on Liberty "OS" Cleaners for cleaning small tubes, such as are found in marine boilers, surface condensers, closed heaters, heat exchangers, etc., having tubes as small as $\frac{3}{4}$ " O.D., No. 14 B.W.G. and up to 2" O.D. These little cleaners use a protected flexible shaft and either a small cone cutter or brush.

The Liberty Manufacturing Company also announces Bulletin Z-10 on "OS" Cleaners specially designed for still cleaning in oil refineries. This bulletin covers six pages and illustrates two types of motors, various types of cutting heads, universal joints and drills available so that tube cleaner equipment can be furnished for the particular needs of each still. See page 15.

The Lagonda Manufacturing Company, Springfield, Ohio, has published a new 24-page Catalog X-12 describing its general line of Lagonda tube cleaners. In it are covered Lagonda thrust-bearing, water-driven cleaners, air- or steam-driven cleaners, various types of cutter heads, drill heads,

wire brushes, universal joints, vibrator cleaners for return tubular boilers, cleaners for locomotive arch tubes, delivery pipes and syphons, cleaners for large tubes or pipes, for small tubes in condensers, evaporators, etc., lubricating devices, cleaner feeding device for feeding the cleaner into curved tube boilers, heavy-duty straight tube cleaner, operating hose, etc.

The Lagonda Manufacturing Company also announces a Bulletin X-13 covering new "Series 450" cleaners for oil stills. The 450 Series incorporates refinements and improvements in motor and head which result in greater power and speed and, as a result, a saving in cost in cleaning still tubes. See Page 20.

BRAIN TEASERS

BRAIN TEASERS, or tricky little problems, are intriguing to most folks and especially to those of an engineering turn of mind. To state a problem is to challenge a solution, and the fellow who is "good at figgers" likes to show his stuff. These little problems known as brain teasers are like jokes. Nobody knows who thinks them up in the first place, but they circulate around as common property and are embezzled from other publications without apology. It perhaps wouldn't be hard to think up some new problems of this kind but nobody ever seems to do that.

Send in your pet problems to sharpen up the wits of other engineers.

Have you tried this easy one?

Infantry marching in a column 20 miles long. A courier started from the rear of the column, delivered a message to the head of the column, and returned to the rear with the reply. When he reached the rear of the column, the rear was at the point occupied by the head of the column when he started his trip from rear to head. How far did the courier travel?