tifier operates on the same princi... as the glass-envelope tubes, Fig. ... and 29, and in that sense is an ele... tronic tube. The rectifier has a mer... cury-pool cathode for large-current ca... pacity instead of one of *metal*. It also has a graphite grid and anode like the grid in Fig. 29, and serves the same purpose. When we discuss rectifiers, construction and operation of mercury-arc rectifiers will be considered.

Press-Fitting a Rotor

(*Continued from page 71*)

number of bolts that can be readily threaded into the end of the shaft.

Three 2½-in. nickel-steel bolts take over 400-ton load without distress or distortion of their threads. When space between hub and shaft end is too short for a standard jack, longer bolts are used to permit locating the plate away from the shaft's end to accommodate the jacks.

On vertical generators the thrust-bearing block can be used as a pressing plate to assemble the shaft and rotor. On such machines the rotor's air-brake units may be used as jacks to press the rotor on the shaft.

Pressing plates are now made of material that can be picked up on the job. Sometimes square or triangular steel plates 2 in. thick are fastened together, the number depending on the number of jacks used.

When the shaft has a forged-on coupling a pressing plate can be fitted on the shaft inside the coupling or against the oil-shedder collar on the bearing journal. These have been made from four steel plates about 2½ shaft diameters long, and one-half as wide. Cut a half circle slightly smaller than the shaft diameter out of one side of each plate.

Place two plates side by side and the other pair crosswise of them as in Fig. 5. Drill, ream and fit body-bound bolts through the plates to hold them together securely. Bore the center hole to a snug fit on the shaft and machine a radius on one edge of the hole to match the coupling or oil shedder, depending on where the strongback is used. If it is used on the oil shedder, fit a copper liner or shims to protect the journal-bearing and oil-shedder surfaces.

Match mark the plates, remove the bolts and reassemble the former on the shaft. Being at right angles to the plate's surfaces the body-bound bolts