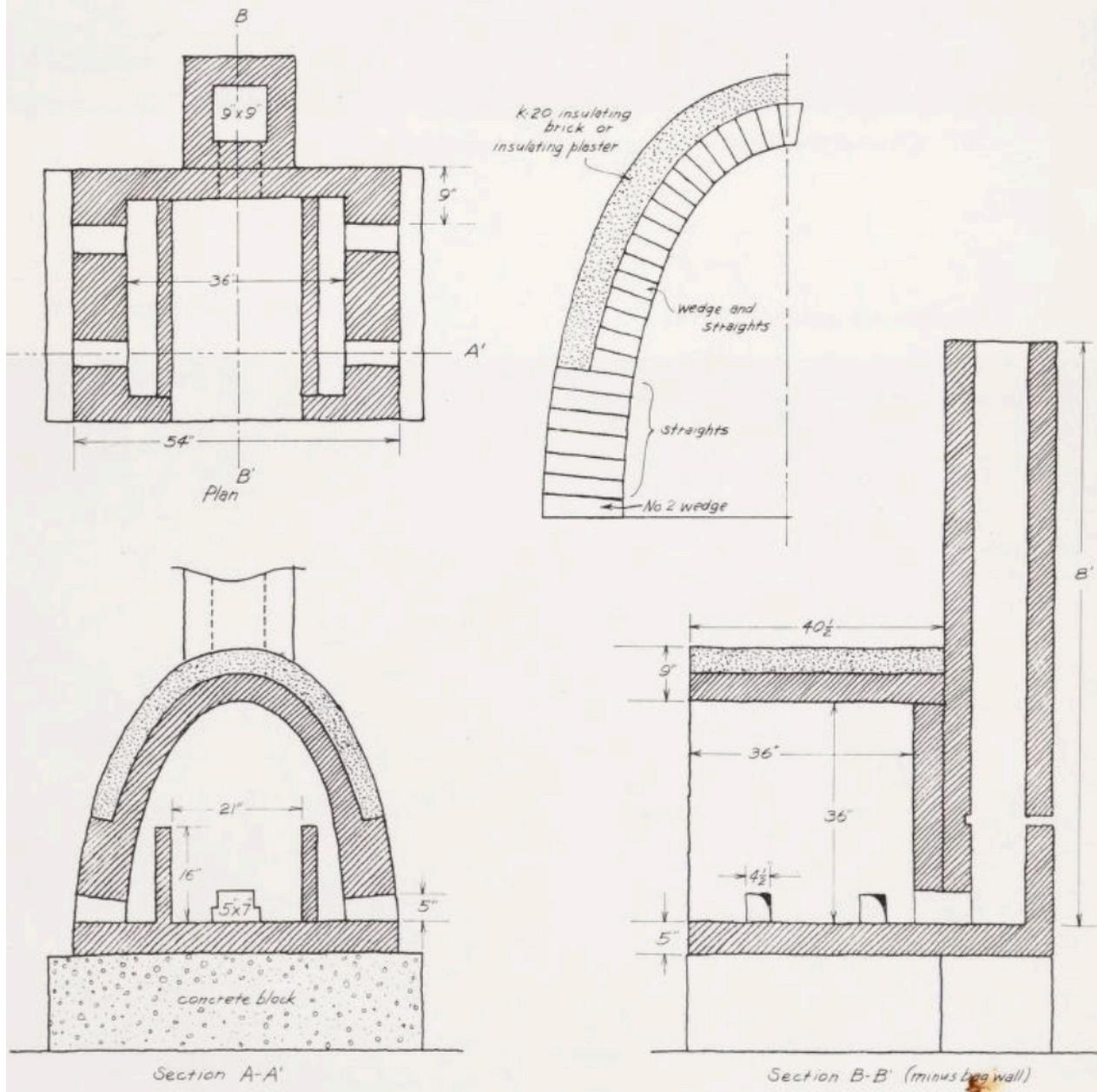
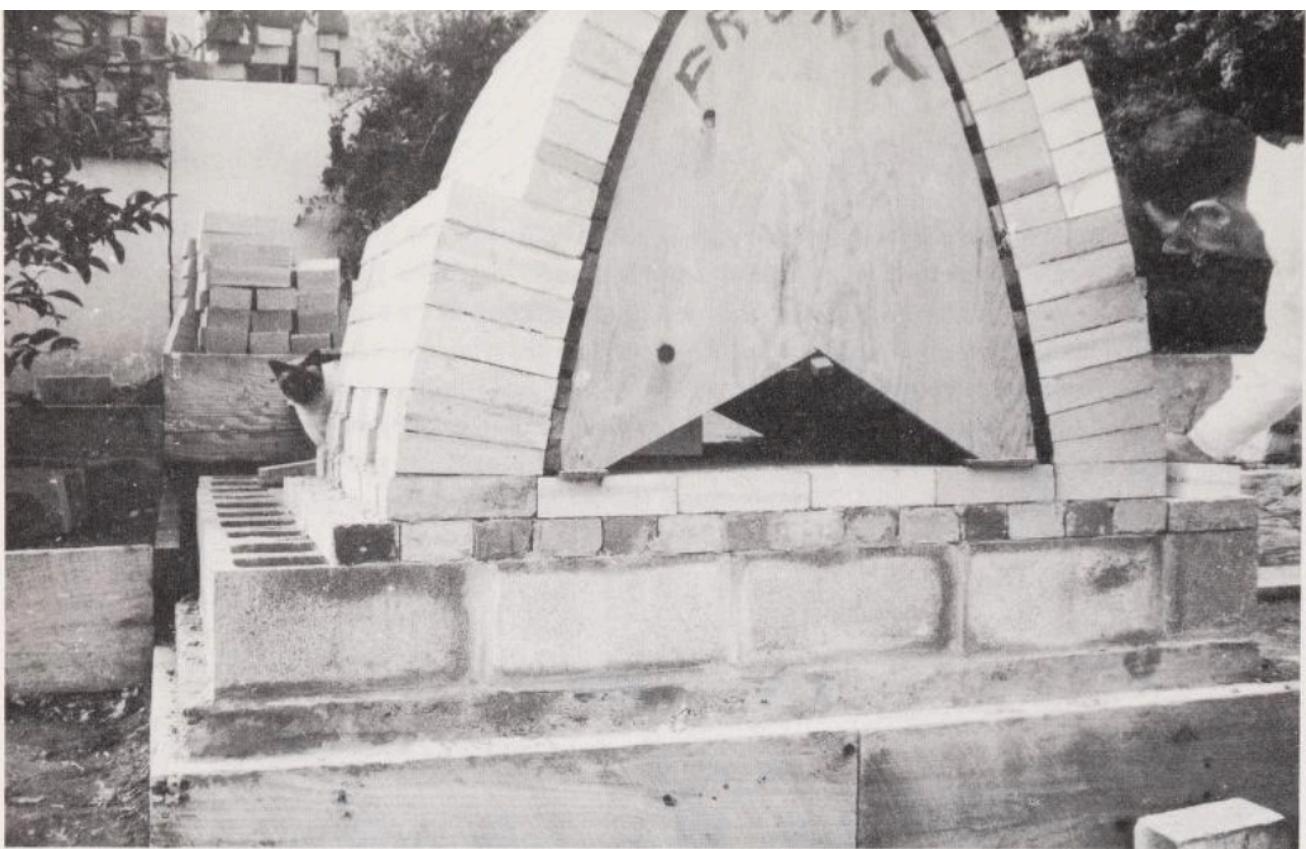


Figure 186 shows a small catenary arch kiln which uses a minimum of insulating bricks and is, therefore, quite inexpensive to build. As shown in the photographs, the arch is constructed on a base of concrete blocks topped with two layers of hard brick. The back wall is built under the arch. The front wall is bricked in for each firing, except for some bricks at the side which may be left in place more or less permanently. A 4½-inch layer of insulating bricks is used over the upper part of the arch, and a waterproof coating is applied to the exterior.

This kiln has a typical catenary arch design, and could be enlarged without

186. Small catenary arch gas-fired downdraft kiln.

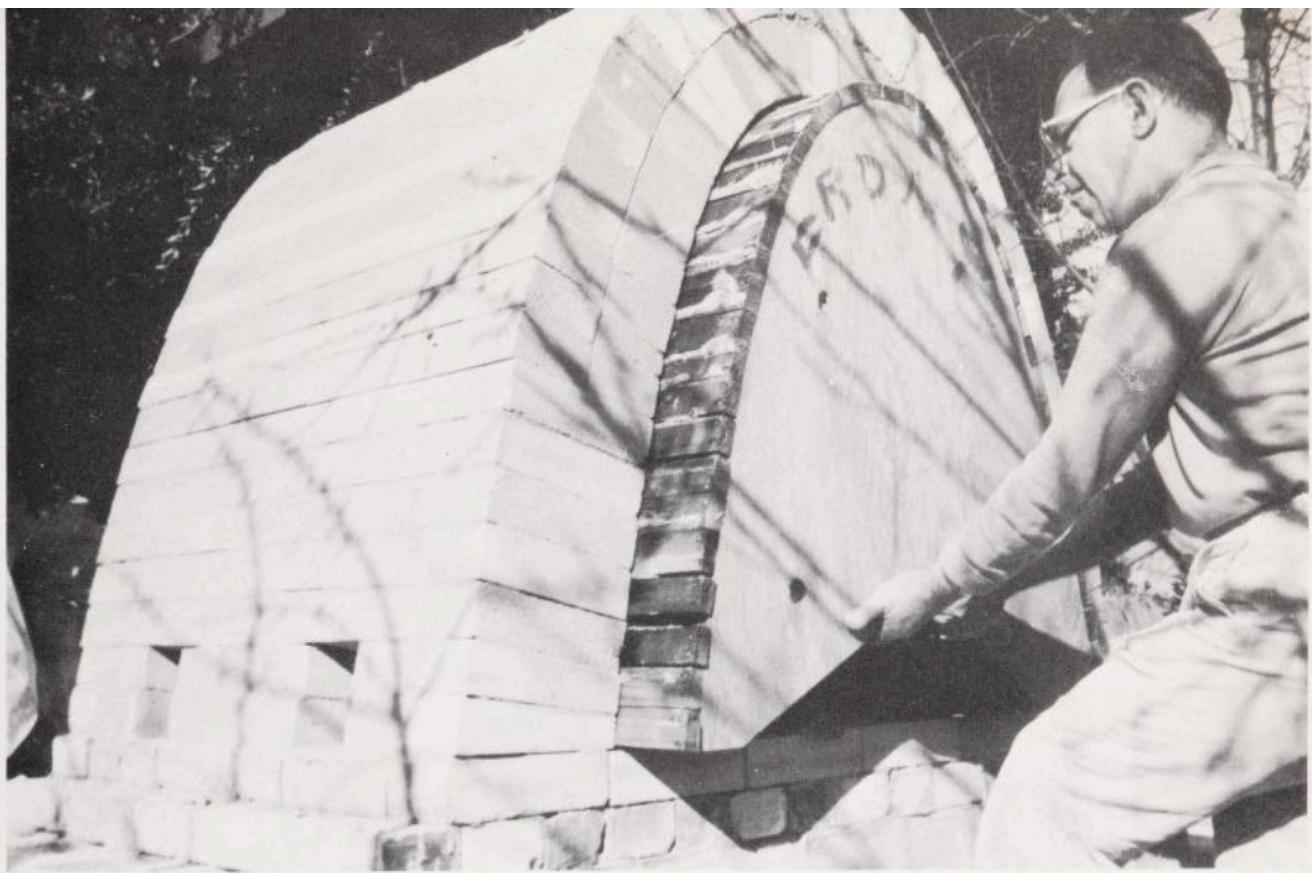




187. *Construction detail, showing the arch support form.*

188. *Arch detail.*





189. *Pulling out the arch form.*

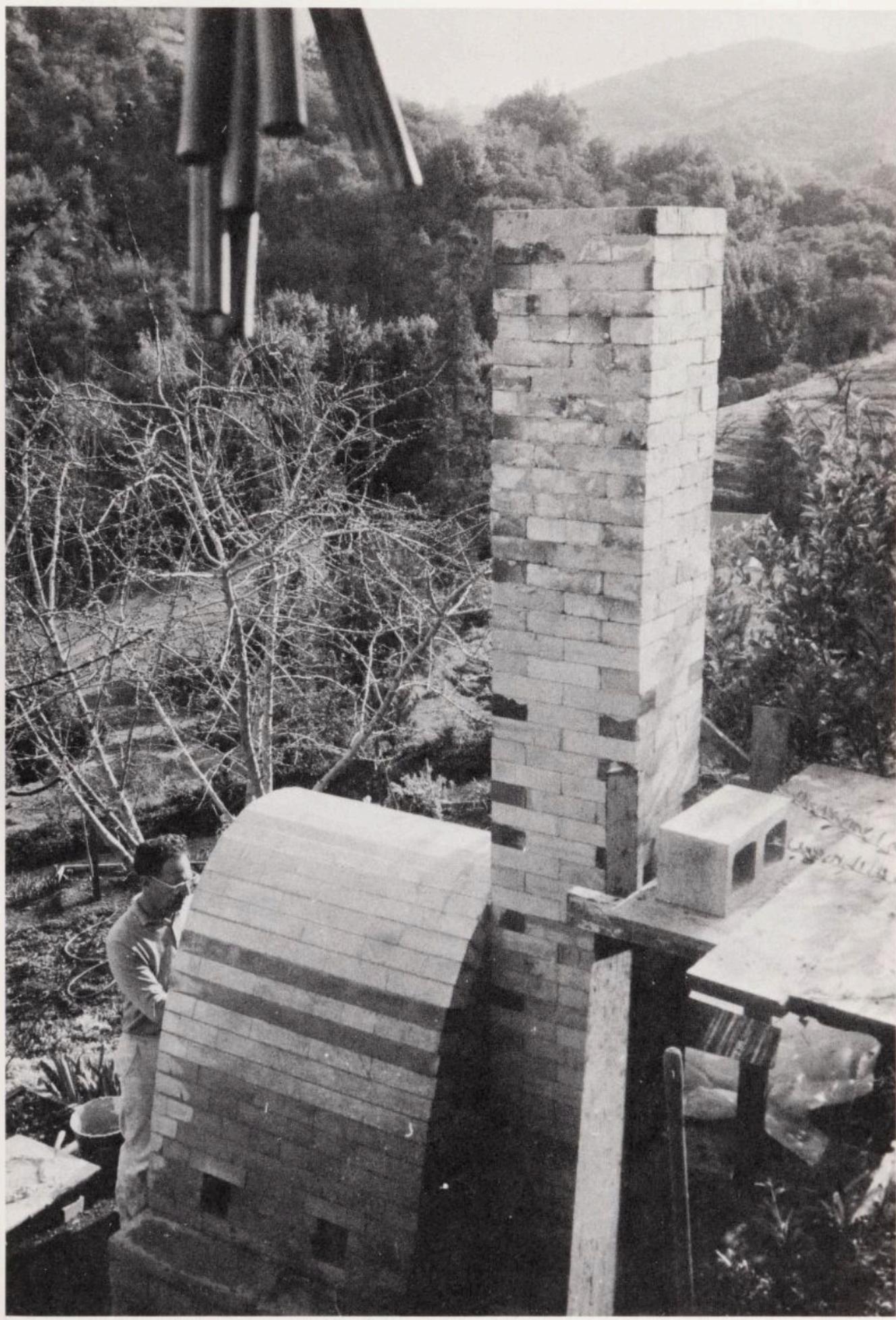
189-A. *Building the back wall.*



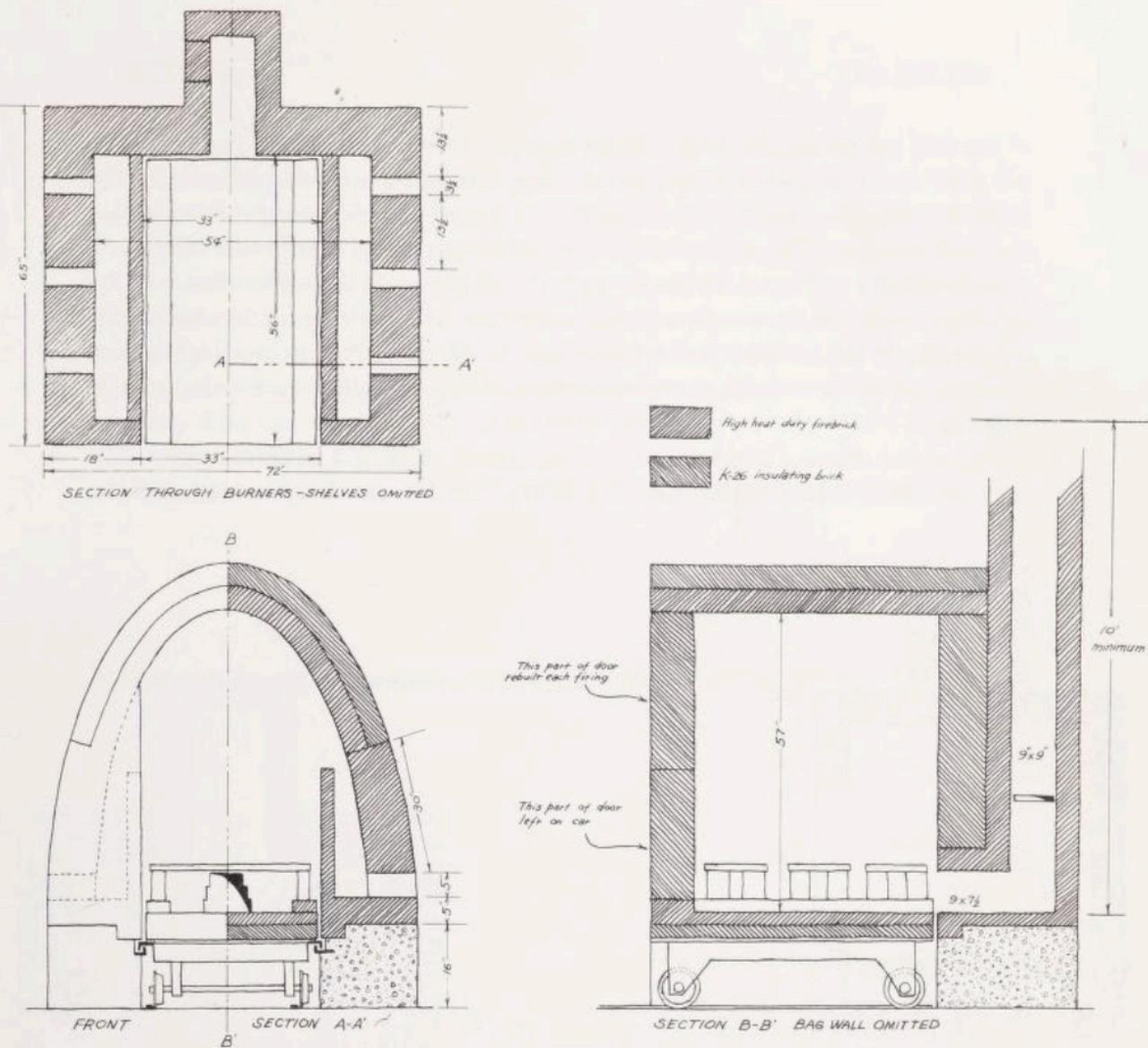


190. *Construction of the damper slot.*

191. *View of the kiln and chimney from above.*







193. *Catenary arch gas-fired car kiln. Designed and built by the author at Alfred in 1961.*

changing the general arrangement of parts, except of course for the addition of more burners. The design is very direct and simple, with no unnecessary concessions to appearance or tradition, and the fact that exterior bracing is not required makes for lower cost, as well as stability and a long life.

Figure 193 shows a car kiln incorporating a catenary arch. This design is identical to a kiln that I built in my studio in 1961, in which I have since fired both sculptures and pottery. It is fitted with 6 "Alfred" burners, similar to that shown in Figure 78, which operate on 7 oz. of pressure.

The construction of this kiln is very similar to that of the smaller catenary kiln described above. The concrete base in this case is built in a "U" shape to admit the car. Steel channels are set into the structure to form a sand seal with a skirt on the car, as shown in the drawing.

192. *The finished kiln. A waterproof blanket of cement has been applied to the exterior. Built by Ellis and Janina Jacobs, Cupertino, Calif., from a design by the author. Photos 187-192 by Janina Jacobs.*