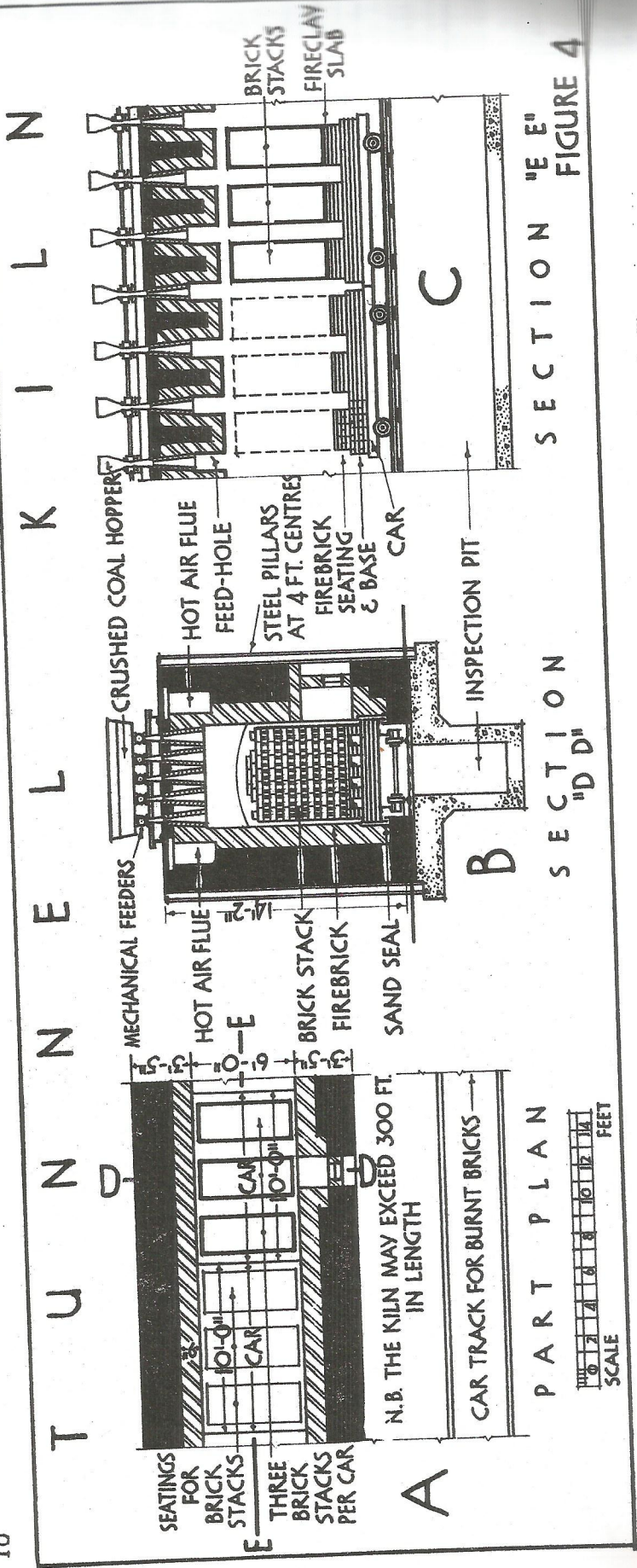


BRICKWORK

10



PART PLAN

SECTION "D D"

SECTION "E E"

FIGURE 4

coal passed through feed-holes provided in the temporary top. It has main and hot air flues. An arched permanent top is best if facings are to be produced.

The Habla kiln, like the Zigzag kiln shown in Fig. 3, has a long length of travel, which facilitates the control of operations, and it is relatively cheap to construct.

**HOFFMAN KILN.**—This is probably the best known kiln of the continuous type. The original kiln was circular in plan, the chambers (separated by paper partitions) being placed round a central tall chimney. This kiln has been improved, and a plan of the later type of Hoffman kiln is shown in the line diagram at U, Fig. 3. The number of chambers varies, but the largest of this type, used for the burning of Fletton bricks, has no less than 224 chambers.<sup>1</sup> In addition to the main flue which takes the products of combustion from each chamber, it has a central hot air flue to which are connected branch flues from the chambers, so that hot air from the cooling chambers may progressively be admitted to dry the bricks. Each chamber is further provided with a flue in the top to allow the steam to escape during the preliminary drying operation. One chamber is filled and another is emptied daily, as described on p. 8. Common bricks, together with a proportion of selected facings, are produced in this kiln.

<sup>1</sup> This kiln is at the works of Messrs The Marston Valley Brick Co. Ltd. Its length is 3,250-ft. Each chamber has a capacity of 33,000 bricks. Fourteen chambers are subjected at the same time to the maximum temperature with fifteen chambers between each. Hence it is equivalent to fourteen 16-chamber kilns and the weekly output is approximately 14 million bricks.

(c) *Tunnel Kilns.*—This kiln, shown in Fig. 4, is a brick structure which is traversed by cars or trucks upon which the bricks are stacked. The kiln may be 300 to 450-ft. long, its internal width varies from 5 to 6-ft., and its height to the crown of the arch is approximately 10-ft. The kiln has three zones, *i.e.*, pre-heating and cooling, thus for a 300-ft. kiln these are approximately 130-ft., 70-ft. and 70-ft. long respectively. The firing zone and part of the cooling zone are lined with firebrick, and the walls of the former are constructed with a 9-in. thick layer of insulating material between the lining and the outer brickwork; this insulating material protects the latter and conserves the heat. A metal door is provided at each end of the kiln.

The metal cars are 10-ft. long, and their bases are protected by three courses of firebricks. In a siding adjacent to the kiln each car is loaded in stacks with a space between each; three seatings, each three courses high of bricks covered with a fireclay slab, are provided on the base to receive the fuel. The approximate number of 3-in. bricks which a car will hold is 2,000. The cars are under cover and tracks for loading and unloading are provided at intervals in the roof of the firing zone.

Rows of feed-holes are provided at intervals in the roof of the firing zone; distance between each row being equal to that between the stacks of bricks. Fuel is crushed coal, and this is fed from hoppers which are placed over mechanical feeders fixed immediately over the feed-holes. Thus the coal dust is fired immediately

<sup>1</sup> By courtesy of Messrs Gibbons Bros. Ltd., Dudley.