

Pig House Sleeping Floors of Pre-cast Blocks

IN an article in the July issue of the "Journal" I. H. Owtram, Extension Officer in Pig Husbandry, Department of Agriculture, Wellington, described a simple method by which pig producers could build their own concrete pig houses with concrete or hollow-stone blocks. In this article he explains how sleeping floors for concrete pig houses can be made with special pre-cast floor blocks.

THE use of special concrete-mixture sleeping floors in pig houses has become general of recent years, and their advantages over wooden floors are very great. An article on the laying of hollow coke-breeze concrete floors was published in the February, 1947, issue of the "Journal." Machine-made coke-concrete blocks for constructing this type of floor are now available, and their use simplifies the job considerably. Each block is 4in. thick, 18in. long, and 8in. wide, covering 1 sq. ft. of floor space. There are four circular holes 2in. in diameter running through the block from side to side, and there is a tongue at one end of the block and a groove at the other. These holes and tongues and grooves are shown in the accompanying illustrations.

Laying the Foundation

The first step in laying these floor blocks is to put down a foundation of ordinary concrete. If this is laid on solid ground, it need not be more than 1in. thick, but if the ground beneath has been built up at all, or if there is any doubt as to its solidity, as, for instance, on sandy types of soil, the foundation should be at least 2in. thick. The necessary falls in the floor, generally $\frac{1}{2}$ in. in 1ft. from the back to the front of the floor, are put in when laying the concrete foundation for the floor. The fall in the sleeping floor must coincide with the fall in the whole floor area, and to achieve this the foundation for the sleeping floor blocks should be laid at the same time as the rest of the floor.

Pegging Levels

The method of pegging levels to get the correct fall is not difficult, but

it is most important that the falls should be correct.

Fig. 5 (below) shows the ground plan of a simple unit 8ft. wide and 16ft. long with a 3ft. race in front of it containing the main drain, the fall of which depends on the site and general layout. This fall should not be too steep, 1in. in 20ft. being ample.

After the walls of the units have been built the main drain is put in. The falls of all floors must connect with this drain, and unless the drain is put down first this cannot be done properly.

In the unit shown in Fig. 5 the trough is placed along the dividing wall between units, not along the front, and the doorway is in the opposite corner of the front; it is to this corner that a fall of $\frac{1}{2}$ in. in 1ft. is required over the whole floor area. As glazed-tile troughs are nearly always used nowadays, the space for the trough is left unconcreted and the troughs set in dead level after the floor has been put down. It is advisable not to excavate the floor area until the levels have been pegged; in building the walls a trench is dug for the foundations, and the earth in the floor area is not touched until the work on the levels is completed.

When the walls have been built up and the main drain finished a peg is placed at A in Fig. 5, the top of this peg being exactly level with the edge of the drain. A second peg (B) is driven in alongside A, its top being exactly 8in. higher than the top of peg A. Then with the aid of a straight-edge and a spirit level along the line between peg B and peg C (several temporary pegs will be necessary, as a straight-edge board of this length, over 16ft., is very hard to

get) place a peg at C so that the top of it is exactly level with the top of peg B.

Again with the aid of the straight-edge and the spirit level place a peg at D, the top being exactly level with the top of peg C. While doing this a peg should be driven to the same level at F., a point 16in. from the side wall along which the trough is placed.

Peg B is driven down until its top is $3\frac{1}{2}$ in. above the top of peg A, and by the use of the straight-edge and spirit level peg E is placed with its top level with the top of B. This is to give a fall of $\frac{1}{2}$ in. in 1ft. from E to A. Peg B is then removed and five pegs, A, C, D, E, and F, are left and are so placed that if the surface of the floor is laid level to the top of these five pegs, a fall of $\frac{1}{2}$ in. in 1ft. is obtained over the whole floor area to the point A.

These are the master pegs. A certain number of intermediate pegs are necessary and these can be placed at the correct level by means of a string stretched tightly between the master pegs; the intermediate pegs are driven into the ground so that their tops are level with the string.

The floor area is excavated to the required depth, 2in. if the floor is to be 2in. thick, below the top of these pegs; screeds are placed in position and the floor laid. The reason for locating a peg at F is to have a straight line for levelling from E to F. The space for the glazed tile trough is left unconcreted until after the floors are finished, when the troughs are put into position.

Placing of Blocks

When the concrete foundation has been laid and has been given time to set properly the placing of the blocks can be proceeded with. A rough surface must be left on the concrete foundation to provide a key for the mortar on which the blocks are laid. First, the blocks are placed so that their length is across the house and the holes in them coincide and run from the back of the sleeping floor to the front (see Figs. 1 and 2). A thin layer of cement mortar (3 parts of sand to 1 part of cement) is placed on the concrete foundation and the blocks placed on top of it.

The blocks are not placed directly against the walls of the house, but a space of about 2in. is left on both sides and at the back. This space is filled in with solid concrete when all the blocks are in position. It is not necessary to put any mortar between the blocks, as the tongue of one block is fitted into the groove of the next.

When all blocks are in position, and it takes about 50 of them for an 8ft. x 8ft. sleeping floor, the spaces at the back and sides are filled in and the front is finished with a strip of solid concrete which is bevelled as shown in Fig. 3. The reason for this is that if a sharp edge is left, both the edge of the concrete and, more important still, the pigs' feet will be damaged.

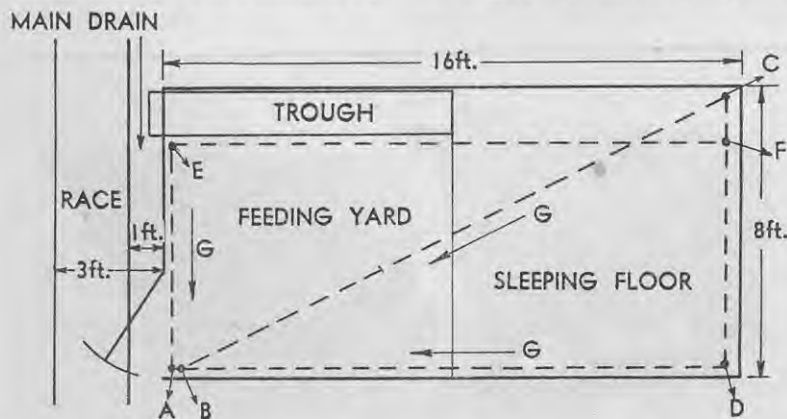


Fig. 5—Method of pegging the falls in a simple unit 8ft. x 16ft. A, B, C, D, E, and F—Pegs. G—Direction of fall $\frac{1}{2}$ in. in 1ft. to doorway at the front corner.