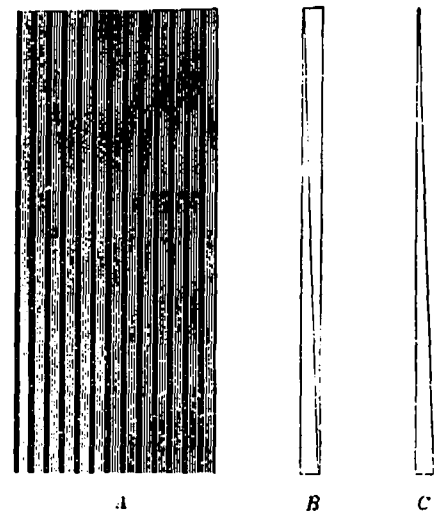
The Home Apiary.

THERE is scarcely a section of our country in which a few farmers do not experiment with bees. As the prize-lists at many local shows indicate, they are not the least successful bee-keepers. The results of experimenting with a house apiary will, therefore, be of interest to many of our numerous readers. Here we have an illustration of a building in which practical results have been satisfactorily obtained. There are those who strongly believe that more honey can be produced with less work, in a house apiary, than in any other way. The bees are kept in the house the entire year; no wintering cellar is needed; the hives, supers and other furniture can be made much cheaper than for an outside yard. We avoid working in the wet grass and hot sun. With the house apiary we can have our bees and honey locked against intruders, can feed with great ease at any time of year without the least danger of starting robbers, and we can open the hive for examination at any time of day during the spring, summer or fall, and keep them open as long as we wish without hearing the sound of a robber's wings, and the crossest hybrids will not attempt to sting. The house is a most satisfactory method of wintering for the above named reasons and many others. With a house apiary of 50 or 100 swarms, with everything in readiness, we can sit in the shade and watch for and control all swarms with little work and much pleasure. The holes over the hives are three inches in diameter, and are covered with a slide on the inside. They are intended to furnish ventilation when work is being done on the inside, as well as to give a place of escape to all bees that get out of the hives while being handled. The door is in the end. On the opposite side of the building is a window with a sliding sash of glass and revolving wire screen which can be opened or closed at pleasure. The ventilator to be seen on the roof is to let all smoke out of the building as quickly as possible, as well as to be used as a chimney if a fire should be needed in winter. With thorough ventilation no artificial heat is needed. By throwing open the door, window and ventilators, the inside remains nearly as free from smoke as does the open air. It is surprising to see how little handling is really needed; also to see with what impunity we can handle even the crossest hybrids in the house. In the illustration our iron covered house for storing and curing comb honey is visible at the left, and a glimpse of the shop is seen at the rear.

Improved Stable Floor.

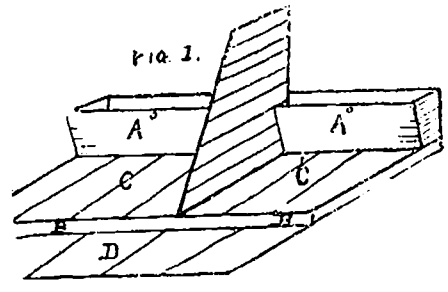
THE illustration here given is of a stable floor especially good for stallions and geldings. The first tier of plank, which may be 2 inches thick, is laid with an incline of 3 inches to the rear. These planks are the full depth of the stall, including the manger. The length will vary from 8 to 9 feet. Over this are laid pieces like *C* in cut. These pieces are 4 inches wide and 3



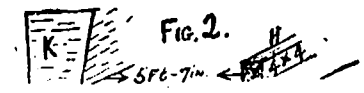
inches in depth, and as long as the stall or plank of first tier. They taper to nothing at one end, and are laid an inch apart. *B* shows how two pieces are taken out of one stick by sawing diagonally any good, hard, tough wood 3 by 4 inches. *A* shows the floor when complete. In cleaning this stall it is necessary to have a kind of mattock to fit into the spaces in the grating. This improvement is more noticeable when used for stallions and geldings.

Stall Floors.

THE following sketches of stall floors, arranged to keep the cows out of their own filth, when lying down, will be found useful. In fig. 1, the stall floor *C* is four inches higher than



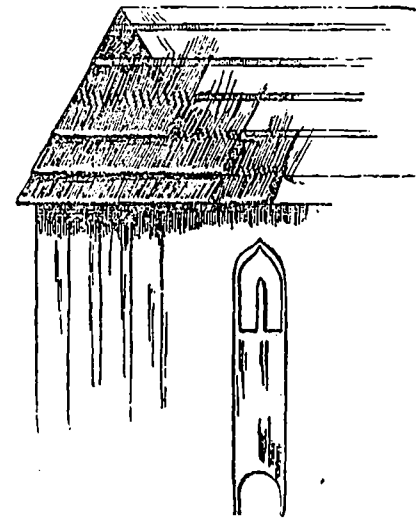
the main floor *D*. The distance from the manger, *A*, to drop at *B* is 5 ft. 7 in. When the cows are standing their hind feet are on the main floor, *D*, but when lying down their entire body rests on floor *C*. Fig. 2 shows how to apply the same principal to a level floor. *H* is a 4x4, and as long as the stall is wide,



placed 5 ft. 7 in. from the manger *K*. The space between *K* and *H* should be filled with sawdust, chaff or other bedding until it becomes level and solid. It answers the purpose of fig. 1, and is much less expensive.

Thatch Roofing.

THE expense of keeping shingled roofs in repair forces the question on the mind of Mr. Hollister Sage, whether a return should not be made to the British and European cheap, effective and tidy thatch roof. Mr. Sage warms up with the idea and holds that ice-houses, wood-houses, stock sheds and the smaller barns ought to be thatched with straw, reeds or rushes. He says: Even those who have never seen thatching know how surely rain runs off the roof of a well-covered stack, and how little a well-made cock of hay is wet by heavy storms. Reeds and rushes are also sometimes employed for roofs. Could the use of thatching be extended in this country, its value might be acknowledged. To lay it is a simple art, requiring no more skill than shingling. After the first two hours of effort, the work will seem more easy and rapid. The essentials are straight, hand-thrashed straw, binder twine and a shuttle made of oak or hickory, six inches long, an inch and a half wide, and one-eighth of an inch thick. The shape of the shuttle, and also a crude sketch of a building being thatched, are shown in illustration. Furring strips are nailed to the rafters as for shingles, and a cord firmly nailed to the end of each. I say "firmly nailed," because if it should loosen, the straw it holds will soon slip down and be at the mercy of the wind, when a bad leak will appear; and thatching, like shingling, is difficult to repair.



The straw is laid and bound to its place in small bundles—the smaller the better—the twine being wound on the shuttle. A little practice will enable the thatcher to flatten and spread each bundle so no cracks will show in the roof. After the cord is put over the straw and under the furring strip, and while it is being held very tight, the straw is forcibly crowded up against the last bundle placed, that the roof may be firm and hard. It is well to secure the binder twine at intervals of one foot on the furring strip, by winding it around a shingle nail and driving it into the wood. None but clean thrashed straw is suitable on account of rats and mice. If it be stiff and strong it may be exposed to the weather in eight-inch lengths, but weak, light straw will not bear the wind unless in six or four inch laps. A steep pitch is desirable, and wide, over-hanging gables will give a pretty appearance to the smallest thatched building.