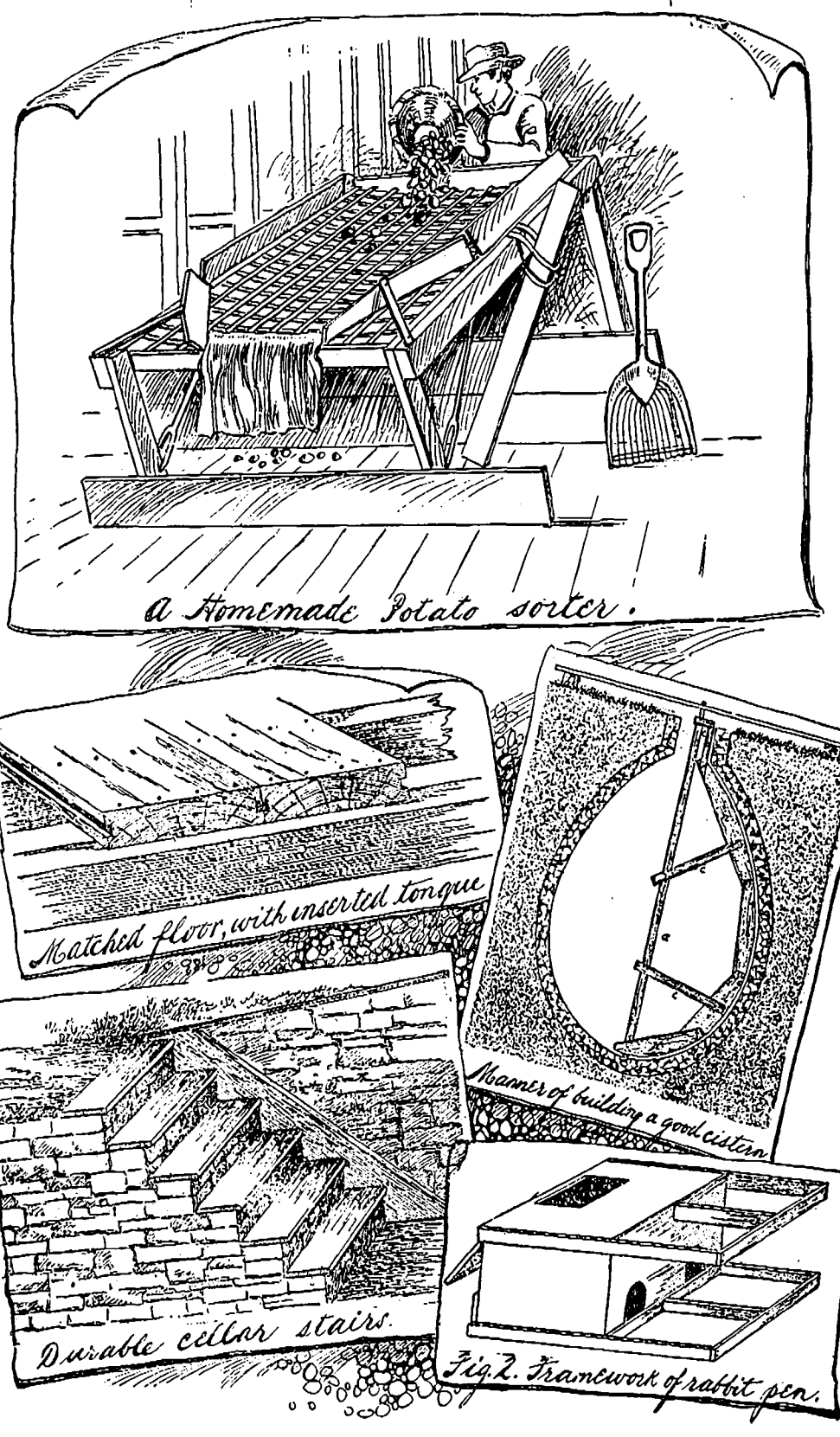
Potato Sorter.

THE illustration here given of a potato sorter shows a simple contrivance of strips and boards and straps, which can be easily made, and will be found useful. The frame is made of 2 x 4 stuff bolted together. Narrow boards at the sides prevent the potatoes rolling off. The potatoes roll down over narrow strips, with edges upward, fastened perhaps two inches apart. The distance apart will depend on the size of the potatoes to be sorted out. Narrow strips of leather are fastened cross-wise of these wooden strips, nailed at each intersection. To cover the nail heads and thus prevent them from bruising the potatoes, narrow strips of canvas are fastened to the tops of the strips after the leathers are nailed in place. As shown in the picture, a bag may be hung at the bottom of the sorter to hold the potatoes as they come down. Really, such a machine should be called a "sizer," rather than a sorter, for all it does is to separate the small potatoes from the larger ones. The wooden strips and the leathers make a series of holes through which tubers of a certain size must fall, while larger ones roll over.



Barn Floors.

THE floors of a barn are a very important portion of the structure, and considerable care should be exercised in choosing the material and placing it in position. For durability, non-liability to warp, and one on which the team can get a foothold, there is nothing better than the common white pine. Most of the hard woods will warp when the sides are unequally dampened, and horses find it difficult obtaining a firm foothold to haul in heavy loads. The plank upon the driveway floor should always extend crosswise. It makes but little difference about the direction of the portion under the remainder of the building. If the joists are heavy, and placed two and a half feet apart, two-inch plank will be strong enough. However, if possible, use those two and a half or three inches thick, and be certain that they are well seasoned. Obtain them a year in advance, pile up under shelter, and as far from the ground as convenient. Both edges of plank should be jointed and grooved, and a tongue of some soft wood used, as shown in the engraving. The manner of laying the floor is clearly shown. The ends of the planks should be spiked, unless there is some doubt about their shrinking, in which case lay them loose, driving them firmly together during a dry time. If not practicable to obtain thick plank lay the floor double. The lower course may be of well seasoned inch boards. For the upper one use one and a half inch plank, jointed, but not grooved, being nailed in place when thoroughly shrunken. The joints or cracks in the two floors should not match.

Outside Cellar Stairs.

As usually constructed, the outside cellar stairs become very much dilapidated after a few years of use, and many serious accidents occur by falling or slipping from and upon the decaying steps. If stones of the right length can be obtained, they are the best possible material for the steps, the next best being plank, though neither can be depended upon unless the whole space underneath the steps, down to the level of the cellar floor, be laid up in masonry. Where only small stone, either round or flat, is at hand, lay up the stairs of this material thoroughly embedded in mortar, making the steps of the needed height When this is done, cut a plank step of the proper width and length for each step, and place them on top of the stone step, as shown in the accompanying illustration. Upon each side fit a retaining board, and the result will be steps that are durable and generally satisfactory. If possible, make the steps from two-inch pine plank, covering the whole with folding doors, in the usual manner.

Constructing a Cistern.

CISTERNS that are built in the ground are usually of a round form, as they are more durable and less liable to cave in than those of a square or octagonal form. To make a round cistern in the usual manner requires a man with a correct judgment of distance, unless a proper framework is used as a model. The accompanying illustration, from a sketch by L. D. Snook, shows how this frame is made and used. After the excavation is made, and the bottom laid with brick or cobblestone, the center of the bottom is found, and a hole is made, in which is inserted the lower end of a standard, *a*, the upper end of which revolves in a hole in a plank, the ends of which rest upon the banks of the excavation. To this standard has previously been nailed a skeleton frame of boards, *c*. The outer sides of these represent the form and inclination of the cistern walls. It is plain that as the walls are laid up, and the guide is brought into position by revolving it, the workman can place each brick or stone at the right angle. To make all easy working an inch space should be left between the wall and the outer edge of guide. For a common house cistern a diameter of eight feet inside the walls will prove large enough and would be a proper guide in the formation of the walls. If possible fill in the space back of the wall as the structure progresses, tamping the soil firmly in position. If it be dry weather, it should be made wet and firmly pressed, that the inside pressure when filled with water will not cause the wall to crack or give way. An egg-shaped form is best, with the top or small end long drawn out or elongated, as shown above. This guide is not expensive, and when the walls are up it is knocked to pieces and thrown out.

Pretty Rabbit Pen.

To encourage my boy in learning the use of tools, writes J. L. Townshend, in the *American Agriculturist*, I designed and helped him make an ornamental rabbit pen (Fig 1.) A box of inch stuff two by four feet and sixteen inches deep was procured, the top taken off and the open part placed on the ground. Four strips, each one by two inches and four feet long were nailed to the box, a cross strip of the same size