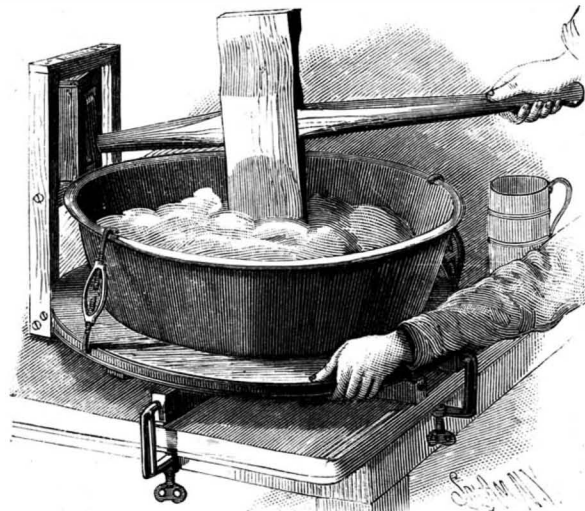


**STONE'S FAMILY BREAD KNEADER.**

A device designed to preclude the necessity of putting the hands into the dough in the process of mixing and kneading, and efficiently knead the dough with the least expenditure of strength, is illustrated herewith, and has been patented by Mr. D. G. Stone, of Negaunee, Mich. A horizontal frame is provided with a central vertical stud, and to one end of the frame is secured a vertical frame in which is mounted a block supported by trunnions, the block being apertured to receive another block supported by trunnions riding in bear-



**AN IMPROVED DOUGH MIXER AND KNEADER.**

ings formed in the first block. Upon the horizontal frame is placed a circular table, having a central aperture to receive the vertical stud, upon which the table is free to turn, and which table, being removable, is used later as a bread board in the process of shaping loaves for the oven. To opposite sides of the table are secured removable hooks, adapted to engage the edges of a bread pan placed thereon, the hooks being provided with turn buckles by means of which the pan may be secured in place.

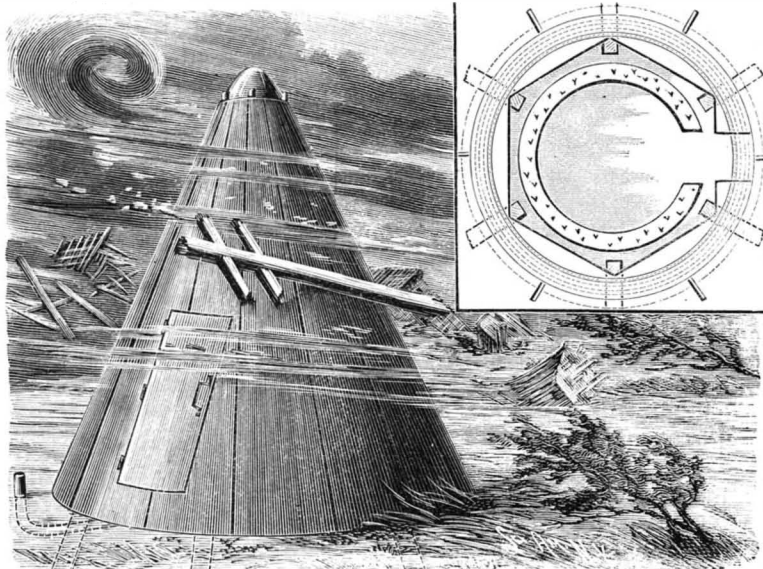
The combined mixer and kneader is supported by a lever having a handle at one end and a projection at the other end adapted to enter the central block in the vertical frame, the face of the mixer, which is shown in use in the illustration, being concavo-convex in cross section, while the kneader end of the implement is hollowed out in its body portion and has a flat, smooth face. The proper ingredients having been placed in the pan, the mixing is effected by reciprocating and turning the lever, revolving the table as desired, as the work proceeds, and when the kneading is to be done the lever is simply turned to bring the kneader into operative position, when the operation may be carried on continuously. The ease with which this usually tiresome labor may be performed by means of this device is designed to insure more thorough kneading, the object of kneading the dough being to break up into finer ones the bubbles of carbonic acid gas resultant from the fermentative action of the yeast, which bubbles have become entangled in the glutinous mass, and to distribute them evenly throughout the material. Thus it follows that the more thorough the kneading the more uniformly light and porous should be the bread.

For further information relative to this invention address the inventor as above.

THE meteors of Nov. 23, 1892, as seen by W. J. Hussey, at Palo Alto, Cal., did not come at a strictly constant rate, though nearly so. On the average, a single observer could see from 50 to 60 fairly bright ones every five minutes, which corresponds to a daily rate of from 400,000,000 to 500,000,000 on the hemisphere of the earth toward the radiant.

**A BUILDING TO WITHSTAND CYCLONES, ETC.**

A structure for use in countries where hurricanes and cyclones are liable to occur, and which will afford a secure temporary shelter during the heaviest storms, is shown in the accompanying illustration, and has been patented by Mr. Reuben Quatermass, of Moline, Kan. A number of posts are arranged in a circle and inclined to connect with each other at the top, forming a conical shell, the lower ends of the posts being firmly secured to horizontal anchor beams some distance below the surface of the ground. This framework is covered by a sheathing of heavy planks, the top layers of which are nailed one upon the other and shaped to form a rounded top. The plank covering extends a short distance below the ground, and this covering is metal-clad, making an earth connection for electrical currents, conducting wires also leading from the lower edge of the covering farther down into the ground. A heavy door, also covered by sheet metal, allows access to the interior, which is suitably floored, and, as will be seen by the plan view, is provided with a circular seat. In the top are a number of vertical ventilating pipes or tubes, and there is also an underground ventilating pipe, terminating in the outer air just outside the building, and affording an ample circulation of air within when the door is tightly closed. This building is designed to afford absolute protection against cyclones, tornadoes, and lightning, there being no danger of flying debris penetrating its walls or obstructing ventilation. Differing materially also from underground caves or vaults, it is not wet or damp, and is free from insects or reptiles, being always ready for occupancy, and forming a comfortable place of refuge for as long as any storm may last.



**QUATERMASS'S CYCLONE BUILDING.**

**AN IMPROVED SIDE AND ROOFING TILE.**

A house which is both sided and roofed by an improved form of tile, with details of the tiling itself and the manner in which it is placed in position, are shown

on their lower edge being nailed to fit tightly above each row to secure the side tile in position. These cleats are not required to be beveled for roof tiles. Figs. 5 and 6 represent plain and ornamental siding tiles, Fig. 9 indicating their finished appearance in position, while Fig. 8 is a sectional view and Fig. 7 is an ornamental coarse strip, border, or moulding. Figs. 3 and 4 are front and side views of the roofing tile, Figs. 10 and 11 being similar views of these tiles in position on a roof.

It will be seen that these tiles have flanges, whereby water is prevented from passing into the joints at the sides and upper edges, the lower edges of the tiles above hanging clear of the upper edges of the next lower tiles, portions of the upper surfaces of the roof tiles also having deep grooves leading downwardly from the upper flanges to convey water to the outer surfaces. The upper flanges of the tiles also have stops opposite the upper ends of the grooves to prevent water and snow from being blown upward. Portions of the face of the roof tiles also have diagonal side grooves conveying the water toward the larger channels centrally in the face of each tile.

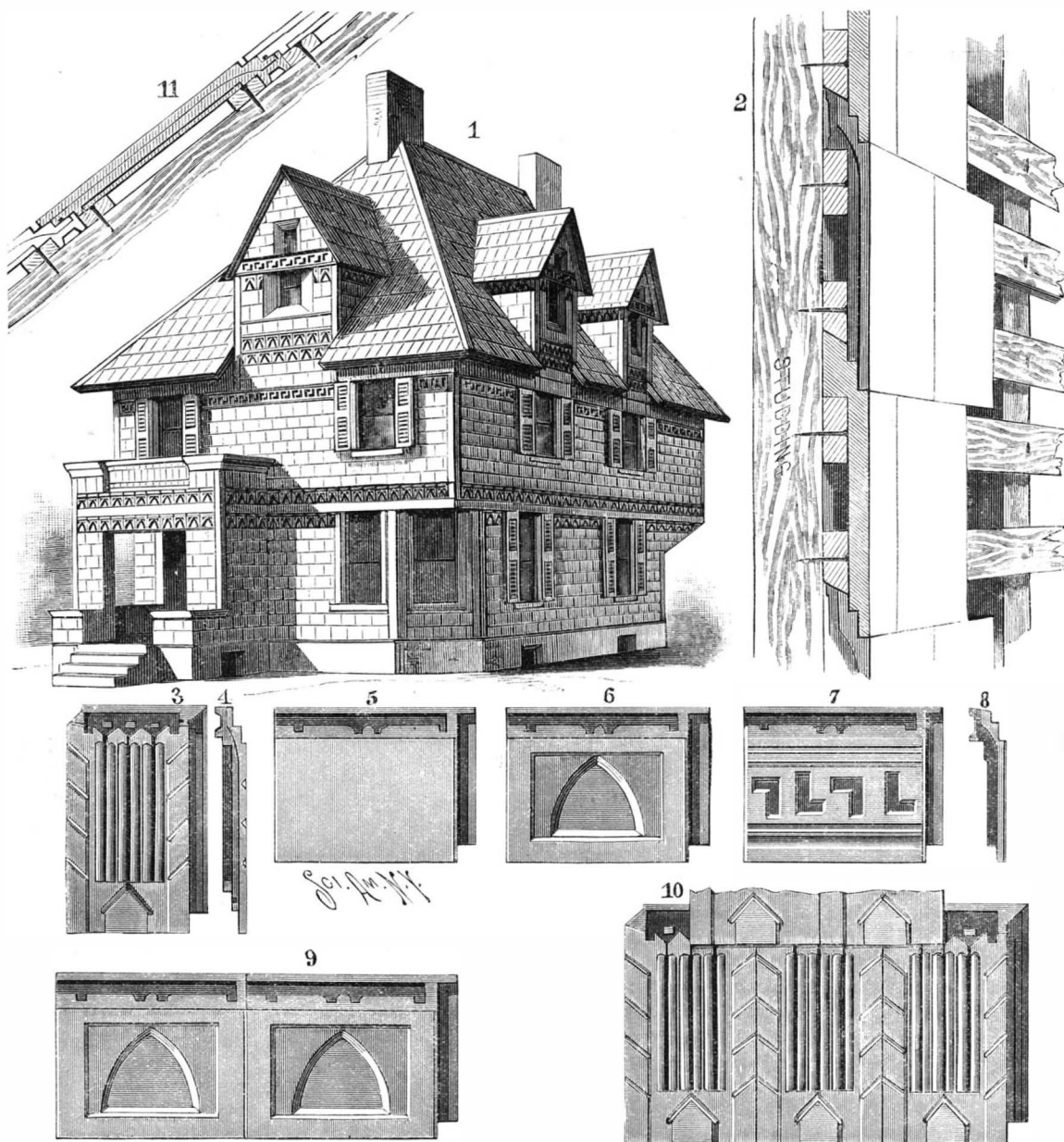
These tiles may be made of such sizes that all cutting around doors and windows will be obviated. Among their advantages over the ordinary wood siding is the fact that they are fireproof, while they require no painting, and their durability and elegance are obvious.

Further information relative to these tiles may be obtained of Messrs. F. N. Marvick & Co., San Mateo, Florida.

**Dulcine.**

Dulcine is a product which, because of its intense sweetness and its non-poisonous character, seems destined to become a serious competitor of saccharine. It was prepared first in 1883 and its sweetening power then recognized; but the cost of manufacture was too great. Patents have now been ap-

plied for its preparation from *p*-phenetidine by the action of ammonia and carbon oxychloride. The chemical name for the compound is *p*-phenetol-carbamide and its formula C<sub>8</sub>H<sub>9</sub>(OC<sub>2</sub>H<sub>5</sub>)NHCONH<sub>2</sub>.—*Apotheker Ztg.*, 1892, 550; *Am. Jour. Pharm.*



**MARVICK'S SIDE AND ROOFING TILE.**

in the above illustration, the improvement forming the subject of two recently issued patents. This tiling is made and put on so as to form tight joints and a smooth surface, the separate tiles being removable, when required, without breaking, as nailing is not