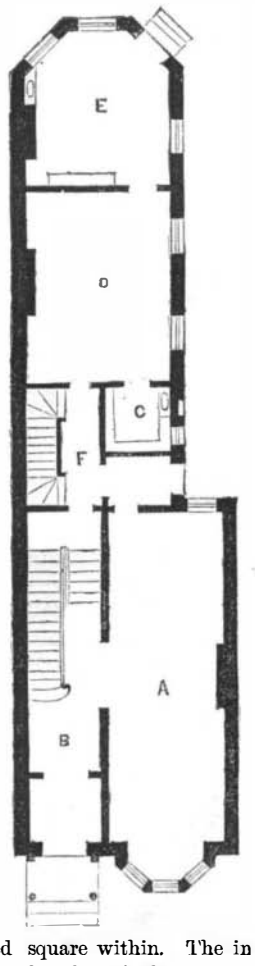
DESIGN FOR A BLOCK OF SIX DWELLINGS.

We copy from *Sloan's Architectural Review and Builders' Journal*, a design in the Franco-American style, and a description of a block of six dwellings, which we consider much superior to the ordinary method of building blocks of buildings, in which each dwelling is built without reference to the general design of the entire block. We give elevation of the whole and ground plan of each.

The design is particularly applicable to small cities, and to larger towns which, like Philadelphia, do not adopt the vicious system of tenement houses in vogue in New York, and is commendable as being at once tasteful and inexpensive.

BLOCK OF SIX DWELLINGS---FRANCO-AMERICAN STYLE.

From the elevation it will be seen, that the intention is to construct six houses in connection; each house, eighteen feet front and three stories high, being surmounted by a French roof, making a fourth story. The sky line is thereby agreeably and effectively diversified by the different hights and breaks of the roof.



The long façade, or face line of the front, is but slightly varied, no projection being more than twelve inches beyond the receding sections, thus dividing the block into compartments, affording opportunities for slight but tasteful decorations, and obtaining what are the greatest desiderata in architecture, breadth of light and depth of shadow.

Each house has a bay window in the front, together with a porch to the front door, projecting about the same distance The form and features of these bay windows may be different in each, by being made square, circular, or octagonal; and, by these means, an effect of pleasing variety will be obtained, considerably to improve the external appearance of the block. The windows, also, are intended to have their heads slightly curved on the outside, but finished square within. The intention is to exhibit the conception of such a block as can be erected at a very moderate cost, and one that would be within the reach, while still meeting the wants, of the major class of the business men of ordinary means.

Beginning with the principal floor: A is the parlor, 12×28 feet, with a front bay window. B, the main hall, containing the stairway to the upper portion of the house, with a vestibule on the front. C, the butler's pantry, D, the dining-room, 12×16 feet. E, the kitchen, 12×14 feet. F, the private staircase to the upper stories.

The other floors may be arranged to suit individual requirements and taste.

The front of this block would present a very pleasing and agreeable effect, if it were constructed of pressed brick, relieved with white marble trimmings, and quoins on the four corners.

Zinc as a Material in Building.

It appears, from a report published in France, on the use of zinc for purposes of construction, that most of the defects experienced in the employment of this material arise from ignorance as to the proper mode in which it should be thus used —the one object to be kept in view being to permit perfect freedom to the sheets; to confine them nowhere, and to separate lengths of guttering, and any other portions of a roof requiring to be made in long pieces, as much as possible. Eaves' gutters should be made in short lengths, bent in the direction of the way in which the sheet has been rolled and soldered, the solder being put between the sheets, and one sheet lapping over the other, nor must they be screwed to the rafters, as this is a practice which occasions a constant failure in the joints of iron eaves' gutters.

Wherever a down pipe comes there should be a stopped end in the gutter, and the gutter should not be continued longer than possible in one place; where it is laid behind a parapet a separate piece of flashing will disconnect it wholly from the sheeting on the roof. For guttering, the gage used should be increased in proportion to length; there should be a proper substance in all cases. Oak boarding will spoil the zinc, and the fir should be dry—the boards with an aperture of about half an inch between each. If they are damp, as much oxidation will take place on the under side of the zinc as on the top of it. It appears from actual experiment that the oxidation proceeds for about four years, gradually diminishing after the first three months, when it hardens into a protecting coat of a dark gray color, preserving the metal beneath from further deterioration. It appears to be evident that a sheet of zinc exposed to the atmosphere for a series of years losses little or nothing of its weight or thickness, and that its surface remains hard and polished like enamel.

Ink from Elder.

According to a German journal, an excellent permanent black ink may be made from the common elder. The bruised berries are placed in an earthen vessel and kept in a warm place for three days, and then pressed out and filtered. The filtered juice is of such an intense color that it takes 200 parts of water to reduce it to the shade of dark red wine. Add to 12½ parts of this filtered juice, one ounce of sulphate of iron and the same quantity of pyroligneous acid, and an ink is prepared which, when first used, has the color of violet, but when dry is indigo blue black. This ink is superior in some respects to that prepared with galls. It does not become thick so soon; it flows easier from the pen without gumming; and in writing the letters do not run into one another.

Important to Woolen Manufacturers.

It is announced that the Supreme Court has given a decision in the case of E. D. Jourdan *vs.* the Agawam Woolen Company, confirming the validity of the Goulding patent. This decision involves several millions of dollars, and affects the whole woolen manufacturing interests of the country. There were several curious points in the case, which constitute it one of the most remarkable suits ever instituted under the patent laws of the United States. In the year 1826, letters patent were granted to John Goulding for an "improvement in the mode of manufacturing wool and other fibrous materials." This patent was reissued in 1836, and expired in 1840. In 1862, twenty-two years after the patent had expired, Goulding succeeded in having an act of Congress passed for his relief, which renewed and extended his patent seven years from that date, with the proviso, however, that such renewal and extention shall not have the effect or be construed to constrain persons who may be using the machinery invented by said Goulding, at the time of the renewal and extension hereby authorized, or subject them to any claim for having used the same. This extraordinary legislation on a patent which had expired nearly a quarter of a century before was eclipsed by the action of the United States Patent Office in reissuing the patent, giving to Goulding an exclusive property in said woolen machinery. It was under this reissue that Eben D. Jourdan, the assignee of Goulding, sued the Agawam Company for an infringement of the patent, and his success involves nearly every woolen manufactory in the country, as Goulding's improvement was in common use when Congress authorized its conditional renewal and extension.

Burrowing Bees.

Packard's *Guide to the Study of Insects* gives an account of certain species of bees that burrow in the earth, and a drawing of the home of a family of them, which we herewith reproduce. This species is called by the entomologists *Andrena vicina*, one of the most common of burrowing bees. Mr. Emerton has closely observed the habits of this species, which builds its nest in grassy fields.

The burrow is sunk perpendicularly, with short passages leading to the cells, which are slightly inclined downward and outward from the main gallery. The walls of the gallery are rough, but the cells are lined with a mucus-like secretion, which, on hardening, looks like the glazing of earthenware. In the annexed figure, Mr. Emerton gives us a profile view of natural size of the nest, showing the main burrow and the cells leading from it; the oldest cell, containing the pupa, *a*, is situated nearest the surface, while those containing larvæ, *b*, lie between the pupa and the cell, *e*, containing the pollen mass and egg resting upon it. The most recent cell, *f*, is the deepest down, and contains a freshly deposited pollen mass. At *c* is the beginning of a cell; *g* is the level of the ground The bees were seen at work on the 4th of May, at Salem, Mass., digging their holes, one of which was already six inches deep; and by the 15th, hundreds of holes were observed. On the 28th of May, in unearthing six holes, eight cells were found to contain pollen, and two of them a small larva. On the 29th of June, six full-grown larvæ were exhumed, and one about half-grown. About the first of August the larva transforms to a pupa, and during the last week of this month the mature bees appear.