

## A VILLAGE RESIDENCE.

In the architectural designs which we have presented during the last year we have made variety the standard of judgment in selection, because of the variety of tastes and necessities which must prevail in a wide circle of readers. We have given cottages of most simple design and small cost and mansions of considerable pretension and expense. At this time we strike a mean between the two and give a drawing of a residence of moderate cost and one well adapted to erection in some of the many thriving villages of our State.

The design is by J. H. Hobbs & Sons, of Philadelphia, and, as may be seen by the picture, it is well contrived to catch sunlight, a quality which lovers of health most highly prize. It is intended to be built of frame, covered with diagonal sheathing boards and weather-boarded. If one desires an extra warm house it will be well to cover the sheathing with tarred building paper before putting on the exterior boarding, but both this and the diagonal sheathing may be omitted if it is desired to cheapen the construction as much as possible. Our equable climate makes this thinner covering admissible, although the more perfect enclosure is desirable nevertheless. The French roof is designed to be covered with ornamental slates, but shingles carefully painted could be substituted, and would be better if the frame is to be weakened by omitting the double boarding.

By reference to the ground plans and measurements below it will be seen that the rooms are of good size and well arranged for beauty of interior. The following are the sizes and locations of the rooms:

First story: A, porch; P, parlor, 12 by 15 feet; D, dining-room, 12 by 22 feet 8 inches; K, kitchen 12 by 12 feet; S, scullery, 10 by 12 feet.

Second story: P C, principal chamber, 12 by 15 feet; H, hall; C C, chambers, 11 feet 4 inches by 12 feet; B R, bath-room, 7 feet 6 inches by 12 feet; S R, store-room, 4 by 12 feet.

The third story, within the French roof, can be finished into neat chambers, and we presume the architect intends to locate there the closets which he has omitted on the chief chamber floor. The "store-room," on the second floor, will, however, serve for closet purposes, and it is large enough to give the good wife room for all her stored treasures.

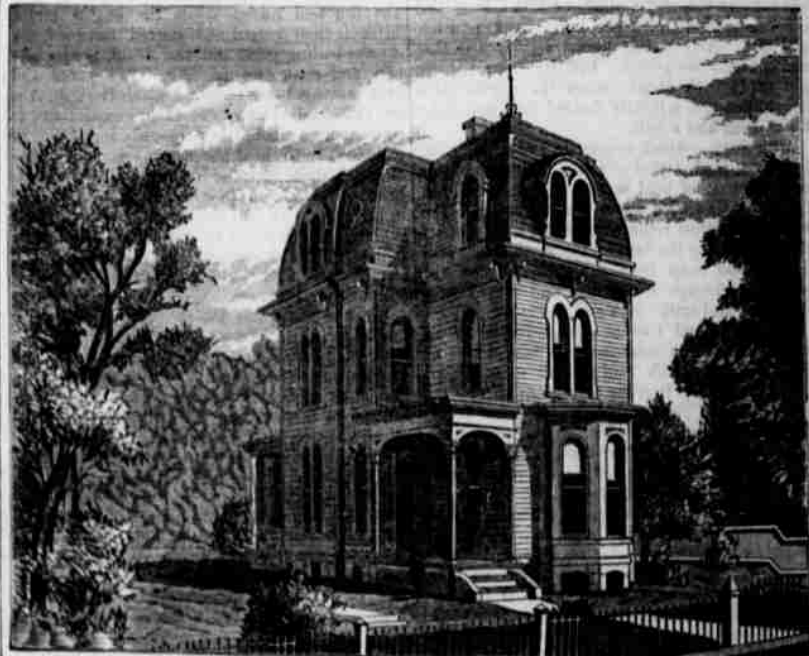
**SPIDERS KILLING TROUT.**—Seth Green, the noted pisciculturist, has been for a long time puzzled by the terrible destruction of very small trout, and his investigations have at length resulted as follows: "There is a small worm which is a favorite food of trout and many other kinds of fish. This worm is one of the greatest enemies which the young fry have. It spins a web in the water to catch young fish, just as a spider does on land to catch flies. I have seen them make the web and take the fish. The web is as perfect as that of the spider, and as much mechanical ingenuity is displayed in its construction. It is made as quickly and in the same way as a spider's, by fastening the threads at different points, and going back and forth until the web is finished. The threads are not strong enough to hold the young trout after the umbilical sac is absorbed, but the web will stick to the fins and get around the head and gills, and soon kills the fish. I have often seen it on the young trout, and it has been a great mystery and caused me many hours, days and weeks of wonder to find out what was wound around the heads and fins of my young trout and killed them. I did not find out until lately, while watching recently-hatched whitefish, these are much smaller than the trout when they begin to swim, and they were caught and held by the web. I found ten small whitefish caught in one web in one night. The web was spun in a little whitefish preserve into which I had put 100 young fish."

## BRAINS.

Brains, though rare, are not distributed by any known rule among a particular class of people. A Stephenson may be born in the cottage of a common miner, and rise to teach the world the science of engineering. A Franklin may force his way from a printer's case to the position of a great statesman and a great physician. Opportunities are what are required, and lacking the opportunity there would not have been any Stephenson nor any Franklin. Comparatively few men of ability are born every year, but they are as likely, perhaps more likely, to be found in the humble dwelling as in the palace. The important problem for any country is, how to utilize its most valuable raw material so as to get the greatest possible effect from it. In the case of brains the answer is simple: give their owners an opportunity to get an education by which their mental faculties can be afforded an opportunity of being used to

the cities—otherwise the mind finds its surroundings uncongenial and is dwarfed. Like a tree transplanted to an unaccustomed soil and climate it withers and dies, or lingers through a sickly existence. Preaching about the evils that beset communities will do no good. Practical common sense must apply a remedy.

**TIN PLATE MANUFACTURE.**—The consumption of tin, or more properly tinned iron, costs this country every year nearly \$20,000,000, of which at least \$15,000,000 is for labor which ought to be paid to American workmen. Some progress has been made in this industry in New York city. The Monitor Tin Plate Company, of New York, occupies a building in Horatio street, where the tinning is done. The iron is rolled in Pittsburg, Pa. The sheets are rolled in the ordinary way, then cut or sheared to size and immersed in a pickling bath. They are then cold-rolled again, annealed and pickled, and put into baths of Russian tallow or palm oil. Then they pass through several baths of tin melted at a high temperature and again through sawdust and bran to cleanse the surface. Finally they are polished with lamb's



DESIGN FOR A VILLAGE RESIDENCE WITH A FRENCH ROOF.

advantage. Bring out their natural abilities. If the boys about a mine or in industrial communities, instead of spending their leisure hours in taverns or even worse places of resort, listening to the harangues of demagogues upon the wrongs of the workmen, should utilize them in a school where a technical education could be imparted, they would with an increase of knowledge take more interest in the prosperity of the country, and have more confidence in the stability of government, and believe that there is a future open to them worth working for. When witnessing the utter demoralization of many of our youth, who does not recall the words of Dickens, "There is not one of these poor creatures but sows a harvest that mankind must reap." The poor working classes have their wrongs, but in a great measure they are brought about by the sudden elevation of some of their own number using oppression, through deficient education, or by their own excesses or indolence.

Between practical foremen and educated engineers there exists a jealousy which must be wiped out by the inculcation of a higher education and opportunities to develop. The resources of the locality where is the domicile, the home, must govern the educational course—mines in a mining region—agriculture in a farming region—and cosmopolitan studies in

wool cuffers and assorted, ready for boxing or shipping. This is the old method of tinning by hand that has been in vogue in Europe for the last hundred years. We believe that the same results can be accomplished by the use of machinery, in which case the tinning will be greatly accelerated, and the cost of tin much decreased. The business has assumed such importance that the late convention of iron and steel manufacturers held at Pittsburg sent a petition to Congress suggesting a change in the law imposing duties on tin, stating that the tin plate business represents an annual consumption of over 150,000 tons of pig iron, about 1,000,000 tons of coal, and about 50 rolling mills having two trains each, all required to supply the demand for that article, and that protective duties should be imposed to develop this industry which would give employment to at least 40,000 persons.

**TRANSMISSION OF POWER BY ELECTRICITY.**—Prof. Houston and Thomson have experimentally shown, at the Franklin Institute, that powerful electric currents can be conducted by very fine wires. They sent the current generated by one dynamo-electric machine through a wire .004 inch in diameter to a second machine, which, working reversely, gave off considerable power.