

ALTERATIONS AND ADDITIONS TO A COUNTRY HOUSE AT POMFRET, CONN.—HOWARD HOPPIN, ARCHITECT.

**A REMODELED HOUSE.**

It frequently happens in the experience of the architect that he is called upon to enlarge or remodel a dwelling. Sometimes it is only required to add one or more rooms, while in other cases it is sought to improve the appearance of the exterior. Such problems often severely tax his ingenuity, for it becomes difficult to considerably improve the appearance of a building while substantially maintaining its original outlines.

As illustrating what may be done in this direction, we present to our readers a set of drawings, showing the ingenious and clever method of treatment adopted by Architect Howard Hoppin in dealing with the residence of Mrs. R. M. Clark, at Pomfret, Conn. This house, before alteration, presented the appearance of a comfortable, plain, country dwelling, as represented in the view in the upper right hand corner of our plate. The imposing appearance of it as it now stands can be seen from the large perspective view.

The alterations, although apparently so extensive, were, in fact, few beyond the addition of towers, the stone lining to some of the walls, and the new piazza. Scarcely a feature of the original house has been removed. It has simply been added to, and this in such a manner as to throw but little weight upon the old work.

The March, 1887, number of the ARCHITECTS AND BUILDERS EDITION of the SCIENTIFIC AMERICAN, from which this engraving is taken, contains detail drawings and a complete specification of the work, which cost about \$7,000 to carry out.

**What the World Owes.**

The *Amateur Mechanic* thinks when a man has a conviction that the world owes him a living, the best thing he can do is to go to work and collect the debt, and there is no surer way than by work. It is the magic key to the most stubborn defenses. Steady, persistent, intelligent work has surmounted more difficulties than the brilliant sallies of genius or the temporary spurts of men without an object.

Many young men feel that they are unappreciated, and that if some one would only come forward and give them an impetus—a chance—they would take the

Want of pluck has killed many an enterprise that had all the elements of success in it. The projectors joined the great ranks of the "unappreciated" after a few good strokes and fell out of the race, when a little more snap and "hang on" would have brought them into smoother sailing.

There is no battle call more stirring than "Up, guards, and at them!" and that must be the motto of every young man everywhere—we say the young man, because if the old has not learned it, it is too late for him to make the knowledge available.

"You don't know how hard it is to start a new business," said a friend the other day, at the head of a large and well-appointed concern; to which we made no reply, though we might have given a few appropriate remarks on the subject from our own experience.

Those who fancy that success depends upon luck or good fortune, or anything short of energetic, persistent hard work, will be undeceived if they embark in trade, and expect to have business roll in on them.

Want of capital is a drawback, but want of work is like a counter mine to a mine, destroying the best plans and intentions.

The faint heart says, "There is no chance; there are so many in business already; the field is occupied," etc. In proportion to demand the field is no more occupied to-day than it was forty years ago, and if men have good wares, sell them at a fair price, deal honestly by all,

and perform what they promise, their future is certain. The world owes every man a living, and will pay it if it is worked for.



A THIRTY-FIVE HUNDRED DOLLAR COTTAGE.\*

world by storm! Doubtless there are many such who languish for want of opportunity, but the incipient genius must not wait for something to turn up. He must turn things up himself, and keep turning.

When he is sick of it, and wants to stop and take things easy, let him keep right on turning and all will turn out right!

J. PERSOZ finds that wool, if previously saturated with a 10 per cent solution of glycerin, can bear a prolonged exposure to 130° to 140° without injury.

\*From the ARCHITECT AND BUILDERS EDITION of the SCIENTIFIC AMERICAN of October, 1886, in which the ground and chambers plan are given. This or any other numbers of the ARCHITECTS AND BUILDERS EDITION (26 ready for delivery) may be had by remitting 25 cents to the office of this paper.

**Telephonic Communication at Sea.**

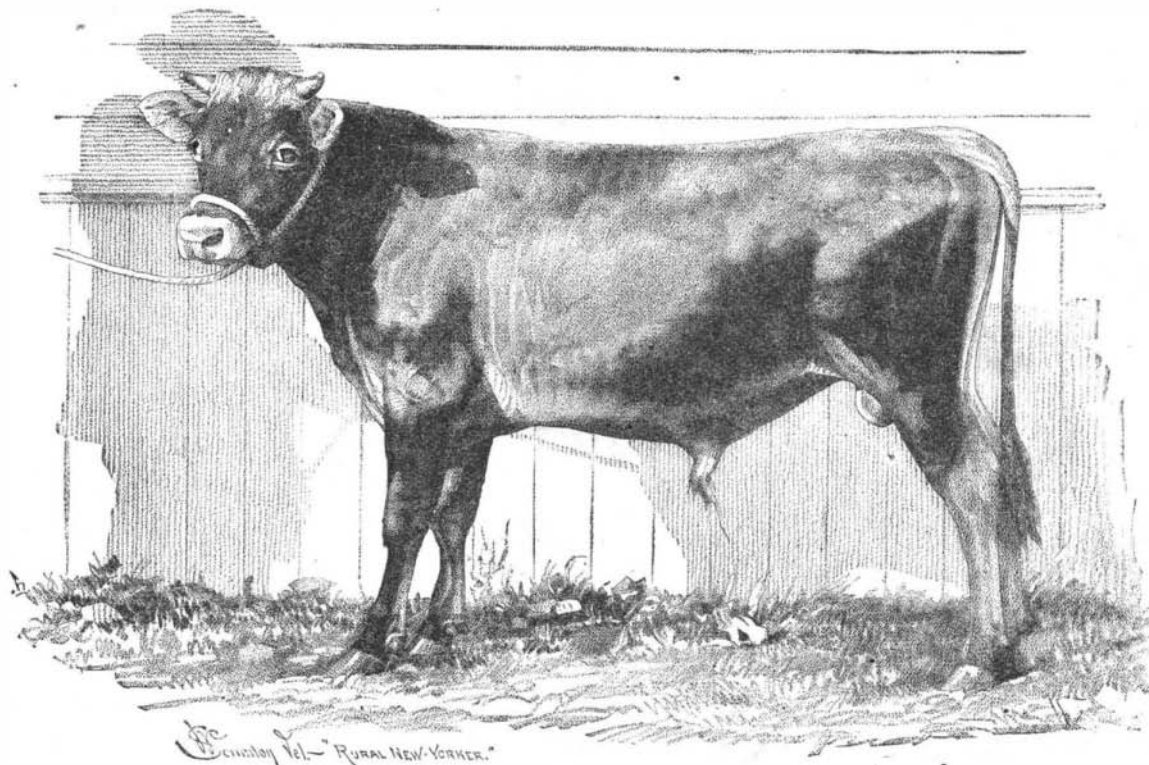
Mr. H. F. Boyer, of H.M.S. Malabar, has recently made a number of experiments in this direction with an apparatus of his own invention. Previous attempts of the same general character by some American electricians were described in our issues of October 7 and November 4. The following description is given of the arrangement:

The source of sound consists of a large gong or flat bell supported against the side of the vessel below the water line. A straight tube leads from this gong to the "bridge" of the ship, and in its interior is a rod fitted with a handle at its upper end, by which the hammer of the gong can be worked, and the gong struck at will. The striking of the gong may, of course, be done in keeping with a code of signals, such as the Morse code used in ordinary telegraphy. In the center of the gong is fixed a modified Bell telephone with a large and sensitive diaphragm. The telephone is connected by means of wires running up the tube to a second telephone on the bridge, within reach of the observer there. This forms the receiving part of the apparatus. If we suppose

two ships fitted with this combination, it is only necessary for one to rap out her message by striking the gong and for the other to receive it on her telephone. The sound waves from the transmitting gong traverse the intervening water and vibrate the diaphragm of the submerged telephone at a distance. These vibrations excite currents in the latter, which, in traversing the second or observing telephone, reproduce the original sounds of the gong. Small explosions of gun cotton under water have also been used by Mr. Boyer in place of the gong; and an ounce of gun cotton can in this way give a signal which is distinctly heard a mile off under water.

Such signals under the sea are independent of fogs or stormy weather; and they hold out the possibility of lighthouses and lightships being able to signal vessels

ever, it will be remembered that Prof. Blake uses a microphone in circuit with the deck telephone as a receiver. With this arrangement, Prof. Blake has been able to transmit subaqueous signals from a locomotive bell through a mile and a half of the Wabash River, comprising three or four windings. Mr. Edison also is

**JERSEY BULL DIAVOLO.**

reported to have signaled through a mile of the Caloosahatchie River, in Florida, during the present year. His system has not been fully disclosed, but it appears to be similar to those described. It is to be hoped that this new development of telephony will be pushed as far as possible. —*Electrician.*

**Oyster-Opening Monkey.**

Mr. Alfred Carpenter, of the Marine Survey Office, Bombay, has observed *Macacus* monkeys on the island off South Burma opening oysters with a stone. They bring the stones from high water mark down to low water, selecting such stones as they can easily grasp. They effect the opening by striking the base of the upper valve until it dislocates and breaks up. They then extract the oyster with the finger and thumb, occasion-

**FINE TYPES OF PRIZE CATTLE.**

The Jersey bull Diavolo, represented herewith, received the first prize in the yearling class at the New York State Fair in 1880, and was at that time the property of Hon. Erastus Corning, of Albany.

The Dutch belted cow Lady Aldine, shown in our engraving, is now owned by Mr. H. B. Richards, of Easton, Pa. She took the first prize in her class at the New Jersey State Fair, held at Waverly last September.

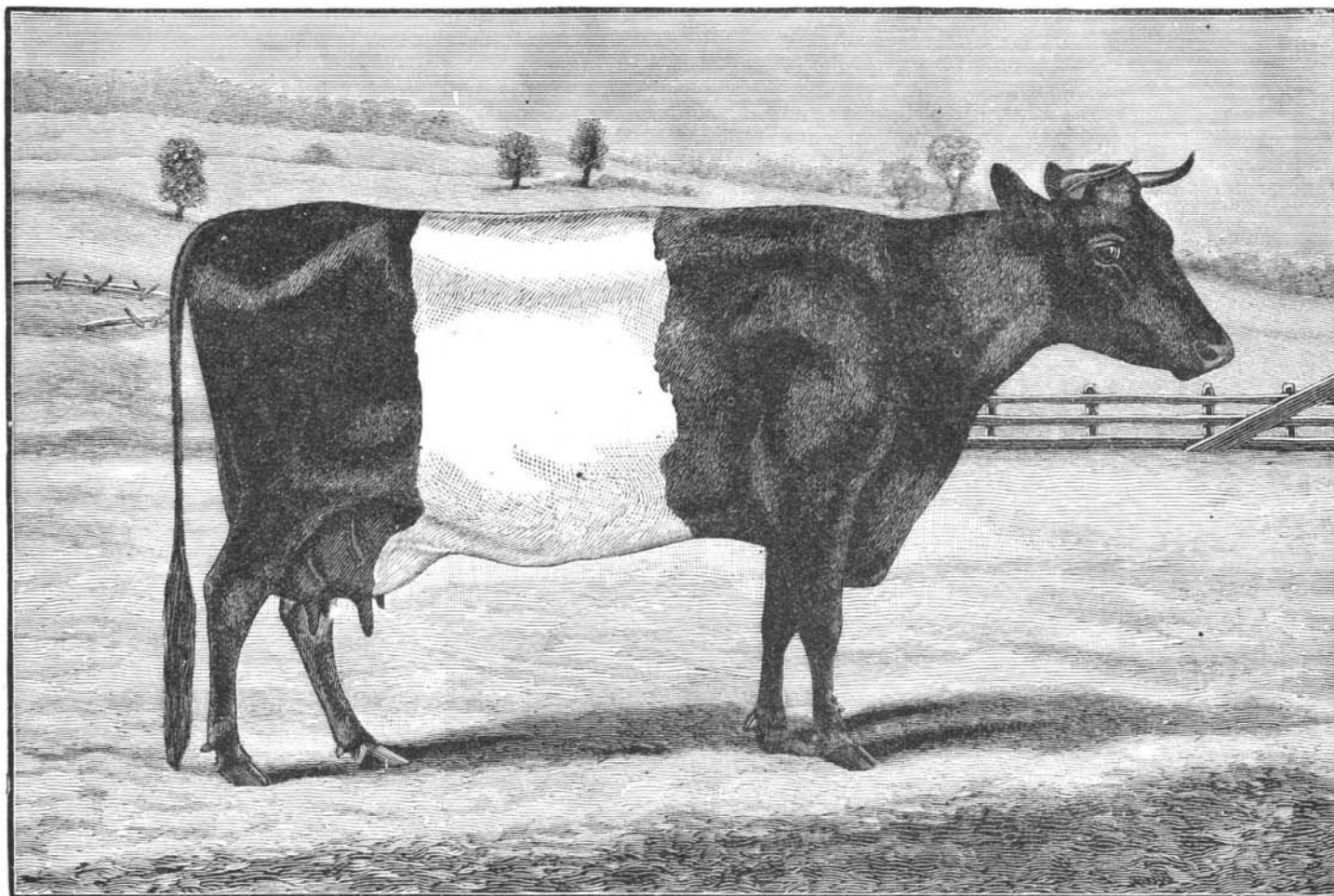
The Aldine family, of which our portrait is a good representation, have become famous as prize winners. The Dutch belted or blanket breed of cows are natives of Holland, and have not been brought to this country in large numbers. They antedate the seventeenth century, when the cattle interests in Holland were in the most thrifty condition, and this type and color were established by scientific breeding. The historian Motley well said: "These are the most wonderful cattle of the world."

In their native country they are owned and controlled by the nobility, and present a very novel feature in the landscape, grazing in the lowlands in

Holland. In color they are black, with a continuous white belt around their body, the white being pure white, the black jet, making a beautiful and imposing contrast. Their form is usually very fine, and they are very productive as milkers.

The owner of Locust Grove farm, Michael Rosney manager, on Orange Mountain, N. J., has a small herd of the Dutch belted cattle. His stock is comprised of both the Aldine and Arnout breeds, five of which number received first and second premiums, according to their ages, at the State Fair where was awarded the first prize for Lady Aldine.

The Holstein cow Clothilde, owned by Smiths, Powell & Lamb, Syracuse, N. Y., has made herself famous by making a milk record of 28,021 pounds in one year.

**DUTCH BELTED LADY ALDINE.**

at all times. Moreover, ships, in addition to signaling each other, could also signal lightships, or announce their number to Lloyd's stations, if the system prove successful. Mr. Boyer's plan, which so far has given encouraging results, is somewhat similar to that of Prof. Lucien J. Blake, of the Rose Polytechnic Institute, United States, which was described in our issue of November 4. Instead of a submerged telephone, how-

ally putting the mouth straight to the broken shell. The way they have chosen is the easiest to open the shell.

AMALGAMS present many peculiarities. Thus iron, antimony, sodium, silver, and gold will dissolve in mercury; but if antimony amalgam be mixed with sodium amalgam, the antimony is thrown out—iron also.

She was exhibited at the New York Dairy and Cattle Show, where all the dairy breeds were shown, and the number of Jerseys exhibited was largely in excess of the number of Holstein-Friesians, and she won the sweepstakes prize for making the most butter in twenty-four consecutive hours, and according to a statement made to us by her owners, she has since given 101 lb. 2 oz. of milk in a day, and made 28 lb. 2 1/4 oz. of