

### THE COLUMBIA.

The name of the fastest of the vessels of our new navy, which was launched at Philadelphia in July last, was given in honor of the capital of South Carolina, as the vessel is of a class that takes the name of a city, although Secretary Tracy thought that, on account of the near approach of the Columbus Centennial, the name might have a double significance. According to the terms of the contract under which she is being built, the Columbia must have a speed of 21 knots an hour, with a possibility of doing 22 knots. She will, to do this, have greater horse power than any vessel ever before built in America, and is, with one exception, the first large vessel ever built with triple screws. The arrangement of these screws is shown in one of the views.

She was launched with one of the three screws fixed in its place. It was the single screw at the stern of the vessel, next to the rudder. It is fifteen feet further aft than the twin screws, and much deeper in the water. The other screws will be put in position soon. There are to be three engines in the vessel, each transmitting 7,000 horse power to a screw. To put a strain of 10,500 horse power on each of two shafts would have taxed the capacity of the shafts too much, and would have made the chance of serious accidents very probable.

and surveillance as may be necessary to insure that this prohibition is strictly enforced and to otherwise protect the salmon fisheries of Alaska; and every person who shall be found guilty of a violation of the provisions of this section shall be fined not less than \$250 for each day of the continuance of such obstruction. The United States reserves the right to regulate the taking of salmon, and to do all things necessary to protect and prevent the destruction of salmon in all the waters of the lands granted under said act and frequented by salmon.

### Forcing Vegetables by Electricity.

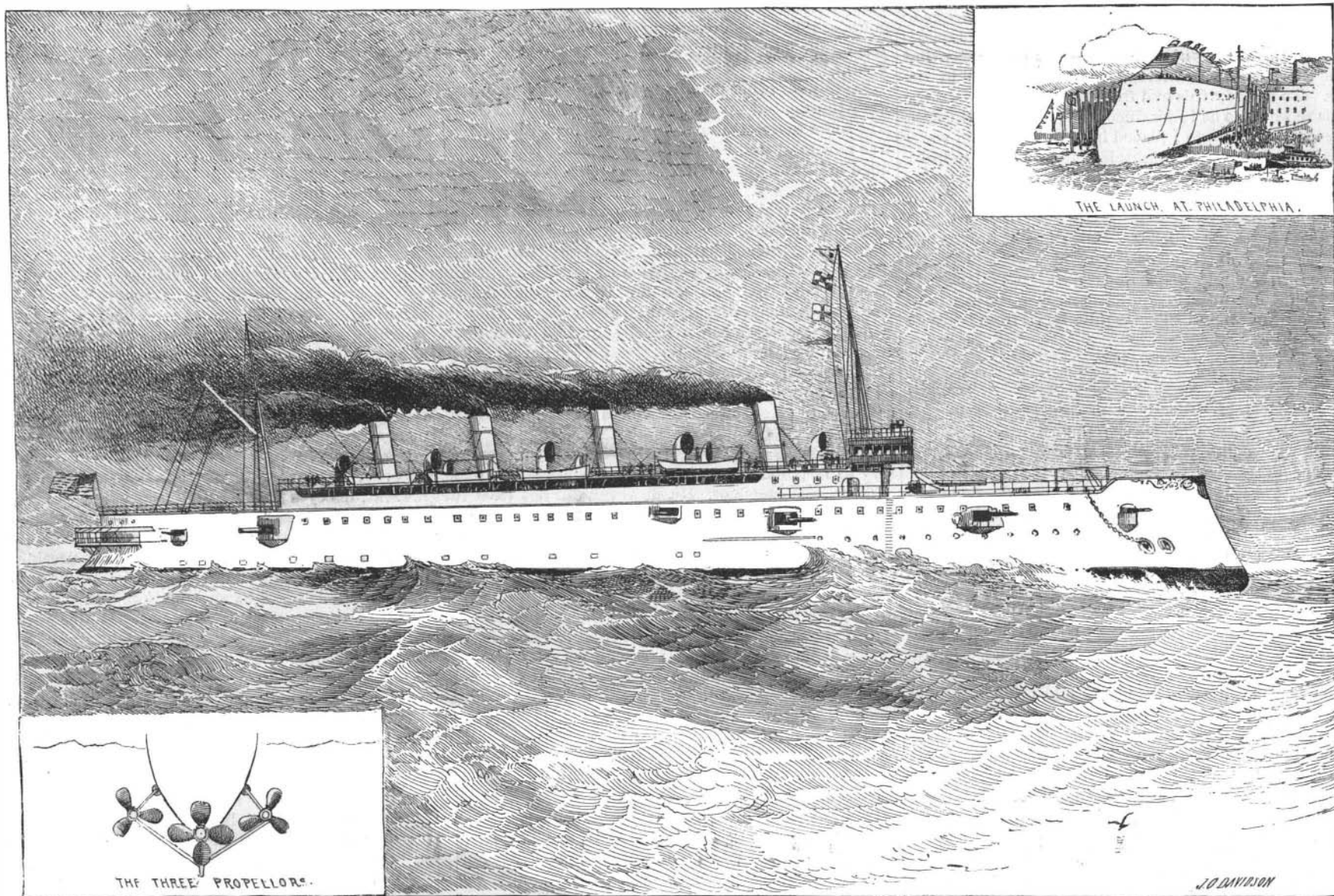
Electricity, a writer in the *Horticultural Times* tells us, is about to find full employment in horticulture. Spring vegetables are already being forced by its aid for the market. There is no doubt that roses and other flowers can be made to bloom more plentifully and more profitably with its assistance. In short, the discovery affords promise of possibilities not yet estimated. It has been found that lettuce is particularly susceptible to the influence of the electric light, by means of which it can be grown for market in two-thirds the usual length of time. Other vegetables respond, likewise, in varying degrees. But everything depends upon the proper regulating of the light, and

traordinary. Tulips exposed to its light have deeper and richer tints, flowering more freely, and developing longer stems and bigger leaves. Fuchsias bloom earlier under like conditions. Petunias also bloom earlier and more profusely, growing taller and more slender. It is the same way with many other flowers. In fact, there is every reason for believing that the electric light will be very profitably used in future as an adjunct to forcing establishments for both flowers and garden vegetables.

### Florida Oranges and Other Fruits for England.

Steamers have been chartered to take Florida oranges to England early in October next. It is expected that this fruit will reach England before the Mediterranean supplies come in.

For carrying fruit from Australia and South Africa, refrigerated holds are required, and experimental shipments from those countries have been so successful that fruit culture for London consumption is likely to be a growing industry in both Australia and Africa. As to the future, Mr. Creighton, of Victoria, in the *Australian Garden and Field*, says: "The United Kingdom's imports of fruit amount to nearly \$35,000,000 annually, and I am quite sure that Australia would be able, in time, to get a good share of that



THE NEW UNITED STATES WAR SHIP COLUMBIA.

By having three screws the power is better distributed, and there is the additional advantage of being able to use only one screw at times of slow speed and of alternating the work of the engines on ordinary occasions. Our engraving is from *Once a Week*.

The dimensions of the Columbia, and other particulars, were given in the *SCIENTIFIC AMERICAN* of August 6. She is 412 feet long, 58 feet broad, draws 24 feet, has a displacement of 7,475 tons, and an indicated horse power of 21,000. Her main armament is to consist of one 8-inch gun, two 6-inch guns, four 4-inch guns, besides twenty 6-pounders and four 1-pounders in her secondary battery. She has no armor, but the protective deck over her machinery is four inches thick. Her cost price is to be \$2,725,000, and her builders are to have \$25,000 for each quarter knot they make over the required twenty-one knots.

### Protection of Salmon in Alaska.

By the terms of an act of Congress approved March 2, 1889, it is provided: That the erection of dams, barricades, or other obstructions in any of the rivers of Alaska, with the purpose or result of preventing or impeding the ascent of salmon or other anadromous species to their spawning grounds, is hereby declared to be unlawful, and the Secretary of the Treasury is authorized and directed to establish such regulations

how to do this can only be learned by careful study of the results produced under all sorts of conditions. The effects of electricity being to hasten maturity, too much of it causes lettuce to run to seed before the edible leaves are formed.

It must not be imagined that electricity is employed for such purposes as a substitute for sunlight. It is merely used in a supplementary fashion. The greenhouse that has the sun in the daytime is illuminated at night with arc lights, toward which the plants incline their leaves and flowers, accepting quite innocently these artificial counterfeits of the orb of day. It was supposed hitherto that vegetables required intervals of darkness for their health and development, just as animals need sleep, but it has been shown that, supplied with electric rays, they will go on growing thrifly between sunset and daybreak; staying up all night seems to do them no harm, so long as the dissipation is properly regulated. The electric gardener employs opal globes to diminish the intensity of the light. When it is left bare and admitted to shed its unfiltered rays upon the plants, the latter grow pale, run up quickly in sticky stalks, and soon die. It remains to be discovered exactly how much electricity is beneficial, and during precisely what period of the development it ought to be applied. The influence of electricity upon the color and productiveness has been shown to be ex-

trade. Something has been done in Victoria and Tasmania in the way of sending fresh fruit to the United Kingdom, apples and pears having been sent from both colonies with good success, and satisfactory prices realized. The quantity of apples imported into the United Kingdom amounts to about 6,000,000 bushels, and about half that quantity of pears. Australia has peculiar advantages, owing to the difference of the season, and would be able to put fruit on the London market at a time when the supplies of Europe and America are practically exhausted, thus getting almost a monopoly of the London market during that period."

### A Great Search Light on Mount Washington.

There has recently been placed on the summit of Mt. Washington, N. H., a search light, said to be the largest and highest in the world. Its elevation is 6,300 feet, and it is calculated to have 100,000 candle power. The current is 90 amperes and the voltage 56, and a French lens of 30 inches diameter is used, whereby it is calculated that a beam of light will be thrown by which a newspaper may be read at the Fabian House, six miles distant. It is expected that every hotel within twenty miles of the summit can be illuminated by the search light, and that lawn parties and tennis tournaments in the evening will be added attractions at each.