

animals cannot be overestimated. These manufacturers are comparatively few in number. By requiring them to stamp and brand all their productions, and to keep such books as will indicate the destination of their products, such products can be followed to the dealers, and through the dealers to the customers. At the same time, by the use of a system of exchanging stamps similar to that now in operation as to distilled spirits, the article may be readily identified by the consumer without necessitating the imposition of a second tax."

THE SKILL DISPLAYED by Mr. Edward Burgess in the application of scientific principles to the construction of yachts has again received a mark of appreciation from the Naturalists' club of Boston, to which he belongs, and which last year gave him a dinner to commemorate the victory of the Puritan. Last Friday, at a dinner given in his honor, at which some fifty members were present, the club presented him with a pair of silver salt-cellar models modelled after 'nature's most graceful designs,'—one of them a miniature Nautilus inscribed 'Puritan;' the other an Argonaut-shell of similar size, marked 'Mayflower;' and both excellent copies of the originals; while the spoons have handles of twisted rope, and on the back of the bowls, delicately raised pictures of the famous yachts. No pains were spared in the workmanship.

WOMEN ON THE NEW YORK SCHOOL BOARD.

As was foreshadowed in a recent number of *Science* (viii. No. 197), the movement in favor of the appointment of women to the board of education in New York City, has been successful. On Wednesday of last week, Mayor Grace filed his appointments, and the list was found to be made up of three new men, two of the old commissioners who were re-appointed, and two women. In taking this step, the mayor has put himself in line with advanced thought on this subject, and has, we feel certain, contributed in no small degree to the increased efficiency of the public-school system. For years women have sat on the school boards of London, Edinburgh, and other foreign cities, and many of our own towns and school districts choose one or more women among their managers. When we consider the character of education in general, the peculiar conditions of public instruction, the fact that a large proportion—not infrequently a majority—of public-school students

are girls, and that fully nine-tenths of the public-school teachers are women, the reasons for the presence of women on the boards of education are apparent. Then, too, it is highly probable that the presence of women commissioners will raise the deliberations of a board of education to a higher plane, and lift them out of the political entanglements in which they are too often caught.

All these considerations apply with peculiar force to New York City; and, moreover, these commissioners of education enjoy a position of great influence and honor. The board of education has general supervision of the whole school system. It appoints the principals of schools, but not the teachers: these are appointed by the trustees of the various wards, who, in turn, are chosen by the board of education for a term of four years. All the money and supplies for the schools are voted by the board, and all repairs and new buildings and the purchase of sites are directed by it.

In making these particular appointments, Mayor Grace has avoided what would have been a great mistake. He has not appointed any 'cranks' or any professional agitators for 'woman's rights.' At such a time plenty of these persons come forward as candidates, but their appointment would have been turning the whole movement into ridicule. Both of the women chosen by the mayor are of the highest standing, morally, intellectually, and socially. They are neither agitators nor theorists, but women of pure Christian character, great ability, and, what is quite as essential to a commissioner of education, some common sense. They are both deeply interested in education, and close students of its theory and practice. Distinguished for years in connection with the prominent charities and philanthropic institutions of a great city, we have every reason to predict that the character and talents which they bring to their new and somewhat trying office will elevate and improve its public-school system.

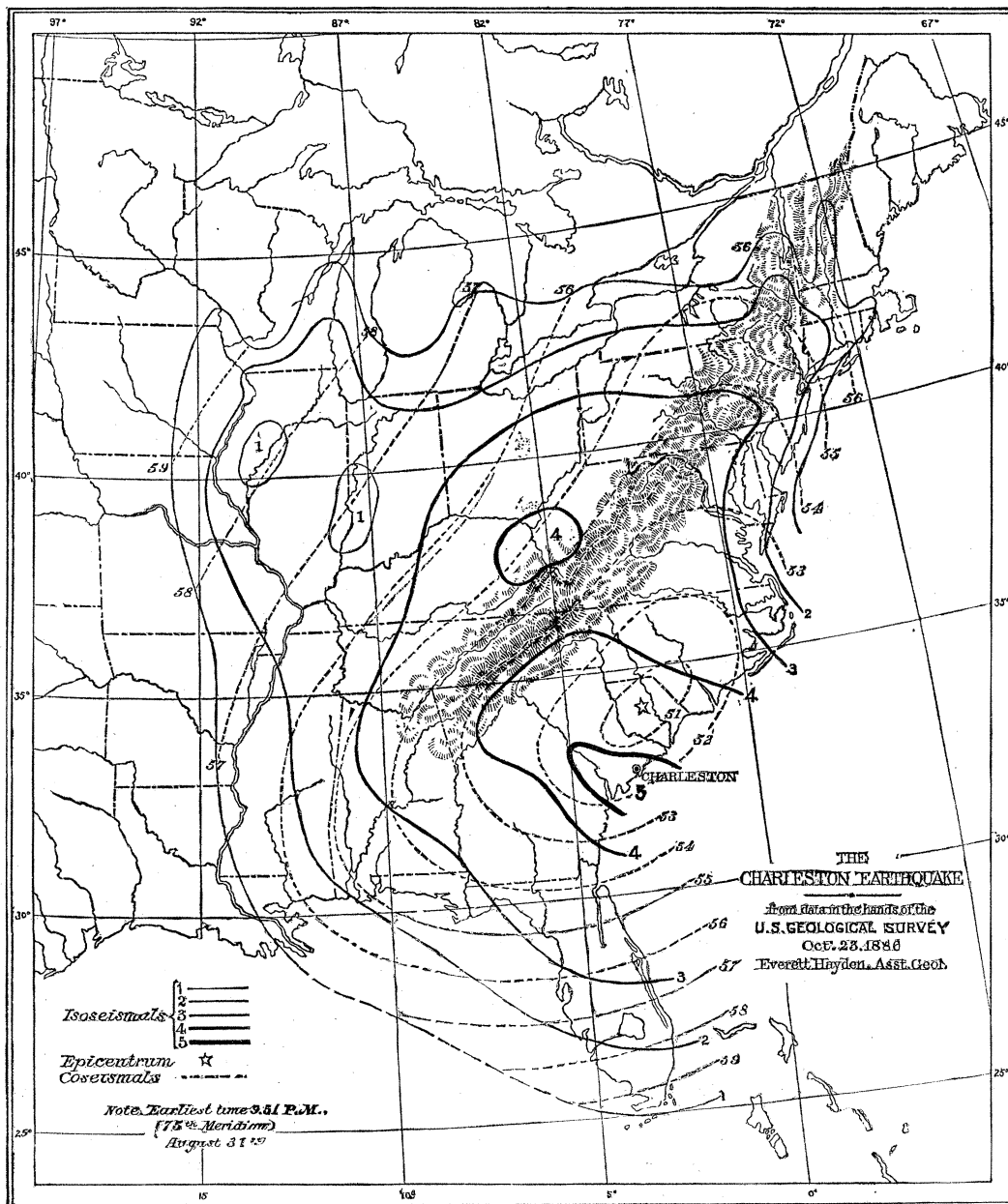
THE CHARLESTON EARTHQUAKE.

WE are indebted to the Philosophical society of Washington for permission to use the accompanying map in advance of its regular publication in their Proceedings. It was presented by Mr. Hayden to illustrate his paper on the Charleston earthquake, read before the society on Oct. 23, and represents graphically the data which had reached the U. S. geological survey concerning the distribution of the earth-wave from the great shock of Aug. 31, as to area, intensity (isoseismals), and time (coseismals). It was compiled mostly from information sent in by private correspondents, and it will be interesting to compare it with

results obtained later, when much additional data will be at hand from the signal service, lighthouse board, and other official sources.

Calls for information in the public press and by

relative intensities, as plotted, with any facts which have come to their knowledge, the survey will no doubt be glad to hear of it. These lines, when drawn from reliable observations, form,



circular letters have been so generously responded to, however, that the lines may be regarded as fairly well established, although if our readers notice any inconsistency between the times and

perhaps, the most important of all records that can be made, and on such data the future progress of seismology must be largely based.

The outer isoseismal (where the shock was felt

by only a few persons) encloses a land area of 774,000 square miles, and adding only half as much more for the ocean and gulf makes the disturbed area very nearly as large as that given by Reclus for the great Lisbon earthquake of 1755. Indeed, the state department has reported one reliable observation showing that it reached Bermuda. The irregularities of the isoseismals are, of course, due to the varying geologic and topographic structure of the country, and will well repay a more careful study than we have space for here. The rapid loss of energy in the sands and alluvial deposits of the north-east coast and lower Mississippi valley is especially noticeable. The isolated areas of different intensities, too, are typical of cases which would be very numerous were it possible to plot intensities in great detail, instead of only indicating the general features of their distribution.

The coseismals were determined by many very reliable and consistent but non-instrumental observations, the most accurate being from points in that part of the disturbed area north of a line from Jacksonville, Fla., to St. Louis. For the most part, high velocities of wave-transmission are indicated. Where the lines are somewhat crowded, it must be owing, at least in part, to the earlier tremors having failed to reach so far; so that a later phase of the wave was successively felt and recorded. The general use of standard time has added greatly to the reliability of these observations; and, on the whole, we may perhaps be justified in feeling a certain sense of self-satisfaction, in view of Mallet's remark, that "the accurate measurement of time is one of the surest indications of advancing civilization."

At the present age of this young and interesting science, probably the most valuable results will be obtained from observations made at numerous points in a selected district, with some simple instruments which will accurately record the time, number, and duration of every shock that occurs.

TECHNICAL AND MANUAL TRAINING CLASSES OF THE SOCIETY OF DECORATIVE ART.

IN the autumn of 1885 the Society of decorative art of New York, desiring to extend its educational advantages, opened an art-school, where men and women, boys and girls, might be trained in the principles of art, and in the rudimentary steps of various art-industries. The first season was one of much usefulness and encouragement, and the second opens with promise. The school is centrally located in West 22d Street, Nos. 37 and 39. An important feature of the school, in

addition to classes in drawing, painting, modelling from life, from still-life, and from the antique, is a special department in manual training, as applied to practical designing, modelling in clay, wood-carving, and metal-working.

In considering the plan of instruction of this new school, the fact must be borne in mind that the work of the Society of decorative art has, from its inception, been distinctively educational. The object of the society was to develop art-industry in America; to extend among women the knowledge of art-needlework, and its adaptation to household decoration; to provide instruction; to lend books; to give helpful criticism for the guidance of those at a distance; and, in addition, to furnish a salesroom where artistic work might be brought to the notice of purchasers.

In the brief period of its life, — less than ten years, — the society has faithfully striven to accomplish these purposes. A standard of color-design, workmanship, and adaptation, has been created through its influence, — an influence which is felt in every home throughout the country, and may be recognized in the wares of the humblest shop where decorative materials are sold. Needlework was almost a lost art, so entirely had the sewing-machine triumphed: it has already taken a place among art-industries. Hundreds of women have been trained by the society, and have gone forth to earn a living and provide homes for themselves and those dependent upon them.

The demand of the age is for workers — men or women — who can 'do.' The artisan who has command of head and hand alike is the one who is sure of success. Human machines can have no chance in competition with those who are intelligent in their work. Head-craft and hand-craft combined give to the worker a solid stone on which to stand. The society's department for technical and manual training provides just this education. Classes have been formed where boys and girls are taught to think and do; to use brain, eye, and hand together, that they may become intelligent and disciplined workers.

The school is fortunate in having secured the services of Mr. J. Liberty Tadd as director, who brings to his work an enthusiasm and confidence born of success. The keynote of his teaching is, that everybody has capacity in some direction. Training will develop the peculiar aptitude. The earlier in life this work of training begins, the better for the pupil. The child, restless and impatient, is eager to try its hand, and welcomes a suggestion to 'make something.' This desire is gratified and directed, interest is held, ambition stirred, and thought developed. The result is calm, quiet growth, an appreciation of labor, a