

New York City. At the first location there were two tests, one in the winter and one in the summer, conducted by the engineers of the college, Messrs. R. D. Kimball Co. The graphic charts of these two tests are shown in Fig. 3, where the top chart shows the record of the winter test, the middle chart that of the summer test, while the record of the Philadelphia test is given in the lowest chart.

The winter test at Dartmouth College was made at the normal running load and took care of all the natural fluctuations in the returns from the heating system, which was being taxed to its utmost by an outside temperature only slightly above zero. These fluctuations were due in part to poor control of the return water from the heating pipes at the new Gymnasium, and in part to the small water-storage capacity of the receiver. The summer test was later run with the same apparatus as the first test, but the rate of flow and amount of fluctuation were greatly reduced because the Gymnasium heating system was out of service. The Philadelphia test was made with water of considerably lower temperature and much higher rate of flow. Also in this case the amount of fluctuation was comparatively negligible. The tests at New York were of longer duration and employed a meter of the larger capacity used.

In Table II. is shown the comparison of the principal data obtained in these three sets of observations and from this table it is apparent that the V-notch weir method of measurement, using the Lea recording mechanism, can be depended upon to within about 1 per cent., even in extreme cases of fluctuating character of flow and changing temperature.

ONTARIO'S SALT SUPPLY.

The brine wells of the south-western peninsula of Ontario last year yielded 88,689 tons of salt, the value of which was \$430,835. In 1910 the output was 84,071 tons, worth 414,978. The industry gave employment to 216 workmen, whose wages amounted to \$121,477. There is a steady demand for this staple article, mainly for preservative purposes connected with food products, etc., but this demand is easily satisfied and does not seem to be increasing. Its requirements are small in comparison with the abundant supplies of raw material, which is present in enormous quantities. Salt constitutes the basis of a number of products of great importance in the industrial arts, connected with one or other of the elements composing it. From chlorine may be built up hydrochloric acid, bleaching powder and a variety of other articles, while the compounds of sodium, such as carbonate and bi-carbonate of soda, sodium nitrate, etc., play perhaps even a larger part in manufactures, states the statistical review of the Bureau of Mines, compiled by Mr. T. W. Gibson, Deputy Minister of Mines. A plant for the manufacture of caustic soda and bleaching powder from salt was established at Sandwich by the Canadian Salt Company, and began operations during the last week of 1911. Some inquiry has also been made on behalf of a European firm of explosives manufacturers as to the availability of salt supplies required for the sodium nitrate used in making their product, which is finding a market in the mines at Cobalt.

About one-half of the salt made in Ontario is produced by the Canadian Salt Company, whose plants are at Windsor and Sandwich. Other makers are the Dominion Salt Company, Sarnia; Western Canada Flour Mills Company, Goderich; John Ransford, Stapleton; Ontario People's Salt and Soda Company, Kincardine.

The workmen employed at the salt wells and works numbered 216, and their wages amounted to \$121,477.

SKYSCRAPERS ARE MONEY-LOSERS.

Mr. Purdy, president of the Department of Taxes and Assessment, New York City, spoke as follows of high buildings while in Canada lately, before the Canadian Club of Toronto.

Rising out of the present-day tendency to tax land fully, Mr. Purdy said, had come the tendency intensified to put real estate to that use which would make it yield the greatest financial return, but as yet the cities of this continent have failed to realize the necessity of protecting men's liberty against the license of their neighbor—hence the "skyscraper." Through the failure to restrict both the height of office buildings and the proportion of ground covered by them, light and air had been shut off to the extent of depreciating the value of the properties in the district, while high land values had also been localized in an extremely small area of the down-town district.

Preserve Air Space.—In his official capacity, the speaker had sat at the hearing of some 50,000 applications for lower assessment, and the number of these which were based on the loss of light and air through the disproportionate height of buildings in relation to surface area was astounding. Closely packed tall buildings had resulted in discomfort to the occupants, which caused them to forsake them, and the appeal for lowered taxation had followed. He further attributed to the intense congestion brought about by the erection of such structures, the smallness of the business area where land values are really high. At one point on Broadway, he explained, corner lots 25 by 100 feet in area are worth over one million dollars, while less than 100 yards distant are similar lots which would not command \$25,000. "Had we restricted the height of buildings as did the cities of Europe," he declared, "we would have no \$25,000 lots, no three-quarters of our business people working by artificial light during the day time, and no streets so crowded that at lunch and supper time it is practically impossible to walk in the opposite direction from the crowd."

As a preventive, he recommended legislation controlling both the height of buildings and the percentage of the lot which they may cover, in order that air spaces may be left between them.

"May I commend you," he continued, "here in this great growing city, which is still in such a position that you can regulate it in time, to look at the pictures of German cities, and to read their building regulations. They are restricting building from the standpoint of utility on the principle that no building may be allowed which will prevent others of the same size around it from receiving their share of light and air."

He further stated that he had recently had opportunity to talk to those who have erected one after another of the recent skyscrapers in New York, and not one of them has made money. Other arguments may not be effective, but perhaps this statement may give pause to some of those who wish to rush you into the erection of large office buildings which are to be the highest in the British Empire.

More Intensive Use of Land.—"With an increase of the tax on land has been an increase in the endeavor to use land for the most intensive purposes," the speaker continued. "Most European countries have recognized that it is necessary to impose the most stringent rules to regulate the height of buildings, and the area of land to be used for office buildings. Both the United States and Canada have been backward in imposing such regulations. They have been loath to impose regulations which would hamper the individual, but perhaps they have overlooked the fact that the freedom of the individual is bounded by the freedom of others, and