

NOTES AND COMMENTS.

"short," or the owner will be subject to a fine of \$5 to \$25. This law comes in force January 1st, 1900.

LIQUID AIR may yet take the place of ice as a refrigerator. Mr. Bobrick of Los Angeles, writes in the California Fruit Grower, concerning his visit to Prof. Tripler's laboratory in New York City, as follows:

"I spent almost twenty-five days with Mr. Tripler in his laboratory. What I have seen would take pages to describe. As a refrigerant there is no doubt that liquid air will replace ice just the same as gas and electricity have replaced the old kerosene lamp, and the cable and electric cars have replaced the old horse car. It is only a question of time."

Oranges were put into liquid air in my presence. They were frozen solid, then pulverized like a piece of marble. After thawing somewhat the juice was extracted by squeezing then concentrated by cold produced by liquid air, in the following manner. First Tripler froze the water contained in the juice and removed it as ice. Certain acids contained in the juice froze at a lower temperature and these, too, were removed in the form of ice. Subsequently the pure juice itself froze at a still lower temperature, leaving an acid, which required an even still lower temperature for freezing. The acid was poured off and the frozen syrup, absolutely pure in a concentrated state, was used for making ice cream, etc.

CROP REPORT.—Bulletin 70 of the Bureau of Industries is just to hand, from which we make the following extracts:

Fruit.—There is likely to be a scarcity of fruit this season owing to various causes. The severe winter destroyed a larger proportion of the fruit trees in some sections, and appears to have injured many which survived. Heavy rain during the blossoming season greatly interfered with fertilization, as did frost in some neighborhoods. The tent caterpillar, curculio, codling moth and other injurious insects have also made great havoc among the orchards, except where they have been kept in check by systematic spraying. The apple crop is very light, but as a rule the

quality is good, and the fruit fairly free from scab. The winter varieties promise better than the earlier kinds. Plums have done rather better than apples, though greatly subject to attacks of the curculio. The yield in most localities where they are grown is poor, but they will be abundant in some places. The peach crop is practically a failure owing to the general destruction of the trees, which suffered more severely from the winter than did the other varieties. Those which remain have borne fairly well in some neighborhoods, but the total product is small. Pear trees have not been so prolific as usual, and the supply will be light. There was about an average crop of cherries, though some damage from worms and black-knot is specified. Reports concerning the vine yards are highly encouraging, the vines being healthy and well laden.

Potatoes.—There promises to be a good yield of potatoes, though in many quarters rain is badly needed, and in consequence of long-continued drouth the early potatoes have been somewhat small in size. Reports as to the present appearance of the late potatoes are generally favorable, one especially encouraging feature being the decrease in the numbers and destructiveness of the potato bug, caused by the severe frosts of last winter. In some neighborhoods, however, this pest is still as active and injurious as ever, and on low-lying lands a good deal of damage was occasioned by excessive wet in the early part of the season.

JUDGING AT FAIRS. — One of the most difficult duties facing the Board of Fair Managers is the securing competent judges. Of late some of fairs are referring the selection to the various associations for lists of suitable persons. In this connection the following on