be "at hill," *i.e.*, spawning on their natural beds in the river, and be sure have proper *written* authority from the owner of the fisheries to allow you to proceed with your operations.

3rd When you know the fish are "at hill," proceed to the river-side with the nets and a large shallow tub or bucket, or other convenient vessel to contain for a few minutes the fish as caught, also bring with you a vessel, such as a small washing tub, in which to impregnate the ova. It should be flat-bottomed, to prevent the eggs being crowded one upon the other; and, also, do not forget the bottles, tin (milk or fish bait) cans, in which you are about to carry home the eggs.

4th. When the fish are caught, examine them one by one. If the ova of the female are ripe, they will pour out from the abdomen at the slightest pressure of the hand. Handle the fish gently. If the milt of the male be ripe, it will also, upon slight pressure be observed to flow out like thin milk.

5th. Place your captured fish in the large tubs or buckets that you may select for them till you are quite ready to take the spawn It is not a bad plan to catch your fish some few days before they go to hill and confine them in some suitable and healthy, roomy place (but not boxes or baskets), whence you can take them out from time to time with a landing net, and, if ripe, proceed to operate on them immediately.

6th. Fill your small tub (or tin bowl) three parts full with clean cold water.

7th. Examine the fish in the tub one by one, and return the unripe fish to the river or reservoir.

8th. Take a female fish that is ripe; hold her head with your left hand; get an assistant to steady the tail; gently submerge the lower part of the body into your small bowl; then gently and carefully pass your right hand downwards from the head to the tail, the thumb and forefinger gently compressing the abdomen, the other fingers following behind as assistants. You should also slightly bend the fish backwards, in a bow-shaped form If the eggs are quite ripe, you will see in an instant that they all pour out into the water, following each other in a most rapid succession, reminding us exactly of shot running out of a shot belt, when loading a gun. Continue your downward pressure as long as the eggs continue to come out. If you find the eggs do not come out *quite* easily, give the tail of the fish a *gentle* shake, to loosen those eggs that still remain in the abdomen, but recollect, if you use *force*, you will spoil the experiment. The eggs *must* run out quite freely.

9th. The eggs being collected at the bottom of the vessel, take a male fish Make pressure on the abdomen, in the same way as has been done to the female If the milt is ripe, it will instantly discolour the water, making it of a cream, or rather milk-white appearance. Stir the eggs and milt gently together, and leave them quiet for three or four minutes, pour off the milk-coloured water, and gently add fresh water, till the eggs appear quite clear again Return the fish you have spawned to the river; if you have been neat-handed they will be none the worse for the operation. If this has been properly and carefully done, the eggs have been thoroughly impregnated. Place the eggs in the vessel by means of which you intend to take them to the hatching apparatus, and carry them in your hand, without shaking. If you remain out a night, stand the bottle or can with the eggs in a tub of cold water.

As regards the number of males to females, be sure to obtain sufficient males before you begin to operate. The milt of one male will impregnate the ova of many females; but it is not wise to get the eggs from a female, and then have no milt to place with them You can impregnate one lot of eggs with a male, place him back into the temporary reservoir, and use him for other lots of eggs.

To Prevent Rats Damaging Leather Belting.—It is not an uncommon occurrence in factories where steam power is used, that during the night, or periods that the machinery is stationary and the shop abandoned, the rats will eat the leather belting, where it is accessible to them: for instance, where it passes through openings in the floor; cases have even happened that they gnawed holes in the floor just over the place where a belt was running horizontally in order to reach and eat pieces of it.

Now, it is a singular fact that rats will not touch anything containing castor oil, or even only covered with it, and, therefore, to guard belting against the voracity of these animals, all we have to do is to touch it at every place where belting is exposed to their attacks, with a brush previously dipped in castor oil.

The antipathy of the rats against this useful oil is really strange Probably instinct teaches them that it is injurious to them, but it is useful for men to know this in order to guard many substances against their voracious appetite.—*Scientific American*

Annual Meeting of the Toronto Horticultural Society.

The annual meeting of this Society was held in the Agricultural Hall, Toronto, on the 7th of February. The president, Hon. G. W. Allan, occupied the chair, and in his address congratulated the Society on the progress made in diminishing the debt which had hitherto so seriously crippled its efforts. This result was due mainly to the success of the concerts which had been given during the past summer in the Horticultural Gardens. He trusted the remaining portion of the debt would soon be wiped off, and that then the Society would turn its attention to the erection of a winter garden, which would be a delightful place of resort for the inhabitants of the city, and enable them to enjoy the mild temperature and beauties of summer, in the midst of surrounding snow. He hoped also that the improved financial position of the Society, and the friendly co-operation of the Electoral Division Society, would enable them to carry out efficiently one of the principal objects of all such institutions—the holding of competitive exhibitions—which had been very successfully accomplished during the past year. The annual Report entered more particularly into the details of the several subjects referred to in the President's address; and urged very strongly, besides, the claims of the Society on the city corporation.

"The directors claim for the members of the Horticultural Society the credit of having in their gardens provided for the citizens of Toronto a very beautiful place of resort, such as is not possessed by any other city in Upper Canada, if indeed in the whole Province. This has been done at a very heavy cost to the society, and by the expenditure of much time, labour and expense on the part of individual members.

"By throwing open their grounds to the public, the society at once sacrifice all their former sources of income, as well as the distinctive rights and privileges of the fellows, and other members of their own body

"These sacrifices, however, were cheerfully made for the sake of securing in perpetuity, for the use of the citizens, the whole of the grounds surrounding the gardens, and in the firm expectation that they would be met in a liberal spirit by those who represented the citizens in the City Council. The directors do not entertain a doubt that if the community were fairly canvassed there would be an immense majority in favour of a liberal grant towards the support of gardens which have been a source of so much pleasure and rational enjoyment to all classes."

After the reading of the Report, the officers for the coming year were elected:—

President—The Hon. G. W. Allan.
1st Vice-President—Geo. Leslie, Esq., sen.
2nd Vice President Jas Fleming, Esq.
Treasurer—J. E. Ellis, Esq.
Recording Secretary—Geo Leslie, Esq., jr.
Corresponding Secretary—Walter Lee, Esq.

The following gentlemen to be directors, viz:—Messrs W Ince, J. C Small, Rev. Mr. Baldwin, Hugh Miller, John Gray, Alex. McNab, F. W. Coate, Prof. Buckland, P. Armstrong, T. D. Harris, J. A. Simmers, John Patterson, Sir Henry Parker, James Forsyth, Geo. Vair, W. Gibson, Alderman G. T. Beard, Alderman Sheard, Samuel Platt.

Auditors—William Edwards and Hugh C. Thompson.

The thanks of the meeting were given to the President and office bearers of the Society for their valuable services during the past year.

Mr. Fleming presented a bunch of finely preserved grapes as a specimen of what could be done in the way of preserving Canadian grapes through the severity of a Canadian winter. The bunch had been preserved in bran.

The meeting then broke up, and those present retired to partake of a repast provided by the President.

Nova Scotia Fruit Growers' Association.

From the report of the Secretary of this Association, we learn that the Annual meeting was held at Wolfville on the 16th January, and was attended by representatives from King's, Annapolis, and Halifax counties. Colchester county was represented by a very important communication from Rev. Dr Forrester, of Truro, who has given great attention to the orchard capabilities of Nova Scotia, with a view to publishing a work on the subject.

The subject of monthly exhibitions of the small and summer fruits was discussed, and it was resolved to continue them for another year. A communication was read from Hon. M. P. Wilder, President of the Massachusetts Horticultural Society, accompanying specimens of forty-three varieties of apples, from the late exhibition at Somerset, sent for identification, and the opinion of the society in regard to their classification and general qualities.

"The President also submitted a list of apples which had been put up in plaster, and forwarded to the Paris Exhibition; half a dozen to a dozen of each kind were sent, and Dr. Honeyman has been requested to exhibit them in sets only; one or two of each sort will be unpacked, placed in nearly air-tight glass cases, and as one set wilts it will be replaced by another taken fresh from the plaster, and thus the Nova Scotia fruit will be seen in all its freshness for a succession of weeks It was resolved that the Challenge Silver Medal become the property of the person taking it three times, *not necessarily* consecutive; three persons, Dr. Hamilton, DeLancy Harris, and Richard Starr, having each taken it once, are to have the benefit thereof in the final competition. It was also resolved—That the Gold Medal taken by this association last year in London, be retained as the property of the association, and produced at all its meetings and exhibitions. A sum of money was placed at the disposal of the Council to be expended in procuring periodical and other Horticultural works for the use of members of the association. It was resolved—That the next general Exhibition be held at Somerset, in October next."

The following officers were appointed for the ensuing year:—

President, C. C. Hamilton, M.D. and M.P.P.; Vice-President for Annapolis County, Thomas W. Chesley, Esq.; Hants County, J. Brown, Esq., Falmouth; Halifax County, G. A. S. Creighton, Esq.; Colchester County, Rev. A. Forrester; Secretary and Treasurer, J. R. Hea, D.C.L.; Auditor, George V. Rand, Esq.; Council for Halifax County, Professor Lawson, Herbert Harris, A. J. Ritchie, Esq. Hants County, A. J. Rickards, Esq.; Annapolis County, James E. Fellows, Oliver Foster, De Lancy Harris; King's County, D. R. Eaton, J. G. Bryne, Robert W. Starr, Leander Rand, Isaac Shaw, Andrew H. Johnson.

Liquid Manure for Pot Plants.

The extensive cultivator of pot plants, and especially of soft-wooded pot plants, usually finds a continuous supply of mild liquid manure of the utmost service; and rightly applied, it is a great aid. Many plants fill their pots with roots, and exhaust their stock of nutriment just about the time of flowering, and when it is unwise or perhaps impossible to supply them with more solid food In such cases the application of gentle doses of clear liquid manure acts with the highest benefit. Indeed, its use is not generally desirable before that time. The good Pelargonium grower keeps his plants well in hand during the winter—dry, firm, and stubby, making regular and cautious growth, but without luxuriance, and thus in spring the shoots are set with abundant flowers; and when once that stage is arrived at, the mild dose of liquid manure supplies food and glistening health and vigour just when it is wanted. The well-grown young specimen Fuchsia that begins to flower in early summer, does not continue to do so for a very long time, unless it is supplied with the liquid; while Chrysanthemum and Strawberry, Calceolaria and pot Vine, Cineraria and Cucumber, as well as numerous other inmates of the garden, are equally well affected by the virtues of properly diluted liquid manure.

Most gardeners have made some preparation for a supply of it—a sunk barrel or cemented tank or such like, into which the manure is put, and then the reservoir filled up with water. This is an inconvenient and a bad way, as most people should know by this time. The cakes of slime which we too often see on pots, to which liquid manure has been applied, are