

Best Methods of Preserving Nets.

Extensive Researches in Many Countries to Find Means to Extend Life and Service of Twine—A Question Worthy of Study.

In a recent number of the *Notes and Memoirs* issued by the scientific and technical branch of the French Fisheries Department, Fillon gives the results of experiments carried out in various countries in order to determine the best methods of preserving nets from rotting.

BLUE-STONE.

Huwart at Ostend in Belgium experimented with blue-stone or blue vitriol (i.e. copper sulphate), the copper in which kills the bacteria that cause rotting. Norwegian fishermen have long used this method for their salmon nets, putting them overnight in a cold solution of blue-stone, and then immersing them, without drying, in sea water. Huwart used half an ounce of blue-stone for each pound of net and let the solution act for 4 hours. He then compared nets so treated with untreated nets first when new, then after 90 days in foul water during the winter, then after 36 more days in foul water in May, and finally after 36 more days in foul water in the summer. The tests made were to find out how much the net would stretch without breaking (elasticity) and how great a strain was needed to break it (strength). The treated and untreated nets were equal at the beginning, but differed greatly after that period to the rotting water. For example at the end of the second period

(115 days in all), the untreated net broke when tested with only 1-30 of the strain it originally withstood, while the treated net did not break until 1/2 of the original strain was used. The former stretched only 1/4 of the original amount before breaking, while the latter stretched even more than it did at first. At the end of the third period both nets were useless, but only the treated net had any strength and elasticity left. The general result is that the blue-stone preserves the net well, except for long periods and in the warmest weather.

A better result is obtained by using soap as well as blue-stone. A copper soap is formed, which is insoluble, covers the fibres and lasts longer. Ordinary soap is dissolved in the hot fresh water (one to two-thirds of a pound to the gallon), using a galvanised vessel. The clean netting, which must have been carefully rinsed in hot fresh water, is kept in the hot soap solution until it is thoroughly penetrated. It is then taken out and wrung by hand. The blue-stone should be dissolved in cold water in a wooden vessel, taking about two-thirds of a pound to each gallon of water. The netting while still hot is plunged into the blue-stone solution, and takes on a fine green tint. When the solution becomes weak, the netting is taken out and rinsed in cold water.

Mother Says It Saved Her Life.

"My mother is firmly convinced that Tanlac saved my life and I don't doubt myself but what that is true." This statement was given out for publication a few days ago, by Miss May Anderson, a popular young lady residing at 100 1/2 Argyle St., Halifax, Nova Scotia.

"About a year ago I caught a cold, which I neglected until I was forced to take to my bed where I had to remain for three weeks. When I got up I could hardly stand alone and would stay awake all night long coughing. I had no appetite and could not regain my strength.

"I had my things ready and the time set to go to a sanatorium when my mother, who was almost frantic over my condition, bought me a bottle of Tanlac. So I stayed home and began taking the Tanlac, and when the third bottle was gone I felt so much better I knew I was getting well. I was almost a skeleton when I started taking Tanlac, but now I am rounded out and feel as strong as I ever did. Tanlac made such a wonderful change in me that my friends could hardly believe I was the same one who had been so sick. My mother praises Tanlac to everybody on account of what it has done for me.

Tanlac is sold by all good druggists.

It is worth while to treat the netting again in this way from time to time. **TAR, LINSEED OIL, AND CREOSOTE.**

Tarring is the chief method of preserving nets used in the United States. It is simple and in expensive method. The tar acts by virtue of covering the fibres of the netting, by being insoluble, and by containing antiseptic or germ-killing substances similar to carbolic acid. Its disadvantage lies in making the netting 100 per cent heavier, which means much greater wear, and also more labour and time in hauling and handling generally. It also makes the netting stiff.

which lessens the catches in the case of gill nets. Better results are obtained by first tanning the net, as described later.

Linseed oil is very dear and difficult to apply. If used in combination with tanning, it does not protect the netting better than does the latter in combination with sodium bichromate and blue-stone.

Trials have been made also of creosote, which is used so successfully for railroad ties and telegraph poles, and the results are good, the netting undergoing very little shrinkage, and not becoming stiff. Unfortunately, the creosote does not last, being partly evaporated and partly washed away by water.

TANNING METHODS.

Tanning is extensively used in the preservation of the skins of animals, converting them into leather. When used for the vegetable fibres of which nets are made, it does not produce quite the same results. The netting, after being treated with the tanning liquor, does not retain the tanning materials so firmly as does leather. In water, even when cold, the netting rapidly loses these materials, and preservation is very temporary. It is necessary to use some method of fixing the tanning materials in the substance of the netting.

(A) Tanning followed by tarring.—In France tanning is generally done with cutch. After the new net has been cleaned, boiling cutch liquor is poured over it, and the net covered and left overnight. The next day the liquor is removed and the net put out to drain. This operation is repeated, as often as six times, until the net is well coloured. When the net is dry (if too dry, it is moistened slightly to prevent too much tar penetrating and stiffening the net) it is immersed in a bath of boiling tar, consisting of four parts of coal tar to one of carbonyl. After this, it is drained and dried. The tarring is not usually repeated, but the tanning is done again after somewhat long use.

(B) Tanning followed by treatment with sodium bichromate and blue-stone.—Bull recommends this method as being much superior to the last one, and gives the following directions for carrying it out. The net must be perfectly clean and in particular free from all fatty or oily matters. For 100 pounds of net (either cotton or hemp, but cotton gives better results) 15 pounds of quercitron extract, 65 pounds of oak bark, or 25 pounds of catechu extract are used. Half the quantity is dissolved (or extracted in the case of oak bark) in water, and this may be hastened by using a jet of steam or by frequent stirring. When solution is complete water is added to make the volume up to 50 gallons, and the temperature is raised nearly to the boiling point. The net is put in and kept below the surface with something heavy (not iron), and the bath left covered so as to cool slowly. After 48 hours the net is taken out, wrung, and left to dry. The other half of the extract is added to the liquor that is left and the operation repeated.

The subsequent treatment with bichromate and blue-stone is carried out as follows: For 100 lbs. of net 2 lbs. of blue-stone and 1 1/2 lbs. of potassium or sodium bichromate (the latter is cheaper) are dissolved in cold water in a wooden barrel and the volume made up to 50 gallons and well stirred. The net is put in, and left for two or three hours, being moved occasionally with a wooden rod. Then it is taken out, rinsed in cold water, and dried. It is worth while repeating the treatment from time to time. In place of quercitron extract, oak bark, catechu or hemlock bark may be used, but they are not quite so good. Cunningham's experiments show that true catechu or cutch does not give as satisfactory results as mangrove extract or red cutch. Quebracho may be obtained more easily, and gives rather satisfactory results, though not so good.

A test of this method, using quebracho, was made at Ostend. Treated and untreated nets were placed in a large shallow vat containing brackish water, fouled, being stirred frequently to let the air have a chance to act. While the untreated net lost nearly fifteen-sixteenths of its original strength, and some of its elasticity, the treated net was considerably stronger, and more elastic to begin with, and lost only a little of its strength in the rotting water.

(C) Tanning followed by treatment with ammoniacal copper sulphate.—Dr. Gile of Utrecht recommends this method for these reasons: (1) the tannin and other matters from the first bath are fixed; (2) the tanning matter is made more permanent, and to its protective action is added the very effective bactericidal action of the copper; (3) the ammonia neutralizes the sulphuric acid formed by the action of the blue-stone on the tannic acid and makes it possible to put the net away in storage at once. When the previous method is used, the net must be put out in the water at once so that the sulphuric acid may be washed out (which takes place slowly); otherwise the net is ruined. By this method it is possible to put the net in storage directly after treating it.

Dr. Gile carried out experiments with this method in 1919, using cotton net, and treating it with various tanning materials, in each case both with and without blue-stone. The various treated pieces of net, as well as

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harmful to the nets, even if well tanned. Much gear lasts only a short time because it has been thus burnt. The rule should be to "thoroughly wash the net and to dry it very quickly."

If it is not possible, salting may be resorted to, which acts as in salting fish by extracting the moisture and preventing growth of bacteria. If the nets are greasy with fat, as in the herring fishery, this is not sufficient, for heating results from the action of air on the fat. Bull recommends in such a case that the nets be kept immersed in water or brine in a vessel with a tight lid until they can be thoroughly cleaned. In this way they are kept free of contact with the air. There is no doubt that the proper preservation of nets is of the greatest importance to our fishermen. At the present time, with low prices for fish and high prices for gear, it is difficult for many to make fishing pay. If the nets could be made to do double duty, failure would in many cases be changed to success. The care now given to nets is far from what it should be, and the better methods advocated above should be adopted by our fishermen. We would welcome inquiries as to the procedure or information concerning failure or success with these methods at present in use in this country.—Canadian Fisherman.

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TO-DAY'S MESSAGE

BARNARD EXPEDITION SAFE.
SEWARD, Alaska, Oct. 3. Capt. Putte and General J. M. Ashton, of Tacoma, who arrived here yesterday on the Siberian trading steamer, brought reassuring reports of the safety of Capt. Joe Barnard, sent by Stearnson to Wrangel Island last year. Ashton said Barnard had been entertained aboard the steamer, and was then in the vicinity of Wrangel Island.

HANGED IN REALITY.
WOODSTOCK, N.B., Oct. 3. Benny Swim twice reprieved the derider of his cousin, Mrs. Olive Tremblay, this morning, when he was hanged on March 27, was hanged in jail here this morning. Two hanged men, one of them being the executioner, were hanged before the execution was successful, taking nineteen minutes for completion.

KEMAL BLOWS HIMSELF.
ANGORA, Oct. 3. Mustafa Kemal has sent the following message to the people of Constantinople: "I offer my greetings and hope soon to be able to give them personally. Peace will be concluded with the realization of our national aspirations. The whole world is with us. Humanity applauds us. Our spirits, even Great Britain, for our cause, and many of her people, hitherto misguidedly opposed to us have seen the truth, and changed their sentiment towards us."

BACK TO MUDANIA.
CONSTANTINOPLE, Oct. 3. Conferring most of the night with the high commissioners here, Ali Kemal, this morning, prepared to leave again for Mudania to resume the Armistice Conference.

FRANCE PROTESTS.
PARIS, Oct. 3. The government has instructed its minister at Athens to protest against the Greek Government having sent reinforcements to the Greek army in Thrace.

BASIS MAY BE REACHED.
CONSTANTINOPLE, Oct. 3. The result of the deliberations here are not announced, but it was conceded the situation is serious. It is thought still that a basis for a common agreement among the British, French and Italian Delegations could be reached. Warships bearing Allied Delegations are scheduled to leave at noon, arriving at Mudania at two thirty o'clock.

Real Drama in "My Wandering Boy."

A STORY THAT WILL PLEASE ST. JOHN'S.

New York raved over the great screen story, "Where is My Wandering Boy Tonight?" The biggest theatre, "The Capital," was crowded on each night during the run and at every city in which it was shown the very same reception was encountered. After a most wonderful run in Canada and the United States, the Nickel Theatre of this city has been most fortunate in securing this film for local presentation. The public wants drama right now, drama packed with sentiment, and in this picture there is the greatest combination of heart punch, sentiment, drama and fun that has ever been seen since the coming of the screen drama. The title is borrowed from a famous hymn with which every man, woman and child is acquainted. But back of this title is a good production, artistic and realistic. The story is smoothly told. Essentially, it is one of the prettiest features offered to the movie fans of the world. "Where is My Wandering Boy Tonight?" is a record breaker and we feel safe in saying that it will prove itself so, next week.

The Mack Bus will run to Bay Bulls and Witless Bay Sunday afternoon, leaving the station at 2:30 p.m. If sufficient passengers offer. Book seats in advance. Return fare \$2.00. Phone 1308. MARSHALL'S GARAGE oct6.21

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