

GREAT ARTIFICIAL HARBOR.

Naval Port at Dover is Largest Area of Open Sea Ever Inclosed.

The opening of Dover naval port... the completion of the greatest artificial harbor ever built in the open sea.

Although that portion of the inclosing breakwaters which is visible at high water gives an impression of their great length and of the wide extent of the harbor, it is a fact that the visible masonry represents only a small proportion of the work actually done.

The fears which have been expressed that this, like other harbors won from the open sea, might be subjected to shoaling up by drifting sand have not been verified, the depth remaining practically constant.

FROZE A SOAP BUBBLE.

Then Break It in Pieces and Floated them on Liquid Air.

A frozen soap bubble broken in two and floating like an iridescent, transparent eggshell on the surface of a vessel of liquid air was one of the marvels exhibited by Professor Dewar in a lecture before the Royal Institute of Great Britain.

The lecture was upon the subject of atmosphere and the curious effects of intense cold, the liquid air and soap bubble being adjuncts introduced to facilitate some explanations.

A few spoonfuls of liquid air were poured into a vessel, and the intense cold caused by evaporation immediately brought on a miniature snowstorm in the atmosphere directly above the vessel. A soap bubble was then placed in the freezing stratum. Almost instantly there was a change in the color of the transparent globe, the bubble becoming much darker; the movements of the rainbows film grew slow; it contracted somewhat in size, and a little later it froze.

A slight but dexterous movement of the rod upon which the bubble was suspended broke the latter into two pieces, which fell upon the liquid air and there floated for an hour, gradually accumulating a tiny snowdrift from the almost imperceptible precipitation constantly going on in the freezing atmosphere above.

THE TINY HUMMING BIRD.

In One Species Its Bill is Nearly as Long as Its Body.

All humming birds, though varying much in size and color, exhibit the same form of wing, legs and feet, the wings being strong (considering the small size of the bird), while the legs and feet are remarkably weak and delicate, a clear indication that these little creatures are intended to spend almost all their time in the air.

In accordance with this we find that humming birds are never seen on the ground; that even when feeding they seldom trouble themselves to alight, but suspend themselves in the air before the flower on whose juices they mean to feed, the rapid vibration of the wings causing them to appear like two fans of filmy gauze and producing at the same time that peculiar humming sound from which these birds derive their popular name.

The beak of most humming birds is long, delicate and slightly curved to enable it to reach the inmost recesses of the trumpet shaped flowers which abound in the tropical regions, but the shape of the beak is very variable, probably on account of the particular flower on which the bird feeds.

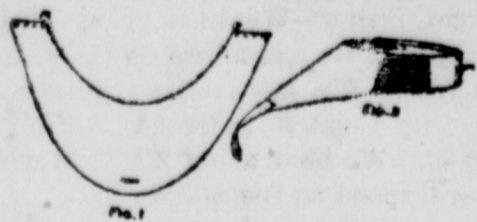
In some instances it is nearly straight, and in the species, the sword bill humming bird, it is very nearly as long as the rest of the body.

GOGGLES FOR DRIVERS

Easily and Cheaply Made For Use on the Road

Goggles are mighty useful things to have when one does much driving, automobilng or riding on motorcycles. They are expensive when the right sort are bought—but the right kind are not costly if made at home.

Two pieces of heavy leather—just a bit lighter than sole leather—form the basis of a pair. Each piece should be cut the shape shown in the sketch (Fig. 1). The line from A to B should be just 1/8 inch less than the circum-



ference of the glass to be used. The glass, properly shaped, can be purchased cheaply from any optician.

A notch is cut in the leather on a line with the line A to B to receive the glass, and the ends at A and B are then sewed together with the glass caught in the notch so as to be shaped when finished, as in Figure 2.

The two pieces are fastened together with a thong or a piece of wire after being fitted to the eyes. The head piece to hold the goggles in place is made of silk elastic.

HAY FOR SASKATCHEWAN

Best Seed Mixtures and Methods in South Half

Superintendent Gibson of the Experimental Farm at Indian Head, Sask., writes as follows of hay crops in Southern Saskatchewan: We get best results here from a mixture of eight pounds of Western rye grass, four pounds alfalfa and four pounds red clover, sown at the rate of 16 pounds per acre on well prepared summerfallow, preferably without a nurse crop. Occasionally, it is desirable to use a nurse crop with the object of getting hay for feed. In this case oats should be used and sown at the rate of a bushel and a half per acre. The oats should be cut early and handled as a hay crop. This allows the young grass to make considerable growth before winter sets in. The above rotation is used exclusively in all our rotation work and gives very good satisfaction as a hay and pasture crop.

Very good results might be obtained by seeding grass mixtures on first year stubble after good summerfallow. Of course, in this case, much will depend on the amount of moisture present in the soil and the preparation of the seed bed. The land intended for seeding down should be handled as follows: Plow six inches deep early fall, pack and harrow to form a mulch. As soon as the rush of spring work is over the land should be surface cultivated and a good seed bed prepared. The seed should be sown as early as possible at the rate of about 16 to 20 pounds per acre. In this case no nurse crop should be used as all the moisture will be required for the young growing grass.

For an annual crop, in some parts of Saskatchewan, millets can be grown with good success. However, at Indian Head we have had very little success with millets. Where they can be grown successfully, we recommend the Hungarian variety. However, for a good sure crop of hay, we recommend a mixture of peas and oats, sown at the rate of two bushels of the former to one of the latter. When cut in the early milk stage, this makes an excellent hay for all classes of live stock.

BREADS CURIOUSLY USED

Strangely Made and Different in Each Country

Every nation has a bread that is typically its own. In one oat flour is used, in another wheat or rice or cassava, and the shape varies from the disc-like Scandinavian hard-tack that has a hole at the centre for convenience in packing them away on poles in the farmhouses to our own plump brown loaves that come out of the oven in the well known form. The bread of the Balkans, curiously made in the form of chains, is sold from the arms and necks of itinerant pedlars. In tent life in Balkania the detached links are often used for fun at quoits, or serve a more useful purpose in suspending temporary curtains and awnings. Then when the camp-

ers run out of provisions they literally eat their curtain rings! The Japanese bamboo bread, so named from its shape, is a somewhat similar product. It is sliced and sold in strings. One of the strangest of biscuits comes from Russia. It is known as fit-the-mouth biscuit, and besides being much appreciated as a tea biscuit is quite commonly used by merchants ignorant of the three r's as a makeshift abacus in counting money—a lower string of ten serving for copecks, and an upper string of the same number representing roubles. More picturesque still is its usage as an extemporizing ring for marrying poor peasants with whom the gold ring is lacking.

BLAME BERRY PICKERS

For Forest Fires in Settled Parts of Canada

Many causes are responsible for Canada's heavy forest fire losses. Some of the erstwhile greatest offenders have come to realize the destruction which their negligence was causing and have developed systematic measures to overcome the loss. Several causes of forest fires have not, however, received sufficient attention. Dr. C. D. Howe states that in the settled areas, one of the chief classes of persons responsible for fires are berry-pickers. Smouldering camp fires, or sparks caused by smoking, fall into dry grass or brush, starting small fires; fanned by a high wind the fires rapidly become uncontrollable, spreading from the berry patches to the larger timber.

It should surely be necessary only to draw the attention of berry-pickers to the destruction which their carelessness or indifference is causing.

Flying with a strong wind, the carrier pigeon covers 1,000 yards a minute.

The farther the waters of the oceans are from the equator the less salt they contain.

WHITEFISH INDUSTRY

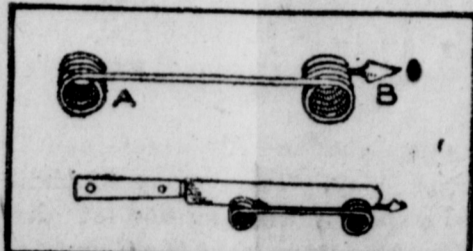
Decline of Great Lakes' Harvest is Object Lesson

The Dominion Fisheries Branch is concerned chiefly with the production of commercial species, leaving the propagation of game fish largely in the hands of the provincial authorities. While lobsters and whitefish are distributed in much the largest numbers, considerable attention is paid also to Pacific and Atlantic salmon, salmon trout, pickerel and other fish. Except with regard to such marine species as the cod and mackerel, extensive artificial culture and strict regulation of fishing operations are necessary to ensure fisheries against depletion. The history of the whitefish production of the Great Lakes furnishes the best example in Canadian experience of the manner in which a valuable fishery can be either depleted in a very short time or maintained at a high level of production accordingly as artificial culture is neglected or efficiently prosecuted. Smaller fisheries, such as the oyster, shad and sturgeon, are to-day in a depleted state, while the two most valuable fisheries of the Dominion, the lobster and Pacific salmon, will require continuous breeding operations on a very extensive scale to maintain their maximum productivity.

POTATO PARER

Here is One That Will Fit Any Knife

There are many economical house-keepers who weep at the losses they suffer through the improper paring of vegetables and yet insist that the patent parers are not nearly so good for the purpose as the old fashioned knife. Here is a way to fix an ordinary knife so that it becomes a potato parer of the highest order. Secure a length of steel wire and coil its ends until it makes a length about



1 inch shorter than the blade of an ordinary table knife. When finished you will have a hard straight piece of wire connecting two coils. Push the blade of the knife between the coils near the straight piece and you have a parer. If you care to leave an end of the wire out and can shape it to a point, you also have a handy tool for removing the eyes from potatoes with this wire.

Examine Your Printing Supply

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DEEDS, MORTGAGES, BONDS

and BILLS of SALE

THE DISPATCH OFFICE

What Is Coming?

(St. John Globe.)

Stanley Washburn, one of the best know correspondents with the Russian forces on the Eastern front, in recent despatches has commented on the persistency with which hospitals and civilian abodes well behind the lines are being bombed by the Germans. The persistence of these attacks has forced a conviction that they are a part of the German plan of campaign. The forerunners or more savage, more brutal, more inhuman attacks on the wounded and the non-combatant population of the Allied powers as the war situation becomes more critical. Those familiar with German character and German war methods long ago predicted war fare such as Mr. Washburn now reports, and there are to be found in recent utterances of German military rulers and in German press comments reasons for assuming that similar tactics will soon be tried on the Western front. On the defensive everywhere, and compelled to give up acre after acre of the ground which was to force acceptance of Germany's peace terms, the leaders of Germany see the end of their dream of conquest. In the frenzy of baffled rage and hate, they are reverting to the warfare of savagery which characterized the early days of the march through Belgium and France, but was modified, if not abandoned, when the

Marne battle checked the Germans and forced the conviction that some thought and attention must be paid to neutral opinion. It is but necessary to read the extracts from German military writers and the German press appearing day by day in the war despatches to understand that a very considerable and very influential section of Germany is today demanding a return to sea piracy and absolute disregard of neutral or other rights in the prosecution of the war. The opinion of those in authority in Germany is well expressed by the Cologne Volkzeitung: "Standing on the threshold of the third year of war, there is nothing left to us but to cry 'Forward, forward,' though the path lead to hell." To that path Germany's whole campaign has pointed the way, and it is not surprising to find those who forced a world into war prosecuting it in the way Stanley Washburn describes and in the way experience and German writers lead us to expect it will be prosecuted in the succeeding weeks and months.

THE DISPATCH.

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