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THE DISASTER TO THE "MAINE."

The great calamity which has befallen the nation in the loss of one of its finest ships, with over two hundred and fifty of its brave and ever popular blue jackets, has brought mingled feelings to the hearts of the American people, feelings in which bewilderment and deep sorrow predominate.

Self-control and moderation, however, are frequently the highest exhibition of courage, and, after the first shock of the calamity was passed, the public realized that it would be fatal to make charges of crime in the absence of any proof that a crime had been committed.

Theory is rife as to the cause of the disaster. If the vessel was struck by a torpedo, the effect would have been the bursting in of her underwater plating, accompanied by a dull, muffled roar. It is claimed that, as the action of high explosives is chiefly downward, the explosion of the gun-cotton charge in the head of a torpedo would not produce sufficient shock to detonate the explosives within the magazines.

If the explosion was due to causes within the ship, it was either intentional or accidental. That any agent of either Spain or Cuba could have placed explosives within the ship, either in coal bunkers or magazine, is rendered extremely unlikely by the extra precautions which would be taken to safeguard the ship.

There remains the theory that the boiler which was supplying the electric light dynamos exploded, and set off the magazines. This would fully account for the double reports spoken of in many of the accounts by eye witnesses. If this was the first cause of the disaster, it will be a difficult matter to prove from the appearance of the wreck whether the boiler or the magazine was the first to explode.

WEATHER BUREAU WARNINGS.

It is likely that if the average citizen were asked to define the work of the United States Weather Bureau, he would say that it consisted in taking observations of the weather and in affording protection to shipping interests by giving due warning of impending storms.

As a matter of fact, however, the work of this bureau is felt over a far larger field than is included under the term "shipping interests," and its range of observations takes in a much wider variety of subjects than the public generally supposes. It is true that the captains of vessels consult the bureau forecasts and frequently defer their sailings as the result of its warnings; but this represents only a portion of a great system of

meteorological forecasts which are directed to the protection of life, property and merchandise both on land and sea.

What might be called the protective work of the bureau is felt in every community throughout the country. It safeguards the crops of the farmer and the fruit grower; warns the shipper of perishable goods of the approach of hot or cold waves, and tells him how long to keep his merchandise under shelter and when it is safe to let it go forward; gives timely warning to the railroads of the approach of storms which will probably call for emergency work with snow plows, special engines and crews; and by its timely warnings throughout the country probably preserves an amount of merchandise from destruction, damage or delays which would compare in bulk with that which is carried out of our various shipping ports on the coast.

The Weather Bureau disseminates its daily prognostications of cyclones, hurricanes and storms and hot or cold waves by means which insure its reaching the largest possible number of people. The daily report is given to the press associations of the country and its bulletins are posted at the various bureau stations and in thousands of public places where they will be readily accessible to the public.

In the event of the approach of a hurricane along the coast warnings are sent to all port stations, from which signals are displayed, flags being used by day and lanterns by night. General information is sent to all shipping interests and bulletins are posted at the maritime exchanges giving full notification of the position and movement of the storm. By the co-operation of the shipping interests, the steamers leaving the port of New York or any ports at which the warnings have been received display the signal flags of the bureau for the benefit of coastwise or inward bound vessels.

Similar care is exercised by the Weather Bureau over the internal mercantile interests of the country. In addition to the usual forecasts, special warnings are sent out at the approach of any storm of unusual severity. Thus the railroad companies are warned of coming snowstorms in time to enable them to overhaul snow plows and gather together the necessary crews for "fighting snow." Special engines are held ready with banked fires, and men are distributed to keep the switches, signals, etc., clear of snow, so that when the storm breaks it finds, thanks to the bureau, an organized equipment ready for all emergencies.

Nowhere, perhaps, is the work of the bureau better appreciated than among the shippers of perishable merchandise, and it is a fact that the movement of this class of goods is largely controlled by the forecasts of hot or cold waves. We are informed by Mr. Elias P. Dunn, the local weather forecaster, that he is in constant receipt of inquiries from shipping merchants relative to the probable weather conditions during the transit of consignments of fruit, liquids or other commodities which would be injuriously affected by extremes of temperature. This particular feature of the service is of great value in the port of New York, especially in the fruit and kindred trades.

Of the direct benefits of the bureau forecasts to the farmer and the fruit grower it is almost superfluous to speak—so well are they known and appreciated. The fruit farms of Florida and California, the sugar plantations of Louisiana and Texas, and the truck growing interests of the eastern seaboard, are not slow to express their indebtedness to the warnings received from the bureau. The San Francisco office reports that during the last three years not a single rain occurred in the raisin drying region without warning, and that in only one instance was an unnecessary warning issued. If this may be taken as a sample of its efficient work in a single department, we may form some idea of the far-reaching benefits of this deservedly popular ser-