

THE CARE OF STEAM BOILERS.

Reports of government enquiries are sometimes tedious reading, and require an amount of patience and resolution on the part of those who wade through them that is often worthier of a better cause. This, however, can rarely be said of the reports on the Board of Trade enquiries with regard to boiler explosions: for these are often full of matter from which much useful information may be gathered, though they are not infrequently sad records of ignorance on the part of owners and attendants, which if it did not lead to terrible results, would be very amusing. The delightful simplicity of the engine tender, who, in a certain Yorkshire town, advised his master on no account to have his boiler insured, because every time the insurance company inspected it they would be sure to want some alterations made, and who recommended in place of periodical inspection by a qualified man, that the boiler should be charged from time to time with pigeon dung to prevent corrosion, is only surpassed by the culpability of a certain owner who worked a boiler for over 20 years without ever having it examined by a competent person.

These are only two cases taken at random out of a host of others, says *Engineering*, which all point to a lamentable lack of ordinary common sense with regard to the management of boilers. We know from experience that there is a certain class of men in charge of driving plants who seem to regard the steam boiler as a thing almost beneath their notice, which ought to go on working with little or no repairs for years, and these men are quite aggrieved if their attention is called to the fact that the hard-working boiler may sometimes require a little attention. As a case in point, we can call to mind a man who had charge of a certain plant, consisting of two 70 indicated horse-power non-condensing engines and two boilers. This man was a first-rate fitter, but had little or no knowledge of boilers, and he sadly neglected the latter in his preference for the engine portion of his charge. We fear it is often men of this stamp who are responsible for the Board of Trade enquiries into the cause of boiler explosions. They do not necessarily mean to neglect their duties, but they seem to have got the idea that it is rather beneath them to pay any attention to boilers. How mistaken such policy is we need hardly point out: to anyone who will give the matter a moment's consideration the thing must be self-evident. There is no part of a factory that repays better a little considerate attention, as there is no part of it that exacts a more terrible penalty for continual neglect.

The best remedies for corrosion are generally the simplest and least expensive; but after all, there can be no hard-and-fast rule laid down as to what should and what should not be used, as so much depends on the water, the kind of boiler, the conditions of work, and many other things. Perhaps two of the simplest remedies ever used as a safeguard against incrustation are petroleum and common soda; but even these must be used with care, and in the proper proportions, else the evils that they cure may be less than those they bring about, and it all comes back to what we said before, that steam users should have some competent man to advise them, be he the engineer to a boiler inspection company or anyone else capable of giving sound advice on the subject.

There is a tendency with some people to regard boiler explosions as very mysterious, and as a necessary evil, while others have some pet theory which to their mind accounts for all mishaps. One of the hardest of these theories to kill is that known as "the spheroidal state of water," so dearly loved in certain quarters. Many and severe charges have been laid at its door, and we fear it is only time, and no stint of that, which will finally dispose of this long-cherished bogey. There is nothing

mysterious about boiler explosions, and their cause can generally be traced to a very simple origin. The more steam users are brought to recognize this the better will it be, and Board of Trade enquiries are powerful means to that end.

In that excellent book, "A Treatise on Steam Boilers," written about twenty-five years ago by Robert Wilson, are these words:

"The practice of ascribing steam boiler explosions to obscure causes has been productive of much mischief, as it engenders a carelessness on the part of owners and attendants, who have been led to believe that no amount of care will avail against the mysterious agents at work within a boiler. Considering the too frequent want of care and knowledge on the part of those having the charge of boilers, and the great number of dangerous defects that are almost daily discovered by trained inspectors, the mystery to be solved is: How so many boilers escape explosion at the ordinary working pressure, and not what has been the cause of the disaster when an explosion does occur."—*Boston Journal*.

MERCERIZED COTTON.

A good deal is said in this issue of the *Reporter* about mercerized cotton. In our Leeds letter the subject is discussed from the point of view of the effects obtained, and in our Yorkshire letter the process of mercerizing is treated at great length. American manufacturers would do well to pay more than passing attention to this new departure in textiles, otherwise they may find their business suffering. Mercerizing, according to all accounts, has passed beyond the experimental stage, and is now considered a process from which the most important results may be obtained.

The process in its general features is not a new one, as it dates back to 1850, but it is only recently that it has been given wide application. Stated briefly, mercerized cotton is the closest imitation of silk that has been put upon the market for many years. It combines the lustre of silk with the strength of the best cotton. Long staple cotton (Egyptian and American) is treated with caustic potash and acid, which brings it to a gelatine condition, the fibres and cells shrinking up. It is then carbonized in a vacuum, and the fibres and cells expand and fit themselves into each other, so that the rays of light, as they fall on the fibres, are reflected instead of absorbed. The result is a great lustre, which is said to be permanent.

In our issue of February 3 was printed an editorial entitled, "Cotton Masquerading as Wool," in which reference was made to some very slightly samples which had recently been received by us from Bradford. We called attention to the very extensive use by Bradford manufacturers of cotton in the fabrication of dress goods, a sample of which goods may be seen at our offices. We neglected to state at the time that all the samples referred to in our editorial were made of cotton that had been subjected to the mercerizing process.

We are now informed by our Leeds correspondent that next season most of the English dress goods manufacturers "will be showing most exquisite designs and effects in all colors, with this mercerized cotton used for the figure and spot effects, where previously silk only has been employed, and it will require an expert to detect the difference." But it can be used for men's wear also, being excellently adapted to the requirements of the vesting trade, and to so-called worsted pantings.

Enough has been said to show the importance of the mercerizing process to American manufacturers. The attempt will undoubtedly be made by English manufacturers to use this process as a means to maintain their foothold in our markets. We have previously referred to the fact that "silk" linings made entirely of cotton (mercerized) have been shipped to the United States, and that light-weight worsteds fabricated from the same material have

been exported to us in small amounts, with the hope that a large business would develop. And as for dress goods, the only people who were at all busy in Bradford were those engaged on this line in connection with cotton. The moral for the American manufacturer is obvious.—*American Wool and Cotton Reporter*.

CURRENCY VIEWS.

At the meeting of the Boston Shoe and Leather Club the other day, Mr. Edward Atkinson was one of the speakers. He said: "I will add only a word to one subject to which Mr. Fairchild called your attention, the inherent vice of legal tender. I did not get my own mind clear of obscurity until I went back to the original history of legal tender. It is now easily read up in recent books. Ten years ago it was a very difficult matter. Money was in use before coinage existed, before any act of legal tender, and the first act of legal tender was a decree born in fraud to scale down the debts of Greece, by the decree of the ruler forcing creditors to take the silver coin at 2/ per cent. less than the quantity named, and called for by the name. From that date down to the present time there has not been any act of legal tender except those that have been made in 1817, to keep subsidiary coin in the country by act of legal tender, coupled with the conditions making that subsidiary currency redeemable in the superior currency, that has not been either a fraud upon the people or enacted for the purpose of collecting a forced loan. Every case through all history in all nations down to our own continental currency, greenbacks and all, have been either to cheat the people by forcing them under an act of legal tender to take either less than the weight of metal promised or else for the purpose of collecting forced loans under the stress of war. I will remind you of one other thing. The standard of foreign commerce is the pound sterling. There is no legal act establishing the pound sterling as the standard. In fact, there is no pound sterling coined of gold, and yet the whole commerce of the world, with scarcely an exception, is to-day conducted in terms of money under the name of pound sterling without an act of legal tender and without existing coins of that name. The equivalent is the sovereign, but if the sovereign is less than 113,000 grains of gold it cannot be forced upon you in place of a draft for a pound sterling. You can break up every silver man by proposing to him: 'Yes, we will accept free coinage; we will open the mints to any coinage of gold, silver and copper to any extent, that any man may bring metal to the mint to be verified, certified and stamped, provided you will not ask or demand in connection with their coinage the right to force one in the place of the other. Leave every man free to make his contract in either coin, and you may have free coinage to any extent.' That breaks them all up. There is no possible reply. It develops the fact that their object is to cheat the people with what they call cheap money under an act of force which is an act of legal tender."

—At the annual meeting of the shareholders of the Commercial Cable Company, held on the 7th inst., the following directors were elected: John W. Mackay, James Gordon Bennett, Gardiner G. Howland, Col. William Jay, George G. Ward, Sir William C. VanHorne, Edward C. Platt, Right Hon. Lord Strathcona and Mount Royal, G.C.M.G.; Charles R. Hosmer, Thomas Skinner, Clarence H. Mackay, Albert B. Chandler, Dumont Clarke. In reply to a question from a shareholder, Mr. Ward stated that the Cable Company's gross earnings for the months of January and February, 1898, were the largest for those two months in the history of the company.