

ation. A general sample of one half ton from one pocket gave:

|            |        |
|------------|--------|
| Fe.....    | 54.700 |
| Insol..... | 6.980  |
| Phos.....  | 0.092  |
| Sul.....   | 0.013  |

By far the largest district investigated during the season is the Mira field, in southern Cape Breton county. This lies on the East side of the Mira river, and extends from near the Roman Catholic church at Grand Mira, south, to below Marion Bridge on the northeast, a distance of eight or nine miles. The field has long been known, and in parts a considerable amount of surface exploration has been made—enough, at all events, to indicate quite definitely the characteristics and value of the deposit. The ore varies from a black magnetite to magnetic hematite, and thence to a non-magnetic phase. It is interbedded in quartzites and slates, and in many ways bears a close resemblance to the Arisaig ore. Several belts are uncovered, also more lines of partial replacement; and the mineralized zone can be traced, with perhaps a slight interruption by faulting over the entire distance mentioned.

The largest amount of work has been done on the northeast end near Marion Bridge by the Dominion Iron and Steel Co., and on the south by the Nova Scotia Steel and Coal Co. The latter shows ore mixed with alternate bands of slate and quartzite up to several feet in width; but in no case does an ore band exceed two feet. The ore often grades into rock insensibly, becoming siliceous outward from the centre of the band. At Marion Bridge there is a tradition of a drift boulder showing 3 feet of hematite clear of rock, and the much of the exploration evidently was based upon that theory. But no evidence could be secured of more than a few inches of clear ore.

The most marked peculiarity of the iron throughout the field is the discontinuity of the bands. Not only do they pass transversely into rock by insensible gradations, but they die out completely along both strike and dip, in many cases reappearing again within a few inches or feet as occupants of the same rock horizon. The evidence indicates incomplete replacement of siliceous strata by iron oxides. These occurrences are the best illustrations yet seen by the writer, which are of service in working out the genesis of the bedded or Clinton type of ores. From an economic point of view, however, this district is a disappointment, as the replacement is everywhere too incomplete to provide workable ore at anything like the present price of iron, in a field which for many years has been regarded as an important prospect. This is the more disappointing since the type is one from which much is usually expected, and the analyses made indicate an ore comparing favourably with any other bedded occurrences. The district is at all points very accessible to Sydney. The best ore, in which replacement was complete, gives over 60 per cent. Fe.; less than 10 per cent. Insoluble; a moderate amount of phosphorus (for a bedded ore); and a negligible quantity of sulphur.

The work of the season, then, may be summarized as regards iron ore by the statement that, no indications of large ore bodies were found; only a few which may upon proper exploration prove of value as contributors to smelters which are not obliged to depend upon them for their chief source of supply."

## - Rubs by Rambler.

"He cannot even drive a nail" is an expression frequently employed in a contemptuous way, when we wish to call attention to the depth of a man's stupidity. To drive a nail however, and drive it properly is not the simple matter generally imagined. A contributor to the Scientific American has this to say on the subject:

"It usually takes a woodworker's apprentice a year or more to learn that he does not know how of a man whom he heard using several blows of the hammer to drive a shingle nail, was somewhat crestfallen when told that the nail would hold better when driven 'home' by several light taps, than when driven by one heavy one.

"Why?" he asked in surprise.

"Because," said the other, "when you drive a nail home with a heavy blow, it is apt to rebound a trifle, loosening the grip of the wood fibres on it. Drive it almost down, if you will with as hard blows as you wish, but finish the job with several light blows."

"One who thinks that the driving of a nail simply consists in getting the whole length of it out of sight, has little conception of the real nature of the operation. A nail driven by an expert will often hold several times as much as one ill driven; while, too, it is often made to draw the parts into place. If you have ever watched a mechanic driving nails, you have doubtless noted that he rarely drives one at right angles with the face of the work. There is a reason for this. Suppose that he is nailing the 'sheeting' on the frame of a building, and desires to draw the board down tightly against the one below it; he points the nail downward, and a few well considered blows at the last produce the desired effect. If the board is bent edgewise, so that much force is required, probably he will start the nail in the upper edge, pointing very sharply downward. Again, two nails driven in a board at different angles will hold it in place much more firmly than the same nails would if they were driven in at right angles with the face of the board.

"Did you ever notice that, in driving a nail in very hard wood, one man will do it successfully, while another succeeds only in doubling the nail up before the point has fairly entered the wood? The difference lies in the fact that the expert strikes the nail fairly, and not too hard, 'coaxing' it in; while the other strikes too hard, 'coaxing' indirection. It may be profitably mentioned, right here, that in driving a nail into very hard wood, it is usually profitable to dip the end into oil or grease. This will not sensibly interfere with the holding qualities of the nail, while it will very materially facilitate its driving."

There are some people who have no bright outlook. Gloom continually overshadows them; they sigh for the good old times and are never tired of saying, things are going fast to the bad. There are some people never happy unless they