

to maintain his dignity; and this sum we have reason to believe does not cover his expenses.

CLOSING CEREMONIES OF THE ASSEMBLY.

"But the General Assembly is drawing to the close of its brief span of power. The Commissioner is beginning to look sleepy, and the throne is vacant for long intervals, during which business proceeds as usual. The really interesting work of the Assembly is over; and the Monday, the last day of its sitting, is devoted to a number of small matters of detail. There are great blanks on the benches that forenoon, and the attendance of strangers is small. The Assembly adjourns to meet again at eight in the evening; and at all hours down to eleven or twelve, p.m., numbers of people are pouring in; till at midnight on that most evening, the house is nearly as much crowded as upon its opening day. It is always a matter of great interest to many to witness the ceremonies with which the Assembly is closed. The business still consists of questions of no great interest, which are arranged by the old gentlemen around the table. At length daylight begins to look through the windows, and the pale, wearied faces of the members and spectators look strange and spectral. It was half past two in the morning before the last item of business at the recent Assembly was finished, and the Moderator rose to give his concluding address. This was brief, occupying just a quarter of an hour. There was a pause when this address was ended, and every one rose to his feet as the Moderator continued, "Right Reverend and Right Honorable, in the name of the Lord Jesus Christ, the great Lord of the Church, I now dissolve this Assembly."

"The Commissioner addressed the Assembly, and ended by saying: 'Right Reverend and Right Honorable, in the Queen's name, I now dissolve this Assembly, and appoint its next meeting to be held in this place on Thursday the 21st of May, 1857.' It was curious to see the little proof of the mutual jealousy of the Church and the State, in this form of dissolving the present Assembly, and appointing the time of meeting for the next; the Moderator doing so in the Saviour's name, without the least recognition of the Queen's power to interfere; and the Commissioner doing so in the Queen's name, without any notice of the previous words of the Moderator.

"The Moderator next offers a prayer, and the proceedings of the Assembly are finally closed by singing part of a psalm, and by the benediction pronounced by the Moderator. From time immemorial the same psalm has always been sung, and it was a touching thing to see the tears stealing down the cheek of many a venerable member, to whom these words brought back Assemblies long ago, and suggested, perhaps, the thought of future Assemblies, when he should have changed his simple pulpit for the quiet grave. It may interest our readers to know the words which have so lively an interest for every Scotch minister, and which are always understood in Scotland as a supplication for the welfare of the church:

"Pray that Jerusalem may have
Peace and Felicity;
Let them that love thee and thy peace,
Have still prosperity.

Therefore I wish that peace may still
Within thy walls remain;
And ever may thy palaces
Prosperity retain.

Now, for my friends' and brethren's sakes,
Peace be in thee, I'll say;
And for the house of God our Lord,
I'll seek thy good alway."

"Rough and rugged in their uncompromising literalness, these words look nothing as we transcribe them here. We can only assure our readers that there was a very remarkable power in them as we heard them read and sung in the Assembly Hall.

"And so the General Assembly is over. The Commissioner becomes plain my Lord again. The Moderator puts off his court-dress and cocked hat, and becomes once more the plain parish-priest. The members return to their homes,—insignificant units singly, though together constituting a court invested with powers, which, if exercised, would excite a revolution. The two or three poor wretches, who have been deposed, go home, with sinking hearts, to tell their children that they must quit the manse, and go down to the lowest depths of poverty and shame. The benefactors and pursuivants become street porters once more. The Assembly Hall is silent and deserted."

(From the *Waterhampton Chronicle*.)

Mr. Bessemer's discovery of a method of making malleable iron and "semi-steel," without subjecting pig iron to the process of refining and puddling, by which a large saving in fuel, and labor and machinery will be effected, continues to excite great attention in this

neighborhood. In our last publication we gave Mr. Bessemer's account of his invention, as detailed at the meeting of the British Association for Advancing Art and Science at Cheltenham; and in our present paper we furnish a further account of an experimental trial which took place in London on Friday last. The operation was witnessed by a numerous company of gentlemen connected with the iron trade, and pronounced successful. Two conditions, however, were wanting to the thorough fulfillment of the process, which Mr. Bessemer's invention holds out, which may seem to require some explanation; and this explanation it is now our purpose to afford. The experiment, for several good reasons, took place in London; but neither in London nor its neighborhood are blast furnaces or iron mills and forges to be found. The operation, consequently, was carried into effect upon pig iron melted in a cupola instead of melted iron flowing from a blast furnace; but this in no particular favored the experiment, for the bulk in which the contents of Mr. Bessemer's cylinder were taken being less than that of "a charge" in a blast furnace, the heat, in all probability, was less, and the metal, consequently, not so well prepared for that admixture of atmospheric air by which its high state of incandescence is acquired. The second condition attaching to the experiment that could not be fulfilled, was the conversion of the contents of the cylinder into bar iron. No attempt to do this could be made in consequence of none of the machinery for the purpose having been erected in connection with establishments for melting iron in the metropolis or its neighborhood; but the fact that malleable iron, fibrous iron, has been made by Mr. Bessemer's process, as we understand, placed beyond doubt by the exhibition of bars that are the result of the process. Thus the process would seem complete, and the evidence of its completion before our eyes. Still the discovery is so simple, yet so great and unexpected, and the results so extensive and important, that some amount of doubt as to its immediate perfection may be excusably entertained. There is not, so far as we can understand, any chemical difficulty whatever in the way of the invention. On the contrary, through its chemical action—that is by the infusion of compressed atmospheric air into the mass of melted iron in the cylinder—it works out the chemical change effected by puddling, and at the same time supplies that mechanical motion in the mass which the puddler with his long iron bar can only with great labor effect. The liquid iron, owing to the intense heat gained, literally boils, bubbles, and the scum is cast off; taken from the cylinder in this state, it is "semi-steel;" allowed to remain a little longer, it becomes, as thickened liquids after the evaporation of portions of their aqueous contents often do, of a pasty and stringy character—of that consistence that gives the fibre to the iron. How this is effected, is not quite clear. We know the *modus operandi*, but the cause of the change is beyond our view. In the case of Mr. Bessemer's iron it seems to be effected by intense heat; in the present practice the heat is less, and the exposure to the influence of atmospheric air modified or changed by its progress through the puddling furnace, would appear to be greater; for the surface of iron presented to atmospheric influence in Mr. Bessemer's cylinder cannot be more than the superficies of its circumference. Hence, in the two operations there is an important difference. Whether that difference ends in precisely the same result, so far as malleable iron is concerned, is a circumstance which only practice can substantiate.

Mr. Bessemer, in the present position of his discovery and the comparatively imperfect state in which it has been submitted to the public, must expect to encounter many doubts—doubts that only its general adoption can solve. As may be guessed from our preceding remarks, some of these have already appeared, and have received a most satisfactory and conclusive answer. Another of these doubts is the character of the pig iron, which has been the subject of experiment. A writer, who adopts the signature of "Ironmaster," wishes "to know what the quality of pig was that he used in his experiments; whether it was cold air, hot air, miney clader, or any of these mixed," as a knowledge of this is necessary to render the comparative loss by puddling and boiling accurately known—and, of course, to some extent, the value of the invention. We have ourselves, heard of pig iron of such excellent quality that, upon being heated in a blacksmith's forge and hammered, it was without puddling or any other process, converted into excellent malleable iron.

We cannot here enter into any description of the qualities that constitute good iron, further than to state that its ductility and capability of extension, either by elongation or in breadth, or by both, with

its antilaminating nature, are the constituent merits of high-class iron. It is, of course, too soon to ask that Mr. Bessemer should present us with specimens of iron of the high quality we have indicated. All that the terms of his invention allow us to require is that malleable iron produced from pig-iron, without puddling, should be shown. And this is, indeed, a high requirement. One of the principal, most extensive, and most laborious processes on iron-making will be superseded. This is gained, if Mr. Bessemer's invention should produce only a low class of fibrous iron. Improvements would naturally follow; and the cost of iron being reduced, its wonderful adaptability to the requirements and the accommodations of life would be rendered more and more evident, as human ingenuity, ever progressing, devised.

It has not been our purpose, as the reader will perceive, to dwell upon the more immediate and pecuniary result of Mr. Bessemer's invention. We wish to indicate its *bearing*, not merely with regard to its local or national, but its social result. We take it for granted that the cost of the production of iron will be materially diminished, and the consequent appliances of it to many purposes yet unperceived take place; hence a greater demand, a greater manufacture, and greater employment. A change of the mode of employment has become necessary; but the more readily that change has been accepted the greater has been the well doing of the individuals concerned. In the present case, so hard and so life-destroying is the puddler's labor that we believe there does not exist any serious objection to its relinquishment on the part of very many concerned. Loss of human life, they wisely think—and their own lives are the lives concerned—would be exhausted.

Experiments to test the invention will, we hear, soon take place. It will be advisable that they should be as numerous and as much diversified as circumstances will permit. The invention is so important that no conceivable test ought to be omitted, for by its capability of standing these tests its value must be ascertained. These tests, so far as we can judge, are likely to be rigorous, yet fair, and, we may add, conducted with every wish to find them successful. The theory of the invention, so far as we can ascertain, is believed to be perfect; in its practice, beyond the experimental range of Mr. Bessemer, some difficulties are assumed, but they are not considered to be insurmountable, and while the testing spirit is awakened, that of inquiry cannot slumber, they must work together; and we believe we can say that experiments, upon a scale calculated to show whether the invention is one of limited or of universal applicability, will soon be undertaken. In a few weeks we shall, upon safe ground, be able to speak of one of the greatest inventions of the day; and this we might say upon the supposition that it proceeds no further than its "semi-steel" process. For ourselves we do not quit it here, for we have faith; we believe that the contemplated experiments will verify the statements of the inventor.

We have yet a word to say. It is that the information of the invention has not been received with dissatisfaction by the working classes in this neighborhood.

GOD IS ONE AND INCOMPREHENSIBLE.—God then is the one Lord over all: a height which allows of no compeer, itself sole occupant of all power. Let us gather an illustration from earth concerning the empire divine. When did ever a partnership in royalty either begin with good faith, or end without bloodshed. Thus the brotherhood of the Thebans was sundered, and discord, outliving death, kept its hold in their unreconciled ashes. Neither could one kingdom contain the Roman twins, though housed afore within the tabernacle of one womb. Pompey and Cæsar were connected together, yet observed not their bond of relationship amidst the rivalry of power. Neither in man only need this draw your attention, for all nature here consents; bees have one king, the flocks one guide, the herds one ruler; far more has the world but one Ruler. Who orders all things, that are by His word, regulates by His wisdom, and accomplishes by His power. We cannot see Him, He is too bright for our vision; we cannot reach Him, He is too pure for our touch; we cannot scan Him, He is too great for our intelligence; and therefore we think of Him, worthily, when we own Him to be beyond our thought. In our own mind must be His shrine, and His consecration within our own bosom. Neither ask thou the Name of God. God is His name. . . . People oftentimes in common course make confession of God, when mind and soul become warmed of their Author and first principle. We oftentimes hear it said, "O God," "God sees me," and "to God I commend him," and "God will restore to me."