10 lbs. of Creosote, by weight and not by measure, had been taken up by each cubic foot of timber.

Greenheart timber, which had been mentioned, was full of a powerful empyreumatic oil, to which was due the power of resisting the attacks of marine insects. In Demerara it was familiarly called 'torch-wood,' because it burned as freely as pitch-pine torches. It cost in England about 4*s.* 6*d.* per cubic foot; whereas creosoted pine cost about 2*s.* per cubic foot.

January 18, 1853.

JAMES MEADOWS RENDEL, President,
in the Chair.

The discussion upon the Paper No. 881—"On the Preservation of Timber," by Mr. H. P. Burt,—being continued, was extended to such a length, as to preclude the reading of any other communication.

January 25, 1853.

JAMES MEADOWS RENDEL, President,
in the Chair.

At the conclusion of the discussion "On the Preservation of Timber," The PRESIDENT directed attention to the Dublin Exhibition, and Mr. C. P. Roney, Assoc. Inst., C.E. (the Secretary), stated, that the undertaking was progressing most favourably, the original size of the building would be nearly doubled, and to meet the additional outlay, Mr. Dargan had increased his donation from £20,000. to £50,000.

It was believed, that the department of machinery in motion would be quite as interesting and attractive as that in the Great Exhibition of 1851, in London.

The Society of Arts (of London) had determined, that their East Indian Exhibition and all the influence of their body should be transferred to the Dublin Exhibition. There would also be a Mediæval court, and an Archæological collection, which would show that Ireland, though of late years not progressing

so rapidly as this country, had in former times, possessed high attributes of civilization. There would also be a fine collection of ancient and modern pictures of every school. Mr. Roney solicited the aid of the Members towards the Exhibition, by the loan of models, whether working, or stationary, and of works of art, of which he promised, that great care would be taken.

No. 883.—“On the Construction of Fire-proof Buildings.” By
JAMES BARRETT, Assoc. Inst. C.E.¹

THE construction of fire-proof buildings is, probably, a subject of more direct interest to the Architect, than to the Engineer. There are, however, many structures, connected with docks, arsenals, railways, and other public works, more directly under the direction of the latter, in which an economical system of fire-proof construction would often be desirable; and a strong feeling now prevails, that some remedy should be provided for the loss of life and great destruction of property resulting from the general use of timber. The construction of buildings, on a principle almost entirely excluding that material, may, therefore, prove a subject of interest; and its importance to society at large is sufficient apology for its introduction, at a meeting of the Institution, where it has been already cursorily referred to. The former discussions on fire-proof construction have, however, been limited to the advantages and defects of the cast-iron girder and brick-arch system, as applied to the floors of warehouses and mills; to which particular class of buildings the application of a fire-proof principle has, until within a very recent period, been mainly confined, chiefly because the girder and arch system is not adapted for general purposes, and none other is familiarly known. The importance, however, of introducing some method of fire-proof construction, admitting of a wider

¹ The discussion upon this paper extended over portions of two evenings, but an abstract of the whole is given consecutively.

A TELFORD MEDAL was awarded to the Author, for this paper, at the Annual General Meeting, December 1853.