

EDITORIAL

THE VINDICATION OF SELF-CONTAINED BREATHING-APPARATUS BY USE UNDER WAR CONDITIONS.

There has been a significant coincidence in the attention given at practically all annual meetings of mining societies held since the conclusion of fighting on the western front to the part played by tunnelling corps in sapping and mining operations, and the papers and discussions at these meetings, both on this side of the Atlantic and in Britain, have disclosed the great extent to which use was made of self-contained breathing-apparatus, chiefly of the oxygen cylinder type, and the reliability shown by these devices under the strenuous conditions of war service.

We reproduce in this issue a paper read before a recent meeting of the Western Branch of the Canadian Mining Institute, which deals largely with the standard-type "Gibbs" apparatus which has been developed under the supervision of the United States Bureau of Mines. It is interesting to know that a composite apparatus of similar excellence is a likelihood of the near future in Great Britain.

Speaking to a discussion on Colonel Dale Logan's paper on "The difficulties and dangers of mine-rescue work on the Western Front, and mining operations carried out by men wearing rescue-apparatus" at the Annual Meeting of the Institution of Mining Engineers in London, Sir W. E. Garforth referred to experimental work which had been carried on in England, and forecasted that in another twelve months, with the help of the Home Office Committee, which he believed was quietly doing valuable work, he thought we should have the apparatus which many had been looking forward to for the last thirty or forty years.

On a number of occasions the "Journal" has advocated that some central governmental authority should undertake to do what is now apparently near completion, namely to devise a breathing-apparatus which should avoid the disclosed dangers of the existing types, and should combine the admitted excellences of these types. The British Home Office, when it enforced the compulsory provision of rescue-apparatus at collieries, became morally responsible for the provision of an approved type of apparatus, and we presume that, but for the interruption of the war, some effort of this kind would have been undertaken ere now. When the war had commenced it speedily became apparent that oxygen breathing apparatus would be used on a scale and under conditions of test that would yield far more important experimental results than could be obtained in many generations of peace-time research, and it would appear as if those who had anticipated inter-

esting and valuable disclosures regarding the war-time evolution of self-contained breathing-apparatus are not to be disappointed.

One other important result of the work of the tunnelling corps is the number of trained and resourceful wearers of breathing-apparatus that will return to employment in mining.

One opinion of Colonel Logan will be agreed in by all who have in any way to do with mine rescue-work. This gallant officer said: "We never found a man refuse to go down, but some of the men were quite incapable of carrying on the work of rescue. The ruthless exclusion of men physically or temperamentally unfitted for the work was necessary." The specialised nature of mine rescue-work, and the unsuitability of untrained men, combined with a proper sense of the limitations of breathing apparatus, are first considerations, and in their neglect is to be found the foundation of most of the bad things that have been said about the use of these devices.

PRESIDENTIAL ADDRESS, INSTITUTION OF MINING & METALLURGY.

We reproduce in this issue the full text of an address given before the Institution of Mining & Metallurgy in London by Hugh K. Picard. The comprehensive survey of recent metallurgical progress which provides the subject of Mr. Picard's remarks shows how extensive and specialised a science the recovery and refining of metals has become. Mr. Picard's address touches chiefly on the metallurgy of zinc, lead, silver, copper and gold. The references to the metallurgy of iron and steel are few, notwithstanding the great financial importance of this industry and the prominent part it plays in the literature of technical societies, and we believe the wide range of metallurgical subjects reviewed, with scarcely a mention of the technique of underground mining operations, is a fair indication of the importance of modern metallurgy, and of the wisdom of recognizing the fact by including metallurgists by name in the titles of mining societies. The average mining engineer cannot hope to become a metallurgical specialist, nor is it required of a metallurgist that he should acquire all the mysteries of the miner's art as practised underground.

We believe the change of the name of the American Institute of Mining & Metallurgy was an overdue recognition of the growing importance of the metallurgist, and, if the Canadian Mining Institute should decide to also change its name so as to more adequately express