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Special Articles

PHYSIOLOGICAL OBSERVATIONS ON MEN'S WEARING APPARATUS FOR SAVING LIFE IN MINES

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The tests described were carried out in the experimental mine of the University of Birmingham, during the years 1909-11. The persons who volunteered to undergo the tests with the rescue apparatus were members of a committee of the South Staffordshire Coal Owners' Association. They are designated by letters thus:

	Kilos.
Weg. No. 8	20.1
Weg No. 9	20.3
Meco No. 4	17.5
Meco No. 5	17.6
Fleurs No. 6	18.5
Fleurs No. 7	18.7
Aerolith (empty)	8.0
Aerolith (full)	11.0

I. General Remarks.

It was distinctly understood that the chief object of the tests was to ascertain the relative fitness of various forms of apparatus designed to permit the breathing of compressed gas, and not to undertake a physiological examination of the men wearing the apparatus, nevertheless, since the success or failure as regards the saving of life in mines depends on certain physiological factors, it would have been absurd to investigate the instruments without also studying the condition of the men inside them.

The experimenters were all men in good health and capable of doing hard manual work for upwards of 1.5 hours, while wearing apparatus, the lightest of which weighed 17.3 kilos (the aerolith of 11 kilos

Subject	Height Age	Height Feet	Inches	Average Weight Kilos.
A.	29	5	9	76.5
B.	35	5	11	69.0
C.	41	5	7½	78.0
D.	26	5	9	77.0
E.	39	5	7	65.5
F.	34	5	10	76.0
G.	50	6	0	89.3
H.	34	5	9	68.5
I.	26	5	8	53.6
J.	28	6	6	89.0
K.	35	6	1¾	80.0

The weights of the apparatus as carried were as follows:

	Kilos.
Drager No. 1	18
Drager No. 2	17.3
Drager No. 3	17.3