

# Sound & Science: Digital Histories

Archives NAG: Geluidstichting: Brief Professor of Engineering: Wing-Commander T.R. Cave-Browne-Cave, University College Southampton aan [Prof. Dr. C. Zwikker], secretaris Geluidstichting, 28.03.1936, [Letter Professor of Engineering: Wing-Commander T.R. Cave-Browne-Cave, University College Southampton to [Prof. Dr. C. Zwikker], secretary Sound Foundation, 28.03.1936,] Delft, 1936.

<https://acoustics.mpiwg-berlin.mpg.de/text/brief-wing-commander-tr-cave-browne-cave-aan-secretary-geluidstichting>



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UNIVERSITY COLLEGE.  
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PROFESSOR OF ENGINEERING:  
WING-COMMANDER T. R. CAVE-BROWNE-CAVE. C.B.E.  
F.R.A.S., M.I.MECH.E., M.I.N.A.

March 28, 1936.

The Secretary, Geluidstichting,  
Algemeen Secretariaat,  
Mijnbouwplein 11,  
Delft, Holland.

Dear Sir,

Thank you for the letter which you wrote to me on March 24. Two silencers were sent to the Royal Automobile Club of Holland on June 27, 1935 and it was understood that trials with them would be carried out. We asked the Club to let us know the result of the tests which they made, but so far we have not heard from them.

For experimental work the accurate measurement of horsepower is essential. We found that the best arrangement was to mount the complete bicycle so that the final driving chain engaged a sprocket on the dynamometer instead of the identical sprocket on the road wheel. With the machine mounted in this way accurate power curves were drawn for the engine with each silencer in use. The noise emitted from each silencer was judged by installing an identical engine in such a way that the exhaust pipe could be led through a brick wall into a space quite free from the other noises of the engine. The information obtained in this way about the noise of the various silencers, combined with the power curves which had been obtained on the dynamometer gave a really satisfactory basis of comparison.

For demonstration purposes we found it best to fit the engine with a small airscrew capable of absorbing the power and incidentally of cooling the engine. This unit was then employed to demonstrate the effectiveness of the various silencers. The difference between the silencers was sufficient to be convincing to casual observers without actual measurement, but we found it best to show the power curves which had been obtained on the dynamometer without attempting to make power measurements under the more primitive conditions of demonstration.

Yours faithfully,