| | |
|---|---|
| Mean brake H.P. during two hours' run, . . . | 15·23 |
| Gas consumption per brake H.P. in cubic feet per hour, | 24·3 |
| ,, ,, indicated H.P. ,, ,, . | 18·9 |

He considered this form of brake preferable to any one of the numerous forms that he had tried, and believed it could be adopted for large powers, and for long continuous runs for the reasons :—

1. It could be constructed on very short notice from materials always at hand in every factory or workshop, and at very little expense. 2. It was so self-adjusting that no very accurate fitting was required. 3. It could be put on and taken off in about one minute; being very light and of small bulk it could be hung up or laid by in a cupboard. 4. It needed little if any attention for lubrication. 5. The back pull registered by the spring-balance was steady, and might be made a minimum by properly adjusting the load, W, before commencing the trial run. 6. The brake-wheel soon attained such a maximum temperature that the radiating heat balanced the heat being generated by friction. 7. It might be used for small as well as for large powers, without any special attendant apparatus except a weight and a spring-balance. 8. For larger powers only more, or larger, or flatter ropes, or a larger brake-wheel, were required.

Since the above tests were taken he had been called upon to test the "Ajax" gas engine as made by the Glasgow Gas Engine Co. at their Bridgeton Works, Glasgow. The brake used on 9th March, 1889, was of the form shown by Fig. 1, and on March 29 by Fig. 2. They are of the same kind as those employed by the jurors in the late trials of Gas Engines under the auspices of the Society of Arts, London, and give much more satisfactory and uniform results than any other form of brake hitherto devised for light work. The substitution of the spring balance in Fig. 2, for the dead weight in Fig. 1, is a decided advantage, since the net load (or difference between the actual readings on the lower and that on the upper balance) can be so easily kept constant throughout the run. The balances, &c., were most carefully tested against registered weights, after the runs and the proper allowance was made for the net weight of the part of the lower balance which aided the positive pull, as well as for the false zeros of each.

The circumference of the circle with radius from centre of fly-wheel to centre of dead-weight was exactly 17 feet.

Careful observations of the gas meter, speed indicator, and brake load were taken *simultaneously* every *ten* minutes throughout the whole of the *three* hours' continuous tests on 9th March, and every *fifteen* minutes throughout the *six and a-half* hours' run on 29th March.



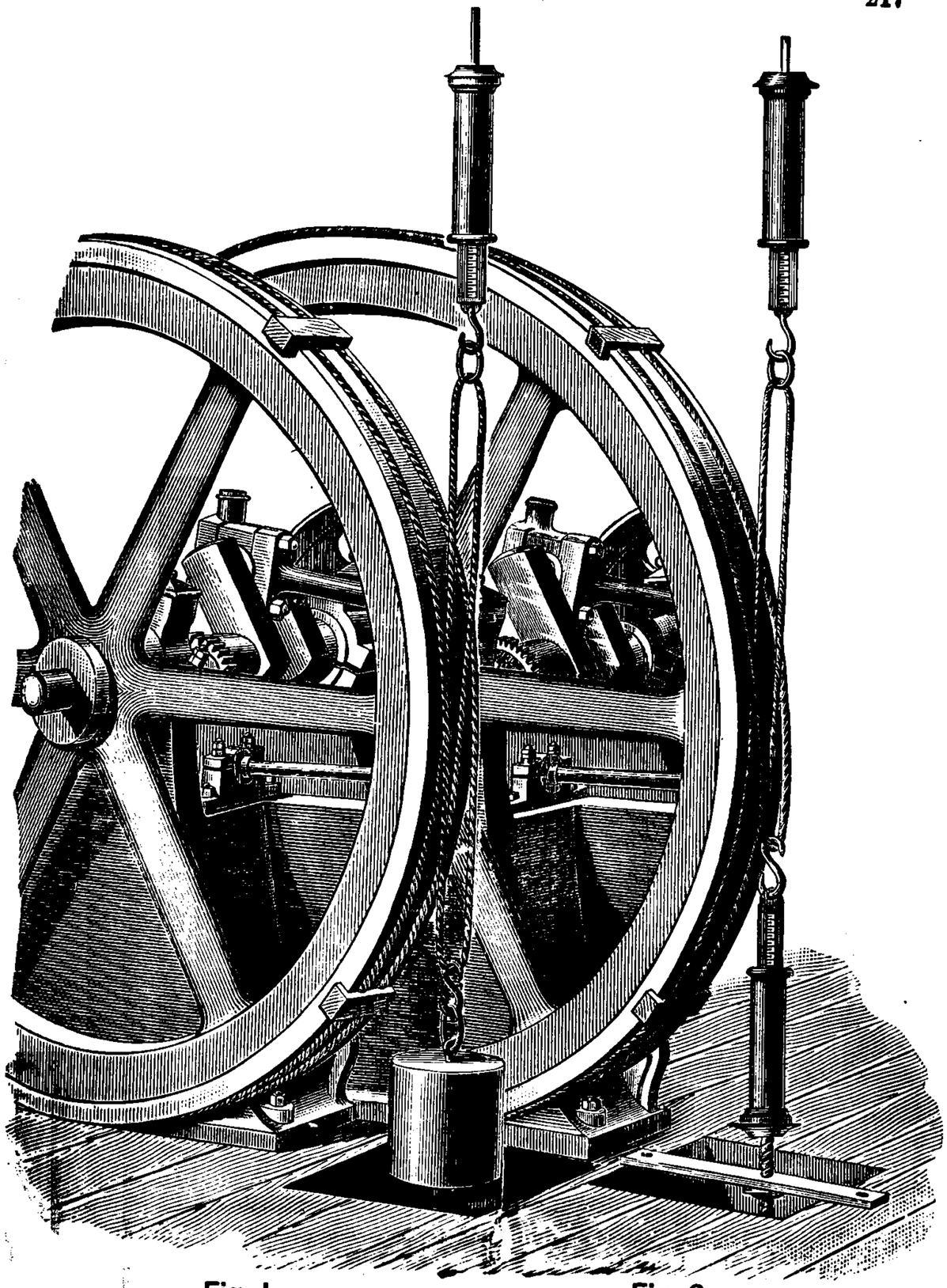

Fig. 1. Fig. 2.

THE TWO FORMS OF BRAKE
USED BY PROF. JAMIESON
IN TESTING THE "AJAX" GLASGOW GAS ENGINE
FOR BRAKE HORSE-POWER.