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CANAL DEVELOPMENT

BOATS DRIVEN BY GAS.

LANCASTURE INVENTION.

Just now, when public attention is directed to the development of our canal system, any invention to expedite traffic and to cheapen the propulsion of canal boats is naturally of great interest. Colonel Wilson Thom, of Southport, has invented a method by which boats may be driven by gas, and yesterday, by permission of the Bridgewater Trustees, a trial trip Was run in a sixty-ton barge from Barton bridge to Monton under the supervision of the inventor of the system and a number of others interested. The use of steam tugs is cumbrous and costly, oil is anathema as motive power where shipping is concerned, the storage of electricity is as yet too costly and impossible, but Colonel Thom has turned his attention to gas. Like all clever inventions, his method is simple and obvious. On the face of it, it appears effective and amazingly cheap.

THE PLAN EXPLAINED.

Briefly, the plan is this. Coal gas is stored in cylinders under pressure and supplied through a converter to what is really a gas engine, which drives the screw. This can be fixed in any canal boat, it occupies next to no space, it requires no skilled engineers, and one man can drive and steer. The engine weighs about fifteen hundred weight it can literally be covered by a decent sized travelling trunk. The whole of the works only occupy six feet in length in the stern of the boat by about two feet wide. The compressed coal gas is stored in a dozen steel cylinders fifteen feet long, of ten inches diameter, which are arranged on either side of the boat, and occupy comparatively little space, so that virtually the whole capacity of vessel is available for cargo. The mechanism is simple, the gas -s turned on, and fired, and the engine runs noiselessly. The helmsman can cut off the supply, reverse, or threw the engine out of gear, and has perfect control. Colonel Wilson Thom's idea is to supply gas at certain points on the canal systems, and driven in this way it is estimated the traffic will be moved at quite half the present cost. Yesterday the large barge travelled at over four miles an hour, there was little wash, and it overhauled empty barges drawn by two horses quite easily. There was no smoke, smell, or rattle, and it seemed wonderful that such a little engine, not much bigger to look at than a small turning lathe, could do the work it was doing. A barge so fitted can draw two more, and no space is wasted by boiler or coal. Applied to the Bridgewater system alone it will save many thousands in the cost of haulage, for it is estimated half the present cost will be done away with. A steam engine and plant, it is estimated, means a cost of some £500 to £600, and at least two engineers. The compressed gas engine, occupying virtually no useful space, can be fitted for £250.

ESTIMATE OF THE COST.

When the Bridgewater Trustees introduced the panting and pulling steam tugs they calculated the cost as compared with horse haulage was reduced by one half. They have some twenty-six tugs and two hundred boats on their forty miles of waterway. They are watching and assisting the new development with interest. Incidentally, it may be mentioned that the machinery and appliances, if the scheme is developed, will almost all be manufactured in Lancashire, and the idea is that there shall be

supply stations of gas preferably near collieries. Colonel Wilson Thom and those with him having a monopoly of supply. Charging the cylinders is a simple matter of seconds or a minute or two, and the cost of the gas is small because the residuals are now so valuable as to yield a profit on the manufacture, especially the coke and the sulphate of ammonia, While possibly the tar might be used as fuel for the actual carbonising of the coal. Colonel. Thom estimates he can supply gas at different generating and compressor works at two shillings a thousand feet and make a large profit thereon.

The boat in which Messrs. Gardner, of L.Gardner and Son Limited, had fitted the engine, reversing gear, and propeller, under the supervision of Mr. Walter H. Wiswall, engineer of the Ship Canal Company, Runcorn, was supplied with the tubes with compressed gas by the Trafford Park Company, and the tubes herd sufficient to provide 20-brake h.p. for twelve hours, sufficient to take the boat fifty miles loaded, and drawing other two barges at four and a half miles an hour instead of one and a half to two by horses.

SOME DETAILS.

The idea is to have generating stations here and there, and make gas on the most economical principles, looking almost entirely for the profit to the bye-products. For convenience of charging storage boats may be used. In looking at the cost, attention may be drawn to the fact that to-day the Widnes Corporation is selling gas at a shilling a thousand feet for power, and at one and fourpence to the ordinary householder. That shows that gas can be made very cheaply and sold at a profit at a low price, owing to the value of the residuals. Colonel Thom urges that thus his power will really cost nothing. The engine and fittings can be easily fixed in any boat. When under way the boat was making four and a half miles an hour and using two hundred cubic feet of gas, which may cost anything from a shilling to nearly two per thousand.

Among those present yesterday, in addition to Colonel Wilson Thom, were Mr. J. Oldfield, general traffic manager of the Bridgewater Canal; Mr W. H. Wiswall, jun., engineer; Mr. Ernest Gardner, L. Gardner and Sons Limited, Barton Hall Engine Works. Patricroft; Mr. John King, incorporated accountant, Wallgate, Wigan; Mr. F. Morton, Messrs. Fellowes. Morton, and Clayton Limited, canal carriers; Mr. L Welwyn White, B. White and Sons, engineers, Widnes, who supplied the tubes; Mr. C. R. Dykes, general manager, Rochdale Canal Company and Mr. G. P. Davies. representing H. Maconochie, Vertical Self-Cleaning Gas Retort Company Limited.