

**FUEL COST AND MECHANICAL DRAFT.**

The possibilities in the way of reduction of fuel cost in modern boiler practice by the introduction of mechanical draft are well exemplified by the accompanying results obtained at the United States Cotton Co., Central Falls, R.I. This record covers a period of fifty-two weeks.

Number of hours run.....	2,998.	
Average indicated horse-power....	1,543.84	
Coal.....	Pounds burned.	Cost.
Buckwheat.....	6,074,400	\$7,316.89
Anthracite coal....	1,173,826	800.34
Cumberland.....	565,906	836.00
Total.....	7,814,132	\$8,953.23

Cost per ton.....\$2.29  
Cost per 1 h.p. per year.....5.80

**COMPOSITION OF MIXTURE.**

Buckwheat.....78 per cent.  
Anthracite dust.....15 "  
Cumberland.....7 "  
100 per cent.

The plant consists of three Babcock & Wilcox boilers of 325 rated horse power each, a total of 1,005 rated horse power. The engine is a cross-compound Harris-Corliss, developing, as will be noted, an average of 1,543.84 indicated horse-power. The remarkably low fuel cost of \$5.80 per 1 h.p. per year in a plant without economizers, is primarily due to the employment

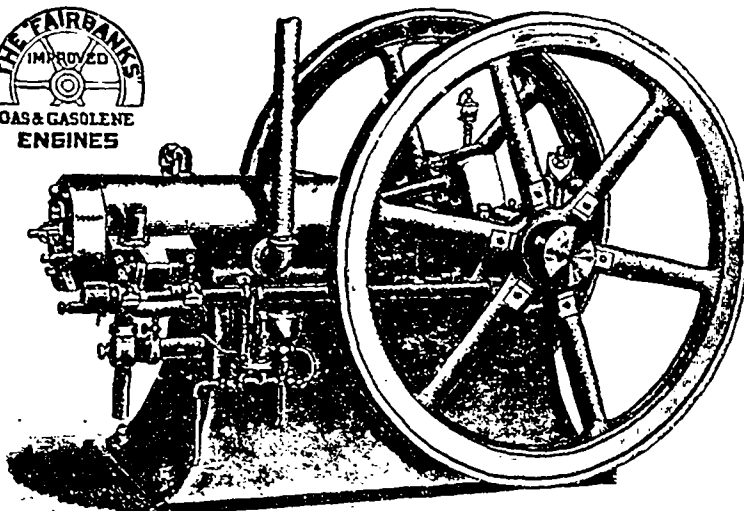
of a low grade mixture costing only \$2.29 per ton, the burning of which has been rendered possible by the introduction of mechanical draft. The draft of the chimney which was previously employed lacked the intensity necessary for the free combustion of this fuel, and as a consequence it had been necessary to use Cumberland semi-bituminous Coal.

The installation of the fan, costing less than \$600, brought about an annual saving of no less than \$6,500 in the fuel bill. The fan, which was built by the B. F. Sturtevant Co. of Boston, is provided with a direct attached engine, the speed of which is regulated by a device of the Chief Engineer, Mr. Thos. P. Burke, whereby a scarcely noticeable change in the steam

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