

driven by a separate engine. Each fan is capable of independently producing the draught for the entire plant, and thus serves as a relay, if desired. Such an apparatus, with the short stack, can be installed complete, under ordinary conditions, for about \$3,500 (£700). The total economy in first cost effected by the introduction of the mechanical draught plant, which amounts to a reduction of about sixty-two per cent., may be indicated as follows; the saving of space occupied by the chimney being neglected:—

Chimney Draft.	
Cost of chimney.....	\$9,000 00
Cost of damper regulator and dampers	300 00
	<hr/> \$9,300 00

Mechanical Draft.

Cost of fans, engines, draft regulator and short stack, installed complete.....	\$3,500 00
Saving by use of mechanical draft	5,800 00
	<hr/> \$9,300 00

A still further reduction might have been secured by designing the plant so as to operate the boilers at somewhat above their rated capacity, as could be readily done by means of the same mechanical draught apparatus. The omission of one boiler would bring the rated capacity down to 1,400 horse power, and would call upon the fans to increase the steaming capacity of the other boilers by only about fourteen per cent. above the normal. This would show an additional saving in first cost which may be thus presented:—

1,600 Nominal Horse Power Plant.

Cost of 8 boilers	\$25,000 00
Cost of settings, etc.	6,000 00
Cost of building	11,000 00
	<hr/> \$42,000 00

1,400 Nominal Horse Power Plant.

Cost of 7 boilers	\$21,875 00
Cost of settings, etc., about	5,500 00
Cost of building, about	10,500 00
Saving by use of mechanical draft	4,125 00
	<hr/> \$42,000 00

This shows a possible supplementary saving on the entire plant of \$4,125 (£825), which makes a total reduction of \$9,925 (£1,985) to be credited to the account of the mechanical method. Of course the fixed charges for interest, taxes and insurance will

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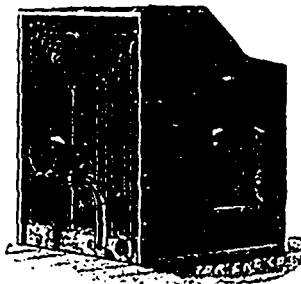
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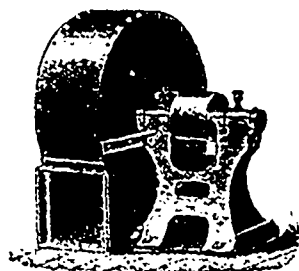


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