

**NOTES.**

Paint your boiler fronts white; black radiates more heat than any other color.

How much ash does your coal give? If you don't know this, you should lose no time in getting the information.

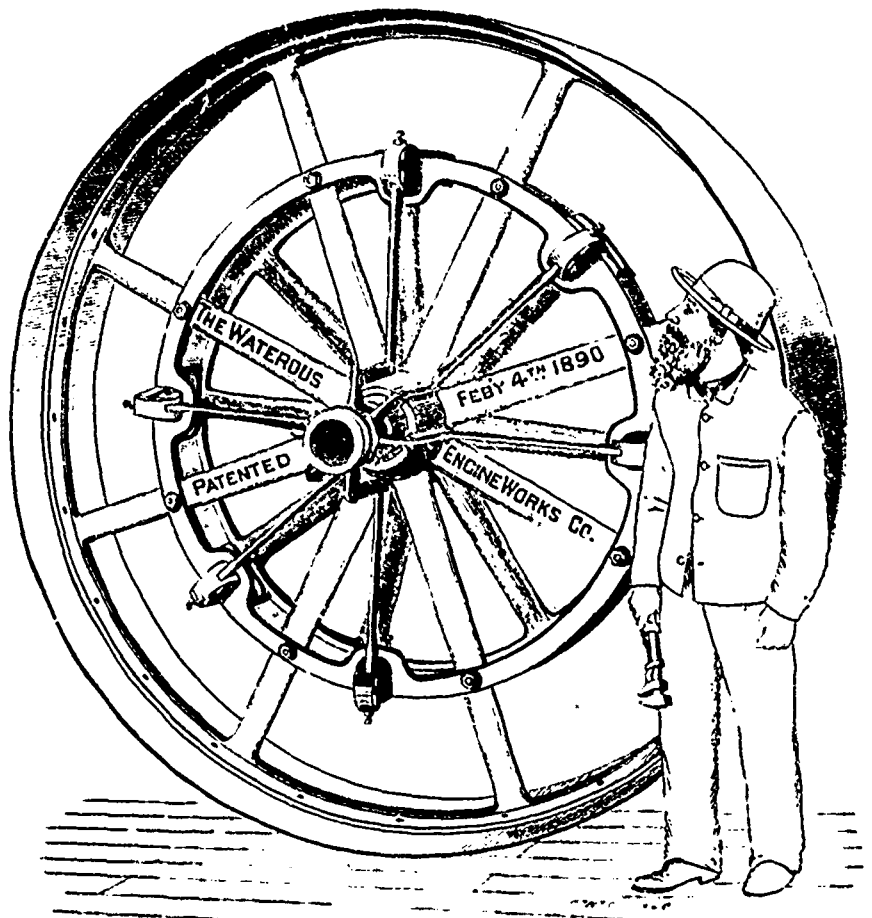
The power absorbed by the reciprocating parts of an engine during each stroke is equal to their weight lifted as many feet high as would be necessary in order to produce their velocity by falling. This can be calculated by the rules relating to the velocity of falling bodies.—*Stationary Engineer.*

Phonographs are to be used in Mexican post offices for the benefit of those who cannot read or write. The illiterate Mex can will go to the post office, talk his message into the receiver of the phonograph, and when the cylinder reaches its destination the persons addressed will be sent for and the message will be repeated to him from another machine.

Inexpensive but handsome incandescent lamps are now being made in various colors. The bulbs are made of white glass and then dipped in colored varnish, which is as durable as the lamp itself and is transparent. Sandblasting a lamp first and then dipping it in red varnish is said to produce a fine rose-colored effect, and even lettering on the bulb may be produced in this way.

The practice of expressing the economy of a steam engine in so many pounds of coal per horse power has been almost universal in the past, and though some few engine builders are using a different standard, the former may still be considered the prevailing method. Certainly nothing could be more fallacious than to speak of the consumption of fuel by the engine, which consumes steam only, or should if proper conditions exist. An improved automatic cut-off engine is sold under a guaranty of, say, three pounds of coal per horse power per hour. How does the maker arrive at this figure, not knowing the economy of the steam generator? With an average boiler performance, the quantity of steam supplied to the engine on the above rating will be that due to the evaporation of about seven pounds of water evaporated per pound, or 21 pounds of water per three pounds, from and at 212 degrees Fahr. Therefore the economy of the engine should be rated at 21 pounds of water per horse power per hour, instead of three pounds of coal.—*Iron Age.*

**GRIPS ALWAYS MOTIONLESS WHEN OUT OF GEAR.**



6 Grip Pulleys, 9 x 22, Furnished Royal Electric Co., Montreal.

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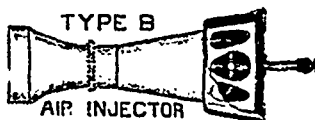
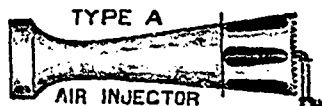
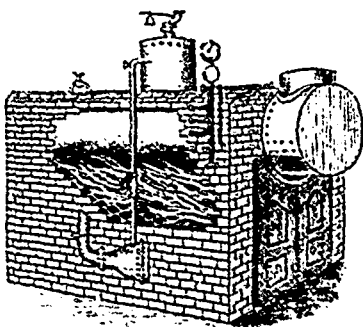
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*Testimonial from the Wilson Publishing Company,*

TORONTO, CAN., Nov. 4th, 1891  
DEAR SIR,—Please find enclosed herewith cheque for the combined Air Injector and Exhauster purchased from you. I am very much pleased with your invention; we have used other air injectors, also a fan for burning hard and soft coal screenings under our steam boilers, and prefer your device to any of them. It requires less steam and makes less noise in operation. My engineer uses it in the morning to start the fire with less than five pounds of steam shown on the steam gauge. This, together with the fact that it is independent of the engine and machinery and can be operated to its full capacity without running either, gives it a decided advantage over fans. I can safely recommend it to any one requiring a first-class blower.

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