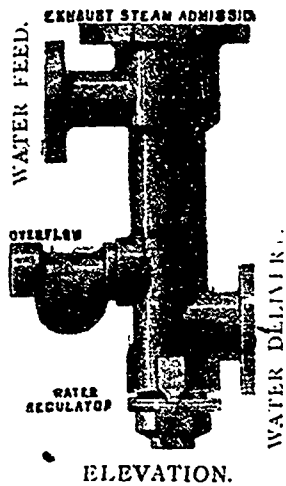
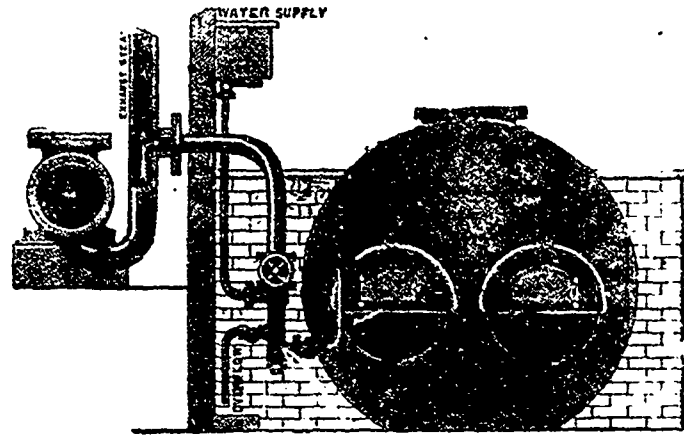


# CLAIMS

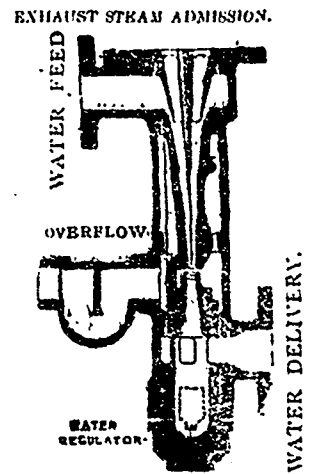
Are so varied and numerous in these days, that they who have any to present, find it needful to be clamorous in order to obtain a hearing. An appeal to instinctive ECONOMY however may be expected to be listened to. *Preserving* heat necessarily *economises fuel*; this twofold object is effected by the New Patent Exhaust-Steam Injectors for Non-Condensing Engines. These Injectors, illustrated below, possess the following twelve advantages:—



ELEVATION.



ENGINE AND BOILER, WITH INJECTOR ATTACHED.



SECTION.

- 1.—Waste steam is substituted for ordinary steam power.
- 2.—Pumps and Feed-Water Heaters are superseded by this patent.
- 3.—The Waste-Steam, does the work of the Pumps and saves the expenditure of power, otherwise required to work them.
- 4.—The Waste-Steam, in passing through the Injector, heats the water to about 190° Fahr., and thus dispenses with costly Water Heaters.
- 5.—By the application of the Injectors, the steam-generating power of boilers is rendered equivalent to the addition of ONE-EIGHTH TO THE HEATING SURFACE.
- 6.—The large quantity of Condensed Steam in the Injector REDUCES BACK PRESSURE, and consequently increases the power of the Engine.
- 7.—Inasmuch as hot water only enters the Boiler, the straining of plates, consequent on unequal expansion is avoided.
- 8.—The Waste-Steam Injector is easily fixed, and it can be managed by any stoker. If the Engine should stop, when re-started, the Injector will re-commence the feeding process.
- 9.—There is nothing attaching to the Injector that involves wear.
- 10.—The inside can be examined without breaking any joints,
- 11.—Stoking-labor is necessarily saved by adopting the use of the Injector.
- 12.—The saving of coal ranges from 15 to 20 per cent. ; when an average sized Injector (No. 9), is used, it returns more than half a ton of Waste-Steam to the Boiler every hour, and therefore saves about A TON OF COAL PER DAY OF TEN HOURS.

When it is understood that an increased supply of Steam from the Boilers is an advantage accruing from the adoption of this Waste Steam Injector, additional to the foregoing, it will be obvious that any one who may adopt it will be quickly reimbursed.

**F. W. GATES, Jr.,**

**HAMILTON,**

SOLE LICENSEE OF THE INJECTOR, FOR THE DOMINION OF CANADA.