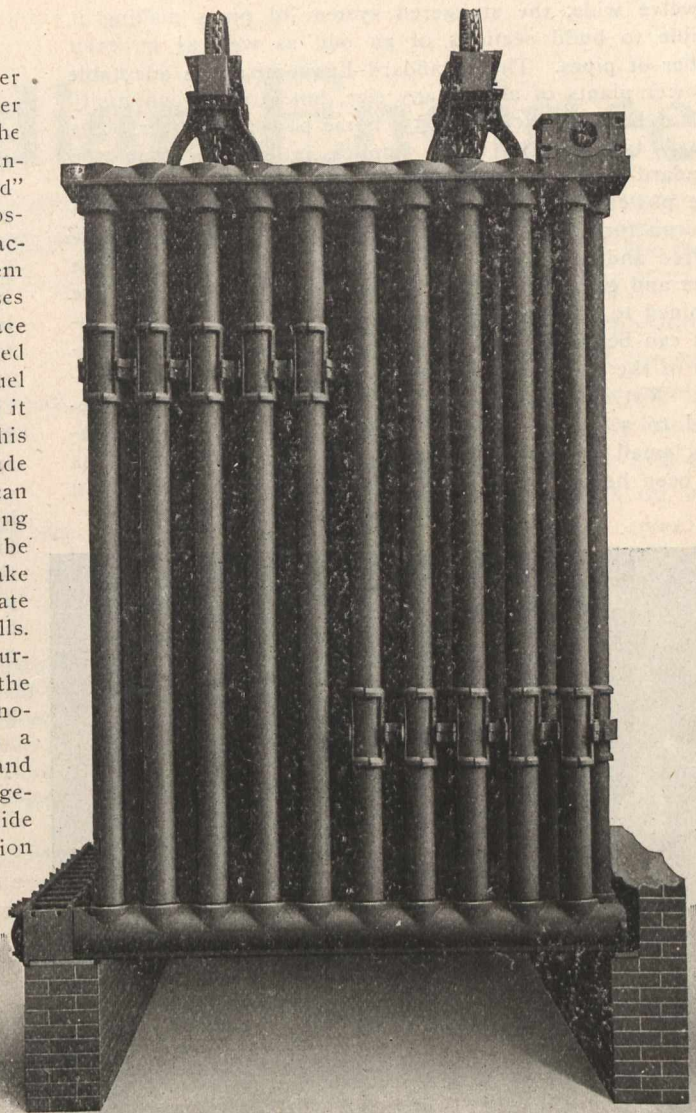


NEW FUEL ECONOMIZER.

The two most essential qualities of a fuel economizer are its ability to utilize most efficiently for heating water a maximum amount of heat (otherwise wasted) from the escaping gases, and the accessibility of all surfaces for cleaning, repairing and renewals. The Sturtevant "Standard" and "Pony" type economizers were designed to make possible these two requisites. These economizers utilize practically all the waste heat from the gases by a patent system of staggered pipes. This system compels all the hot gases to encircle the pipes, increasing the effective heating surface to a maximum. The gases are thus broken up and forced to give up their heat to the surrounding surfaces. A fuel economizer must be accessible both inside and outside if it is to be a valuable adjunct to a power plant. To make this possible the joints of the Sturtevant economizer are made taper metal to metal, and are so designed that any pipe can be taken out and a duplicate substituted without disturbing any other pipe, section or side walls. This would not be possible if packing, cement or rusting were used to make tight joints. Any header can be withdrawn and a duplicate replaced without disturbing any other section or side walls. There are no connection pipes to remove and all water surfaces are rendered accessible by the simple removal of the caps. The taper metal to metal joints make these economizers especially valuable for high pressures and are a marked improvement over gasket joints which spring and leak under such pressures. The scrapers are interchangeable and the driving mechanism positive in action. A guide plate for the scrapers is used to insure the scrapers position and prevents them from sticking and breaking. The driving pulley can be belted up parallel or perpendicular to the length of the economizer.

The Sturtevant economizers are not designed for forced circulation, but the connections are made in such a way that the flow of water is started in the right direction, and tends to keep the flow up and down the consecutive sections without making undue work for the pump. The foundations required for these economizers are comparatively simple. This is due to the fact that the machines are so constructed that the parts themselves contain the rigidity that would otherwise be required in the foundations. The fact that taper metal to metal joints are used also eliminates the necessity



of building more rigid foundations, as there are no gaskets to loosen and leak if the foundations spring slightly.

Two general types of economizers are made by the B. F. Sturtevant Company, the "Standard" and "Pony". The "Standard" is built in sections containing pipes from four

