introduced in the decomposition of steam (the heat of combustion of hydrogen being 4.28 times that of carbon).

2. Carrying off a proportion of the sulphur primarily in combustion with the hydrogen, and so making practicable the use of materials having that element in excess.

3. Effecting a saving of the loss of iron—especially apparent where a high proportion of oxide of iron is present by

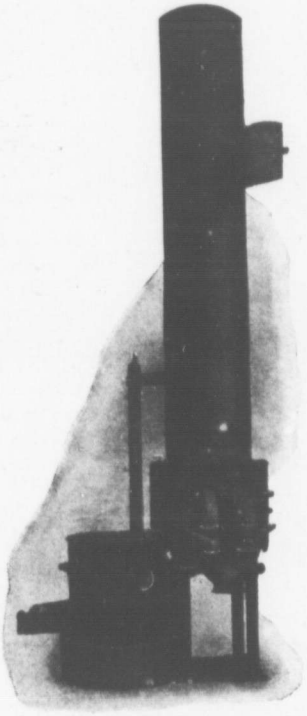

FIG. 1

the increased volume of actively reducing gases produced by the decomposition of steam.

4. Securing by more perfect combustion, high liquification and corresponding homogenity of iron melted.

Assuming these objects to be attained by the process, it is obvious that the advantages incidental to it are:—

(1) A saving of fuel.