

with his name* is shown in Fig. 2, and consists of a crucible A of graphite or similar refractory material, and of two rods, B and C, for leading in the current. The lower rod was made of metal, and fitted into the base of the crucible, while the upper was of carbon, and acted by an automatic regulating device to maintain the arc E of a constant length. The metal to be melted was placed in the crucible, making electrical contact with the lower pole C; then the rod B was lowered until an arc was started between this rod and the metal in the crucible.

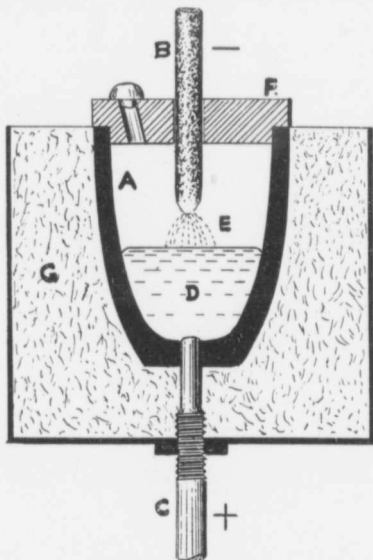


Fig. 2.—Siemens' Vertical Arc Furnace.

In the illustration the metal is shown melted, at D, as it would be at the end of the operation.

The positive pole is always hotter than the negative pole, and for this reason the metal to be melted is made the positive pole of the arc. A lid, F, was provided with a hole for observing the operation, or making additions to the charge, and a protecting

*W. Siemens' English patent, 2,110, 1879, see Borchers' Electric Smelting.