

# UNITED STATES PATENT OFFICE.

JOSEF SAVELSBERG, OF PAPENBURG, GERMANY.

## PROCESS OF TREATING ORES.

No. 875,852.

Specification of Letters Patent.

Patented Jan. 7, 1908.

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*To all whom it may concern:*

Be it known that I, JOSEF SAVELSBERG, a subject of the King of Prussia, residing at Papenburg-on-the-Emis, Germany, have invented certain new and useful Improvements in Processes of Treating Ores; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Heretofore ores and mattes mixed with sulfur or sulfur containing substances, coke or coal and flux have been blown in a converter in order to sinter the mass preparatory to further metallurgical treatment and as a substitute for the more expensive briquetting. I have found that such sintering process is applicable to ores which do not need a special addition of sulfur since these ores contain sufficient sulfur to form a matte. I have further found that this sintering process is also applicable to such ores, as *e. g.* iron ores, which for melting do not need sulfur at all. In this case it is sufficient to add to the mixture finely divided coke or the like in such quantity as may be adapted to furnish the necessary heat, which otherwise would have been produced by the addition of sulfur. The ore - mixture thus obtained and consisting of ore, of slag-material or fluxes and of a suitable quantity of fuel, such as coke and the like, in a finely divided condi-

tion is then in known manner blown in a Bessemer converter until sintered. This sintered mass is then broken up and fed direct to the blast furnace in the same manner as lump ore.

The fluxes added are acid or basic fluxes, such as quartz rock, lime-stone, magnesite and the like, a protecting lining in the converter not being necessary for carrying out this process.

The process is especially applicable to the treatment of all fines or ores of pulverulent nature which in view of this pulverulent nature have been customarily briquetted or use in the blast furnace.

I claim:—

1. The method of treating pulverulent ores, which comprises mixing them with slag forming materials and carbonaceous fuel and blowing the same until sintered in a pneumatic converter.

2. The method of treating pulverulent ores, free from sulfur, which consists in mixing the ores with slag forming materials and carbonaceous fuel and blowing the same in a pneumatic converter until sintered.

In testimony that I claim the foregoing as my invention, I have signed my name in presence of two subscribing witnesses.

JOSEF SAVELSBERG.

Witnesses:

EMIL C. DANNENBERG,  
HENRY HASPER.