UNITED STATES PATENT OFFICE.

J. MILTON SANDERS, OF NEW YORK, N. Y., ASSIGNOR TO JAMES H. AND CHARLES H. COVEL, OF SAME PLACE.

IMPROVEMENT IN PROCESSES FOR MAKING CAST METAL FROM TINNERS' SCRAP.

Specification forming part of Letters Patent No. **191,780**, dated June 12, 1877; application filed October 12, 1876.

To all whom it may concern:

Be it known that I, J. MILTON SANDERS, of the city of New York, county and State of New York, have invented a new and useful Process for Making Cast Metal from Tinners' Scrap or Waste, which process is fully set forth in the following specification:

As tinned iron plate is made of iron that, from its great purity, fuses at a very high temperature, it is necessary to treat it with something that will facilitate not only its fusion, but its property of becoming more fluid when melted.

To attain these desiderata, I subject the tin scraps to the following process: Into a suitable furnace, such as is generally used for melting cast-iron, I throw the tinners' scrap, and subject it to a temperature of from 3000° to 4000° Fahrenheit, or sufficient to volatilize the adhering tin and separate it from the iron, and to fuse the iron into a consistent mass, assisting the process by the addition of cryolite, or any other suitable flux. During the time that the fusion is progressing a stream of hydrocarbon, such as crude petroleum or other hydrocarbon, is injected into the fused iron, for the purpose of rendering the otherwise tenacious mass quite fluid, and capable of filling molds and taking sharp impressions; and I find that the small amount of tin left incorporated with the iron improves its quality as a casting metal.

I inject about one hundred pounds of hydrocarbon to each and every ton of melted iron, to make it flow readily, and cast in a proper manner.

What I claim, and desire to secure by Letters Patent, is—

The process of making cast metal from tinners' scrap, which consists in subjecting the scrap to a temperature of 3000° or 4000°, or sufficient to effect the volatilization of the tin coating, and at the same time fusing the iron base plates to a consistent mass by suitable flux, as described, liquid hydrocarbon being injected during treatment, substantially in the proportions specified, whereby the metal is properly carburized, and its ready flow in casting insured, all substantially as herein set forth.

J. MILTON SANDERS.

Witnesses:

SAMUEL SCHUMACHER,

W. W. STADLER.