

# UNITED STATES PATENT OFFICE.

JAMES SANGSTER, AMOS W. SANGSTER, AND WM. H. SANGSTER, OF BUFFALO, NEW YORK, ASSIGNORS TO THEMSELVES, HUGH SANGSTER, AND THOS. J. CONROY, OF SAME PLACE.

## IMPROVEMENT IN THE MANUFACTURE OF INK.

Specification forming part of Letters Patent No. **53,379**, dated March 20, 1866; antedated March 5, 1866.

*To all whom it may concern:*

Be it known that we, JAMES SANGSTER, AMOS W. SANGSTER, and WILLIAM H. SANGSTER, of the city of Buffalo, in the county of Erie and State of New York, have discovered a new and useful Combination of Materials for Printers' Ink; and we hereby declare that the following description thereof is sufficiently clear and exact to enable others skilled in the art to make and use our invention.

We manufacture our ink of pulverized mineral coal in combination with oil, soap, and rosin. Either of the mineral coals will answer, but the anthracite coal is preferred, as being the best and the blackest. The bituminous coal will produce a brown color, which is not as good for printing, but can be used for some kinds of paint.

We prepare our ink as follows: The coal is ground to a coarse powder in a cast-iron mill similar to a coffee-mill. It is then passed through a mill such as is used in grinding wheat, and thereby reduced to a fine powder. The oil and rosin, with a small proportion of soap, are now added in. It is again passed through what is commonly known as a "paint-mill," and ground finely for use.

The materials used are mixed in about the following proportions: To six quarts of oil add six pounds of rosin and one and three-quarters pounds soap. Rosin soap is preferred. They are well boiled together, after which the pulverized coal is added in sufficient quantity to give the desired blackness. The proportion of oil must be varied according to the season and climate. In warm weather less oil and rosin are required in proportion to the coloring-matter used than in cold weather.

What we claim as our invention, and desire to secure by Letters Patent, is—

A new and useful discovery of a combination of pulverized mineral coal with rosin, soap, and oil, or their equivalents, and the production thereby of a cheap compound to be used as ink for printing.

JAMES SANGSTER.  
AMOS W. SANGSTER.  
WILLIAM H. SANGSTER.

Witnesses:

THOS. J. CONRY,  
N. MENAAR.