

UNITED STATES PATENT OFFICE.

JUDAH TOURO ROBERTSON, OF NEW YORK, N. Y.

IMPROVEMENT IN PROCESSES OF RENOVATING WASTE INK.

Specification forming part of Letters Patent No. **181,597**, dated August 29, 1876; application filed December 16, 1875.

To all whom it may concern:

Be it known that I, JUDAH TOURO ROBERTSON, of New York, in the county and State of New York, have invented an Improved Process of Renovating Waste Ink, of which the following is a specification:

In copper and steel plate printing, in which the impression is taken from the ink deposited in the incisions in the plate, the entire surface is covered with ink by means of an inking-roll, and the superfluous ink is then wiped from the polished portion of the plate. In work where even the entire field of the plate is occupied with fine engraving, much the larger portion of the ink that has been used on the plate is wiped from it before taking the impression; and in bank-note and bond printing, where a large part of the paper is left blank, it has been estimated that only one pound of ink out of ten is utilized in the printing. The ink consumed in this description of work is an important part of the expense. As the inking-rollers and the wiping-rags are generally of woolen or cotton cloth, and sometimes of the fabric known as "Canton flannel," which has a fleecy nap on one side, the waste ink wiped from the plates contains fibrous matter which renders it unfit for further use. In power-presses in which the wiping-pads are cleaned by contact with the same or other material, from which in turn the ink is removed by a scraper, it may be intermixed also with other matter. The boiled oil, too, with which the ink is mixed, causes it quickly to form a skin on the surface exposed to the air, which renders it unfit for use.

The object of my invention is to renovate the waste ink which has become useless by the different causes, among others, which I have named, by separating the ink from the impurities; and also to recover the ink from the cloths upon which it has been wiped. To accomplish this object I keep the waste ink covered with water, to prevent, as far as possible, the formation of skin, and when a suffi-

cient quantity has been accumulated I run it through a centrifugal machine composed of a rapidly-revolving wire sieve or screen, supported by an external perforated plate, similar to the machines used for extracting the molasses from sugar, and then grind and temper it as may be required in a mill or a mixing-machine.

By means of a sieve the sticky semi-fluid ink is effectually separated from the fibrous and scaly and other more solid impurities, which are left within the sieve, and the centrifugal force developed by the heavy particles of which the ink is composed when rotated in the machine effects a separation from the lighter impurities, which it would be impossible to accomplish by pressure or force applied to any other species of filter or strainer. In the same way the ink may be separated from the wiping-rags by spreading them inside the machine, although care must be taken, by keeping them constantly wet, to prevent their taking fire by spontaneous action.

I do not claim the use of a centrifugal machine merely to extract fluid from solid matter; nor do I wish to claim the separation of particles according to their size by means of a strainer or filter; but my improvement in this respect, and as part of a process, consists in the renovation or restoration of waste ink by the separation of the heavy semi-fluid mass from the fibrous and other lighter impurities by means of centrifugal action.

I claim as my invention—

The process of preserving, separating, and renovating oil-color or ink that contains fibrous matter or other foreign substance, by first immersing it in water, then running it through a centrifugal machine, either with or without water or other fluid, and then grinding it in a mill, substantially as described.

J. TOURO ROBERTSON.

Witnesses:

CHARLES THIES,
WM. KEMBLE HALL.