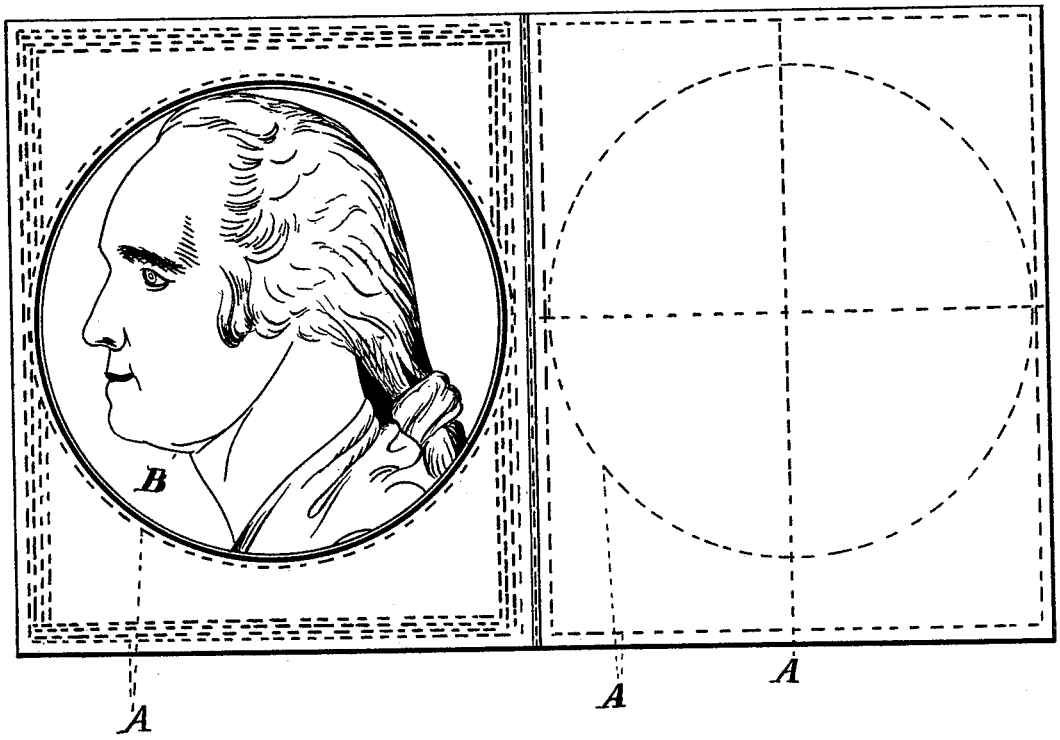
J. SANGSTER.
Postage-Stamp.

No. 202,760. Patented April 23, 1878.



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IMPROVEMENT IN POSTAGE-STAMPS.

Specification forming part of Letters Patent No. **202,760**, dated April 23, 1878; application filed February 11, 1878.

To all whom it may concern:

Be it known that I, JAMES SANGSTER, of the city of Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Postage or other Stamps, which improvements are fully set forth in the following specification and accompanying drawings.

The object of this invention is to loosen the fiber of the paper on portions of the stamp not covered by the design or printing, so that the coloring matter of the canceling-ink will more readily penetrate such more absorbent, open, or softer portions of the stamp, and thereby render the washing or otherwise cleaning of the same for fraudulent reuse impossible.

The further object is to render parts of the paper more absorbent, so as to take up the ink, but without permitting any of the material used to be retained so as to affect the ink subsequently applied.

For these purposes I employ any of the alkalies of sufficient strength—caustic potash or caustic soda—(both answer the purpose) or any acid or chemical that will, to a certain extent, dissolve or otherwise loosen the sizing in the paper, and thereby produce the desired result.

It is best to put the alkali or acid on such portions of the stamp (by ruling or otherwise) after the design has been printed. If it is done before, the heavy pressure required by steel or copper plate printing would be liable to press the treated portions close together again, and thereby, in a measure, defeat the object sought to be gained by this invention.

A stamp treated in this way is just as strong and durable in the printed portions as the ordinary stamp, and is no more liable to be affected by moisture, while it is capable of holding the canceling-ink on certain portions, so that it cannot be effectually cleaned, as before mentioned, and the paper in the portions so treated will be more easily rubbed off than the rest of the stamp, and thereby render it more easily disfigured during the process of an attempted washing or cleaning.

In said drawings the parts of the stamp treated according to my invention are shown by the dotted lines A, B being the stamp-design.

I do not confine myself to any particular design of stamp, or of the chemically-prepared portions, the object being to treat only such portions as are not covered by the ink used to print the stamp-design.

It is well known that with the ordinary postage-stamp the stamp-design is nearly indelible, while the canceling-ink is not. By treating a stamp as herein described, the best paper employed for steel or copper plate printing may be used. The stamp-design is just as indelible as any of the ordinary stamps, as it is printed in the usual manner, while the canceling-ink used thereon is equally indelible on the chemically-treated portions of the paper; and such portions of the paper being more easily abraded than the rest, it is impossible to wash or otherwise clean the stamp for fraudulent reuse.

If the chemically-treated parts should be made to cross the ink-lines composing the stamp-design without being neutralized or cleaned out from the paper, the oily or resinous matter in such ink (if it be an alkali in the paper) would be partly converted into soap, and would thereby become soluble, or partly soluble, in water, and so render the stamp-design liable to be injured by moisture, which is one of the objections this invention is intended to avoid. If the stamps are printed from a relief-line or wood-cut engraving, or by the lithograph process, the paper may be prepared beforehand by treating certain portions of its surface, either in lines or dots, with an alkali, acid, or other chemical that will loosen the fiber of the paper or partly dissolve the sizing therein, and then afterward thoroughly washing or neutralizing it, thereby relieving it of the chemical used, so that if any part of the stamp-design should be printed thereon it will not be affected thereby, while the paper will be more absorbent in the parts so treated, and thereby render the canceling-ink used in the cancellation of the stamp indelible, as hereinbefore mentioned, so that both the stamp-design and the canceling-ink are equally indelible.

I am aware that alkaline compositions have been applied to paper so as to saponify the ink with which the stamp is afterward printed; but it will be noted that in this invention the alkali is applied so as to affect the paper at

points where the printing-ink does not coat the surface, or is entirely removed before printing.

I claim as my invention—

1. A postage or other stamp having printed and unprinted portions, the latter being treated with an alkali or its equivalent, so that the fiber of the paper may be loosened, softened, or rendered more absorbent in such portions, substantially as specified.

2. The method of preparing paper for printing postage-stamps or other similar articles, by first treating a part of its surface, A, with an alkali or other chemical, whereby the fiber is rendered more loose and absorbent in the parts so treated, and afterward washing the same or neutralizing the chemical used, so that the ink employed to cancel the stamp will be more firmly fixed in the stamp, as described.

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