

No. 665,622.

Patented Jan. 8, 1901.

F. W. WEEKS.
MANIFOLD PAPER.

(Application filed Oct. 23, 1899. Renewed Nov. 19, 1900.)

(Specimens.)

Fig. 1.

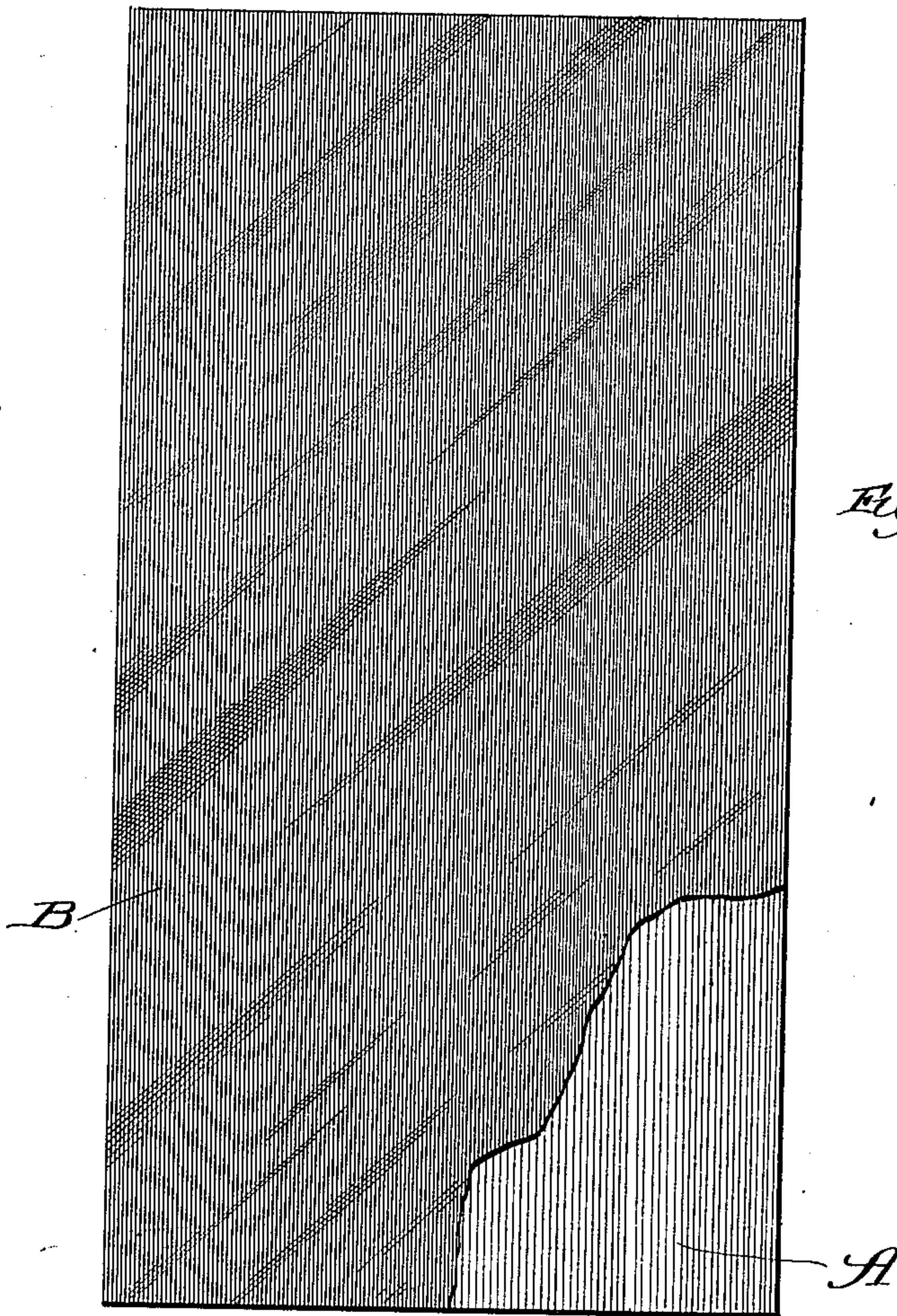
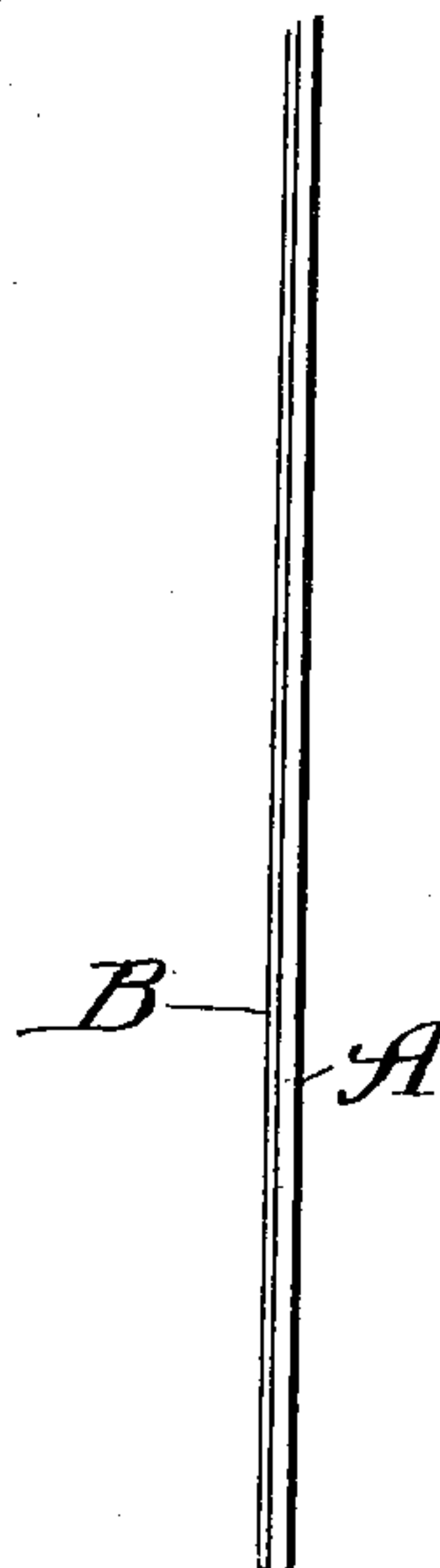


Fig. 2.



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UNITED STATES PATENT OFFICE.

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MANIFOLD-PAPER.

SPECIFICATION forming part of Letters Patent No. 665,622, dated January 8, 1901.

Application filed October 23, 1899. Renewed November 19, 1900. Serial No. 37,051. (Specimens.)

To all whom it may concern:

Be it known that I, FRANK W. WEEKS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Manifold-Paper, of which the following is a specification.

My invention relates to that class of manifold-papers which are composed of a sheet of ordinary paper having one or both sides coated with carbon, and particularly to the kind of carbon or coloring-matter applied to the paper, so as to make a concrete article of manufacture, all of which will be more fully hereinafter set forth.

The principal object of my invention is to provide a simple, economical, and efficient article of manufacture known as "manifold-paper" having a surface or surfaces of hardened finished carbon; and the invention consists in the article of manufacture hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a plan view of a piece of manifold-paper constructed in accordance with my improvements, and Fig. 2 a broken side elevation of the same.

In the art to which this invention relates it is well known that the ordinary manifold or carbon paper as used in commerce is provided on one or both of its surfaces with a coating of carbon or other coloring-matter, and it is also known that the coloring-matter is applied to the paper in a soft condition and remains thereon in a soft condition, so that when the operator handles such paper the coloring-matter comes off, to the detriment of the paper and to the annoyance of the operator. The principal object of my invention, therefore, is to provide an article of manufacture known as "manifold-paper" with a hardened surface or coating of carbon or equivalent coloring-matter, all of which will more fully hereinafter appear.

In constructing my improvement I take a sheet of paper A and preferably apply a coloring-matter B thereto by means of a roll or other color-applying mechanism, and after such coloring-matter has been applied thereto it is hardened and finished by means of mechanism, preferably roll and polishing mechanism,

so that the coloring-matter is substantially evenly and uniformly applied to and spread over the surface and afterward hardened and finished. This paper I have found from experimental use to be very satisfactory in that, first, handling of the paper does not injure it to any appreciable extent, and, second, the coloring-matter does not come off, to the annoyance or discomfort of the operator.

The article of manufacture may be made by various kinds of machinery—such, for instance, as I have described in connection with my application for Letters Patent of the United States, Serial No. 671,281, filed February 23, 1898, to which application I respectfully refer those who desire a complete description of one class of machine for manufacturing the article. In this class of machines the coloring-matter is applied to the paper in the shape of a cake of the consistency of soap. It can then by means of a roll be evenly distributed on the paper, and after the color has been applied to the paper by roll or equivalent mechanism it can be spread thereon either by vibrating platens or irons or distributed by means of wing polishers and afterward hardened on the surface by means of rolls or polishers. The finishing or polishing of the paper, which also removes all surplus material, can be accomplished by means of rapidly-rotating wing polishers.

The cake of coloring material is formed as follows: A quantity of wax and tallow is taken and broken up in a finely-divided condition and a quantity of finely-divided carbon mixed therewith. The coloring material can be either lampblack or Prussian blue. After mixing the composition is melted and poured into molds, which will form cakes about an inch thick and of any desired length or width. I, however, prefer to use a cake twenty inches long and from eight to twelve inches wide. When cool the cakes should be about the consistency of hard soap.

The use to which this invention is principally applicable is in connection with telegraph-blanks, train-orders, letter-heads, and other blanks or forms which have printed matter upon one side of a sheet of paper which is adapted to be written upon with the usual appliances, such as a pen or pencil or

stylus or a type-writing machine, and are formed and printed in duplicate or triplicate, as may be desirable. When in duplicate, the back of one blank or form is provided with a surface of hardened carbon, as above described, and when in triplicate the first and second blanks are provided with the surface of hardened carbon on the backs thereof, as above described, so that an impression or imprint made on the face of the first of these blanks is copied on the adjacent registering blanks or sheets without the use of interleaving carbon-sheets. The invention is also applicable for many other purposes, such as stock-books, record-books, invoice-books, bills of lading, shipping-blanks, and the like, as will be readily appreciated by those skilled in the art who have carefully read the foregoing.

I claim—

1. As a new article of manufacture, a manifold-paper provided with a surface of hardened carbon or similar coloring material, substantially as described.

2. As a new article of manufacture, a manifold-paper with a surface of carbon or other equivalent coloring material hardened and polished, substantially as described.

3. As a new article of manufacture, a manifold-paper adapted to be written upon provided with a printed form or heading on one side and a surface of hardened coloring material on the opposite side, whereby a manifold copy or impression can be taken on an adjacent sheet without the use of interleaving carbon, substantially as described.

4. As a new article of manufacture, a manifold-paper adapted to be written upon on one side and provided with a surface of hardened coloring material on the other side, whereby a manifold copy, imprint or impression can be taken on an adjacent sheet without the use of interleaving carbon, substantially as described.

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Witnesses:

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