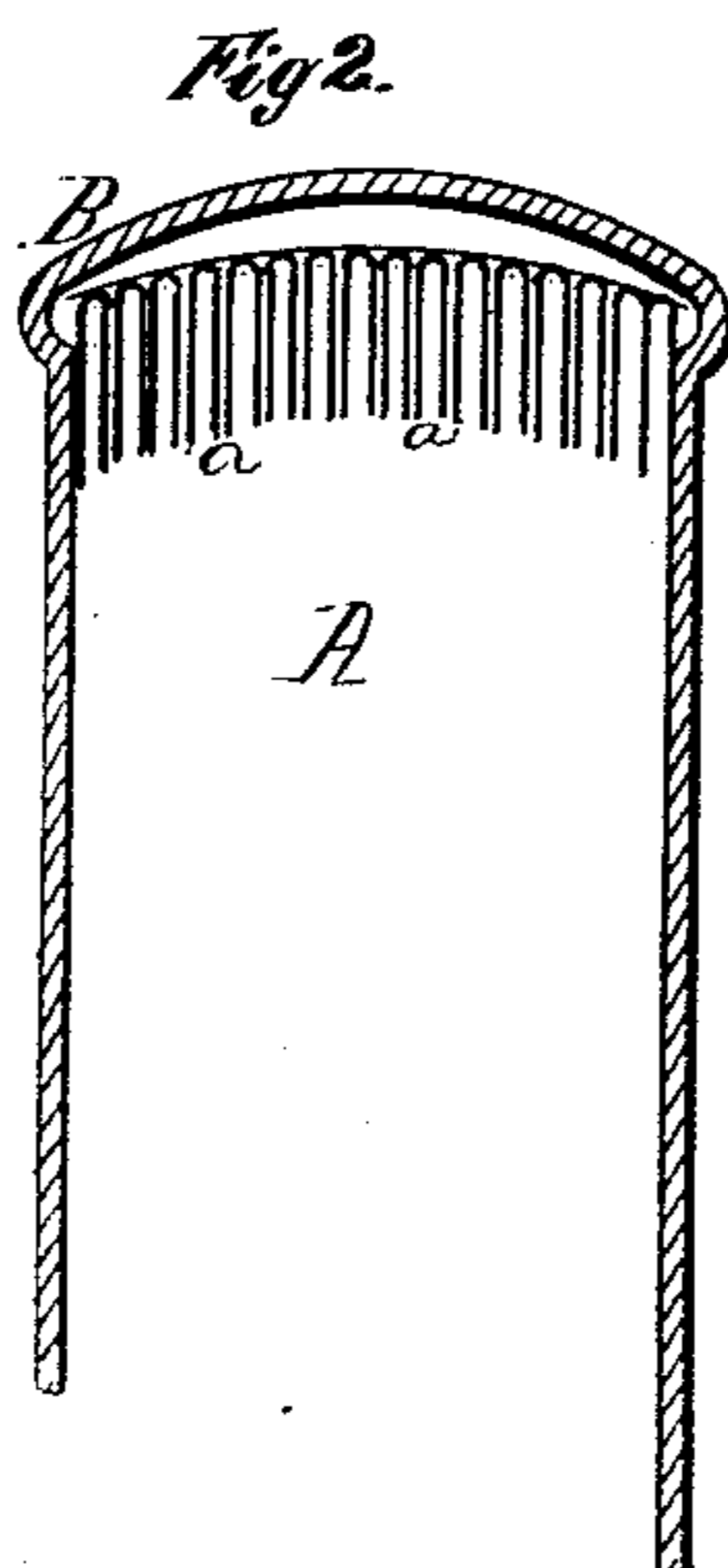
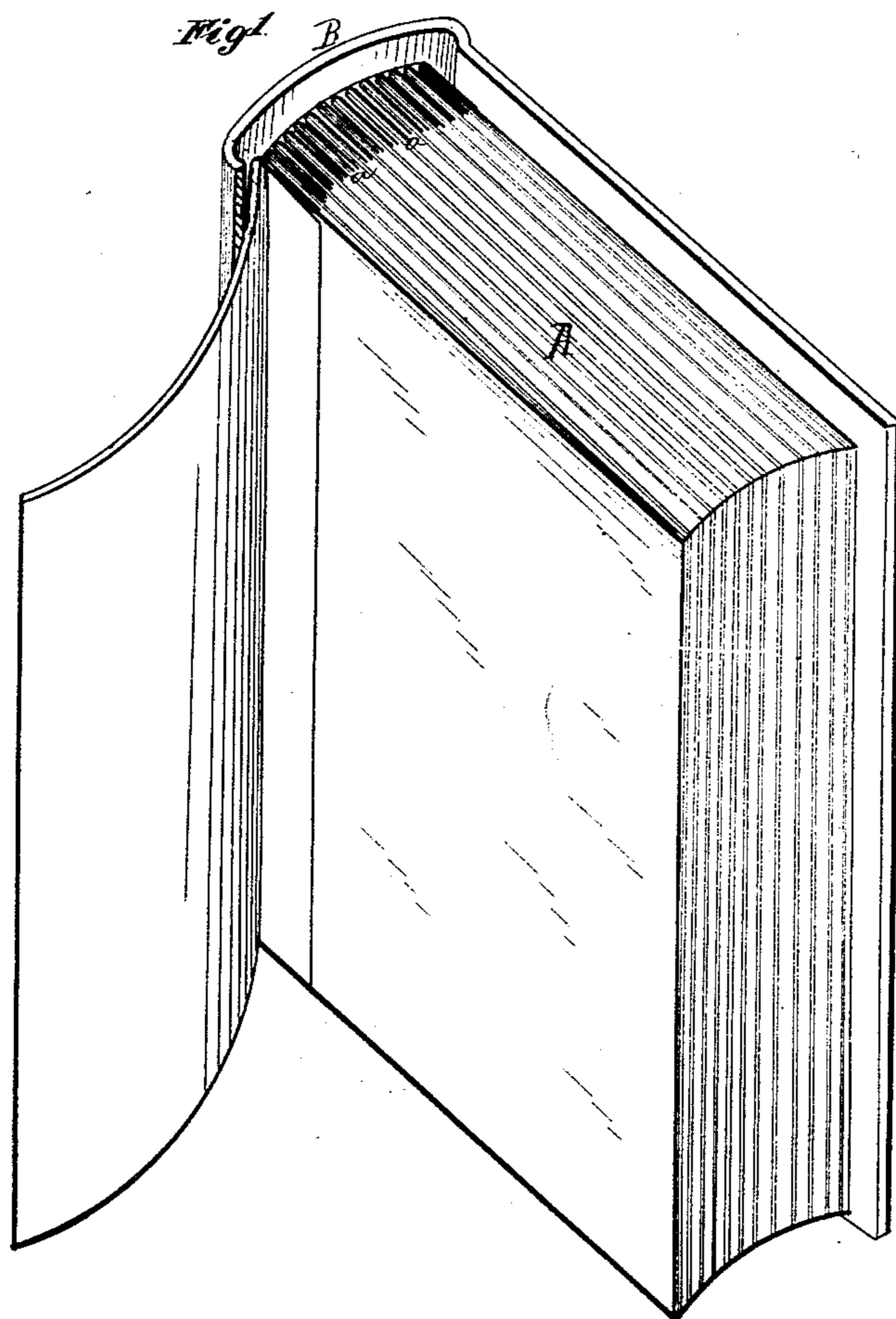


W. D. CHANDLER, E. WICKSTEAD &
J. D. VAN VOORHIS.
Copying-Book.

No. 210,239.

Patented Nov. 26, 1878.



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UNITED STATES PATENT OFFICE.

WILLIAM D. CHANDLER, EDWIN WICKSTEAD, AND JAMES D. VAN VOORHIS,
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IMPROVEMENT IN COPYING-BOOKS.

Specification forming part of Letters Patent No. **210,239**, dated November 26, 1878; application filed October 18, 1878.

To all whom it may concern:

Be it known that we, WILLIAM D. CHANDLER, EDWIN WICKSTEAD, and JAMES D. VAN VOORHIS, of Cranford, in the county of Union and State of New Jersey, have made certain new and useful Improvements in Copying-Books for Letters, Manuscript, &c., of which the following specification is a description.

The invention relates to various improvements on paper for taking copies of letters, manuscript, &c., and for use in letter-copying books; and consists in the production of sheets of paper, either bound or unbound, that will be rendered permanently moist by the application of a deliquescent and slowly-evaporating compound.

The invention also consists in a novel construction and arrangement of a series of guards at the back of the book, so that the moisture will be retained in the leaves, and precluded from soaking through the back of the book and injuring the same; and in various other features of improvement, all as hereinafter more fully pointed out.

The sheets of paper which we use for copying-books are first prepared in the ordinary way, and are then thoroughly saturated or coated with a deliquescent compound, which is composed of glycerine, pearlash, and French chalk, mixed and applied as follows: We mix fifty pounds of glycerine with four ounces of pearlash and eight ounces of French chalk, and reduce with water to a density of 18° Baumé. After the compound has been thoroughly mixed and reduced, as stated, to a specific gravity of 18° Baumé, it is applied to the sheets of paper by means of pads of suitable size, composed of a vegetable or animal fibrous substance, which are thoroughly saturated with the compound and placed at intervals between the sheets, (about one pad to every twenty sheets,) which are then placed in a screw-press and a slight pressure applied, so as to thoroughly saturate the sheets without wrinkling them. The sheets are left in the press for about four hours, when they are taken out and the pads removed. The sheets are then ready for use.

The function of each ingredient of the deliquescent and slowly-evaporating compound

above described is as follows: The glycerine, reduced and applied as above stated, produces a slowly-evaporating moisture. The pearlash—a deliquescent substance—is capable of attracting moisture from the atmosphere, and, when combined with the glycerine and applied as above stated, serves the double purpose of keeping the sheets of paper moist, and, should the sheets become dry by being subjected to artificial heat, of restoring the moisture when the sheets are placed in the outdoor air. The French chalk frees the sheets from stickiness naturally imparted to them by the glycerine, and when combined with the glycerine and pearlash and applied as above stated it precludes the sheets from adhering, and enables the operator to handle the moist sheets without delay or inconvenience.

In the accompanying drawing, Figure 1 is a perspective view, and Fig. 2 is a cross-section, of a copying-book having our improved guards or strips applied.

Similar letters of reference indicate corresponding parts in both figures.

A designates the book, and B the back thereof. *a a a* designate a series of intersecting guards or strips, of rubber-cloth or other moisture-proof material, arranged at intervals, so as to form an independent back for about every twenty-five sheets. The guards or strips extend the full length of the leaves, and lap over the inner edges of the sheets they inclose, and are all stitched or fastened together and to the sheets. The guards are thus between the sheets and the cloth back of the book, and constitute an efficient and reliable protection to the back, which might otherwise be injured by the moisture applied to the leaves, which would naturally work toward the back.

This part of our invention is applicable for use on copying-books for letters, &c., whether the leaves thereof are rendered permanently moist or simply moistened with water when used, and will be found exceedingly useful and beneficial in both cases.

Among the many advantages of this invention over the copying paper and books heretofore used the following may be stated:

The books or sheets of paper are always ready for use, as the application of our improved de-

liquescent and slowly-evaporating compound renders them permanently moist.

A copy of a writing can be taken with greater facility, in less time and by an ordinary hand-roller, as our composition has greater receptive power than is contained in the ordinary letter-copying paper saturated with water.

As all the sheets contain an equal amount of moisture, any number of letters or pages of manuscript can be copied at the same time, which cannot be done with paper prepared in the ordinary way and moistened with water, as one sheet would become dry before the operation of moistening the others and placing the manuscript or letters to be copied in position could be completed and the sheets placed in the press.

Letters copied on paper moistened by our improved compound do not become wrinkled, as is the case when copied on paper moistened with water, but, in fact, when taken from the book after the copy has been made, will be in the same smooth and fresh condition as before.

As a copy can be taken by an ordinary hand-roller, as above stated, the use of a heavy and expensive press is thus rendered optional with the user, and a great saving can thereby be effected.

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

1. A package or packages of sheets of letter-copying paper rendered permanently moist by being saturated or coated with a compound

composed of glycerine, pearlash, and French chalk, in the proportions specified, substantially as set forth.

2. The combination, in a letter-press book for copying letters, &c., of a series of intersecting guards or strips, *a a a*, of rubber-cloth or other moisture-proof material, arranged as shown, for protecting the back of the book and precluding the moisture applied to the leaves from soaking through it, substantially as specified.

3. The combination of a book for taking copies of letters, &c., having its leaves rendered permanently moist by being saturated or coated with a deliquescent and slowly-evaporating compound, composed of glycerine, pearlash, and French chalk, in the proportions specified, with a series of intersecting guards or strips, of rubber-cloth or other moisture-proof material, extending the entire length of the leaves, each strip lapping over and forming an independent back for a suitable number of sheets, for retaining the moisture in the leaves and protecting the back of the book, substantially as herein shown and described.

WILLIAM D. CHANDLER.
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Witnesses:

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