

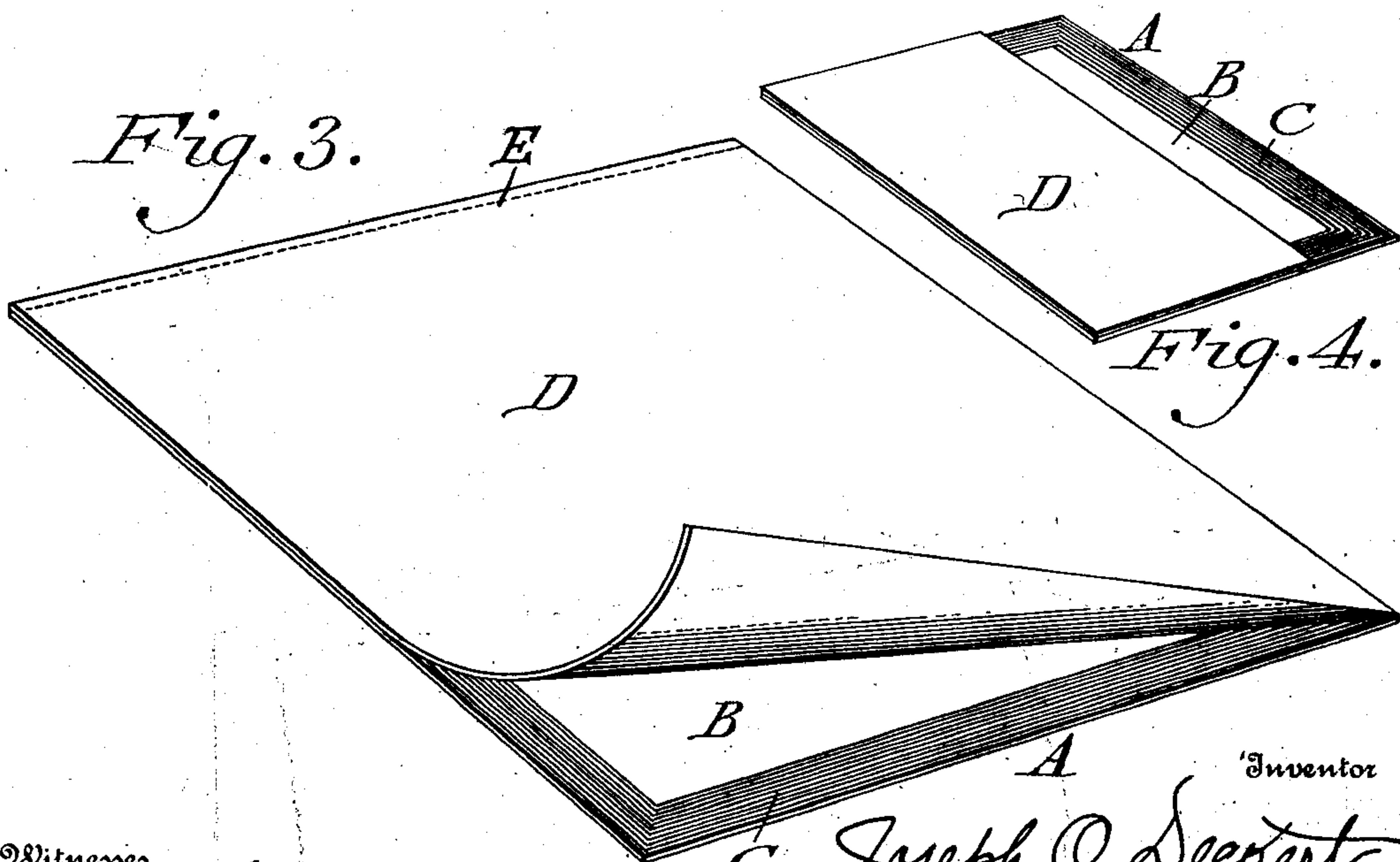
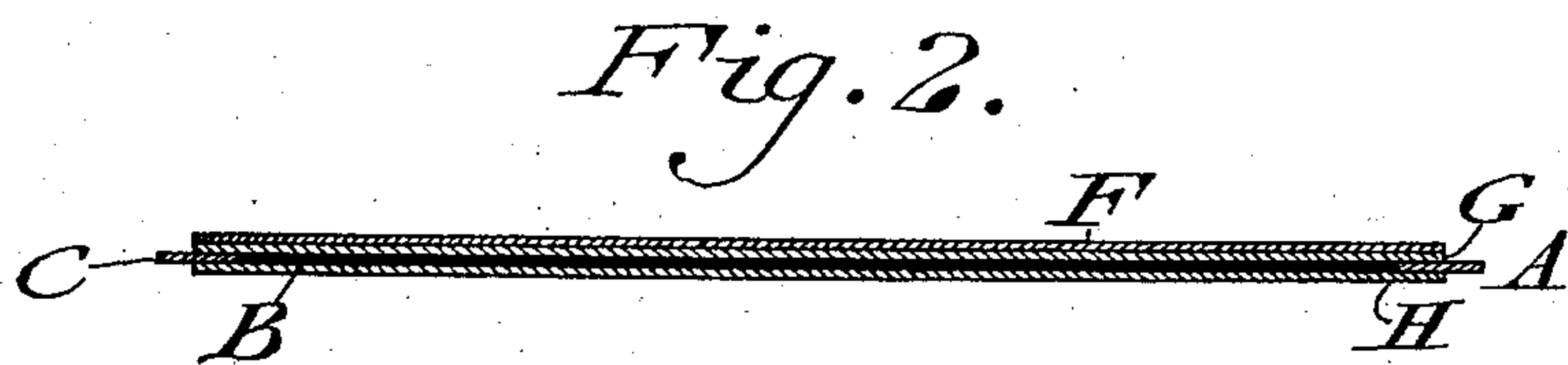
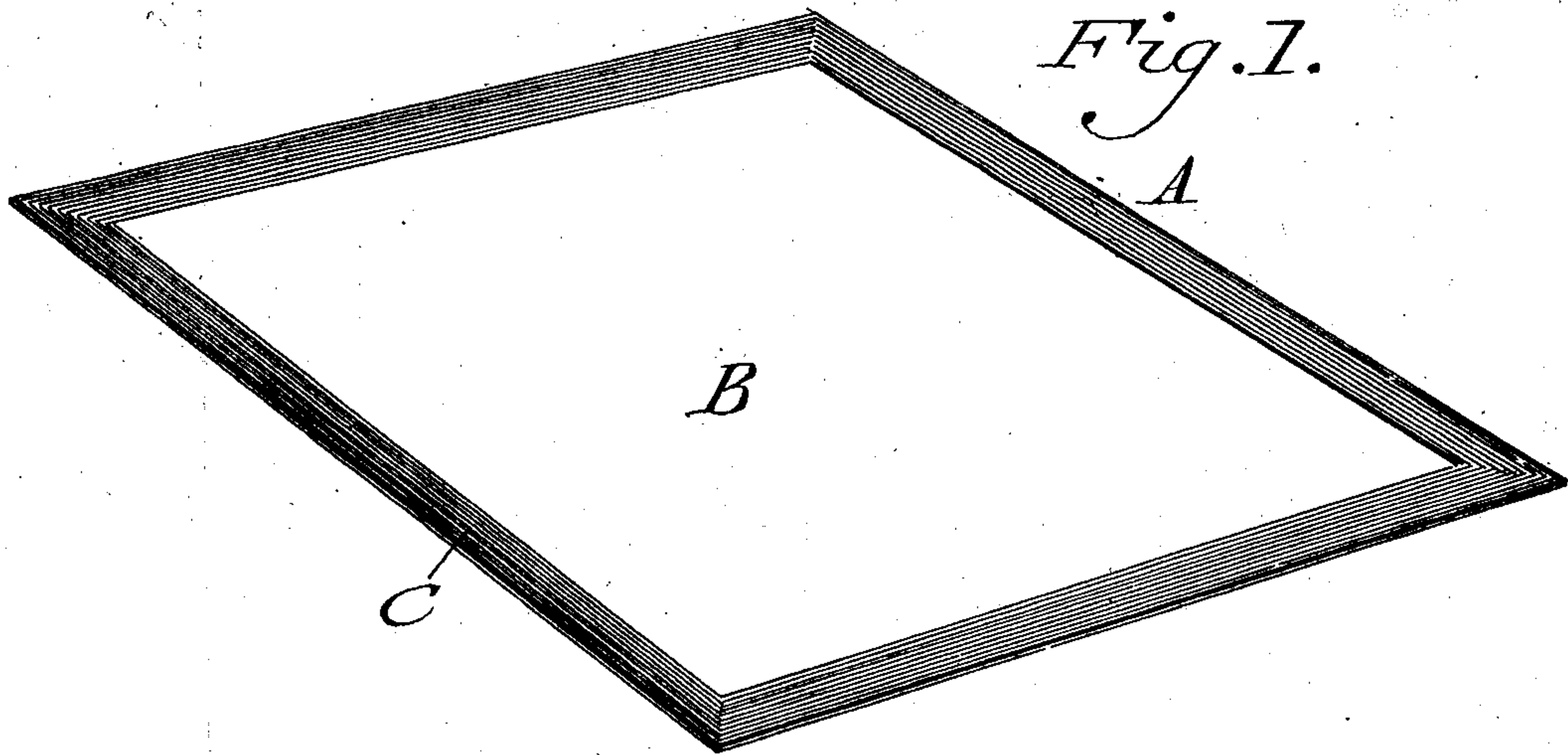
No. 747,861.

PATENTED DEC. 22, 1903.

J. O. DECKERT.
COPYING RIBBON.

APPLICATION FILED MAY 23, 1903.

NO MODEL.



Witnesses
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By

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UNITED STATES PATENT OFFICE.

JOSEPH O. DECKERT, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR
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COPYING-RIBBON.

SPECIFICATION forming part of Letters Patent No. 747,861, dated December 22, 1903.

Application filed May 23, 1903. Serial No. 158,398. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH O. DECKERT, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Copying-Ribbons, of which the following is a specification.

My invention relates to improvements in copying-ribbons, all as will be hereinafter fully set forth.

Figure 1 represents in perspective a ribbon or sheet of fabric embodying my invention. Fig. 2 represents in cross-section my device in operation. Figs. 3 and 4 represent modified forms of the device shown in Fig. 1.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings, A designates a piece of ribbon or fabric having a center portion B impregnated with carbon or other duplicating material and a border or margin C filled with varnish or like material, which stiffens it and prevents its soiling the fingers or any article with which it contacts.

D is a sheet of non-impregnated non-permeable paper or the like covering one side of the sheet A and secured thereto either by a row of stitching, as E, or by pasting or gluing.

F, G, and H are sheets of paper, of which F may be a letter or bill head or the leaf of a book on which a type or hand written record is to be made.

G is a sheet of tissue or other thin paper placed above the ribbon A, while H is a leaf or loose sheet below the ribbon.

The operation will be readily understood. Although my ribbon is adapted to take the place of the heavy double-faced carbon-sheet wherever used, it is particularly advantageous for use with what is known as a "book type-writer." In making out invoices, *e. g.*, a book is used having leaves in sets. In this case, F, Fig. 2, would be a page printed in bill-head form and perforated for removal from the book, G a sheet so thin as to have the impression formed on its under side readily read therethrough, and H a leaf intended to be retained in the book, so as to form a permanent record or "day-book." The objection to this system has been the liability of

the smearing of records in using and in addition the soiling of the operator's hands. My device by the stiffening of its margin permits the use of a ribbon or textile which gives a clearer and a non-smudge copy, and, furthermore, the unimpregnated margin is adapted to receive the clamp of a machine for holding the same in position and will not smudge the copies. When only the usual or lower copy is required—*e. g.*, where the tissue-sheet G is omitted—I attach to the one side of the ribbon A a sheet D of impermeable paper, sized fabric, or the like, as shown in Fig. 3, by which the lower side of the sheet F is protected from marking. In making invoices it is sometimes desirable that the tissue copy G should show the amounts and descriptions of the goods shipped, but not the prices or extensions. In this case I attach to the ribbon A a partial covering-sheet D, as indicated in Fig. 4.

To secure the best results of my invention, it is important that the margin of the textile or ribbon sheets shall not be substantially thicker than the copy-producing center portion. If the margin were thicker than the middle of the sheet, the latter when placed between the leaves would tend to move vertically or wave, thereby smearing the page or blurring the impression.

It will be evident that various changes may be made by those skilled in the art which may come within the scope of my invention, and I do not, therefore, desire to be limited in every instance to the exact construction herein shown and described.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A copy-producing sheet having a margin stiffened by impregnation with a substance insoluble in water, said margin being substantially of even thickness with the copying-ribbon.
2. A copy-producing sheet having a non-copying, stiffened margin of substantially even thickness with the copying portion.
3. A copy-producing sheet having its margin impregnated with a varnish whereby it is stiffened and rendered non-copying.
4. A copy-producing sheet of textile mate-

rial having a margin stiffened by impregnation with a substance insoluble in water, said margin being substantially of even thickness with the copying portion.

- 5 5. A copy-producing sheet of textile material having a non-copying, stiffened margin of substantially even thickness with the copying portion.

6. A copy-producing sheet of textile material having a non-copying margin impregnated with a varnish whereby it is stiffened and rendered non-copying.

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Witnesses:

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