

P. AUSCHER & C. DEHAINAULT.
MANIFOLDING BOOK.
APPLICATION FILED SEPT. 21, 1906.

932,365.

Patented Aug. 24, 1909.

3 SHEETS—SHEET 1.

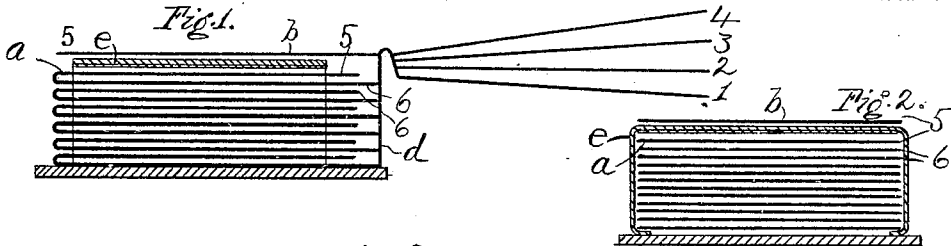


Fig. 3.

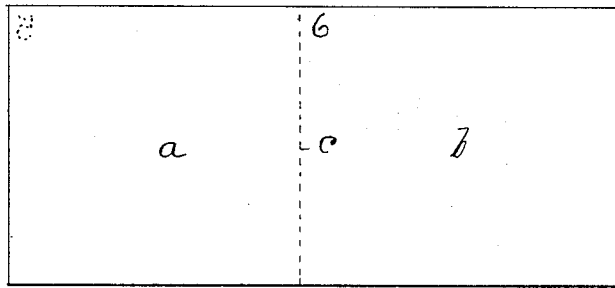


Fig. 4.

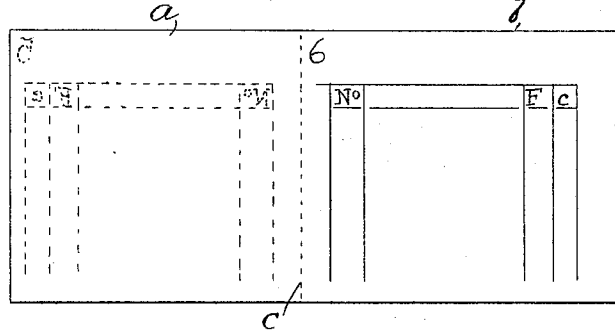


Fig. 5.

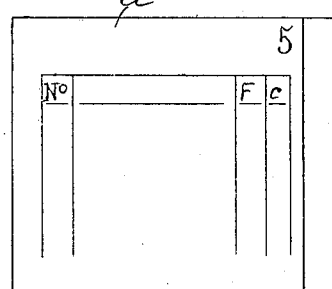


Fig. 19.

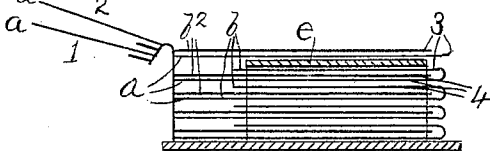
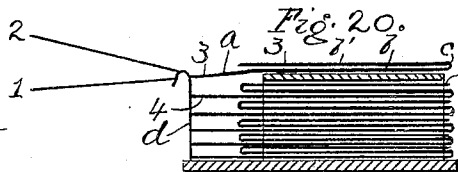


Fig. 20.



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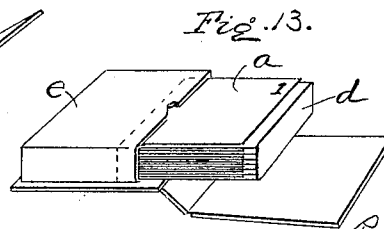
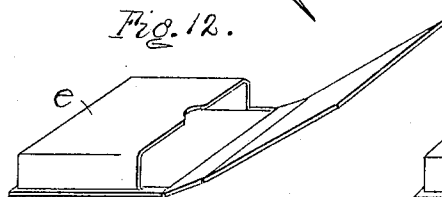
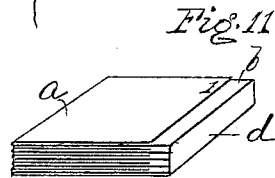
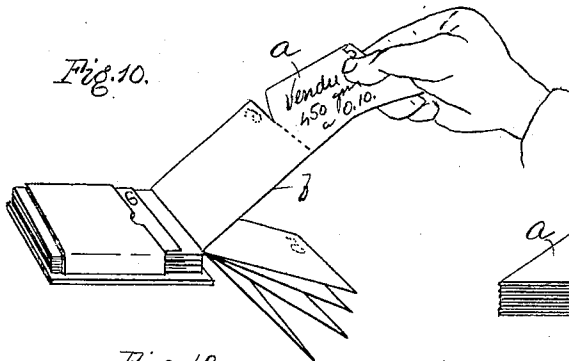
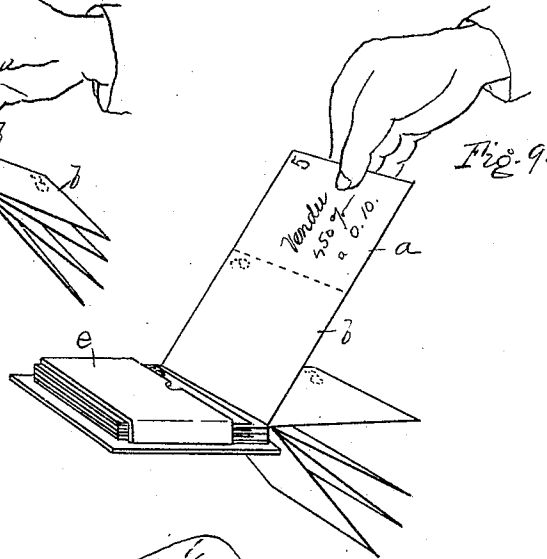
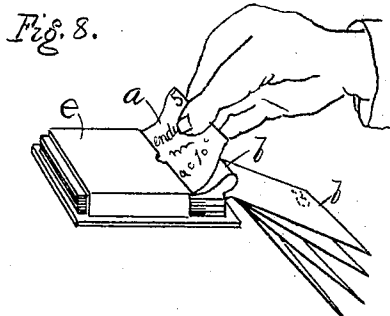
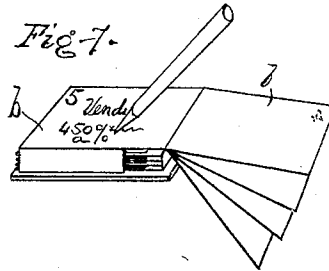
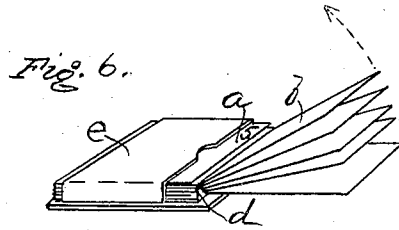
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3 SHEETS—SHEET 3.

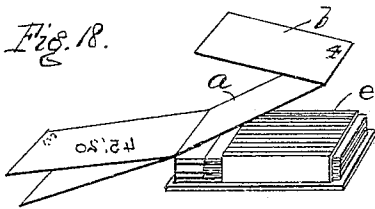
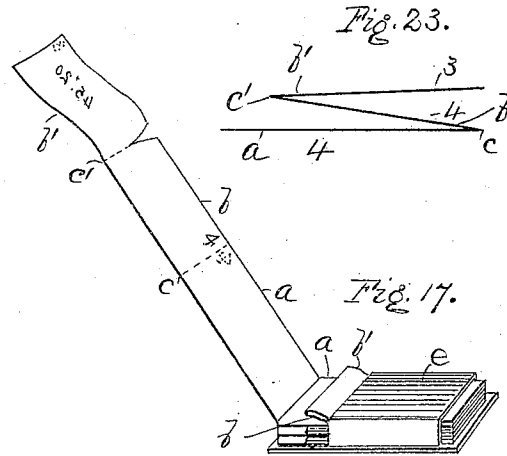
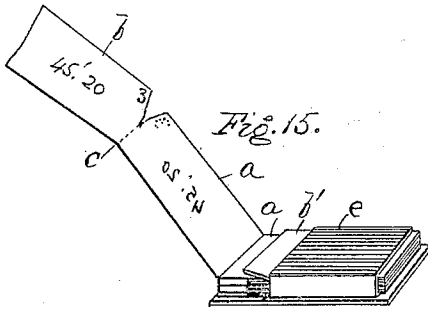
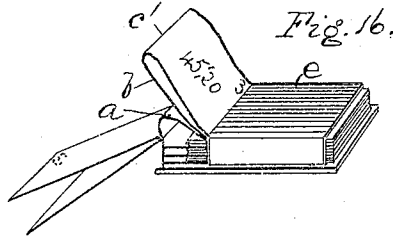
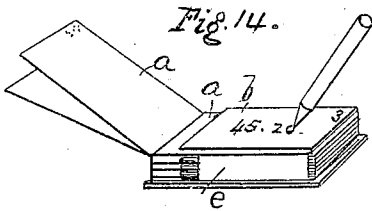


Fig. 22

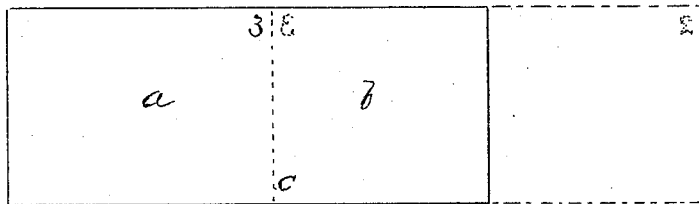
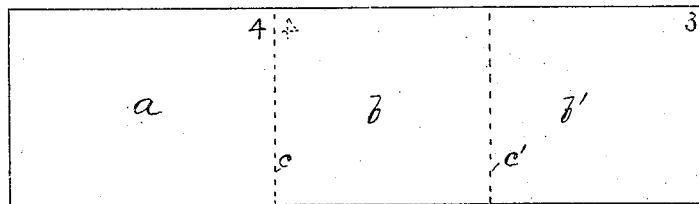


Fig. 21.



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UNITED STATES PATENT OFFICE.

PAUL AUSCHER AND CHARLES DEHAINAULT, OF PARIS, FRANCE.

MANIFOLDING-BOOK.

932,365.

Specification of Letters Patent. Patented Aug. 24, 1909.

Application filed September 21, 1906. Serial No. 335,641.

To all whom it may concern:

Be it known that we, PAUL AUSCHER, residing in Paris, France, architect, and CHARLES DEHAINAULT, residing in Paris, France, engineer, both citizens of the Republic of France, have invented certain new and useful Improvements in Manifold-Books, of which the following is a specification.

The present invention relates to a duplicator and triplicator book, more especially intended for commercial invoices, but likewise adapted for use for other purposes, and particularly for correspondence.

Duplicator books with superposed stubs have long been known in which a sheet of carbon paper is interposed between the sheet written upon and that which is intended for the reception of the duplicate, but it is also known that in practice it presents defects due to the manipulation required by the carbon paper at each operation. This manipulation requires time and soils the fingers, and further the sheet of carbon paper becomes creased, will not assume its proper position, and speedily becomes worn. Notwithstanding the services rendered by carbon paper in avoiding the repetition of writing, all these defects have restricted its employment in retail establishments, and in many other cases in which it would certainly be of the greatest utility.

The device which forms the object of the present invention is free from these defects, as will be understood from the following description which is given with reference to the accompanying drawing, in which:—

Figure 1 is a diagrammatic longitudinal section through a duplicator book embodying this invention. Fig. 2 is a corresponding cross-section. Fig. 3 shows separately one of the constituent sheets of the book. Fig. 4 shows the same sheet after it has received an impression. Fig. 5 shows this sheet folded, that is to say ready to be bound in the book. Figs. 6 to 10 are perspective views showing the different phases of the method of employing the book. Figs. 11 to 13 relate to a modified form of the book. Figs. 14 to 18 inclusive, are views of a triplicating book according to this invention, and illustrating the manner of use, the details of construction being shown in Figs. 20 to 23; Fig. 19 is a view of a modification. Fig. 20 is a longitudinal section of the book arranged for triplicating. Fig. 21 shows one of the sheets of this book separately. Fig. 22 shows one

of these sheets with its outer part removed. Fig. 23 illustrates the folding of this sheet in section.

This duplicator book represented in Figs. 60 1 and 2, may consist of any desired number of sheets of paper, subdivided into two unequal parts *a* and *b* (Fig. 3), by means of a printed line, a dotted line or a line of perforations *c*. These sheets are numbered in the order of 65 their assemblage, with this peculiarity, that the part *a* is numbered on its face, while the part *b* is numbered on its back, and further, the numbering of the part *b* is of the next higher order; in the example represented it is 70 6, while the part *a* is numbered 5. Finally the sheets whether printed or not are folded before their assemblage along the line *c* (Fig. 5), and it will be noted that the part *a* only covers the part *b* incompletely, the project- 75 ing portion of this latter part being utilized for the binding. The sheets thus folded and assembled are bound to the back *d* of a case of any appropriate kind by means of the project- 80 ing edges of the parts *b*; they are placed beneath a band of paper *e*, preferably sulfurized paper, or thin rigid linen which carries stuck to its inner face a sheet of carbon paper or carbon linen, or any other substance per- 85 mitting of making a transfer or reproduction. This band or bridge *e* completely surrounds the note book (Fig. 2) in the direction of its height, and covers almost the entire surface of the part *a* of the sheets. The band or 90 bridge *e* is attached or simply stuck beneath the last sheet or directly upon the cover of the book; its sides or bellows may also be constituted of a material other than the top, elastic or otherwise, or combined with 95 springs, elastics or other means insuring sufficient and constant contact of the top of the bridge with the sheet situated immediately beneath it, while at the same time facilitating the withdrawal of this sheet. It will be noted that the sheet of carbon is isolated, 100 inaccessible, and even invisible beneath the band of paper or linen which protects it.

The book thus constituted is employed in the following manner:—A certain number of sheets four for example, have already been 105 completely utilized (Figs. 1 and 6); the fifth sheet now only comprises the part *b* (folio 5) ready for the reception of an inscription of any kind; all the other folded sheets are situated beneath the band or bridge *e*, the part 110 *a* (folio 5) of the sixth sheet occupying the upper part. The part *b* (folio 5) is then

applied by the operator to the band *e* (Fig. 7) for receiving the matter that it is desired to inscribe upon it. This inscription written upon this part *b* (folio 5) is at the same time transferred on to the part *a* (folio 5) which is situated immediately beneath the band or bridge *e*. When this has been done the operator lifts the part *b* (folio 5) which constitutes the stub or duplicate and seizes (Fig. 8) the projecting edge of the part *a* (folio 5) of the sheet situated immediately beneath the band *e*, and pulls it in order to open out the sheet completely (Fig. 9); he then detaches (Fig. 10), along the dotted line *c* the said part *a* (Fig. 5) which bears the reproduction and which constitutes the original to be forwarded or used for any purpose, the duplicate remaining attached in the form of a stub to the book itself. The part *b* (folio 6) which belongs to the same sheet as the part *a* (folio 5) is ready for utilization later in the same conditions as those already enumerated, while the part *a* (folio 6) or following sheet is situated immediately beneath the reproducing band *e*. It will be noted, in addition to the advantages already enumerated that the disposition of this duplicator book adapts it to certain and absolute checking owing to the fact that the traction exerted for opening out the sheets can only be effected on one sheet at a time, and that further the inscription on a part *b* is necessarily reproduced on the part *a* similarly numbered.

As a modification of this form of duplicator book, the sheets folded and assembled in the order of their numbering may be assembled in an independent manner (Fig. 11) in the form of ordinary note blocks, while the reproducing band *e* fixed to a case of any desired quality (Fig. 12) constitutes a sort of drawer into which the said block may be slid (Fig. 13). In these conditions, the case may be employed repeatedly, the coloring material or sheet of carbon only having to be changed when worn out. In all cases the employment of the book would be the same.

The body of the bridge *e* may be of hard material such as zinc, cardboard, or the like, rendering the carbon copy more distinct, especially when ink is employed for the copy which is written directly. When the book is a triplicator book as in the case of Figs. 14 to 20, the sheets are sub-divided by lines of perforations or otherwise, *c* and *c'* (Fig. 21), into three parts *a*, *b* and *b'*, numbered with the same folio as regards *a* and *b*, while the part *b'* bears the next lower number. It will be noticed that the parts *a* and *b'* are printed on their face, while the part *b* is printed on its back. The sheets are folded (Fig. 23) in such a manner that the printed faces of the parts *a*, *b* and *b'* are all directed upward; in this condition they are bound at *d* (Fig. 20) and placed beneath the bridge *e*, which pre-

sents this peculiarity that its two faces are prepared for reproduction by transfer. The first of the sheets comprises only the parts *a* and *b* folded at *c* and placed upon the bridge. The book always presents this appearance until the sheets are completely exhausted. In Fig. 14 it has been assumed that the parts *a* and *b* numbered 3 are placed upon the bridge *e*, the part *b* being at the upper part for the reception of the direct writing. At the same time that this part *b* (folio 3) receives the direct writing, the part *a* of the same sheet (folio 3), in contact with the upper face of the bridge *e* and the part *b'* (folio 3) of the sheet situated beneath the bridge and in direct contact with its lower face, both receive the same impression by transfer. Then the sheet situated upon the bridge *e* is unfolded (Fig. 15) and the part *b* written upon directly is detached; the sheet situated beneath the bridge *e* is then pulled by the fold *c'* (Fig. 16) and unfolded (Fig. 17) the part *b'* (folio 3) with the transferred inscription is detached and the remaining parts *a* and *b* (folio 4) are re-folded and placed upon the bridge (Fig. 18) under the same conditions as the first sheet, that is to say ready for the reception of a subsequent inscription.

From the foregoing it will be seen that the part *b* (folio 3) written upon directly, free from all soiling and detached, may be forwarded in an entirely unsoiled condition, while the part *a* (folio 3) bearing the transferred inscription and intended to be read as a transparency serves as a stub, and that the part *b'* (folio 3) likewise bearing a transferred inscription but read directly, may serve as a duplicate for forwarding or retaining for any purpose. Again, the numbering of the parts *a* and *b* of each of the sheets may be reproduced on the top, at the bottom, or upon the sides, the figures being appropriately turned, in order to render it possible to make use of the book in any of the four directions, that is to say, to open the book indifferently in one or other of the directions parallel with the binding, or in one or other of the directions perpendicular to the binding.

In the case of the triplicator book (and this is also so as regards the duplicator book), a supplementary line of perforations might be employed for the sheets so as to render it possible to detach, if desired, the part intended to serve as a stub, that is to say to permit of the detachment of all the copies which have received the inscription two with the duplicate book and three with the triplicate book. Finally, instead of sticking carbon paper upon the face or faces of the bridge, these faces may be carbonized directly whatever the nature of the bridge may be. It should also be understood that the duplicator or triplicator book may be

made in all sizes and dimensions, and comprise any desired number of sheets either printed or not.

It should be understood that the book in question may be made of any desired shape and size, and that in accordance with the purpose for which it is intended (correspondence, invoices, or the like) the parts *a* and *b* of the sheets of which it is constituted receive an impression appropriate for such employment.

The triplicator may be constituted by interposing in any appropriate manner between the parts *a* and *b* of each of the sheets folded at *c*, and in particular Fig. 19 a sheet *b*². In this case, the book is used in the manner described with reference to Figs. 1 to 13 inclusive, but in pulling the sheet, the interposed sheet *b*² which then receives the direct writing is carried along with it.

What we claim and desire to secure by Letters Patent of the United States is:—

1. A manifolding book, comprising a support with a series of superposed folded sheets each sheet having a part projecting beyond the folded portion whereby the several sheets are bound together and a band constituting

a bridge surrounding the folded sheets with a carbonizing material on the underside of the bridge, two folds of each sheet being differently numbered, while one fold of each sheet is numbered the same as one fold of the adjacent sheet, substantially as described.

2. A triplicate manifolding book, comprising a support with a series of superposed twice-folded sheets and a band constituting a bridge surrounding the folded sheets, carbonizing material on both sides of the bridge, two folds of each sheet being differently numbered, while one fold of each sheet is numbered the same as one fold of the adjacent sheet, substantially as described.

In testimony whereof we have signed our names to this specification, in the presence of two subscribing witnesses.

PAUL AUSCHER.

CHARLES DEHAINAULT.

Witnesses as to Paul Auscher:

JULIUS A. VAN HEE,

MICHEL DE KIES.

Witnesses as to Charles Dehainault:

GUSTAVE DUMONT,

HANSON A. COXE.