(Model.)

2 Sheets—Sheet 1.

J. S. McDONALD.

MANIFOLD ORDER BOOK.

No. 377,360. Patented Jan. 31, 1888.

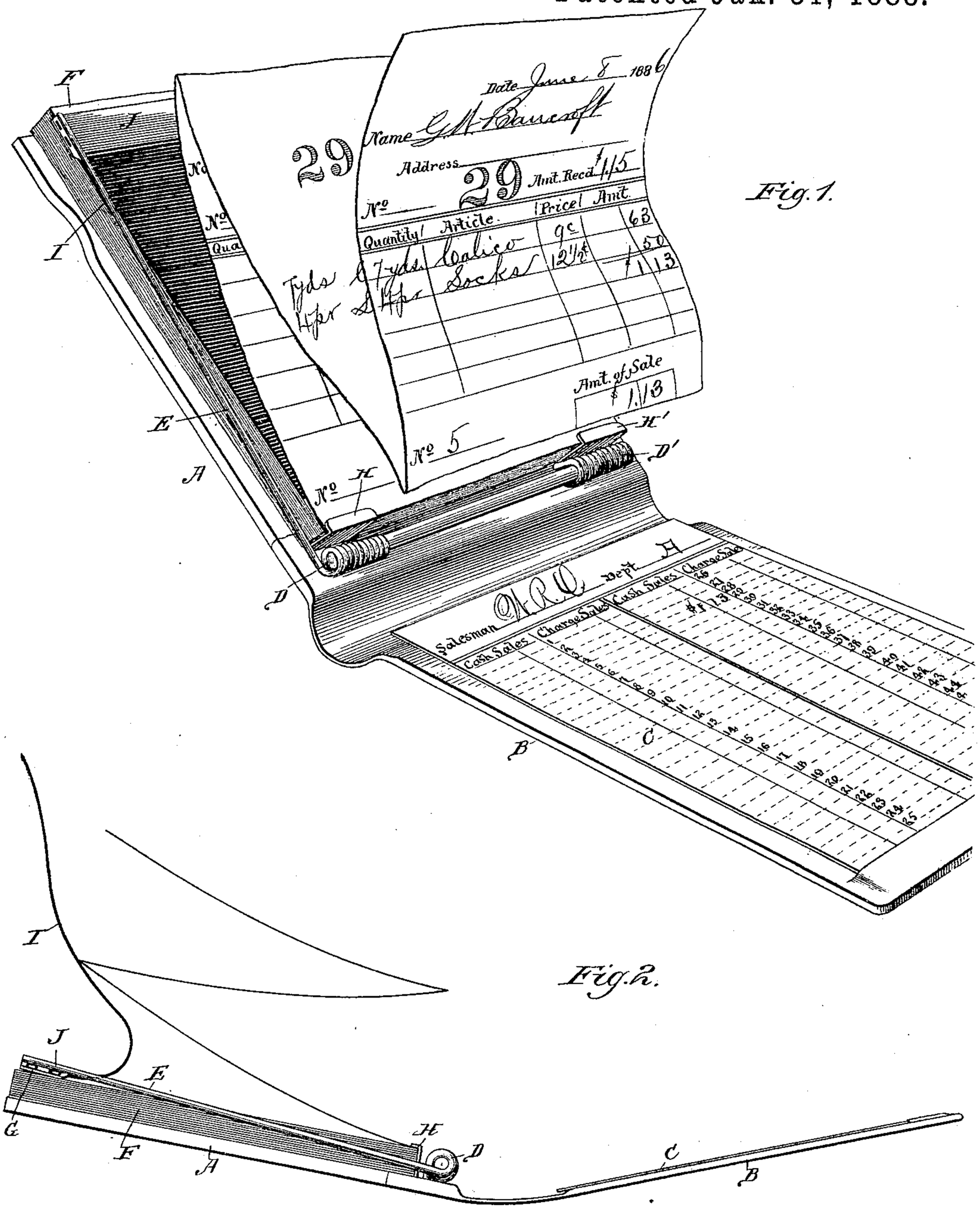

Fig. 1.

Fig. 2.

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(Model.)

2 Sheets—Sheet 2.

J. S. McDONALD.

MANIFOLD ORDER BOOK.

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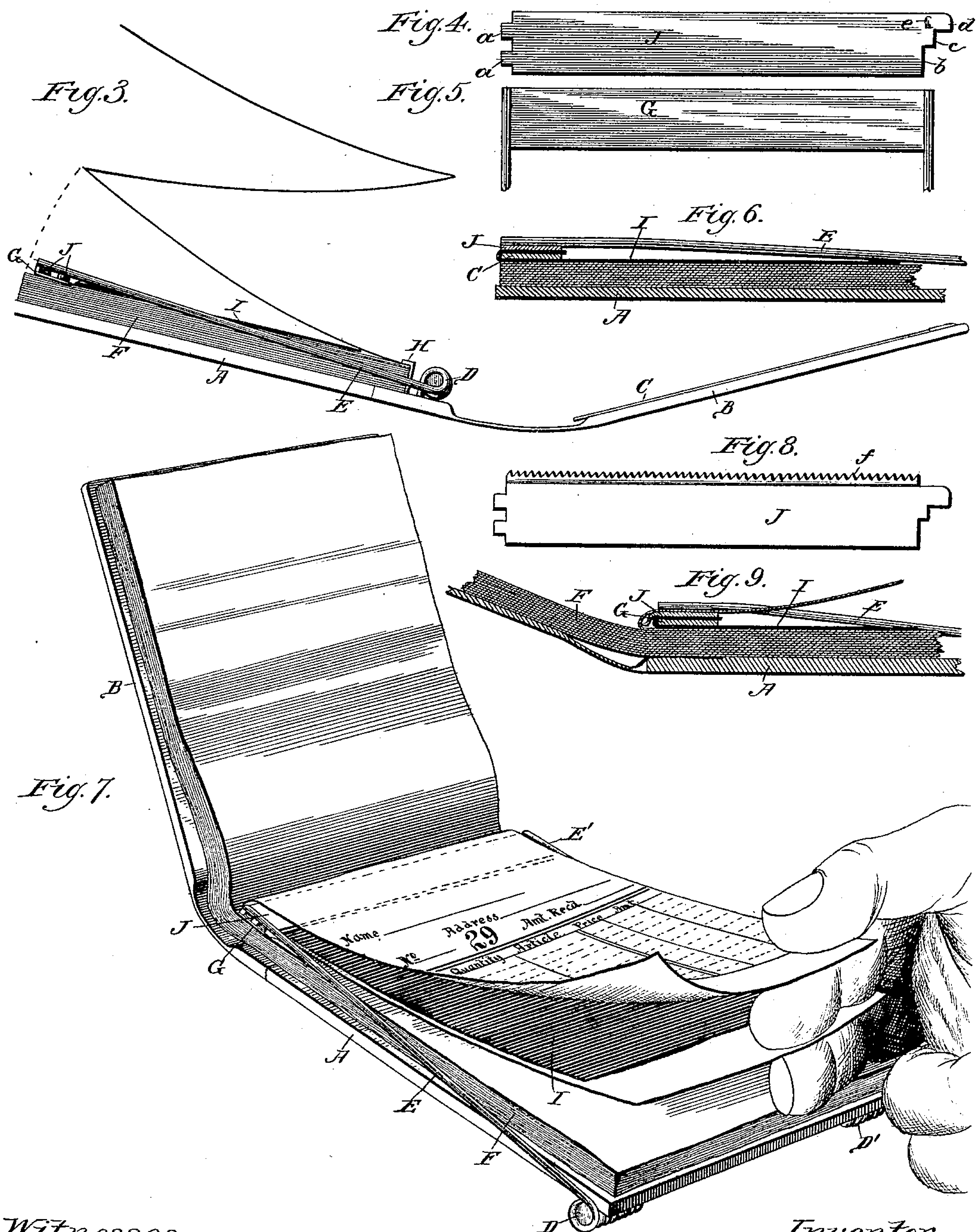

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UNITED STATES PATENT OFFICE.

JAMES S. McDONALD, OF CHICAGO, ILLINOIS.

MANIFOLD ORDER-BOOK.

SPECIFICATION forming part of Letters Patent No. 377,360, dated January 31, 1888.

Application filed July 6, 1886. Serial No. 207,221. (Model.)

To all whom it may concern:

Be it known that I, JAMES S. McDONALD, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Manifold Order-Books, of which the following is a specification.

This invention relates to improvements in manifold order-books in which there are one or more carbon sheets for producing fac-simile memoranda in duplicate or series of the original itemized bill of sale and cash received thereon, whereby the salesman and cashier, and, if need be, the customer, may have a check on each other to such an extent as to insure the rectifying of any errors in the items and footing of the bill, and also identify the amount of cash received and change returned, or balance due on said bill.

The object of my invention is to maintain a series of orders and the carbon sheet against displacement while in the tablet form and in use, and at the same time promote a convenient removal of the orders as they are filled out and exhausted, and also to avoid any necessity of handling the carbon sheet, by devices and combinations of devices hereinafter described, and shown in the accompanying drawings, in which—

Figure 1 represents a perspective view of an order-book involving my invention with a filled-out order and duplicate in position for detachment from the tablet and a fresh order in its operative position to be filled out when the orders and duplicates constituting the book are folded in a zigzag manner; Fig. 2, a side elevation of the same, mainly illustrating the position of the carbon sheet after it is released from a filled-out order and duplicate preparatory to detaching the same from the book; Fig. 3, a similar view showing a carbon sheet in its operative position for a new order after the order has been filled out and before its detachment from the tablet. Figs. 4 and 5 respectively represent plan views of the clamping-plate for the carbon sheet and the binding-plate for the outer ends of the orders; Fig. 6, a central longitudinal section through the tablet for illustrating the manner in which the carbon sheet is secured in its operative position upon the orders. Fig. 7 is a perspective view showing the adaptation of my invention to an order-book in which the original orders constitute one half of the book, while the duplicate orders are contiguous therewith and form the remaining half of the book, with the carbon paper secured at the center thereof; Fig. 8, a front elevation of a combined clamping-plate for the carbon paper and a perforator, by means of which the original and duplicate orders are severed simultaneously with their detachment from the tablet or book; Fig. 9, a detail central longitudinal section of the order-book shown in Fig. 7, and mainly illustrating the form of the combined clamping-plate and perforator in transverse section and the relative position of the carbon sheets and orders thereto and to each other.

Similar letters of reference indicate the same parts in the several figures of the drawings.

In either of the constructions shown in Figs. 1 or 7 the base or back A for the forms may or may not have flexibly secured thereto a stiff back, B, forming with the back or base A an inclosing-cover for the tablets; but when the back B is employed a memorandum-card, C, may be secured thereto, having numbers corresponding with the forms, and upon which the aggregate amount of the sale of each form may be entered opposite said corresponding number.

Secured at one end, and next each side of the base A, are coiled springs D D′, from which extend arms E E′, parallel with each other and with the side edges of the piled forms F and their base-support, which said arms E E′ extend to the end of the tablet opposite the coiled springs, and are connected by a flat plate, G, which, owing to the spring action of the arms, constitutes a clamping-plate for clamping one end of the series of orders to their base, and by its yielding pressure in the direction of the base holding the remaining forms as others are removed from its grip. The opposite ends of the piled orders have an end support against lugs H H′, bent at a right angle, so as to overlap and prevent the orders from an accidental rising displacement, and lateral displacement of the orders is prevented by the arms E E′, owing to said arms extending along the sides of the

tablet in an oblique line from the lower corner of one edge to the upper corner of the opposite end of said edge, as shown in Fig. 1.

By the device above described a series or tablet of forms are held securely upon a base, A, from a movement in any direction, while at the same time, owing to the form of the lugs H H′ and the elasticity of the clamping-plate G, the orders may be removed in any number from the binder by lifting them from under the lugs and pulling them out from under the clamping-plate without disturbing or in anywise displacing the remaining orders.

In making up a book or tablet of these forms, after they have been properly folded, I place upon the top of the forms a carbon sheet, I, so as to cover the orders and of a length greater—that is to say, increased about the width of the clamping-plate—which, before inserting the orders, is flat upon the base, and after placing the tablet, with the carbon sheet, upon the base, and while pinching the tablet and base between the fingers of one hand, I take hold of the spring-arms with the other hand and lift them until the end of the tablet has dropped below the clamping-plate, which is then released and seizes them. The end of the carbon sheet projecting beyond the clamping-plate is then folded over upon the same, as shown in Fig. 6, and the folded end is held in contact with the clamping-plate by a binding-plate, J, (see Figs. 4, 5, and 6,) which binding-plate is provided at one end with lugs *a*, which are projected through corresponding slots in one end of the spring-arms, and at its opposite end is provided with steps, one of which, *b*, embraces one edge of the opposite arm, and the other, *c*, passes into a slot or recess between said arm and the clamping-plate, while the remaining step, *d*, serves as a catch by which the binding-plate is handled when locking or unlocking it. This binding-plate may also be provided with an indentation, *e*, into which a suitable catch formed on the under side of the spring-arm may project to lock the binding-plate in its operative position to bind the carbon sheet to the clamping-plate.

With orders folded in a zigzag form and secured in the position shown in Figs. 1 to 6, inclusive, and the employment of a carbon sheet carbonized only on its under side, as it is designed said sheet shall be, the topmost order, which is a ruled blank, is first drawn out from under the clamping-plate, and in so doing the carbon sheet without handling will fall to its place between the form order and the duplicate order thereof. After filling out the order and producing the duplicate thereof, the free end of the form order is taken hold of with one hand, while holding the base of the tablet in the other hand, and pulling so as to draw out the duplicate from under the clamping-plate, and at the same time release the upper end of the next form order, as will be understood by reference to Fig. 1, and as the filled form order and its duplicate, together with the new form order, approach a straight line the carbon sheet will fall to place in a smooth condition upon the duplicate of this new form, and so on the forms are filled out and withdrawn from the tablet or book until exhausted, when a new series of forms may be inserted, as before described.

From the operation of the device, as above described, it will clearly be seen that the forms remaining in the tablet after drawing out others are not disturbed or displaced, but that in the act of detaching the filled-out form the carbon automatically assumes its operative position and requires no handling whatever, and that the forms when so held may be subject to quite rough usage and handling without displacing them upon each other or rendering them liable to mutilation.

In this connection it may be observed that by placing between the carbonized face of the carbon paper and the orders a sheet of tissue or waxed paper the orders, with their carbonized paper, may be inserted in the tablet without touching the carbonized face of the paper, and after being so inserted this intermediate sheet of tissue may be torn out, so that only a small portion of it will remain between the binding and clamping plates, and in like manner the carbon paper for a single series of forms may be renewed at any time without handling its carbonized face.

The form of tablet above described is especially designed and adapted for orders which alternate and are contiguous with their duplicates, and are folded in a zigzag form, which manner of folding, however, I admit to be the invention of another person, and therefore do not broadly claim the same herein.

In Figs. 7 to 9, inclusive, I have illustrated my invention in connection with orders and duplicates contiguous and with a single fold upon each other, so that the form orders constitute one half of the book or tablet, while the duplicates constitute the remaining half. In this last construction referred to the coiled springs D D′ are secured upon the under side of the base A, likewise provided with the parallel arms E E′ and clamping-plate G and binding-plate J, identical in form and arrangement with those shown in Figs. 1 to 6, inclusive, except as to the perforator or cutting-edge *f*, formed upon the binding-plate. This cutting-edge *f*, as shown in Fig. 9, projects downwardly from the binding-plate across the outer edge of the clamping-plate, and when the form order is folded over to be filled, before it is held in position to sever it from the duplicate order, it lies between the sheet composing the form and duplicate order and the folded portion of the carbon sheet and in close proximity to the piled forms, so as to permit the effective and regular separation of the form and duplicate order, though not operating to clamp the duplicate further upon the remaining pile of orders. In this construction, where the carbon sheet is of a length corresponding with the ruled portion of the

form order, both the form and duplicate orders are of a greater length than the carbon sheet, so that a margin is provided for taking hold of the form and duplicate orders, as shown in Fig. 7, with the fingers and separating and removing them from the remaining orders without the fingers having contact with the carbon sheet, which is held in the tablet or book in the same manner as in the construction first described.

The tablet shown in Fig. 7 may be provided with the angular lugs H H′, if desired, and said lugs may be dispensed with in Fig. 1 without a departure from my invention, as may also the springs D D′ be secured upon the under side of the base, as in Fig. 7, and instead of coiled springs any form of angular springs may be substituted, and in some instances the spring-arms E E′ may be secured directly to the base and the clamping-plate depend upon the spring action of these arms to maintain the orders upon the base.

While, in a general sense, the binding plate J is hinged to the spring-arms, it may be observed that a regular hinged joint may be employed, so that one end of the binding-plate is lowered or raised above the base to secure the release of orders therefrom.

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

1. In a manifold order book or tablet, a series of original orders, a carbon sheet arranged substantially as described, and a base-support for said orders, in combination with a pair of spring-actuated arms parallel with each other and extending obliquely across the opposing edges of the orders, and a clamping-plate uniting said arms and having no connection with the base, except through said arms, for removably securing the orders and carbon sheet upon the base, substantially as described.

2. In a manifold order book or tablet, a series of original and duplicate orders, a carbon sheet arranged substantially as described, a base-support therefor, and a pair of spring-actuated arms extending obliquely along the opposing edges of said orders, and a clamping-plate uniting the free ends of said arms, in combination with a binding-plate, between which and the clamping-plate the carbon sheet is removably bound, substantially as described.

3. In a manifold order-book, a series of original and duplicate orders and a carbon sheet arranged substantially as described, in combination with a base-support for said orders, a spring-actuated clamping-plate upon one end of said orders, a binding-plate for the carbon sheet, and one or more angular lugs embracing one end and projecting over said orders, substantially as described.

4. In a manifold order-book, a series of original and duplicate orders and a carbon sheet arranged substantially as described, a base-support, and a spring-actuated clamping-plate for said orders, in combination with a separable binding-plate mounted upon the clamping-plate and provided upon one edge with a perforator, substantially as and for the purpose described.

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Witnesses:
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M. KEO WEST.