

I. REYNOLDS.
Blank-Books.

No. 164,873.

Patented June 22, 1875.

No. 1.	a	a	a	a	a	a	a	a	a
	a	a	a	a	a	a	a	a	a
	a	a	a	a	a	a	a	a	a
	a	a	a	a	a	a	a	a	a

Witnesses:

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UNITED STATES PATENT OFFICE.

IRA REYNOLDS, OF DAYTON, OHIO, ASSIGNOR TO REYNOLDS & REYNOLDS,
OF SAME PLACE.

IMPROVEMENT IN BLANK-BOOKS.

Specification forming part of Letters Patent No. **164,873**, dated June 22, 1875; application filed
May 31, 1875.

To all whom it may concern:

Be it known that I, IRA REYNOLDS, of the city of Dayton, in the State of Ohio, have invented a new and useful Improvement in Blank-Books; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings and to the letters of reference marked thereon, making a part of this specification.

The object of my invention is to produce a cheap, durable, and convenient book for business men, as there has been, and now exists, a strong desire on the part of jobbers, shippers, and others for a book that can be folded back so as to hold the same in the hand while writing. The ordinarily-constructed book does not answer the demand, as it will not readily fold back, and if the attempt is made the binding soon gives way, while, with my improvement, combining the consecutive ruling with the strong outside cover, and the book stitched through the center, the book will fold back so that the two sides of the cover shall lie flat together, and the whole book may be turned inside out, and folded back without injury to the same, as the leaves simply turn upon the threads which hold the book and cover together.

In order to practice my improvement, I make any number of consecutively-ruled diagrams necessary to produce the desired size of book. These diagrams in consecutive ruling are only intended for what is called the down ruling, as it is a well-known fact that to fold any number of sheets of paper, the inside sheets must necessarily project; therefore, in order to make a book of any considerable number of sheets, with down ruling, it is obvious that the down ruling must fall back in proportion to the projection of each sheet, or the ruling would be cut off or destroyed for use by trimming. Therefore, in order to produce a book cheaply that will fold back without injury, I have adopted the plan of consecutive ruling by sections, dividing the book into sections of, say seven, nine, eleven, thirteen, or fifteen sheets—fifteen sheets being the supposed maximum of each section.

In the model-book, herewith presented, I

adopted the plan of four sections of fifteen sheets each, and after folding the same and marking a register-line across the book-leaves, I selected the middle sheet of each section from which I drew the four several diagrams hereunto annexed, and numbered 1, 2, 3, and 4, which show the exact difference in the center of each section caused by folding the sheets. Of course the sheets above and below the center pass backward and forward from the center, therefore the actual difference or variation from the center is so slight that it does not interfere in the use of the down lines, and is not sufficiently perceptible to make the book objectionable; therefore by this process a book can be produced at less cost than by any other process now known, and at the same time much more desirable, as a cheap and convenient blotter for general use.

The several sheets desired to compose a book may be consecutively ruled from the outside to the center, but I prefer ruling in sections, for the following reasons, viz: The trouble and expense of producing sixty diagrams for ruling each different kind of book would be expensive, while the gathering would be very objectionable as well as expensive; but in ruling by sections the number of diagrams are greatly reduced, being only about one-twelfth part, consequently the gathering would be reduced in the same proportion.

It will be noticed that the diagrams 2, 3, and 4, (being second, third, and fourth from the outside,) are cut away, so as to show the relative proportion of the receding of the lines as the leaves approach the center of the book.

In giving a general description of the construction of books with my Improvement, I would say that after the sheets have been ruled, as above stated, I take a strong Manila or other board of equal size of the paper. Then I gather the several sections, commencing with section No. 1, that being the outside section. After the sheets are so gathered they are put into a patent clamp, which holds them in place, and regulates the line of perforation for the stitches. The sheets and cover having been stitched together, are then cut into sections or rows of sheets and covers, sufficient for two or four books, as we make from four to twelve

books from a gathered section of the consecutive numbers 1, 2, 3, and 4, and rule from four to twelve of these diagrams on each and every sheet, depending only on the size of book to be produced.

When the books are thus separated, they are then folded (cover and all) by a machine which will fold from two to four books at one operation. The books having been thus folded, are finished to suit the market for which they are intended.

In the diagrams hereunto annexed, *a a a* represent the consecutive ruling above mentioned.

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

A blank-book of sheets held to a flexible cover by a line of stitching through the center, with the ruled spaces consecutively changing from inside to cover, so that the ruling shall register, or nearly so, when the book is closed, substantially as herein set forth.

IRA REYNOLDS.

Witnesses:

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