

(No Model.)

W. A. PALMER.  
FLAT OPENING BOOK.

No. 528,340.

Patented Oct. 30, 1894.

Fig. 1.

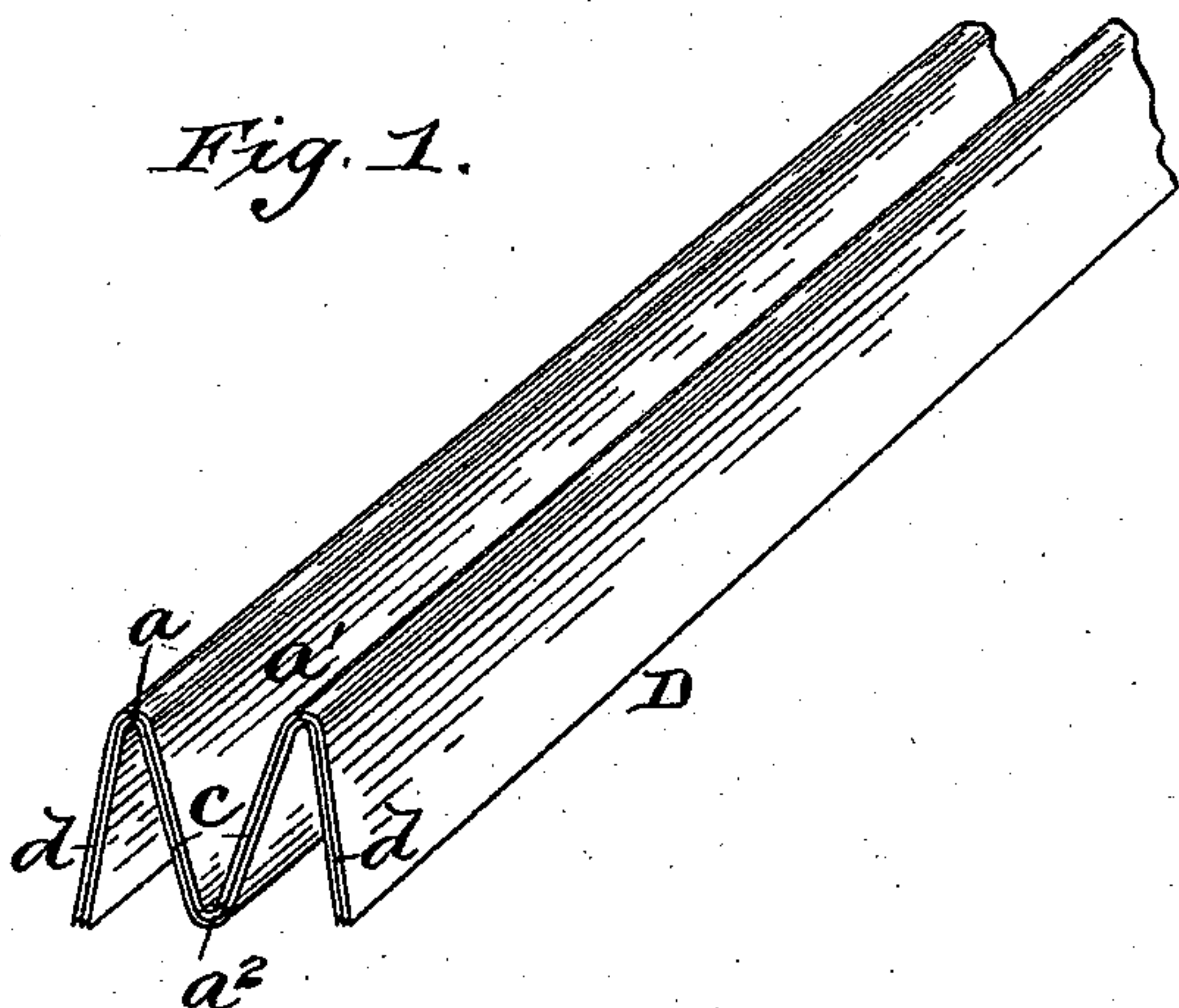


Fig. 2.

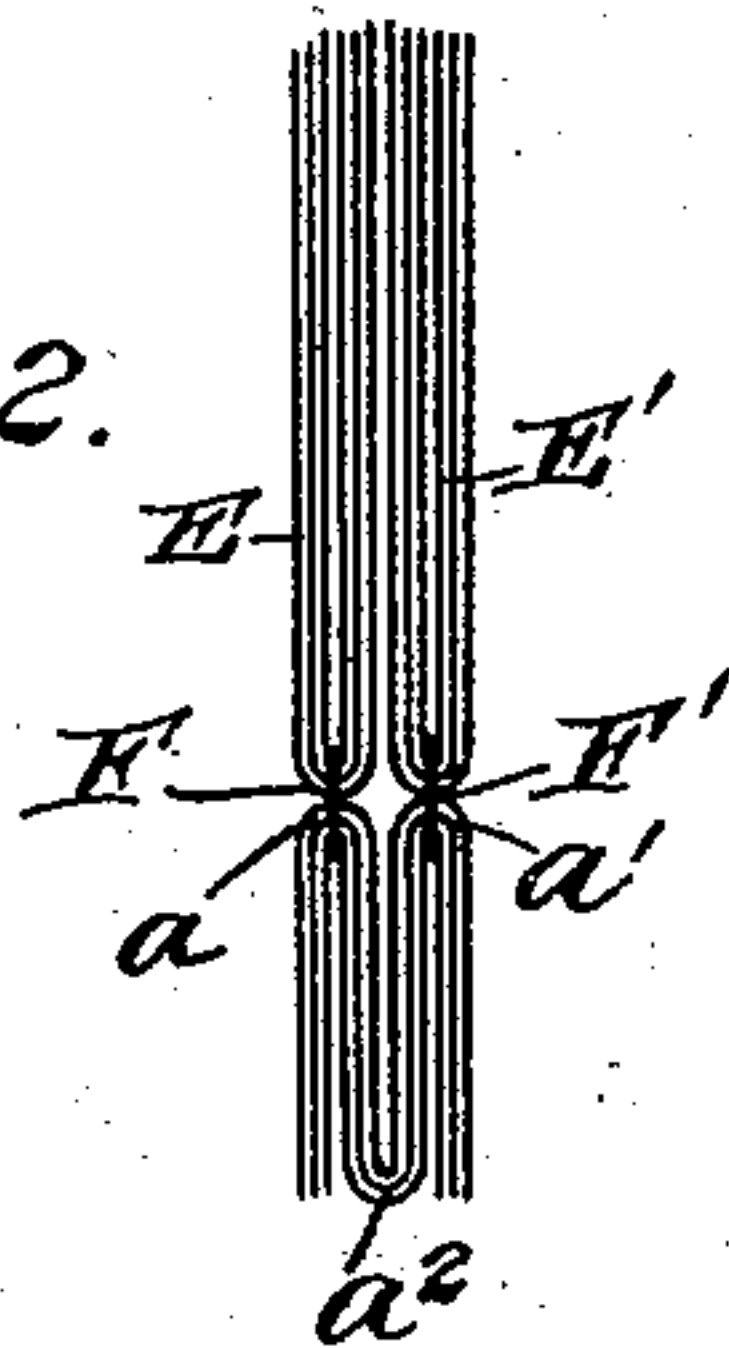


Fig. 3.

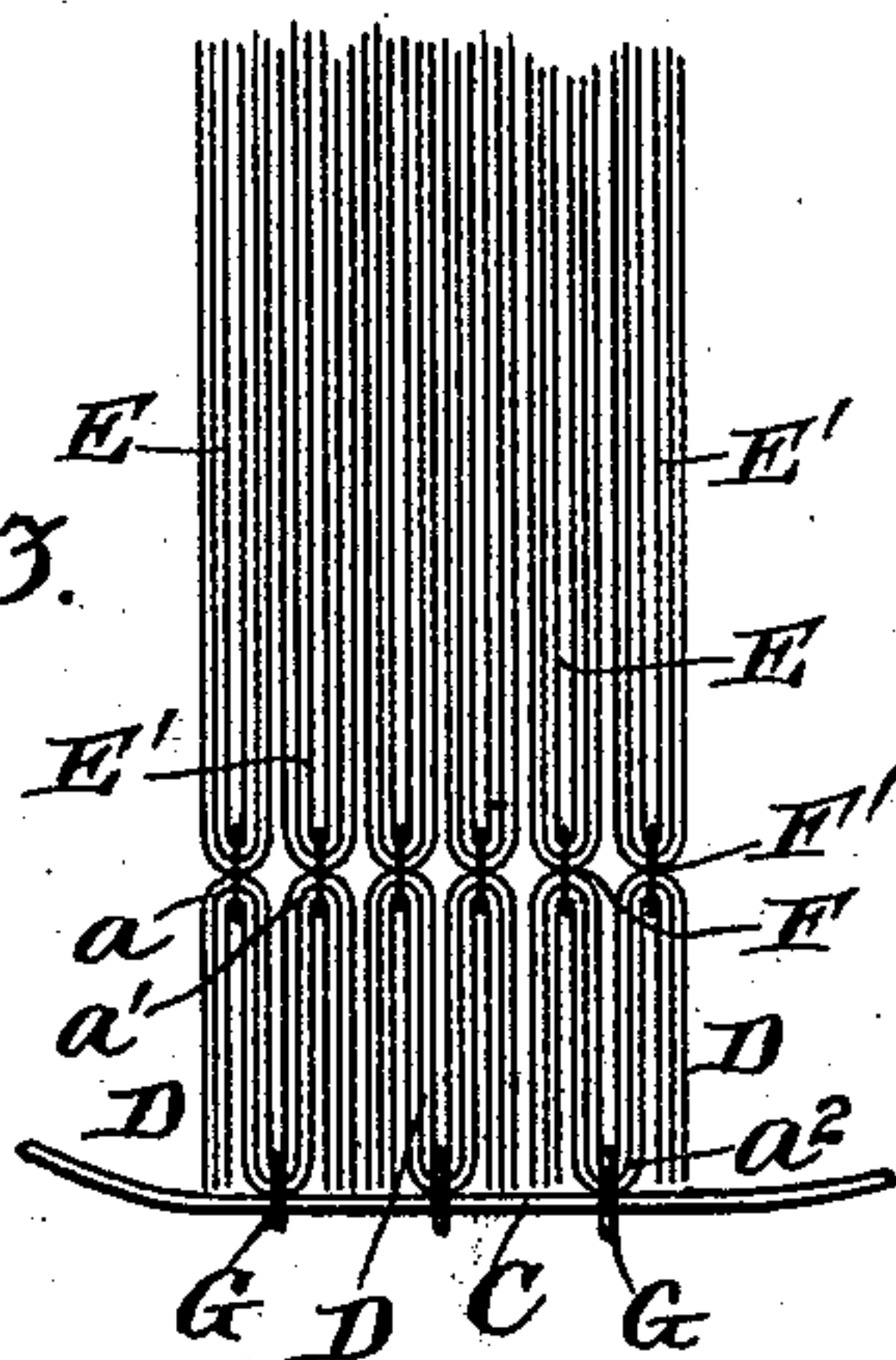
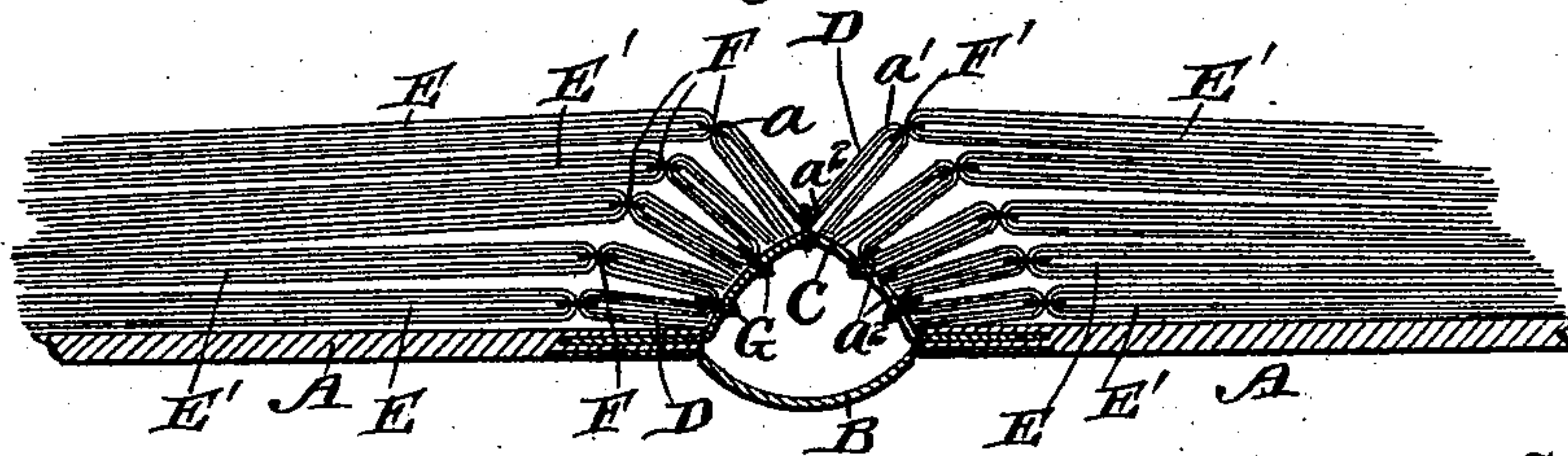


Fig. 4.



Witnesses

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# UNITED STATES PATENT OFFICE.

WILLIAM A. PALMER, OF DUBUQUE, IOWA.

## FLAT-OPENING BOOK.

SPECIFICATION forming part of Letters Patent No. 528,340, dated October 30, 1894.

Application filed June 27, 1894. Serial No. 515,869. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM A. PALMER, a citizen of the United States, residing at Dubuque, in the county of Dubuque and State of Iowa, have invented certain new and useful Improvements in Flat-Opening Books; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention consists in an account, blank or other flat opening book, comprising in its construction zig zag folded guards, all of the folds of the same width and forming two forward stitching loops to the outer edges of which the leaf-sections are attached in pairs and one rear loop, which is sewed to the parchment or back band in preparing the book for binding, this specific and peculiar construction extending throughout the book.

By my invention the leaf-sections are sewed to the guards before the sheets or guards are folded, by sewing one of the leaf-sections to the inner or forward edge of one of the guards and then turning around the guard and sewing the other leaf-section to the inner or forward edge of the other loop of the guard, then when folded, they form a single book-section composed of two double-sections attached to the edges of the inner or forward loops and a single loop for sewing the book-section to the parchment bands or bridge straps whereby, the amount of sewing required for uniting the guards with sections attached, to the back of the cover or to the back band or straps is reduced one half or one third in a book of a given number of sections; the reduction in the amount of sewing being according to the number of leaves composing the respective sections. Furthermore the back edges of the flat portions of the guard are concealed, and the book when thus constructed will be composed of a given number of independent book-sections, each section of which will be composed of double leaf-sections attached to the inner or forward edges of the two loops of the same guard and will be entirely flat-opening. By this mode of construction, it will be readily seen that there is no necessity for reinforcing the guard with canvas or cloth as the loops of the guard to which the leaves are sewed are of as many thicknesses as there are double

leaves in each leaf-section. Books made in this manner are exceedingly strong and durable.

In the accompanying drawings, Figure 1. is a perspective view of one of a series of guards which are employed in the construction of the book. Fig. 2. is an end view showing one of the guards with the leaf-sections stitched to it. Fig. 3. is also an end view of three guards, six leaf-sections and a back band or bridge strap united by stitching and sewing; and Fig. 4. is a broken view of a bound book. The cover of the book is shown in cross section and five guards and ten leaf-sections in elevation, the whole being stitched, sewed, and bound together.

A in the drawings, indicates the lids of the cover, B the back, and C one of the bridge straps or parchment or back bands of the book.

D indicates the guard; E, E' the leaf-sections; F, F' the stitching between the guards and the sections, and G the sewing between the guards and back bands or bridge straps of the book.

The guards D throughout the book are formed preferably by folding paper of substantially the same thickness and the same number of pieces as compose each leaf-section E, E'.

I have found that a convenient number of leaves for each leaf-section to be six or three sheets folded at their center, and the guard for such section would be composed of three pieces of paper, which greatly adds to its strength. When thus constructed each guard has two inner or forward stitching loops  $a$ ,  $a'$  for receiving the thread for which a pair of leaf-sections E, E' are attached to each guard as indicated at F, F' and the outer or rear loop  $a^2$  for receiving the cord or thread by which the guard is attached to the parchment bands or bridge straps C, C of the back B of the book as shown. Each of the guards when folded has a doubled intermediate portion  $c$  and right and left hand single flap portions  $d$  formed of the same material and of the same thickness as C. The flap portions have their outer or rear edges terminated just at the back bands or straps, and while they are left free will be concealed when the book is opened.

The respective guards are wholly independ-



ent of one another and when the book is finished and closed the flap portions of one guard will lie against the flap portions of another guard, but not connected together, and the intermediate double portion will lie flat between the flaps of the guard, the construction being followed throughout the book, and all being held firmly in their place in the process of binding.

10 By my invention flat opening books can be constructed at considerable less cost as there is much less sewing to unite the sections into a book than under other modes of construction, while their durability and convenience  
15 are insured.

What I claim as my invention, and desire to secure by Letters Patent, is—

A flat opening book having independent guards each formed by folding the material  
20 so as to make a doubled intermediate portion

which terminates in an outer or rear loop, and also to make right and left hand flap portions which with the intermediate portion form two inner or forward stitching loops, said book also having leaf-sections stitched in pairs to each guard, forming a single book-section and the sections and guards being sewed to the back hand or bridge straps by threads passed through the outer loops of the intermediate doubled portions of the guards and the flap portions of the respective guards lying flatwise against one another when the book is finished and closed, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM A. PALMER.

Witnesses:

M. M. CADY,

JOHN L. BUETTELL.