

No. 863,988.

PATENTED AUG. 20, 1907.

P. HANSEN.
LEAF FOR BOOKS.
APPLICATION FILED JUNE 22, 1906.

Fig. 1.

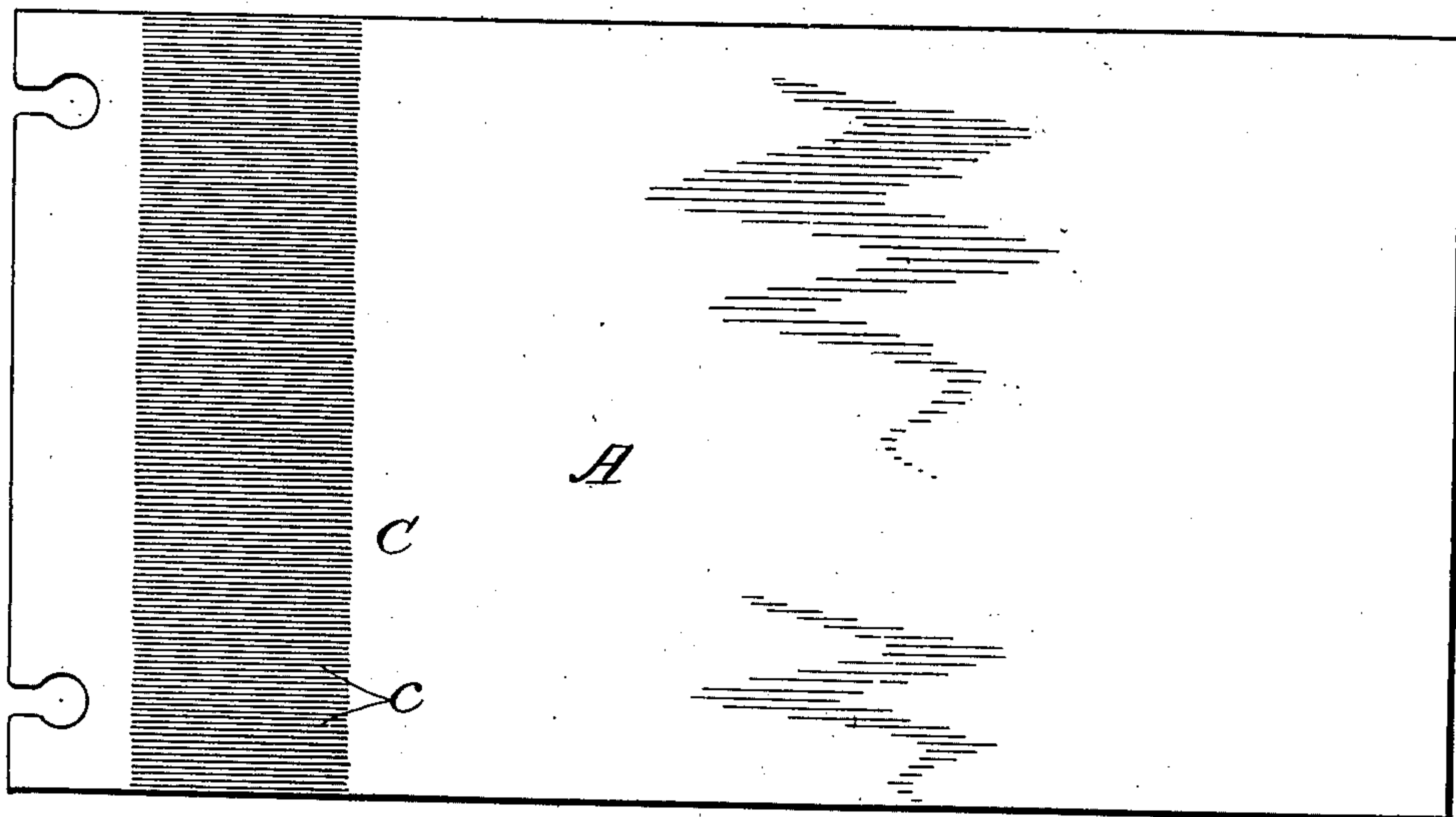


Fig. 2.

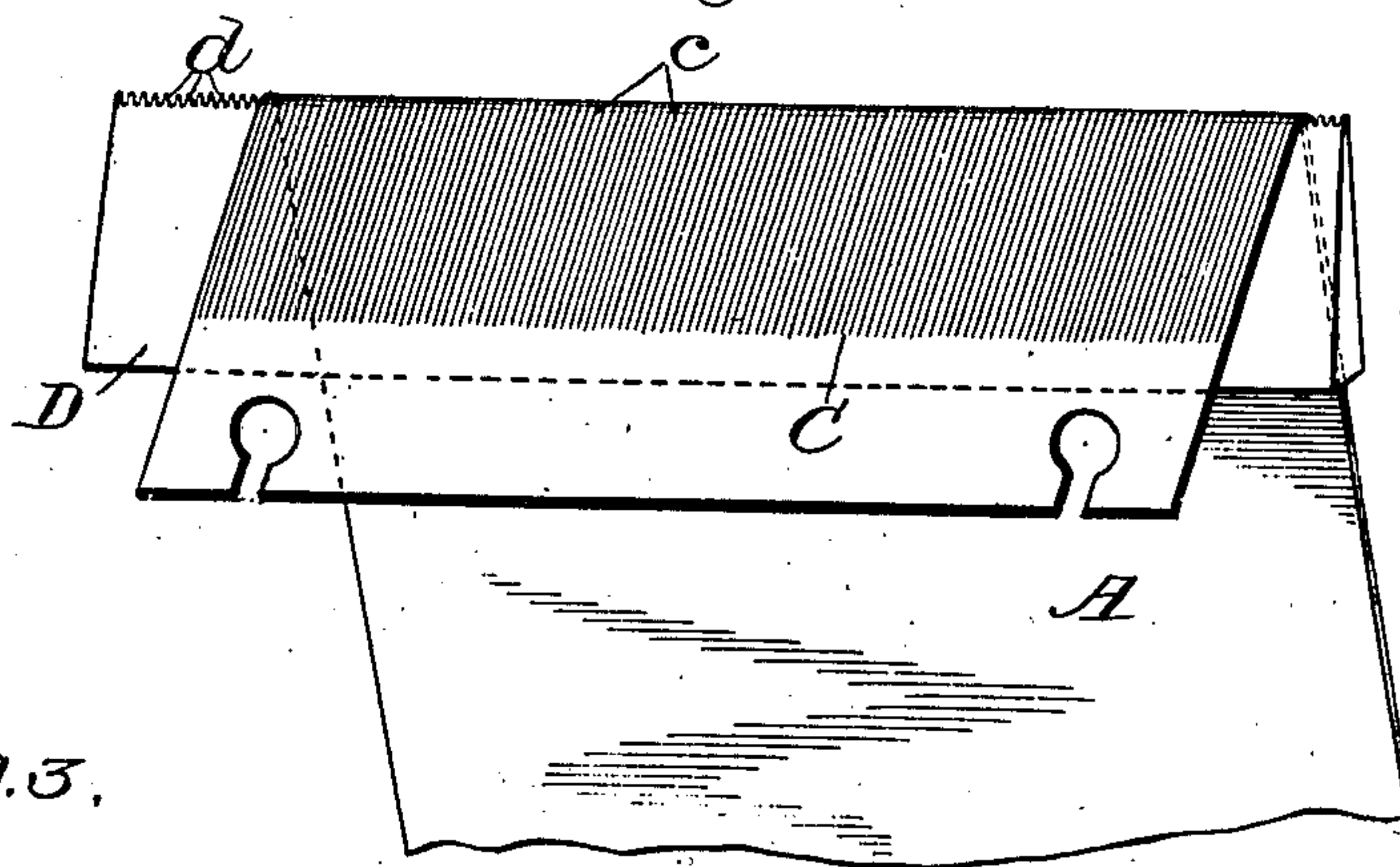


Fig. 3.

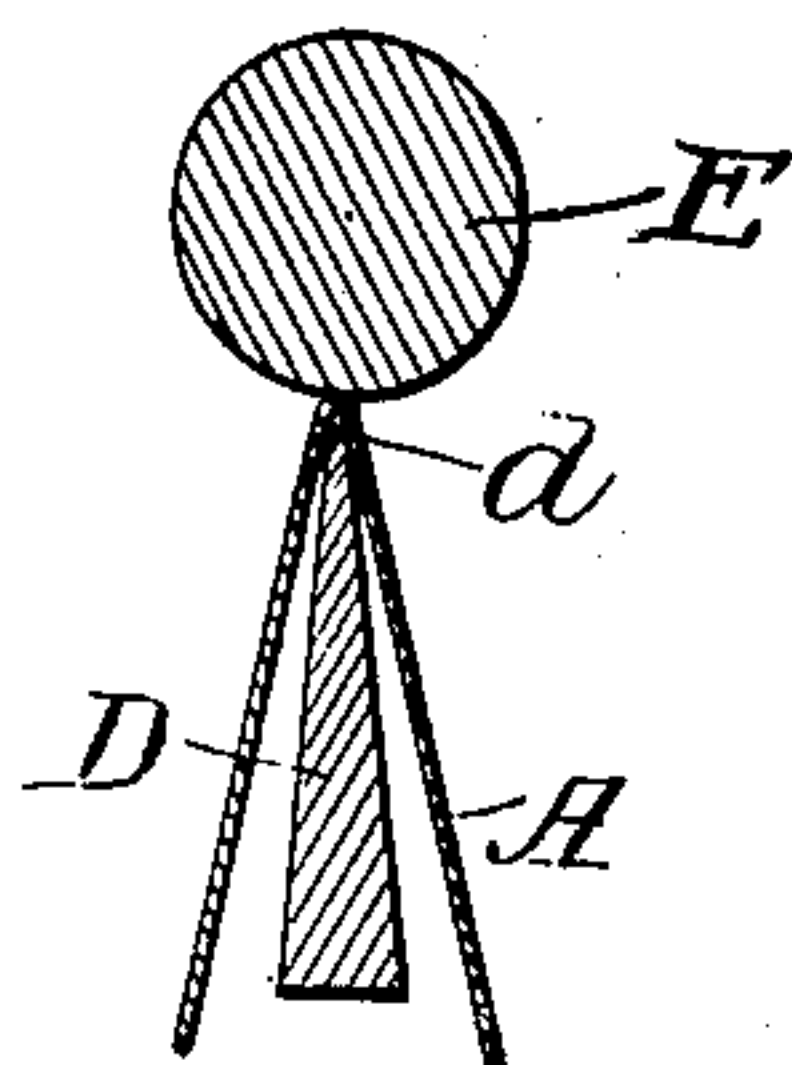


Fig. 4.



Witnesses:

Wm. Hennich

E. H. Lundy

Inventor
Peter Hansen

By Frank D. Thomas
Att'y.

UNITED STATES PATENT OFFICE.

PETER HANSEN, OF CHICAGO, ILLINOIS, ASSIGNOR TO J. S. McDONALD COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

LEAF FOR BOOKS.

No. 863,988.

Specification of Letters Patent.

Patented Aug. 20, 1907.

Application filed June 22, 1906. Serial No. 322,877.

To all whom it may concern:

Be it known that I, PETER HANSEN, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Leaves for Books, of which the following is a full, clear, and exact description.

My invention relates to the leaves of books, and more especially to the leaves of that type of books known as loose-leaf ledgers, and loose-leaf binders, etc. In such books it is very desirable, owing to the large proportions that they often attain, to so construct the leaves or sheets to be inserted therein that they will lie flat while the book is open and in use. Owing to the fact that the securing-member or binding post for the leaves is usually an inflexible element, it has been found almost impossible to do this. Various means have been devised to overcome this objection but the most efficient method employed has been to flex in one way or another, the individual sheets throughout a limited transverse portion near and substantially parallel to the binding edge thereof.

It is the object of my present invention to flex each leaf over a certain area in such a manner as to form a "hinge" which will be so flexible that, when a book containing a number of such leaves is opened, the same will lie flat against each other and against the binder covers, thereby presenting a page which is easily readable and presents a level writing surface.

To accomplish this I employ the means hereinafter fully described in the specification and as more particularly pointed out in the claims.

In the drawings:—Figure 1 is a representation of one of my improved leaves. Fig. 2 is a perspective view showing substantially the manner of accomplishing the flexing of said leaf. Fig. 3 is a transverse section of the flexing comb. Fig. 4 shows a portion of said flexing comb, drawn to an enlarged scale.

Referring to the drawings, A represents a suitable leaf such as is usually employed in loose-leaf ledgers, and which is provided along its binding edge with a series of slots or circular openings that are adapted to be engaged by and secured to the usual telescopic posts of the binder. A slight distance from these slots the leaf is provided with a flexed "hinge" or band C, within which the surface of the paper is so treated as to render the said "hinge" considerably more flexible than the remaining portion of the sheet, so that when the book is opened, said hinge will form the bend of the leaf. This flexibility is accomplished by superficially scoring the paper transversely to the length of the hinge, but longitudinally and parallel with the upper and lower edges of the leaf, which scoring may be made to cover the "hinge" its entire length or only portions thereof. These scores c are made by running the portion of the sheet it is desired to flex, back and forth over the teeth

d of the serrated edge of a bar or comb D, as many times as may be necessary. The teeth d are, preferably, not sharp, but have their points rounded, as shown in Fig. 4 of the drawings, and the scores c made by these teeth are not intended to tear or penetrate the paper, although this may happen, but to fracture its sizing and destroy the compactness of and weaken the same. After the paper has been treated on one side, the other side of the flexible portion or hinge is correspondingly treated. If desired the paper may be engaged by a roller E, as it passes around the serrated flexing edge of bar D, substantially as shown in Fig. 3 of the drawings. The effect of this would be to compress the paper where the scores c are made, and make it thinner while at the same time weaker.

What I claim as new is:—

1. A leaf for books comprising a sheet of paper provided with a flexible band formed of a plurality of scores arranged transverse to the length of said band.

2. A leaf for books comprising a sheet of paper provided with a band of greater flexibility than the remainder of the leaf and formed of a plurality of scores arranged transverse to the length of said band.

3. A leaf for books comprising a sheet of paper provided with a band of greater flexibility than the remainder of the leaf and formed of a plurality of parallel scores arranged transverse to the length of said band.

4. A leaf for books comprising a sheet of paper provided with a flexible band formed of a plurality of scores arranged transverse to the binding edge of the sheet.

5. A leaf for books comprising a sheet of paper provided with a band of greater flexibility than the remainder of the leaf and formed of a plurality of minute scores arranged transverse to the binding edge of the sheet.

6. A leaf for books comprising a sheet of paper provided with a flexible band disposed parallel to the line of bending of said leaf in the book and formed of a plurality of minute scores that are arranged at substantially right angles to the line of bending of said leaf.

7. A leaf for books comprising a sheet of paper provided with a flexible band parallel to its binding edge, the surface of the portion of paper comprising said band provided with scratches transverse to the length of said band.

8. A leaf for books comprising a sheet of paper provided with a flexible band formed of a plurality of scores arranged transverse to the length of said band on each side of said sheet.

9. A leaf for books comprising a sheet of paper provided with a band of greater flexibility than the remainder of the sheet and formed of a plurality of parallel scores arranged transverse to the length of said band on each side of said sheet.

10. A leaf for books comprising a sheet of paper provided with a flexible band parallel to its binding edge, the surface of both sides of said sheet throughout the portion comprising said band provided with scratches transverse to the length of said band.

In testimony whereof I have hereunto set my hand and seal this 16th day of June, A. D. 1906.

PETER HANSEN. [L. S.]

Witnesses:

FRANK D. THOMASON,
E. K. LUNDY.