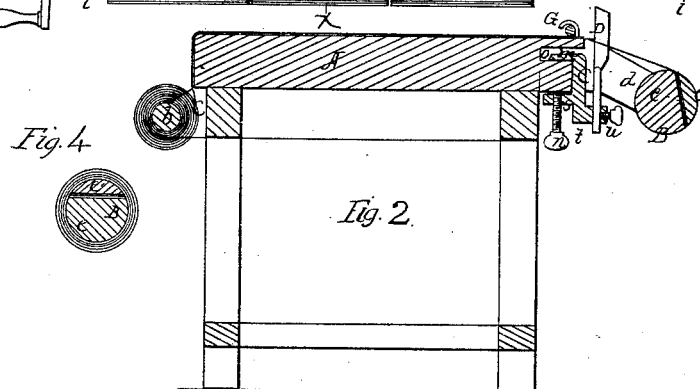
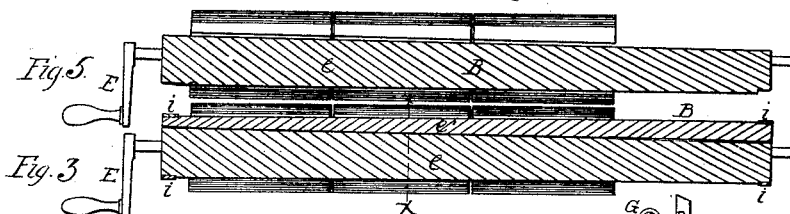
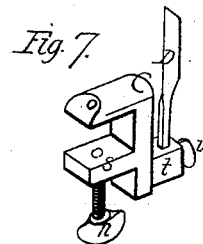
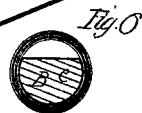
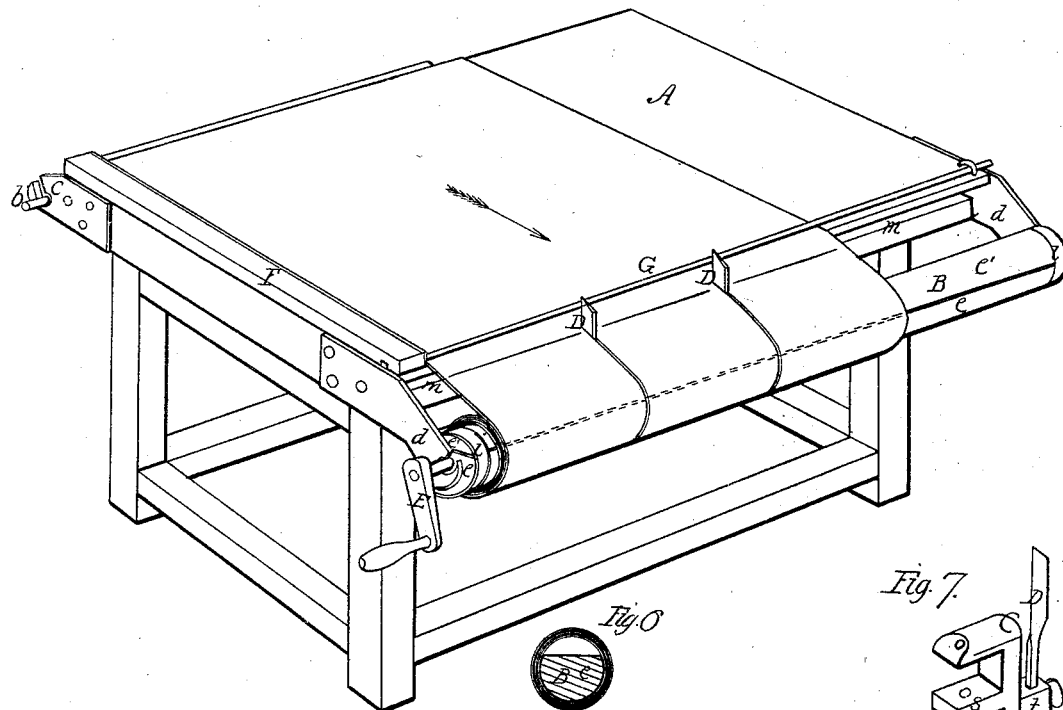


*C. Lemon.*  
*Book-binders' Cloth-cutting Table.*  
*N<sup>o</sup> 45,620.      Patented Dec. 27, 1864.*  
*Fig. 1.*



Witnesses:

A. O. A. Johnson  
 W. F. Smith

Inventor:

Charles Lemon

# UNITED STATES PATENT OFFICE.

CHARLES LEMON, OF WASHINGTON, DISTRICT OF COLUMBIA.

## BOOKBINDER'S CLOTH-CUTTING TABLE.

Specification forming part of Letters Patent No. 45,620, dated December 27, 1864.

*To all whom it may concern :*

Be it known that I, CHARLES LEMON, of the city and county of Washington, in the District of Columbia, have invented a certain new and useful improvement, being a Book-Binder's Cloth-Cutting Table; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, which make part of the same, and in which—

Figure 1 represents a view in perspective of the cutting-table with its appendages, showing a piece of cloth in the position it occupies when undergoing the operation of being cut into strips suitable for book-covers. Fig. 2 represents a transverse section of the same. Fig. 3 represents a longitudinal section of the clamping and drawing roller, the red lines showing the cloth clamped and wound upon the roller after it has been cut into strips. Fig. 4 represents a transverse section of the same at the line *x x*. Fig. 5 represents a longitudinal section of the same with one part of the roller removed, by which means the cloth can be taken from the roller after it has been cut. Fig. 6 represents a transverse section of Fig. 5, and Fig. 7 represents a view in perspective of the cutter and its adjusting-frame detached from the table.

In the trade heretofore the operation of cutting covers for books has been performed by hand, by means of a knife and pattern-board, and this mode is necessarily slow and inconvenient in handling the cloth, by reason of its being in rolls and requiring to be kept straight while being cut, and then only one strip or pattern can be cut at a time.

The object of my invention is to cut an entire roll of cloth into strips for any given-sized covers at one and the same operation, and to leave the strips so cut in rolls for convenient handling in the subsequent operation of simply cutting the strips into covers.

The machine consists of a table, A, of an oblong shape and of suitable size. On the left side of this table is fitted in brackets *c* a small roller or iron rod, *b*, which holds the cloth to be cut, and on the right side is also mounted in brackets *d d* a clamping and receiving roller, B, by which the cloth is drawn forward to the knives, and on which it is wound as it is cut. Both of these rollers are mounted in their brackets a suitable distance

below the top of the table, and the right one, B, is also placed a suitable distance from the frame, so that the cloth to be cut shall be presented to the knives at an angle as it leaves the table, and also to leave a space for the knives which are located between the table and the receiving-roller. This roller B is made in two parts, *e e'*, each tapering longitudinally, as shown in Figs. 1, 3, and 5, for the purpose of receiving the ends of the cloth to be cut between the adjacent sides of the two parts, so that when the two parts are locked together, as shown in Fig. 1, the cloth will be clamped fast to the roller, so that when revolved it forms a drawing and winding roller. The two parts of this roller are locked together at their ends by means of rings *i i*, which can be easily removed to allow the cloth to be taken off when cut. The object of tapering the two parts *e e'* of the roller longitudinally will be described hereinafter.

The right side of the table is provided with a groove, *m*, into which is fitted a knife-stock, C, so that it can be adjusted along the groove, and clamped by means of a thumb-screw, *n*, to the under side of the table, a tongue, *o*, of the stock, entering the groove *m*, and a similar tongue, *s*, receiving the thumb-screw *n* beneath the table, as shown in Fig. 2. A similar tongue, *t*, projects from the opposite side of the stock to form a seat for the knife D, and in which its shank may be adjusted vertically and clamped by a screw, *u*, so that its blade, the cutting-edge of which is next to the table and but a slight distance from it, may be raised or lowered as it gets dull, or removed from its seat to be sharpened.

The particular shape and structure of the knife-stock is shown in the detached view, Fig. 7, and is made adjustable in the groove of the table, so as to adapt the cutter to the required width of the strip to be cut.

The clamping and drawing roller is fitted with a crank-handle, E, by which the operator performs the operation of cutting with one hand while with the other he holds the cloth to be cut to the table and against a guide, F, fixed upon the end of the table, as shown in Fig. 1.

The operation is very simple. The roll of cloth to be cut is placed upon the iron rod or roller *b* by simply passing the rod through the central opening in the cloth and then

placing the rod in its supporting-baskets. The end of the piece of cloth is then unrolled and drawn upon the table and slits cut in it the exact size of the strips to be cut by the knives. The two sections of the drawing-roller are then separated by removing the clamping-rings *i*, and the slitted end of the piece of cloth is placed upon the flat side of one of the sections and clamped by placing the corresponding flat side of the other section over it and securing the two by again placing the clasp-rings *i* over their ends, and the two tapering sections, thus locked together, present a true cylindrical form. The knives, having been previously adjusted, are placed in the slits already cut by drawing the cloth over them, so that at the commencement of the operation the drawing-roller B will occupy the relative position to the knives shown in Fig. 2, the pattern slits, therefore, being only long enough to allow the cloth to be clamped to the drawing roller and to receive the knives which project through the slits and above the cloth, as shown in Fig. 1. The operator then with his right hand revolves the crank-handle of the drawing-roller, and with his left hand resting upon the cloth on the table holds it against the guide F, and the entire piece is thus drawn rapidly against the knives, and as fast as it is cut each strip is wound upon the roller, the same as if it had not been cut. In thus drawing the cloth rapidly to the knives it is liable to spring up from the table in front of the knives by reason of its stiffness, and to prevent this I place a rod, G, by securing its ends in eyes to the top of the table, over the cloth and in front of the knives, so that the cloth is held even upon the table and prevented from flying up above the knives.

The cloth having been cut into strips and wound upon the roller B, which is cylindrical, some means must be devised by which it can be removed in rolls—that is to say, without

having to unroll each strip from the roller. To accomplish this, therefore, is the object of constructing the drawing and receiving roller in two parts, tapering longitudinally, so that either of them may be withdrawn by simply removing the clamping-rings *i* and pushing either part out endwise, and thus at the same time unclamping the ends of the cloth. Thus it will be seen the removal of one section of the cylinder leaves the cloth as free to be removed as though it had not been wound upon the surface of the cylinder. Before the parts of the roller are separated, however, it is removed from its brackets and placed upon the table, the rolls having been previously tied with a string, and the rolls are thus taken off in a condition ready for the operation of being cut into patterns.

I have represented two knives, but it is obvious any number may be used, as desired, and they may be adjusted at equal or unequal distances apart, according to the patterns to be cut.

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

1. The combination of the drawing and receiving roller B with the knives D and table A, in the manner and for the purpose described.

2. Constructing the drawing and receiving roller B in two tapering parts, *e e'*, in the manner and for the purpose described.

3. Mounting the knives upon stocks constructed in such a manner as to be clamped to the front edge of the table and adjusted in the manner described and shown.

In testimony whereof I have hereunto signed my name in the presence of two subscribing witnesses.

CHARLES LEMON.

Witnesses:

A. E. H. JOHNSON.  
J. H. JOHNSON.