

No. 736,644.

PATENTED AUG. 18, 1903.

J. SILBERSTEIN.  
CARPET CUTTING MACHINE.

APPLICATION FILED MAR. 15, 1902.

NO MODEL.

Fig. 1.

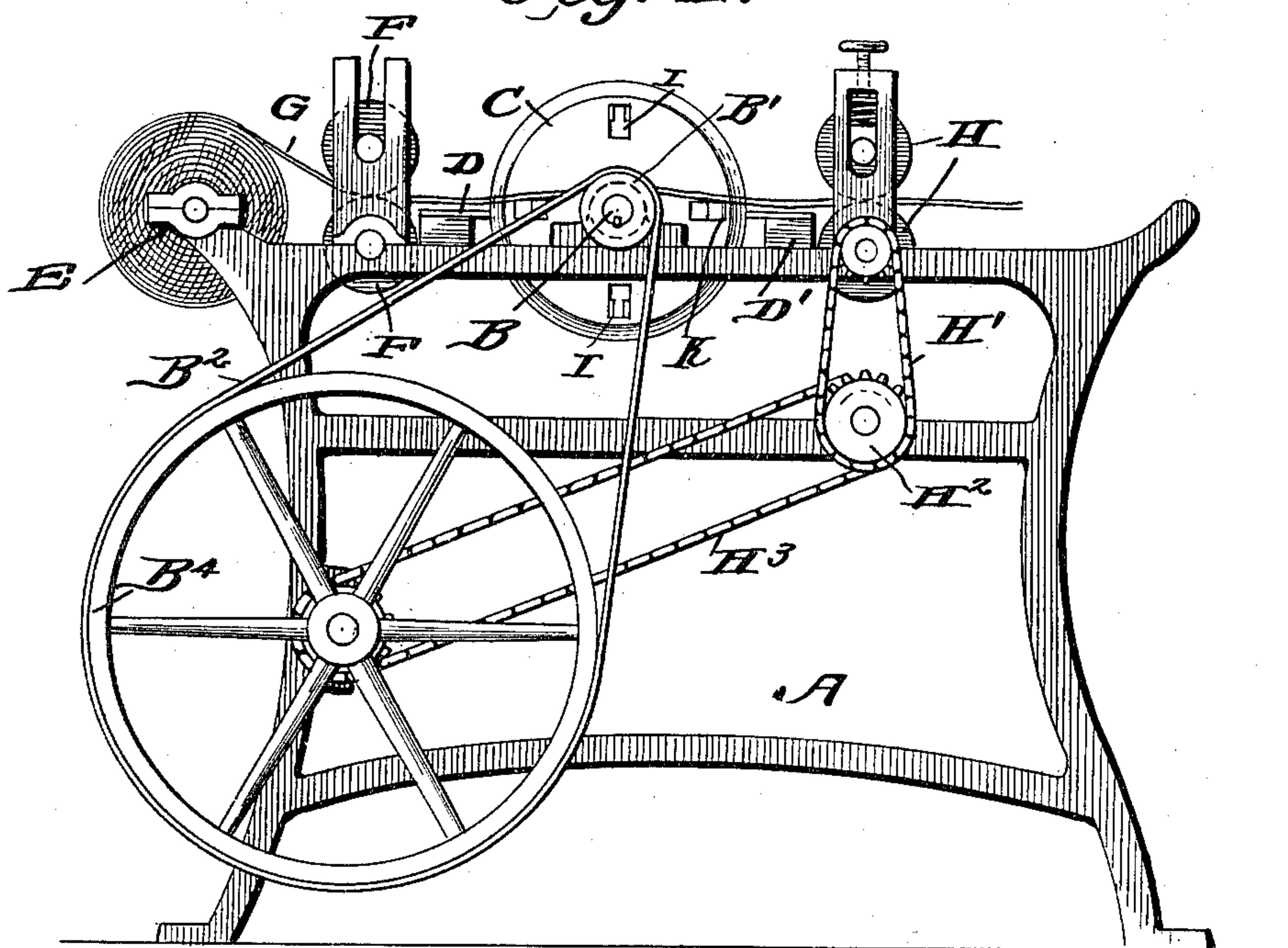


Fig. 2.

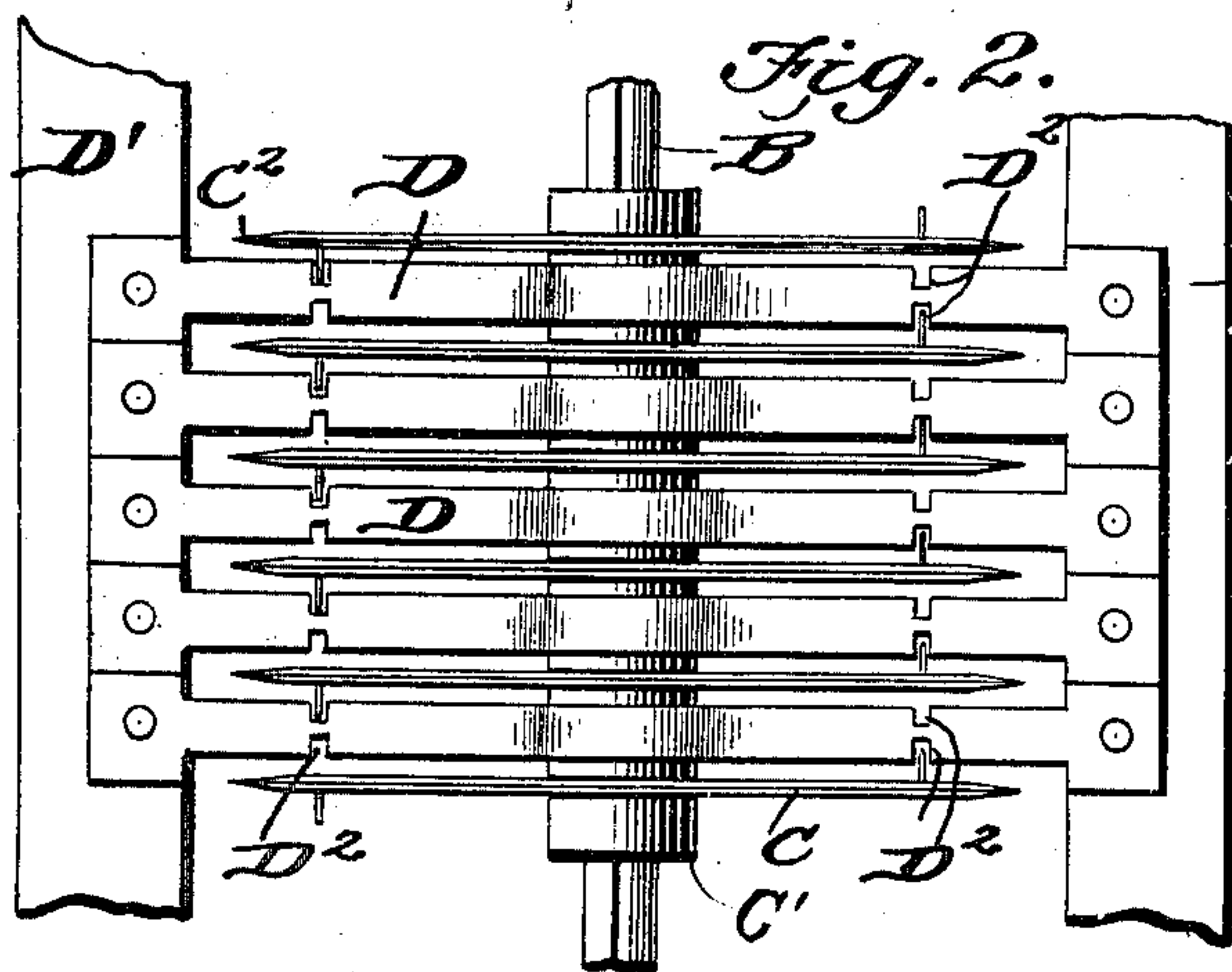


Fig. 3.

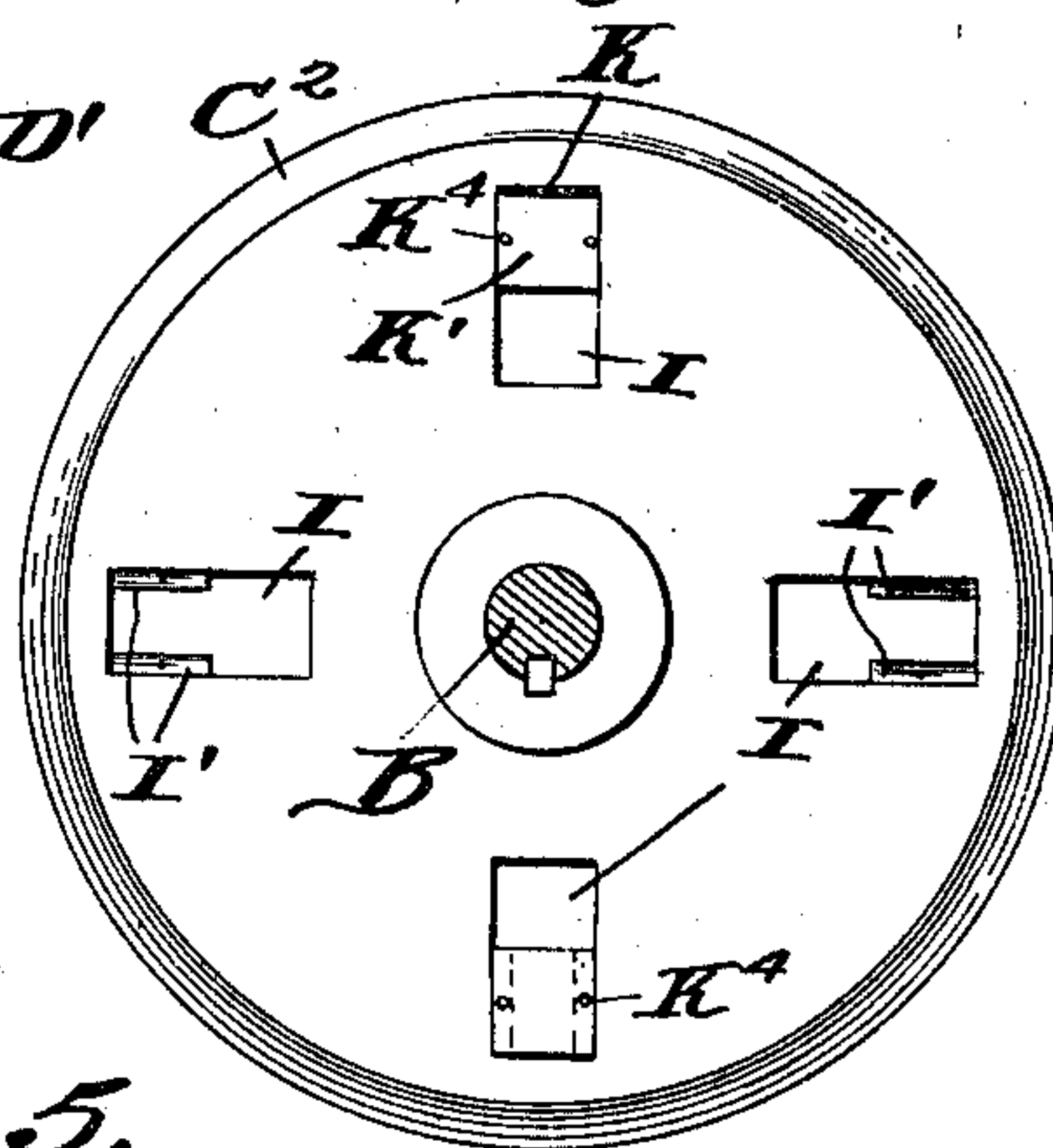


Fig. 4.

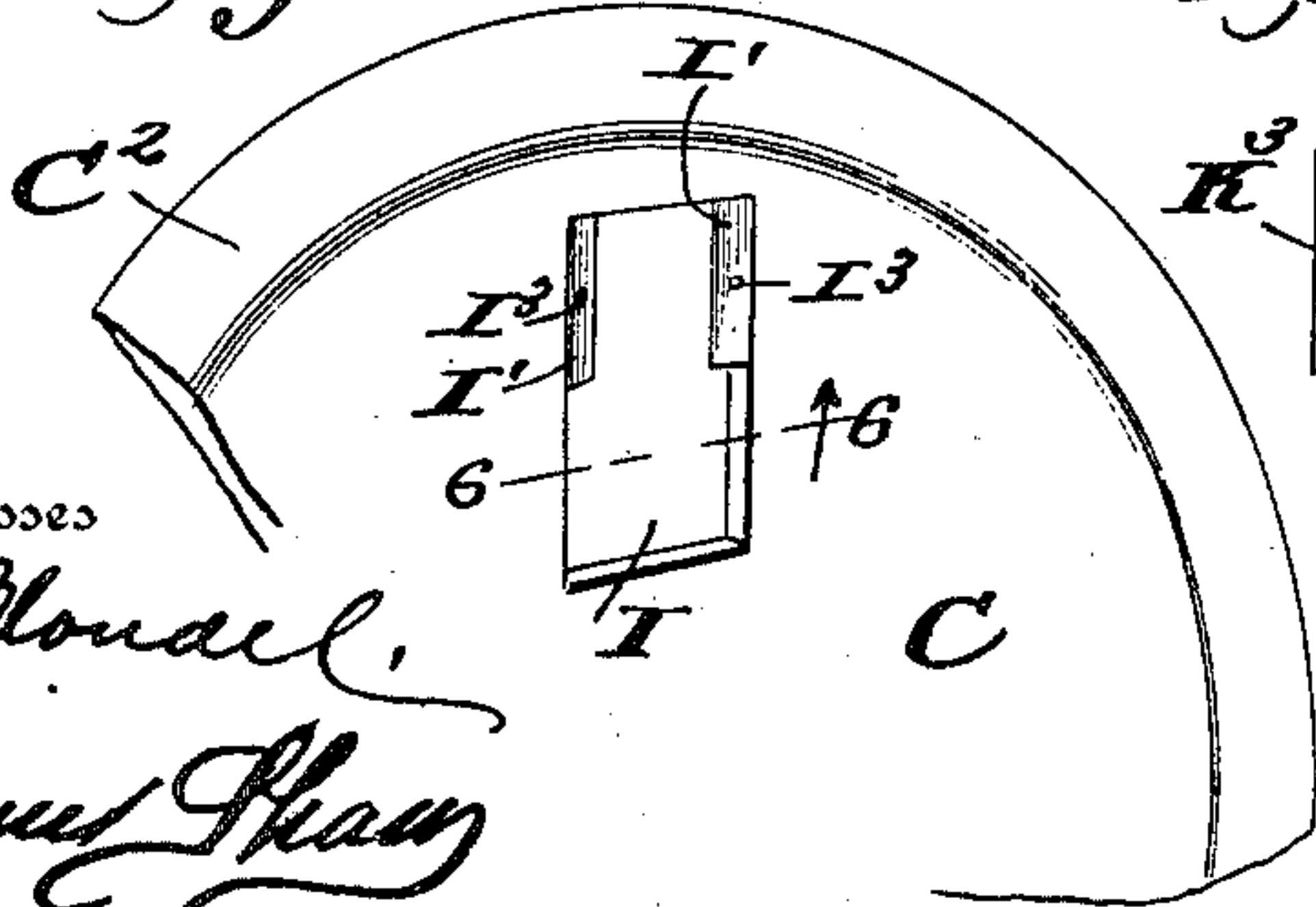


Fig. 5.

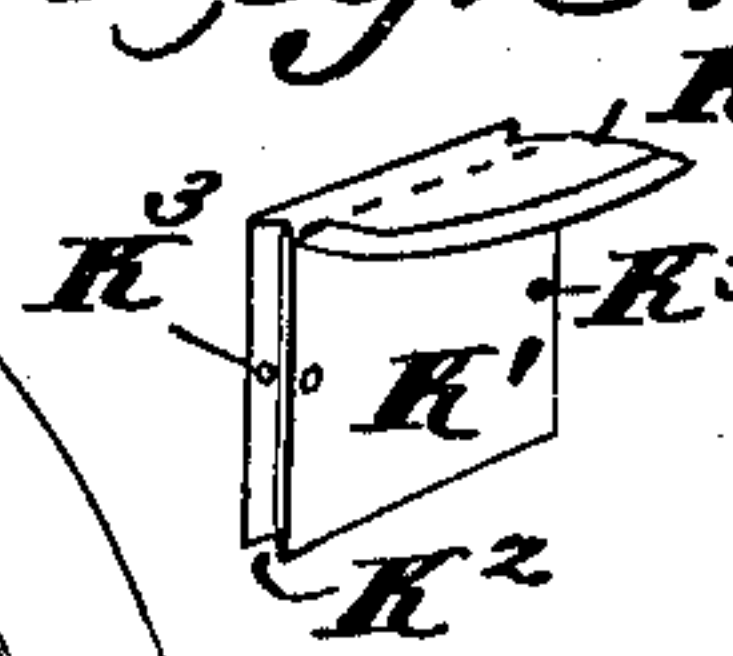
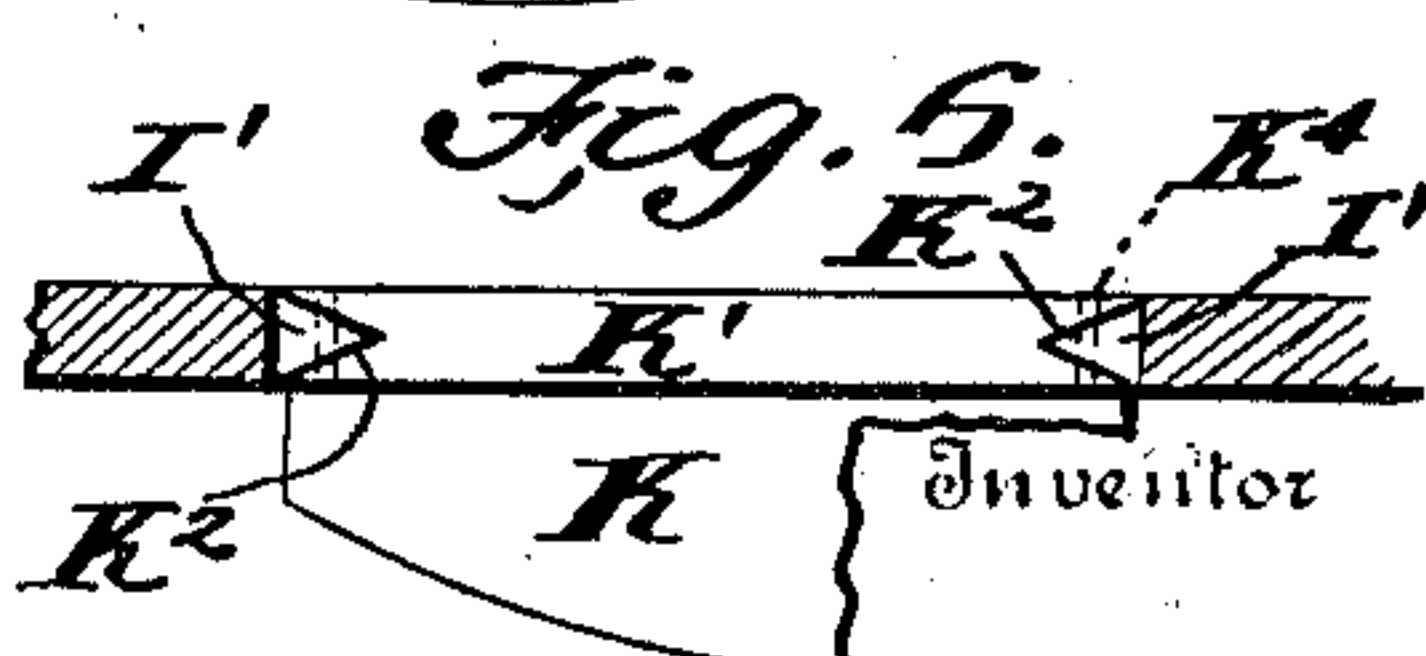


Fig. 6.



Witnesses  
M. S. Clouet,  
James Shaw

Julius Silberstein,

By  
Mendel Brock  
Attorneys



# UNITED STATES PATENT OFFICE.

JULIUS SILBERSTEIN, OF CHICAGO, ILLINOIS.

## CARPET-CUTTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 736,644, dated August 18, 1903.

Application filed March 15, 1902. Serial No. 98,378. (No model.)

*To all whom it may concern:*

Be it known that I, JULIUS SILBERSTEIN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Carpet-Cutting Machine, of which the following is a specification.

This invention relates generally to carpet-cutting machines, and more particularly to a combined carpet cutter and raveling machine, the object of the invention being to provide a cheap, simple, and efficient device by means of which carpets, preferably of the ingrain type, can be cut into strips and the edges of same raveled, thereby providing suitable stock for weaving into rugs, it being common to employ this material for this purpose.

The invention consists also in certain details of construction and novelties of combination, all of which will be fully described hereinafter and pointed out in the claims.

In the drawings forming a part of this specification, Figure 1 is a side elevation of a carpet-cutting machine constructed in accordance with my invention. Fig. 2 is a top plan view of the cutting and raveling mechanism. Fig. 3 is a side elevation of one of the cutting-disks. Fig. 4 is a detail perspective view showing a portion of one of the cutting-disks and illustrating in detail the opening produced in said disks for the purpose of receiving the raveling cutter-blade. Fig. 5 is a detail perspective view of the said cutter, and Fig. 6 is a detail section view on the line 6 6 of Fig. 4.

In carrying out my invention I employ the main frame A, upon which is mounted the shaft B, having a pulley B' at one end, which is driven by means of a belt B<sup>2</sup>, passing around the band-wheel B<sup>4</sup>. A series of carpet-cutting disks C are rigidly mounted upon the shaft B, suitable spacing-collars C' being employed to hold the disks in proper parallel positions. Each disk C rotates between two flat parallel bars D, said bars being arranged in series and secured at their opposite ends to the cross-pieces D', fixed upon the main frame, and these bars D virtually constituting a slotted bed-plate through which a series of cutting-disks rotate. It will also be noticed that I employ one disk at each side of the series of bars D. A carpet-roll E is mounted at the rear end of the frame, and adjacent thereto

are tension-rolls F, through which the carpet G is passed. Drawing-rolls H are arranged adjacent to the forward end of the frame, one of said rolls having a sprocket at its outer end, driven by a chain H', which passes over another sprocket H<sup>2</sup>, which in turn is driven by a chain H<sup>3</sup>, from the hub of the band-wheel B<sup>4</sup>.

Each disk C is constructed with a double beveled cutting edge C<sup>2</sup> for the purpose of cutting or splitting the carpet as it is drawn from the roll E across the slotted bed-plate by means of the drawing-rolls, the direction of revolution of the disks being toward the rolls, and in order to ravel or fray the edges of the carpet-strip I attach a series of cutter-blades to the said disk, which cutters project laterally from the faces of the disk, and thereby serve to cut, fray, or ravel the edges of the strip. These cutter-blades may be connected to the disks in any suitable manner, but in practice I prefer to connect them in the manner illustrated in Figs. 3, 4, 5, and 6, and by reference to said figures it will be noted that I produce four openings I in the said disk, said openings being essentially rectangular in form and provided with inwardly-projecting guides I' at their outer ends, said guides being beveled, as shown.

The cutter-blade K has a shank K' in the form of a rectangular block, which is of such size and shape as to fit the inner end of the opening I, and the said edges of the shank K' are grooved, as shown at K<sup>2</sup>, to receive the inwardly-projecting guides I', and the shank K' and the guides I' are provided with registering openings K<sup>3</sup> and I<sup>3</sup>, through which fastening pins or bolts K<sup>4</sup> can be passed for the purpose of securely fastening the cutter-blades to the disk. In practice I prefer to arrange these cutting-blades alternately in opposite directions—that is, one blade projects laterally from one side of the disk, while the next adjacent blade will project laterally from the opposite side of the disk. The bars D are provided with notches D<sup>2</sup>, so as to permit the revolution of the cutter-blades.

In operation the carpet to be cut and raveled is placed upon the roll E, passed between the rolls F and against and passes the disks C, and then between the drawing-rolls H. The band-wheel B<sup>4</sup> is then rotated so as to



rotate the disks at about six hundred revolutions per minute, and the carpet being forcibly drawn against the cutting edges of the said disk by action of the drawing-rolls the  
5 carpet will be quickly and easily cut into a series of longitudinal strips, and inasmuch as four cutting-blades are brought into contact with the edges of the carpet during each rotation of said disk it is obvious that the  
10 edges of the carpet-strips will be frayed or raveled, thereby providing a superior article of stock for weaving into rugs.

Having thus fully described my invention, what I claim as new, and desire to secure by  
15 Letters Patent of the United States, is—

1. A machine for cutting and raveling carpets, consisting of one or more rotary disks constructed with smooth cutting edges and having one or more laterally-projecting cutter-blades, together with means for bringing  
20 the carpet into engagement with the said disk, as specified.

2. A machine for cutting and raveling carpets comprising one or more rotary disks constructed with smooth cutting edges and having a plurality of oppositely-disposed laterally-projecting cutter-blades, the slotted bed-plate through which the disks rotate, and

means for moving the carpet into engagement with the said disks for the purpose specified. 30

3. A carpet cutting and raveling machine, comprising a main frame, a carpet-supporting roll at one end, tension-rolls adjacent thereto, and the drawing-rolls arranged adjacent to the opposite end of the main frame, a slotted bed-plate arranged between the  
35 drawing and tension rolls, and a plurality of cutting-disks mounted upon the main frame between the said rolls and working in the slotted bed-plate, each disk being constructed  
40 with the cutting edge and provided with laterally-projecting cutting-blades, substantially as specified.

4. The combination with a rotary cutting-disk having openings produced therein, of  
45 the laterally-projecting cutter-blades having shanks arranged and secured within the openings produced in the disk, a slotted bed-plate in which said disk is mounted and transverse intersecting slots adapted to permit the passage of the laterally-projecting cutter-blades,  
50 substantially as specified.

JULIUS SILBERSTEIN.

Witnesses:

WALTER VON SYDON,  
J. C. JOHNSTONE.