

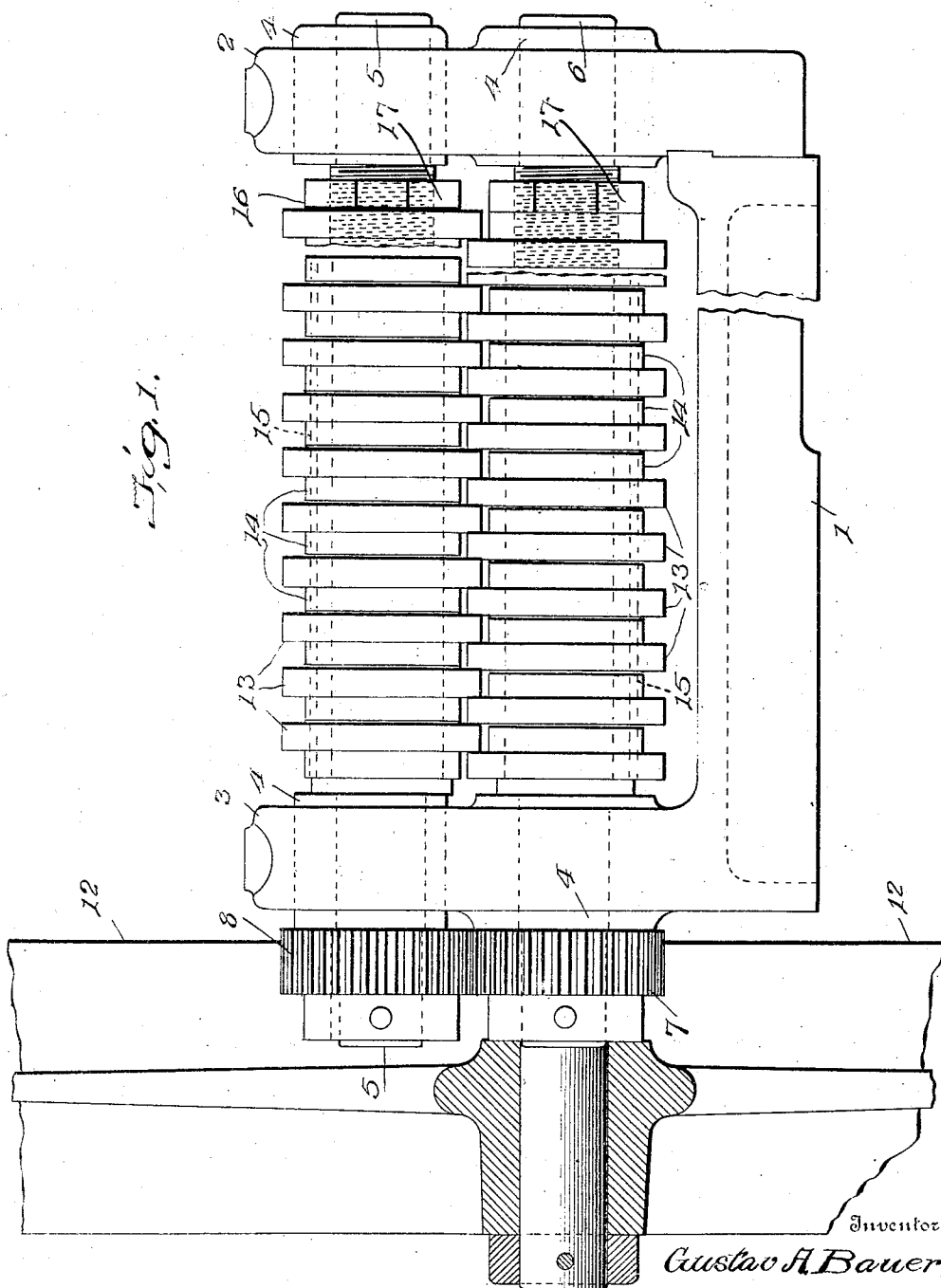
No. 884,556.

PATENTED APR. 14, 1908.

G. A. BAUER.
ROTARY CUTTER.

APPLICATION FILED APR. 9, 1907.

2 SHEETS—SHEET 1.



Witnesses

G. Howard Walmsley,
Edward T. Reed

By

H. A. Goldman

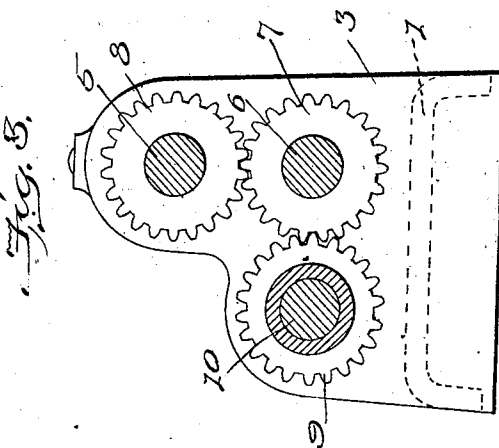
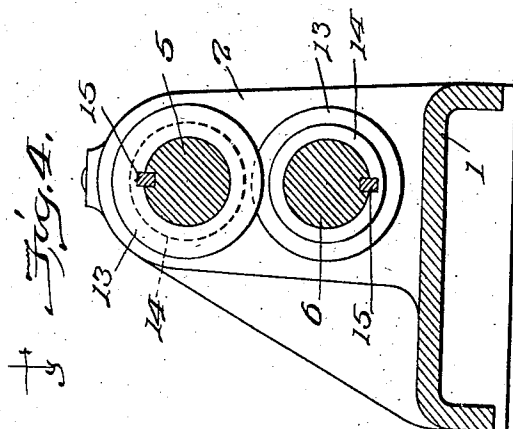
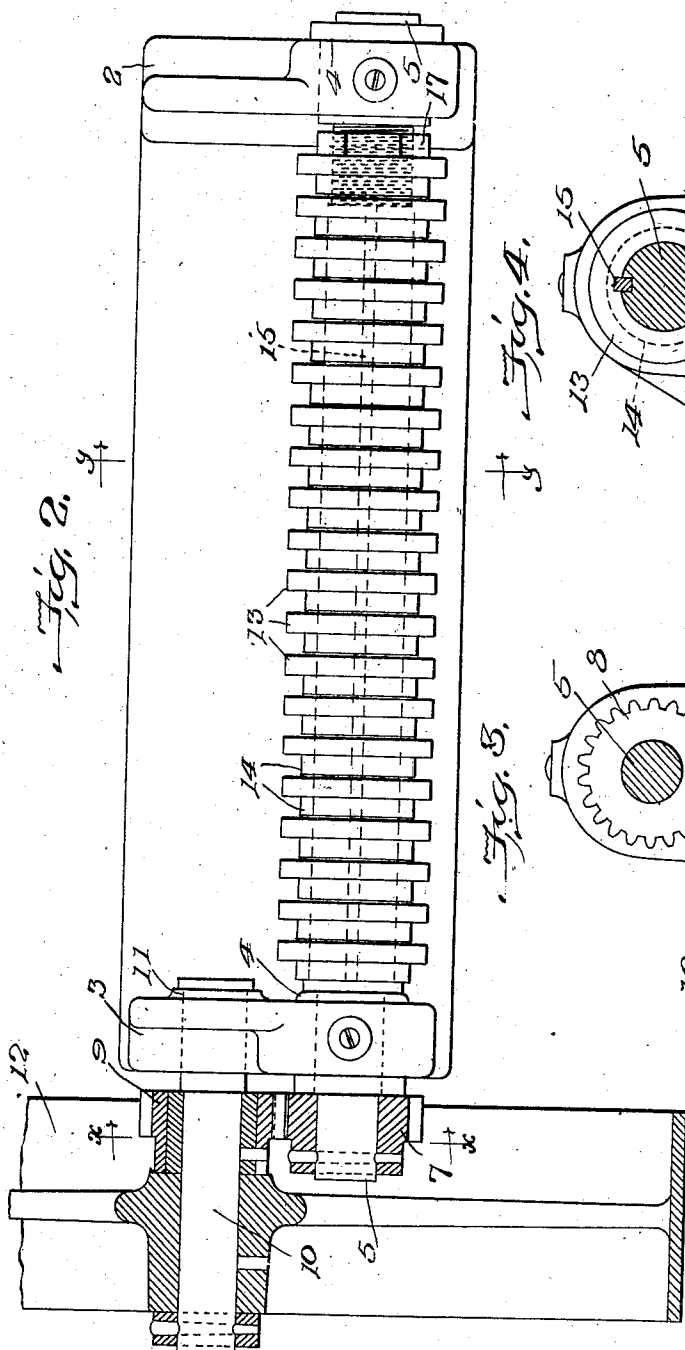
Attorney

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2 SHEETS—SHEET 2.



Inventor
 Gustav A. Bauer,

Witnesses
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UNITED STATES PATENT OFFICE.

GUSTAV A. BAUER, OF SPRINGFIELD, OHIO.

ROTARY CUTTER.

No. 884,556.

Specification of Letters Patent.

Patented April 14, 1908.

Application filed April 9, 1907. Serial No. 367,172.

To all whom it may concern:

Be it known that I, GUSTAV A. BAUER, a citizen of the United States residing at Springfield, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in Rotary Cutters, of which the following is a specification, reference being had therein to the accompanying drawings.

10 The present invention relates to rotary cutters, and the object of the invention is to provide a rotary cutter which will successfully cut carpet and similar materials into strips, operating continuously and simulta-
15 neously cutting a plurality of strips; to provide improved means for securing the cutters on the cutter shafts; and to provide means for adjusting the cutters on the shafts to maintain the same in proper cutting relation
20 one to the other.

With these objects in view my invention consists in certain novel features of construction and in certain parts and combinations to be hereinafter described, and then more
25 fully pointed out in the claims.

In the accompanying drawings, Figure 1 is a front elevation of a rotary cutter embodying my invention; Fig. 2 is a top plan view of such a cutter; Fig. 3 is a sectional view,
30 taken on the line xx of Fig. 2 and looking in the direction of the arrows; and Fig. 4 is a sectional view, taken on the line yy of Fig. 2 and looking in the direction of the arrows.

In these drawings I have illustrated the
35 preferred form of my invention, in which the cutters are mounted in a frame comprising a base portion 1 having upright end portions 2 and 3, each of which is provided with two bearings 4, mounted one above the other and
40 adapted to receive the ends of the shafts 5 and 6, which are rotatably mounted therein and are provided on one end with gears 7 and 8, meshing with each other. One of said
45 gears, preferably the lower gear 7, also meshes with a third gear 9 which is mounted on a stud shaft 10 journaled in a bearing 11 formed in the upright end portion 3 of the frame. A drive wheel 12 is also mounted on the
50 shaft 10 and serves to rotate the gear 9, and, through this medium, the gears 7 and 8 and the cutter shafts upon which they are mounted are rotated in opposite directions. The bearings of one of the shafts, preferably
55 the upper shaft 5, are arranged eccentrically to the shaft and are rotatably mounted in the end portions of the frame, whereby the rota-

tion of the eccentric bearings will adjust the upper shaft toward or away from the lower shaft.

Upon each of the cutter shafts 5 and 6 are
60 mounted a plurality of cutter disks 13. These disks are mounted upon their respective shafts in such a manner as to permit the same to be adjusted longitudinally of the shaft, but to be held against rotation rela-
65 tively thereto, thus causing the cutter disk and the shaft to rotate in unison. These cutters are spaced one from the other a distance equal to the thickness of one of said cutters, all of said cutters being of the same
70 thickness. The diameter of the cutters relatively to the distance between the shafts 5 and 6 is such as to cause the cutters of one shaft to overlap the cutters on the other shaft and to extend between the adjacent
75 cutters on the other shaft. The edges of the disks are left rough or undressed so as to provide a rough cutting edge at the edge of the periphery thereof; which not only cuts
80 the material in a more satisfactory manner than does the smooth edged disk, but also serves to feed the material forward without the aid of special feed mechanism. These
85 cutters may be secured upon the shafts in any suitable manner, but I prefer to provide each cutter with a hub portion or collar 14 which is rigidly secured to and preferably
90 formed integral with the cutters 13, and is of a width slightly less than the width of the cutter. This hub portion provides the cut-
95 ters with a bearing of sufficient width to hold the same in proper vertical position on their respective shafts. Each of the cutters are provided through the hub portion with a
100 recess extending longitudinally of the cutter shaft and adapted to register with a similar recess formed in the shaft itself and extending longitudinally thereof. A single key 15
105 is fitted into these recesses and serves to retain the cutters against rotary movement relatively to the shaft, but to allow the same to be adjusted longitudinally thereof. In order to retain the cutters in their adjusted position, a suitable locking means is provided near one end of the shaft. In the
110 present instance, the cutter lying nearest the end of the shaft is screw-threaded to form a nut adapted to engage the screw threads in the end of the shaft and form a locking nut 16. Preferably, the outer end of the hub
115 portion is extended, as shown at 17, to afford adequate means for actuating the nut.

The operation of the device will be obvious from the foregoing description. Through the medium of the drive wheel 12 and the pinions 9, 7 and 8 the cutter shafts are rotated in opposite directions. The arrangement of the cutters on their respective shafts so that they overlap each other is such as to provide at their points of intersection a cutting edge adapted to give a shearing cut on the material which is fed to the disks, and, the edges of the cutting disks being rough, the cutting action is further increased. When the disks become worn so that the cutting edges of the adjacent disks are so far separated as to diminish their cutting effect, they may be adjusted one to the other by slipping each successive cutter toward the same end of the shaft, thus bringing the cutting edges again into proper relation one with the other, this adjustment being permitted by making the collars which lie between the adjacent cutters of less thickness than the cutters. The nut 16 is then tightened down to lock the cutters in their adjusted position. Thus, it will be seen that I have provided a rotary cutter of this character which provides at the intersecting edges of the disks a rough-shearing cut which is adapted to readily sever such fabrics as carpet and the like; and further, that I have provided adequate means for adjusting the cutters relatively one to the other for maintaining the same in proper cutting relation one to the other, and means for locking the cutters in their adjusted positions.

I wish it to be understood that I do not desire to be limited to the exact details of construction shown and described, for obvious modifications will occur to a person skilled in the art.

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

1. A device of the character described comprising a pair of parallel rotary shafts, a plurality of cutter disks mounted on each of said shafts, the disks on one shaft extending between the adjacent disks on the other shaft, and each of said disks coming in contact with both of said adjacent disks, hubs carried by said disks for maintaining the same in proper position upon their respective shafts, said disks being adjustable on their shafts to maintain the disks on one shaft in proper cutting relation to the disks on the other shaft, and means for adjusting said disks.

2. A device of the character described comprising a pair of parallel rotary shafts, a plurality of cutter disks mounted on each of said shafts and adapted to slide longitudinally thereof and to rotate in unison therewith, the disks on one shaft extending between the adjacent disks on the other shaft, hub portions formed integral with said cutter disks, said hub portions being of less width than said cutter disks, and means for adjusting said cutter disks longitudinally of said shafts.

3. A device of the character described comprising a pair of parallel rotary shafts each having a screw-threaded portion, a plurality of cutter disks mounted on each of said shafts and adapted to be adjusted longitudinally thereof and to rotate in unison therewith, the disks on one shaft extending between the adjacent disks on the other shaft, one of said disks being screw-threaded to engage with the screw-threaded end of said shaft to lock said other disks in their adjusted position.

4. A device of the character described comprising a pair of parallel rotary shafts each having a groove formed therein and extending longitudinally thereof, a plurality of cutter disks mounted on each of said shafts and each provided with a groove adapted to register with the groove in their respective shafts, a single key for each of said shafts adapted to engage the groove therein and the grooves of the several cutter disks mounted thereon, a single cutter disk mounted on each of said shafts beyond the end of said key and means carried by said single cutter disk for locking said cutter disks in their adjusted positions on said shaft.

5. A device of the character described comprising a pair of parallel rotary shafts, a plurality of cutter disks mounted on each of said shafts and having their peripheries rough to form a rough cutting edge on each side of said disks, the disks on one shaft extending between the adjacent disks on the other shaft, and means for adjusting the disks on one shaft relatively one to the other to maintain the same in proper relation with the disks on the other shaft.

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

GUSTAV A. BAUER.

Witnesses:

A. C. LINK,
EDWARD L. REED.