No. 815,491. PATENTED MAR. 20, 1906.

W. H. TSCHANTZ.

CARPET CUTTING MACHINE.

APPLICATION FILED AUG. 22, 1905.

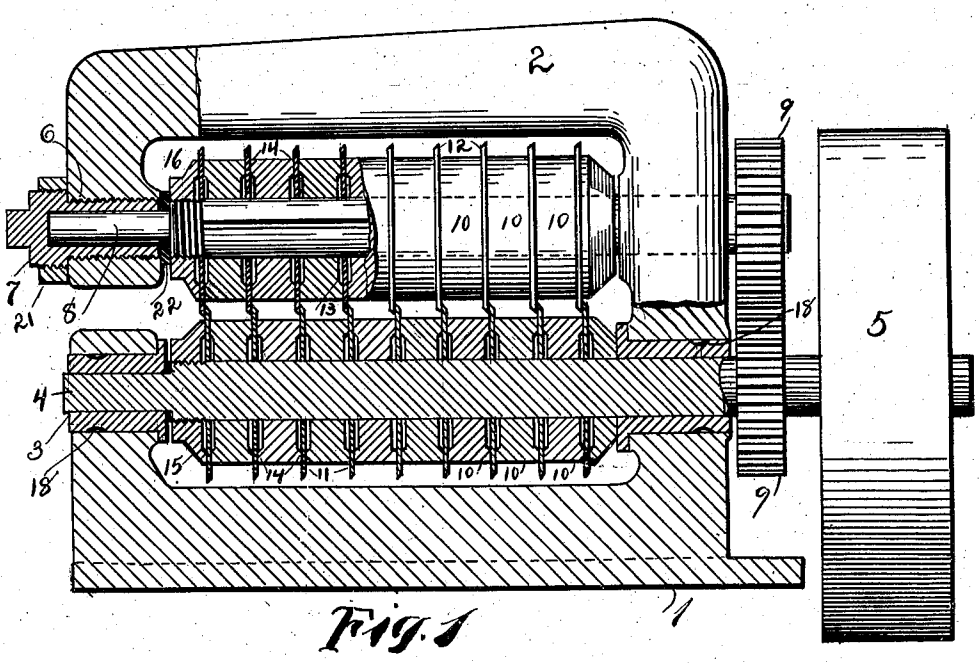


Fig. 1

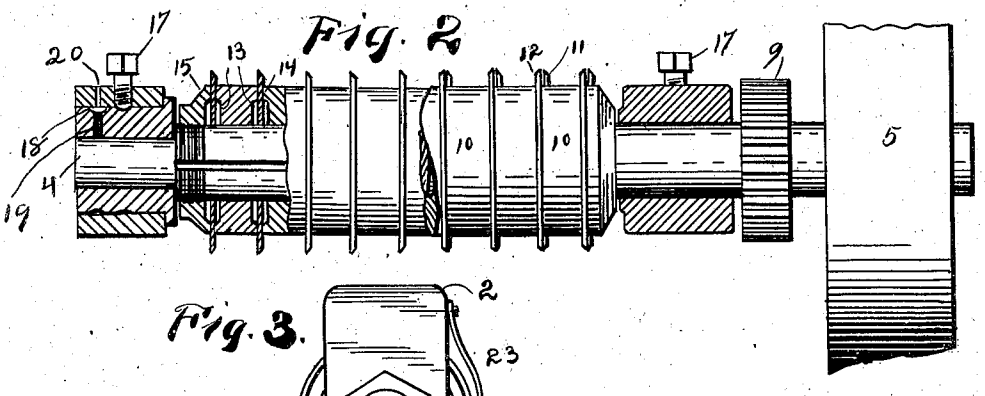


Fig. 2

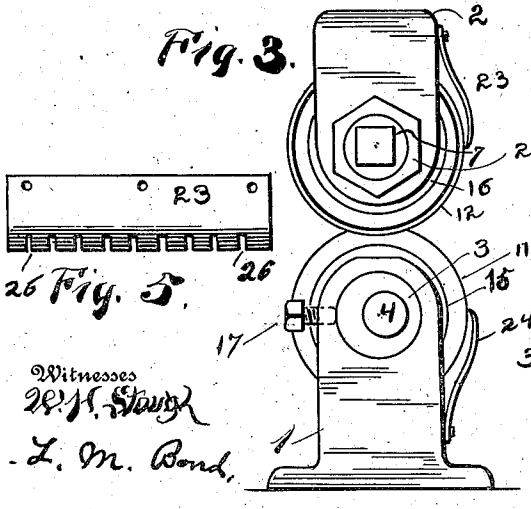


Fig. 3.

Fig. 5.

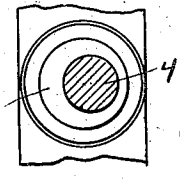


Fig. 4.

Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM H. TSCHANTZ, OF ORRVILLE, OHIO, ASSIGNOR TO THE CYCLONE DRILL COMPANY, OF ORRVILLE, OHIO, A CORPORATION OF OHIO.

CARPET-CUTTING MACHINE.

No. 815,491. Specification of Letters Patent. Patented March 20, 1906.

Application filed August 22, 1905. Serial No. 275,220.

To all whom it may concern:

Be it known that I, WILLIAM H. TSCHANTZ, a citizen of the United States, residing at Orrville, in the county of Wayne and State of Ohio, have invented certain new and useful Improvements in Carpet-Cutting Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the figures of reference marked thereon, in which—

Figure 1 is a side elevation showing the parts in section. Fig. 2 is a top view showing the parts in section. Fig. 3 is an end view. Fig. 4 is a detached view of one of the adjustable bearings. Fig. 5 is a detached view of one of the stripper-bars.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

In the accompanying drawings, 1 represents the base of the machine, which may be supported upon any suitable structure, said base supporting eccentrically-adjustable boxings for the bearings of the lower disk-shaft, and also an upper or overhanging integral arm portion 2, provided with suitable bearings for the reception of the upper shaft.

The lower shaft is carried by bearings so arranged with eccentrically-adjustable boxings 3, that by the adjustment of said boxings the shaft 4 may be thrown closer to or farther away from and out of exact line with the upper shaft, the purpose of said adjustment being to provide for wear of the cutting-disks mounted upon the shafts and at the same time to throw the disks out of exact alinement, so that there will be produced a shearing effect between the cutting-disks. The lower shaft is extended and provided with a pulley or crank 5 for the purpose of imparting a rotary motion to the shafts and disks.

The arm portion 2 is provided with the screw-threaded aperture 6, which screw-threaded aperture receives and holds in proper position the bearing-nut 7, in which bearing-nut is properly journaled the upper disk-shaft 8, the opposite end of said shaft being properly journaled in the upright portion of the arm 2.

For the purpose of imparting rotary motion to the upper disk-shaft 8, when rotary motion is imparted to the lower disk-shaft 4, the gears 9 are provided, which gears are securely mounted upon their respective shafts and so formed and fitted to each other that the eccentric adjustment of the lower shaft will not interfere with their proper mesh.

Upon the upper and lower shafts 4 and 8 are located a series of disk-dividing collars 10, which collars are formed of a width to correspond with the distance between the cutting-disks upon the shafts 4 and 8, the disks 11 being mounted upon the lower shaft 4 and the disks 12 upon the upper shaft 8. For the purpose of preventing the disks from buckling and to give a better purchase upon the disks and more firmly lock them to the revolving shafts and with each other the collars 10 are provided with the recesses 13, which recesses are located opposite each other and are so arranged that the annular flanges 14 will press or bear against the opposite sides of the cutting-disks 11 and 12, and thereby bind or clamp the cutting-disks and hold them in proper spaced relationship with reference to each other. For the purpose of binding the various parts upon the upper and lower shafts the screw-threaded collar-nuts 15 and 16 are provided, which nuts are provided with recesses similar to those in the collars, as described.

It will be understood that the eccentrically-adjustable boxings 3 of the lower shaft when brought to the proper adjustment should be held in fixed position, and in order to accomplish this set-screws, such as 17, are employed.

For the purpose of providing means for lubricating the bearings of the lower shaft the eccentric boxes 3 are provided with annular grooves 18, from which grooves leads the oil-passage 19 or, if desired, a number of oil-passages, such as 19, may be employed, and for the purpose of conveying oil to the annular grooves 18 an oil-hole, such as 20, should be provided. For the purpose of holding the bearing-nut 7 in proper fixed position the jam-nut 21 is provided, which may be located substantially as shown in the drawings. For the purpose of preventing any end movement of the upper shaft 8 a washer 22 is provided, which washer is rotated against the nut 16, and for the purpose of reducing friction said washer is preferably formed of fibrous substance. The lower shaft may be provided with a similar washer located between the

nut 15 and the adjacent adjustable bearing 3. In the drawings this washer is shown removed; but it is located in a similar position to that illustrated upon the shaft 8.

For the purpose of preventing the strips of carpet after they are cut from following the disks in their revolutions and becoming entangled in the working of the machine two guards 23 and 24 are provided, which guards consist of shields of sheet metal extending down from the top or arm to the rear of the upper disk-shaft and up from the base to the rear of the lower disk-shaft and having curved edges which extend into the collars between the cutting-disks, recesses 25 being cut in the curved edge of the shield for the reception of the edges of the disks.

It will be understood that when rotary motion is applied to the shaft 4 and a strip of carpet fed between the revolving disks the carpet will be cut into narrow strips of a width equal to the space between the cutting-disks upon the shaft, which strips are properly prepared and from which strips rugs are made in the usual manner. The present invention has reference only to the cutting of the carpet.

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

In a carpet-cutting machine, the combination of a base and an upward-extending arm, upper and lower shafts journaled in the base and arm respectively, one of the shafts mounted in eccentric bearings or boxes, said shafts provided with spaced cutting-disks, collars located between the cutting-disks, and the cutting-disks of the different shafts located out of alinement, or at an angle to each other, a longitudinal adjustable nut located upon the upper shaft and said upper shaft journaled in the adjustable nut, means for holding the adjustable nut in fixed adjustment, and means for imparting rotary motion to the disk-shafts, and guard-plates, substantially as and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

WILLIAM H. TSCHANTZ.

Witnesses:
THOS. W. ORR,
F. W. BOND.