E. H. MAY.

CARPET CUTTING MACHINE.

APPLICATION FILED SEPT. 23, 1913.

1,096,733.

Patented May 12, 1914.

2 SHEETS—SHEET 1.

Fig. 6.

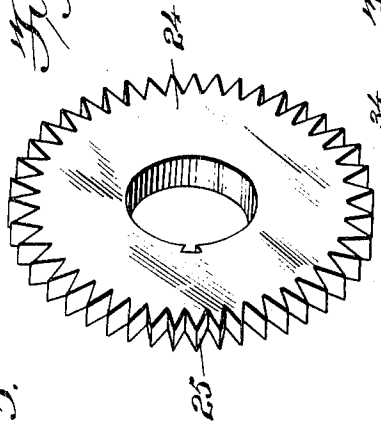


Fig. 2.

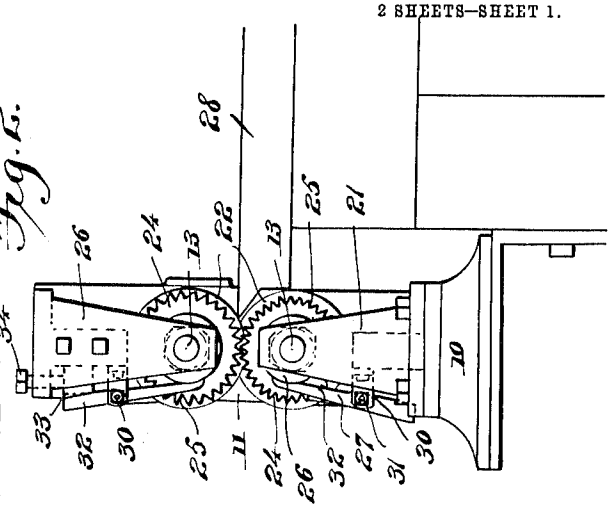


Fig. 5.

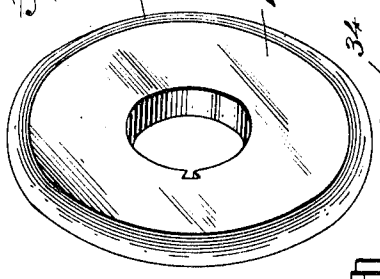


Fig. 1.

Witnesses

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2 SHEETS—SHEET 2.

Fig. 3.

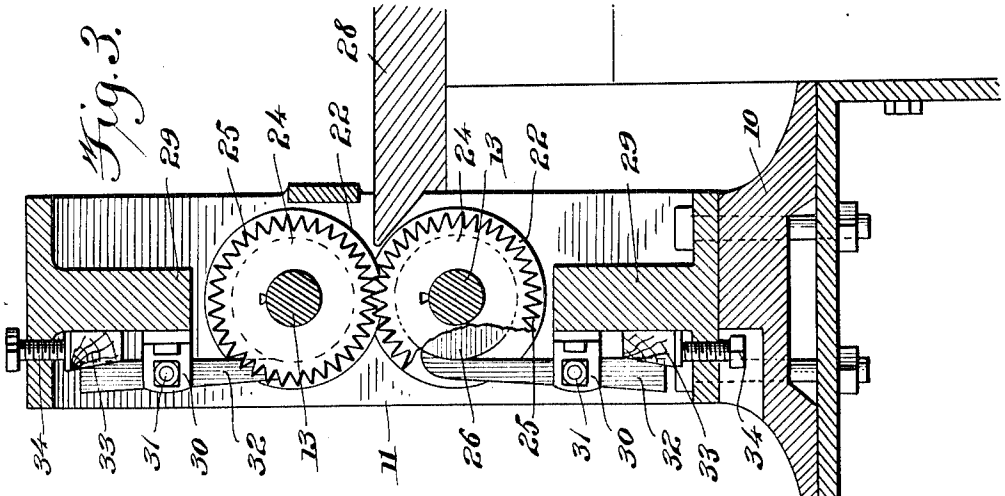
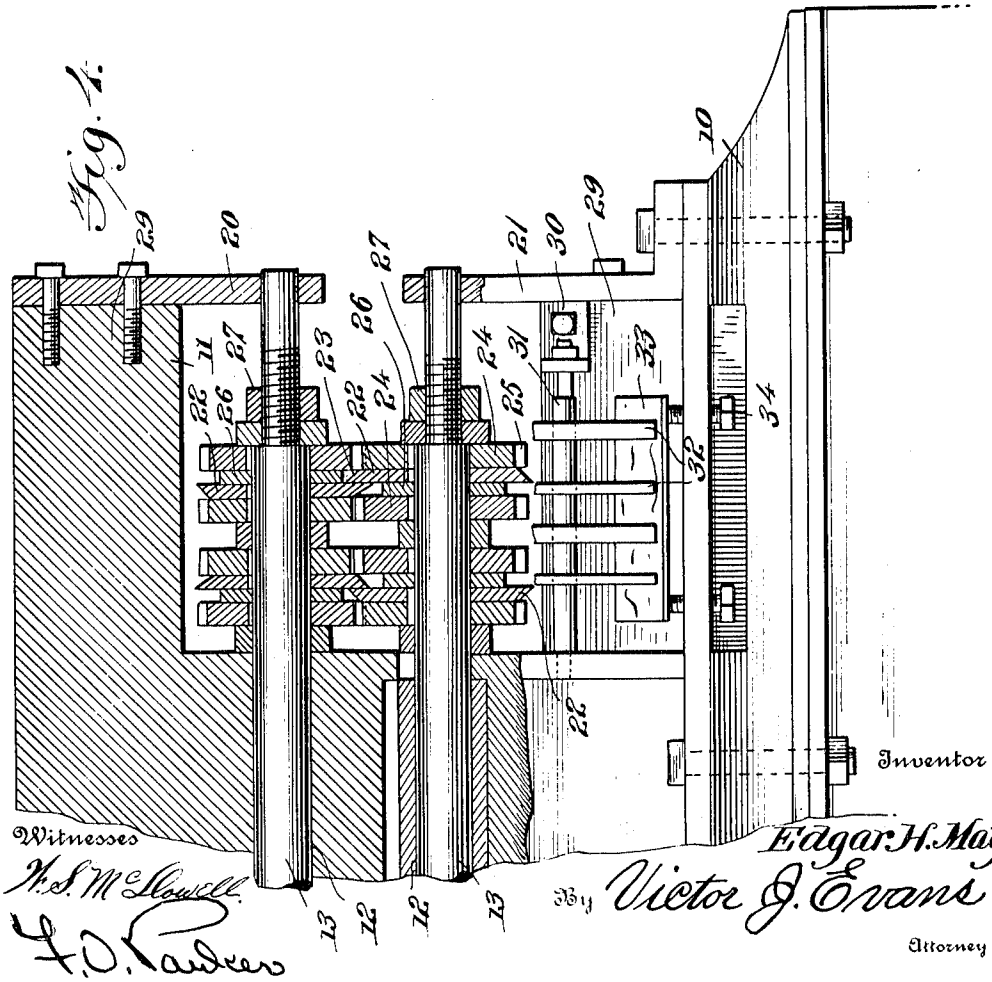


Fig. 4.



Witnesses

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EDGAR H. MAY, OF HOLTON, KANSAS.

CARPET-CUTTING MACHINE.

1,096,733. Specification of Letters Patent. Patented May 12, 1914.

Application filed September 23, 1913. Serial No. 791,380.

To all whom it may concern:

Be it known that I, EDGAR H. MAY, a citizen of the United States, residing at Holton, in the county of Jackson and State of Kansas, have invented new and useful Improvements in Carpet-Cutting Machines, of which the following is a specification.

The invention relates to cutting machines, and more particularly to the class of carpet cutting and fraying machines.

The primary object of the invention is the provision of a machine of this character wherein used carpets or other material can be cut into strips of any required width so that said strips can be utilized in the making of rugs.

Another object of the invention is the provision of a machine of this character wherein the cutting elements are of novel form and will sever the material into strips of required size in a single operation of the machine, the cutting elements being cleaned automatically so as to prevent the clogging thereof which would result in interfering with the working of the machine.

A further object of the invention is the provision of a machine of this character which is simple in construction, thoroughly reliable and efficient in its operation, and inexpensive in manufacture.

With these and other objects in view, the invention consists in the construction, combination and arrangement of parts as will be hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereunto appended.

In the drawings:—Figure 1 is a side elevation of a machine constructed in accordance with the invention. Fig. 2 is an end elevation thereof. Fig. 3 is a vertical transverse sectional view through the machine. Fig. 4 is a vertical longitudinal sectional view thereof. Fig. 5 is a perspective view of one of the cutting disks removed from the machine. Fig. 6 is a perspective view of one of the feeding gears.

Similar reference characters indicate corresponding parts throughout the several views in the drawings.

Referring to the drawings in detail, the machine comprises a base 10 on which is supported a frame 11 having arranged thereon spaced horizontal bearings 12 in which are journaled superposed shafts 13 each carrying a pinion 14 which is suitably fixed thereto at one end of the same. These pinions 14 mesh with each other so as to drive the said shafts 13 in unison, and adjacent to one of the pinions is a gear 15 which is fixed to one of the shafts 13, the said gear 15 being in mesh with a gear 16 fixed to a counter shaft 17 journaled in a bearing 18 carried by the frame 11, and this shaft 17 has fixed thereto a belt wheel 19 over which is trained a suitable belt adapted to be driven by any suitable source of motive power.

Suitably fixed to the frame 11 are upper and lower bearing brackets 20 and 21 respectively, in which are journaled the free ends of the shafts 13, and upon these shafts are carried the cutters presently described.

The cutters each comprise a series of cutting disks 22 which may be of the required number, one set of disks being supported upon one shaft 13, while the other set of disks is supported upon the other shaft 13, the disks being of a diameter so that the edges of the respective sets will overlap each other. The perimeter of each disk is formed with a beveled cutting edge 23 to afford a shearing cut, the said disks being slightly dished so as to hold the cutting perimeters in close contacting relation to each other and thereby assure the proper cutting action to the work operated upon.

Alternately arranged with respect to the disks 22 are feed wheels 24 having peripheral teeth 25, the wheels 24 being supported by the shafts 13 so that the teeth of the uppermost set of wheels will mesh with the teeth on the lower set of wheels so that material when fed between the cutting disks 22 will be engaged by the teeth 25 of the wheels 24 for the feeding of the material through the cutters. Arranged between certain of the wheels 24 and the cutting disks 22 adjacent thereto are washers 26 which serve to space the said wheels 24 and also space the cutting disks 22 from certain of the said wheels 24 so that the cutting actions of the disks 22 will not be interfered with during the operation of the machine. The shafts 13 are provided with screw threads 26 engaged by means of lock nuts 27 which serve to hold the parts of the cutters together and in their assembled relation upon the shafts.

Integrally formed with the frame 11 in alinement with the cutting plane of the cutters and projecting outwardly from one side of the said frame is a work support or shelf 28 on which is placed the carpet to be fed

to the cutters when the machine is in operation.

Formed on the frame above and below the cutters are vertical webs 29 to which are bolted or otherwise secured at one side thereof ears 30 supporting pivots 31 on which are mounted a series of cleaning combs or fingers 32, one end of each being designed to frictionally contact with the peripheries of the washers 26 in alinement therewith so that the said fingers or combs 32 will clean the cutters during the rotation thereof to prevent the clogging of the same with waste from the work operated upon, the outer ends of the fingers 32 being acted upon by means of sliding wedges 33 which are adjustable through the means of adjusting screws 34 threaded in the frame 11 of the machine. These wedges 33 serve to hold the fingers 32 in operative relation to the cutters so that the latter will be thoroughly cleaned to obviate the possibility of the clogging thereof during the operation of the machine.

The disposition of the cutting disks 22 of the cutters will enable the carpet to be cut into strips of predetermined widths. The cutters 22 can be spaced closer together or farther apart and thereby enable the width of the strips to be varied when being cut from the carpet. These strips when cut into lengths are utilized for the making of rugs, so that old or worn carpets can be renovated or cut into strips for the making of rugs.

The lower bearing 12 carrying one of the shafts 13 is made in a manner to permit adjustment of the said shaft so that the cutters can be positioned with respect to each other to increase or decrease the overlapping relation of the perimeters thereof. This adjustment allows the introduction of material of different thicknesses to the machine.

From the foregoing it is thought that the construction and manner of operation of the device will be clearly understood, and therefore a more extended explanation has been omitted.

What is claimed is:—

1. A machine of the class described comprising a frame having superposed shafts, cutters arranged on the shafts, each cutter including a cutting disk and a toothed feed wheel, the said cutting disks of the superposed cutters being arranged in overlapping relation to each other, means for driving the shafts in unison, and means for feeding material to the cutters.

2. A machine of the class described comprising a frame having superposed shafts, cutters arranged on the shafts, each cutter including a cutting disk and a toothed feed wheel, the said cutting disks of the superposed cutters being arranged in overlapping relation to each other, means for driving the shafts in unison, means for feeding material to the cutters, and means for cleaning the cutters.

3. A machine of the class described comprising a frame having superposed shafts, cutters arranged on the shafts, each cutter including a cutting disk and a toothed feed wheel, the said cutting disks of the superposed cutters being arranged in overlapping relation to each other, means for driving the shafts in unison, means for feeding material to the cutters, means for cleaning the cutters, and means for adjusting the cleaning means.

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

EDGAR H. MAY.

Witnesses:
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