P. MEDVED.

MACHINE FOR CUTTING LEATHER STRIPS.

APPLICATION FILED JUNE 22, 1910.

973,448. Patented Oct. 18, 1910.

3 SHEETS—SHEET 1.

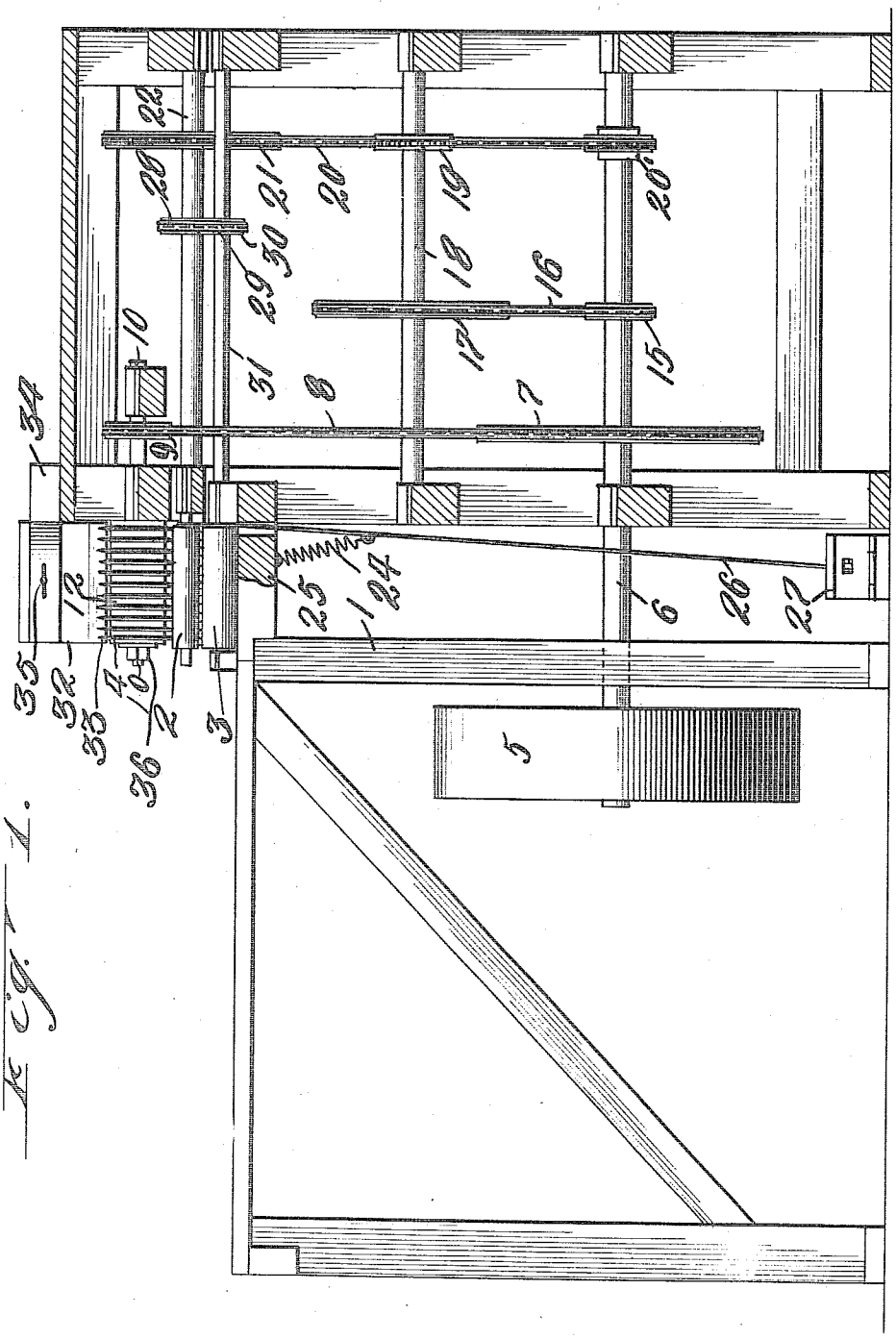

Fig. 1.

Witnesses

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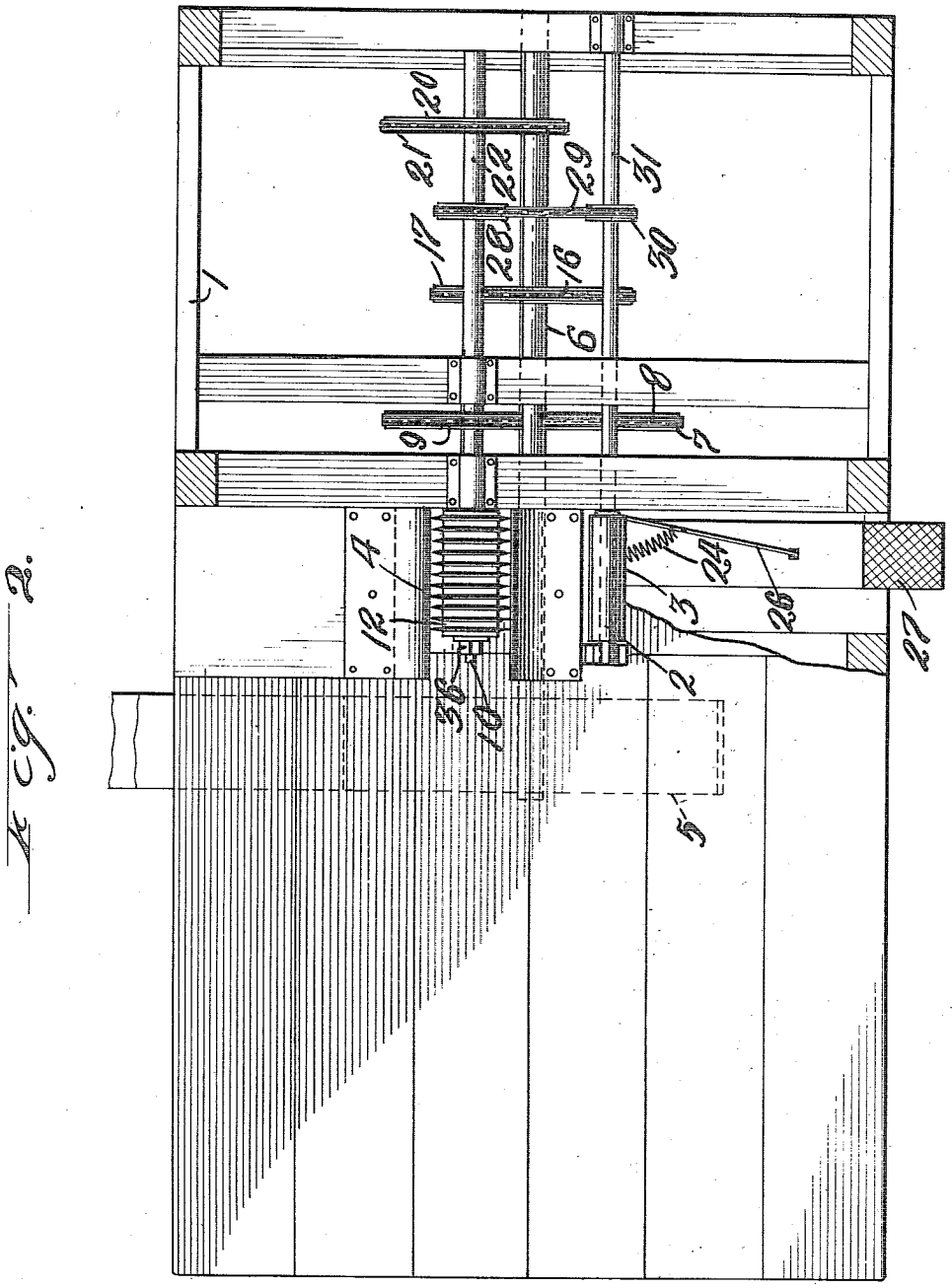

Fig. 2.

Witnesses
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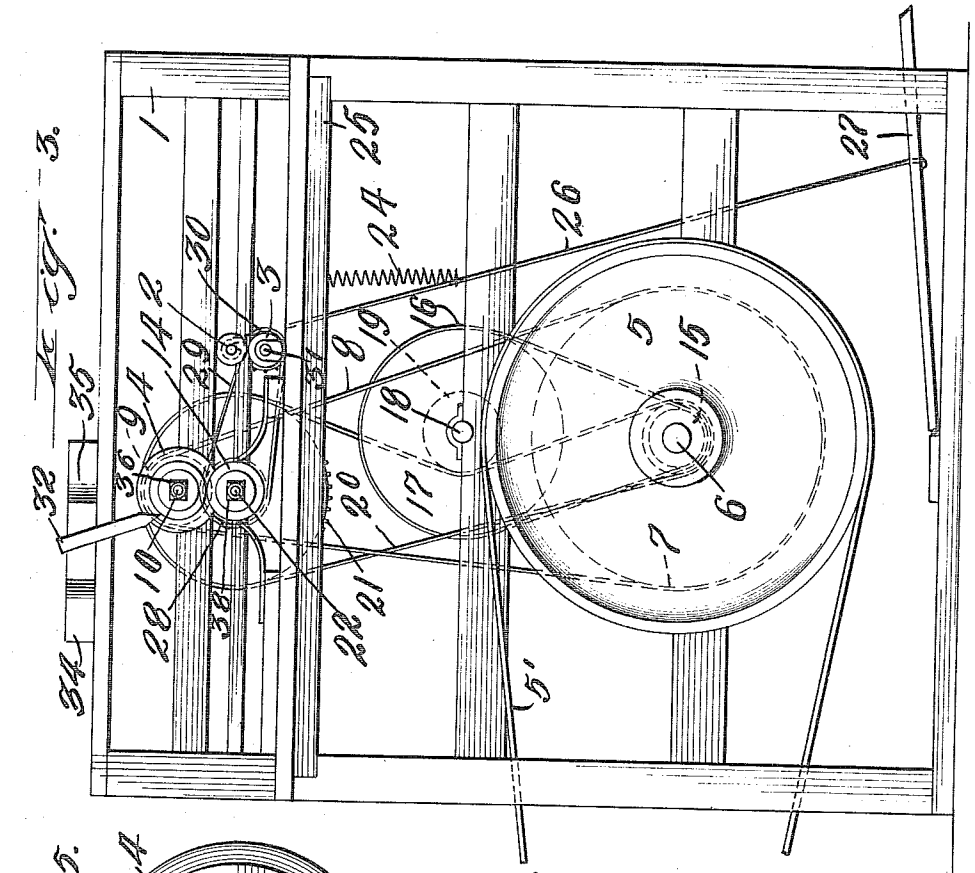

Fig. 3.

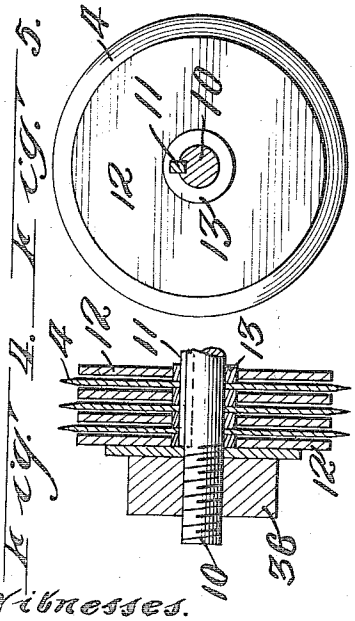

Fig. 5.

Fig. 4.

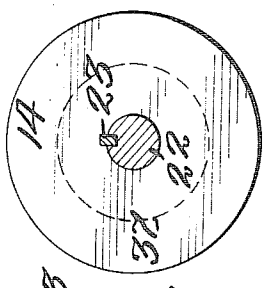

Fig. 7.

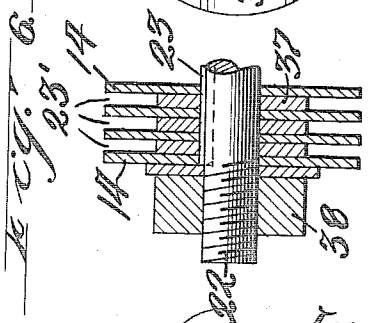

Fig. 6.

Witnesses.

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UNITED STATES PATENT OFFICE.

PAUL MEDVED, OF MILWAUKEE, WISCONSIN, ASSIGNOR OF ONE-HALF TO THOMAS MEDVED, OF MILWAUKEE, WISCONSIN.

MACHINE FOR CUTTING LEATHER STRIPS.

973,448. Specification of Letters Patent. Patented Oct. 18, 1910.

Application filed June 22, 1910. Serial No. 568,264.

To all whom it may concern:

Be it known that I, PAUL MEDVED, a citizen of the United States, residing at Milwaukee, county of Milwaukee, and State of Wisconsin, have invented new and useful Improvements in Machines for Cutting Leather Strips, of which the following is a specification.

My invention relates to improvements in that class of machines which are used for cutting leather into small narrow strips, such as are used in the manufacture of fly nets for horses and the construction is explained by reference to the accompanying drawings, in which—

Figure 1 represents a front view thereof. Fig. 2 is a plan view. Fig. 3 is an end view. Fig. 4 is a section of the annular cutting blades and intermediate revoluble disks. Fig. 5 is a side view of one of the cutting blades and intermediate disks, illustrating the manner of keying the blades to a supporting shaft. Fig. 6 is a section of a series of revoluble disks and their supporting shaft, which disks are used in connection with the cutting blades, and Fig. 7 is a side view of one of the disks in connection with the disk supporting shaft shown in Fig. 6.

Like parts are identified by the same reference numerals throughout the several views.

1 is the supporting frame of my machine.

2 and 3 are feed rollers by and between which the leather is fed to the series of cutting blades 4, preparatory to being severed into strips of the required width.

5 is a driving pulley through which motion is communicated through the belt 5′ from the motive power, not shown, to the driving shaft 6 and motion is communicated from the driving shaft 6 to the series of cutting blades 4, through the sprocket wheel 7, sprocket chain 8, sprocket wheel 9 and wheel supporting shaft 10, upon which shaft 10 the series of cutting blades 4 are mounted and upon which they are rigidly secured by the longitudinal key 11.

12, 12, represent a series of annular disks which are revolubly supported from the shaft 10 upon the annular collars 13, upon which collars 13 said disks 12 are adapted to revolve independently of the supporting shaft 10. The diameter of the cutting blades 4 is slightly greater than the diameter of the disks 12, so that their peripheries extend past the peripheries of said disks and said blades are adapted as they revolve to pass between the opposing sides of the disks 14, substantially as shown in Fig. 3.

Motion is communicated from the driving shaft 6 to the series of annular disks 14 through the sprocket wheel 15, sprocket chain 16, sprocket wheel 17, wheel supporting shaft 18, sprocket wheel 19, sprocket chain 20, sprocket wheel 21 and wheel supporting shaft 22, upon which shaft 22 said disks 14 are mounted and to which they are secured by the longitudinal key 23. The lower end of the sprocket chain 20 is supported from the sprocket wheel 20′ and said sprocket wheel 20′ is revolubly supported upon the shaft 6 and is adapted to move independently of it, while one side of said sprocket chain 20 only bears against the one side of the sprocket wheel 19 as more clearly shown in Fig. 3. The relative diameters of the respective gears by which the series of knives 4 and the series of disks 14 are revolved, is such that said knives are adapted to revolve about thirty revolutions to one of said disks, whereby the leather as it is being fed forward by and between the rollers 2 and 3 is severed. It will be understood that as the leather is being thus moved forward, the series of disks 12 bear upon the upper side, while the series of disks 14 bear upon the lower side of such leather, while the knives 4 pass down in the spaces 23 between said disks 14. In view of the fact that the disks 12 are revolubly supported from the shaft 10 upon the collars 13, said disks are caused to revolve at a speed corresponding with the movement of the leather which passes between them and the disks 14, while the supporting shaft 10 is free to revolve at the greater speed required for properly driving said cutting blades.

24 is a spiral spring, which is connected at one end with the bar 25 of the frame and at its opposite end to the treadle rod 26, whereby the treadle rod 26 and treadle 27 are raised and whereby motion is communicated from the upper end of said treadle rod to the roller 2 with which said rod is connected. Thus it will be understood that as soon as the operator removes his foot from the treadle 27, said roller 2 will be raised and moved from the fixed roller 3, whereby the operator may readily insert the leather to be cut between said opposing rollers.

When the leather has been thus inserted, said rollers are drawn together by downward pressure upon the treadle 27, whereby the required movement is communicated to the leather for forcing it forward between the cutting blades and the opposing disks.

Motion is communicated to the lower feed roller 3 from the shaft 22, through the sprocket wheel 28, sprocket chain 29, sprocket wheel 30 and wheel supporting shaft 31, whereby the roller 3 which is supported from said shaft 31, is caused to revolve, while the upper bearing roller 2 is revolved by contact of the moving leather between it and said driving roller 3.

32 is a contact bearing block, which is provided with a series of V-shaped notches 33, one for each of said annular cutting blades 4 and said block 32 is supported from the top of the frame 1 of the machine by the bracket 34 and clamping bolt 35, said contact bearing block being adapted to serve as a wiper for the cutting edges of said blades, whereby they are kept clean and in condition for work. The several cutting blades 4 and intermediate disks 12 are retained in place upon the supporting shaft 10 by the clamping nut 36, while the several disks 14 and their intermediate disks 37 are secured in place upon the shaft 22 by the clamping nut 38.

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

1. In a device of the described class, the combination of a revoluble shaft, a plurality of annular cutting blades secured at short intervals apart on said shaft, an annular disk interposed between each of said blades and adapted to revolve independently of said shaft, a disk supporting shaft, a series of annular disks supported at short intervals apart upon said last named shaft, the cutting edges of said annular blades being adapted as they are revolved to pass between the opposing surfaces of the periphery of said last named disks, a pair of feed rollers supported in close proximity to said annular blades and opposing disks and adapted as they revolve to convey a strip of leather forward until engaged between the cutting edges of said blades and the opposing disks, a driving shaft, and means for simultaneously communicating motion from said driving shaft to said feed rollers, said cutting blades and the opposing disks.

2. In a device of the described class, the combination of a pair of feed rollers, a series of cutting blades and opposing bearings, a driving shaft, means for communicating motion from said driving shaft to said cutting blades and bearings, a treadle, a treadle rod, a spring for communicating motion from said treadle rod to one of said feed rollers, whereby the same is separated from its opposing roller preparatory to inserting a piece of leather between them, said treadle being adapted as it is passed downward to bring said feed rollers together upon the opposite sides of a piece of leather preparatory to forcing the same between the cutting blades and opposing disks.

3. In a device of the described class, the combination of a revoluble shaft, a plurality of annular cutting blades secured at short intervals apart on said shaft, a contact bearing block provided with a series of V-shaped notches for the reception of the cutting edges of said blades, means for supporting said contact bearing block at one side of the cutting blades, an annular disk interposed between each of said blades and adapted to revolve independently of said shaft, a disk supporting shaft, a series of annular disks supported at short intervals apart upon said last named shaft, the cutting edges of said annular blades being adapted as they are revolved to pass between the opposing surfaces of the periphery of said last named disks, a pair of feed rollers supported in close proximity to said annular blades and opposing disks and adapted as they revolve to convey a strip of leather forward until engaged between the cutting edges of said blades and the opposing disks, a driving shaft, and means for simultaneously communicating motion from said driving shaft to said feed rollers, said cutting blades and the opposing disks.

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

PAUL MEDVED.

Witnesses:
JAS. B. ERWIN,
A. G. BIERBACH.