

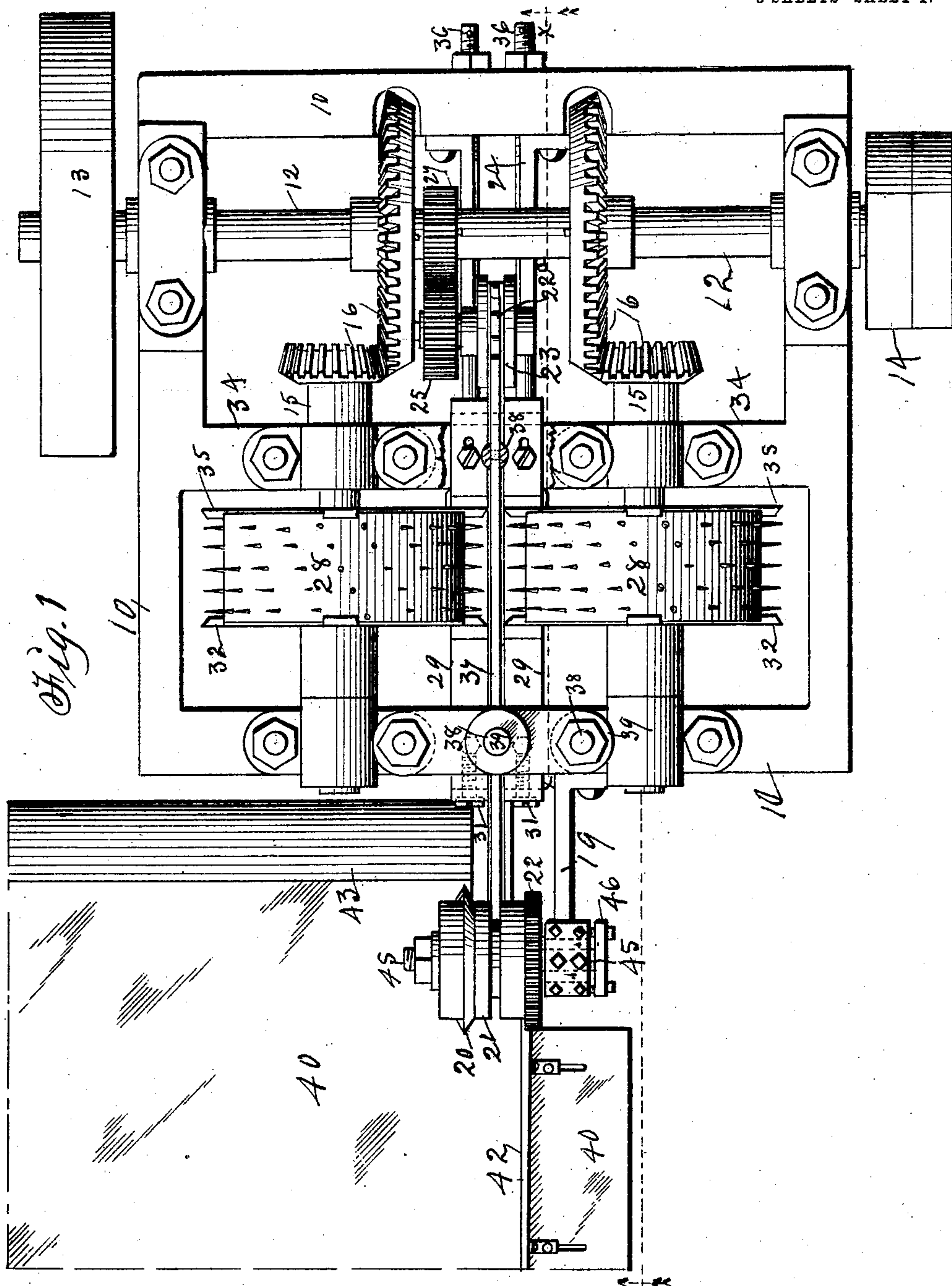
No. 861,661.

PATENTED JULY 30, 1907.

L. E. KING.
CARPET CUTTING AND FRAYING MACHINE.

APPLICATION FILED JAN. 10, 1907.

3 SHEETS—SHEET 1.



Witnesses:
m. G. Sweet.
R. H. Orrig.

Inventor: Leonidas E. King.
By Thomas G. Orrig, Attorney.

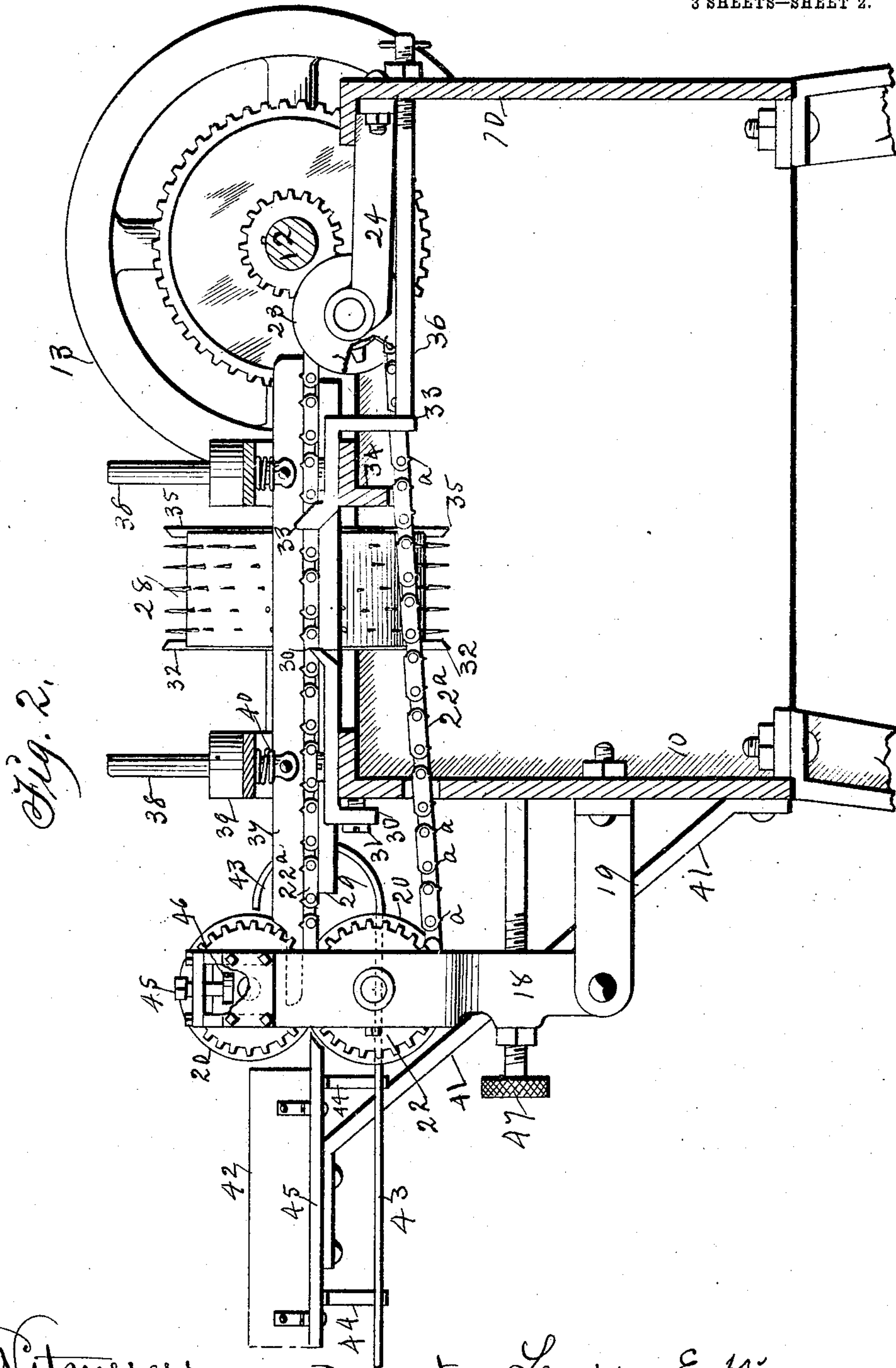
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3 SHEETS—SHEET 2.



Witnesses:
M. G. Sweet.
A. H. Orwig.

Inventor: Leonidas E. King,
By Thomas G. Orwig, Attorney.

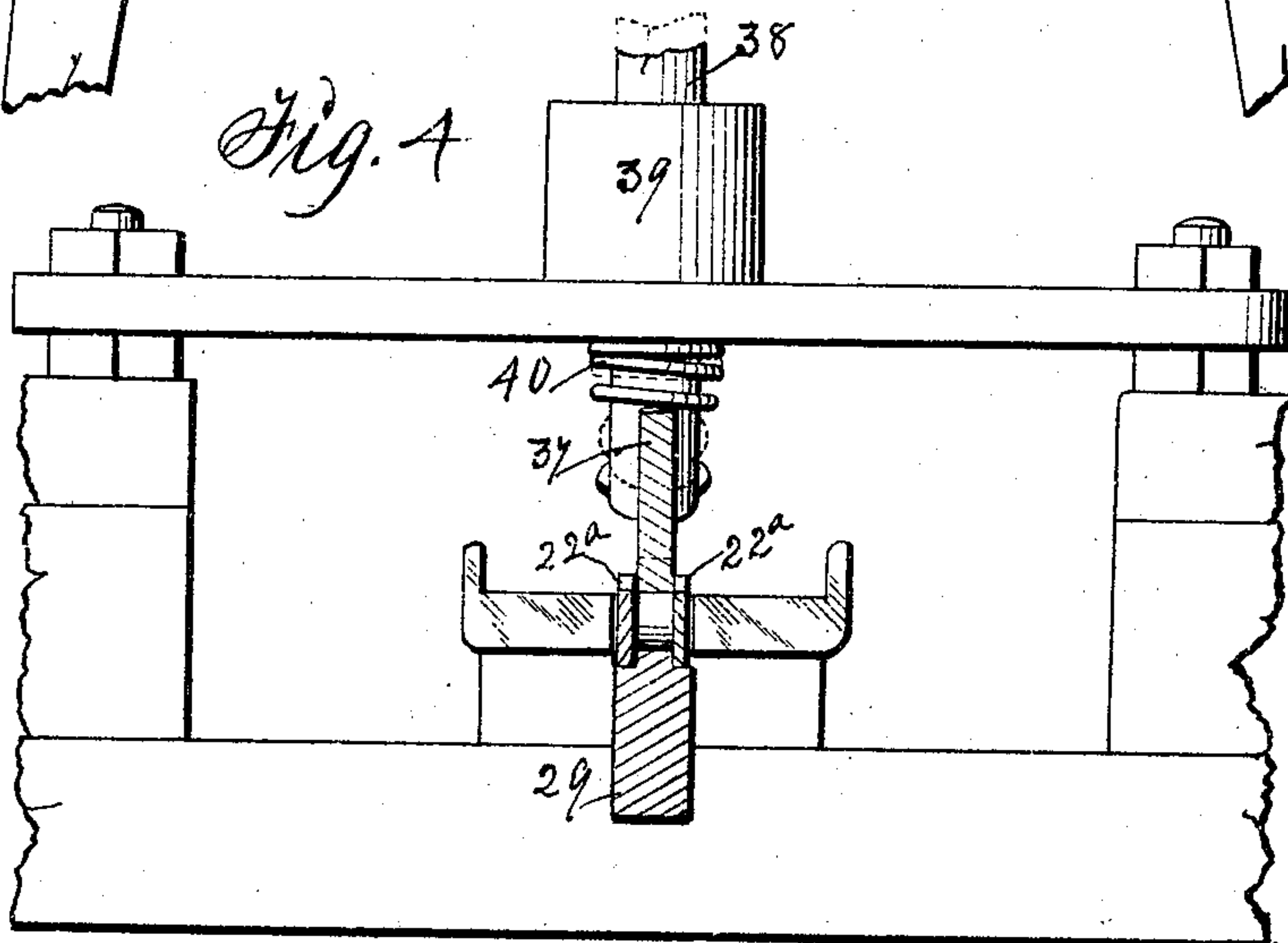
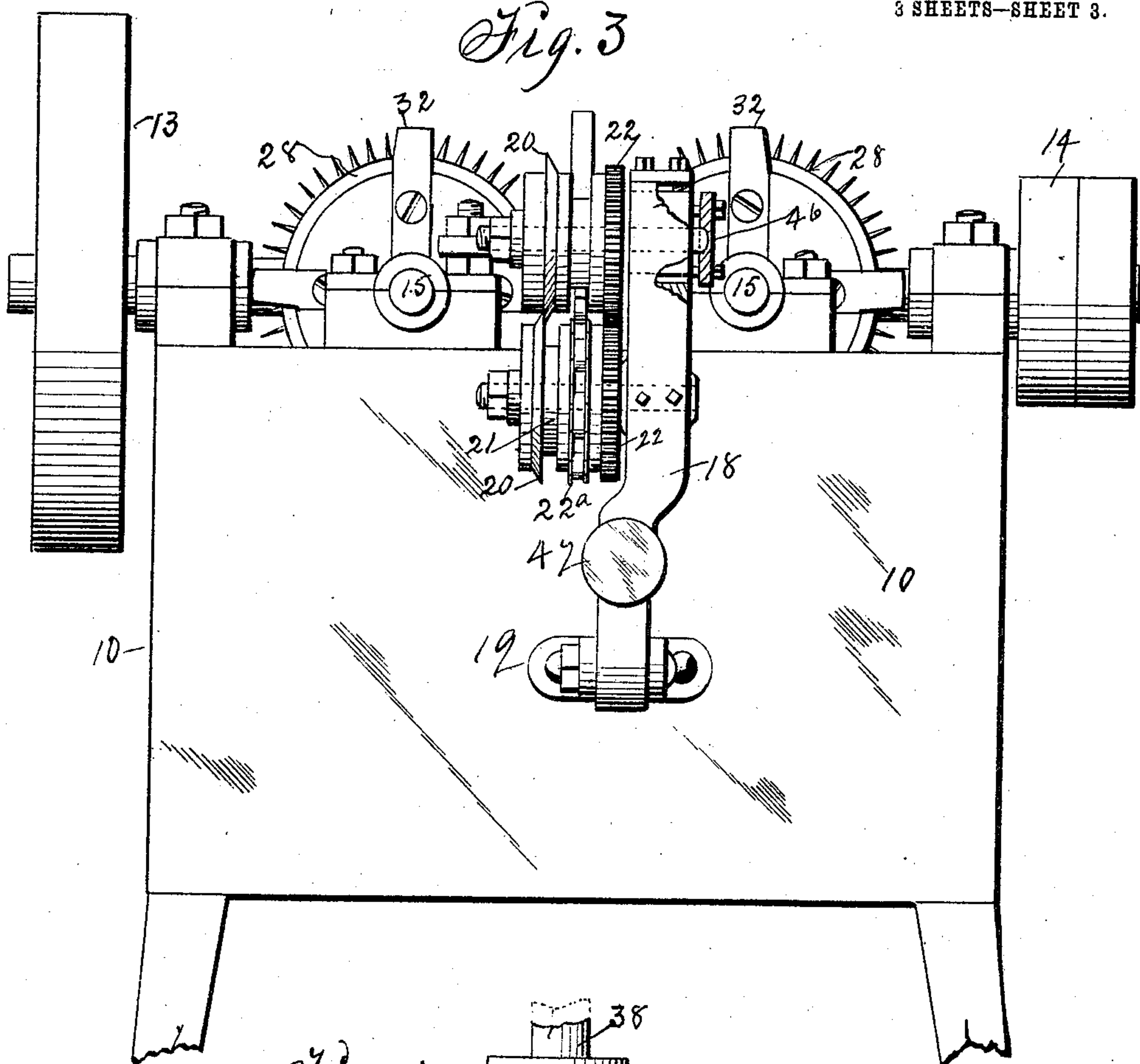
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3 SHEETS—SHEET 3.



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M. G. Sweet. }
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Inventor: Leonidas E. King,
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UNITED STATES PATENT OFFICE.

LEONIDAS E. KING, OF MARSHALLTOWN, IOWA.

CARPET CUTTING AND FRAYING MACHINE.

No. 861,661.

Specification of Letters Patent.

Patented July 30, 1907.

Application filed January 10, 1907. Serial No. 351,733.

To all whom it may concern:

Be it known that I, LEONIDAS E. KING, a citizen of the United States, residing at Marshalltown, in the county of Marshall and State of Iowa, have invented a new and useful Carpet Cutting and Fraying Machine, of which the following is a specification.

My invention is for preparing strips of carpet to be woven into rugs and relates to the ribbon fraying machine for which United States Letters-Patent No. 627,508, were granted to me June 27, 1899 and carpet cutting mechanism added thereto and the rearrangement of the operating mechanism as required for coöperating the cutting and fraying devices as hereinafter set forth pointed out in my claims and illustrated in the accompanying drawings in which:

Figure 1 is a top view of the machine and shows the positions of the operative parts relative to each other and the frame upon which they are mounted. Fig. 2 is a side elevation of the machinery disclosed by the removal of the side of the frame that supports the operative parts in connection with each other. Fig. 3 is an end view of the machine and shows the carpet cutting and ribbon fraying devices in position as required to simultaneously cut off a strip or ribbon of carpet and fray the ribbon as it is advanced from the cutters. Fig. 4 is an enlarged detail view of the adjustable ribbon holding mechanism that keeps the ribbon in contact with the endless chain that has toothed links to engage and move the strip of carpet or ribbon through the machine.

The numeral 10 designates a four-sided frame that is open at its top and bottom, 12 a horizontal rotatable shaft mounted on top of one end portion of the frame, 13 a balance wheel and 14 a band wheel on the shaft as shown in Fig. 1. Shafts 15 are mounted at the other end portion of the frame and extend at right angles to the shaft 12 and are connected therewith by bevel gears 16 and fixed on said shafts are toothed wheels 17 adapted for pulling threads of warp from ribbon strips of carpet.

A frame 18 is pivotally connected with a fixed bearing arm 19 shown in Fig. 2 projecting from the end of the main frame 10 as shown in Figs. 2 and 3. Carpet cutters 20 are mounted in the frame and their hubs 21 connected with each other by gear wheels 22 formed on or fixed to the ends of the hubs as shown in Figs. 2 and 3. To impart motion to the cutters 20 on the periphery of the hubs 21 as required to rotate them jointly they engage each other and an endless chain 22^a in a groove in the lower hub is connected with a grooved roller 23 mounted on bearers 24 fixed to the inside of the main frame 10 as shown in Figs. 1 and 2, and a gear wheel 25 on the end of the shaft of the roller 23 engages a mating gear wheel 27 on the shaft 12 as shown in Fig. 1 and as required to actuate the endless chain 22^a and thereby the carpet cutters 20. The links of the chain

22^a are provided with teeth *a* adapted to bite the strips cut from the carpet as required to move the strips forward between the toothed fraying and mating wheels 28 on the shafts 15. A track 29 for supporting the chain 22 is fixed on the frame 10, as shown in Fig. 2.

Cutters 30 are fixed to the frame 10 by screws 31 as shown in Fig. 2, to coact with cutters 32 fixed to the front edge of the fraying wheels 28. Cutters 33 are secured on a cross bar 34 at the top of the frame 10 and coacting cutters 35 are fixed to the rear edge of the fraying wheels 28 and the functions of these cutters at the sides of the wheels 28 is to cut strands of warp in the edge portions of the carpet strips to aid in fraying the strips as they pass between the fraying wheels from the cutting wheels 20. Screw threaded bars 36 extended from the lower ends of the cutters 33 are seated in the frame as shown in Fig. 2 and as required for adjusting the cutters 33 relative to the fraying wheels 28.

A carpet strip holder and guide 37 is adjustably suspended above the chain 22 by means of posts 38 fixed thereto and extended up through bearers 39 fixed to the frame 10 as shown in Fig. 2. Coiled wire springs 40 are interposed between the guide bar 37 and the bearers 39 as required to allow self adjustment of the guide bar 37 and a strip of carpet passing under it over the fixed track 29.

A table 40 is fixed to the frame 10 by means of brackets 41 as shown in Fig. 2, for supporting carpet placed thereon and a gage 42 is adjustably fixed on top of the table. With the bottom of the table is connected a carpet support 43 by hangers 44 fixed to the bottom of the table 40. The inner end of the support 43 is curved upwards, as clearly shown in Fig. 2, in such a manner that when a piece of carpet is advanced on the table 40 and a strip cut from its edge that contacts with the gage 42 the end of the carpet will come against the curved end of the carpet support 43 to be thereby directed downward and then backward while at the same time the strip cut from its edge by the cutters 20 will be advanced by the toothed chain 22^a between the fraying rollers 26.

Screws 45 seated in the top of the frame 18 support the bearing 46 of the upper cutter 20. A screw 47 seated in the lower portion of the frame to engage the frame 10 serves as a means for regulating the tension of the endless chain 22^a.

Having thus set forth the purpose of my invention and its construction and functions of the different elements and sub-combinations the practical operation and utility of the machine is obvious.

What I claim as new and desire to secure by Letters-Patent, is:—

1. In a carpet cutting and fraying machine, a table, a carpet support terminating at its inner end with an upward curve and means to retain the carpet support in a plane below the table, in combination with an auxiliary

frame at the end of the main frame, rotary cutters on the auxiliary frame and an endless chain on the auxiliary frame, to operate as set forth.

2. In a carpet cutting and fraying machine, a table
5 terminating at its end in an upward curve and a gage on top of the table in combination with an auxiliary frame at the end of the main frame, an auxiliary frame and rotary cutters on the auxiliary frame, an endless chain, a fixed track on the main frame, a fraying roller on each
10 side of the fixed track and the chain, and fixed cutters on the main frame at the sides of the fixed track, to operate as set forth.

3. In a carpet cutting and fraying machine, a table
15 terminating at its end in an upward curve and a gage on top of the table in combination with an auxiliary frame at the end of the main frame, an auxiliary frame and rotary cutters on the auxiliary frame, an endless chain, a fixed track on the main frame and a fraying roller on each side of the fixed track and the chain, fixed cutters on the main

frame at the sides of the fixed track and means to adjust
20 the auxiliary frame for regulating the tension of the endless chain, to operate as set forth.

4. A machine for cutting and fraying carpet, comprising a main frame, a main shaft and two minor shafts connected with the main shaft by bevel gears, toothed fraying
25 wheels fixed on the minor shafts, an auxiliary frame at the end of the main frame, a fixed track on the main frame, a roller at the end of the fixed track connected with the main shaft by gear wheels, two cutting rollers on the auxiliary frame, an endless chain, a guide bar above the
30 endless chain, cutters fixed to the main frame, cutters fixed to the sides of the fraying wheels and a table fixed to the main frame on a level with the fixed track, arranged and combined to operate as set forth.

LEONIDAS E. KING.

Witnesses:

GEO. M. LYON,
A. H. WEEKER.