

J. A. ROSE.
WASHER AND GASKET CUTTER.
APPLICATION FILED JUNE 30, 1908.

945,009.

Patented Dec. 28, 1909.

Fig. 1.

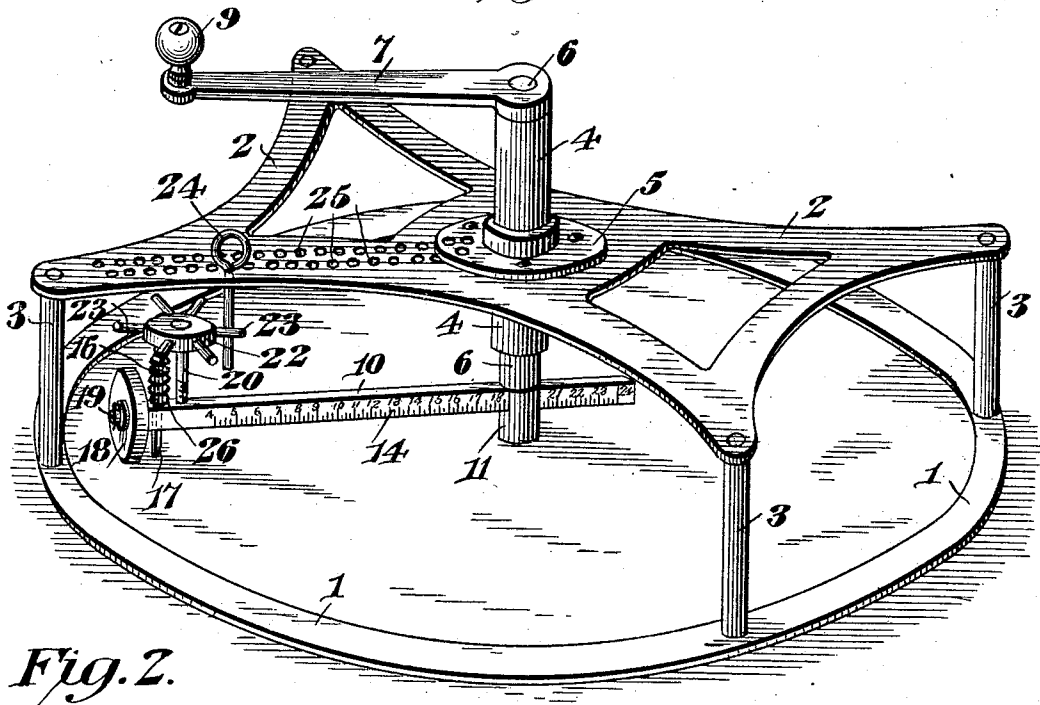
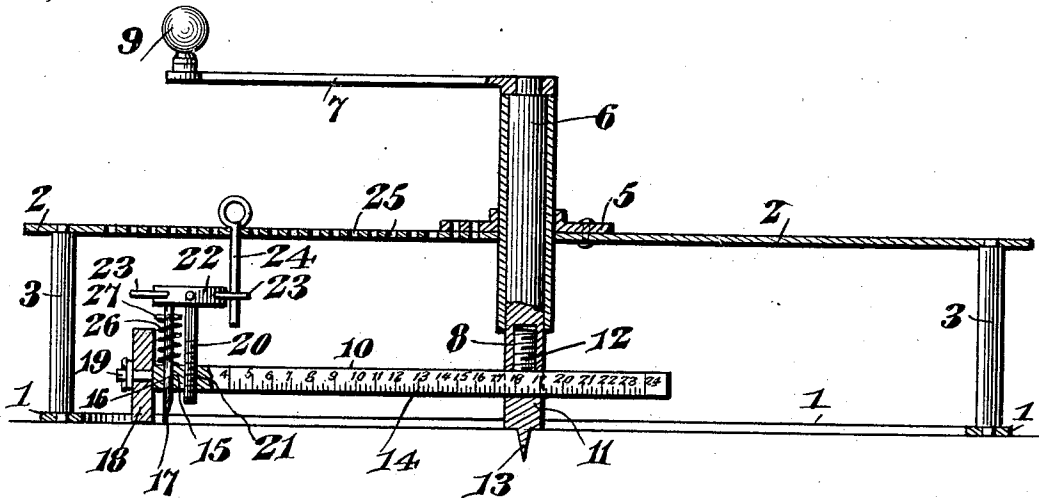


Fig. 2.



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JAMES A. ROSE, OF HASTINGS, NEBRASKA.

WASHER AND GASKET CUTTER.

945,009.

Specification of Letters Patent.

Patented Dec. 28, 1909.

Application filed June 30, 1908. Serial No. 441,143.

To all whom it may concern:

Be it known that I, JAMES A. ROSE, a citizen of the United States, residing at Hastings, in the county of Adams and State of Nebraska, have invented a new and useful Washer and Gasket Cutter, of which the following is a specification.

The invention relates to improvements in washer and gasket cutters.

10 The object of the present invention is to improve the construction of washer and gasket cutters, more especially that shown and described in Letters Patent, No. 692,712, dated Feb. 4, 1902, and to provide a simple
15 and comparatively inexpensive washer and gasket cutter, designed for operating on all kinds of sheet packing and provided with means for automatically feeding the knife into the material and for holding the latter
20 while it is being cut.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying
25 drawing, and pointed out in the claims here-to appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to with-
30 out departing from the spirit or sacrificing any of the advantages of the invention.

In the drawing.—Figure 1 is a perspective view of a washer and gasket cutter, constructed in accordance with this invention.
35 Fig. 2 is a vertical sectional view of the same.

Like numerals of reference designate corresponding parts in all the figures of the drawing.

40 The frame of the machine, like that of the said patent, is equipped with a circular base 1 and is provided with a horizontal top 2, supported by vertical rods or posts 3. The top of the frame is provided with a central
45 opening receiving a vertical bearing sleeve 4, projecting from the upper face of the top, and depending below the lower face of the same, and provided with an intermediate annular flange or collar 5, which is secured
50 to the top 2 of the frame at the upper face thereof by means of rivets, or other suitable fastening devices. The sleeve forms a bearing for a vertical shaft 6, provided at its upper end with an operating arm 7, and hav-
55 ing an interiorly threaded vertical socket 8 at its lower end. The operating arm 7 is

provided at its outer end with a suitable pivoted knob or handle 9, forming a crank handle and adapted to be grasped by the operator, but any other suitable operating
60 means may be employed for rotating the shaft 6.

The shaft 6 carries in its rotary movement a graduated knife supporting arm 10, arranged horizontally and adjustably secured
65 to the lower end of the shaft 6 by means of a clamping member 11, provided with a slot to receive the graduated arm 10, and having a reduced threaded upper portion 12, which fits within and engages the threads of the
70 socket 8 of the lower end of the vertical shaft. The shaft and the clamping member are readily adjusted by rotating the former, and the forward rotary movement of the shaft incident to the operation of the device
75 serves to hold the lower end of the shaft and the clamping member tightly in engagement with the graduated arm. The shaft is rotated backwardly with respect to the graduated arm to release the latter, the arm be-
80 ing preferably held stationary for such purpose. The clamping member 11, which forms a continuation or lower section of the shaft, is provided at its lower end with a depending centering point 13, which is ar-
85 ranged to pierce the material operated on by the device.

The knife carrying arm 10, which is equipped with a scale 14, is provided near its outer end with a vertical opening 15 of
90 rectangular form to receive a squared knife 16, which is slidable vertically in the rectangular opening. The knife is fed downwardly by the means hereinafter described to force its lower cutting portion 17 into the
95 material, whereby the latter is accurately, gradually and easily cut by the device. The material is held during the cutting operation by a rotary wheel 18, located adjacent to and beyond the knife 16 and mounted on
100 a reduced pivot portion 19 of the outer end of the graduated arm 10. The wheel, which is constructed of steel, or other suitable material, is retained on the pivot or spindle of the arm by means of a suitable fastening de-
105 vice, and it is arranged to run on the upper face of the material contiguous to the knife, and it holds the material firmly against the supporting surface while the material is being cut by the knife.
110

The knife is automatically fed downwardly during the rotary movement of the

shaft 6 by means of a vertical adjusting screw 20, mounted in a threaded perforation 21 of the graduated arm and provided at the upper end with a horizontal head 22, forming the body portion of a tappet or feed wheel and fitting against the upper end of the knife and adapted to move the same downward. The head of the adjusting screw is provided with radially arranged horizontally disposed tappet arms 23, adapted to be engaged by an actuating member 24, arranged in the path of the arms and depending from the top of the frame. At each revolution of the shaft, one of the arms of the feed or tappet wheel comes in contact with the relatively fixed actuating member 24, and is oscillated by the same thereby rotating the adjusting screw and moving the same downward. The adjusting screw carries the knife with it in its downward movement and feeds the knife into the material. This operation is repeated until the washer and gasket is severed from the rest of the material.

The top of the frame is provided with two radially arranged rows of perforations 25, the perforation of one row being located at intervals between the perforations of the other row to secure a fine adjustment. These perforations are adapted to receive the removable pin or member 24, which may be placed in any of the said perforations. The pin is provided at its upper end with a suitable head, which is supported by the top of the frame. The graduated arm is adapted to be adjusted inwardly and outwardly to arrange the knife the proper distance from the center to cut a washer of the desired diameter, and the relatively fixed actuating member, which engages the feed wheel, is adjustable radially of the frame by means of the said perforations.

The knife is yieldably supported in an elevated position by means of a coiled spring 26, disposed on the upper portion of the shank or body portion of the knife and interposed between the upper edge or face of the graduated arm and a suitable stop 27 preferably consisting of a pin, which pierces the upper portion of the knife. Any other suitable means may be employed for engaging the upper end of the spring with the knife, and when the feeding device is raised by a screw, the spring automatically lifts the knife.

The washer and gasket cutter is adapted to operate on all kinds of packing material, and a glass cutter consisting either of a diamond or a steel wheel may be substituted for the knife to enable the device to be employed for cutting glass.

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

1. A device of the class described com-

prising a frame, a vertical rotary shaft mounted in the frame, means for rotating the shaft, an arm connected with and carried by the shaft in the rotary movement thereof, cutting mechanism mounted on the arm, and a wheel supporting the arm and arranged to run on the material for holding the same while it is being cut.

2. A device of the class described comprising a frame, a vertical rotary shaft mounted in the frame, means for rotating the shaft, an arm connected with and carried by the shaft in the rotary movement thereof, cutting mechanism mounted on the arm, and a wheel journaled on the arm at the outer end thereof and arranged to run on and hold the material while the same is being cut.

3. A device of the class described comprising a frame, a vertical rotary shaft, an arm connected with and carried by the shaft in the rotary movement thereof and adjustable radially of the same, cutting mechanism mounted on the arm, and means for automatically feeding the cutting mechanism.

4. A device of the class described comprising a frame, a vertical rotary shaft, a radially arranged arm connected at its inner portion with and carried by the shaft in its rotary movement thereof and adjustable longitudinally, a cutter carried by the outer portion of the arm and movable upwardly and downwardly on the same, and mechanism for feeding the cutter downwardly at intervals.

5. A device of the class described comprising a frame, a vertical rotary shaft, an arm connected with and carried by the shaft in its rotary movement thereof, a cutter carried by the arm and movable upwardly and downwardly on the same, mechanism for feeding the cutter downwardly at intervals, and a spring yieldably supporting the cutter.

6. A device of the class described comprising a frame, a vertical rotary shaft, an arm connected with and carried by the shaft in its rotary movement thereof, a cutter carried by the arm and movable upwardly and downwardly on the same, mechanism for feeding the cutter downwardly at intervals, said means including a screw located at one side of the cutter and mounted on the arm in a threaded opening thereof and having projecting means engaging the said cutter, and a relatively fixed member supported by the frame for actuating the screw at intervals.

7. A device of the class described comprising a frame, a vertical rotary shaft, an arm connected with and carried by the shaft in its rotary movement thereof, a cutter carried by the arm and movable upwardly and downwardly on the same, mechanism for feeding the cutter downwardly

at intervals, said means including a screw mounted on the arm in a threaded opening thereof and provided with a feed wheel extending over and engaging the upper end of the knife and provided at intervals with projecting arms, and a relatively fixed member arranged in the path of the feed wheel for partially rotating the same at each revolution of the shaft.

8. A device of the class described comprising a frame, a vertically rotary shaft, an arm adjustably connected with and carried by the shaft and provided with smooth and threaded openings, a knife mounted on the arm in the smooth openings thereof, and means for feeding the knife downward including a screw mounted in the threaded opening of the arm and provided with a feed wheel, and a relatively fixed member arranged in the path of the feed wheel and adjustably mounted on the frame.

9. A device of the class described comprising a frame provided at intervals with perforations, a vertical rotary shaft mounted on the frame, a radially arranged arm carried by the shaft in the rotary movement thereof and movable inwardly and outwardly on the same, a cutter mounted on the arm, and means for feeding the cutter including a rotary member also mounted on the arm in spaced relation with the cutter and having projecting means for engaging the same, and a relatively fixed member located in the path of the rotary member and arranged in one of the perforations of the frame and adjustable radially of the latter.

10. A device of the class described including a vertical rotary shaft, means for supporting the same, a radially arranged arm mounted on the shaft and adjustable inwardly and outwardly with respect to the same, said arm being provided with smooth and threaded openings, a vertically movable cutter mounted in the smooth opening of

the arm, a spring for yieldably supporting the cutter in an elevated position, a screw mounted in the threaded opening of the arm and extending over and engaging the cutter, and means arranged in the path of the screw for partially rotating the same.

11. A device of the class described comprising a vertical rotary shaft provided at its lower end with a threaded portion, a threaded clamping member provided with a threaded portion engaging the threaded portion of the shaft, one of the said threaded parts being provided with an opening, a radially adjustable arm extending through the opening and clamped by the said threaded parts to secure it in its adjustment, and cutting mechanism carried by the arm.

12. A device of the class described comprising a vertical rotary shaft provided at its lower end with a threaded socket, a threaded clamping member fitting in the socket and engaging the threads thereof and provided with an opening, a radially adjustable arm extending through the opening and clamped by the shaft and the said member, and cutting mechanism carried by the arm.

13. A device of the class described comprising a vertical rotary shaft, a clamping member provided at its lower end with a depending centering point and having an opening and adjustably connected with the shaft, an arm extending through the opening and clamped to the shaft by the said member and adjustable radially thereof, and cutting mechanism carried by the said arm.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JAMES A. ROSE.

Witnesses:

C. G. LANE,

G. L. GREENFIELD.