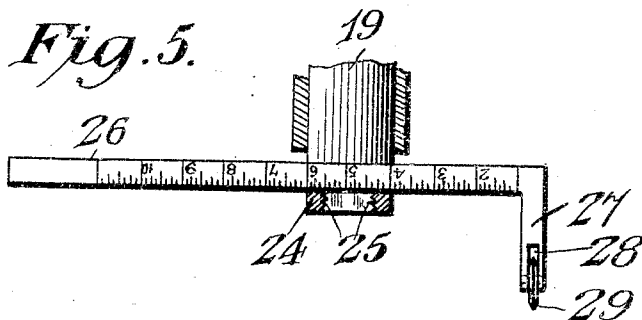
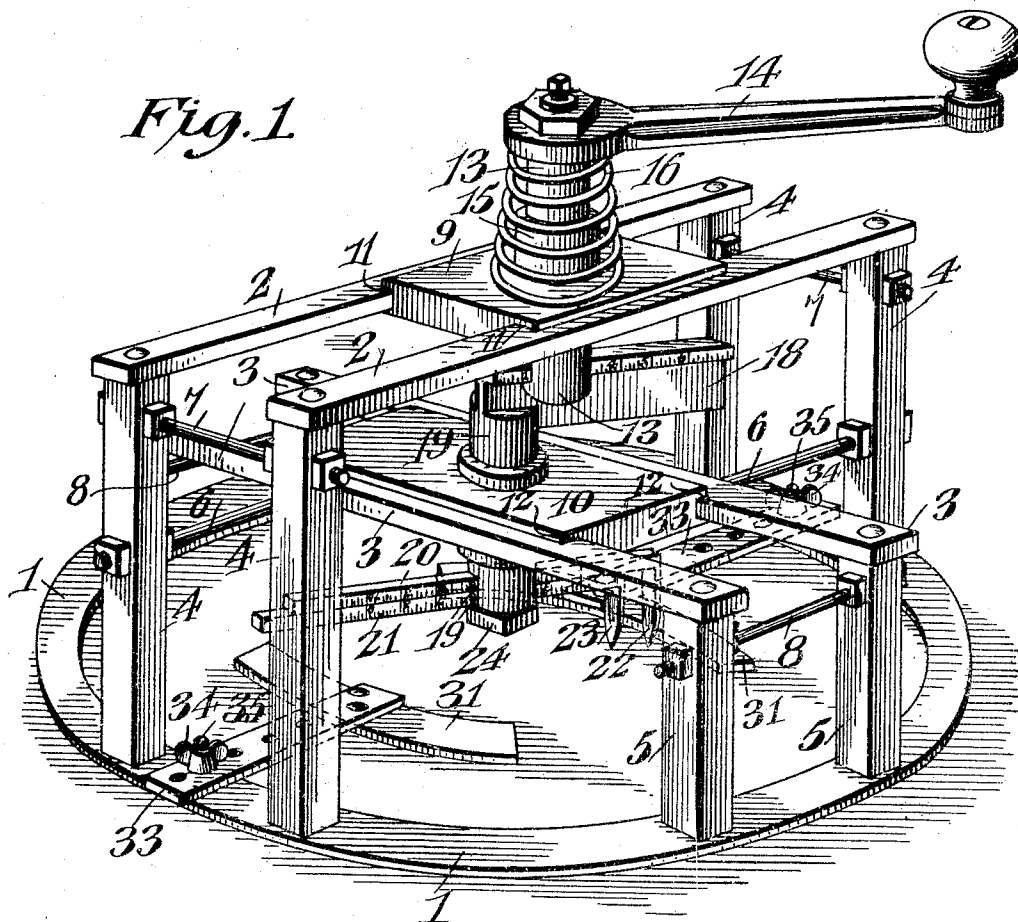


958,941.

J. A. ROSE.
WASHER AND GASKET CUTTER.
APPLICATION FILED DEC. 4, 1908.

Patented May 24, 1910.

2 SHEETS—SHEET 1.



Witnesses
Jas. E. McLaughlin
J. F. Riley

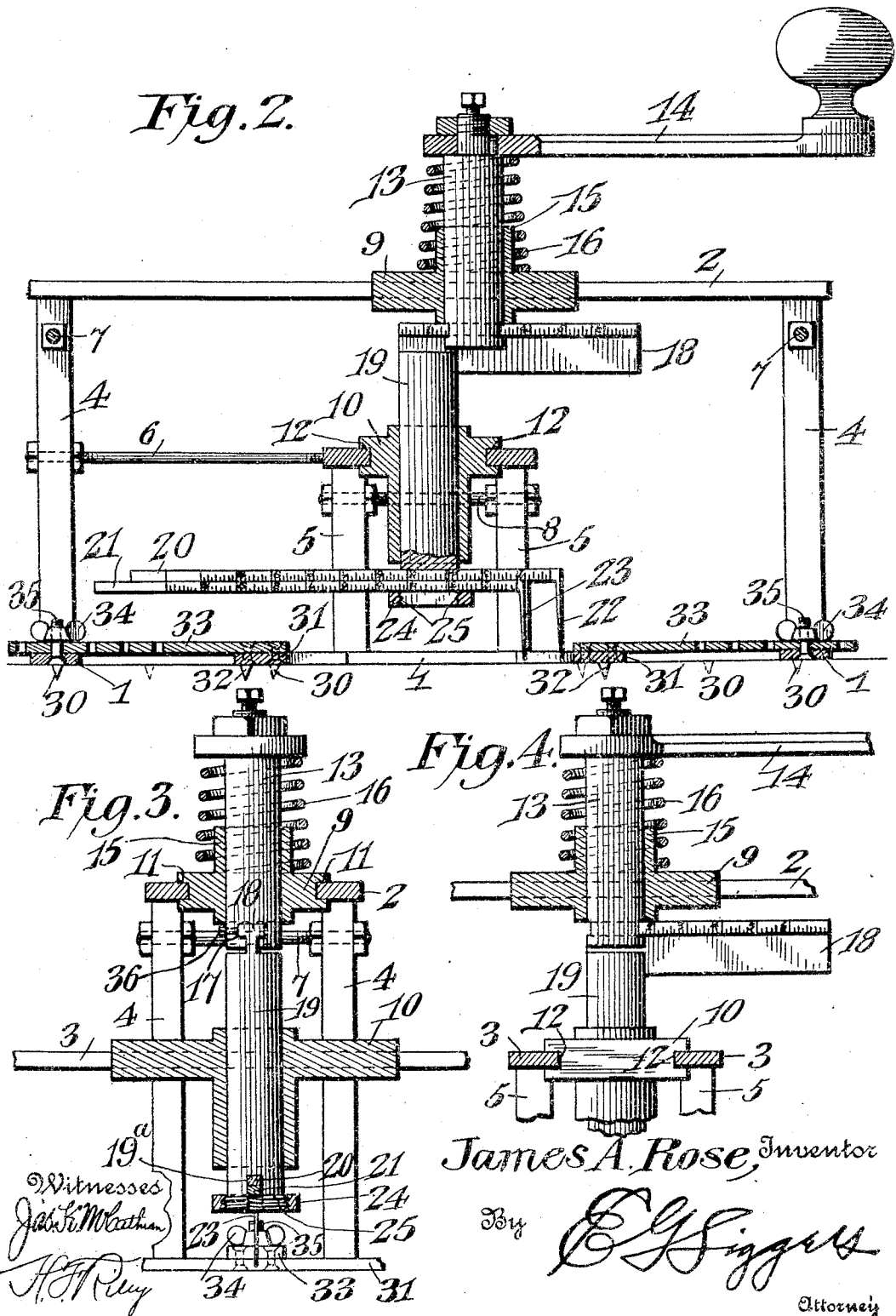
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2 SHEETS—SHEET 2.



UNITED STATES PATENT OFFICE.

JAMES A. ROSE, OF HASTINGS, NEBRASKA.

WASHER AND GASKET CUTTER.

958,941.

Specification of Letters Patent. Patented May 24, 1910.

Application filed December 4, 1908. Serial No. 466,009.

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.

The object of the present invention is to improve the construction of washer and gasket cutters, and to provide a simple, inexpensive and efficient machine, capable of accurately cutting round and oval gaskets of any thickness and of any kind of packing material.

A further object of the invention is to provide a washer and gasket cutting machine, capable of securely gripping the material to prevent the same from slipping and adapted also for cutting glass.

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 drawings, and pointed out in the claims hereto 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 without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings:—Figure 1 is a perspective view of a washer and gasket cutter, constructed in accordance with this invention and shown arranged for cutting an elliptical gasket or washer. Fig. 2 is a central vertical sectional view, taken longitudinally of the upper guide. Fig. 3 is an enlarged sectional view of the upper portion of the machine, taken transversely of the upper guide. Fig. 4 is a similar view, taken longitudinally of the upper guide. Fig. 5 is a detail view, illustrating the construction of the glass cutter.

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

The frame of the machine is provided with a circular base 1, consisting of a flat ring adapted to expose the material operated on, and the said frame is equipped with upper and lower horizontal guides or ways 2 and 3, located at different elevations and

consisting of spaced parallel guide bars. The guides or ways, which are arranged at right angles to each other, are supported by long and short posts 4 and 5, suitably secured to the circular base and to the terminals of the guide bars. The long posts, which support the upper guide or way, are braced by horizontal rods 6, extending from the said posts to the guide bars of the lower guide or way. The long and short posts are arranged in pairs, and the members of the sets or pairs of the two horizontal guides are connected by horizontal rods 7 and 8.

The upper and lower horizontal guides or ways receive upper and lower rectangular slides 9 and 10, provided with vertical tubular bearings and having parallel side grooves 11 and 12 to receive the guide bars of the upper and lower ways. The slides have intersecting paths of movements and are arranged to reciprocate at right angles to each other. The upper slide receives a vertical operating shaft 13, slidable vertically and equipped at its upper end with an operating crank handle 14. The tubular bearing of the upper slide projects from the upper and lower faces of the said upper slide, which forms a seat for a coiled spring 16, encircling the upper shaft and the upper portion of the upper tubular bearing, and interposed between the upper slide and the operating crank 14 of the upper shaft to maintain the latter normally at the limit of its upward movement. The lower end of the vertical shaft is provided with a horizontal slot 17, T-shaped in cross section and slidably receiving a graduated horizontal arm 18 of a lower tool-carrying shaft 19, which is journaled in the tubular bearing of the lower slide. The graduated arm 18 is T-shaped in cross section to conform to the configuration of the T-shaped slot in the lower end of the upper vertical shaft. The upper shaft is adapted to be adjusted radially of the frame in a direction longitudinally of the upper way to position it either at the center of the machine, or eccentrically of the same, or with relation to the lower shaft, and as the upper shaft is moved from the center, the size of the ellipse will be increased, as hereinafter more fully explained. When the upper shaft is located centrally of the frame, the machine cuts a circular gasket or washer.

The lower shaft, which is movable ver-

tically with the upper shaft, is provided at its lower end with a vertical slot 19^a for the reception of horizontally adjustable graduated cutters 20 and 21, graduated, as shown, and provided with depending knives or cutting members 22 and 23 for cutting the material at the inner and outer edges of the washer or gasket. The shanks or graduated body portions of the cutters are arranged horizontally, and are slidable through the slot of the lower vertical shaft to position the knives or cutting portions 22 and 23 the proper distance from the center of the machine, and the cutters are secured in their adjustment by means of a lower clamping nut 24, engaging threads 25 of the lower end of the lower vertical shaft, and bearing against the lower cutter, as clearly illustrated in Fig. 2 of the drawings. By this construction the cutters are securely clamped between the nut 24 and the upper wall of the slot. Instead of employing a cutter of the form illustrated in Figs. 1 and 2 of the drawings, a glass cutter 26 may be used to enable the machine to cut glass for picture frames and various other purposes, either in circular or elliptical form. The glass cutter consists of a graduated body portion, provided with a depending arm 27 having a slot 28 at its lower end to receive an ordinary glass cutting disk or wheel 29.

The circular base of the machine is provided with an annular series of depending spurs 30, adapted to engage the material operated on and capable of securely holding the same. The material is also held within the area of the circular base by means of a pair of adjustable clamping members 31, curved longitudinally and having inner concavely curved edges. The clamping members 31, which are equipped with clamping spurs 32, are connected with the circular base by substantially radially arranged arms 33, provided at intervals with perforations and adjustably secured to the circular base by thumb nuts 34, arranged on screws 35 and engaging the shanks or arms 33. The screws project upward from the circular base, preferably piercing the same, as clearly illustrated in Fig. 2 of the drawings. The clamping members are adjustable toward and from the center and are adapted to hold the material in a smooth stretched condition contiguous to the path of the cutters.

In the operation of the machine, the cutters are adjusted to cut a washer or gasket the desired size, the graduations facilitating a quick and accurate positioning of the knives or cutting portions, and enabling a gasket or washer to be cut the exact size desired. If the gasket or washer is to be circular, the upper operating shaft and the lower tool-carrying shaft are arranged centrally of the machine, and the lower end of

the upper shaft is equipped with a set screw 36 for engaging the graduated horizontal arm 18 to secure it in proper position with relation to the lower tool-carrying shaft 19. The central positioning of the shafts causes the cutters to operate in circular paths, and when it is desired to cut an elliptical piece of material, the upper shaft is arranged eccentrically with relation to the lower shaft, the amount of adjustment being indicated by the graduations of the horizontal arm 18. When the upper shaft is arranged out of alinement with the lower shaft and is rotated, the upper and lower horizontal slides will be reciprocated, and the knives will be caused to cut in the path of an ellipse. The size of the ellipse may be varied by adjusting the upper and lower shafts toward and from each other.

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

1. A machine of the class described comprising a frame including upper and lower horizontal ways arranged at different elevations, upper and lower shafts, means for slidably mounting the upper and lower shafts in the ways, means for connecting the shafts for arranging the same either in or out of alinement, operating means connected with the upper one of the shafts, and means for securing a tool to the lower shaft.

2. A machine of the class described comprising a frame including upper and lower horizontal ways arranged at right angles to each other and located at different elevations, upper and lower slides mounted in the ways and having parallel side edges to fit the same, a tool-carrying shaft mounted on the lower slide, an operating shaft carried by the upper slide, and means for adjustably connecting the shafts for arranging them either in or out of alinement.

3. A machine of the class described comprising a frame including upper and lower horizontal ways arranged at right angles to each other and located at different elevations, upper and lower slides having parallel side edges slidably interlocked with the ways, a tool-carrying shaft mounted on the lower slide, an operating shaft carried by the upper slide, means for adjustably connecting the shafts for arranging them either in or out of alinement, said shafts being movable vertically, and means for yieldably supporting the shafts at the limit of their upward movement.

4. A machine of the class described comprising a frame including upper and lower horizontal ways arranged at an angle to each other, rectangular slides having parallel side edges slidably interlocked with the ways, a lower tool-carrying shaft mounted on the lower slide, an upper operating shaft

carried by the upper slide and having a slot, and a horizontal arm connected with the lower shaft and slidably arranged in the slot of the upper shaft, whereby the upper and lower shafts are adjustably connected to enable them to be arranged either in or out of alinement.

5. A machine of the class described comprising a frame including upper and lower horizontal ways, upper and lower slides having parallel side edges slidably interlocked with the ways, said slides being provided with tubular bearings, upper and lower shafts journaled in the bearings and movable vertically, one of the shafts being provided with a horizontal arm slidably connected with the other shaft, and operating means connected with the upper shaft.

6. A machine of the class described comprising a frame including an open base, upper and lower horizontal ways composed of spaced guide bars, and long and short posts mounted on the base and supporting the guide bars, upper and lower horizontal rectangular slides having parallel side edges operating in the said ways, a lower tool-carrying shaft mounted on the lower slide, an upper operating shaft carried by the upper slide and adjustably connected with

the lower shaft, and means for operating the upper shaft.

7. A device of the class described comprising a frame consisting of a flat ring to enable it to be placed over the material, cutting mechanism mounted on the frame and operating within the ring, and adjustable means for clamping the material within the area inclosed by the ring and adjacent to the path of movement of the cutting mechanism, said means including a clamping device consisting of a straight shank arranged radially of the ring and adjustably secured at its outer end to the same and extending inwardly from one side of the ring, and a curved member secured at an intermediate point to the inner end of the shank and extending laterally from the same in opposite directions and provided at its lower face with means for engaging the material, said member being movable inwardly and outwardly with the shank.

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,

J. R. McLAUGHLIN.