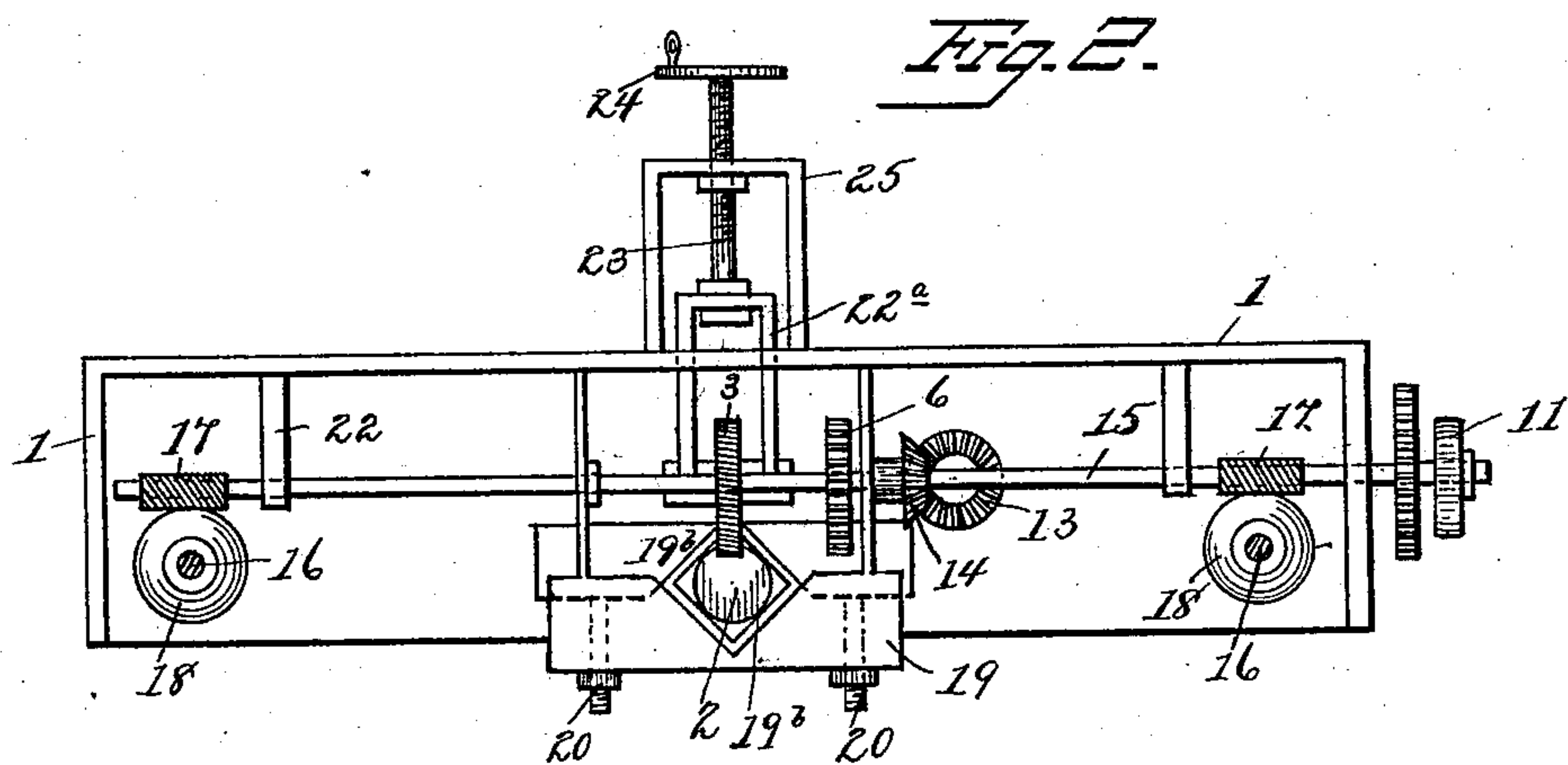
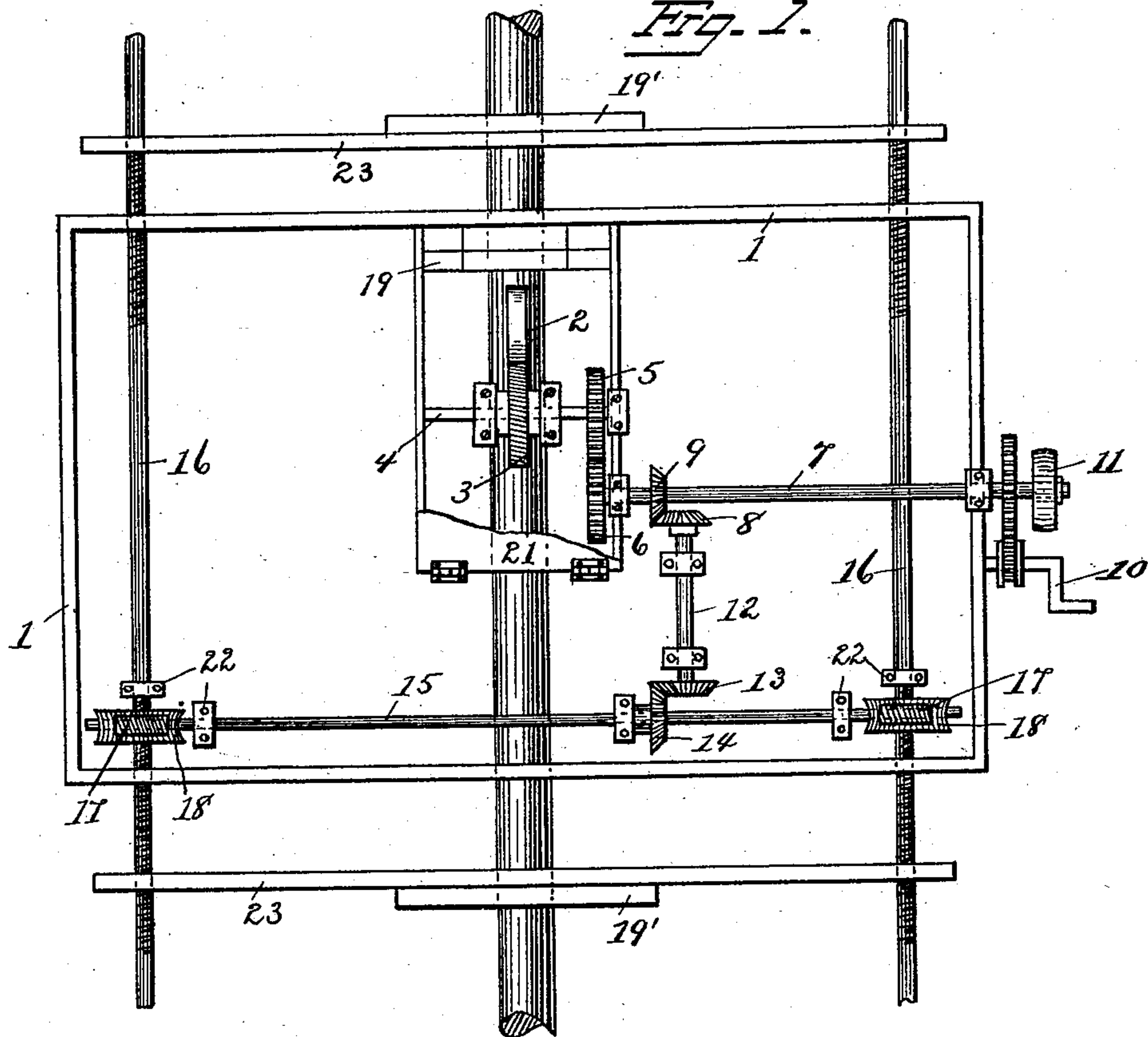


(No Model.)

W. J. LETZKUS.
KEYWAY CUTTER.

No. 549,573.

Patented Nov. 12, 1895.



Witnesses.

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UNITED STATES PATENT OFFICE.

WILLIAM JOSEPH LETZKUS, OF ALLEGHENY, PENNSYLVANIA.

KEYWAY-CUTTER.

SPECIFICATION forming part of Letters Patent No. 549,573, dated November 12, 1895.

Application filed May 31, 1895. Serial No. 551,158. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM JOSEPH LETZKUS, a citizen of the United States, residing at Allegheny, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Keyway-Cutters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to an improved key-seat-cutting machine; and it consists in certain details of construction and combination of parts, as will be fully described hereinafter.

In the accompanying drawings, Figure 1 is a plan view of my improved key-seat cutter having the top platform removed to show its inner working parts, said machine being constructed and arranged in accordance with my invention. Fig. 2 is a front sectional elevation of the same.

The box-shaped frame 1 is adapted to be loosely mounted upon the shaft 2 it is desired to form the keyseat in by means of a clamp consisting of the plates 19, having V-shaped recesses 19^b facing in opposite directions and adapted to permit the passage therethrough of the shaft, the lower plates having their lower edges connected by cross-pieces, through which pass set-screws 20, engaging the upper plate, as shown. The frame 1 is capable of movement in the direction of the length of the shaft 2 by means of the threaded shafts 16, held in position by plates 23, each provided with a clamping device 19', engaging the shaft 2, and of like nature as the previously-described clamps 19 20, said threaded shafts passing through and engaging opposite bars of said frame. Mounted upon these threaded shafts 16 are threaded worm-wheels 18, held at the front of the frame 1 by means of suitable bearings 22. Meshing with these worm-wheels 18 are worms 17, mounted upon a shaft 15, said shaft being driven by means of bevel-gearing 13 14, counter-shaft 12, bevel-

gearing 8 9, and power-shaft 7, operated either by a belt-pulley 11 or hand-crank 10. By means of the latter gearing and power-shaft the frame can be moved, as before intimated, in the direction of the length of the shaft 2, as required to aid objects of this invention, within the limits of the end plates 23.

Attached to the inner end of the power-shaft 7 is a gear-wheel 6, which meshes with another 5, mounted upon a shaft 4, provided with a rotary cutter 3. This shaft 4 is mounted upon a hinged frame 21 and is capable of a vertical movement by means of a stirrup 22^a, a threaded shaft 23, operating through a stand 25, and a hand-wheel 24.

By operating the hand-wheel 24 the cutter 3 will be elevated or lowered, and by means of the gearing 5 6 the said cutter is given a rotary movement, by which, together with the movement of the frame 1, a keyway will be cut along the shaft 2 in the direction of its length.

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

The key-seat cutting machine for shafts, comprising the frame carrying the shaft having the key-seat cutter, the power-shaft, an intermediate shaft geared to the aforesaid shafts, a second frame carrying the aforesaid frame, and adapted to be loosely mounted upon the shaft into which the key-seat is cut, the threaded shafts passing through and engaging said second frame and resting in supports connected to said key-seat shaft, the threaded worm-wheels mounted upon said threaded shafts, and worms meshing with said threaded worm-wheels, with their shaft geared by a counter-shaft and bevel-gearing to said intermediate shaft, substantially as set forth.

In testimony that I claim the foregoing I hereunto affix my signature this 29th day of March, A. D. 1895.

WILLIAM JOSEPH LETZKUS. [L. s.]

In presence of—

P. B. REILLY,
M. E. HARRISON.