

No. 724,883.

PATENTED APR. 7, 1903.

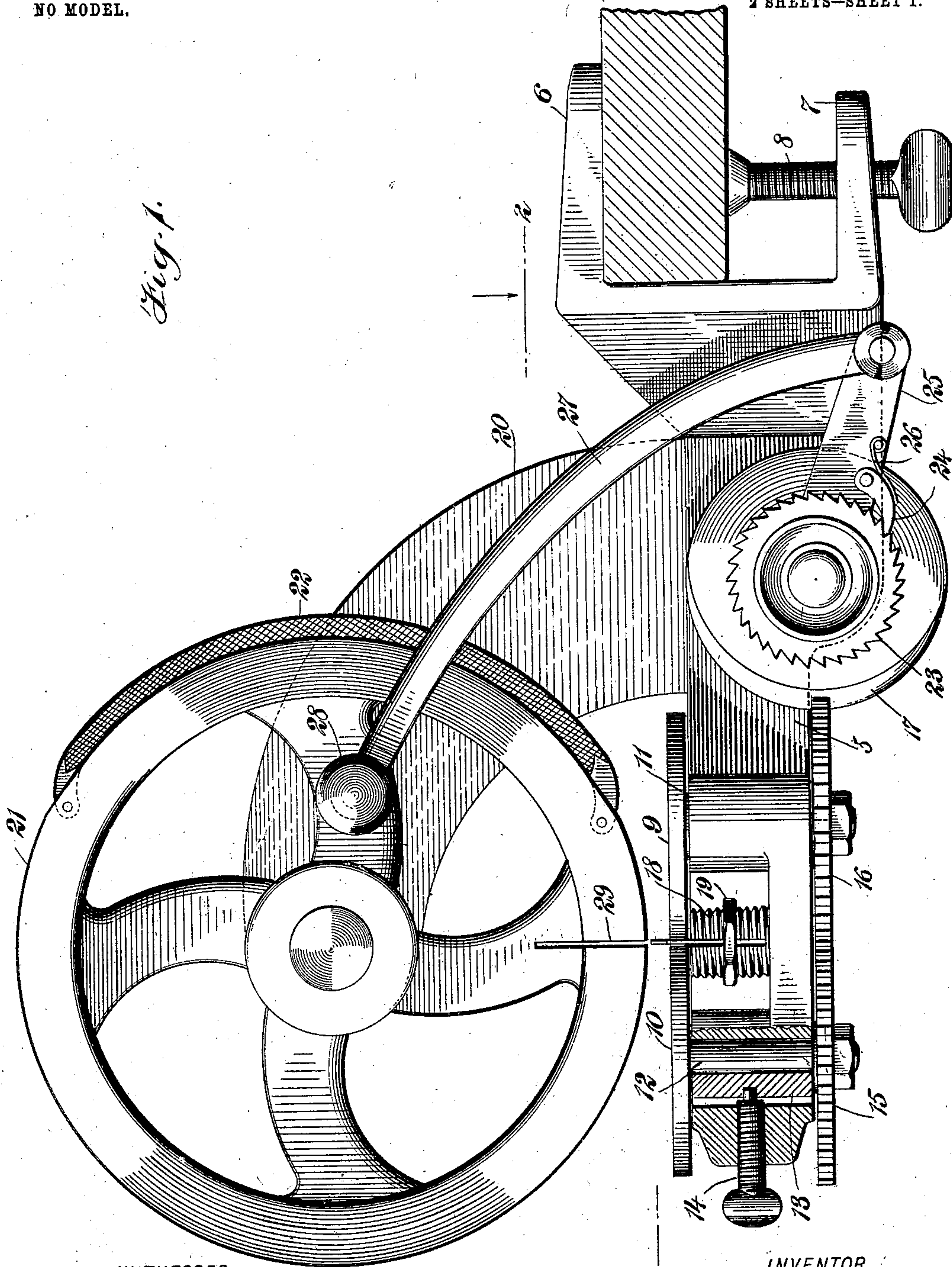
D. L. KELCHNER.

SAW FILER.

APPLICATION FILED AUG. 16, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



WITNESSES:

*Geo. M. Taylor.*  
*E. Ferguson*

INVENTOR

*David L. Kelchner*

BY *Munn & Co.*

ATTORNEYS.

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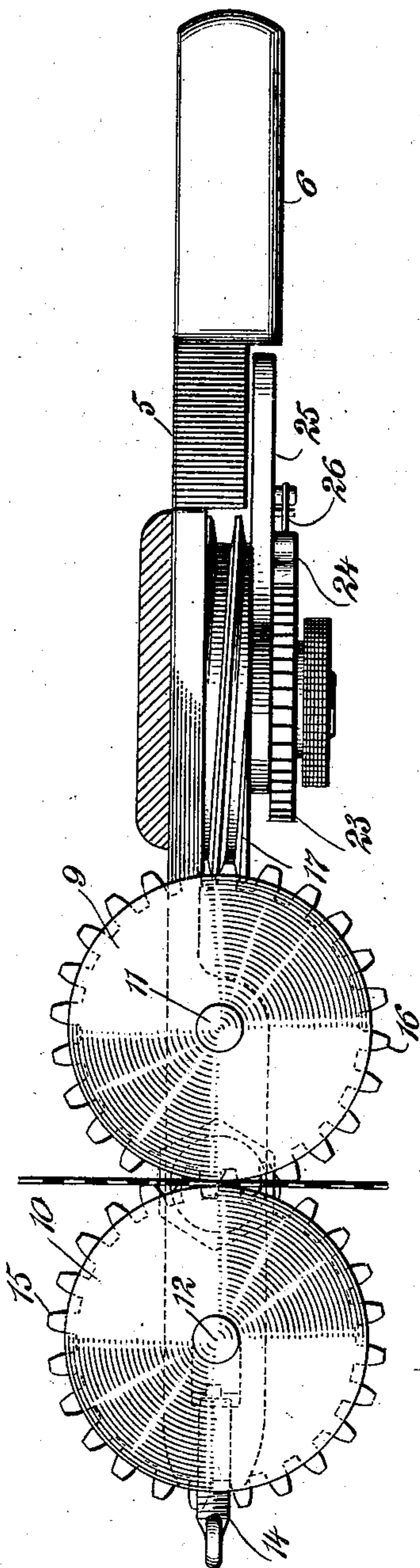
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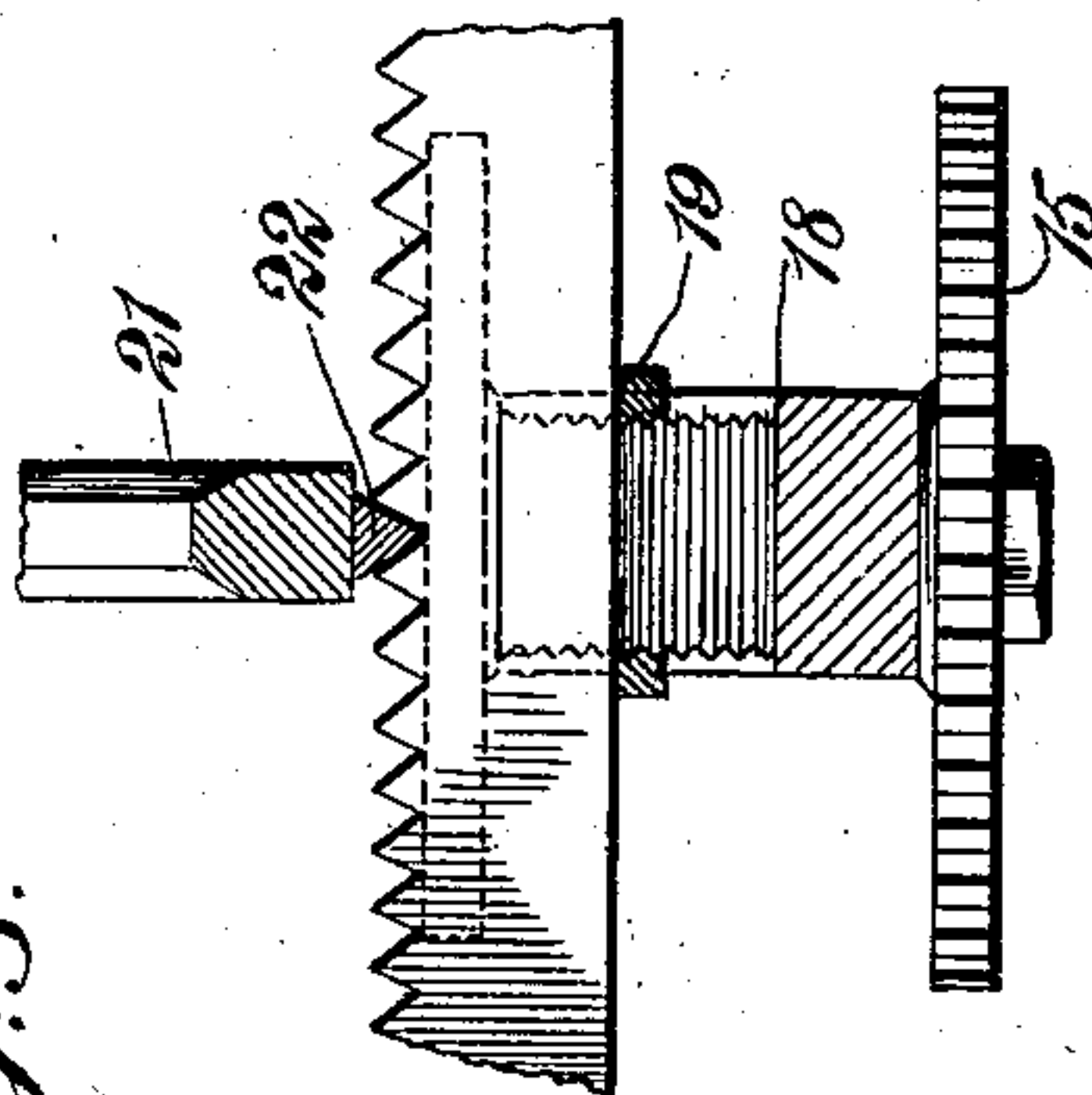
*Fig. 2.*



*Fig. 4.*



*Fig. 3.*



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# UNITED STATES PATENT OFFICE.

DAVID L. KELCHNER, OF BROOKLYN, NEW YORK.

## SAW-FILER.

SPECIFICATION forming part of Letters Patent No. 724,883, dated April 7, 1903.

Application filed August 16, 1902. Serial No. 119,883. (No model.)

*To all whom it may concern:*

Be it known that I, DAVID L. KELCHNER, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented new and useful Improvements in Saw-Filers, of which the following is a full, clear, and exact description.

This invention relates to improvements in machines for filing saws, the object being to provide a machine of this character of simple construction and by means of which a saw may be quickly and uniformly filed.

I will describe a saw-filer embodying my invention and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a front elevation of a saw-filer embodying my invention. Fig. 2 is a sectional plan view on the line 2 2 of Fig. 1. Fig. 3 is a sectional detail view showing the saw-guide, and Fig. 4 is a plan view showing the file and its carrier.

Referring to the drawings, 5 designates a base-frame, on the end of which are jaws 6 7, and in one of the jaws, here shown as the jaw 7, is a clamping-screw 8, by means of which the device may be secured to a table or other support. Supported in the frame 5 are feeding-disks 9 10, these feeding-disks rotating in a horizontal plane, the feeding-disk 9 being attached to a shaft 11, having bearings in the frame 5, and the shaft 12 of the disk 10 has bearings in a block 13, adjustable in the frame, so as to regulate the distance between the feeding-disks. The disk 10 is moved toward the disk 9 by means of a screw 14, passing through the outer end of the frame 5 and engaging with said block 13.

On the lower end of the shaft 12 is a gear-wheel 15, meshing with a gear-wheel 16 on the shaft 11, and this gear-wheel 16 is designed to engage with and be operated by a worm-wheel 17.

Arranged underneath the feeding-disks is a guide for the saw comprising an exteriorly-threaded lug 18, which is vertically split to receive the saw-blade, as clearly shown in Fig. 1, and the plane of the teeth is regulated

by means of an interiorly-threaded ring 19 on the lug 18.

An arm 20 is extended upward and at a forward curve from the rear portion of the frame 5, and mounted to rotate on this arm is a wheel-like file-carrier 21, on which is removably mounted a longitudinally-curved or segmental file 22.

Mounted rigidly on the shaft of the worm-wheel 17 is a ratchet-wheel 23, engaged by a pawl 24, mounted on an arm 25, arranged to swing loosely on the shaft of the worm-wheel and pressed yieldingly against the ratchet-wheel by means of a spring 26. From the outer end of the arm 25 a pitman 27 extends upward and connects with an operating-handle 28 on the rotary part 21.

To facilitate the insertion of a saw-blade between the feeding-disks, the carrier or rotary part 21 is provided with a slit or kerf 29, in which the blade may pass. In operation when the slit or kerf 29 is in position at the forward side of the feeding-disk the blade may be inserted therein and then the carrier or rotary part moved to bring the saw-blade in line with the space between the feeding-disks. Then of course the blade is to be passed between said disks and into the lug 18, the adjusting device 19 having previously been moved so as to cause a proper projection of the saw-teeth. Now upon rotating the carrier 21 the file 22 will pass between the two teeth of the blade and file the same. After the complete file passes between the teeth the pitman 27 will cause a downward swinging movement of the arm, and consequently, through the pawl-and-ratchet mechanism, will impart a slight rotary movement to the worm-wheel, which through the medium of the gears 15 and 16 will rotate the disks 9 and 10 sufficiently to move the saw-blade to bring the next teeth in position for receiving a file.

It will be noted that the file 22 is connected with the carrier or rotary part by means of screws. Therefore when a file becomes worn out it is readily replaced by a new one.

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

1. In a saw-filer, a rotary part having a slit or kerf to receive a saw-plate, a segmental



file carried by the rotary part, horizontally-disposed feeding-disks below the rotary part, driving connections between said disks and the rotary part and an adjusting device below the disks.

2. A saw-filer comprising a rotary part, a longitudinally-curved filer carried by the rotary part, feeding-disks, gear connections between the disks, a worm-wheel engaging with one of the gears, and means operated from the rotary part for imparting intermittent motion to the worm-wheel.

3. A saw-filer comprising a frame, a rotary part supported on the frame, a segmental file carried by said rotary part, feeding-disks attached to vertically-disposed shafts in the frame, meshing gears on the lower ends of said shafts, a worm-wheel engaging with one of said gears, a ratchet-wheel fixed to the side of said worm-wheel, an arm mounted to swing on the shaft, a spring-pressed pawl carried by the arm and engaging with the ratchet-wheel, and a pitman connection between the arm and rotary part.

4. A saw-filer comprising a frame, an arm extending upward from said frame, a rotary part mounted on said arm, a segmental file

carried on the periphery of the rotary part, and feeding-disks arranged to rotate in a horizontal plane, means operated from the rotary part for operating said disks, a guide below the disk, and a stop-ring adjustable vertically on said guide.

5. A saw-filer comprising a frame, a clamping device on the frame, an arm extending upward from said frame, a rotary part mounted on the arm, a segmental file carried by the rotary part, said rotary part being provided with a slit or kerf, feeding-disks mounted to rotate in a horizontal plane, one of said disks being adjustable toward and from the other, a vertically-slitted lug arranged below the disks and having an exterior screw-thread, a ring engaging with said screw-thread, and means operated from the rotary part for imparting step-by-step rotary motion to the disks.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

DAVID L. KELCHNER.

Witnesses:

JNO. M. RITTER,  
C. R. FERGUSON.