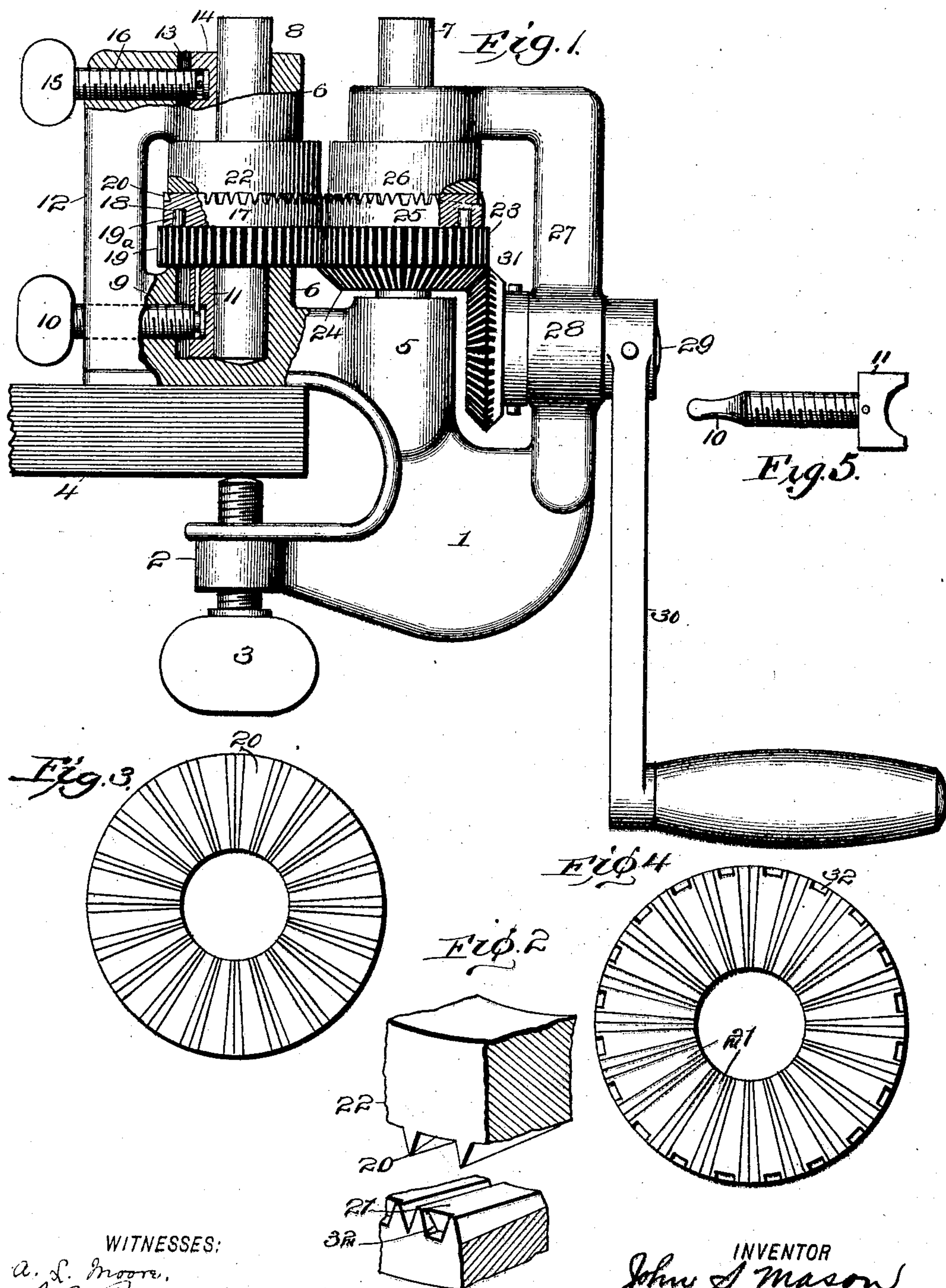


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PATENTED JULY 12, 1904.

J. S. MASON.  
SAW SETTING MACHINE.  
APPLICATION FILED JAN. 18, 1904.

NO MODEL.



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

JOHN S. MASON, OF SANTA ANA, CALIFORNIA, ASSIGNOR OF ONE-HALF  
TO JAMES S. TREW, OF SANTA ANA, CALIFORNIA.

## SAW-SETTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 764,858, dated July 12, 1904.

Application filed January 18, 1904. Serial No. 189,594. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN S. MASON, a citizen of the United States of America, residing at Santa Ana, in the county of Orange and State of California, have invented certain new and useful Improvements in Saw-Setting Machines, Rotary, of which the following is a specification.

This invention relates to metal tools and implements, and particularly to a class thereunder known as "saw-setting rotary."

An object of this invention is to produce a saw-setting device which automatically feeds the saw or carries said saw to bring its teeth successively into engagement with the saw-setting means, which is rotated in unison with the feeding mechanism.

Furthermore, an object of the invention is to produce a saw-setting machine in which one of the saw-setting wheels is positively driven and in the provision of means whereby the companion member or wheel is driven through the medium of a certain gearing connected to the positively-driven member.

Furthermore, an object of the invention is to provide a novel frame containing bearings for the reception of the rotating parts of the device, the said frame having means for permitting the adjustment of the members with relation to each other and means also for securing the frame in position for operation.

Furthermore, an object of the invention is to produce a saw-setting machine having a plurality of interchangeable parts, whereby a rip-saw, band-saw, or ordinary crosscut-saw may be acted upon and effectually set by the same apparatus.

Finally, an object of the invention is to produce a saw-setting machine of the character noted which will possess advantages in points of simplicity, efficiency, and durability, proving at the same time satisfactory in use and comparatively inexpensive to manufacture.

With the foregoing and other objects in view the invention consists in the details of construction and in the arrangement and combination of parts to be hereinafter more fully set forth and specifically claimed.

In describing the invention in detail refer-

ence will be had to the accompanying drawings, forming part of this specification, wherein like characters denote corresponding parts throughout the several views, in which—

Figure 1 is a view in elevation illustrating a saw-setting machine embodying the invention. Fig. 2 illustrates fragments of the feeding and setting wheels detached. Fig. 3 illustrates the under surface of the feeding-wheel. Fig. 4 illustrates the upper surface of the setting-wheel. Fig. 5 is a detail view showing the adjusting-block.

In the drawings, 1 denotes the frame, having a clamp member 2 with a threaded aperture for the reception of the thumb-screw 3, whereby the frame is secured to a bench or table 4 of any ordinary construction. The frame has two bosses 5 and 6, which have vertically-disposed recesses forming bearings for the short shafts 7 and 8, respectively. The frame has a longitudinally-disposed screw-threaded aperture 9 for the reception of the thumb-screw 10, the said thumb-screw 10 being swiveled in a bearing-block 11, which bearing-block is slidable in the elongated recess which is formed in the boss 6. The bearing-block 11 has a half-bearing in its inner surface which bears against the shaft 8, so that the shaft may be adjusted toward shaft 7.

An arm 12 has a right-angular extension provided with an elongated opening 13 for the reception of a bearing-block 14, similar to the bearing-block 11, heretofore described. A thumb-screw 15 is swiveled in the block 14 and is threaded in the aperture 16 of the arm 12.

The shaft 8, as stated, is rotatable in the boss 6 and in the extension of the arm 12 and is designed to carry one of the saw-setting members 17, which saw-setting member has a recess 18 in its under surface for the reception of a stud 19, which projects from the upper surface of the gear-wheel 19<sup>a</sup>. The saw-setting member 17 has a series of radial slots 20 and ribs on its upper surface, into which a series of ribs 21 of one feeding member 22 are seated in order that the members 17 and 22 may be moved or rotated together. The gear-wheel 19<sup>a</sup> is loose on the shaft 8,



and the members 17 and 22 may be connected to the said gear-wheel through the medium of the stud and the ribs just described, so that the said setting and feeding members  
 5 may be readily removed by withdrawing the shaft from its bearings. Of course, if it is desired, all of the members on the shaft may be keyed thereto; but it has been found in practice that the parts are more readily dis-  
 10 connected by having them joined in the manner stated.

It is to be understood that the bearing-blocks 11 and 14 engage the shaft 8 and re-  
 15 tain it in certain relation to the shaft 7 in order that the coöperating setting members may be moved to accommodate saws of different thicknesses, and it will be understood also that the said members may be removed for the purpose of substituting those having accom-  
 20 modations for teeth of larger or smaller sizes.

Coöperating with the parts 17, 19, and 22 are a set of positively-driven members consisting of a gear-wheel 23, which has a lower bevel-gear 24, the said gear-wheel 23 having  
 25 a stud connection with the setting member 25 and the said setting member 25 having a slot-and-rib connection with the feeding member 26, similar to that heretofore described.

The shaft 7 has its upper end mounted in a  
 30 bearing formed on the arm 27, which arm at its lower end is integral with the frame 1. Intermediately of the arm 27 a bearing 28 is formed, in which is mounted a short shaft 29, the said short shaft 29 being provided with a  
 35 crank-handle 30, by which it is rotated. On the inner end of the shaft 29 is a pinion 31, meshing with the bevel-gear 24. Hence as the crank-handle is rotated the pinion communicates motion to the gear-wheel 23 and to  
 40 the shaft 7, on which the parts 25 and 26 are mounted in any suitable manner.

The faces of the two coacting setting members are provided with recesses 32 for the accommodation of the points of the teeth of the  
 45 saw, the said recesses being of such size as to receive the said teeth and the said members being interchangeable for the purpose of substituting members having recesses of different sizes. It is observed that the feeding

members 26 are of slightly less diameter than  
 50 the setting members 25 in order that the saw may be fed between the rollers while the teeth thereof depend between the setting-  
 55 wheels, the said setting-wheels having teeth which oppose the recesses of the coacting setting-wheel. The recesses 32 are formed in those portions of the setting member between the radial slots 20.

Having fully described the invention, what I claim as new, and desire to secure by Letters  
 60 Patent, is—

1. In a saw-setting machine, a suitable frame, shafts supported on the frame, intermeshing gear-wheels on the shafts, and means for rotating the gear-wheels, setting-wheels  
 65 on the shafts, connections between the gear-wheels and setting-wheels whereby the latter are rotated with the gear-wheel, the said setting-wheels having peripheral teeth and opposing recesses, for the reception of the teeth  
 70 of the saw, the said setting-wheels having radial grooves in their upper faces, feeding-wheels of less diameter than the setting-wheels, having tongues fitting in the grooves of the setting-wheels, and means for adjust-  
 75 ing one shaft toward and away from the other shaft.

2. In a saw-setting machine, a suitable frame, shafts carried by the frame, intermeshing gear-wheels on the shaft means for  
 80 rotating the gear-wheels, independent setting and feeding wheels on the shafts, connections between the gear-wheels and setting-wheels, connections between the setting-wheels and feeding-wheels of each set, where-  
 85 by the setting and feeding wheels are rotated with the gear-wheels, the said feeding-wheels being of less diameter than the setting-wheels, the said setting-wheels having peripheral teeth and opposing recesses substantially as de-  
 90 scribed.

In testimony whereof I affix my signature, in the presence of two witnesses, this 7th day of January, 1904.

JOHN S. MASON.

Witnesses:

H. C. HEAD,  
 HOMER G. AMES.