

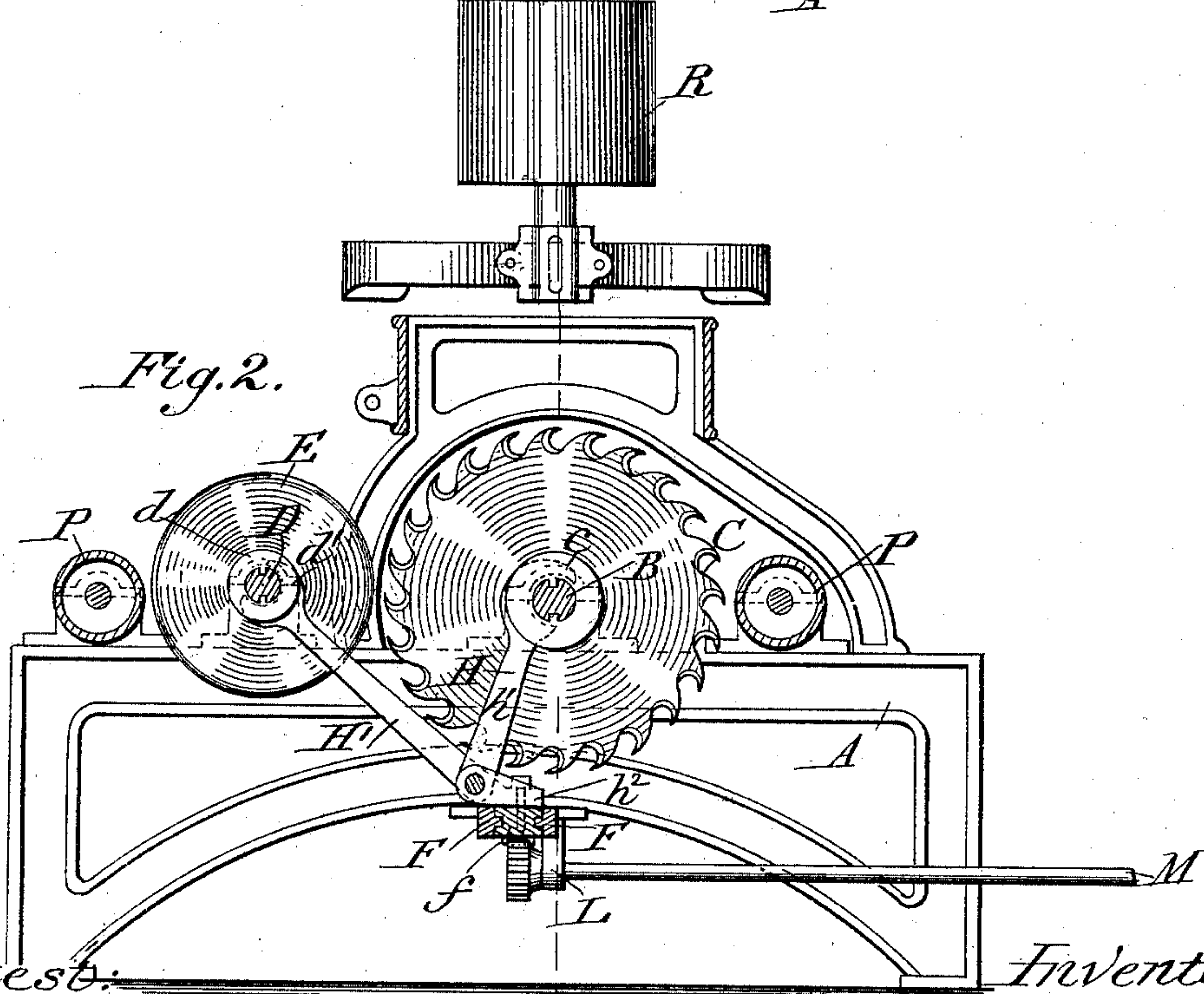
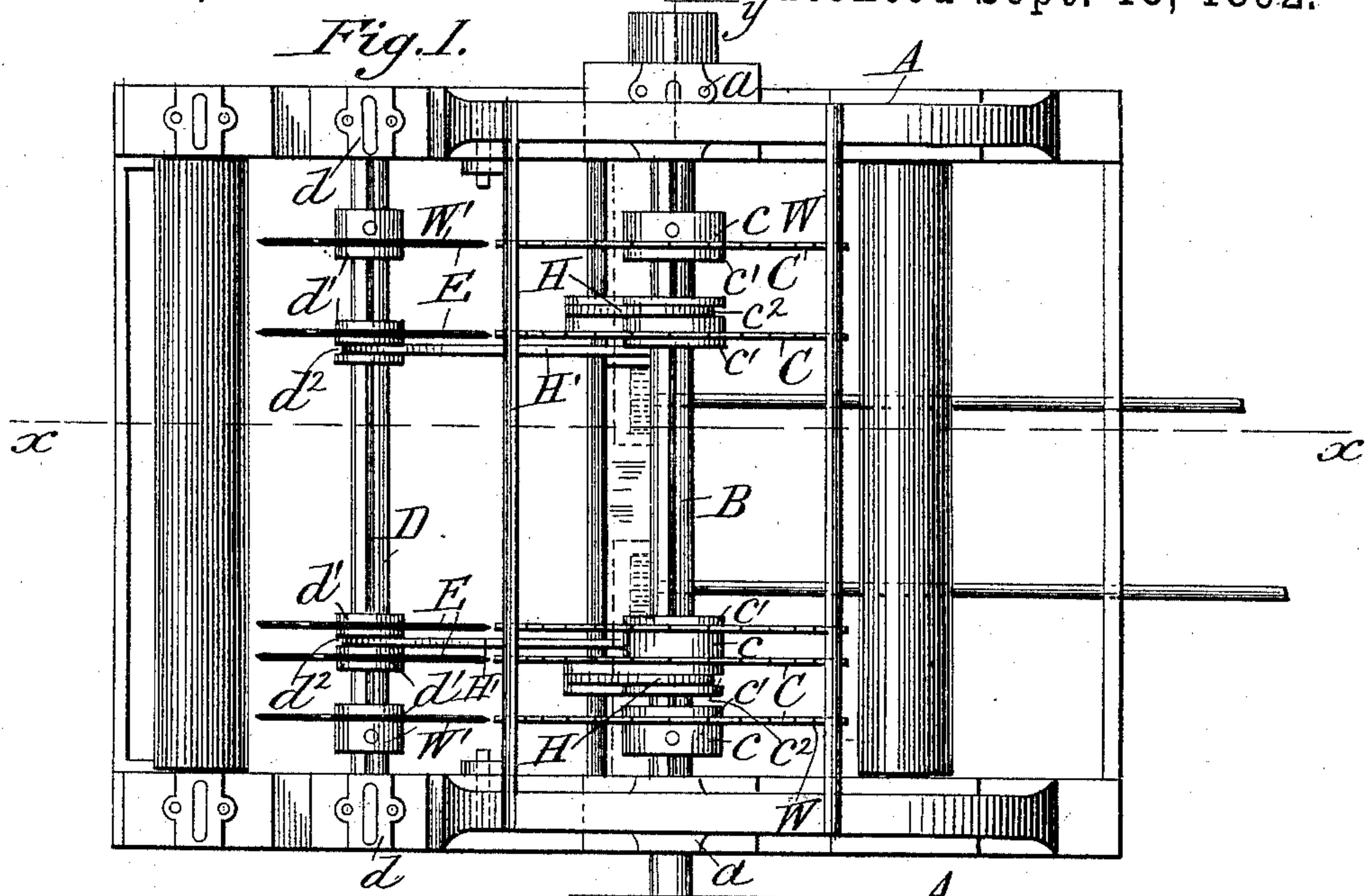
(No Model.)

2 Sheets—Sheet 1.

A. RODGERS, Sr.
SAWING MACHINE.

No. 482,697.

Patented Sept. 13, 1892.



Attest:

J. H. Schott

M. B. Chandler.

Inventor

Alexander Rodgers Sr.
by M. F. E. Chandler & Co
Attys.

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Fig. 3.

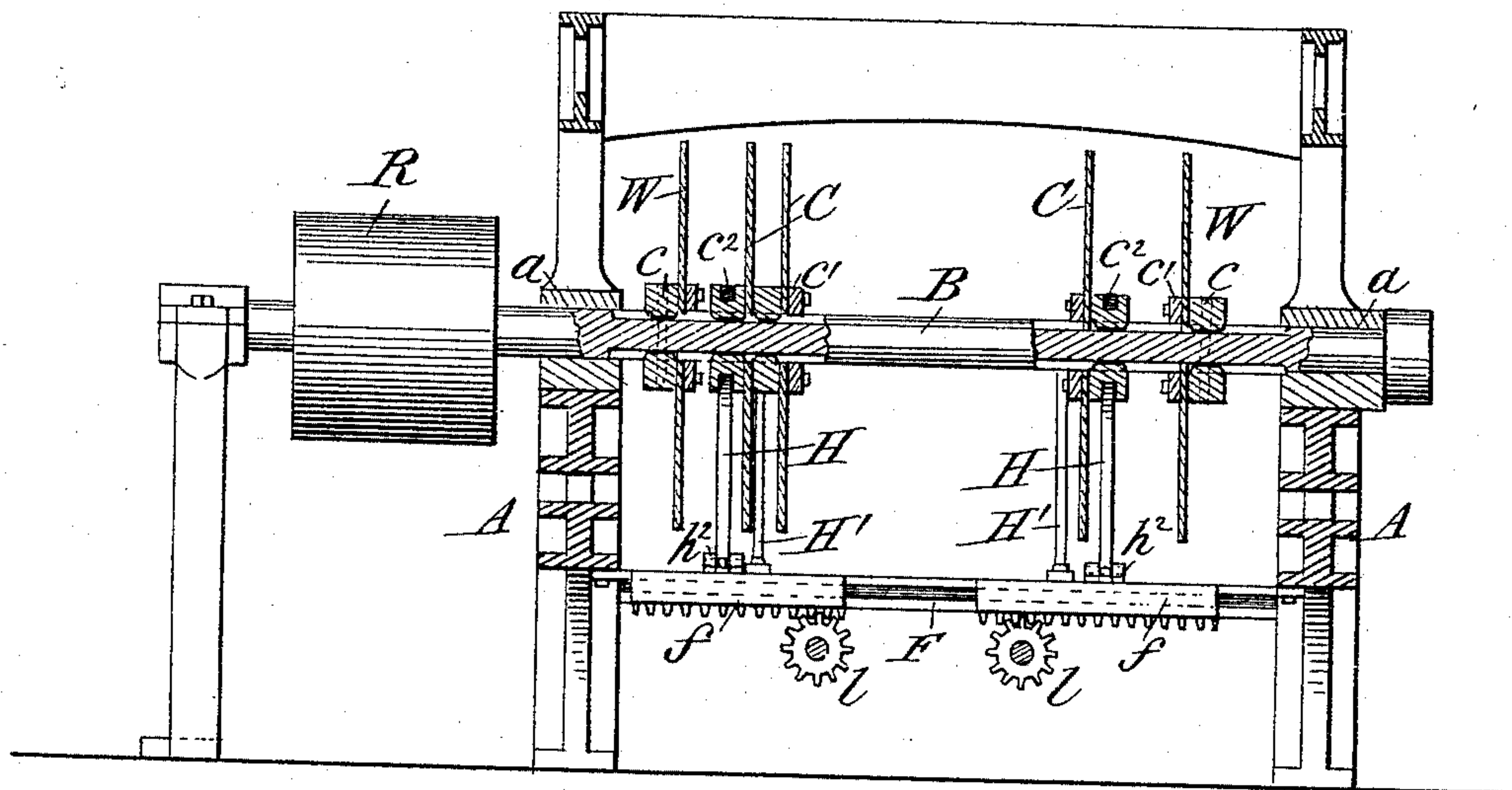
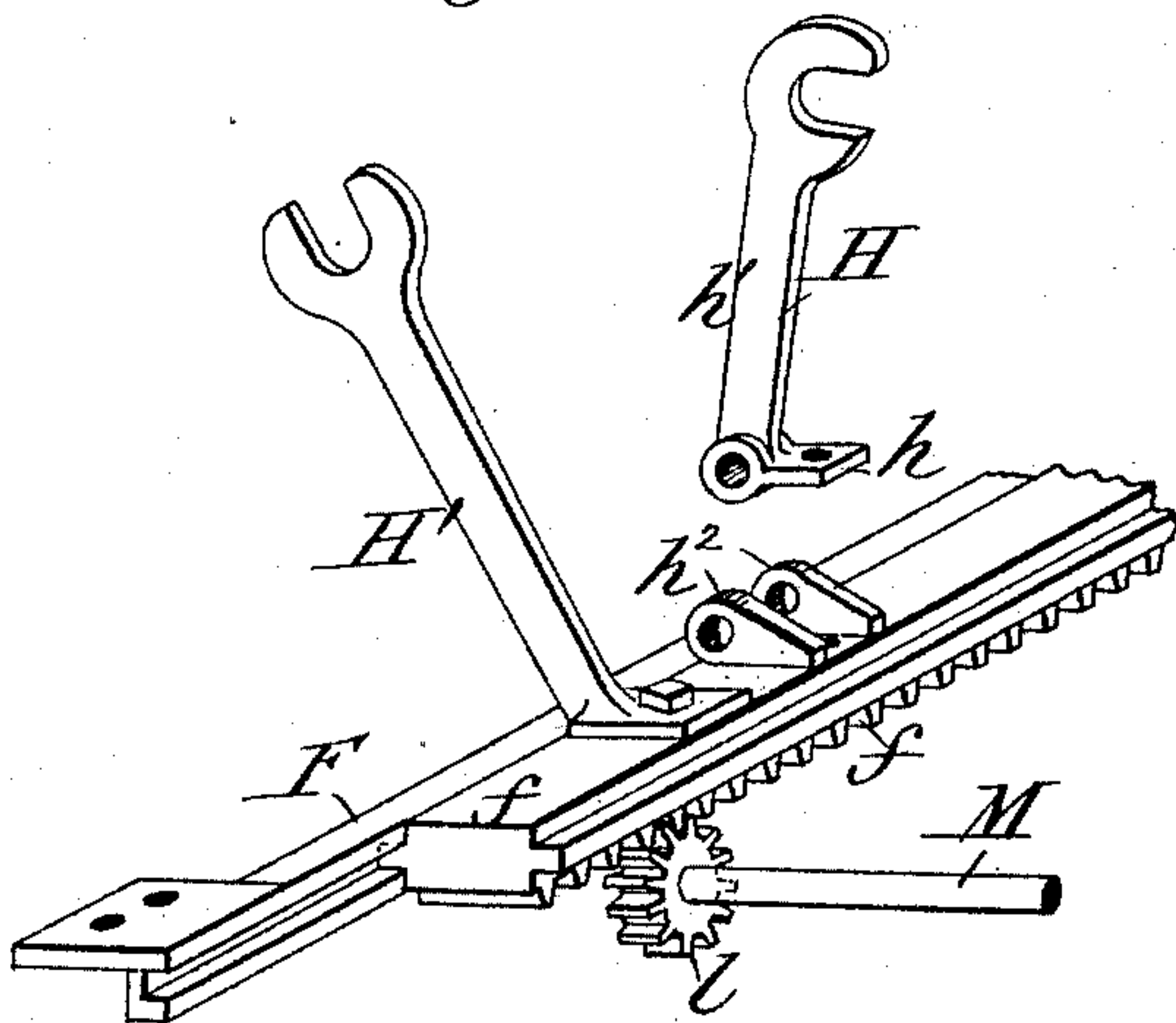


Fig. 4.



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UNITED STATES PATENT OFFICE.

ALEXANDER RODGERS, SR., OF MUSKEGON, MICHIGAN, ASSIGNOR TO THE
RODGERS IRON MANUFACTURING COMPANY, OF SAME PLACE.

SAWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 482,697, dated September 13, 1892.

Application filed March 28, 1892. Serial No. 426,805. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER RODGERS, Sr., a citizen of the United States, residing at Muskegon, in the county of Muskegon and State of Michigan, have invented certain new and useful Improvements in Sawing-Machines, of which the following is a full, clear, and exact description, such as will enable those skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to improvements in circular sawing-machines, and especially to that class termed "edgers." It has for its object the construction of a device wherein a disk enters the kerf made by the saw mounted immediately in front of it to prevent the boards from springing together, so that the saw-blade will not be pinched between the surfaces of the wood and become overheated by the friction, and consequently injured, to prevent the dulling of the teeth in their upward movement in the kerf, and to prevent the lumber from riding upon the saw and being thrown back upon the operator to endanger his life or limb.

The invention consists in mounting back of each saw of the edger a disk adapted to enter the kerf made by the saw immediately in front of it to prevent the boards as they are cut from springing together and in connecting each saw and its respective disk to a common adjusting mechanism, so that any movement of the latter to adjust the saw will at the same time move the disk to the same extent, so that they will always be in register—that is, the disk will always be immediately back of its respective saw and in position to enter the kerf made by the latter.

It also consists in providing means whereby the adjusting mechanism can be readily operated from the exterior of the machine, and in so constructing the said mechanism as not to interfere with the disengagement of a saw from the arbor whenever it should become necessary.

The invention further consists in the novel construction, combination, and arrangement of parts, as will be hereinafter fully described,

pointed out in the appended claims, and illustrated in the accompanying drawings.

In the accompanying drawings, in which similar letters of reference designate corresponding parts, Figure 1 is a plan view of a sawing-machine embodying the invention. Fig. 2 is a longitudinal vertical section on the line $x x$ of Fig. 1. Fig. 3 is a transverse vertical section on the line $y y$ of Fig. 2. Fig. 4 is a detail perspective view showing the shifters and their adjusting mechanism.

Referring to the drawings by letter, A A designates the side frames of any construction suitable in the premises, which carry the several parts that make the complete machine.

B designates the saw-arbor, journaled in suitable bearings, as at $a a$ in the side frames.

C C designates the saws mounted upon the arbor. Each saw is seated upon a collar c , and is clamped between the annular projections $c' c'$ of the same. Each collar is splined upon the arbor so that it can move longitudinally of the same, and it may carry one or more saws, and it is provided with an annular groove c^2 , the purpose of which will be explained farther on.

Back of the saw-arbor and parallel with it the shaft D is mounted, with its ends journaled in the journal-boxes $d d$, secured to the side frames. Upon this shaft the collars $d' d'$, similar to those carried by the saw-arbor, are splined so as to have a free movement longitudinally of the shaft, and each is provided with an annular groove d^2 . Upon these collars the disk E E are mounted in a manner similar to that in which the saws are mounted on their respective collars. Each disk is formed of an annular piece of metal with its edge beveled, and of a diameter great enough to allow it to enter a kerf a considerable distance, the diameter being somewhat less than that of the saw in front of it. Both the saws and the disks are mounted so as to be longitudinally adjustable on their shafts, and each saw is connected with a particular disk in such a manner that when the former is adjusted on its shaft the latter will be similarly adjusted, so that it will always be immediately back of its particular saw.

To the under side of the supporting frame, parallel with the shafts of the saws and of the disks, the guides F F are secured in any suitable manner, preferably immediately below the saw-arbor. In these guides the racks *f f* are mounted to move longitudinally of the former. There is a rack for each movable saw and its disk, or for each set of movable saws and their disks.

10 H H and H' H' designate shifters or arms that connect the saws and disks with their respective racks. Each of the shifters H H that connect the saws with the racks is formed in two parts, the foot *h* and the shank *h'*, the
15 foot *h* being seated in the socket *h*², and the whole being pivoted or hinged to the rack by a bolt which passes through the sides of the socket and the angle formed by the junction of the shank with the foot secured to its
20 respective rack, and the part *h'* having its outer end hooked or bifurcated and engaging with the collar of its respective saw, the arms of the bifurcation registering with the annular groove *c*². The object in having these
25 arms hinged is to allow them to be disengaged from the saws, so as not to interfere with their removal when it becomes desirable.

Each of the shifters H' H' is formed of one piece, one end of which is bifurcated and en-
30 gages with the collar of its respective disk, the arms of the bifurcation registering with the annular groove *d*². The other end is fastened to the same rack as the shifter of the saw with which the disk to which it is con-
35 nected acts.

The hangers L L support shafts M M, that lead to the exterior of the machine, where they are provided with suitable means for their rotation. On the inner ends of these
40 shafts are the pinions *l l*, which mesh with the racks *f f*, there being a shaft and pinion for each rack. By means of these shafts and pinions the racks can be moved to adjust the saws and their disks to any desired position.

45 P P designate feed-rollers suitably journaled in the frame and provided with means

for driving them. R designates the driving-pulley mounted on the saw-arbor.

W W and W' W' designate, respectively, stationary saws and their disks.

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

1. In a sawing-machine, the combination of the arbor, the saws adjustably mounted there-
55 on, the shaft journaled back of and parallel with the said arbor, the disks adjustably mounted thereon, and the shifters connecting each disk with a particular saw to hold the same in alignment, so that when the lat-
60 ter is adjusted a like adjustment will be given to the former, substantially as described.

2. In a sawing-machine, the combination of the arbor, the saw adjustably mounted there-
65 on, the shaft journaled back of and parallel with the said arbor, the disks adjustably mounted thereon, the movable racks, and the fixed and the hinged shifters connecting, re-
70 spectively, the disks and saws with the racks, each disk being so held as to be immediately back of a particular saw, so that when the lat-
75 ter is adjusted a like adjustment will be given to the former, substantially as described.

3. In a sawing-machine, the combination of the main frame, the parallel arbor and shaft
75 journaled in the said frame, the saws and disks adjustably mounted on the said arbor and shaft, respectively, the guides secured to main frame parallel with the arbor and shaft, the movable racks carried by the guides, the
80 fixed and hinged shifters connecting, respectively, a saw and a disk with the same rack, so that the said saw and disk will be held in alignment and both be adjusted to
85 the same extent by the movement of the rack, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

ALEXANDER RODGERS, SR.

Witnesses:

KATIE E. DELANTY,
JNO. HUGHES, Jr.