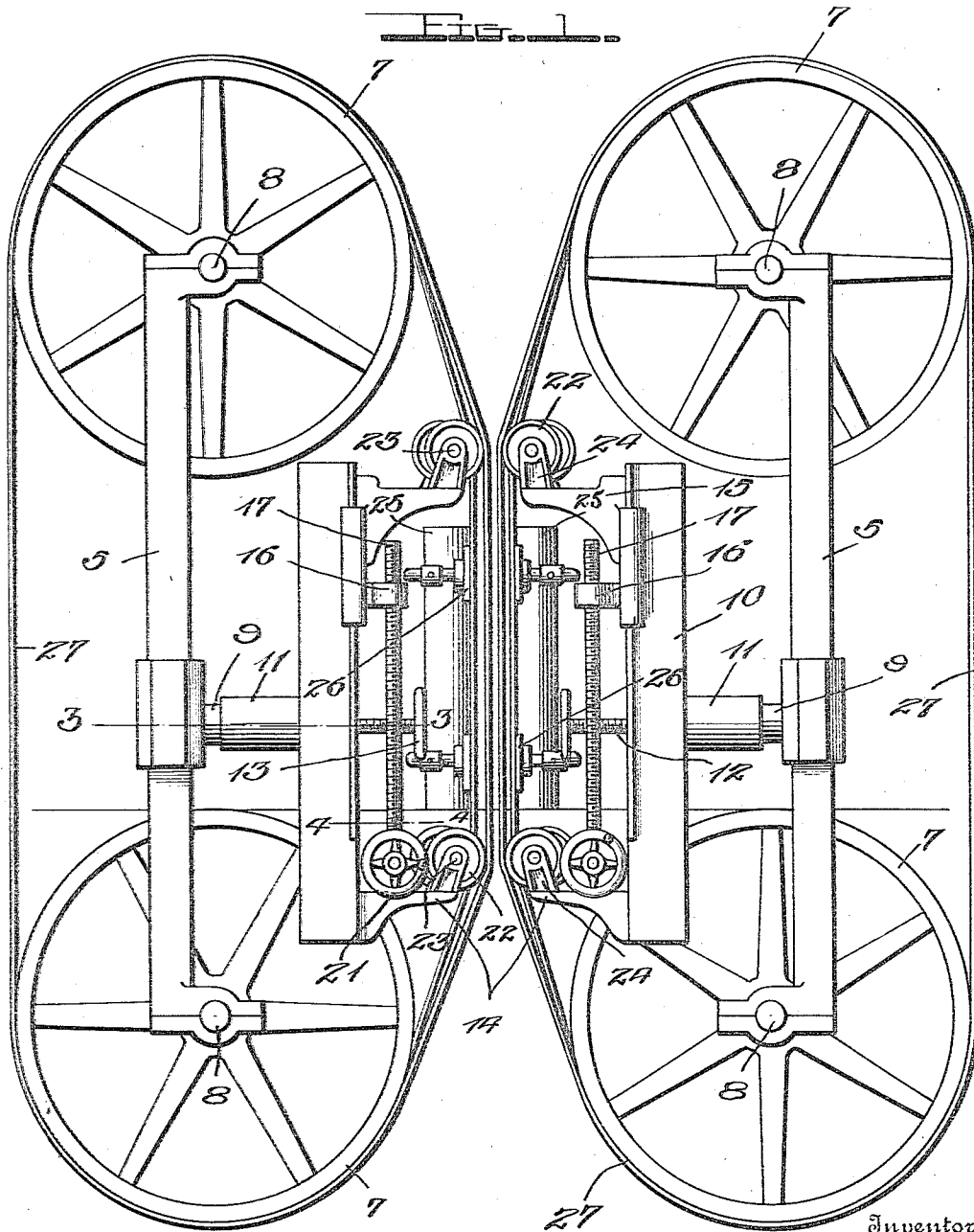


S. E. RANGER.
BAND RESAW MACHINE.
APPLICATION FILED APR. 9, 1912.

1,062,358.

Patented May 20, 1913.

2 SHEETS-SHEET 1.



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Witnesses

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A. B. Norton.

By

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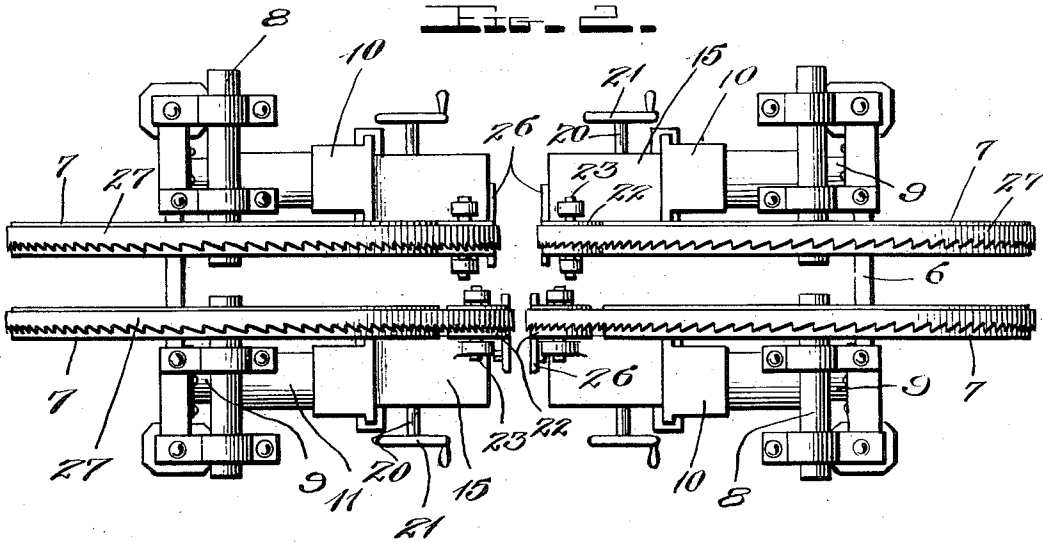


Fig. 2.

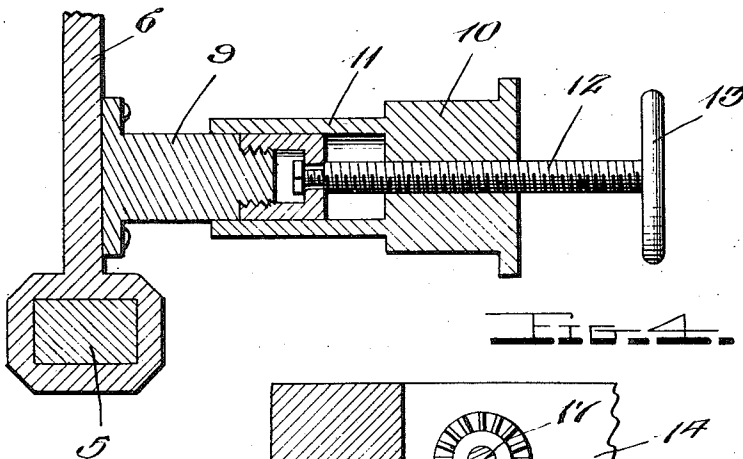
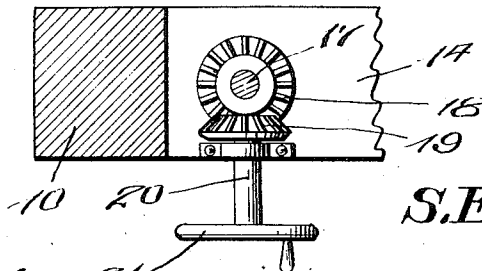


Fig. 4.



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UNITED STATES PATENT OFFICE.

SAMUEL E. RANGER, OF HILTS, CALIFORNIA.

BAND RESAW-MACHINE.

1,062,358.

Specification of Letters Patent.

Patented May 20, 1913.

Application filed April 9, 1912. Serial No. 689,613.

To all whom it may concern:

Be it known that I, SAMUEL E. RANGER, a citizen of the United States, residing at Hilts, in the county of Siskiyou and State of California, have invented certain new and useful Improvements in Band Resaw-Machines, of which the following is a specification, reference being had to the accompanying drawings.

10 This invention relates to improvements in band resaw machines and has for its primary object to provide improved means for mounting and adjusting the crowding wheels for the saws.

15 Another object of the invention resides in the provision of independently adjustable sets of crowding wheels arranged in upper and lower pairs for use in connection with a machine provided with quadruple bands and arranged in pairs whereby the bands of each pair may be adjusted with relation to each other and also with relation to the other pair of band saws.

25 Still another object of the invention is to provide means whereby the durability and working efficiency of band resaw machines is materially increased without materially adding to the cost of manufacture.

30 With the above and other objects in view, the invention consists of the novel features of construction, combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

35 Figure 1 is a side elevation of a quadruple band resaw machine embodying the present invention; Fig. 2 is a top plan view; Fig. 3 is a section taken on the line 3—3 of Fig. 1; and Fig. 4 is a detail section taken on the line 4—4 of Fig. 1.

40 Referring in detail to the drawings, 5 designates the spaced vertical uprights of a frame structure, said uprights being arranged in pairs and each pair connected by the transverse bars 6. Upon the upper and lower ends of the uprights 5, the band guide wheels 7 are mounted upon the shafts 8 rotatably mounted in suitable bearings arranged upon the uprights.

50 To each of the transverse bars 6 of the frame, the inwardly extending cylindrical rods 9 are secured, one of said rods being arranged adjacent to each end of the frame bar and disposed in the vertical plane of the upper and lower band wheels 7. The vertical supporting members 10 are provided

with the lateral tubular extensions 11 intermediate of their ends which are keyed upon the cylindrical rods 9 for sliding movement. An adjusting screw 12 is threaded in each of the members 10 and has one of its ends swiveled upon the inner end of the rod 9 as shown in Fig. 3. The other end of this adjusting screw is provided with a hand wheel 13 whereby the screw may be rotated to move the member 10 inwardly or outwardly.

60 Upon the lower end of each of the vertical members 10 an inwardly extending lateral arm 14 is rigidly fixed and similar arms 15 are mounted upon the upper ends of said members for longitudinal sliding movement. These latter arms carry the threaded sleeves 16 to receive the upper ends of the threaded adjusting rods 17. The lower ends of these rods are mounted in suitable bearings on the arms 14 and are provided with the beveled gears 18 with which similar gears 19 fixed upon the shafts 20 engage. The shafts 20 are provided with suitable hand wheels 21. 70 Upon the upper and lower arms 14 the crowding wheels 22 are rotatably mounted, the shafts 23 of said wheels projecting beyond the opposite faces of the wheels and being mounted at their extremities in the bearings 24 fixed upon the arms 14 and 15. By providing a support for each end of the shafts 23, liability of said shafts springing or bending during the operation of the machine is obviated.

80 Upon the bed of the machine frame the spaced vertical rollers 25 are mounted between which the material to be sawed passes. Directing plates 26 are also arranged in pairs to cooperate with said rollers and maintain the material in position whereby the saws are relieved of undue strain. The saws, indicated at 27 pass around the band wheels 7 in the usual manner and extend between the opposed upper and lower crowding rollers 22 in parallel relation to each other. It will be obvious that by simply adjusting the opposed upper and lower pairs of rollers by means of the screws 12, the opposed portions of the saw bands may be spaced apart as desired so that the material is sawed to the required thickness. By arranging the saw bands in spaced pairs, the material without passing beyond the first pair of opposed bands may be again sawed by the rear pair of bands which have been adjusted to space the parallel

portions thereof differently from the other pair of saw blades. Thus a double sawing action is simultaneously carried on whereby the completion of the work is greatly
5 facilitated.

From the foregoing description taken in connection with the accompanying drawing it is believed that the construction and manner of operation of my resawing machine will be fully understood.
10

While the crowding wheels 22 are preferably provided with smooth peripheries, it will be understood that they may be circumferentially grooved if desired to receive
15 the fine particles of wood or saw-dust whereby heating is prevented and the bands will at all times maintain a close engagement upon the peripheries of the wheels or rollers.

20 The machine as a whole is of comparatively simple construction, durable and efficient in its operation and may be manufactured at comparatively small cost.

While I have shown and described the
25 preferred construction and arrangement of the various parts, it will be obvious that the invention is susceptible of considerable modification without departing from the essential feature or sacrificing any of the advantages thereof.
30

Having thus described the invention what is claimed is:—

1. The combination with a frame structure, spaced pairs of upper and lower band
35 saw guide wheels mounted therein, of lat-

erally movable vertical supports mounted in said frame, lower stationary crowding wheels mounted upon said supports, upper crowding wheels vertically movable upon the supports, means mounted upon said supports for adjusting the upper crowding
40 wheels with relation to the lower crowding wheels and varying the cutting length of the band saws, and additional means for adjusting each pair of supports laterally
45 with relation to each other to space the opposed portions of the band saw.

2. The combination with a frame structure, spaced pairs of upper and lower band saw guide wheels mounted therein, of horizontally disposed inwardly extending arms rigidly secured to the frame structure, vertical supports, sleeves carried by said supports telescopically engaged upon said arms, adjusting screws threaded in the supports
55 and connected to the arms to adjust the supports of each pair laterally with relation to each other, stationary lower crowding wheels mounted upon each of the supports, vertically movable upper crowding wheels
60 mounted upon said supports, and means carried by the supports for adjusting said upper crowding wheels to vary the cutting length of the band saws.

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

SAMUEL E. RANGER.

Witnesses:

A. H. DAVIS,
T. W. HILL.