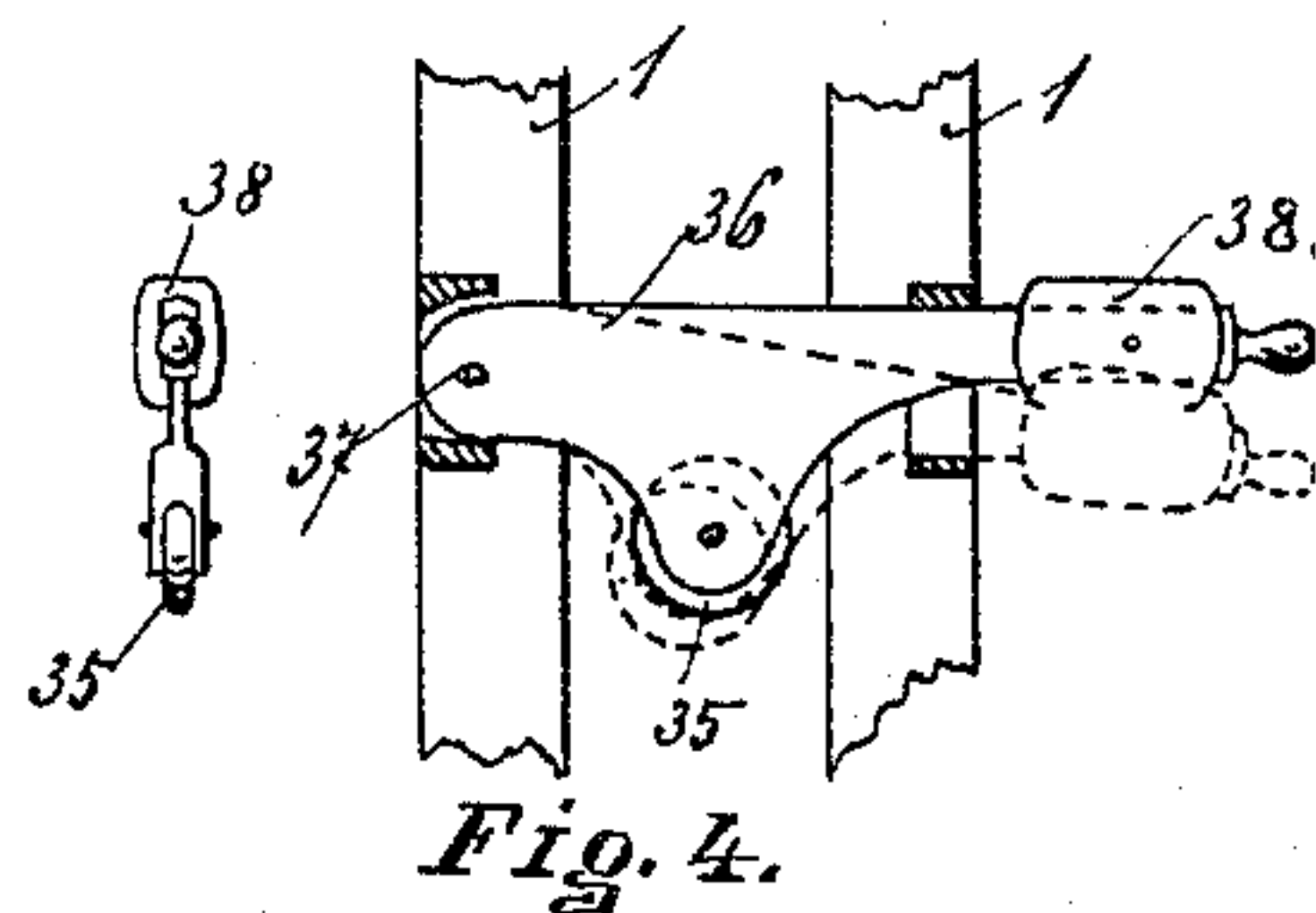


DE WITT C. MARKHAM.
BAND SAWING MACHINE.

Patented Mar. 24, 1891.



WITNESSES.
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UNITED STATES PATENT OFFICE.

DE WITT C. MARKHAM, OF COLLINSVILLE, NEW YORK.

BAND SAWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 448,659, dated March 24, 1891.

Application filed May 20, 1889. Serial No. 311,503. (No model.)

To all whom it may concern:

Be it known that I, DE WITT C. MARKHAM, of Collinsville, in the county of Lewis and State of New York, have invented certain new and useful Improvements in Band Sawing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

My invention relates to an improvement in band-saws, and in the arrangement and combination of them and with them.

In the drawings which accompany and form a part of this specification, Figure 1 shows a front view of the device. Fig. 2 shows a side edge view. Fig. 3 shows a section on line A B of Fig. 1. Fig. 4 shows a side and end view of a presser-roller.

Similar letters and figures of reference refer to like parts in the several figures of the drawings.

Reference being had to the drawings, 1 indicates a frame mounted upon a suitable supporting-floor *a*.

In suitable bearings in the lower portion of frame 1 are placed shafts 2, 3, 4, and 5, which have mounted upon their inner ends wheels 7, 8, 9, and 10, and upon their outer ends band-pulleys 11, 12, 13, and 14, which are connected by driving-bands 15, 16, 17, and 18 with pulleys upon the main driving-shaft 19. The upper part of frame 1 carries four adjustable bearings 20, 21, 22, and 23, in which run shafts which carry wheels 24, 25, 26, and 27. Bearings 20, 21, &c., are adjustable by screws *b*. Band-saws 28, 29, 30, and 31 are mounted and run upon the following pairs of wheels, respectively, 7 and 24, 8 and 25, 9 and 26, and 10 and 27. These several wheels upon which the saws run are provided with a flange, as *c*, upon the rear edge of each wheel, to keep the saws upon the wheels when forced against from the front. It is common to use a roller behind the saw for this purpose, and I also

sometimes use the roller either with or without the flange.

Upon the frame 1 is mounted a table 32, which is provided with a guide or gage 33 and rollers 34, to which rollers power may be applied, if found desirable.

Above the table, between the saws and in suitable position to engage upon the material being operated upon, I provide presser-rollers 35, three of which are shown. Rollers 35 are mounted and pivoted in levers 36, which are pivoted in the frame at 37 (see Fig. 4) and provided with weight 38. Springs may be provided in lieu of weights 38. The free ends of levers 36 are movable within certain limits in guides 39 in the frame. When power is applied to the driving-shaft 19, the saws are moved in the same direction through table 32, and the material to be cut is fed along the table from the right toward the left of Fig. 2, between the rollers 35 and the rollers 34 of the table, the rollers 35 holding it firmly upon the rollers in the table, and when power is applied thereto, assisting in feeding the saws.

It will be observed that the frame consists, essentially, (without reference to cross-bars) of four posts connected at the top and bottom, which posts are in two pairs, a front and rear pair. Each pair carries two pairs of band-wheels, on which the saws run. The upper sets of wheels on which the saws run are substantially in the same horizontal plane likewise of the lower sets. The wheels are also of the same diameter, and are at equal distances from the table, and the saws all travel at the same speed, thus doing smooth and true work.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, in a gang band sawing-machine, of a frame 1, a table, and four pairs of saw-bearing wheels 7 and 24, 8 and 25, 9 and 26, and 10 and 27, all of the same diameter and mounted on the frame, two pairs of which are in the same vertical plane and two pairs in an adjacent parallel plane, and the centrals of all the upper and lower wheels

being in the same horizontal plane, respectively, and the four band-saws, all of substantially the same length, running on each pair of wheels, respectively, substantially as
5 set forth.

2. The combination, with a band sawing-machine, of the frame, the table, and the presser-roller adjacent to or between the saws, mounted upon a lever pivoted in the frame,

and having its free end weighted and movable between guides, substantially as described.

In witness whereof I have affixed my signature in presence of two witnesses.

DE WITT C. MARKHAM.

Witnesses:

JOSIAH PERRY,
M. E. ROBINSON.