

(No Model.)

F. H. CRAFTS.
COMBINED SCROLL AND RESAWING MACHINE.

No. 402,067.

Patented Apr. 23, 1889.

Fig.1.

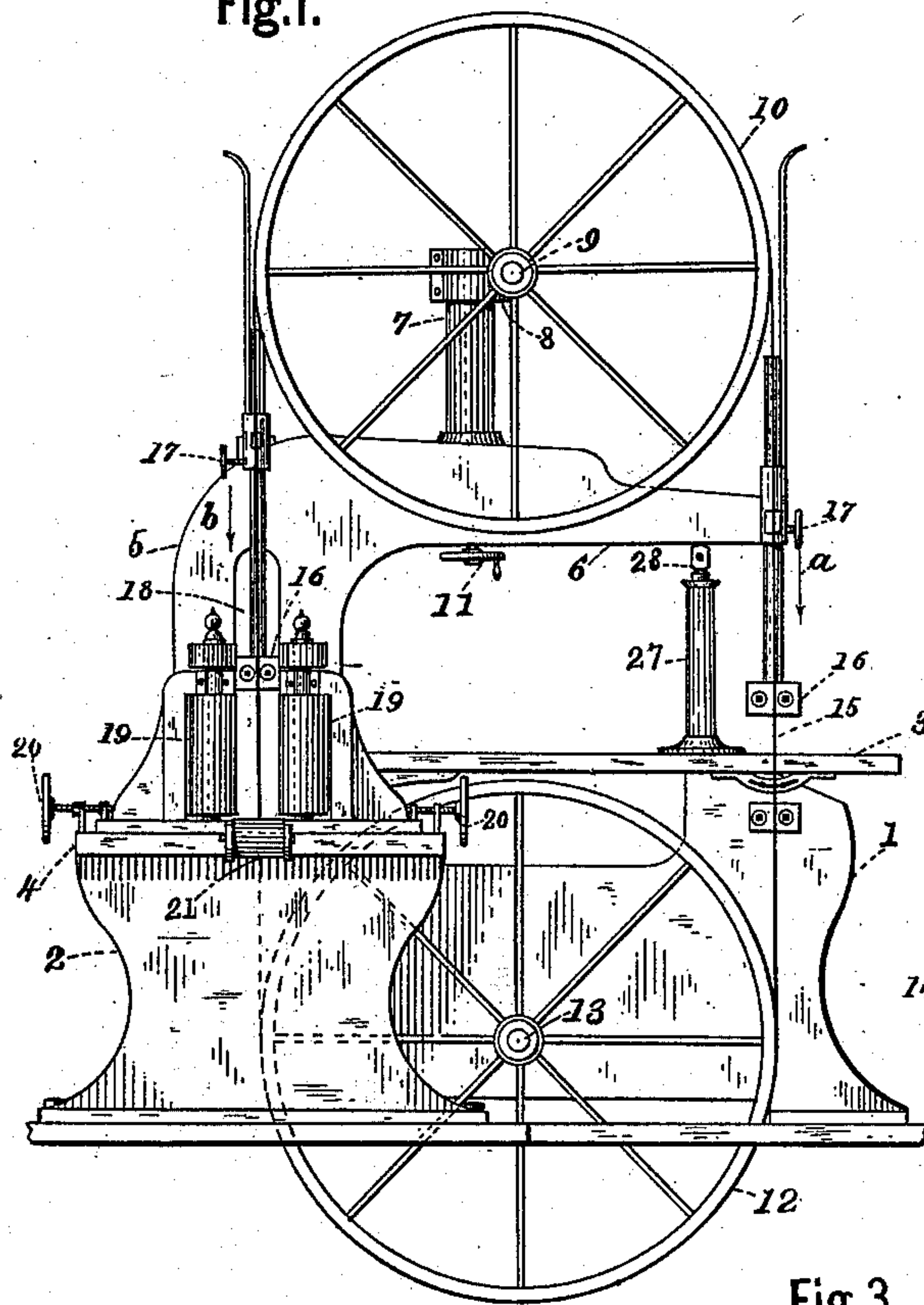


Fig.2.

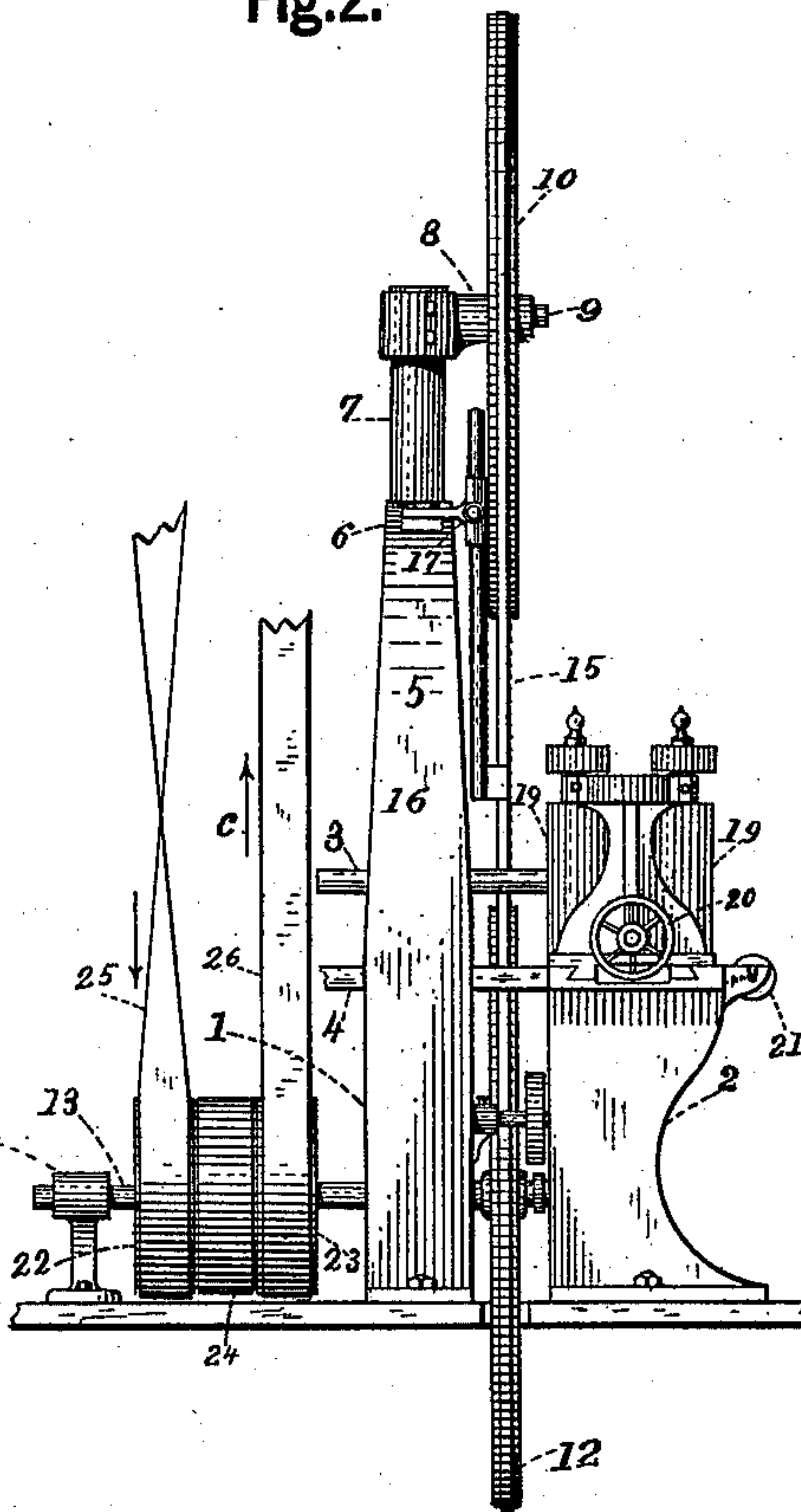
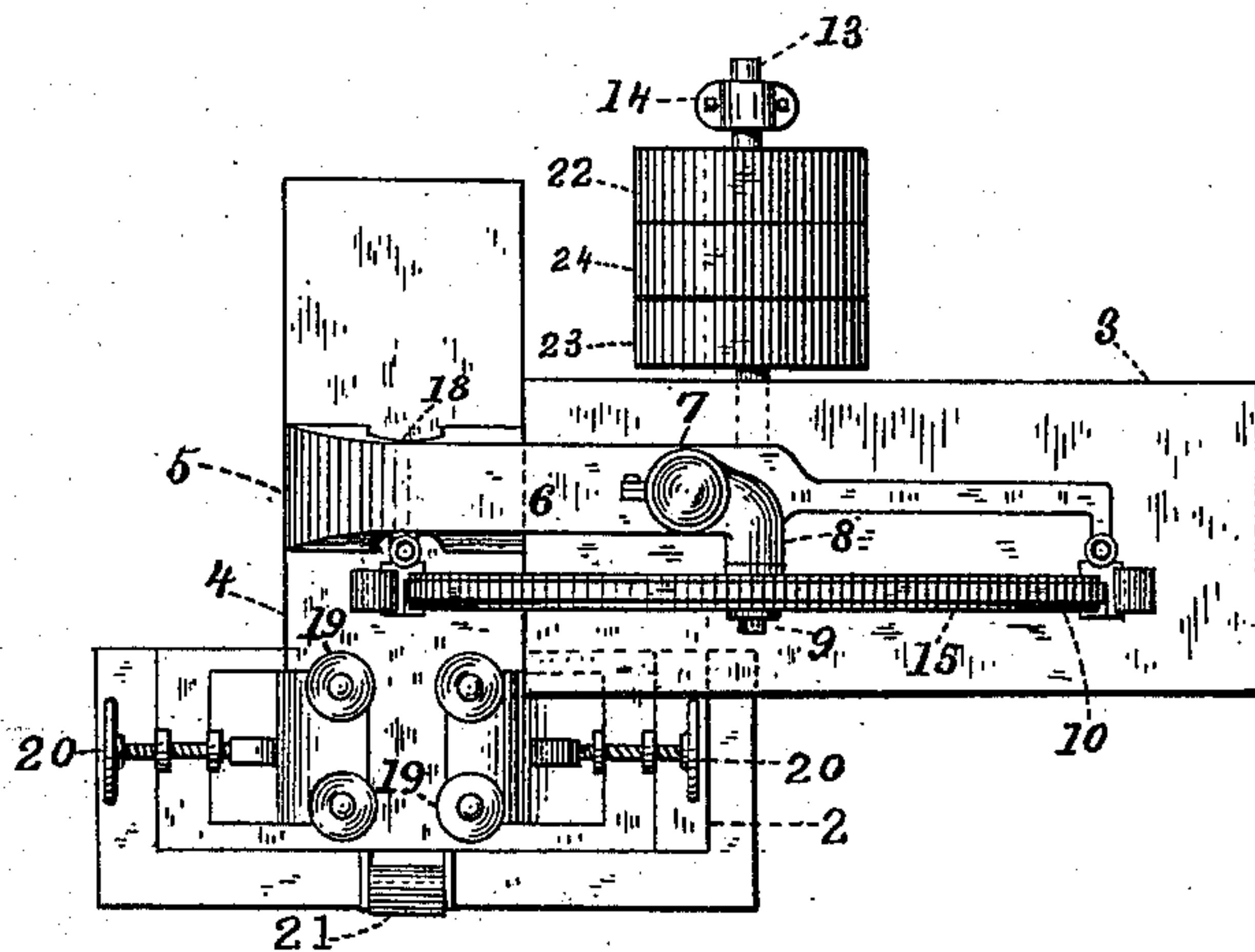


Fig.3.



Witnesses.

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UNITED STATES PATENT OFFICE.

FRANCIS H. CRAFTS, OF BUFFALO, NEW YORK.

COMBINED SCROLL AND RESAWING MACHINE.

SPECIFICATION forming part of Letters Patent No. 402,067, dated April 23, 1889.

Application filed January 3, 1888. Serial No. 259,719. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS H. CRAFTS, a citizen of the United States, residing in Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Combined Scroll and Resawing Machines, of which the following is a specification.

My invention relates to a new and improved band-saw machine, whereby it may be used either as a band scroll-sawing or as a band resawing machine.

Band resaws as heretofore constructed have had a great many objectionable features. In the construction of my machine I use a heavy column with an opening cored through it for the passage of the lumber being resawed. This construction enables me to place the feed-works in such a position that it never becomes necessary to disturb the rolls when the machine is changed from resaw to scroll-saw, or vice versa. I am also enabled to get the feed-rolls closer to the center of the driving-wheel, thereby securing a much stiffer blade than can be obtained by other machines that have the rolls placed on the table above the driving-wheel, all of which will be fully and clearly hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a front elevation of the machine. Fig. 2 is a rear end elevation. Fig. 3 represents a top plan view.

1 represents the frame of the scroll-sawing portion of the machine, and 2 is the supporting-frame for the resawing portion of the machine. Both are preferably made of cast-iron; but any other suitable material may be used.

The portion 1 is provided with a table, 3, through which the scroll-saw passes, and 4 represents the table for the resawing portion of the machine. These tables may be made of either cast-iron or wood, and are firmly secured in place in the usual way. On the frame 1 is a supporting overhanging arm consisting of the vertical column 5 and the horizontal portion or overhanging arm 6. At the top of the arm 6 is secured a hollow cylindrical column, 7, carrying a journal, 8, in which is mounted the shaft 9 and its upper band-

saw wheel, 10. This cylindrical column is made adjustable vertically by means of a hand screw-wheel, 11, made and operated in the usual way. Its object is to provide the means for tightening or releasing the saw.

The lower band-saw wheel, 12, mounted on the main shaft 13, is supported in a bearing in the base of the frame 1, near the forward end of the shaft, and the rear end is mounted and supported in bearings 14. (Shown in Figs. 2 and 3.)

The band-saw 15 and its adjustable holding device 16, made adjustable vertically by the screw hand-wheels 17, are all old and of well-known construction and require no further mention here.

A vertical opening, 18, is preferably put through the vertical column 5, through which the wood to be resawed passes; but this portion 5 may be so placed as to be either to one side of the saw or the other, in which case the opening 18 may be dispensed with, and the wood to be resawed would pass either by the inside or outside of the same.

On the table 4 are the feeding-rolls 19, made adjustable by the hand screw-wheels 20, and on the front of the table is the usual friction-roller, 21, upon which the plank to be resawed rests as it moves into the machine. The feed-rollers receive their rotary movement from the usual and well-known mechanism for that purpose. A further description is therefore not required here.

In using the machine as a scroll-saw, the saw should run in the direction of the arrow *a*, Fig. 1, and when used as a resawing-machine the action of the saw is reversed, so as to move in the direction of the arrow *b*. (Also shown in Fig. 1.) This reversing movement is produced as follows: On the driving-shaft 13 are two loose pulleys, 22 23, and between them is the driving-pulley 24, rigidly secured to the shaft 13. 25 and 26 are two belts, one on each of the loose pulleys, one, as will be seen by reference to Fig. 2, being a cross-belt. The upper ends of both belts are adapted to be connected to a pulley moving one way and receiving its rotary movement from any source of power. It will now be seen that if the belt 26, moving in the direction of the arrow *c*, Fig. 2, be moved

to the driving-pulley 24 it will cause the saw 15 to move in the direction of the arrow *a*, Fig. 1, so that the saw can be used for scroll-sawing.

For a resawing-machine, another and a larger saw will in most cases be required, and the saw should run in an opposite direction to the one used for scroll-sawing and have its teeth made to correspond; but it is used in the same place and on the same pulleys.

The belt 26 should be moved back to the loose pulley and the belt 25 moved onto the driving-pulley, which operation will cause the saw to move in the direction of the arrow *b*, Fig. 1. The machine is now in position for resawing.

In order to strengthen the overhanging arm 6 while using the resawing side of the machine, or for other purposes, I use a small supporting-bar or a jack-screw, 27, (shown in Fig. 1,) or its equivalent—a wedge, for instance. It is placed on the table and secured in place by turning the screw-head 28 just enough to tighten it in place sufficiently to prevent the overhanging arm 6 from vibrating. It is easily removed when not required

for use. This device is often required when using the machine for certain kinds of scroll-sawing, when a steady movement free from vibration is required.

When only one saw is used for both scroll and resawing, the teeth may be made in any well-known way, so as to cut when the saw runs in either direction.

I claim as my invention—

1. The combination, with a band-saw, of the driving-pulleys mounted in bearings on the machine for carrying the saw, a table at the front of the machine for the scroll-cutting side of the saw, a table provided with a feeding mechanism facing the saw at the rear of the machine for feeding material to be resawed, and a means for reversing the motion of the saw, for the purposes described.

2. In a band sawing-machine, the combination of the overhanging arm having an opening through the vertical portion of the same and opposite the saw at the rear of the machine, a feeding mechanism for carrying the material to be resawed against the saw through said opening, and a reversing-gear for reversing the motion of the saw, substantially as described.

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Witnesses:

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