

(No Model.)

2 Sheets—Sheet 1.

J. H. MORRISON.  
SAWING MACHINE.

No. 519,192.

Patented May 1, 1894.

Fig. 1

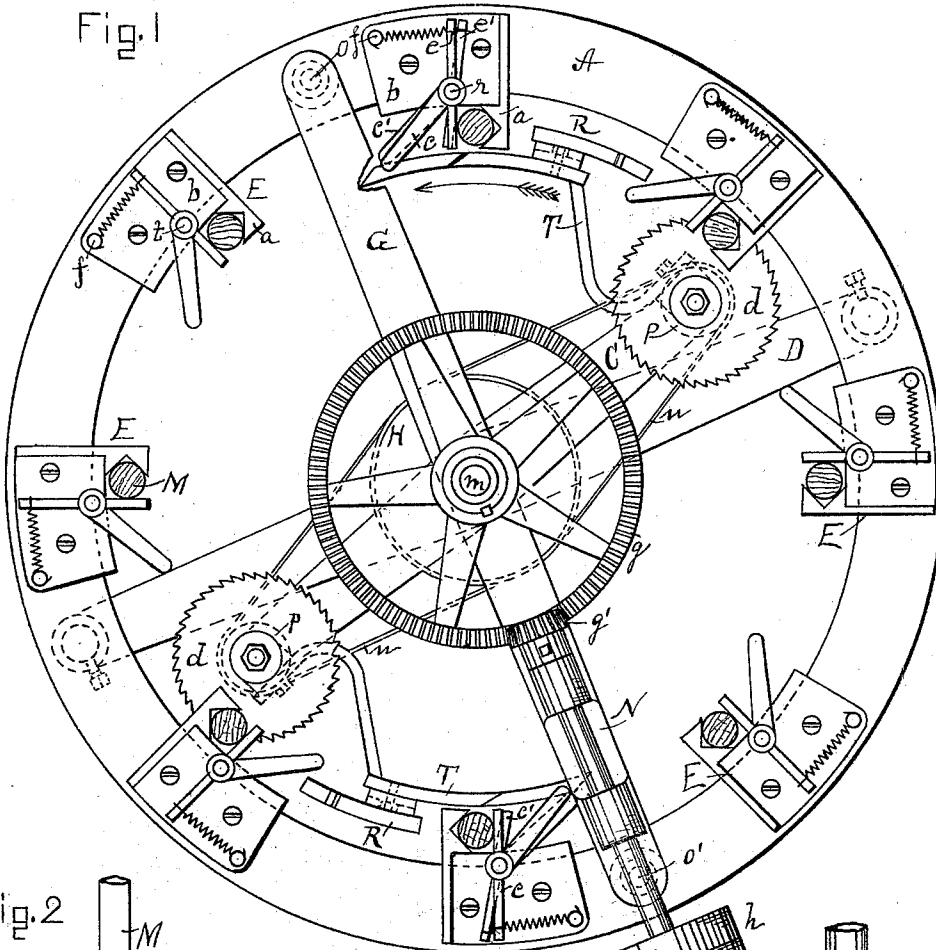


Fig. 2

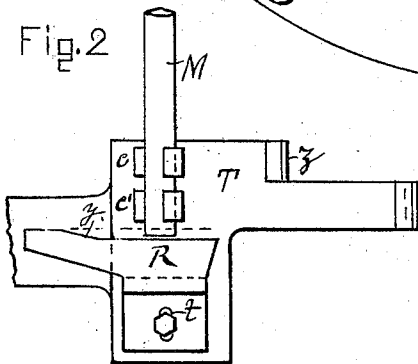
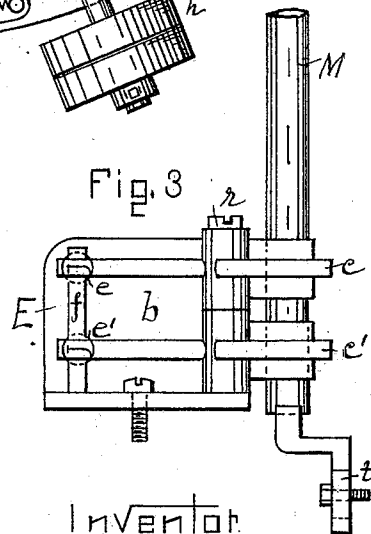


Fig. 3



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*Edw. Crawford*  
*Walter Crawford*

INVENTOR  
*John Henry Morrison*

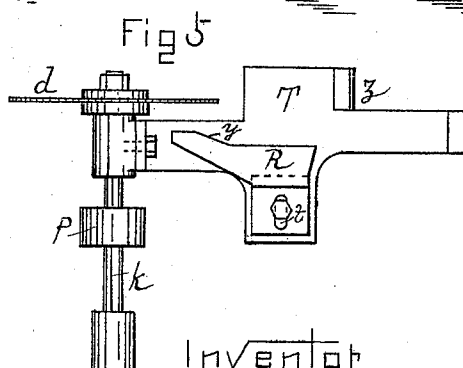
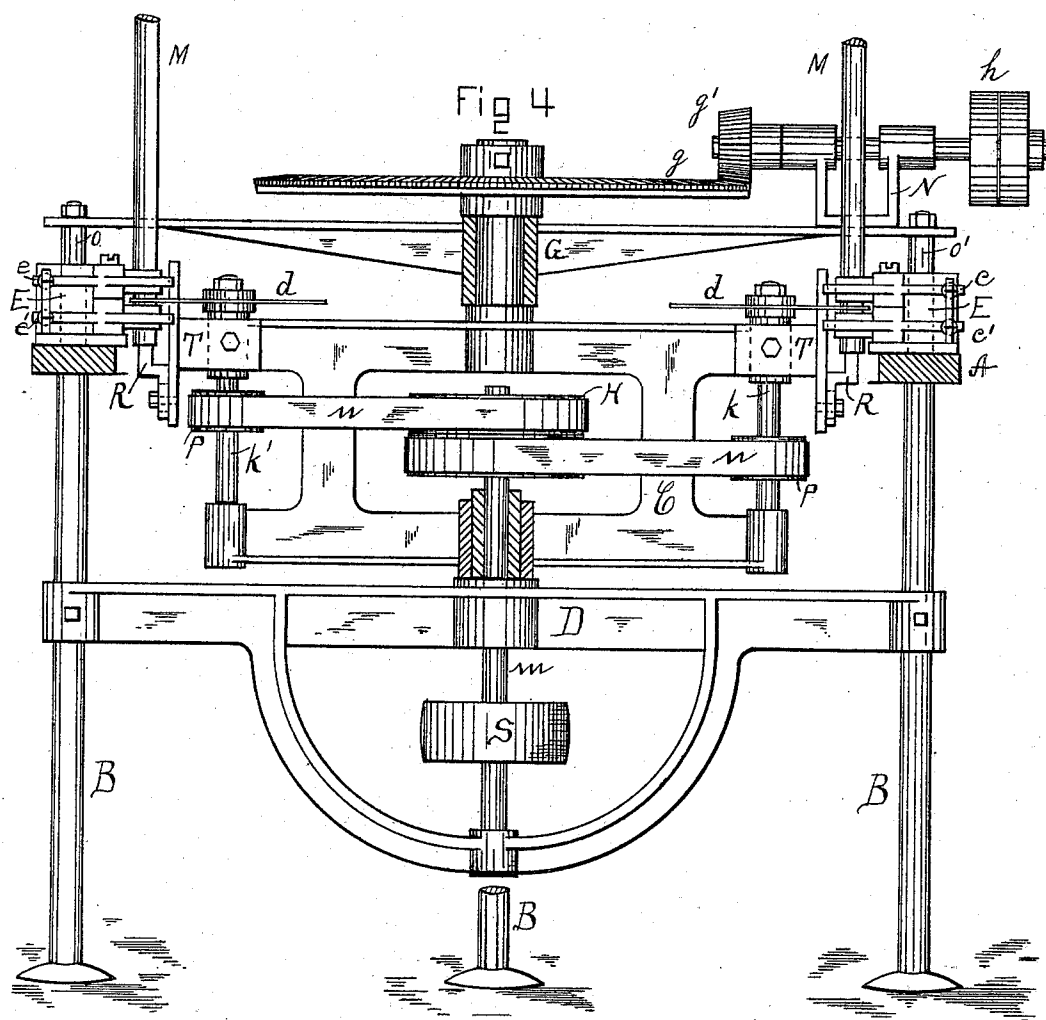
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WITNESSES

Walter Crumford.

# Inventor

John Henry Morrison

# UNITED STATES PATENT OFFICE.

JOHN HENRY MORRISON, OF PAWTUCKET, RHODE ISLAND, ASSIGNOR TO  
THE ATWOOD, CRAWFORD COMPANY, OF SAME PLACE.

## SAWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 519,192, dated May 1, 1894.

Application filed November 7, 1890. Serial No. 370,637. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN HENRY MORRISON, of Pawtucket, county of Providence, and State of Rhode Island, have invented a new and useful Improvement in Sawing-Machines, of which, taken in connection with the accompanying drawings, the following is a specification.

This invention relates to machines for cutting up rods of wood, usually of cylindrical form into blocks or blanks from which spools, rolls and analogous articles are made.

Figure 1 is a top view of said improved machine showing ends of rods in their respective holdfasts, saws mounted on vertical arbors at each end of a rotating saw carrier and operating mechanism. Fig. 2 is a detached and enlarged view of the piece I call the holdfast opener and upon which is attached an adjustable gage for regulating the length of block to be cut, said gage having a slight rise at one end, the purpose of which is to be hereinafter fully explained. Fig. 3 is an enlarged and detached side view of holdfast, showing rod in position, the gripping fingers and edge view of adjusting gage referred to in Fig. 2. Fig. 4 is a side view of my improved machine with some parts in section and others left off to avoid repetition and consequent confusion. Fig. 5 is a view of the end of rotating saw carrier showing saw mounted on vertical arbor and to the top bearing of which is secured the aforesaid holdfast opener and the adjustable gage secured thereto, all to be hereinafter fully described.

Referring to the annexed drawings, the letter —A— represents a stationary ring shaped bed or table supported on legs —B— upon the top of which are arranged in circular form and at equi-distances from the center of said ring shaped table a series of devices —E— for holding the wooden rods against the action of the saws as they sweep around against them. These devices are all exactly alike and I call them holdfasts, one of which consists of the —V— shaped jaw —a— in Fig. —1—, fastened to or forming a part of the bed-plate —b—, the two gripping fingers —c— and —c'— pivoted on stud —r— and located one above the other with a space be-

tween for the passage of the saws, the spiral springs —e— and —e'— secured to outward end of fingers and stud —f—, the gripping fingers are provided with an inwardly projecting arm for the action of the opening device to be hereinafter fully described.

Letter —C— represents a continuous rotating saw carrier located within the ring shaped bed —A— and suspended on vertical bearings positioned at the center of said ring shaped bed, this carrier being provided at each end with a vertically mounted buzz saw —d— and adapted to rotate by means of the bevel gears —g— and —g'—, pulley —h— and suitable connecting power.

Letter —D— represents a girt secured to legs —B— and serving as a journal for shaft —m— and bottom bearing for rotating saw carrier —C—. Near the top of shaft —m— is secured the pulley —H— by which the saws are driven with the aid of belts —n— and pulleys —p— on vertical arbors —k— and —k'—. Shaft —m— is rotated by means of the pulley —S— and suitable connecting power.

Letter —G— is a girt located at the top of machine and securely fastened thereto by means of the pillars —o— and —o'— said girt bearing the journal that the upper bearing of saw carrier —C— rotates in also serving as a support for the hanger —N—.

Letter —M— indicates the wooden rods to be cut.

Letter —T— represents the opening device or holdfast opener as I term it and letter —R— the adjustable gage which is attached to it, said gage being so positioned as to pass directly under the bottom of rods —M— and is provided with an elongated hole —t— so that it may be raised or lowered for the different lengths of blocks to be cut. Said holdfast opener —T— bearing the adjustable gage —R— is firmly secured to each end of saw carrier —C— and is carried by it at a convenient distance in front of the saws and as it travels along it strikes against the opposing arms of the gripping fingers which extend by the line of rotation of the periphery of the opener —T—, thus causing the opener as it comes in contact with the arm to swing it outward until it rests on the periphery of said opener a distance sufficient to release the

pressure of the gripping fingers on the rod —M— and the severed block. The said opener is cut away on its upper and outer end as shown at —z— in Figs. —2— and —5— so that its lower and extended end shall open the lower gripping finger first, thus allowing the severed block to drop into any convenient receptacle before the upper gripping finger that holds the suspended rods is acted on.

The said opener continuing its motion brings the adjustable gage —R— under the rod —M— and immediately the upper gripping arm comes in contact with the upper part of the opener, thus releasing the grip on the rod allowing it to drop by its own gravity onto adjustable gage —R—. Upon a slightly further forward movement of the opener the opposing arms of the two gripping fingers are passed by the opener, allowing said fingers to close tightly on the rod —M— by action of the springs —e— and —e'—. As the rod might slightly rebound as it drops on the gage —R— I have provided a rise or incline —y— on the rear end of said gage for the purpose of forcing the rod slightly upward while under pressure of the gripping fingers and just before the action of the saw, thus insuring perfect accuracy in the lengths of the articles to be cut.

I do not limit myself to any particular number of holdfasts. I have illustrated eight, but more or less might be used consistent with the size of the machine. The saw carrier is

also provided with two saws but it might be expedient sometimes to use only one.

When my machine is in operation the saws are swiftly revolved by the means described. The saw carrier bearing the holdfast opener —T— and adjustable gage —R— is then set in motion carrying the saws through the circular row of wooden rods a distance from the bottom controlled by the adjustable gage —R— while the holdfast opener successively operates from one to another around the circle.

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

In a sawing machine and in combination a continuous rotating saw carrier centrally pivoted around a vertical shaft and carrying a saw mounted at each end thereof, a stationary ring shaped bed plate bearing a series of holdfasts and encircling said continuous rotating saw carrier, means for successively operating said holdfasts and an adjustable gage having an incline at the top of its rear end for slightly raising the wooden rods upward before the action of the saws, all supported, arranged and provided with operating mechanism substantially as described and for the purpose specified.

JOHN HENRY MORRISON.

Witnesses:

C. FRED CRAWFORD,  
WALTER CRAWFORD.