Sheet 1 - 2 Sheets.

W. H. H. Palmer,

Shingle Machine,

No. 99,940. Patented Feb. 15, 1870.

Fig. 1.

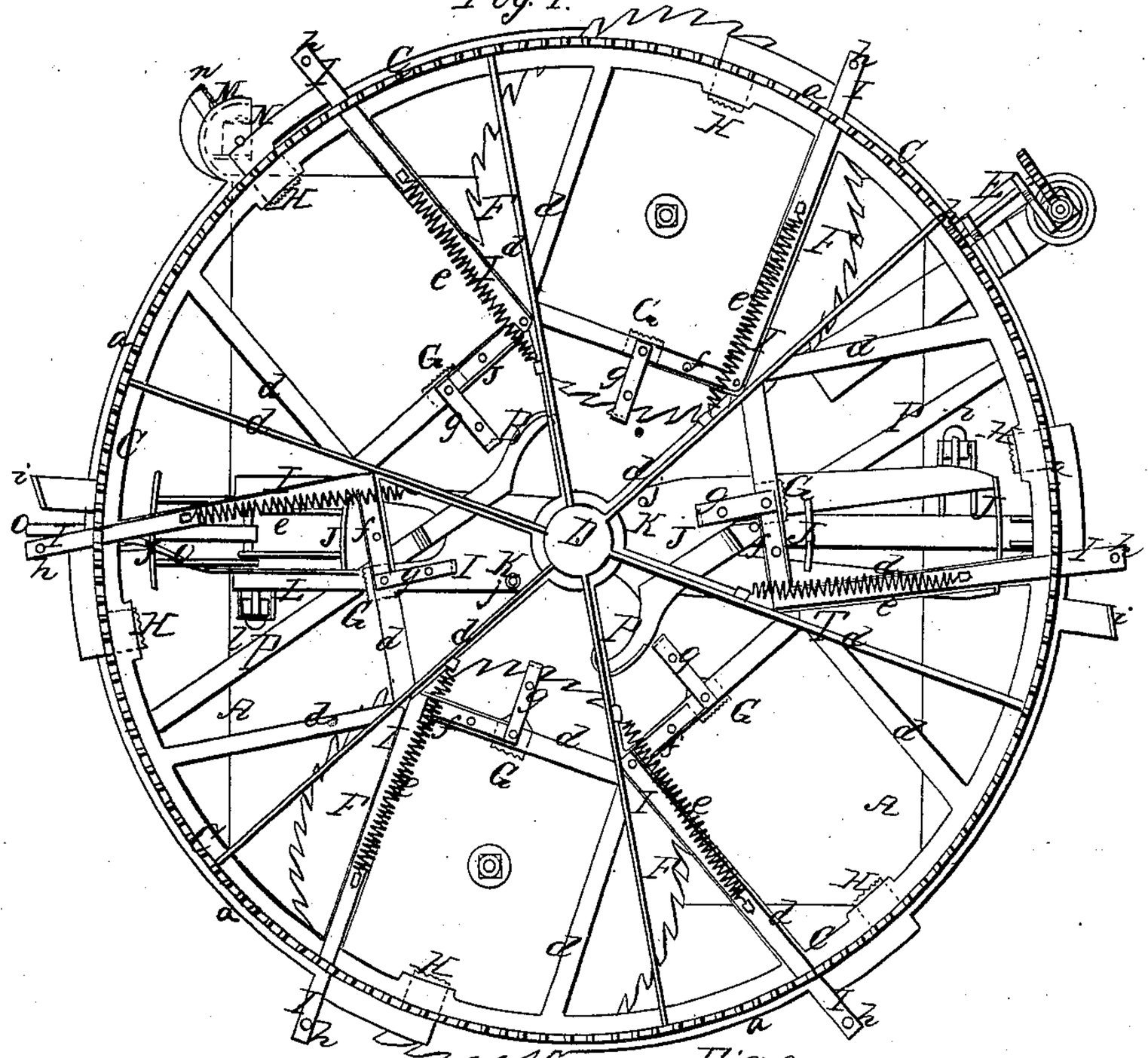
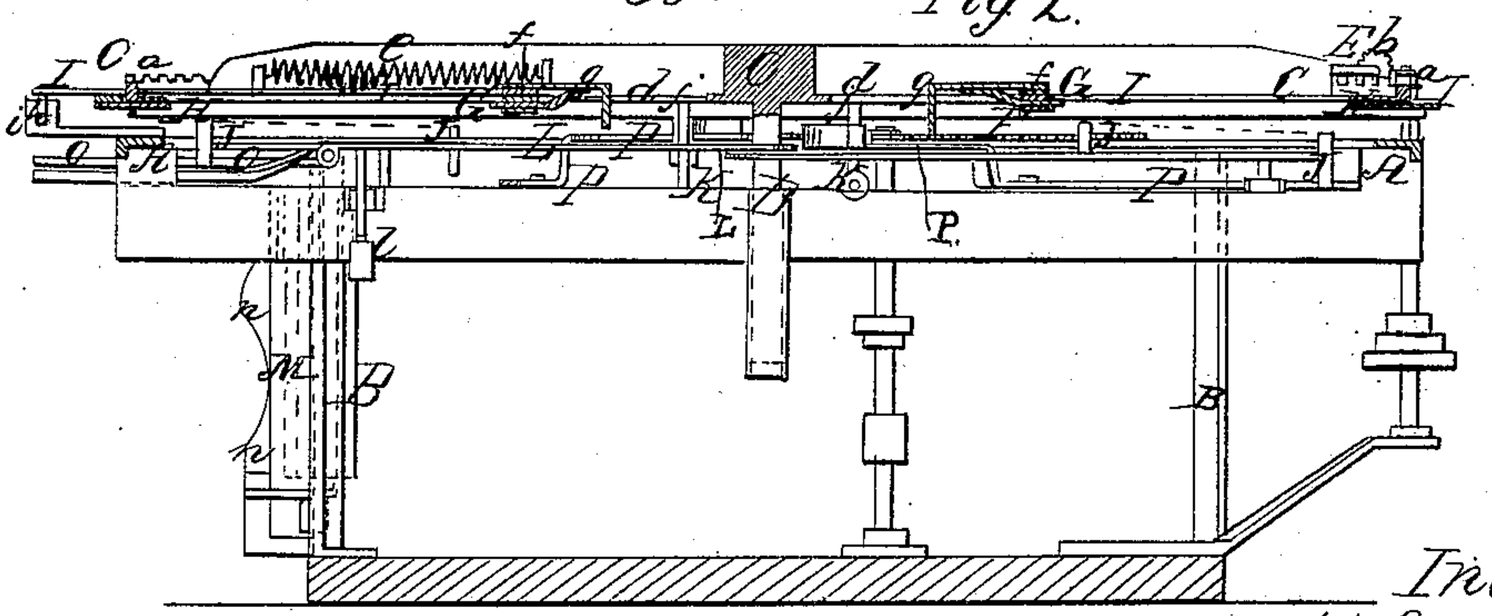


Fig. 2.



Witnesses.

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Alex. F. Roberts

Inventor

W. H. H. Palmer

Munn & Co

Attorneys

Shee2 - 2 Sheets

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Fig: 4.

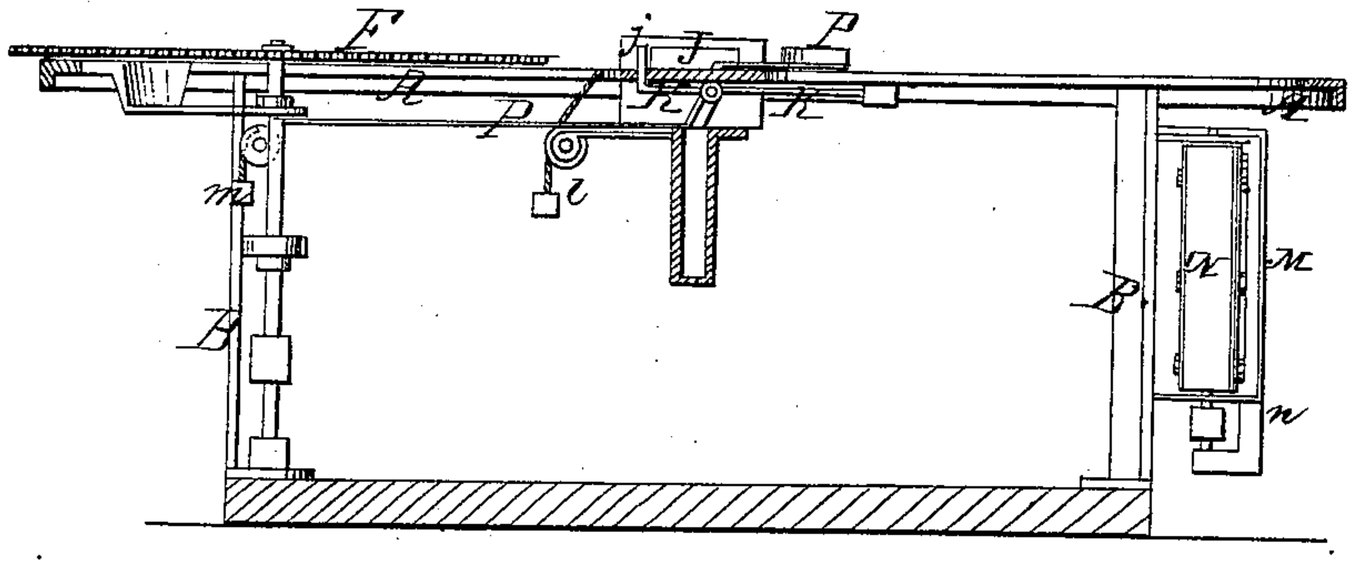
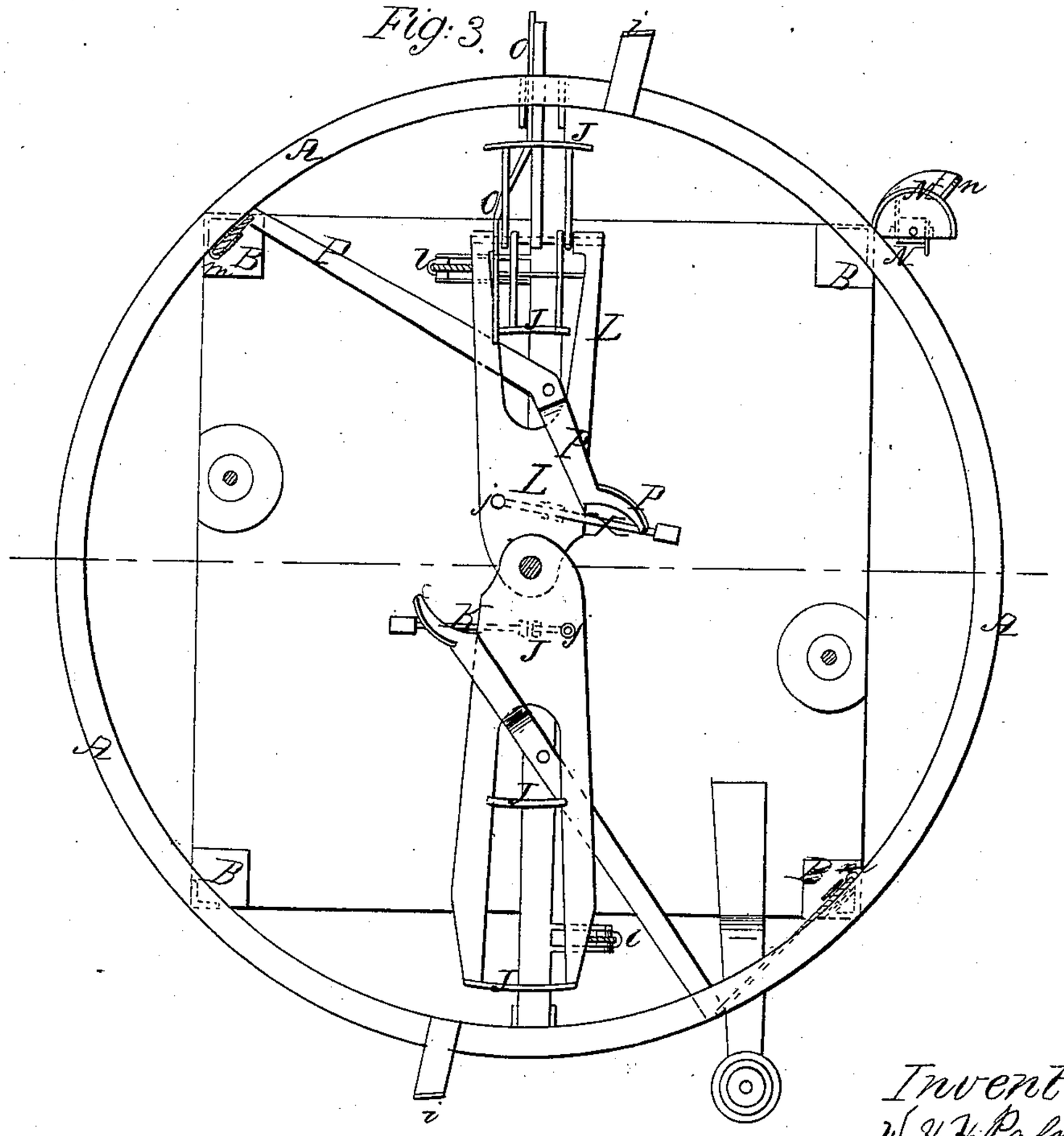


Fig: 3.



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United States Patent Office.

WILLIAM H. H. PALMER, OF ROCKVILLE, RHODE ISLAND.

Letters Patent No. 99,940, *dated February* 15, 1870.

IMPROVEMENT IN SHINGLE-MACHINE.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, WILLIAM H. H. PALMER, of Rockville, in the county of Washington, and State of Rhode Island, have invented a new and improved Shingle-Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

Figure 1 represents a plan or top view of my improved shingle-machine.

Figure 2 is a vertical central section of the same.

Figure 3 is a detail plan view of the supporting-frame.

Figure 4 is a vertical central section of the same.

Similar letters of reference indicate corresponding parts.

This invention relates to certain improvements in that class of shingle-machines in which the blocks to be cut are held in a rotary frame and exposed to the action of horizontal circular saws.

The invention consists in various details of construction, whereby the blocks are brought into the proper alternate inclined positions and caused to be firmly clamped while being sawed.

The invention also consists in the arrangement, with a shingle-machine, of the aforesaid kind of an apparatus for trimming the edges of the shingles cut by the same.

A, in the drawing, represents the frame of the machine. It is made in form of an annular plate and supported by suitable posts B.

C is the circular frame which carries the shingles. It is mounted on a vertical shaft, D, which has its bearings in the center of the frame A.

Cog-wheels *a a* are formed on the frame C, so that the same may receive rotary motion from a pinion, *b*, on a driving shaft, E.

The frame C may also be rotated by applying the motive power to the shaft D.

F F are two circular saws mounted on vertical shafts G, and held under the frame C, as shown.

The frame C is divided by means of radial arms and other bars, *d*, into six (more or less) parts, each part being a receptacle for a block to be sawed.

The blocks are held in the compartments by jaws G and H.

The outer jaws H are formed on levers I that are pulled inwardly by springs *e*.

The said levers I extend inward toward the center of the frame C, and are, by rods *f* and *g*, connected with the inner jaws G, so that thus the two jaws are connected to move simultaneously toward or away from each other.

On the outer end of each lever I is formed a projecting pin, *h*, which, before a block is brought to a saw, is caused to pass along the outer face of a fixed cam, *i*, projecting from the frame A.

The lever is thereby drawn out, and the jaws are moved apart to release the block and drop it upon the adjusting platform J.

One such adjusting platform is arranged in front of each saw.

The platform is pivoted to the shaft D so that it can turn on the same, and is inclined in such suitable direction as may be necessary to properly place the block.

As the frame C does not cease to move after a block has been deposited on the platform, it is necessary that the latter moves along with C while the block is on it.

For this purpose a lever, K, weighted at its lower end, is pivoted to the under side of each platform, and has a pin, *j*, projecting upward through the same.

The upper end of said pin is beveled.

When a bar, *d*, of the frame C strikes said pin *j*, it causes the platform to move along with it until the said pin has been forced down below the frame C, which is done in proper time owing to its inclined upper end.

The jaws release the block at the same instant at which the platform commences to move with the frame C, and the block therefore remains in its proper relative position to the frame C.

As soon as the pin *h* has passed the cam *i*, the jaws are released again and clamp the block to hold it secure.

The block is thus dropped to have its lower face adjusted, is then reclamped, and carried to the saw.

The platform is, after it has been carried along by the frame C, carried back to its original position by a weight, *l*, ready to receive and adjust another block.

The platform, instead of having a fixed inclination, may be pivoted to a frame, L, (see fig. 3,) and connected with a lock-bar O, by which it can be set in any direction.

While the block is being cut by the saws, the jaws are firmly clamped together by a cam-lever, P, pivoted to the frame A and acted upon by a weight or spring, *m*, so as to push the rod *g* outwardly, and thereby move the jaws toward each other.

To the frame A are secured semi-cylindrical vertical cases, M, which contain rotary cutters N N, and which are slotted, as shown in fig. 3.

The cutters are revolved and serve to plain off or trim the edges of the shingles that were cut by the saws.

A projecting flange, *n*, is arranged on the case M to guide such shingles in the proper direction.

The attachment of this trimming-machine to the

shingle-cutter makes the whole apparatus more effective, as the shingles can be more rapidly completed than on the simple shingle-machines now in use.

Having thus described my invention,

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

1. The arrangement of the spiral springs *e* with relation to the radial ribs *d* of the frame C, and the lever I, provided with the jaw H and the rods *f g* and jaw G, whereby the block is held, as shown and described.

2. The platform J, pivoted to the center of the revolving frame and provided with the weighted lever K, that has the projecting pin *j* to carry the platform with the revolving frame, substantially as set forth.

3. The platform J, combined with a frame, L, and lock-bar O, substantially as and for the purpose herein shown and described.

4. The cam-lever L, acting upon the jaws G H so as to lock the blocks securely while they are being sawed, as set forth.

5. The arrangement, with relation to the rotary frame C and the saws, of the rotary trimmer N, provided with the case M, constructed and operating as specified.

WM. H. H. PALMER.

Witnesses:

GEO. W. MABEE,

ALEX. F. ROBERTS.