

(No Model.)

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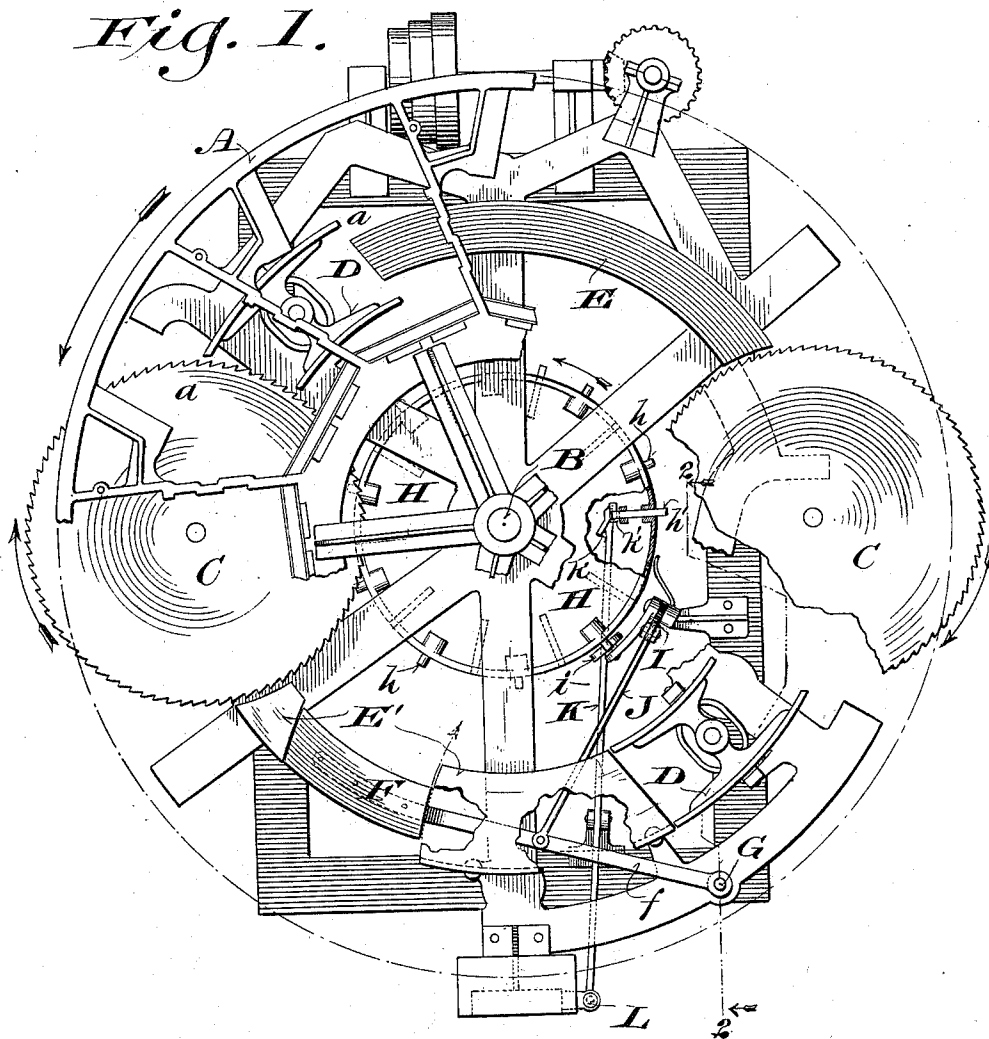
F. CHALLONER.

SPALT DROPPER FOR ROTARY SHINGLE SAWING MACHINES.

No. 559,362.

Patented May 5, 1896.

Fig. 1.



Witnesses:

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(No Model.)

3 Sheets—Sheet 2.

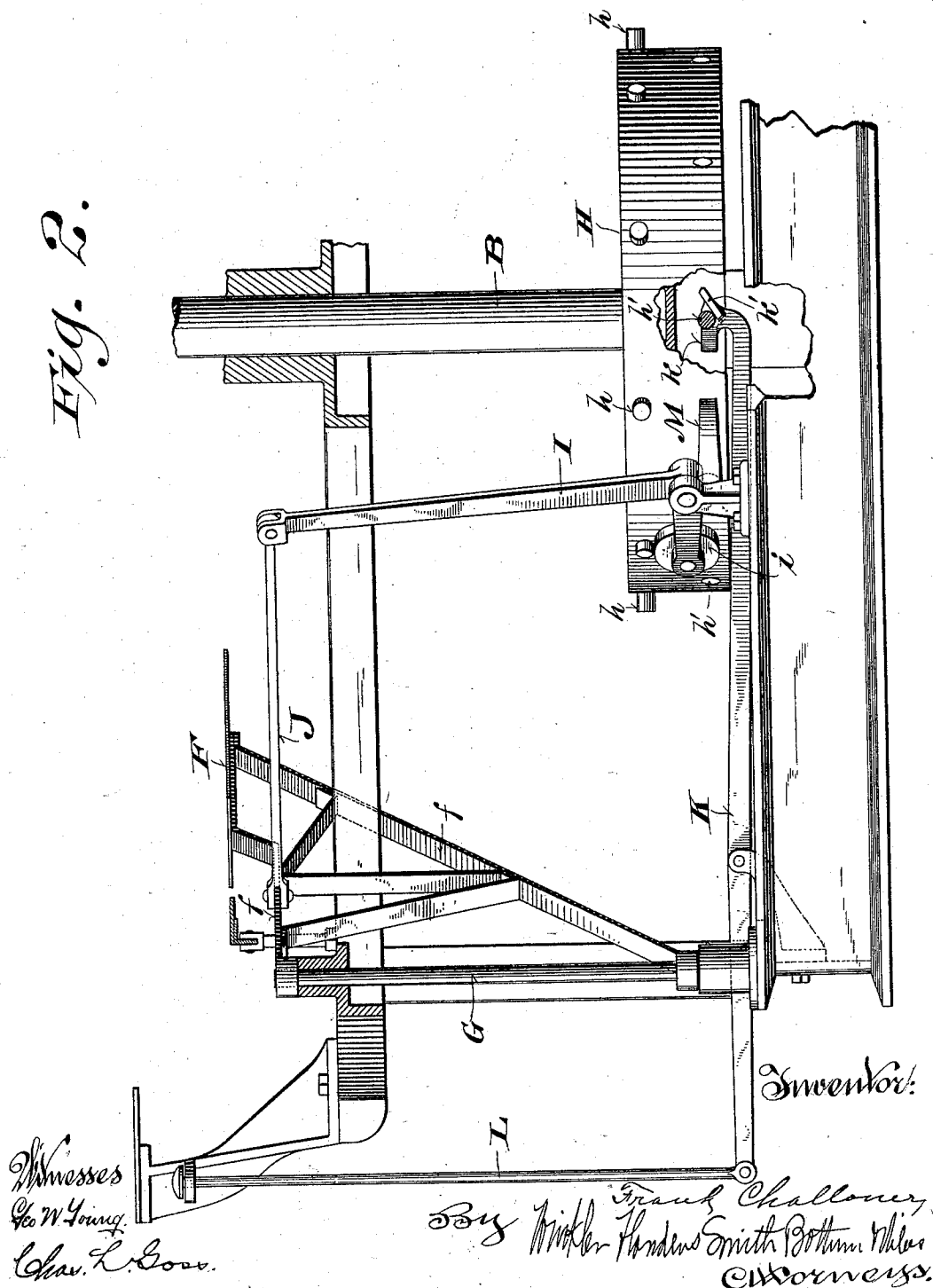
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Fig. 2.



UNITED STATES PATENT OFFICE.

FRANK CHALLONER, OF OSHKOSH, WISCONSIN.

SPALT-DROPPER FOR ROTARY SHINGLE-SAWING MACHINES.

SPECIFICATION forming part of Letters Patent No. 559,362, dated May 5, 1896.

Application filed December 26, 1893. Serial No. 494,648. (No model.)

To all whom it may concern:

Be it known that I, FRANK CHALLONER, of Oshkosh, in the county of Winnebago and State of Wisconsin, have invented certain new and useful Improvements in Spalt-Droppers for Rotary Shingle-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 pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to that class of shingle-sawing machines in which the shingle blocks or bolts are carried in a rotary carriage over one or more horizontal saws located below the carriage. Its main object is to facilitate discharging from the machine shingle-blocks or the residuum commonly called "spalts."

It consists of certain novel features in the construction and arrangement of the component parts of the spalt-dropping mechanism, hereinafter particularly described, and pointed out in the claims.

In the accompanying drawings like letters designate the same parts in the several figures.

Figure 1 is a plan view of a rotary shingle-sawing machine embodying my improvements. Fig. 2 is a vertical section on the line 2 2, Fig. 1, showing the spalt-dropping mechanism, on an enlarged scale, in side elevation; and Fig. 3 is a front elevation of the spalt-dropper.

A designates the rotary carriage, provided in the usual manner with a number of block openings or receptacles *a a* and mounted upon the upper end of a vertical shaft B, which is supported by and provided with suitable bearings in the frame.

C C are the saws, mounted upon the upper ends of vertical arbors and located, in the usual manner in this class of machines, on diametrically opposite sides of the carriage-shaft B and a short distance below the carriage.

D D are tilt-tables located on the approaching side of the block-receptacles to each saw and normally set so as to cause the saws to

cut the butts and points of shingles alternately from opposite ends of each block. They are constructed and arranged in the usual manner to be reversed as to their inclination at the will of the operator, for the purpose of taking two or more butts in succession from the same end of a shingle-block, and thus making the cuts approximately parallel with the grain of the blocks.

The foregoing parts are common to rotary shingle-sawing machines of this class, and I make no claim to invention therein.

E E' represent curved block-supporting ways located directly below the block-receptacles of the carriage between the saws and tilt-tables on opposite sides of the machine, with their upper surfaces in approximately the same plane with the saws. The shingle-blocks after clearing the saws are dropped thereon and carried upon the tilt-tables in advance. The way E', on the front side of the machine, has an opening which is normally closed by a laterally-movable plate or section F, for the purpose of discharging a block or spalt from the carriage when desired. This plate or section is supported by arms or braces *f f*, extending laterally from a vertical shaft G, located near the path of the shingle-blocks in the machine, so that when it is turned the plate or section F will be moved laterally out of or into the opening in the way E'. The plate or section F is made of sufficient width to afford the required support for the shingle-blocks when it is in its normal position, and to prevent them from being displaced in or discharged from the carriage, except when desired.

H is a trip-wheel fixed upon the carriage-shaft B below the carriage and provided with two sets of trips *h h* and *h' h'*, the former fixed and projecting at intervals from the periphery of said wheel and the latter movable radially in the rim of said wheel and being located below and alternating with the fixed trips *h h*. The movable trips *h' h'* are withdrawn and stand normally within the periphery of the trip-wheel.

I is a bell-crank lever fulcrumed at its angle to the frame of the machine adjacent to the periphery of the trip-wheel and carrying at the extremity of its shorter horizontal arm a friction-wheel *i*, which projects normally

into the path of the movable trips *h'* when they are projected from the trip-wheel. The longer vertical arm of said lever is connected by a link *J* with the upper supporting arm or
5 brace *f* of the movable section or plate *F*.

K is a lever fulcrumed to the base of the machine and formed or provided at its inner end with horizontally and vertically disposed inclines *k* and *k'*, the first of which is arranged
10 when elevated to engage the inner end of the next movable trip-pin *h'* and move the same outward through the periphery of the trip-wheel. The other vertical incline *k'* is constructed and arranged when elevated to be
15 engaged by the next succeeding trip-pin *h'* in normal position and to be thereby depressed, thus restoring the lever *K* to its normal position. To the outer or front end of the lever
20 *K* is pivoted a vertical rod or bar *L*, extending upwardly therefrom to a point within easy reach of the operator.

M is a fixed incline located adjacent to the periphery of the trip-wheel in position to thrust the movable trip-pins *h'* inward into
25 normal position after they have operated upon the roller *i*.

In Fig. 2 the lever *K* is shown in abnormal position for thrusting a trip-pin *h'* outwardly.

My improved spalt-dropper operates as follows: When it is desired to drop a block or spalt from the carriage as the receptacle in which it is contained passes the operator's stand, he depresses the rod *L*, elevating the
30 inner end of lever *K* and carrying the incline *k* into the path of the movable trips *h'* *h'*, which project normally inside of the rim of the trip-wheel *H*. The next trip-pin which is properly located to discharge the desired block or spalt is thereby thrust outwardly beyond
40 the periphery of the trip-wheel, and the next succeeding trip-pin *h'*, engaging the incline *k'*, depresses the inner end of lever *K* and restores it to normal position. When the block or spalt to be dropped arrives over the movable section or plate *F*, the projected
45 pin *h'* engages the under side of roller *i*, forces it upward, swings the upper end of lever *I* inward, and carries the movable section or plate *F* out of the opening in the curved way
50 *E'*, through which the block or spalt can now freely fall. The block or spalt being thus dropped, the plate *F* is returned to normal position, closing the opening in the fixed way by the next fixed trip *h* engaging the upper
55 side of the roller *i*. The pin *h'* which has just acted on said roller, engaging the incline *M*, is restored thereby to normal position.

In the manner above explained, blocks or spalts may be dropped from any one or more
60 receptacles of the carriage at intervals or in succession.

Various changes in minor details may be made within the intended scope of my invention.

65 I claim—

1. In a shingle-sawing machine the combination with a rotary carriage provided with a

series of block-receptacles, of a block-supporting way located below said receptacles and having an opening therein, a laterally-mov- 70
able section of sufficient width to support a shingle-block thereon, adapted to normally close said opening, a vertical shaft located at a distance from the opening in said block-sup- 75
porting way adjacent to the path of the block-receptacles of the carriage and provided with laterally-projecting arms or braces which carry said movable section, mechanism for turning said movable section horizontally on said vertical supporting-shaft from and into 80
normal position in the opening in said way, and a series of trips corresponding in number and position with the block-receptacles in said carriage and movable synchronously therewith and also movable by the operator into 85
abnormal position to operate said mechanism, substantially as and for the purposes set forth.

2. In a shingle-sawing machine, the combination with a rotary carriage provided with a series of block-receptacles, of a block-support- 90
ing way located below said receptacles and provided with a laterally-movable section normally closing an opening in said way, an operating connection with said section and a trip-wheel mounted on the carriage-shaft be- 95
low the carriage and provided with a series of trips corresponding in number and position with said block-receptacles and movable by the operator into abnormal position to operate said movable section through the aforesaid 100
connection, substantially as and for the purposes set forth.

3. In a shingle-sawing machine, the combination with a rotary carriage provided with a series of block-receptacles, of a movable block- 105
support located below the carriage, operating connections with said support, and trip mechanism comprising a trip-wheel mounted on the carriage-shaft and provided with two sets of trips arranged to operate through said con- 110
nections, the trips of one set being movable into abnormal position and alternating with those of the other set, substantially as and for the purposes set forth.

4. In a shingle-sawing machine, the combination with a rotary carriage provided with a series of block-receptacles, of a movable block- 115
support located below the carriage, a bell-crank lever having one arm connected with said block-support, and a trip-wheel mounted 120
on the carriage-shaft and provided with two sets of trips arranged to engage in operative position alternately with the other arm of said lever, the trips of one set being movable into and out of operative position, substantially 125
as and for the purposes set forth.

5. In a shingle-sawing machine, the combination with a rotary carriage provided with a series of block-receptacles, of a movable block- 130
support located below the carriage, a trip-wheel mounted on the carriage-shaft and provided with two sets of trips, one above the other, the trips of one set alternating with those of the other and being movable into and

out of operative position, an incline movable by the operator into position to project the movable trips into operative position, a fixed incline for restoring the movable trips to normal position, and a lever having one arm connected with said block-support and the other projecting into the path of either set of trips when they are in operative position, substantially as and for the purposes set forth.

- 10 6. In a shingle-sawing machine, the combination with a rotary carriage provided with a series of block-receptacles, of a movable block-support below said carriage, a trip-wheel mounted on the carriage-shaft and provided
15 with two sets of trips, one movable into and out of operative position, a lever provided with inclines, one of which is constructed and

arranged to shift the movable trips into operative position and the other to restore said lever to normal position, a fixed incline arranged to return the movable trips to normal position, and a lever having one arm connected with said block-support and the other arm projecting normally into the path of the movable trips when the latter are projected into abnormal position, substantially as and for the purposes set forth. 20 25

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

FRANK CHALLONER.

Witnesses:

THOS. F. HAYDEN,
CHAS. L. GOSS.