

(No Model.)

2 Sheets—Sheet 1.

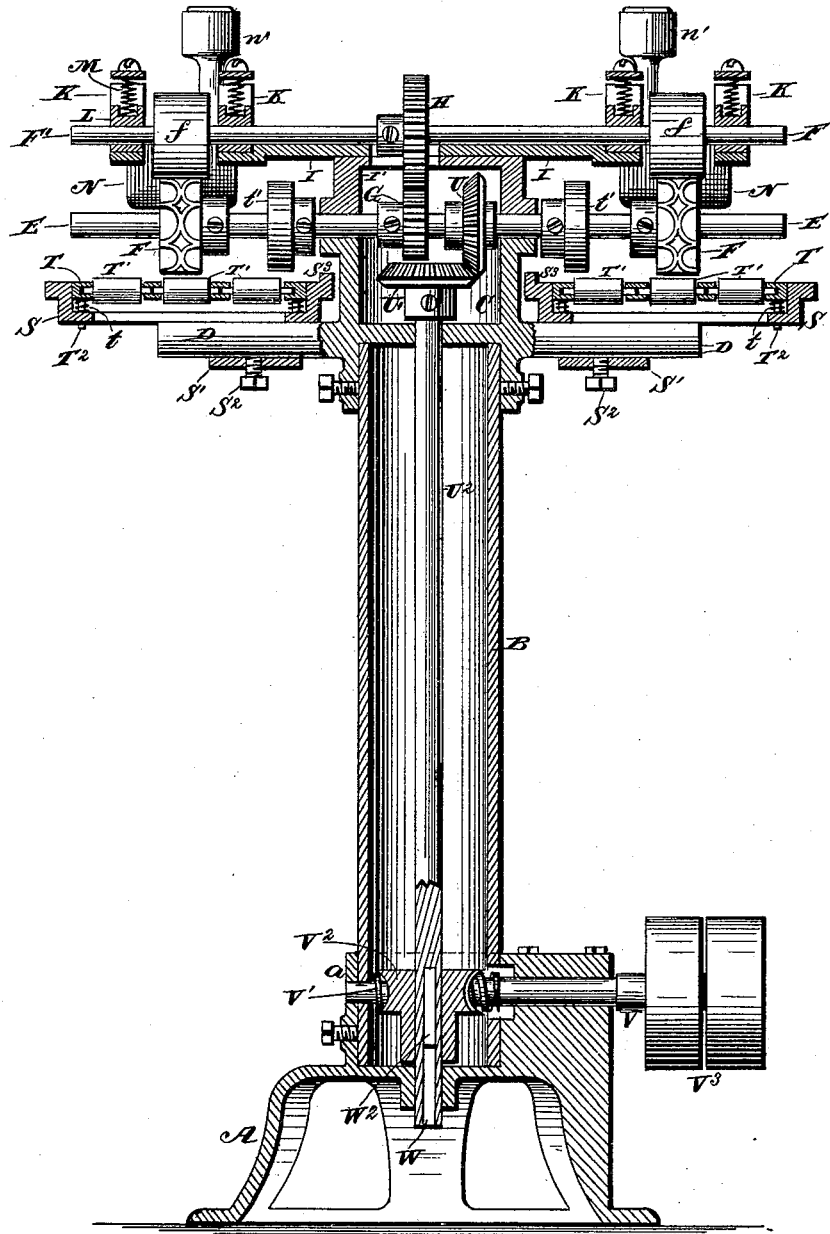
H. E. MARCHAND.

MACHINE FOR MARKING SHINGLES.

No. 266,173.

Patented Oct. 17, 1882.

*Fig. 1.*



Witnesses.

*Robert Everett,*

*J. A. Rutherford.*

Inventor.

*Henry E. Marchand.*

By *James L. Norris,*  
*Atty.*

H. E. MARCHAND.

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Fig. 2.

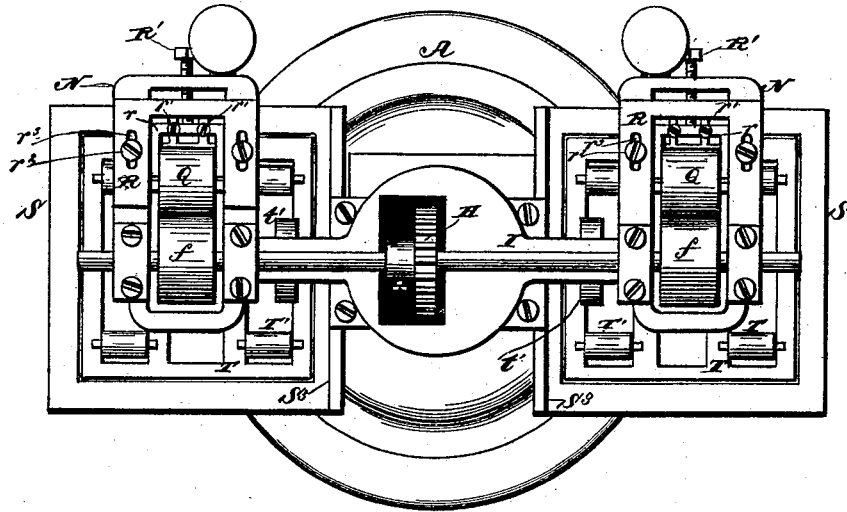


Fig. 3.

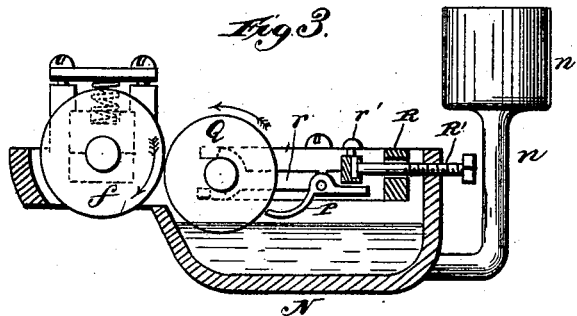


Fig. 4.

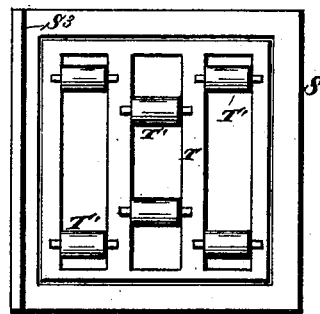


Fig. 5.

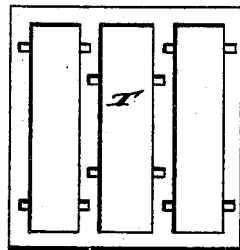
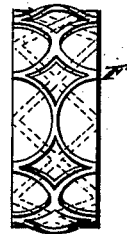


Fig. 6.



Witnesses.

Robert Emmett,

J. A. Rutherford.

Inventor.

Henry E. Marchand.

By James L. Norris,  
Atty.

# UNITED STATES PATENT OFFICE.

HENRY E. MARCHAND, OF ALLEGHENY, PENNSYLVANIA.

## MACHINE FOR MARKING SHINGLES.

SPECIFICATION forming part of Letters Patent No. 266,173, dated October 17, 1882.

Application filed June 9, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY E. MARCHAND, a citizen of the United States, residing at Allegheny, in the county of Allegheny and State of Pennsylvania, have invented new and useful Improvements in Machines for Marking Shingles, of which the following is a specification.

My invention relates to that class of machines that are employed for the purpose of forming one or more marks or lines upon the faces or edges of shingles, in order to determine the position of the overlying course of shingles in nailing the same upon a roof.

The improvement relates, first, to the devices for actuating the shafts carrying the inking and the marking rollers; secondly, to the adjustable table over which the shingles are passed in order to receive the marks from the marking-rollers; thirdly, to the feed and marking rollers and the table and yielding frame carrying the same.

The invention will be first fully described in detail and the improvements specifically set forth in the claims.

In the drawings; Figure 1 is a vertical central section of the improved machine. Fig. 2 is a top or plan view. Fig. 3 is a section taken through the ink-reservoir and one of the journal-bearings of the shaft carrying the inking-roller. Fig. 4 is a plan view of one of the adjustable tables and the frame that carries the rollers over which the shingles pass. Fig. 5 represents the roller-frame detached, and Fig. 6 is a face view of one of the marking-rollers on an enlarged scale.

The base A of this machine is formed with a socket, *a*, to receive the lower end of the tubular standard B, which is secured in said socket by means of a suitable number of set-screws. The tubular cap C, which is adjustably secured upon the upper end of the standard by means of set-screws, is formed with the horizontal arms D D for supporting the tables, and it is also formed with bearings for the shafts that carry the inking and the marking rollers.

E indicates the shaft which carries the marking-rollers F. The marking-edges upon the faces of these rollers are made either semicircular or diamond-shaped, so as to make either

semicircular or diamond-shaped marks upon the shingles, the semicircular marking-edges being indicated by full lines, and the diamond-shaped marking-edges being indicated by dotted lines, as shown in Fig. 6. These mark the shingles to guide the workman in laying down not only shingles having straight edges, but also shingles having their edges rounded or pointed. The shaft carrying said marking-rollers transmits motion to an upper shaft, F', carrying the inking-rollers *f*, through the medium of the gear G upon the lower shaft intermeshing with a gear, H, upon the upper shaft. This upper shaft is arranged within a long semi-cylindrical bearing, I, that is secured upon a bow-shaped piece or yoke, I', of the cap upon the top end of the standard, the said semi-cylindrical bearing being provided at its ends with boxes K K, in which are arranged the bearing-blocks L L, held down upon the shaft by means of suitable springs, M. This construction provides a yielding bearing for the marking-rollers, so that they will bear with a yielding pressure upon the inking-rollers below.

N indicates the ink-reservoirs, one of which is arranged in rear of each inking-roller, and supported by suitable connection with the bearing I, before referred to. The reservoir N is provided with a supply-pipe, *n*, for admitting the requisite supply of ink into the reservoir, a cup or small reservoir, *n'*, being arranged at the upper end of said pipe to receive the ink which flows down through the supply-pipe into the lower reservoir. Within the lower reservoir is arranged an adjustable cut-off, P, for regulating the supply of ink taken up from the reservoir by the roller Q, and delivered by said distributing-roller to the inking-roller *f*. This cut-off consists of a curved plate extending the length of the distributing-roller and hinged in a yoke, *r*, set-screws *r'* being arranged to pass through said yoke, in order that they can be brought to bear upon rear projections of the hinged cut-off, and thereby cause its front edge to be raised and brought into contact with the distributing-roller. In this way the amount of ink taken up by the distributing-roller, which rotates in the direction of the arrow shown in Fig. 3, can be regulated. The yoke is arranged within a carriage or adjustable frame, R, and

is adjustable toward or away from the distributing-roller by means of a screw,  $R'$ , passing through the rear portion of said frame or carriage, as illustrated by dotted lines in Fig. 3.

5 The front ends of the yoke are provided with semicircular bearings, which receive the shaft of the distributing-roller when the yoke is adjusted toward the said roller. The distributing-roller is mounted in the frame or carriage

10  $R$ , which latter is supported by the ink-reservoir, and rendered adjustable therein by means of set-screws  $r^2$  passing through slots  $r^3$  in the said carriage. By this the pressure of the distributing-rollers upon the inking-roller can be

15 regulated.

$S$  indicates the horizontal tables that are adjustably secured below the marking-roller upon the horizontal arms  $D$  of the cap upon the upper end of the standard. This adjustment is

20 effected by means of a sleeve,  $S'$ , upon the under side of the table fitting upon the horizontal arm, a set-screw,  $S^2$ , being provided for holding the same in adjustment. The table is provided at one end with a gage,  $S^3$ , for the ends

25 of the shingles, said gage running transversely to the axis of the shaft carrying the marking-roller, and being arranged at the required distance from the marking-roller by shifting the table along upon the arm which supports it.

30 Within each table is arranged a frame,  $T$ , having bearings for the journals of rollers  $T'$ , over which the shingles are passed during the process of marking the same. In order to cause the frame carrying these rollers to yield, so as

35 to insure the contact of the rollers with the marking-roller, no matter of what thickness the shingles may be, and also to secure a positive mark upon the shingles, I provide the frame  $T$  with studs or pins  $T^2$ , which pass down through

40 perforations in the table, and around these pins I arrange springs  $t$ , so that elastic cushions will thereby be formed between the frame and the table.

The shaft carrying the marking-rollers also

45 carries the feed-rollers  $t'$ , which act upon the shingles placed upon the table and feed the same over the rollers of the yielding frame, so that they will be marked or printed by the marking-rollers. This shaft, which imparts motion to

50 the upper shaft through the medium of the gearing  $G H$ , is provided with a bevel-gear,  $U$ , rigidly secured thereon, and receives its motion through the medium of said bevel-gear and an intermeshing bevel-gear,  $U'$ , upon the

55 upper end of the vertical rotary shaft  $U^2$ . The vertical rotary shaft receives its motion from a horizontal shaft,  $V$ , provided with a worm,  $V'$ , that engages a worm-wheel,  $V^2$ , upon the vertical shaft. The horizontal shaft passes

60 through the base of the machine, and is provided with the usual fast and loose pulleys,  $V^3$ , for applying belt-power to the same. The vertical shaft is formed with a longitudinal chan-

nel,  $W$ , at its lower end, the worm-wheel being arranged upon such channel portion and held thereon by means of a key,  $W^2$ , whereby the vertical shaft and the tubular cap  $C$  can be raised or depressed, should occasion require, by first loosening the said wedge, and also the set-screws that hold the cap upon the tubular

65 standard, and then raising or lowering the cap.

From the above the operation of the machine will be readily understood. The upper horizontal shafts are driven by means of the

75 gearing and the vertical and lower horizontal shafts, and the requisite supply of ink is admitted into the lower reservoir by adjusting the cut-off. The ink is fed to the inking-roller by the roller within the reservoir and from the

80 inking-roller, and then to the shingles placed upon the rollers of the yielding frame and fed under the marking-roller by the feed-roller and marked.

In conclusion, it may be observed that the

85 worm-gearing and bevel-gears tend to reduce the speed of the marking-rollers, and the intermeshing gears of the two shafts tend to reduce the speed of the inking-rollers, the gear upon the lower one of the two upper horizon-

90 tal shafts being the smaller of the two.

Having thus described my invention, what I claim is—

1. The combination, in a shingle-marking machine, of the shafts carrying the inking and

95 marking rollers, and having intermeshing gears, with a vertical rotary shaft arranged within a tubular standard and carrying a gear engaging a gear upon the shaft that is provided with a marking-roller, the worm-wheel upon

100 the vertical rotary shaft, and the rotary horizontal driving-shaft provided with a worm engaging the said worm-wheel, substantially as described.

2. In a shingle-marking machine, the combination, with the marking-roller, of the horizontal table provided at one end with a gage,

105  $s^3$ , for the ends of the shingles, said gage running transversely to the axis of the shaft carrying the marking-roller, and the said table being adjustably secured below the said marking roller upon an arm of the vertical standard, substantially as described.

3. The combination, in a shingle-marking machine, of the feed and marking rollers with

115 the table, and the yielding frame carrying the rollers and supported upon the table, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

120

H. E. MARCHAND.

Witnesses:

S. A. JOHNSTON,  
M. JOHNSTON.