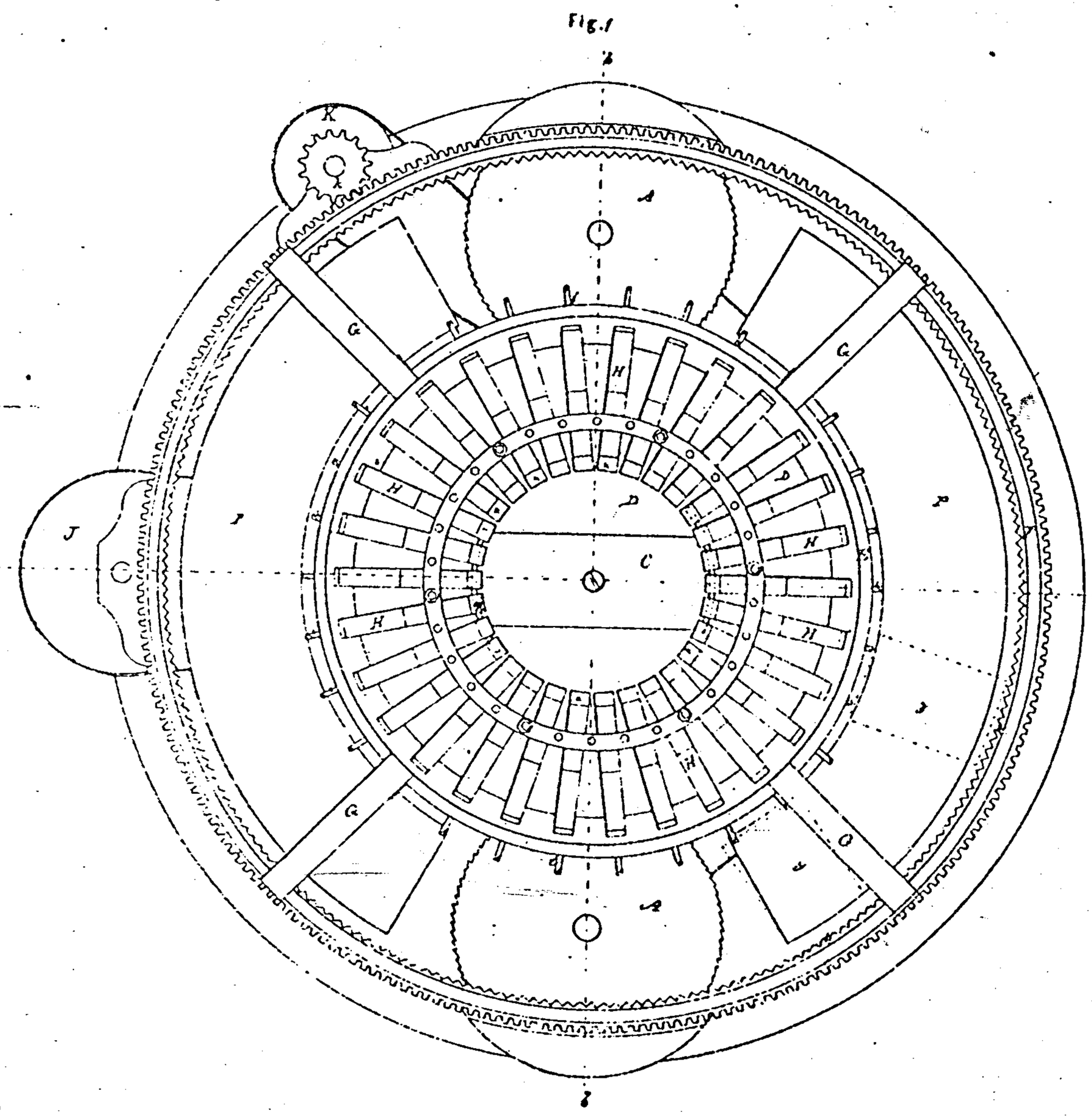
# H. Evarts.

3 Sheets-
Sheet-1.

## Shingle Machine.

No. 11858. Patented Oct 31. 1854.

Fig. 1



2 Sheets
Sheet 2.

# H. Evarts.

## Shingle Machine.

No 11858. Patented Oct 31. 1854.

Fig. 2.

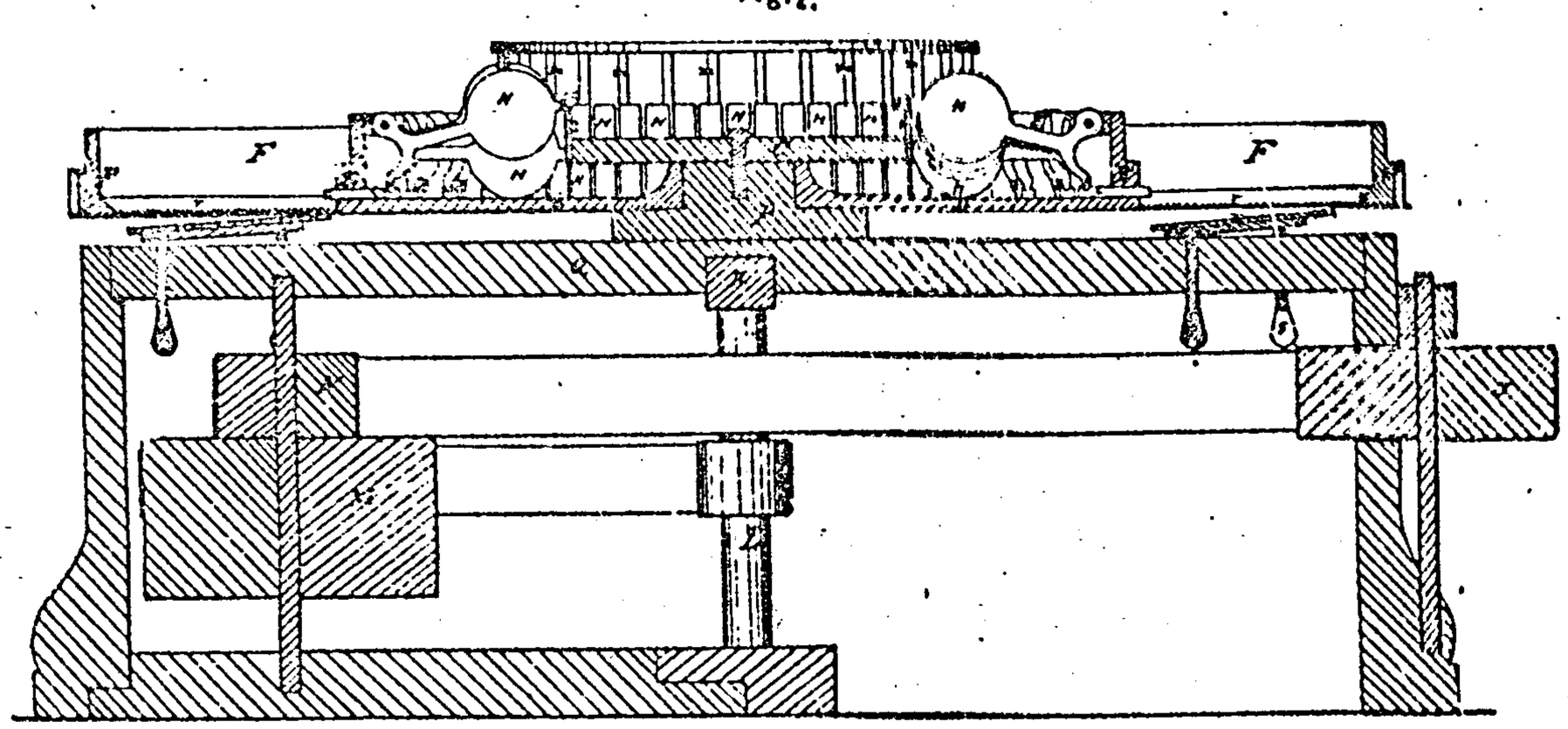
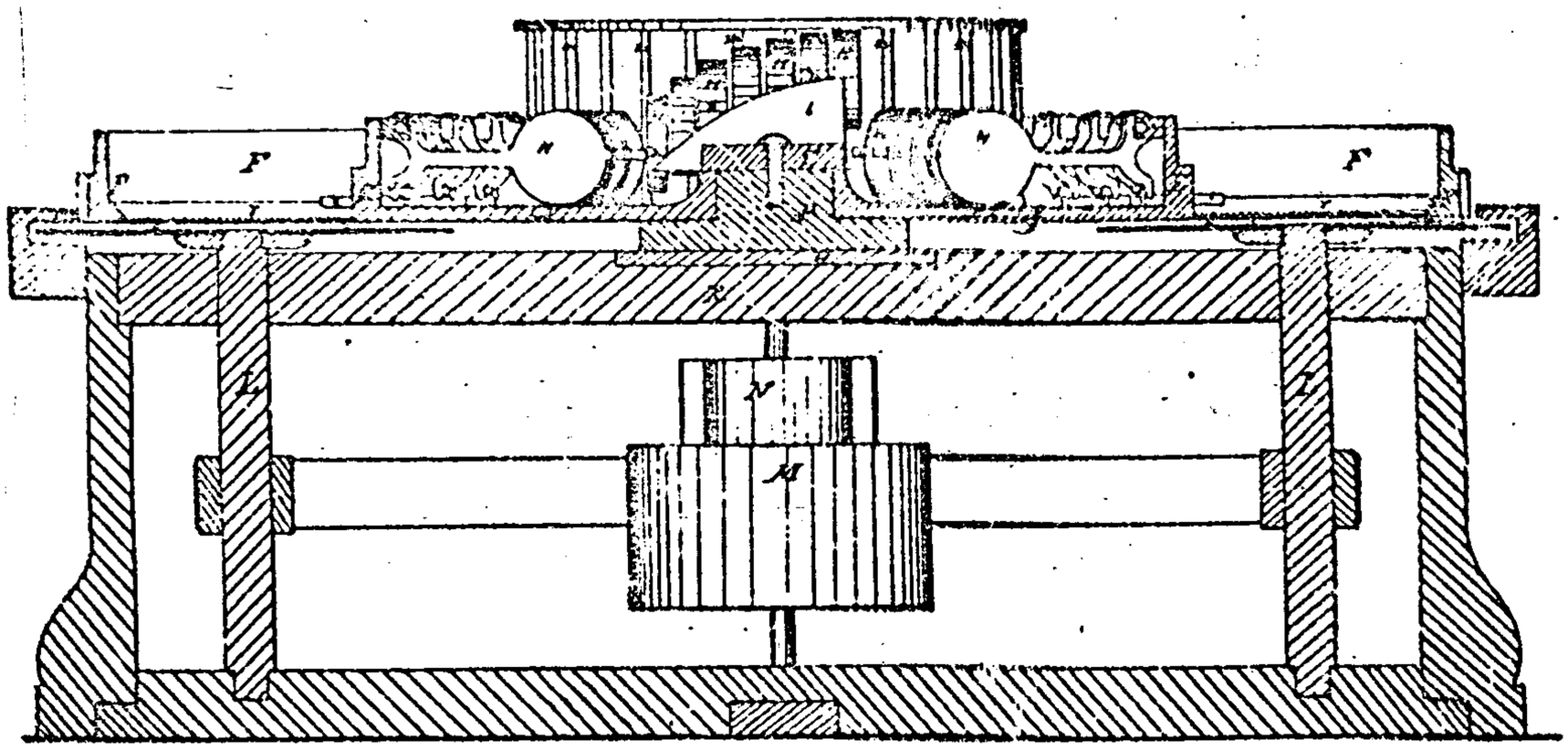



Fig 3.



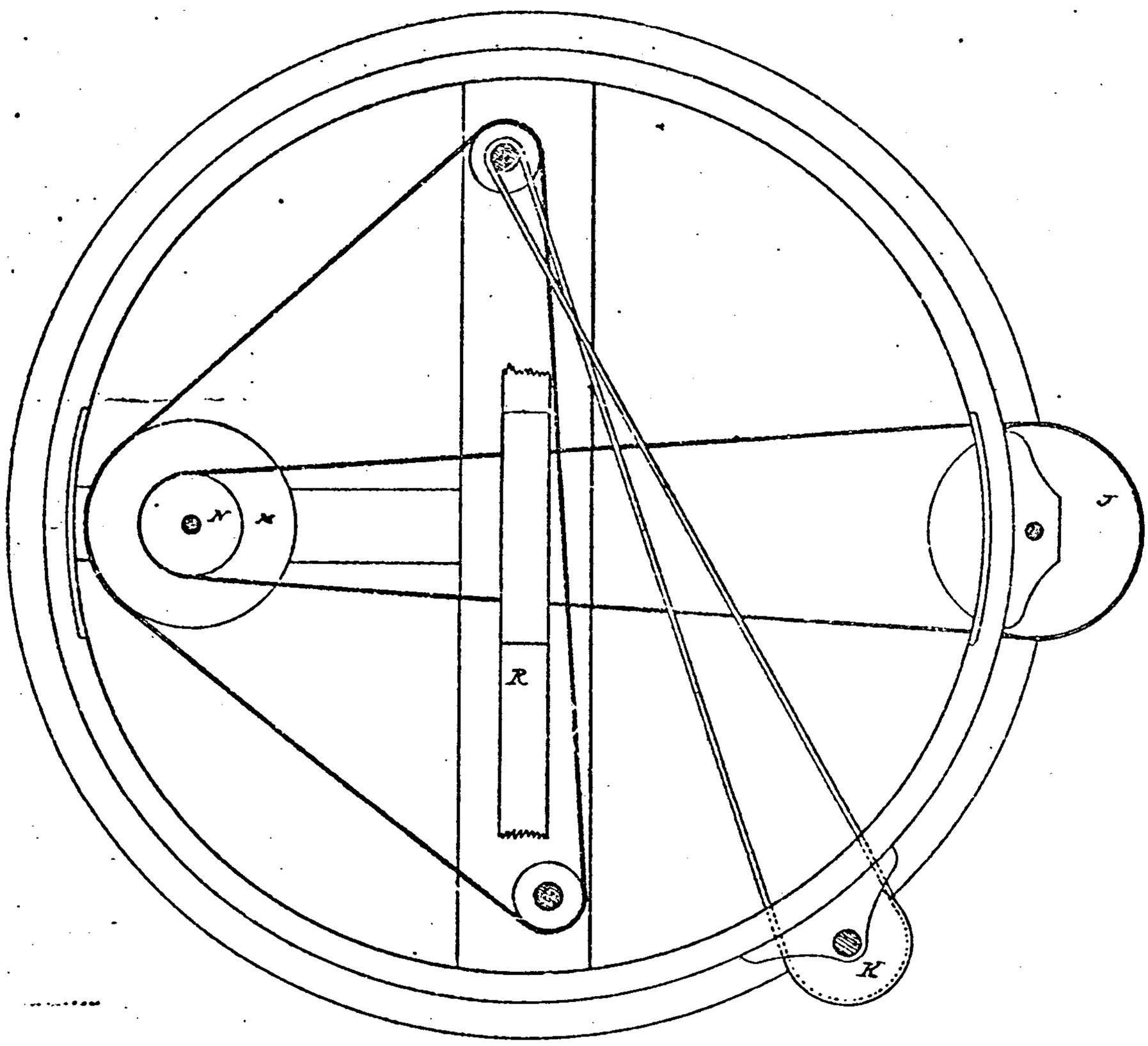
# H. Evarts.

## Shingle Machine.

3 Sheets
Sheet. 3.

No. 11,858. Patented Oct. 31. 1854.

Fig. 4.



# UNITED STATES PATENT OFFICE.

HARRY H. EVARTS, OF CHICAGO, ILLINOIS, ASSIGNOR TO HIMSELF AND A. J. BROWN.

## SHINGLE-MACHINE.

Specification forming part of Letters Patent No. 11,858, dated October 31, 1854; Application for Reissue, in two divisions, filed January 8, 1874.

*To all whom it may concern:*

Be it known that I, HARRY H. EVARTS, of Chicago, in the county of Cook and State of Illinois, have invented sundry Improvements in the Sawing of Shingles; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making a part of this specification. Figure 1 being a top view of my improved shingle-sawing machine; Fig. 2, a vertical section in the line *a a* of Fig. 1, and Fig. 3 a vertical section in the line *b b* of Fig. 1.

Similar letters indicate like parts in all the figures.

The first general feature of my invention consists in a rotating carriage arranged in connection with tables, inclined in opposite directions, and with circular saws, in such a manner that the bolts of wood, placed in said carriage, will, one after the other, be continually operated upon, cutting the thick end of a shingle first from one end of a bolt, and the thick end of the next in succession, from the opposite end of said bolt, and thus alternate, until the bolt is sawed down as thin as it can be safely operated upon.

The second feature of my invention consists in presenting the side of a bolt of wood to the saws, instead of the end thereof, for the purpose of producing thereby shingles with much smoother surfaces than can be produced by advancing the end of the bolt to the saw in the usual manner.

The rotary carriage, which receives and carries forward the blocks of wood to be operated upon, is composed of the central disk D, E, and the outer annular portion F, which are connected to each other by the series of curved plates G, G. The said carriage rests and rotates upon the bearing support P, which is secured to the transverse supporting beams Q, R, as shown in Figs. 2, and 3. Motion is imparted to the carriage by means of teeth which radiate from the outer periphery of F, and fit into the teeth of the driving pinion *k*.

The saws *o*, *o*, are placed opposite each other immediately below the open space between the central and annular portions of the carriage, and with their upper surfaces parallel with and near to the under sides of said portions of the carriage, as shown in Fig. 3. Between the saws are placed the tables *p*, *p*, which, it will be perceived, incline in opposite directions, with relation to the carriage; one inclining inward and the other outward. The blocks to be operated upon, are placed in the open space between the curb E, (which rises from the periphery of the disk D,) and the annular portion F, of the carriage; and are secured in their proper positions by means of the pointed teeth which project inward from the flange *r*, at the bottom of F, and the teeth *i*, *i*, which are forced outward through the base of the curb E, by weighted levers H, H, which are jointed to the upper edge of E, and connected to the said teeth *i*, *i*, as shown in the drawings. The tables *p*, *p*, can be given different inclinations and positions, by means of the set screws *q*, *q*, which sustain them. After a shingle has been sawed from a block, the block is automatically detached from its fastenings, placed in a proper position and refastened, to be again operated upon, in the following manner. Inclined planes *l*, *l*, are secured to the ends of the plate C, which is made fast to the upper end of the central carriage bearing P. The said inclined planes *l*, *l*, are in such positions with relation to the weighted levers H, H, that the inward projections *n*, *n*, upon the inner ends said levers, will come in contact with and pass over said planes; thereby elevating the levers and drawing inward the fastening pins *i*, *i*, to which the legs *s*, *s*, of said levers are connected. When the pins *i*, *i*, are drawn inward, they draw the blocks from the outer series of teeth in the flange *r*, at the same time that they are themselves drawn out of the blocks; which allows the blocks to fall upon the tables *p*, *p*, when they are in proper position to be again operated upon by the saws: and when the blocks have passed beyond the influence of the inclined planes *l*, *l*, (being forced forward by the blocks in their rear,) the levers, as they fall again upon the disk D, will force outward the teeth *i*, *i*, into the blocks, and at the same time force the blocks themselves outward, so that the outer series of teeth in the flange *r*, will act upon them; and thereby will firmly hold and secure said blocks, when they are carried beyond the tables and are brought in contact with the saws.

The blocks of wood are first placed upon tables *p*, *p*, and fastened in their positions, as before described; and the open spaces are

filled up as the carriage moves forward. The blocks are so placed that the fastening teeth act upon the ends of the fibers of the wood, and consequently this will cause the saws to act against the sides of said fibers; which causes a much smoother surface to be produced, than when the saws act against the ends of the fibers of the wood, in the usual manner.

Fig. 4, represents a method of landing the various movements of my machine to each other and to the driving pulley.

In Fig. 1, *z*, inclosed in red lines, represents the position of a block resting upon one of the tables *p*, just at the moment that it has been detached from its fastening teeth. *y*, inclosed in red lines in said figure represents the position of a block, firmly secured and fastened by the double series of teeth, just before it is brought in contact with one of the saws.

What I claim as my invention and desire to secure by Letters Patent, is—

1. Placing the blocks to be sawed into shingles, in a rotating carriage which is combined with inclined tables *p*, *p*, (or a single table,) and with saws *o*, *o*, (or a single saw) in such a manner that the blocks will be carried continuously forward and be automatically operated upon, to convert them into shingles, substantially as herein set forth.

2. I also claim the arrangement of the weighted levers H, H, the fastening teeth *i*, *i*, and the inclined planes *l*, *l*, with each other, and with the inclined tables *p*, *p*, and the outer series of teeth in the ledge *r*, substantially as herein set forth.

3. Presenting the sides of the fibers of the wood to the action of the saws in the sawing of shingles or equivalent articles, for the purpose of giving them smoother surfaces, than can be produced by the usual mode of sawing, substantially as herein set forth.

The above specification of my improved machine for sawing shingles, signed and witnessed this 8th day of Augt. 1854.

HARRY H. EVARTS.

Witnesses:
Z. C. Robbins,
G. W. Adams.

[First Printed 1913.]