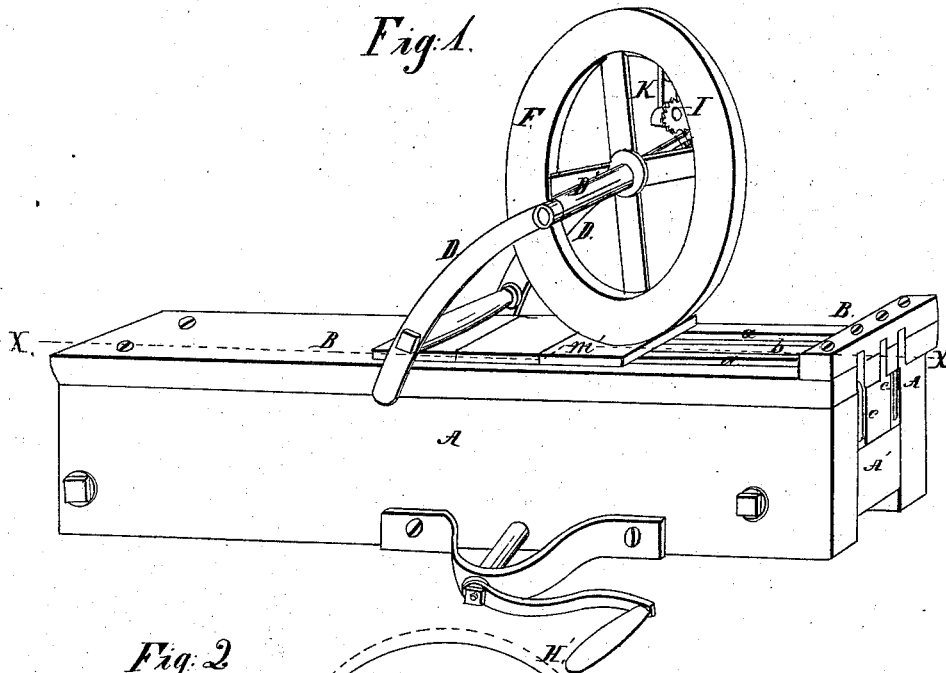
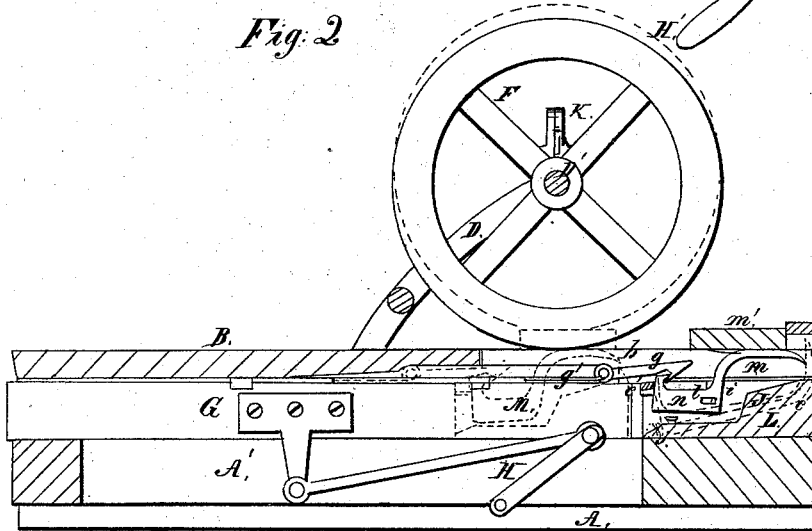


*M. Bonney,*  
*Measuring and Counting Shingles.*  
*N<sup>o</sup> 47,697.      Patented May 16, 1865.*

*Fig. 1.*



*Fig. 2.*



*Fig. 3.*

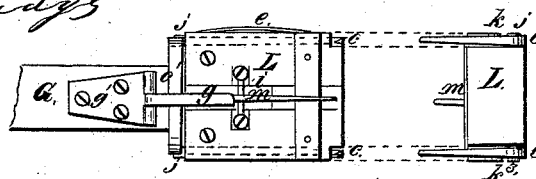
*Fig. 4.*

*Inventor:*

*Witnesses:*

*W. H. Burdick*

*J. Holmes*



*M. Bonney*

# UNITED STATES PATENT OFFICE.

M. BONNEY, OF MANTUA, OHIO.

## IMPROVEMENT IN MACHINES FOR MEASURING AND COUNTING SHINGLES.

Specification forming part of Letters Patent No. 47,697, dated May 16, 1865.

*To all whom it may concern:*

Be it known that I, M. BONNEY, of Mantua, in the county of Portage and State of Ohio, have invented a certain new and Improved Machine for Measuring and Counting Shingles; and I do hereby declare that the following is a full and complete description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of the machine. Fig. 2 is a sectional view in the direction of the lines *xx* in Fig. 1. Figs. 3 and 4 represent detached sections.

Like letters of reference refer to like parts in the different views.

My improvement relates to a machine for measuring and counting shingles, described as follows:

A represents a frame or case, the cover B of which, forming a table or platform, is screwed down on the top. At the end B' of the table are slotted openings *a a* and *b*. (Seen in Figs. 1 and 2.) To the sides of the table are hung arms D, that support the shaft D' of a gage-wheel, F, and in which the shaft turns. These arms support the wheel so as to allow it to rest on the shingles or on the table.

The internal structure of the machine is represented in Figs. 2, 3, and 4, and consists of a slide, G, that rests on a bottom piece, A', of the frame, and is moved backward and forward by means of the crank H, connected to the handle H'. To the slide at one end is attached a dog or catch, *g*, as shown in Figs. 2 and 3, the dog being jointed or hinged to a plate, *g'*, secured on the top of the slide.

L is a sliding head fitting into the case or frame at one end and resting on the piece A'. On each side of this head is a hook, *c*, as shown in Figs. 3 and 4, and indicated in Fig. 2. These hooks are formed of one continuous piece, bent up and extending across the top of the head at the inner end, as at *c'*, and is pivoted to the sides of the head at *j* in such a way that the hooks can be moved up or down, the head being suitably cut out on the sides to allow the hooks this motion, as indicated by the dotted line J in Fig. 2, and shown at *k k* in Fig. 3.

Fig. 4 is an end view of the head or of Fig. 3.

The hooks, when moved up, project through the openings *a a* in the table.

In the middle of the head L is arranged a hook, *m*, that is hung on a rod, *i*, passing through a slot, *l*, in the head *n* of the hook. The upper part of this hook extends up through the middle opening, *b*, of the table, and is always above the level of the top of the table, unless depressed by the weight of the shingle, for the head *n*, being so heavy and balancing on the rod *i*, elevates the hook. The back end of the head *n* is formed into a catch that the dog *g* takes hold of, as represented, by which the hook is drawn back until in the position shown in Fig. 2, and as it is being thus moved back it comes against the end *c'* of the hooks *c* and turns it on the pivots, as indicated, which elevates the hooks, causing them to project through the openings *a*, for the purpose to be described in its practical operation.

*e* is a spring on one side of the head, causing it to fit tightly in the case, and prevents it from jostling about and getting out of place.

In operating this machine, by turning the crank the slide G is moved back and forth, moving on a guide in the bottom piece, A', to keep it in place. The shingles are fed onto the table B at the end B', and as the hook *m* projects through the opening *b* the weight of the shingle *m'* coming on it presses down the hook, which elevates the back end of the head *n* of the hook, so that the dog *g* on the end of the slide, as it moves up, takes hold of it, as shown in Fig. 2, and as it is drawn back by the reverse movement of the slide the hooks *c* are raised, as before described, and, projecting through the openings, come against the side of the shingle, when the head with the shingle is drawn back under the wheel F, as indicated by the dotted lines M. The friction produced by the shingle coming under the wheel moves the wheel, which is noted by a counting-indicator connected with the shaft, as shown at K, that consists of a notched wheel, I, working in a screw on the shaft, with which is connected a pointer and index, marking the revolutions of the wheel. Every shingle passing under the wheel F is measured according to its width, as shingles are measured in this way.

When the wheel F is fifty inches in circumference, and there are eighty teeth on the

wheel I, the wheel F, making eighty revolutions, will turn the wheel I once around, which counts one thousand shingles.

Every revolution of the wheel F turns the wheel I one tooth, and in case the wheel F is one hundred inches in circumference the wheel I should have forty teeth, in which forty revolutions of the wheel F will turn the wheel I once around, marking one thousand shingles on the index. The wheel F may be of any desired size and the wheel I to correspond with it, by which the shingles are measured upon the same principle as described.

A shingle is called four inches wide, and a thousand shingles of this width would make four thousand inches. Thus four thousand inches in width makes one thousand shingles. It makes no difference what the width of the shingles may be if they are more or less than four inches, as they are measured according to their width and the reckoning is made from the number of inches, counting four inches for a shingle.

The crank can be turned, moving the slide G back and forth without producing any effect on the rest of the machine unless the shingles pass on to the table, for without the hook *m* is depressed by the weight of a shingle the dog *g* will not take hold of the head *n*, as the head is not high enough. Thus the gage-wheel will not be moved only as the shingles are carried under it, and it will always move a distance in proportion to the width of the shingle.

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

The measuring-wheel F and recording-index I K, in combination with the slide G, hooks *m* and *c c*, dog *g*, and adjustable arms D D, arranged and operating as and for the purpose set forth.

M. BONNEY.

Witnesses:

W. H. BURRIDGE,  
J. HOLMES.