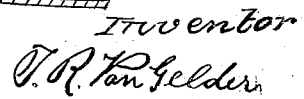


Mechanical Toller.

Patented March 20, 1860.



Witnesses
J. L. Parsons
Moses Tyler 2^d

UNITED STATES PATENT OFFICE.

T. R. VAN GELDER, OF DAMASCUS, PENNSYLVANIA.

COLLECTING TOLL FROM GRIST-MILLS.

Specification of Letters Patent No. 27,582, dated March 20, 1860.

To all whom it may concern:

Be it known that I, T. R. VAN GELDER, of Damascus, in the county of Wayne and State of Pennsylvania, have invented a new and Improved Device for Collecting or Gathering Tolls from Grist, designed for grist mills, and which device I term an "Automatic Toller;" and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a vertical section of my invention taken in the line *x, x*, Fig. 2. Fig. 2, is a vertical section of do, taken in the line *y, y*, Fig. 1.

Similar letters of reference indicate corresponding parts in the two figures.

To enable those skilled in the art to fully understand and construct my invention I will proceed to describe it.

A, represents a wheel which may be of any suitable dimensions constructed of wood with a groove formed in its periphery and divided into equal compartments by sheet metal plates *a*, placed radially in the groove, the compartments forming buckets *b*, one of which *b'*, has an inclined bottom *b''*, and an opening *c*, at one side, see Fig. 2. The other buckets *b*, have close bottoms.

B, is an inclined spout which is placed at one side of the wheel A, and has an open space in its side which adjoins the wheel A. The shaft C, of the wheel has its bearings *c'*, in a frame D, the spout B, being secured in said frame and also a vertical spout E, which communicates with a garner containing the grists. The lower end of the spout E, is provided with guards or caps *d, d*, which fit over the top of the wheel and snugly to it as shown clearly in Fig. 1. The guards or caps *d, d*, are equal in width to the wheel A, and they each extend over the wheel a distance equal to rather more than the length of the orifice of a bucket *b*.

The implement may be placed over the side or corner of a hopper of a pair of mill stones and a barrel or other proper receptacle may be placed underneath the spout B, see Fig. 1, in which the hopper and barrel are shown in red.

The operation is as follows: Motion is transmitted to the shaft C, from any of the shafts of the mill and the grain to be ground passes down through the spout E, into the buckets of the wheel A. The wheel rotates in the direction indicated by arrow 1, and the buckets *b*, it will be seen, convey the grain that falls into them while passing underneath the spout E, into the hopper of the mill stones, while the grain that falls into the bucket *b'*, passes down the inclined bottom *b''*, through the opening *c*, into the spout B, the latter conveying the grain into the barrel or other receptacle. By referring to Fig. 1, it will be seen that there are ten buckets in the wheel A, and as nine of them *b*, convey the grain into the hopper, and one *b'*, conveys the grain into the spout B, it follows as a matter of course that one tenth of the amount of grain that passes down through the spout E, will be taken or separated from the portion that passes into the hopper. The toll therefore which is a tenth is separated from the grist.

This device is extremely simple and efficient. It has been practically tested and has been found to work very precisely taking just one tenth of the grain from the grist or, from the amount that passes down the spout E.

I am aware that mechanical tollers have been previously devised and a horizontal wheel provided with buckets and valves has been previously used for such purpose, but so far as I am aware a rotary wheel provided with buckets without valves, one bucket being open and communicating at a certain portion of its revolution with a spout has not been employed for the purpose specified. I do not claim therefore broadly a rotating wheel provided with buckets, but,

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

The arrangement and combination of the toll spout B, vertical wheel A, open bucket (*b'*), and the spout E, as and for the purpose shown and described.

T. R. VAN GELDER.

Witnesses:

I. L. PARSONS,
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