

C. Coleman,

Bending Rake Teeth.

No. 101,230.

Patented Mar. 29, 1870.

Fig. 1.

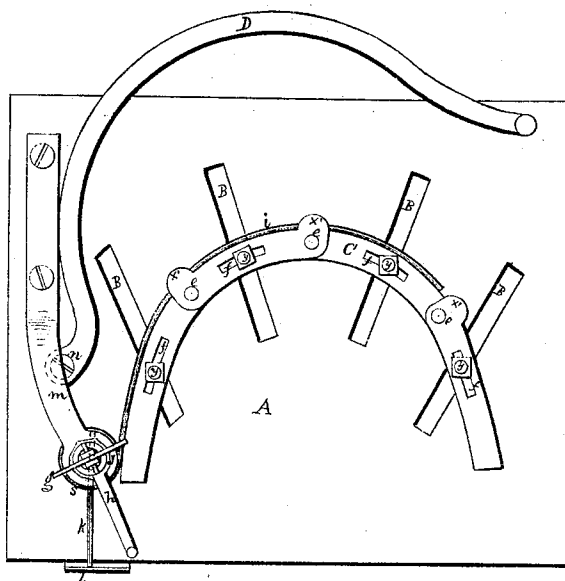
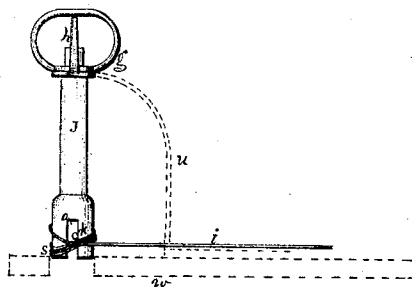


Fig. 2.



Witnesses  
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COLUMBUS COLEMAN, OF ALLEGHENY CITY, PENNSYLVANIA.

Letters Patent No. 101,230, dated March 29, 1870.

## IMPROVED MACHINE FOR BENDING RAKE-TEETH.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, COLUMBUS COLEMAN, of the city and county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Machines for Bending Rake-Teeth; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The nature of my invention consists in the combinations and arrangement of the parts hereinafter described.

To enable others skilled in the art to make and use my invention, I will proceed to describe more fully its construction and operation.

In the accompanying drawings, which form part of my specification—

Figure 1 is a top-view or plan of my improvement in machine for bending rake-teeth.

Figure 2 is a side elevation of the lever used for forming the spring on the end of the rake-teeth.

In the accompanying drawings—

A represents the table, which consists of a cast-iron plate provided with a series of openings or slots, B, for the purpose of bolting the former C to it.

The plate A and the parts connected to it may be elevated to the desired height for convenience in working by placing it on a suitable pedestal.

The former C consists of a series of sections of an ellipse.

These sections are pivoted together at points marked *e*, and are held in the desired position by means of bolts *y*, which pass up through the slots B of the plate or table A, and through the slots *f* in the several sections of the former C.

The projections *x'* on the outer edge of the sections of the former are used for holding the rake-tooth *i* down on the table A while it is being pressed against the outer edge of the former C by the bending-lever D, which is pivoted to the table A at the point marked *n*.

The bending-lever D is provided with a handle, *x*, arranged at right angle to the plane of the table A. This lever is so pivoted to the table that it may be easily removed, to give place to another of different form, when any change is made in the curvature of the former C.

The lower end of the lever J is fitted to an opening in the table A, as indicated by the dotted lines *w*, shown in fig. 2, and the upper end of it is held in the proper position by the yoke *m*, which is secured to the table A.

The form of the yoke *m* is indicated by dotted lines *u* in fig. 2, and its position with relation to the bending-lever D and former C is shown in fig. 1.

To the table A is secured an adjustable guide, *l*, for the tang *k* of the rake-tooth, which tang passes across the coil *s* of the tooth, projecting beyond it, so as to leave a tang of sufficient length for fastening the tooth to the rake-head.

The lower end of the lever J is provided with a slot, *o*, and the upper end of it with a handle, *g*, and crank *h*.

The operation of the bending-machine is as follows:

The rods of iron or steel for forming the teeth are heated to the desired degree in a suitable furnace. The operator then passes one end of a heated rod through the opening *o* of the lever J, with the end of it resting against the guide *l*. He then turns the lever one revolution, or more, by means of the crank *h*. He then bends that portion of the rod which is to form the curved part of the tooth against the former C, and forces the bending-lever D against the tooth, so as to press it against the former C, thereby giving it the desired curvature. The bending-lever D is then turned back, and the lever J, by means of the handle *g*, is raised, so as to remove it from the coil of the spring *s*, and the tooth is then removed from the machine to give place to another rod for forming, by a similar operation, another tooth.

One of the advantages of my improvement in machine for bending rake-teeth consists in so constructing the former C that it can be changed to any desired curvature, thereby adapting it to all the different curves that are given to rake-teeth.

Having thus described the nature, construction, and operation of my improvement,

What I claim as of my invention is—

1. The combination of the lever J, constructed as herein described, with the table A, form C, and bending-lever D, as and for the purpose set forth.

2. The gauge *l*, in combination with the subject-matter of the first clause of claim, as and for the purpose set forth.

3. The combination of the hinged and sectional form C, table A, and bolts *y* with a bending device for operating in conjunction with said form, substantially as described.

COLUMBUS COLEMAN.

Witnesses:

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JAS. G. THOMPSON.