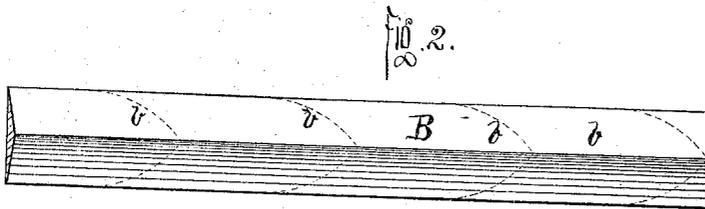
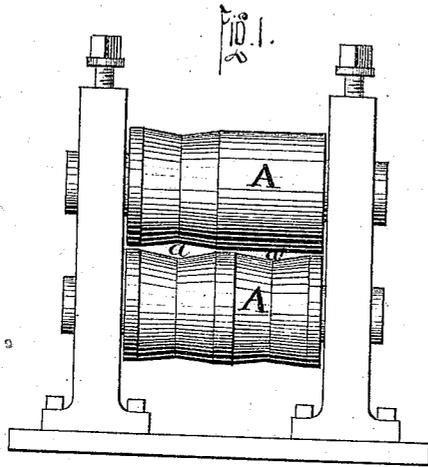


W. H. Singer.

Plate So. Cultivator Blanks.

No. 97451.

Patented. Nov. 30. 1869.



Witnesses:

Victor Hagmann
Chas. F. Pettit

Inventor:

W. H. Singer
per Wm. & Co
Attorneys.

United States Patent Office.

W. H. SINGER, OF PITTSBURG, PENNSYLVANIA.

Letters Patent No. 97,451, dated November 30, 1869.

IMPROVED PLATE FOR BLANKS OF CULTIVATOR-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, W. H. SINGER, of Pittsburg, in the county of Allegheny, and State of Pennsylvania, have invented a new and improved Double-Tapered Plate for the Material of Blanks for Cultivator-Teeth, &c.; and I do hereby declare that the following is a full, clear, and exact 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 side elevation of the rolls for the manufacture of such plate, and

Figure 2 is a plan view of such plate, marked for division into blanks.

It is found expedient to manufacture cultivator-teeth, shovel-plows, &c., with sides tapering each way from the centre, in order to reduce their weight and cost, and diminish their thickness at the edges where hammering and grinding are required. Heretofore, such taper has been produced by plating, hammering, or grinding, which are slow and expensive processes.

My invention consists in a plate, of the proper metal, run between rolls of such shape as to give it the required double transverse taper, such plate being of any desired or practical length, and serving as the material out of which blanks may be cut for immediate formation into shovel-plows or cultivator-teeth. By this method, I not only save the difference in expense between hammering and rolling, but in the less amount of material required.

In the drawings—

A A are the rolls, so grooved, circumferentially; as

to form between them spaces *a*, of lozenge-shape, which give the double taper on each side of the plate, or spaces *a'*, of half-lozenge shape, which give the double taper only on one side of the plate, leaving the other side flat.

B is the plate, and
b b, in dotted lines, are the blanks.

I am aware of the patent of Henry Barnes, August 3, 1869, for plates for mould-board blanks, whose plates have longitudinal central ribs along one side, and taper transversely in both ways from that. Barnes' plate is manifestly inapplicable to the manufacture of cultivator-teeth or shovel-plows, which need no rib at the centre, and require only the transverse taper.

I disclaim any and all plates except such as are adapted to this manufacture of cultivator-teeth or shovel-plows, or other articles of that specific nature.

Having thus described my invention,

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

As an article of manufacture, the rolled plate herein described, tapering from the centre to the edges on one or both sides, and suited to be the material whence blanks for cultivator-teeth, plow-shovels, &c., may be cut.

To the above specification of my improvement, I have set my hand, this 1st day of October, 1869.

W. H. SINGER.

Witnesses:

CHAS. A. PETTIT,
SOLOM O. KEMON.