

S. Vanstone,

2. Sheets, Sheet. 1.

Making Clinch Rings.

No. 100,823.

Patented Mar. 15, 1870.

Fig. 1 - Side Elevation.



Fig. 3 - Plan.

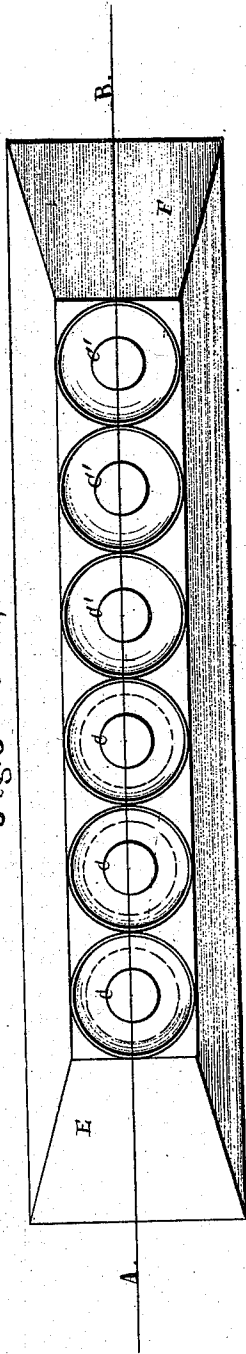
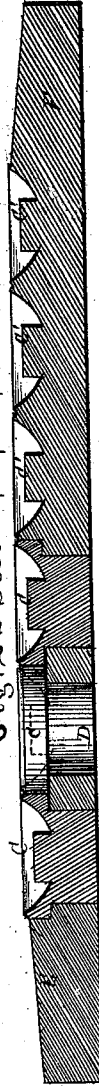


Fig. 2 - Section on line A.B.



Witnesses.

W. H. Woodcut
John W. Taylor

Inventor.

Samuel Vanstone

S. Vanstone,

2. Sheets, Sheet. 2.

Making Clinch Rings

No. 100823.

Patented Mar. 15. 1870.

Fig. 1 - Side Elevation.



Fig. 3 - Plan.

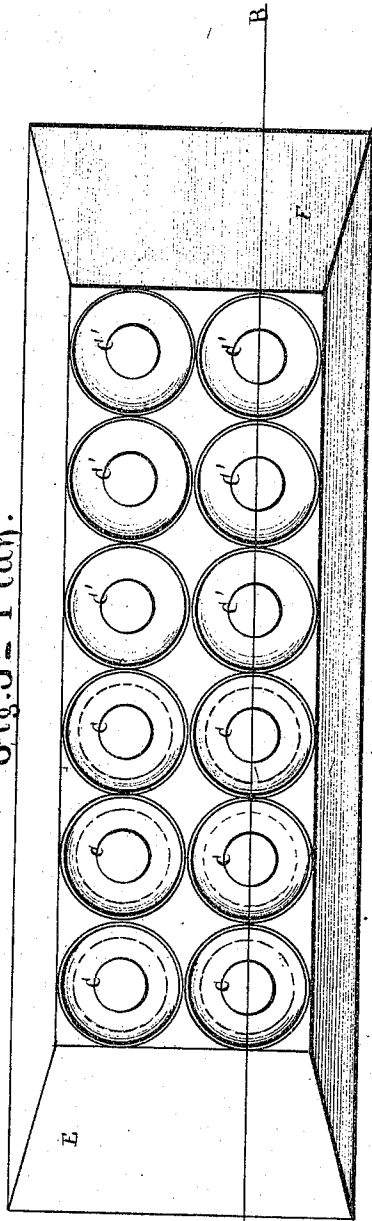


Fig. 2 - Section on line A.B.



Witnesses.

H. P. Vincent
John W. Taylor

Inventor.

Samuel Vanstone

United States Patent Office.

SAMUEL VANSTONE, OF PROVIDENCE, RHODE ISLAND.

Letters Patent No. 100,823, dated March 15, 1870.

IMPROVED DIE FOR MAKING CLINCH-RINGS.

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, SAMUEL VANSTONE, of the city and county of Providence, in the State of Rhode Island, have invented an Improvement in the Art of Making Clinch-Rings; and I do hereby declare that the following specification, taken in connection with the drawings making a part of the same, is a full, clear, and exact description thereof.

Figure 1 is a side elevation.

Figure 2 is a section on line A B.

Figure 3 is a top view.

My invention relates to that article of manufacture known as "clinch-rings," the office of which is too well understood to require an explanation here, and has for its object greater rapidity in manufacture, with less waste of material, than can be attained by any other method now in use.

Clinch-rings have heretofore been cut from strips or sheets of metal, and punched while cold, after which they are heated, and stamped into the proper shape by means of suitable dies.

My invention consists of a bed, E F, provided with a series of dies, (as shown in figs. 2 and 3, sheet 1.)

The dies may be made separately, and the bed drilled to receive them, as *c c c*, (as shown fig. 2,) or the surface of the bed may be so made as to form a compound die, as *c' c'*.

The strip of metal from which the rings are to be made is heated and placed upon the die-bed, and forced into the dies. This may be accomplished in several ways. For instance, the die-bed, after receiving the

strip or sheet of heated metal, may be passed through rollers; or the die-bed may be attached to a sliding under-bed, which carries it under a fixed roller; or the bed may remain stationary, and be traversed by a roller.

The edges of the dies are sharp, and project slightly above the surface of the bed, which causes the rings to become detached, or nearly so, by the rolling process.

Each die is also provided with a raised center, as shown in fig. 2, which, as the metal is pressed in, makes a hole nearly through the bar.

The bar is now taken from the dies and the remainder of the hole punched or drilled through, and the ring itself cut out at the same time, if the rolling process has failed to entirely disconnect it.

I do not confine myself to the use of a die-bed with one row of dies, as two or more may be used to advantage, as shown in fig. 3, sheet 2.

Metal washers may also be manufactured by the same process and in the same manner.

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

The series of connected dies herein described, for forming clinch-rings by rolling or pressing upon it strips or sheets of heated metal, substantially in the manner described.

SAMUEL VANSTONE.

Witnesses:

W. B. VINCENT,

JOHN D. W. TAYLOR.