

2 Sheets--Sheet 1.

W. D. WOOD.
Hammers for Planishing Sheet-Iron.
No. 142,754. Patented September 9, 1873.

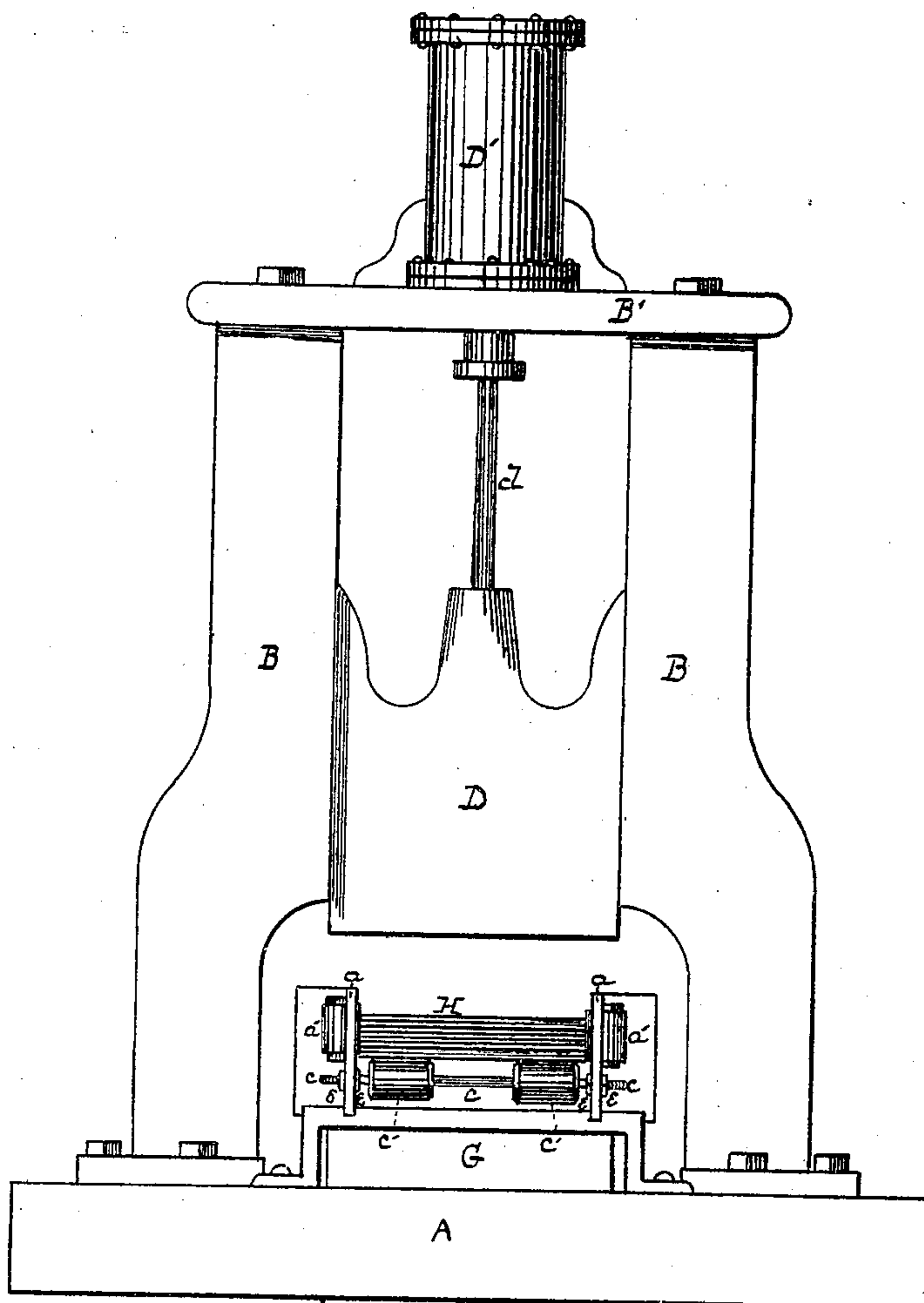


Fig. 1.

WITNESSES
R. C. Henderson.
James L. Kay

INVENTOR
W. Dewees Wood,
by Bakewell, Christy & Kerr,
his Attys.

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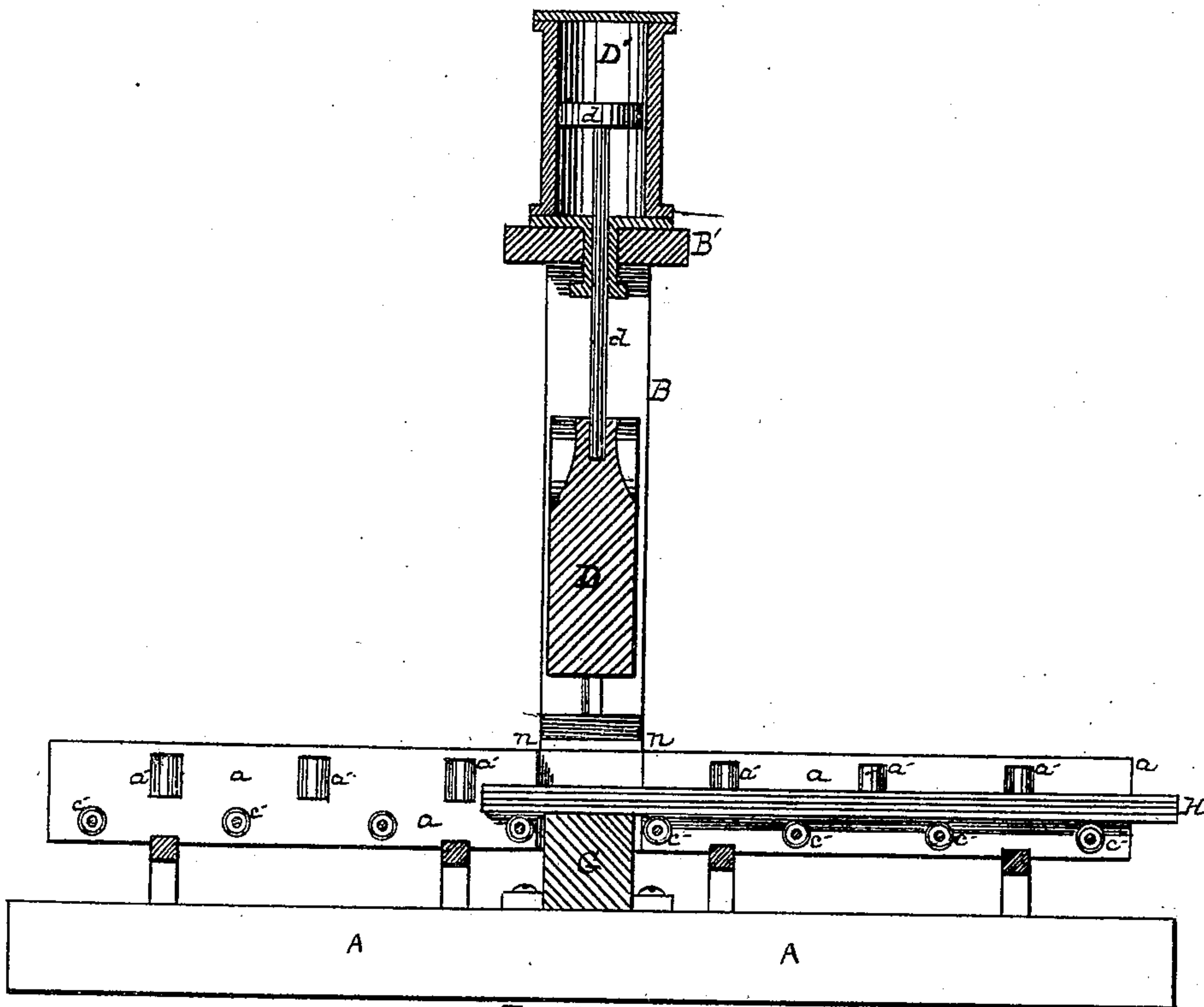


Fig. 3.

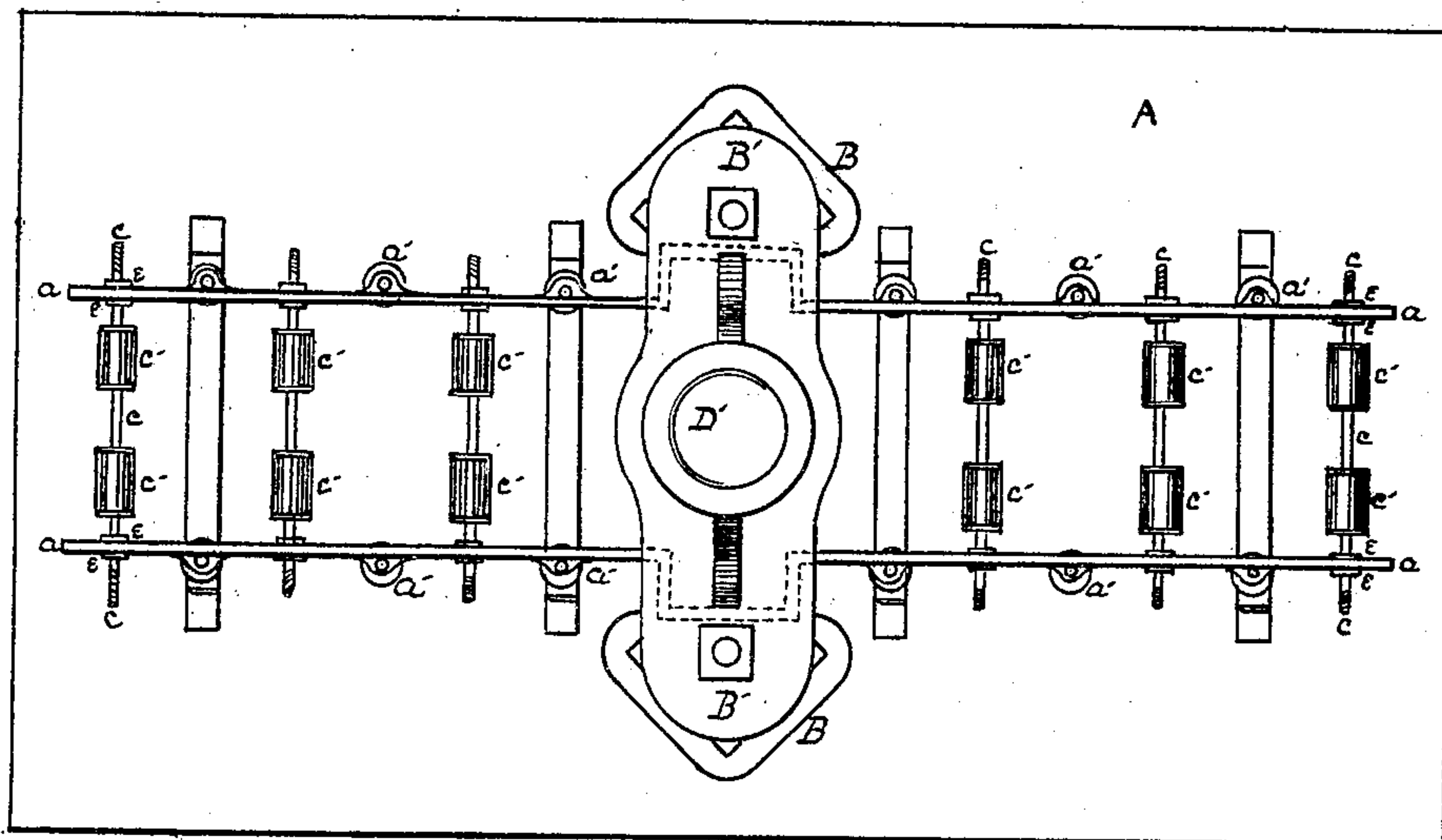


Fig. 2.

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UNITED STATES PATENT OFFICE.

W. DEWEES WOOD, OF McKEESPORT, PENNSYLVANIA.

IMPROVEMENT IN HAMMERS FOR PLANISHING SHEET-IRON.

Specification forming part of Letters Patent No. **142,754**, dated September 9, 1873; application filed June 23, 1873.

To all whom it may concern:

Be it known that I, W. DEWEES WOOD, of McKeesport, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Machine for Planishing Sheet Metal; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing, in two sheets, making a part of this specification, in which—

Figure 1, Sheet 1, is an end elevation of my improved machine. Fig. 2, Sheet 2, is a plan view of the machine; and Fig. 3 is a sectional elevation of the machine.

Like letters of reference indicate like parts in each.

My improvement relates to the construction of a machine to be used in planishing sheet-iron in packs while cold by means of a steam-hammer. Heretofore, in this operation, this ordinary steam-hammer and anvil have been employed, and the sheet-iron pack has been moved back and forth under the hammer, and from side to side, by the workman with his tongs, so as to bring all parts of the pack successively under the hammer, and subject the same to the planishing operation. In my improved machine, I provide a feeding-table with friction-rollers in the bottom thereof, the upper faces of which rollers are even, or about even, with the face of the anvil. The feeding-table also has vertical sides, which, in connection with the planishing of sheets of uniform width, may be fixed; or, in a mill where sheets are to be planished of varying width, the sides of the table are made adjustable, and, in either case, they are, preferably, furnished with vertical friction-rollers, against which the edges of the pack operate, for greater facility in feeding. In a mill where but a single width of sheets is to be made, the face of the steam-hammer is made as long, at least, as the sheets are wide; but where the machine is to be made for planishing sheets of different widths, the face of the steam-hammer is made of a length equal to the greatest width of the sheets, and the sides of the table, either by being set out opposite the ends of the hammer, or by terminating at each opposite face of the hammer, are so made that they

can be set up past the opposite sides of the hammer, and the hammer and table thereby be adapted for planishing packs of lesser widths.

To enable others skilled in the art to make and use my improved machine, I will proceed to describe its construction and mode of operation.

On any suitable foundation, A, I erect the guide-posts B, with a cross-head, B', and in such a position that they shall carry or support the steam-hammer D, which, by the piston and stem *d* and cylinder D', is operated in the usual way. The length of the face of this hammer, as also of the anvil-block G immediately under it, is at least as wide as the greatest width of sheet or pack to be operated on thereby. The feeding-table may be made of any desired form; but the form shown embodies all essential features of construction. As shown, it contains vertical side rails *a*, in which are set the friction-rollers *a'*, with their inner faces projecting slightly beyond the inner faces of the rails. These rails are connected together a little below the feeding level by tie-rods *c*, on which are mounted the friction-rollers *c'*, the upper faces of which are level, or nearly so, with the upper face of the anvil-block G. By means of nuts *e* the side rails *a* are adjustable to and from each other. These side rails may terminate at or a little short of each lateral face of the hammer D, as at *n*, or they may, at those points, be outwardly bent, as shown in the drawings, so as to make room for the desired adjustment. When the machine is to be used in a mill where but a single width of packs is to be planished, the hammer D may have a face equal in length to such width, and the side rails *a* be fixed in position to exactly or about the same width. But where, as is generally the case, different widths of packs are to be planished, the hammer is made with an operative face at least as long as the greatest width of pack, and the said rails *a* are then made, one or both of them, adjustable, so as to be adapted for feeding along under the hammer packs of such width as may be desired. The feeding operation with such a machine will be simple and easy, as each blow

of the hammer will be operative across the entire face of the pack, and no assistance will be required from the workmen, except to move the pack forward. In Figs. 1 and 3 the packs are shown at H.

One great feature of utility connected with the use of the side rails results from the fact that when the sheets are fed under the steam-hammer in packs, in the ordinary way, and are held by the workman's tongs without any lateral support, the sheets are, as one result of the blows, displaced laterally, so that they do not, as the blows are continued, each receive the full impact evenly across its entire surface. But, by my machine, the sheets are held against lateral displacement by the side rails, and against longitudinal displacement by the workman's tongs. One side rail may, in some cases, be sufficient, as the workman

can, by a little extra labor, guide the pack along such side rail.

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

1. In a machine for planishing metal, the combination of an anvil and hammer, a feeding-table, and side rails, substantially as described.

2. The combination of hammer and anvil, the operative faces of which are as wide as the pack, a series of friction-rollers, constituting the face of the feeding-table, and one or more adjustable side rails, substantially as described.

In testimony whereof I, the said W. DEWEES WOOD, have hereunto set my hand.

Witnesses: W. DEWEES WOOD.

T. B. KERR,

G. H. CHRISTY.