2 Sheets—Sheet 1.

S. P. M. TASKER.

MACHINE FOR WELDING METAL TUBES.

No. 186,769. Patented Jan. 30, 1877.

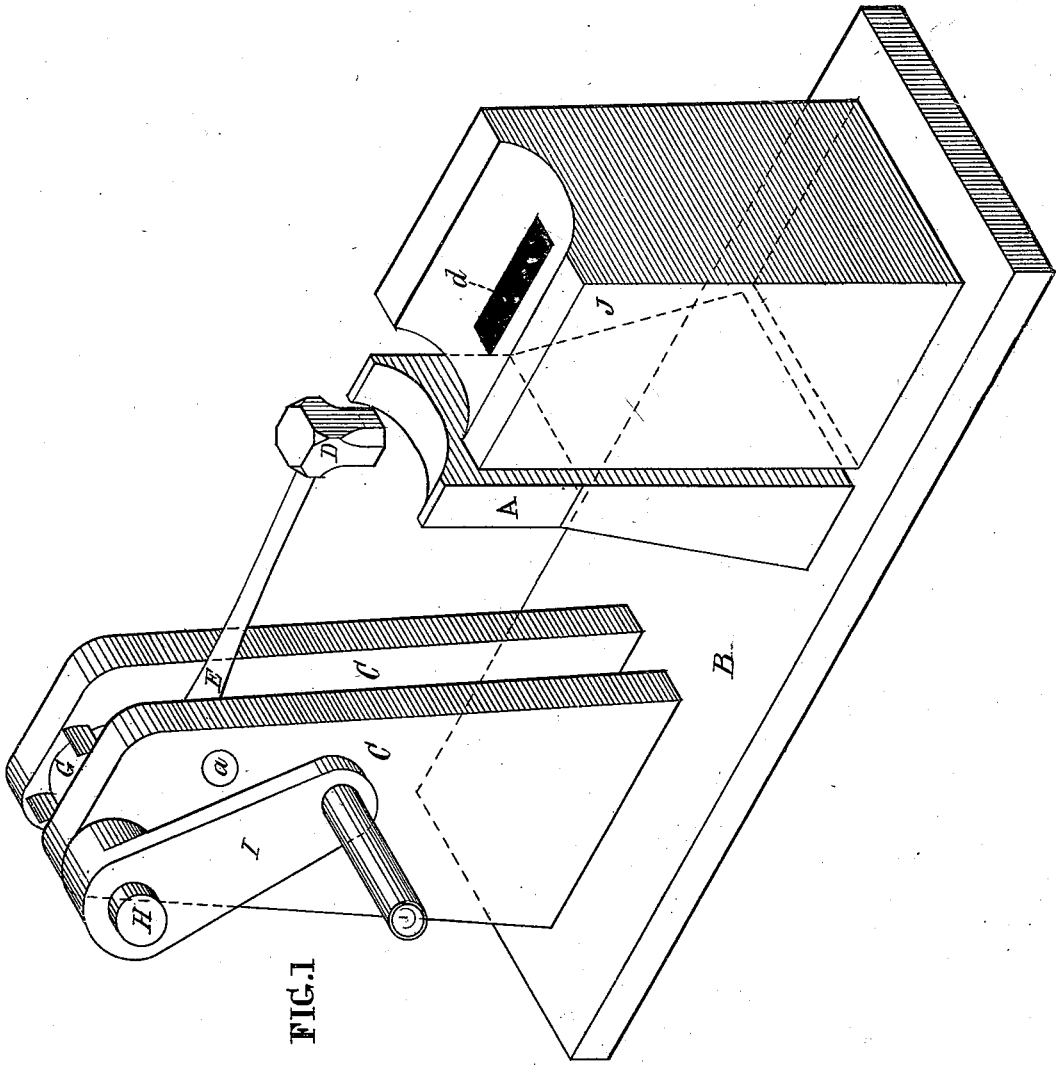

FIG. 1

Witnesses.

Thomas J. Bewley

George C. Hazel

Inventor

Stephen P. M. Tasker

per Stephen Uotick Attorney

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

2 Sheets—Sheet 2.

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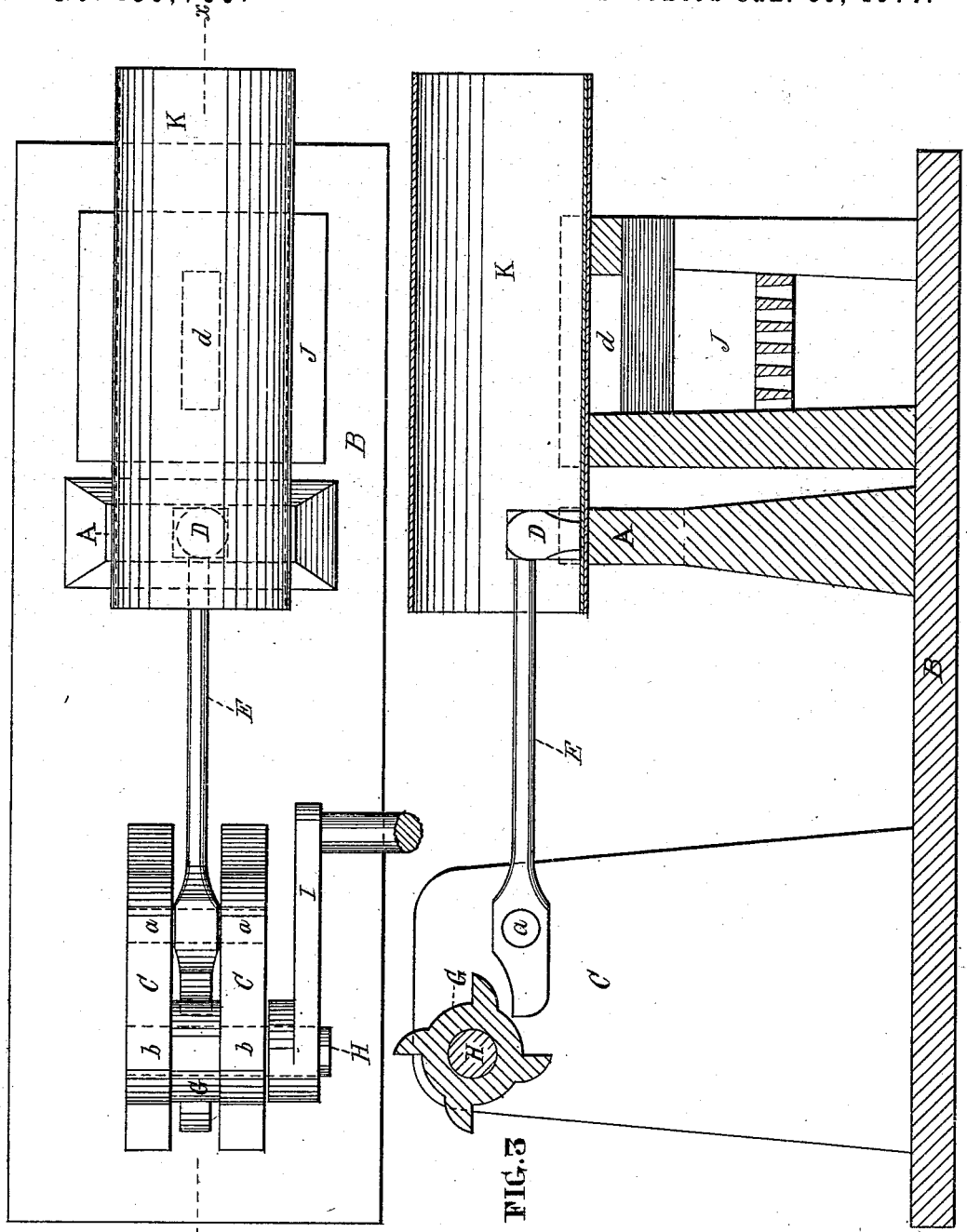

FIG. 2

FIG. 3

Witnesses.

Thomas F. Bewley.

George C. Hazel

Inventor

Stephen P. M. Tasker.

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UNITED STATES PATENT OFFICE.

STEPHEN P. M. TASKER, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN MACHINES FOR WELDING METAL TUBES.

Specification forming part of Letters Patent No. **186,769**, dated January 30, 1877; application filed December 9, 1876.

To all whom it may concern:

Be it known that I, STEPHEN P. M. TASKER, of the city and county of Philadelphia, in the State of Pennsylvania, have invented a new and useful Improvement in Machines for Lap-Welding Metal Tubes, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 is an isometrical view of the machine and furnace. Fig. 2 is a top view of the same, having a tube, K, in position for the heating and welding operation. Fig. 3 is a vertical section at the line *x x* of Fig. 2.

Like letters of reference in all the figures indicate the same parts.

The nature of my invention consists in the combination of a trip-hammer with an anvil and furnace, in such a manner that the tubes which rest on the face of an opening which passes through the top of the furnace and anvil, in line therewith, and are passed along over the same as the edges become heated, are welded by the repeated strokes of the hammer, which is arranged to operate within the tubes.

The furnace and anvil have concave seats for t e tubes, so that the latter are kept in their lateral position as they are moved along, and the welding-edges brought directly over the opening in the top of the furnace and vertical with the hammer. The said opening is of such dimension as to cause the passage of a current of heat that will only bring the welding-edges of the tube to a welding-heat, and thus to prevent the deterioration of the metal in the body of the tube by reheating.

A is the anvil on the bed-plate B. C C are housings, which are also connected with the bed-plate. D is the hammer, having a lever, E, which has fulcrum-pins *a a* supported in bearings of the housings. G is a tripping-wheel on the shaft H, whose journals *b b* rest in bearings of the housings. The shaft H is rotated by means of the crank I or other suitable device. J is an ordinary furnace, which has an elongated vertical opening, *d*, for the passage of the heat to the welding-edges of the tubes. The top of the furnace and the anvil are concave, as seen in Fig. 3, to keep the tube K in its lateral position as it is moved along. The tube is pushed forward by hand or otherwise, the edges of the tube being brought to a welding-heat, and as the heated portion of the tube passes over the anvil the repeated blows of the hammer D form a perfect welding of the same.

By combining the anvil and hammer with the furnace, as described, in close proximity thereto, the welding-edges lose but little of the heat before they receive the welding-blows of the hammer.

I do not confine myself to operating the hammer in the manner described, as other devices may be used for giving it either an oscillatory or vertical movement, as may be desired.

I claim as my invention—

1. The furnace J, having a narrow opening, *d*, at its top for the passage of the heat to the seam of the tube, in combination with the anvil-block A and the hammer D, the latter arranged in line with said opening and anvil, in a manner to permit the hammer to operate within the tube, substantially as described.

2. The hammer D, to be operated within the tube by means of the tripping-wheel G, in combination with the anvil A and furnace J, having an opening, *d*, in line with the anvil, substantially as and for the purpose set forth.

STEPHEN P. M. TASKER.

Witnesses:
THOMAS J. BEWLEY,
STEPHEN USTICK.