

(No Model.)

E. K. COAS.

MANUFACTURE OF SHEET METAL TUBES.

No. 378,769.

Patented Feb. 28, 1888.

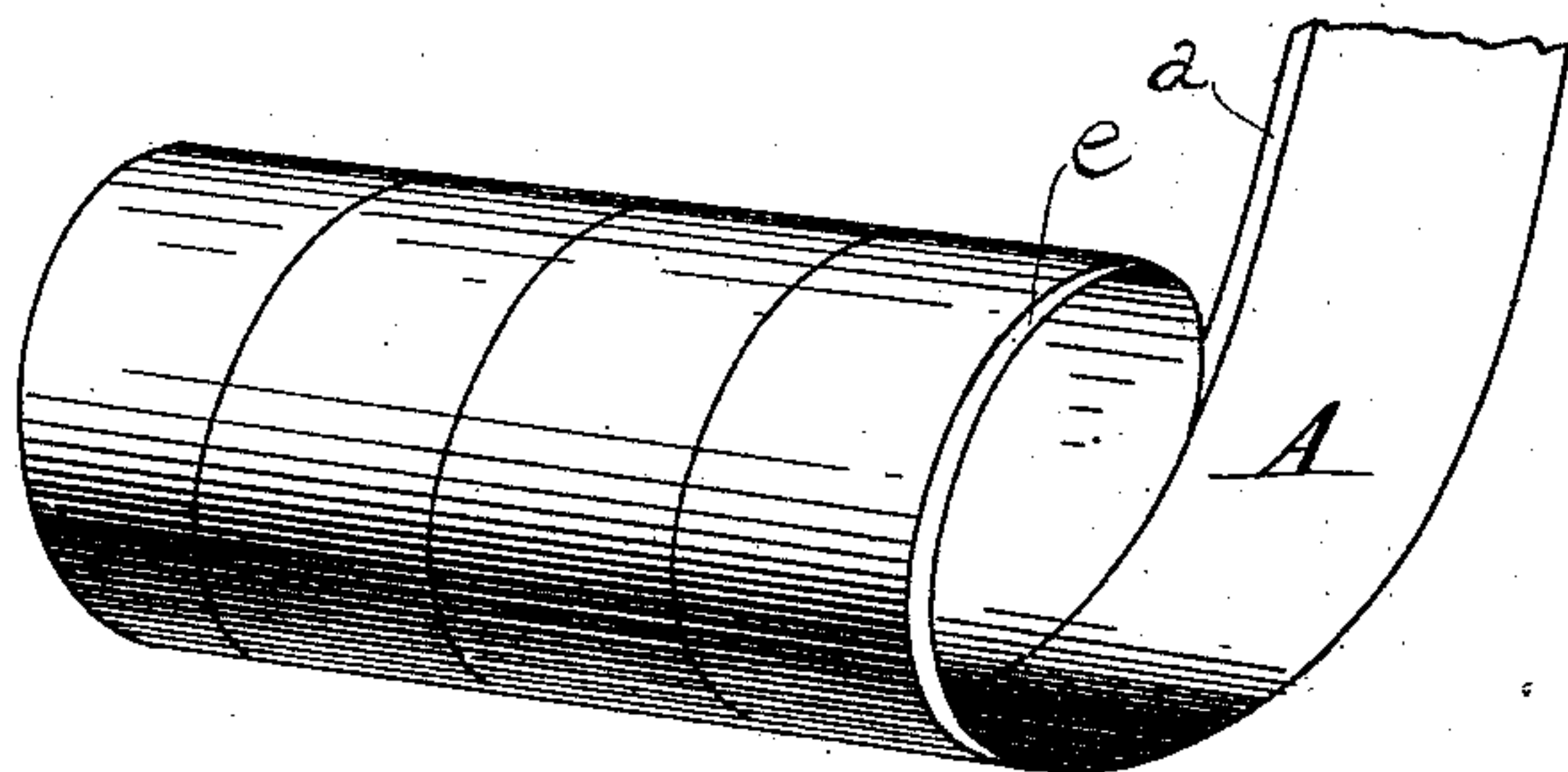


Fig. 1.

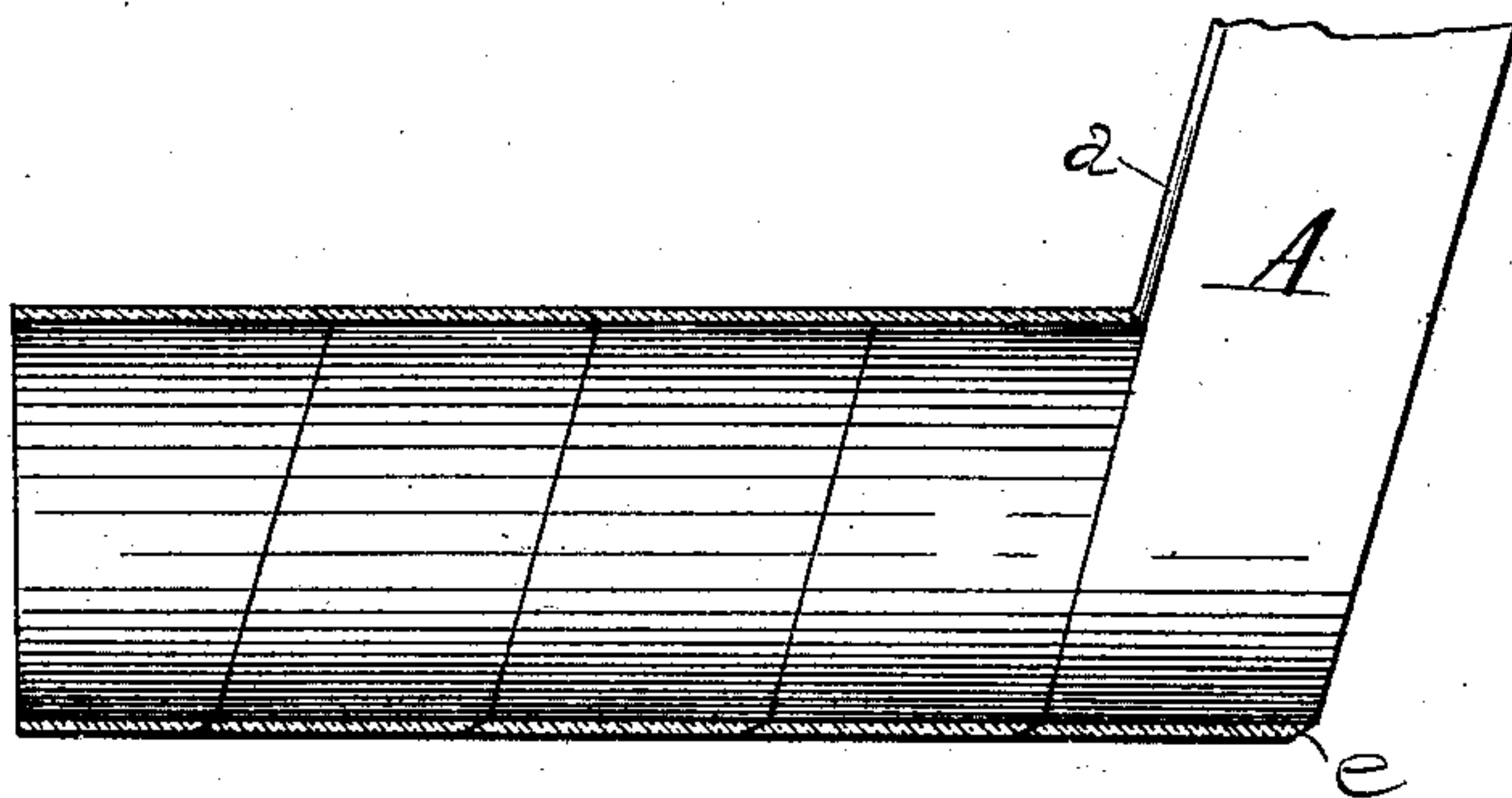


Fig. 2.

WITNESSES:

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EDWARD K. COAS, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR TO THE
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MANUFACTURE OF SHEET-METAL TUBES.

SPECIFICATION forming part of Letters Patent No. 378,769, dated February 28, 1888.

Application filed May 16, 1887. Serial No. 238,331. (No model.)

To all whom it may concern:

Be it known that I, EDWARD K. COAS, of Providence, in the State of Rhode Island, have invented certain Improvements in Sheet-Metal
5 Cylinders, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to that class of cylinders which are made by coiling a sheet or ribbon of metal so that its edges overlap each other, and then securing the edges together, the
10 object being to make a strong and rigid cylinder with greater economy than usual.

It is a common practice to make sheet-metal cylinders by spirally coiling over a suitable
15 former a narrow strip of sheet metal, so that the edges abut each other, and then securing these edges by soldering; but on account of the continuous spiral joint these cylinders are
20 not strong enough for many purposes.

My invention is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view showing the strip wound to form a cylinder, and Fig. 2 is
25 a longitudinal section of the same.

In carrying out my invention I take a strip or ribbon of sheet metal and bevel its edge faces through the entire length of the strip, the bevel given to the edge along one side being
30 obverse to the bevel given to the edge along the other side. I then wind the ribbon A spirally, allowing the edges to overlap each other, as in Figs. 1 and 2, the amount of lap being
35 coequal with the beveled surfaces *a c*, to the end that the metal cylinder may be of even thickness throughout and the surface thereof be practically smooth and even. The metal

ribbon being thus coiled, the cylinder is dipped into a bath of molten metal, which enters the joints and firmly unites the lapped edges, and
40 thus completes the cylinder.

A cylinder made in accordance with my invention is much stronger than one made with abutting edges. It is equally light, and presents a smooth surface, is of equal diameter
45 throughout, and is specially useful in running cotton-spindles, where speed and uniform motion are required.

I am aware that it has been suggested to form metal tubing by rolling the skelp with
50 longitudinal ridges and furrows in its alternate edge faces, and lapping the same in a spiral direction to form a lock, and I do not claim this broadly, my invention being designed to enable me to make tubes out of
55 very thin material, in which such ridges and furrows could not be made, and I therefore simply bevel the edges, so that the adjoining edges may overlap to form a bearing; and the whole is held together by subjecting the tube
60 thus formed to a solder bath.

I claim—

The mode herein described of making a sheet-metal cylinder, consisting in coiling a ribbon of sheet metal having plain beveled
65 edges to the form of a tube, with the bevels of the edges overlapping, and in subjecting the tube thus formed to a solder bath, substantially as described.

EDWARD K. COAS.

Witnesses:

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