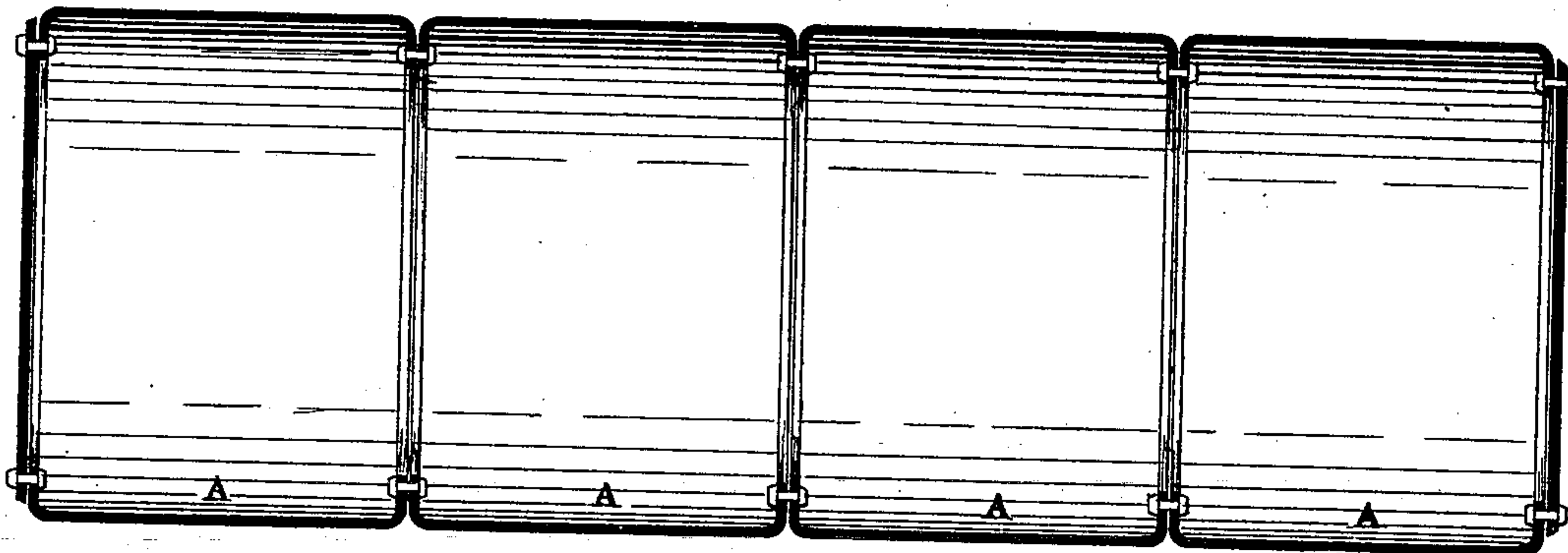


J. T. COLEMAN.
OIL-STILL.

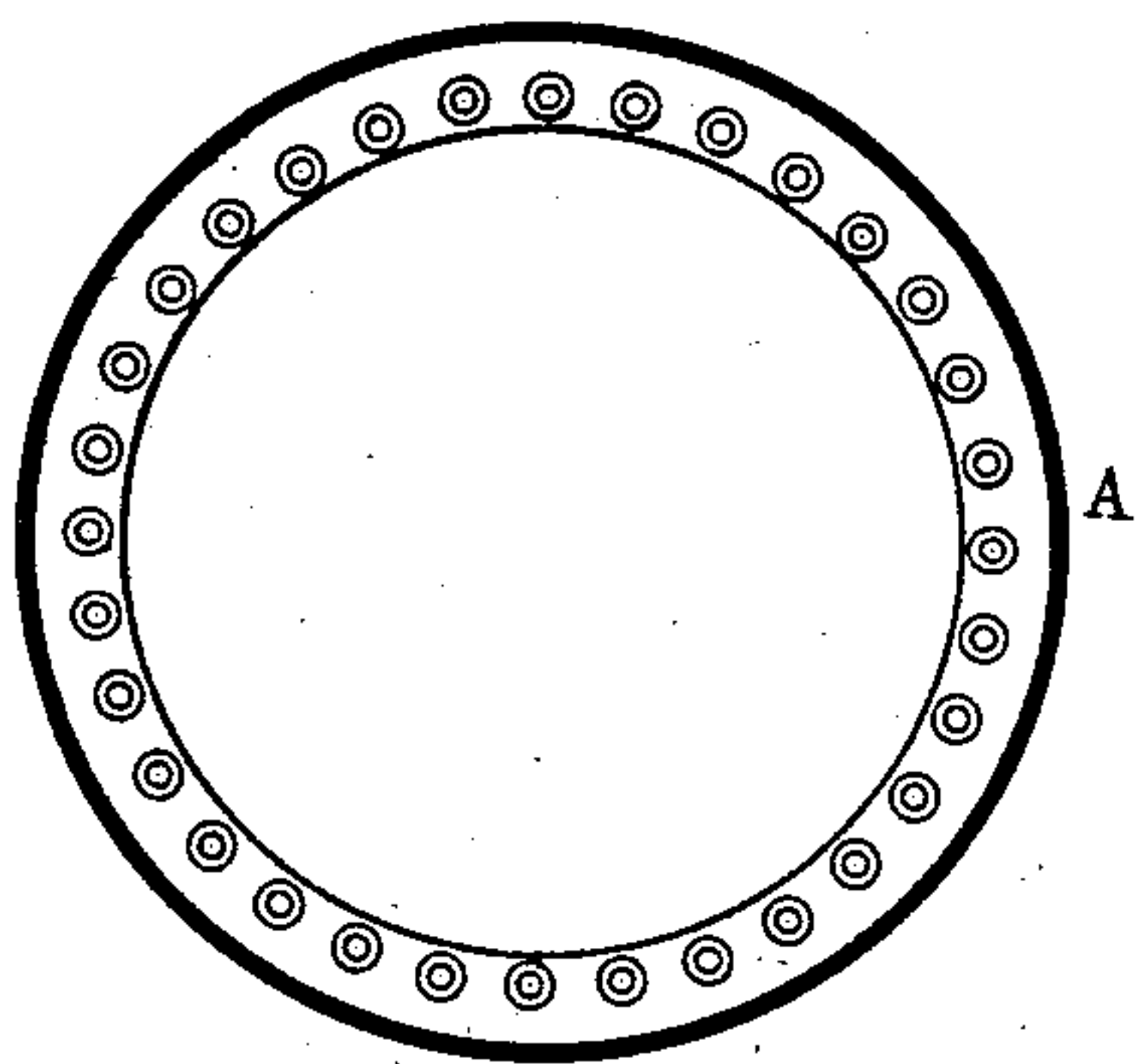
No. 191,406.

Patented May 29, 1877.

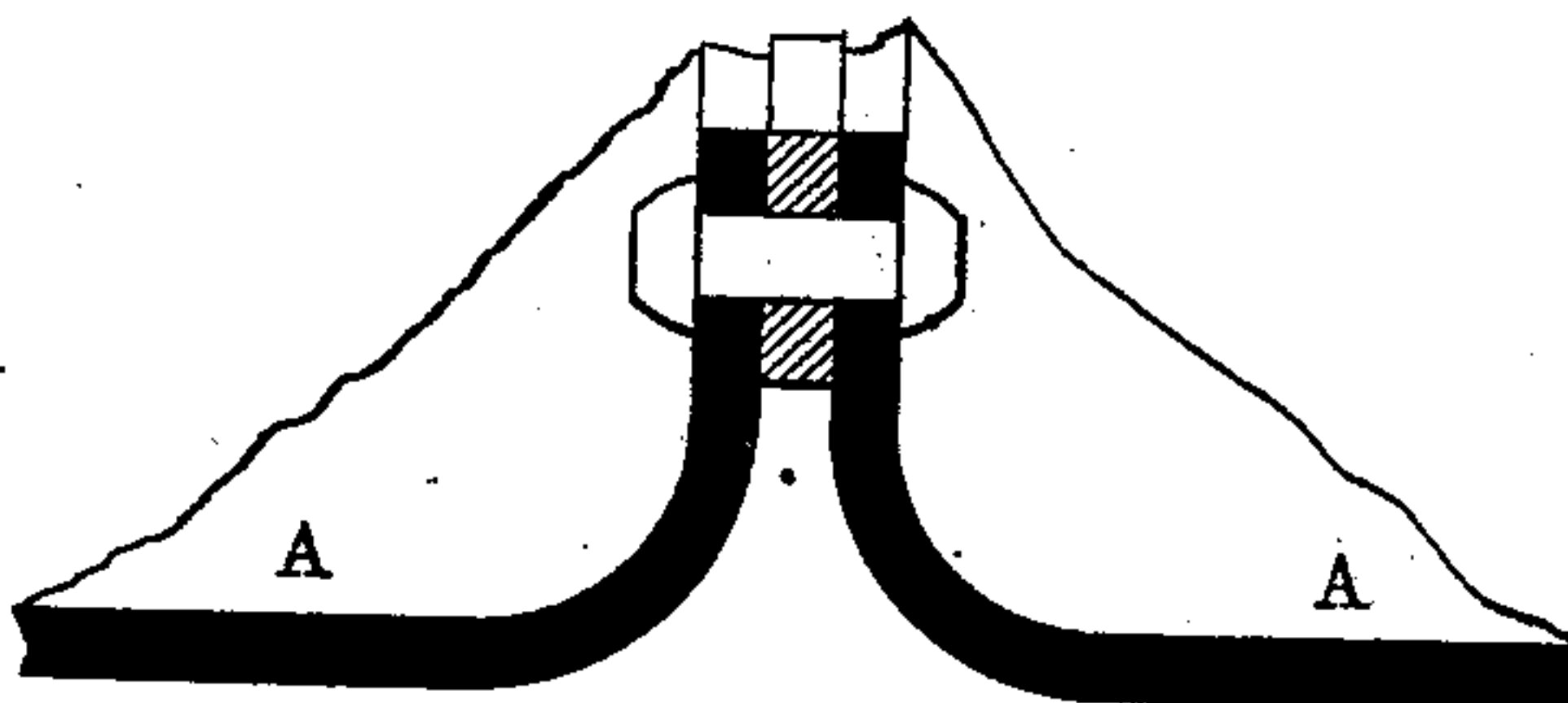
—FIG. I—



—FIG. II—



—FIG. III—



—WITNESSES—

Wm. H. Towson
Edmund Howard

—INVENTOR—

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UNITED STATES PATENT OFFICE.

JOHN T. COLEMAN, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN OIL-STILLS.

Specification forming part of Letters Patent No. **191,406**, dated May 29, 1877; application filed April 27, 1877.

To all whom it may concern:

Be it known that I, JOHN T. COLEMAN, of the city of Baltimore and State of Maryland, have invented certain Improvements in Stills, of which the following is a specification; and I do hereby declare that in the same is contained a full, clear, and exact description of my said invention, reference being had to the accompanying drawing and to the letters of reference marked thereon.

This invention relates to an improved still to be used in the refining of hydrocarbon fluid; and consists in a novel construction of the circumferential seams of the still, whereby the said still has longitudinal elasticity, and may be deflected from a straight line without sustaining injurious strain.

The said invention also serves to protect the rivets connecting the edges of the plates together against the direct action of the fire, and obviates the necessity of laps in forming the circumferential seams.

In the construction of coal-oil stills it is usual to employ plates of such length as to bring the longitudinal seams above the portion of the still in direct contact with the fire; and in order to have as few circumferential riveted seams as is possible, the plates are rolled of a width greatly in excess of that of plates ordinarily used in the building of boilers.

This is found necessary, as, during the latter part of the refining process, when the fluid in the still is nearly exhausted, the lower portion of the said still becomes overheated, which causes the seams to leak.

To roll plates of such width as are commonly used in stills of this class is, however, a costly operation, and extremely large plates are liable to embody defects difficult to discover except by the actual use of the still. The burning of the rivet-heads in consequence of the overheating of the lower part of stills also renders constant repairs necessary, and such repairs are usually of an expensive character.

Another fruitful cause of the destruction of this class of stills is their deflection from unequal heating, the continued stretching of the iron effecting their rapid deterioration.

The foregoing difficulties met with in the refining of hydrocarbon fluid are obviated in the present invention, as hereinafter described.

In the drawing, forming a part hereof, Figure 1 is a longitudinal section of the improved still. Fig. 2 is a transverse section of the same. Fig. 3 illustrates a modification in the invention.

Similar letters of reference indicate similar parts of the invention in all the views.

A A are plates or sheets, flanged where they connect, to form the circumferential seams, and riveted together, as shown.

The flanges of the plates are either brought into contact, as is represented in Fig. 1, or they may have a ring interposed between them, as shown in Fig. 3 of the drawing. The first-named method is, however, much preferred.

By this manner of forming the seams they are removed from contact with the fire, and sufficient elasticity is given to the still to allow it to be deflected from a straight line without its sustaining injury.

The invention also admits of comparatively narrow plates being used, which not only decreases the original or first cost of the plates, but the cost of bending and otherwise manipulating them in the construction of the still.

I am aware that it is not new to provide semi-cylindrical rigid pans with internal or inwardly-turned flanges, and to secure the same together by means of bolts or rivets; and also that curved plates have been used with portions of their ends turned inwardly to form a series of lugs, and such devices I do not claim herein. But I am unaware that sheet-metal stills have been made elastic or susceptible of longitudinal extension, or adapted to admit of deflection from a straight line without sustaining injury, by means of internal or inwardly-turned flanges having pronounced rounded corners, as herein shown.

Having thus described my invention, what I claim as new, and wish to secure by Letters Patent of the United States, is—

A cylindrical sheet-metal still, divided lon-

gitudinally into sections, the said sections being connected together by continuous internal or inwardly-turned flanges, the said flanges having pronounced rounded corners, and connected by rivets, substantially as and for the purposes herein set forth.

In testimony whereof I have hereunto sub-

scribed my name this 30th day of March, in the year of our Lord 1877.

JOHN T. COLEMAN.

Witnesses:

GEO. MCCAFFRAY,
P. H. C. STITCHER.