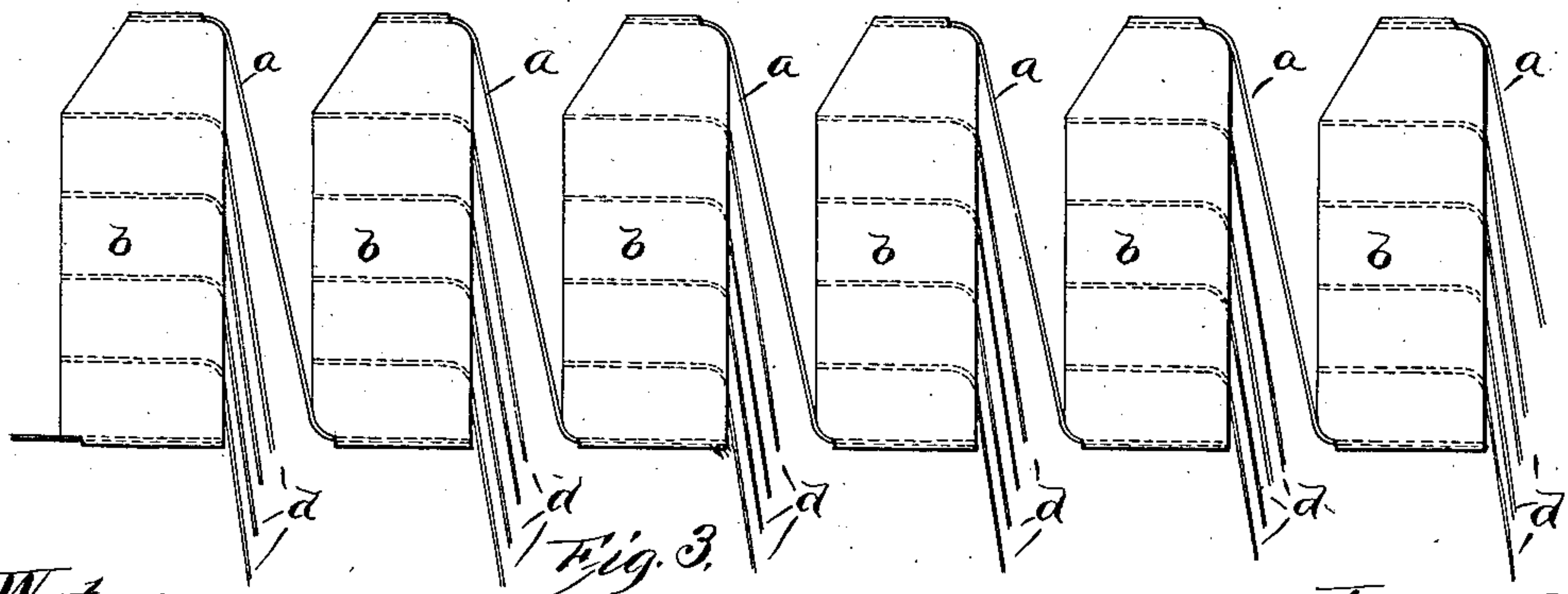
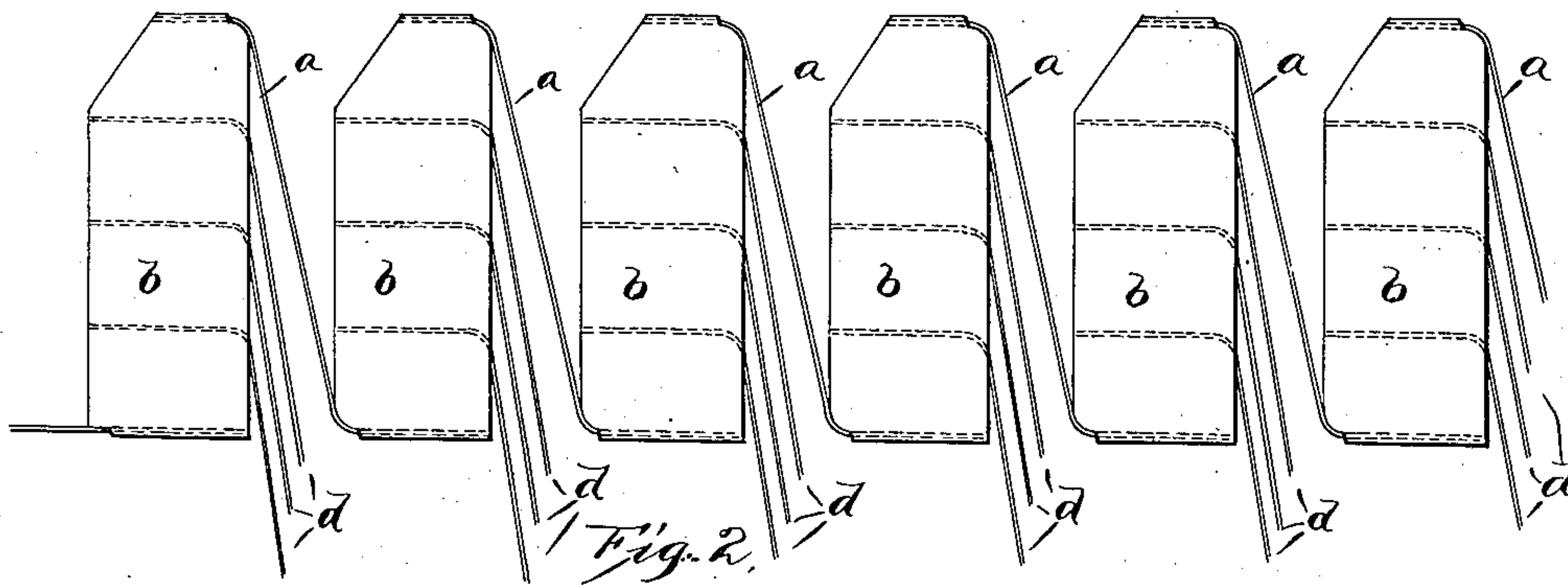
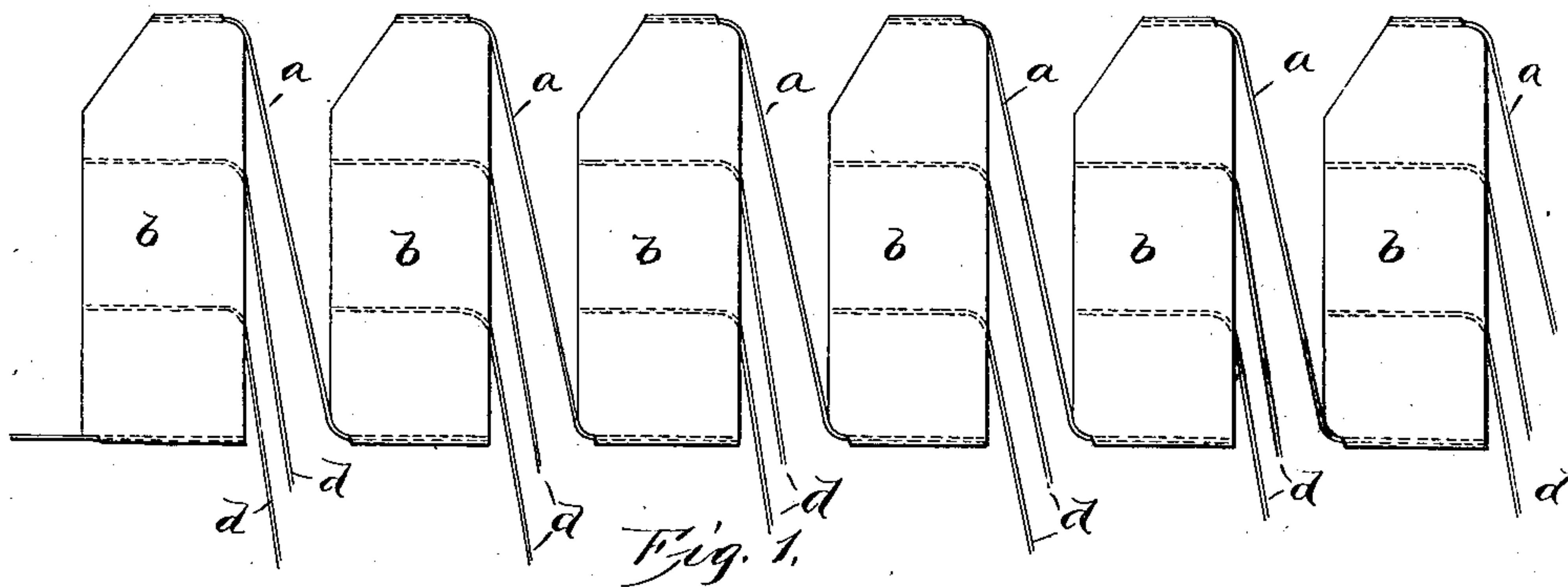


(No Model.)

H. B. COX.  
THERMO ELECTRIC GENERATOR.

No. 434,429.

Patented Aug. 19, 1890.



Witnesses:

J. B. McGinn.

H. E. Decker

Inventor:

H. B. Cox

per

*[Signature]*  
Attorney

# UNITED STATES PATENT OFFICE.

HARRY BARRINGER COX, OF HARTFORD, CONNECTICUT.

## THERMO-ELECTRIC GENERATOR.

SPECIFICATION forming part of Letters Patent No. 434,429, dated August 19, 1890.

Application filed June 13, 1890. Serial No. 355,301. (No model.)

*To all whom it may concern:*

Be it known that I, HARRY BARRINGER COX, of Hartford, in the county of Hartford and State of Connecticut, have invented certain  
5 new and useful Improvements in Thermo-Electric Generators; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it apper-  
10 tains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

This invention relates to certain improve-  
15 ments in thermo-electric generators.

In my application, Serial No. 334,743, dated December 23, 1889, for Letters Patent for an improvement in thermo-electric generators, a single conductor or radiator within the cir-  
20 cuit is shown and described to produce a fall in thermic potential. By experiment it has been found that a series of such conductors or radiators within the circuit produce an improved result; and this invention consists in  
25 a series of conductors or radiators in thermo-electric couples placed within the circuit of the same to produce a fall in thermic potential.

Referring to the accompanying drawings, Figure 1 illustrates in elevation a series of  
30 thermo-couples each provided with two radiators or conductors. Fig. 2 illustrates the same provided with three radiators or conductors. Fig. 3 illustrates the same provided with four radiators or conductors.

35 Each thermo-couple consists of the two unlike elements *a b*, composed of unlike metals joined together in a suitable manner. Of course in forming a pile any number of these

couples are employed, the strips *a* extending from one end of one large element *b* to 40 the opposite end of the next adjoining element *b*, and heat is applied from any suitable source to the junctions at corresponding ends of the elements. The opposite corresponding junctions are to be kept at as low tem- 45 perature as possible.

A series of conducting or radiating strips *d*, of good conducting metal, are electrically connected with and extend from each large element *b*, between the hot and cold junc- 50 tions thereof, toward the source of cold. The object of the series of radiators and conductors is to produce a fall in thermic potential in the circuit.

What I claim is—

1. In thermo-electric couples, a series of ra- 55 diators or conductors placed within the circuit of the couple to produce a fall in thermic potential, substantially as described.

2. In a thermo-electric generator, a series 60 of radiators within the circuit of each couple to produce a fall in thermic potential, substantially as described.

3. A thermo-couple having a series of con- 65 ductors or radiators in the circuit thereof and extending therefrom between the hot and cold junctions thereof, substantially as described.

In testimony that I claim the foregoing as my own I affix my signature in presence of 70 two witnesses.

HARRY BARRINGER COX.

Witnesses:

O. E. DUFFY,  
C. M. WERLE.