

No. 790,979.

PATENTED MAY 30, 1905.

H. H. PEIRCE & E. A. TAYLOR.

AIR COOLING DEVICE.

APPLICATION FILED MAR. 17, 1904.

Fig. 1.

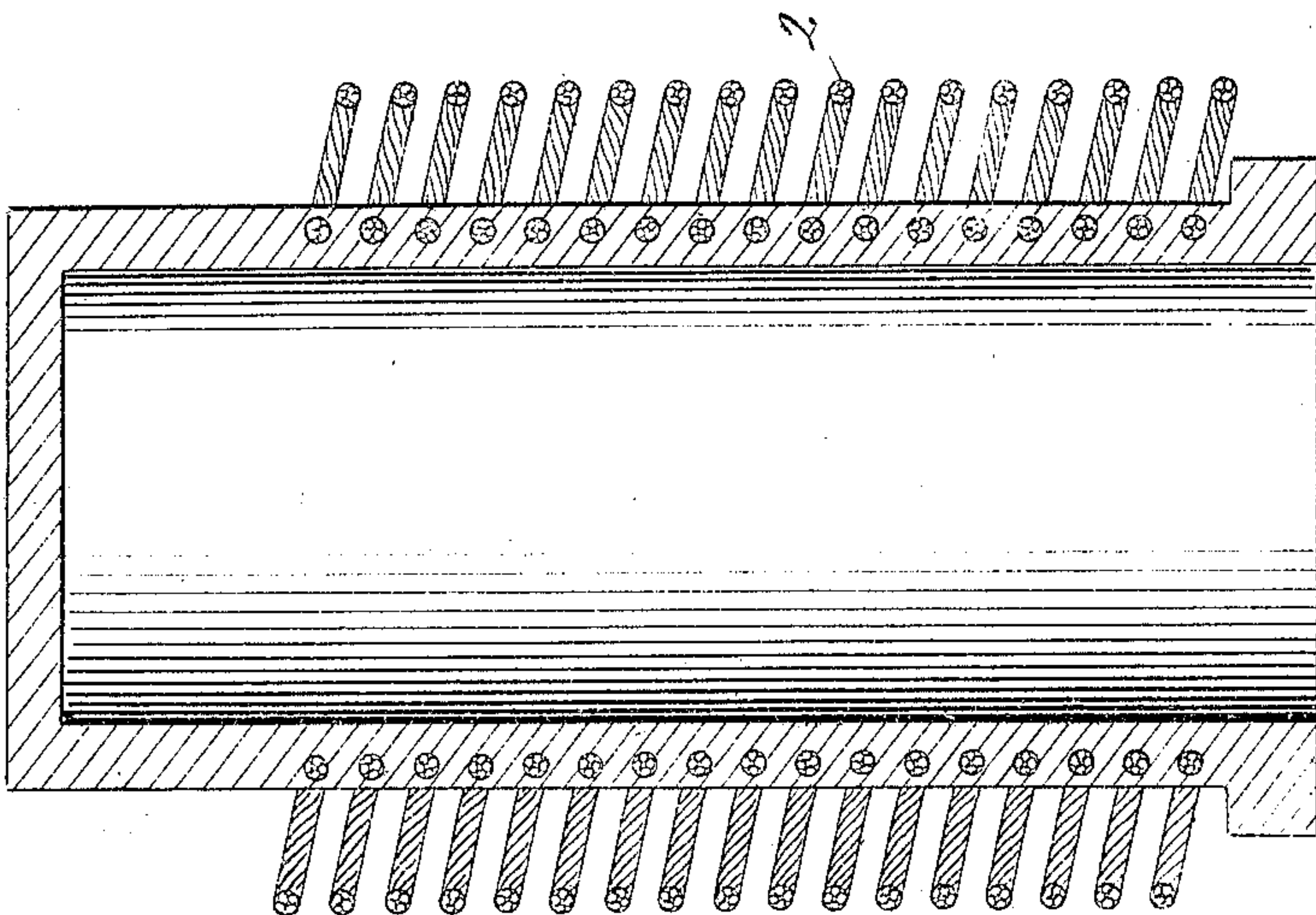


Fig. 2.

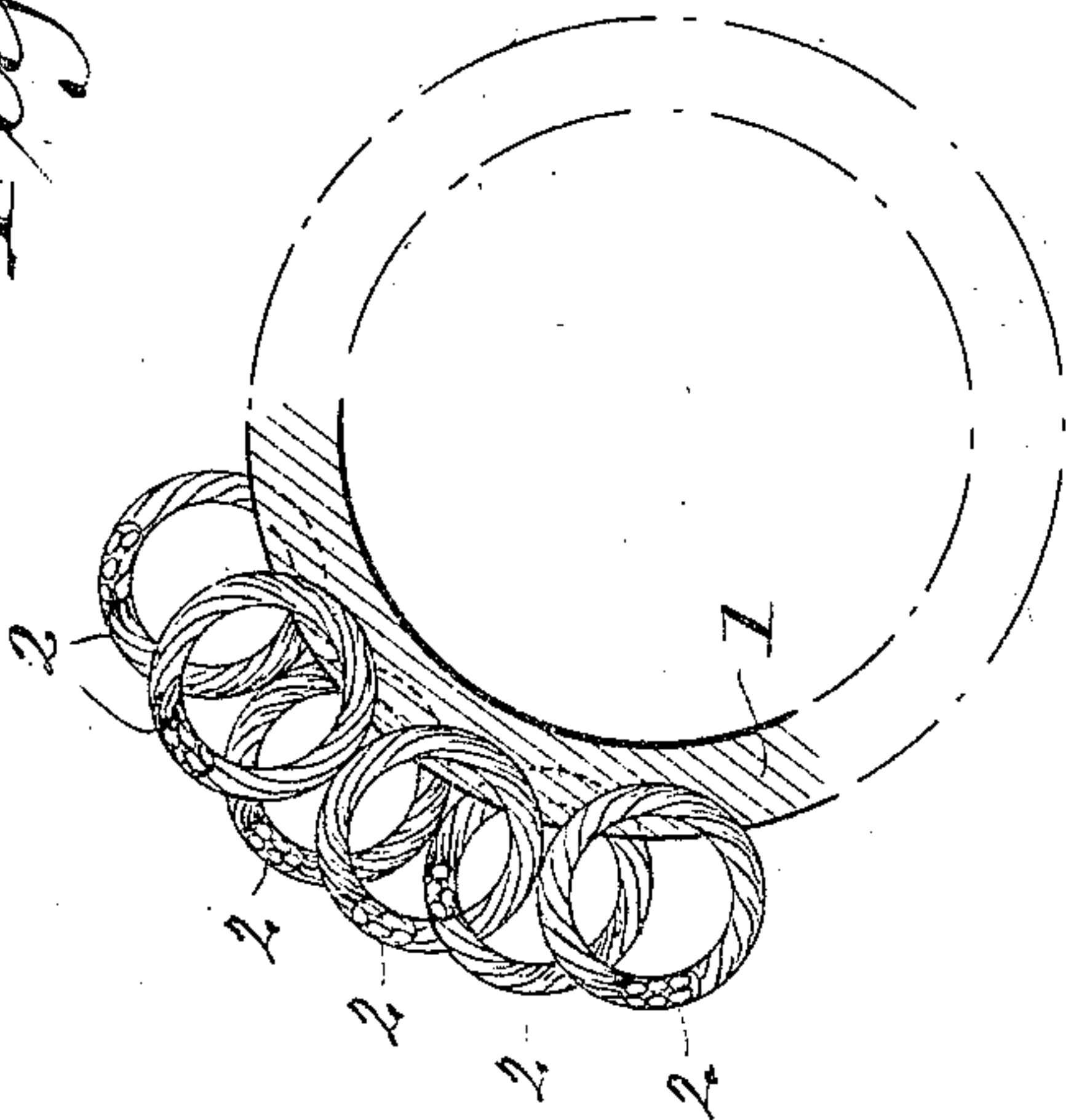
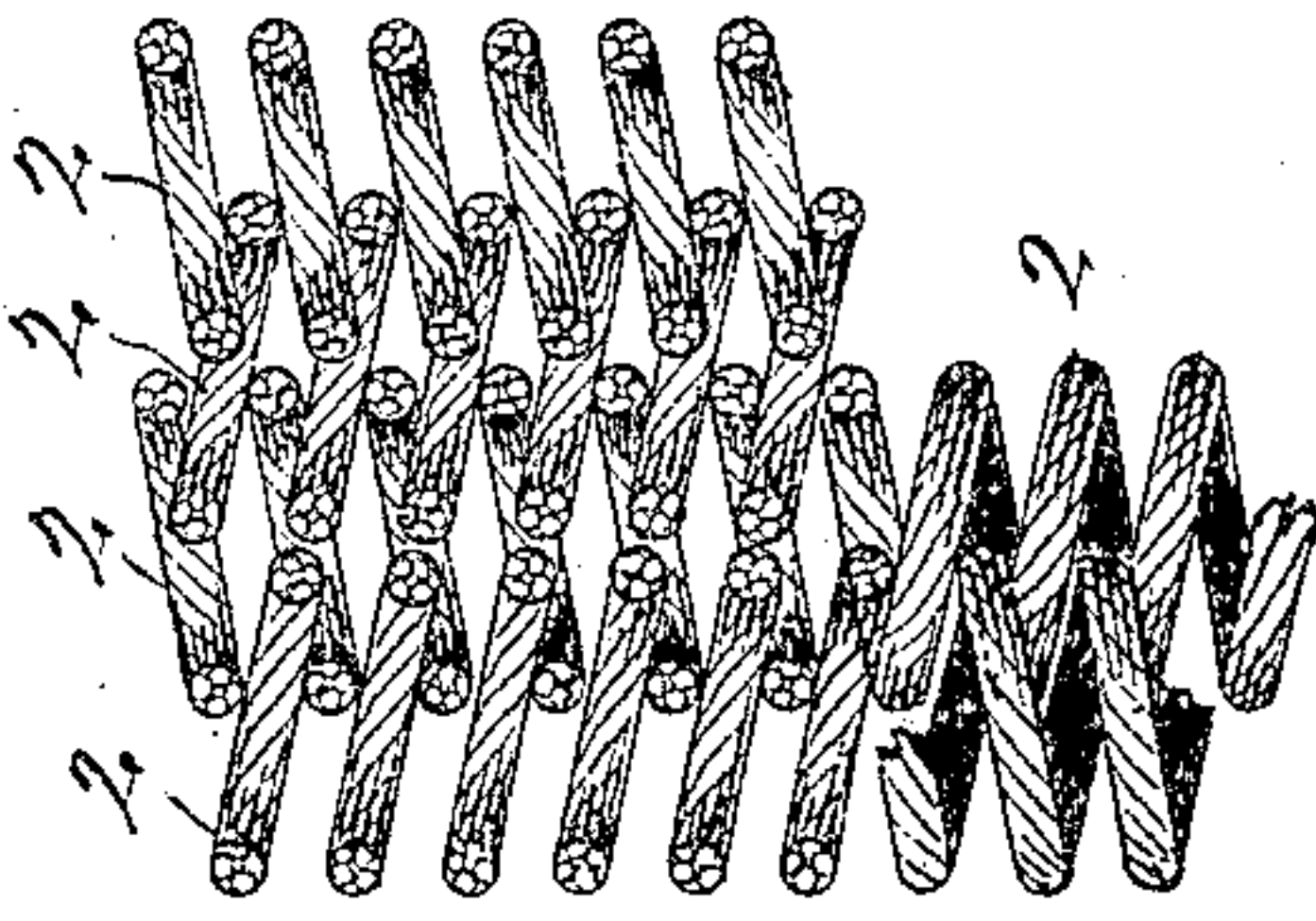


Fig. 3.



Witnessed
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UNITED STATES PATENT OFFICE.

HIRAM H. PEIRCE AND EDWARD A. TAYLOR, OF RACINE, WISCONSIN.

AIR COOLING DEVICE.

SPECIFICATION forming part of Letters Patent No. 790,979, dated May 30, 1905.

Application filed March 17, 1904. Serial No. 198,579.

To all whom it may concern:

Be it known that we, HIRAM H. PEIRCE and EDWARD A. TAYLOR, citizens of the United States, and residents of Racine, in the county of Racine and State of Wisconsin, have invented certain new and useful Improvements in Air Cooling Devices; and we do hereby declare that the following is a full, clear, and exact description thereof.

Our invention has especial reference to devices for cooling the cylinders of gasolene-engines; and it consists in certain peculiarities of construction in said cylinders, as will be fully set forth hereinafter in connection with the accompanying drawings and subsequently claimed.

In the said drawings, Figure 1 is a central vertical sectional view of a gasolene-engine cylinder embodying our present invention. Fig. 2 is a detail view illustrating the manner in which the coils are embedded in the cylinder, and Fig. 3 is another detail view showing how the several series of coils intermesh with each other.

In engines of the explosive type employing gas or gasolene one great objection lies in the rapid heating of the cylinders, and various means have been devised for effecting the necessary reduction of temperature. This we propose to accomplish in the following manner, referring by numerals to the parts shown in the said drawings: 1 designates a metal cylinder, and 2 2 2 indicate series of coils of wire, preferably continuous, and we prefer to use a compound wire composed of several strands

twisted together, as shown. The cylinders are usually made of cast-iron, and in carrying our invention into effect we take a number of sections of the coiled wire and mesh these sections together laterally, thus forming a hollow cylinder, as indicated in Figs. 2 and 3, and place this wire cylinder in the sand, which is shaped to receive the molten iron from which the metal cylinder is to be formed, so that when this is done the inner circle of the wire cylinder is embedded in the metal cylinder, as best indicated in Fig. 2. In this manner a radiating-surface of large area is provided close to the heated body without greatly adding to the weight and insuring a free and ready circulation of air between and around the coils.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

The combination with a metal cylinder of sections of coiled wire, said sections being laterally meshed together to form a skeleton cylinder, surrounding said metal cylinder, and partially embedded therein.

In testimony that we claim the foregoing we have hereunto set our hands, at Racine, in the county of Racine and State of Wisconsin, in the presence of two witnesses.

HIRAM H. PEIRCE.
EDWARD A. TAYLOR.

Witnesses:

W. H. CARPENTER,
MARY E. MORRISSEY.