March 31, 1931. A. CONEJOS 1,799,039

HEAT EXTRACTOR

Filed Sept. 16, 1929

Fig. 1.

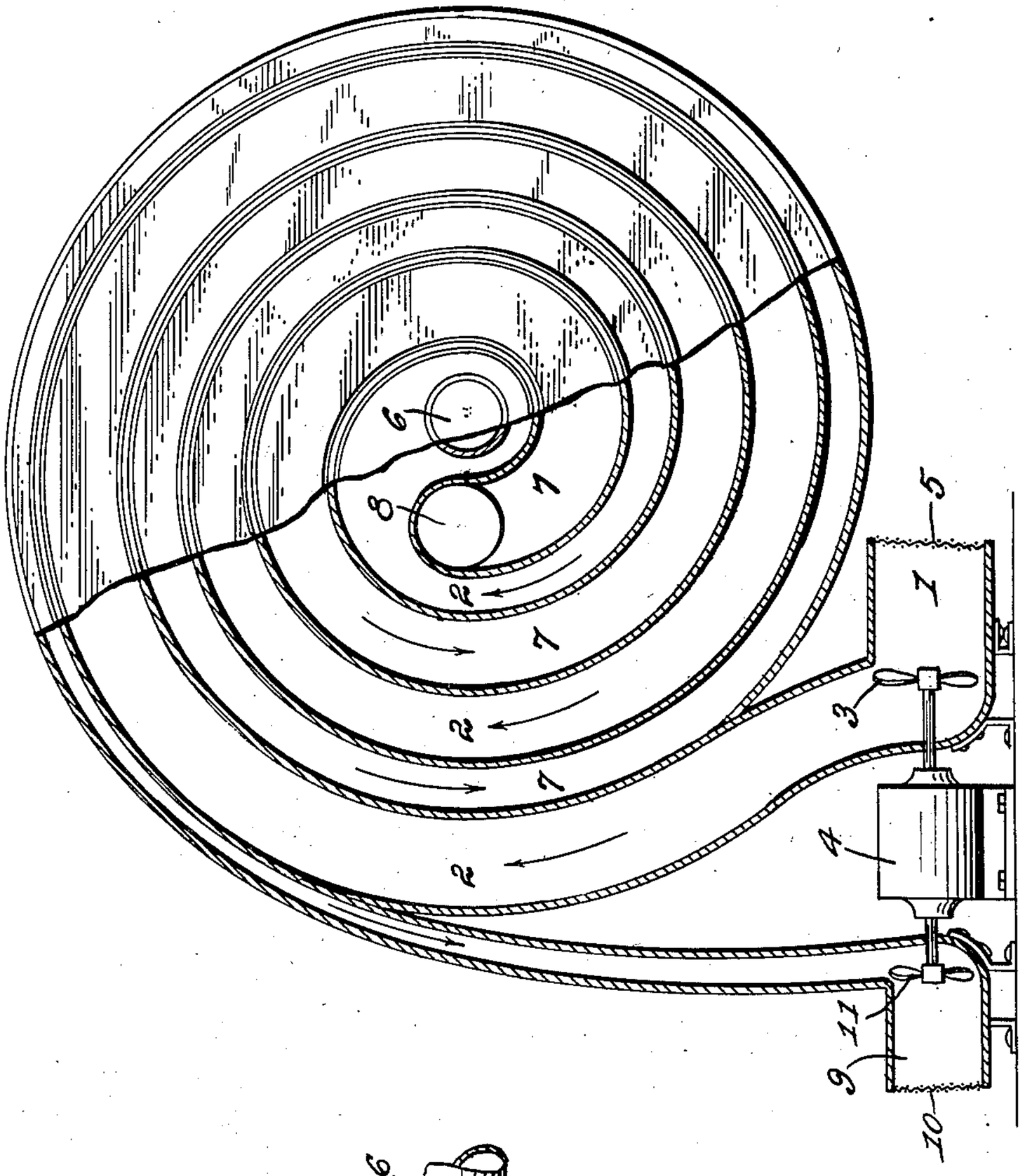
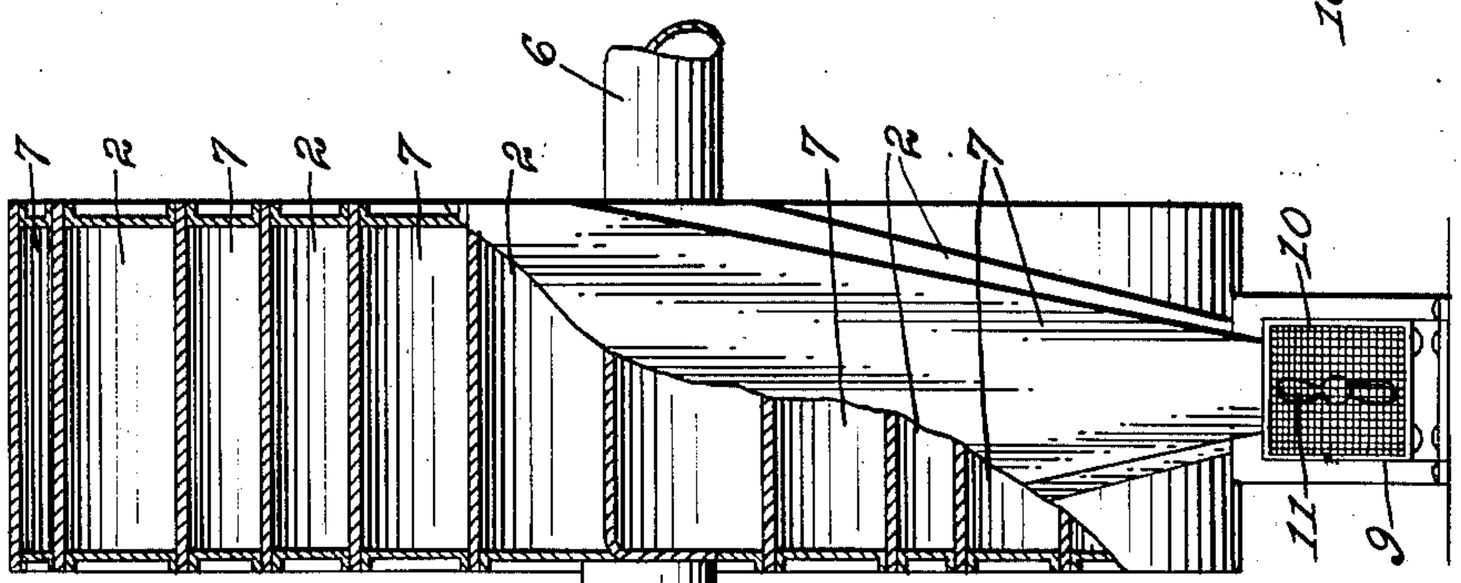


Fig. 2.



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UNITED STATES PATENT OFFICE

ANTHONY CONEJOS, OF NEW YORK, N. Y.

HEAT EXTRACTOR

Application filed September 16, 1929. Serial No. 393,044.

My present invention has reference to a neat extractor or what may be more properly termed a heat exchange, the object being to provide a device that includes spirally wound conduits, the end of one of such conduits having arranged therein a fan for creating a forced draft, the end of the second conduit having arranged therein a fan for creating a suction, the forced draft fan forcing heated gases through the conduit connected therewith and directing the same outwardly therefrom, after such gases have passed through all of the spiral branches of the conduit, the end of the second conduit having connected thereto a pipe for the admission of gases which are drawn through the spiral branches of the conduit by the suction fan, such gases being heated to a determined degree by the heated gases which are forced out of the device.

To the attainment of the foregoing the invention consists in the improvement hereinafter described and definitely claimed.

In the drawings:

Figure 1 is a side elevation of my improvement with parts broken away and parts in section.

Figure 2 is an end view thereof, parts being also broken away and in section.

As disclosed by the drawings the body of the improvement is constructed of side plates or discs which have welded or otherwise rigidly secured in their inner faces spirally wound conduits. The end 1 of one of the spirally wound conduits 2—2—2 is screened but has arranged therein a suction fan 3 that is driven by a suitable motor 4. The screen for the outer face of the horizontal branch or end 1 of the conduit 2 is indicated for distinction by the numeral 5, and the fan 3 is designed to create a suction for forcing a heated gas through the conduits 2 and through an outlet pipe 6 connected to one side of the casing for the conduits. The second series of conduits 7—7—7 can be larger than the conduits 2 and the inner branch 7 of these conduits has an opening for a pipe 8 that provides a passage for non-heated gases or if desired, for the passage of air. The end or outer conduit 7 has an angle longitudinal enlarged branch 9 that extends in an opposite direction from the end 1 of the conduits 2, the end of the said branch 9 being provided with a screen 10. In the branch 9 there is arranged a suction fan 11 which is also operated by the motor 4.

With my improvement it will be seen that the heated gases are circulated into the branch 1 by the fan 3 and from thence are conducted circularly around the spiral conduits 2 before the same find an outlet through the pipe 6. The suction fan 11 will draw non-heated gases through the pipe 8 and through the conduits 7. These non-heated gases contacted by the division wall between the conduits 2 and 7 will be heated to a determined degree by the heated gases that are forced out of the improvement. The construction and advantages of the invention will, it is thought, be readily apparent to those skilled in the art to which such invention relates without further description.

Having described the invention, I claim:

A heat extractor comprising a circular casing, a power source located adjacent the casing, inlet and outlet pipes connected to the sides of the casing and centrally thereof, spiral conduits located in the casing and having one of their ends connected to the pipes and their opposite ends enlarged and annularly disposed and positioned at opposite sides of the power source, fan shafts connected to the power source and extending into the annularly disposed ends of the conduits, and suction fans secured to the shafts within the conduits to drive heated gases through one of the conduits to the outlet pipes and to draw non-heated gases through the inlet pipe and to the other conduit to heat the last mentioned gases from the heat derived from the heated gases first mentioned.

In testimony whereof I affix my signature.

ANTHONY CONEJOS.