

(No Model.)

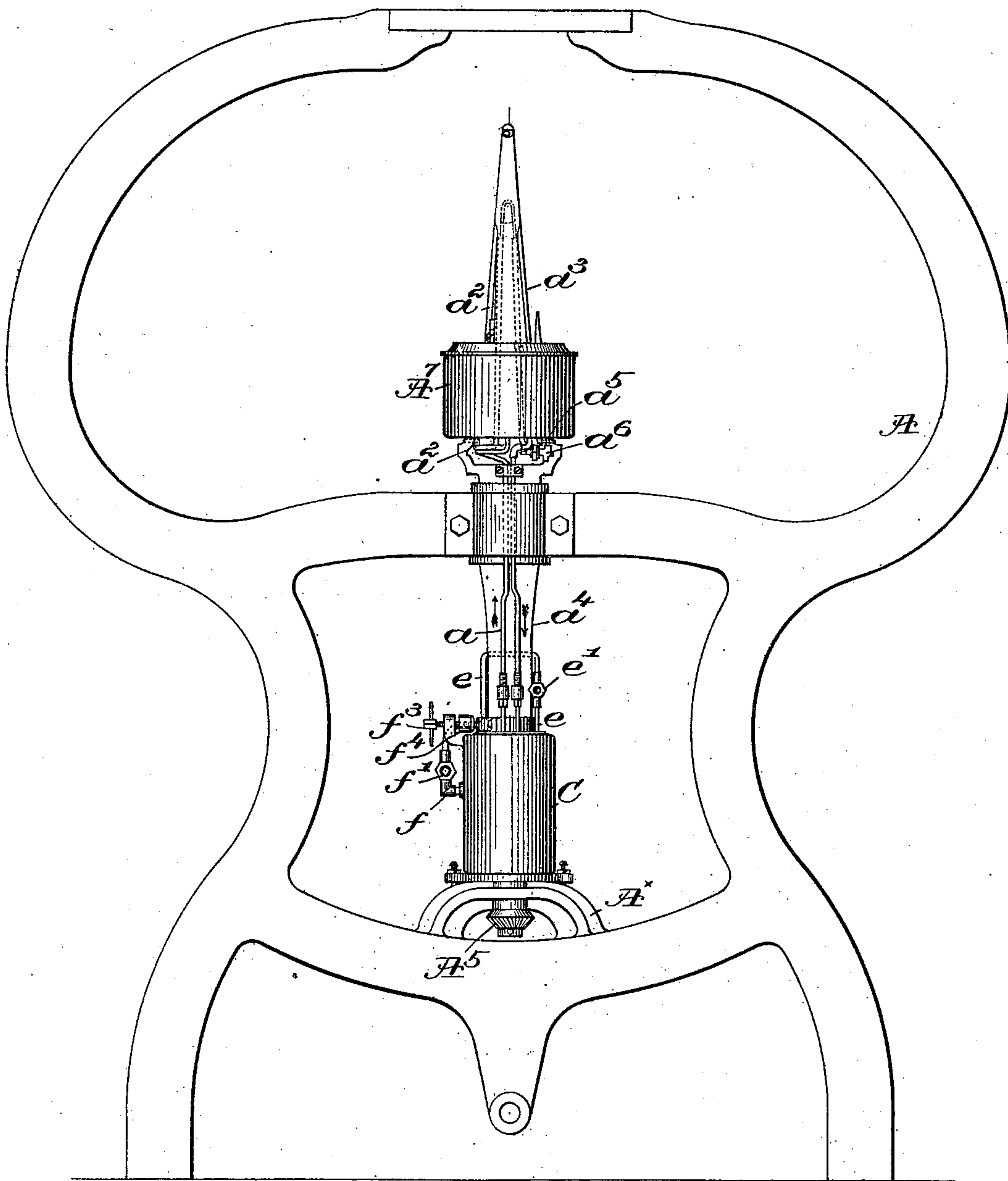
3 Sheets—Sheet 1.

W. O. HILDRETH.
SOLE SEWING MACHINE.

No. 503,084.

Patented Aug. 8, 1893.

Fig:1.



witnesses.

Louis N. Sowell
Fred S. Grumbaf.

Inventor:

William O. Hildreth.
by Crosby & Gregory *Prints.*

(No Model.)

3 Sheets—Sheet 2.

W. O. HILDRETH.
SOLE SEWING MACHINE.

No. 503,084.

Patented Aug. 8, 1893.

Fig. 2.

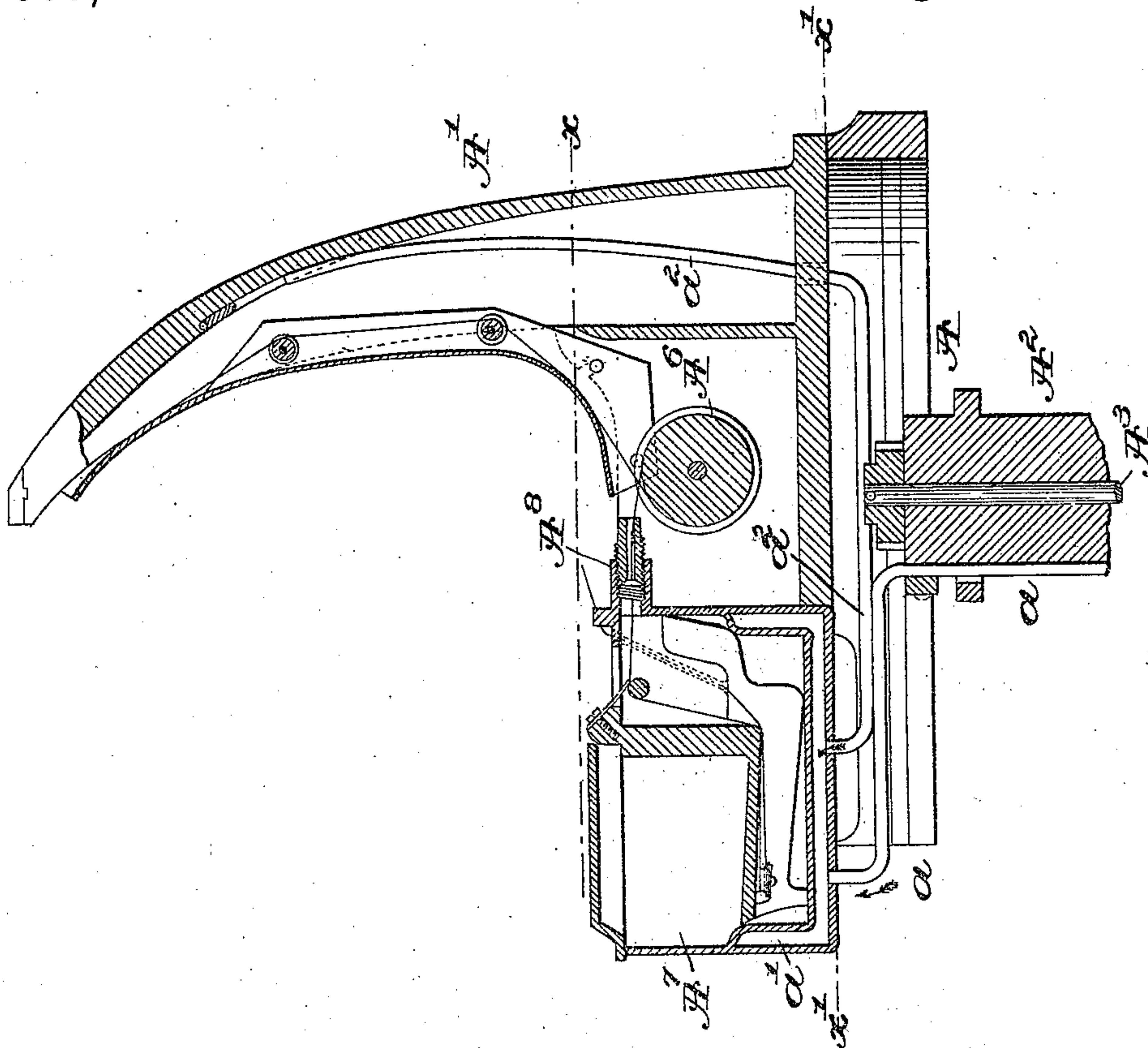
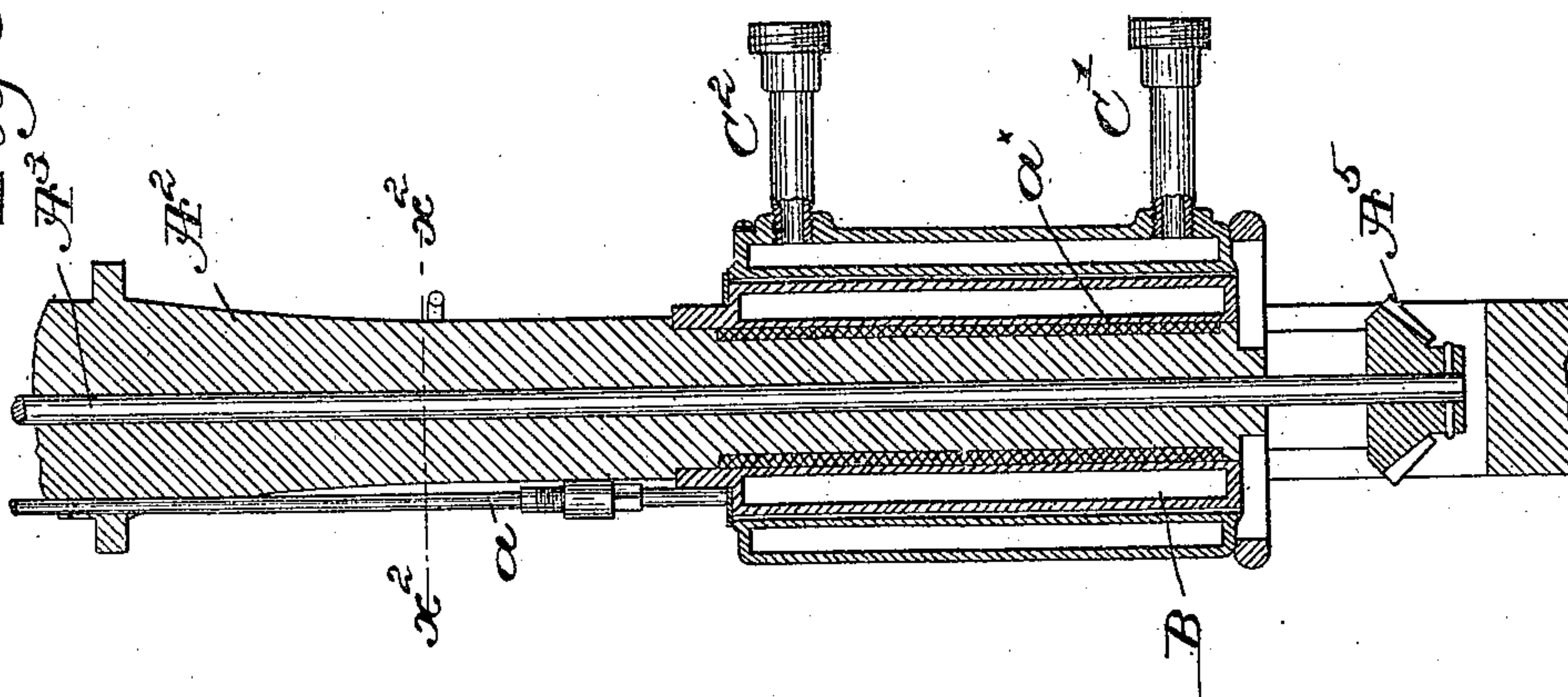


Fig. 3.



Witnesses.

Louis N. Gould
Fred S. Grunhof

Inventor:

William O. Hildreth,
by Crosby & Gregory Attys.

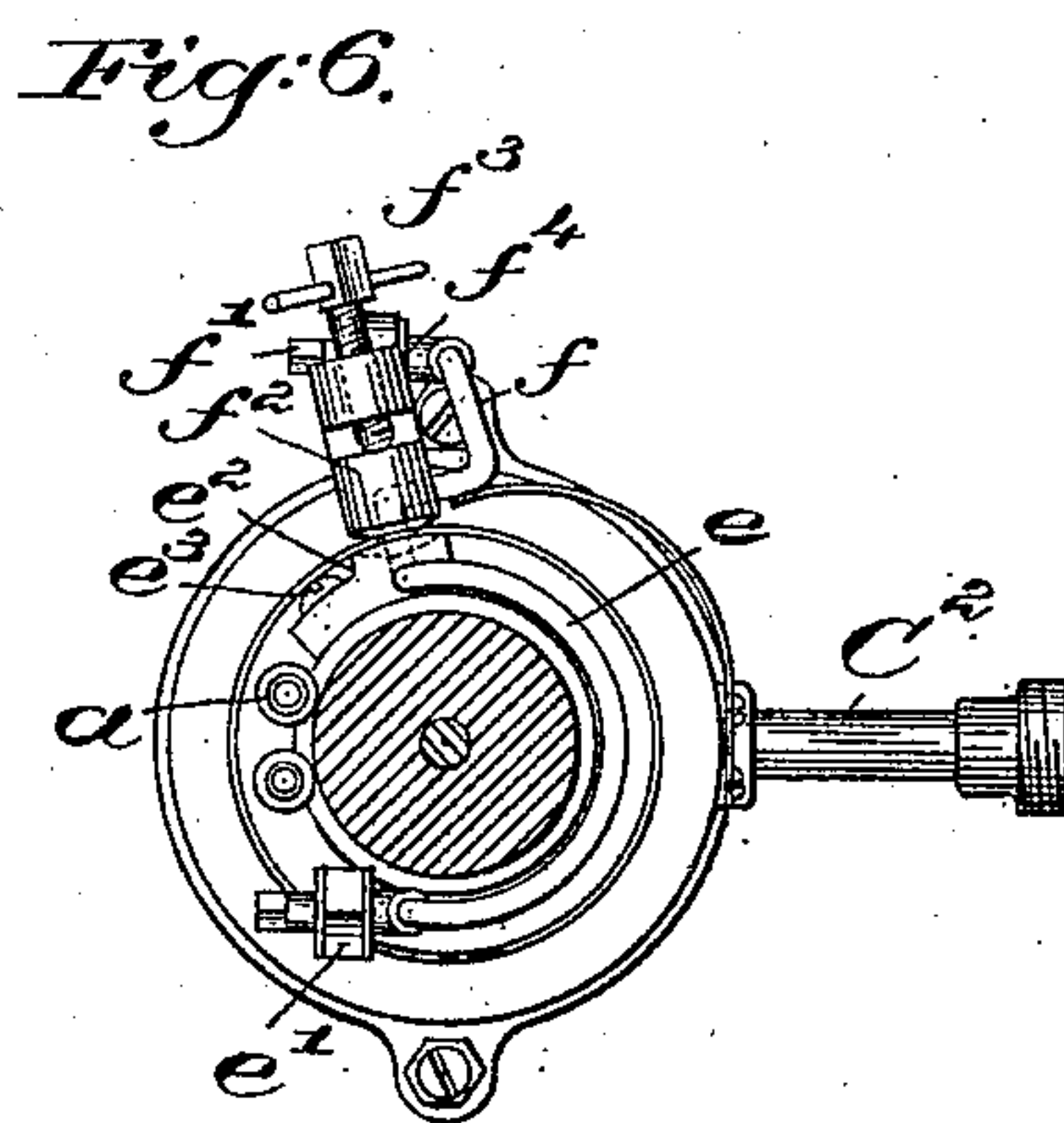
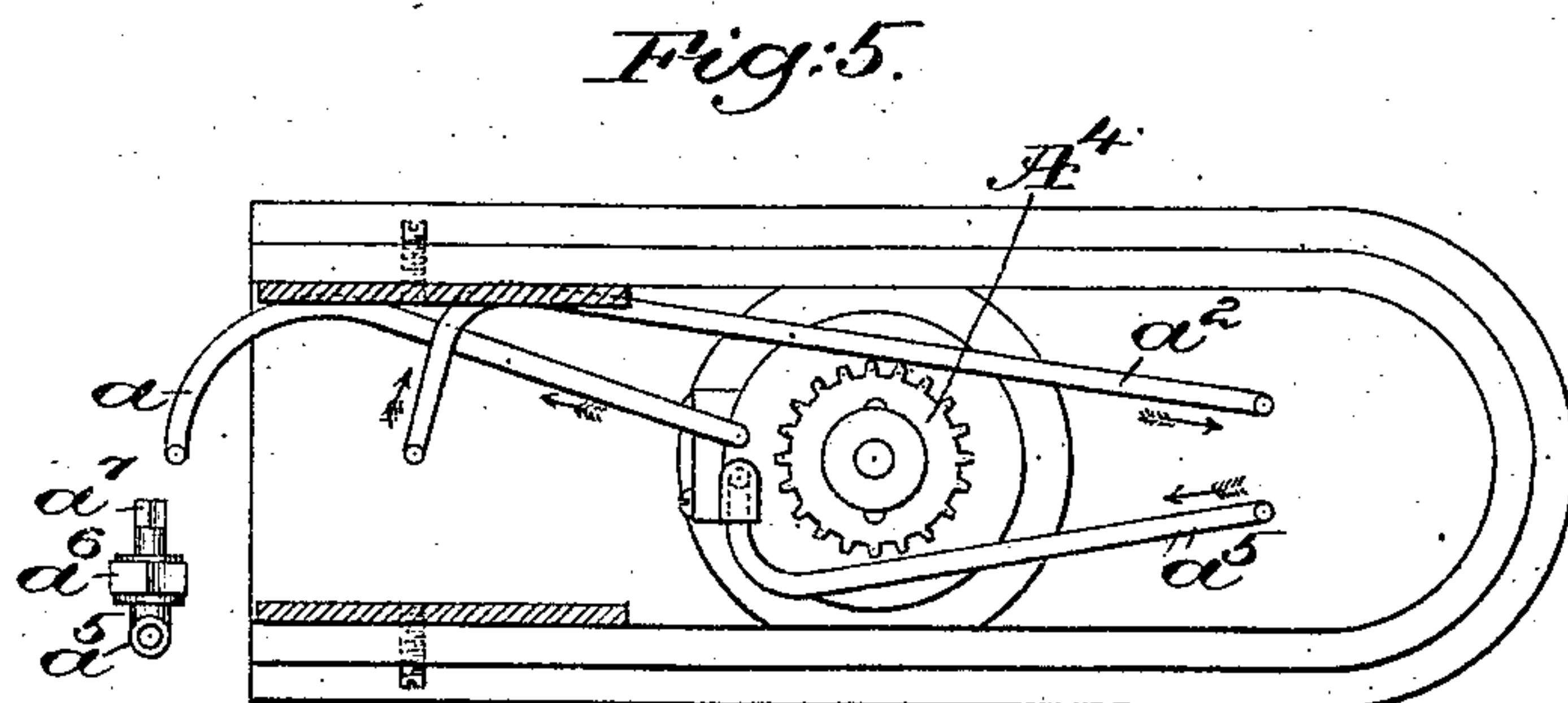
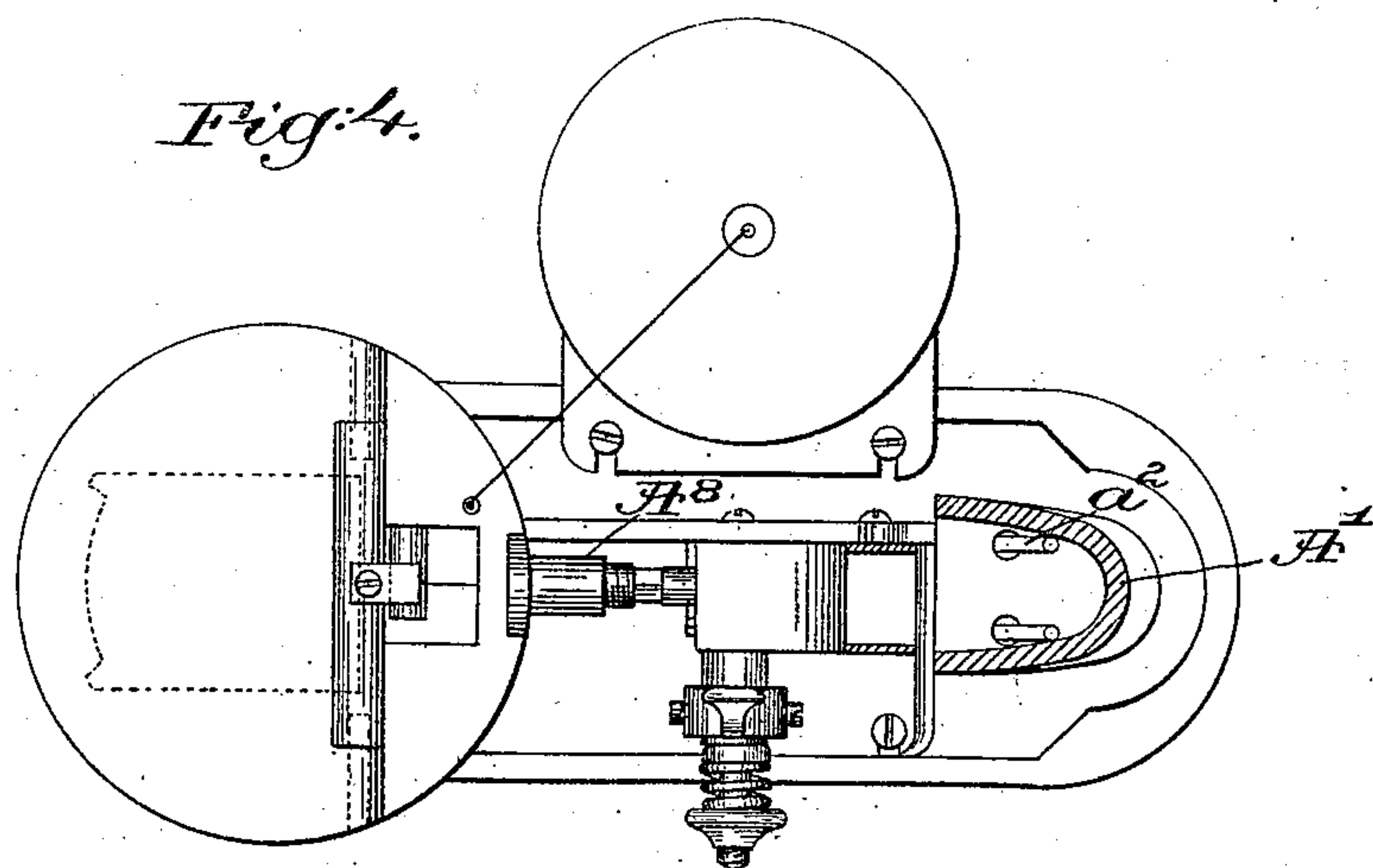
(No Model.)

3 Sheets—Sheet 3.

W. O. HILDRETH.
SOLE SEWING MACHINE.

No. 503,084.

Patented Aug. 8, 1893.



witnesses.

Witnesses.
Louise N. Gould
Fred S. Gould of.

Inventor:

William O. Hildreth;
by Crosby & Gregory attys.

UNITED STATES PATENT OFFICE.

WILLIAM O. HILDRETH, OF LAWRENCE, ASSIGNOR TO THE STANLEY MANUFACTURING COMPANY, OF BOSTON, MASSACHUSETTS.

SOLE-SEWING MACHINE.

SPECIFICATION forming part of Letters Patent No. 503,084, dated August 8, 1893.

Application filed March 6, 1893. Serial No. 464,729. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM O. HILDRETH, of Lawrence, Essex county, Massachusetts, have invented an Improvement in Sole-Sewing Machines, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention relates to that class of sole sewing machines using a rotating horn, and has for its object to provide improved means for heating the horn whereby the wax is kept at the proper temperature for sewing.

Prior to my invention the horn has been kept warm by a lamp; by a gas flame; and by steam made to circulate through suitable pipes; but in accordance with my invention I depend upon hot water to supply the necessary heat, and I have arranged to heat the water by conduction of heat from a water jacket surrounding a reservoir surrounding and rotating with the horn spindle. In my invention there are no joints to leak and no packing to deteriorate.

Figure 1, in front elevation, shows a sufficient portion of a sole sewing machine to enable my invention to be understood; Fig. 2, an enlarged longitudinal section of the upper part of the horn; Fig. 3, a like section but of the lower part of the horn, and the bearing for the lower end of the vertical shaft to aid in rotating the usual whirl, not shown, in the tip of the horn. Fig. 4 is a section below the line x Fig. 2; Fig. 5, a section below the line x' , and Fig. 6, a section below the line x^2 , Fig. 3.

The frame-work A, bearing block A^x , horn A' , horn spindle A^2 , upright shaft A^3 extended through the horn spindle and provided at one end with a gear A^4 and at its other end with a gear A^5 , the tension device A^6 , wax pot A^7 , and stripper A^8 , are and may be all as usual.

In accordance with my invention I have applied to the horn spindle a cylindrical reservoir B, and for the best and most economical results I have applied between the reservoir and the horn spindle a non-heat conducting gasket a^x composed preferably of asbestos, and shown in Fig. 3. The reservoir has extended from its upper end a suitable pipe a which enters the chamber a' , forming, as

shown, the bottom of the wax pot. A pipe a^2 , see Figs. 1 and 5, leads from the chamber a' , up inside the horn and down again as at a^3 , joining the pipe a^4 , which has its lower end extended into the reservoir, in practice, to a point lower down than the end of pipe a . Water heated in the reservoir will, by the rising of the hot water in the pipe a , cause a circulation of the hot water from the reservoir into the chamber a' , out through pipes a^2 , a^3 , and back again through pipe a^4 to the reservoir.

The chamber a' of the wax pot has at its front end a short pipe a^5 , provided with a stop cock a^6 , having a plug a^7 which may be turned to open the valve and draw water from the chamber as may be desired.

The hot water reservoir B is surrounded by a stationary jacket C secured in suitable manner to the stand A^x . This jacket by pipe C' is in communication with a source for supplying hot water or steam, and with a pipe C^2 for the escape of steam from the jacket, the hot jacket communicating its heat to the reservoir, and the water therein.

To prevent the entrance of dust between the exterior of the reservoir, and the interior of the jacket I prefer to place a washer d on the top of the reservoir to cover the joint between it and the jacket as in Fig. 3.

When it is desired to heat the horn quickly, as in the morning to commence work, I have provided means whereby the steam may be admitted directly into the water. For this purpose I use an auxiliary pipe e having a stop cock or valve e' , one end of said pipe, the right hand end Fig. 1, being connected with the reservoir, the other end of said pipe being carried over to the other side of the horn spindle and connected to a block e^2 attached to the spindle by a screw e^3 , said block having preferably a concaved inlet or port, as best shown in Fig. 6.

The jacket has an auxiliary pipe f provided with a stop cock or valve f' , the upper end of the pipe being attached to a nozzle f^2 , the end of which is shaped to fit the mouth of the block e^2 , and adjusting device shown as a screw f^3 , extended through an ear f^4 attached to the jacket, being adapted to act upon and

force the nozzle into said mouth when the horn is rotated far enough to bring the mouth of the block opposite the said nozzle.

The nozzle and block having been put together, and the valves f' and e' opened, steam may be forced into the reservoir to heat the water, and this done the valves e' and f' , will be closed and the screw withdrawn, leaving the machine ready to be started, and there-
10 after the water, the reservoir having been previously properly filled, will be kept hot by the steam, or it may be hot water, in the jacket by conduction.

Having described my invention, what I
15 claim as new, and desire to secure by Letters Patent, is—

1. A rotating horn having an attached hollow reservoir for the reception of a liquid,—
20 and pipes leading liquid therefrom to the part of the horn to be heated and back therefrom into said reservoir, combined with an inclosing hollow jacket adapted to heat the liquid in the said reservoir by conduction, as described.

2. A rotating horn having an attached hollow reservoir for the reception of a liquid,—
25 and pipes leading liquid therefrom to the part of the horn to be heated and back therefrom into said reservoir, and the inclosing hollow jacket, combined with a non-conducting gas-
30 ket between the horn spindle and reservoir, substantially as described.

3. The stationary hollow jacket, its auxiliary outlet pipe provided with an open delivery nozzle, and the horn spindle, its hot water
35 reservoir, and auxiliary pipe e connected with said reservoir and provided with a valve, combined with means to put the delivery nozzle of said auxiliary outlet pipe and said auxiliary pipe e , into communication with each
40 other, as and for the purposes set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM O. HILDRETH.

Witnesses:

MERRILL N. HOWE,
FRANK F. WARDEN.