

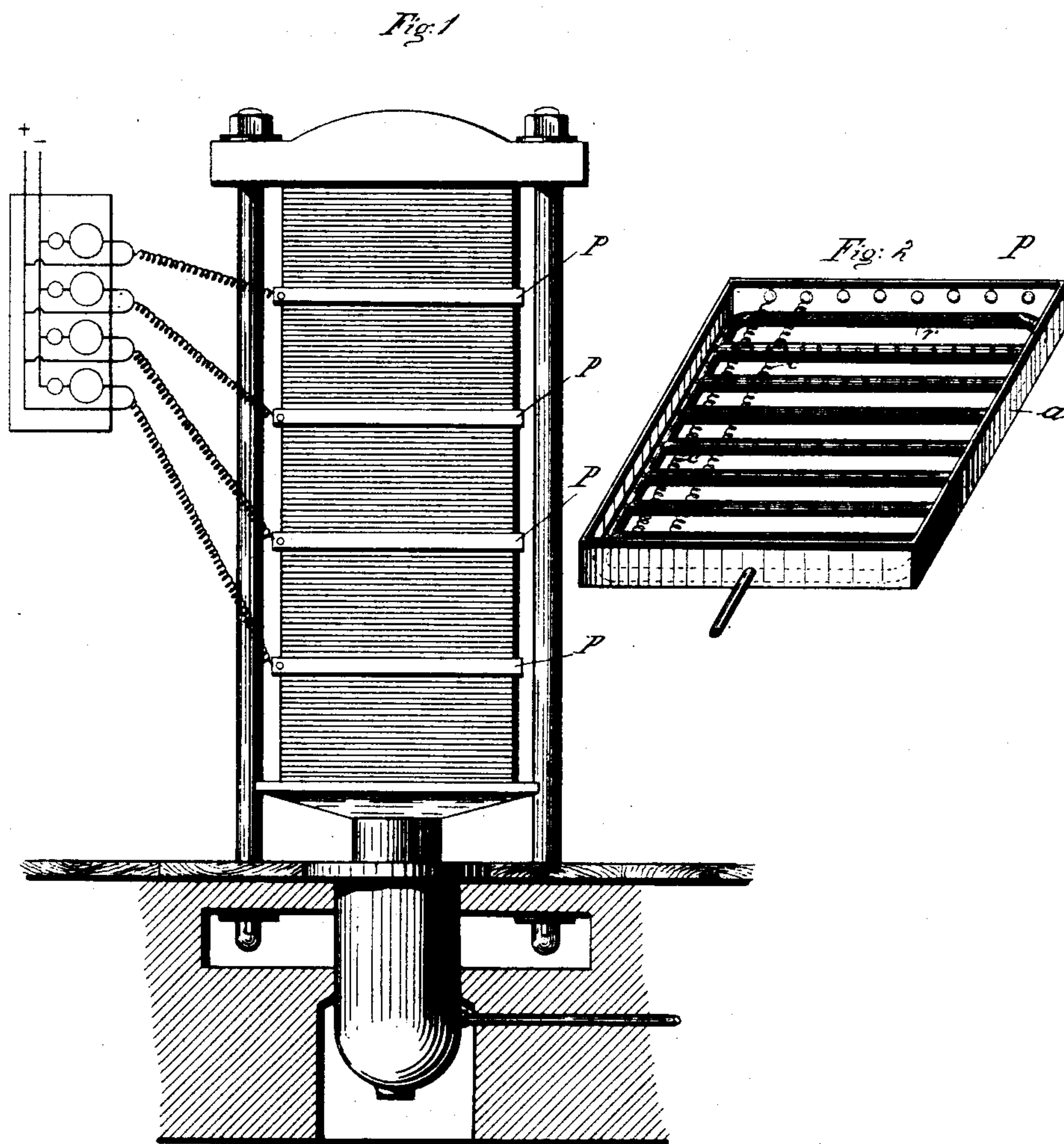
(No Model.)

E. CLAVIEZ.

MACHINE FOR CALENDERING TEXTILE FABRICS.

No. 539,416.

Patented May 21, 1895.



Witnesses:

*E. B. Bolton*

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# UNITED STATES PATENT OFFICE.

EMIL CLAVIEZ, OF CHEMNITZ, GERMANY.

## MACHINE FOR CALENDERING TEXTILE FABRICS.

**SPECIFICATION** forming part of Letters Patent No. 539,416, dated May 21, 1895.

Application filed January 10, 1894. Serial No. 496,402. (No model.) Patented in Germany May 5, 1893, No. 75,371; in France June 20, 1893, No. 231,001; in England July 24, 1893, No. 14,267, and in Switzerland July 24, 1893, No. 7,217.

*To all whom it may concern:*

Be it known that I, EMIL CLAVIEZ, a subject of the King of Saxony, and a resident of Chemnitz, in the Kingdom of Saxony, German Empire, have invented certain new and useful Improvements in Machines for Calendering Textile Fabrics, of which the following is a true specification.

This invention has been patented in Great Britain, No. 14,267, dated July 24, 1893; in Germany, May 5, 1893, No. 75,371; in France, June 20, 1893, No. 231,001, and in Switzerland, July 24, 1893, No. 7,217.

The present invention relates to a new or improved machine for calendering textile fabrics by the aid of an electrical current. The necessary electrical current is obtained from any suitable source and conducted to plates packed in between the material.

In the drawings, Figure 1 is an elevation of a press, showing my invention in use. Figs. 2 and 3 are detail views of part of the apparatus.

In Fig. 1, an old form of press is shown with the material to be calendered in place and between the layers of material are my improved heating sections or plates P electrically connected as shown. Fig. 2 shows the form of plate used for this purpose. This consists of a wrought iron frame provided top and bottom with a lid, thus forming a hollow body. Coils *c* are introduced into the interior of this hollow body and are connected to one another, offering a high resistance to the passage of the electrical current. A grating *r* of tubes is fixed in the interior, the tubes being provided with fine perforations. The ends of the wire coils pass out of a hole made in one side of the frame, so that the inserted stopper (Fig. 3) is in contact with both ends. This stopper is in connection with the electric conductor inclosing both poles, so that by the insertion of the stopper in the frame, the wire coils are brought into the circuit of the electric current. The resistance which the spirals (rheostats) offer to the electric current causes these wires to be heated and to impart

their heat to the top and bottom lids of the heating plate. By means of a switchboard, to which the various conductors are attached, any desirable number of plates can be introduced between the goods, connected to the wires or conductors and heated so that the goods are thoroughly and equally heated. The plates can naturally be heated at any desired time, and the temperature regulated as may be required. After the process is completed, it is desirable to cool the plates and the goods as quickly as possible so that they can be taken apart and be prepared at once for packing. For the purpose of cooling the plates, the grating of tubes *r* has been inserted in the same, one tube projecting out of the frame so that an air pipe can be attached. Compressed air is led through this pipe into the grating and penetrates into the interior of the plate through the fine perforations made in the tubes, drawing the heat off immediately. By opening the stopper, the compressed air can escape, so that a brisk change of air occurs within the plate. The plate, and the goods lying on the same can be cooled to any desired temperature.

With the aid of this new apparatus it is possible to produce beautiful and regularly calendered goods and to assure the same quality at all times and at the same time make it possible to pack the goods immediately on being removed from the press.

What I claim, and desire to secure by Letters Patent of the United States, is—

In combination in a calendering machine, a heating section consisting of a frame, top and bottom plates, electrical connections for heating said frames and a series of perforated pipes within the frame and openings whereby a cooling medium may be forced through said pipes, substantially as described.

In witness whereof I hereunto set my hand in presence of two witnesses.

EMIL CLAVIEZ.

Witnesses:

PAUL SCHULZ,  
ADOLF HERZOG.