

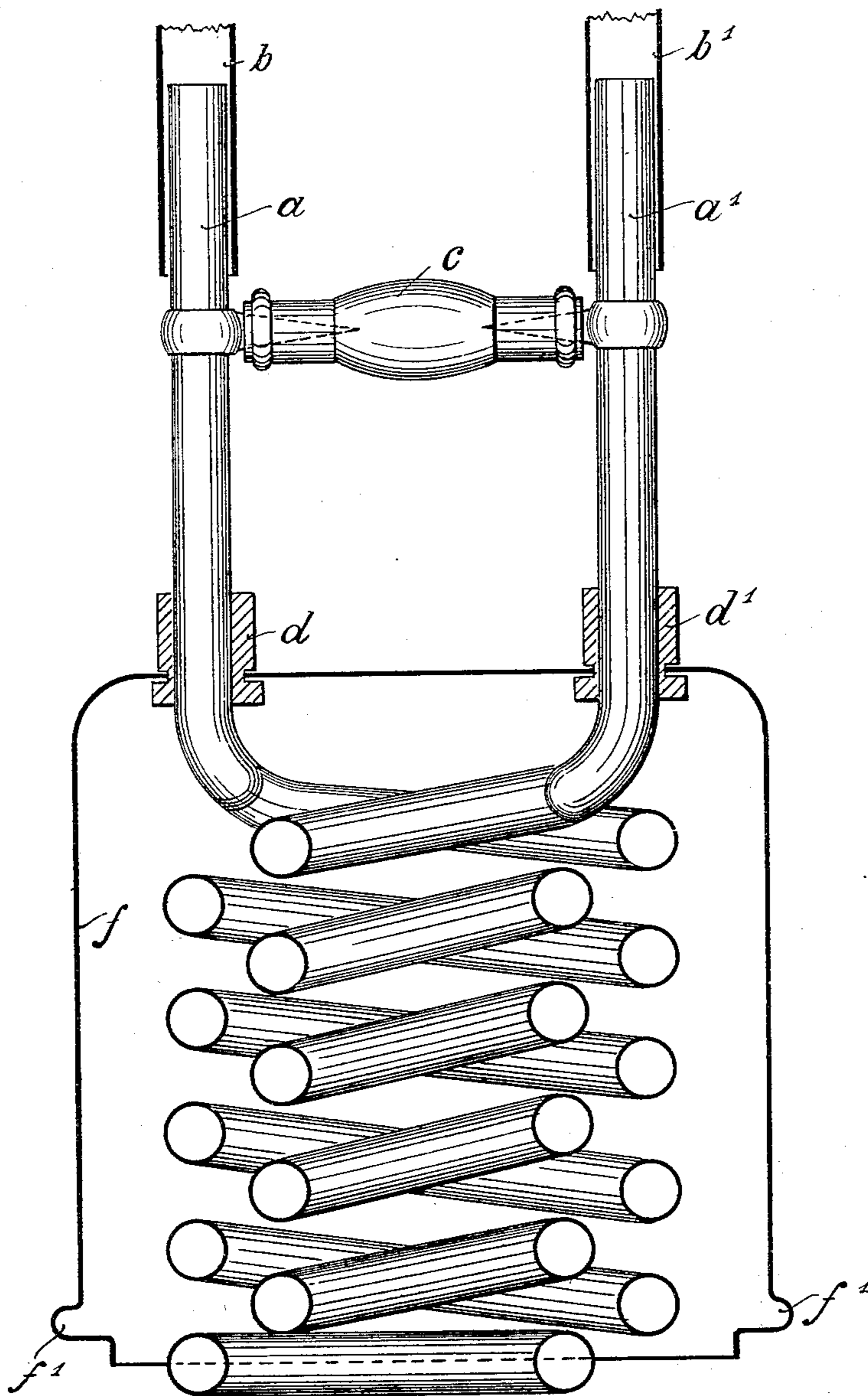
No. 632,854.

Patented Sept. 12, 1899.

A. STÄGE & C. TORNOW.  
APPARATUS FOR HEATING WATER.

(Application filed Apr. 12, 1899.)

(No Model.)



Witnesses:

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Albert Stäge  
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# UNITED STATES PATENT OFFICE.

ALBERT STÄGE AND CARL TORNOW, OF SPANDAU, GERMANY.

## APPARATUS FOR HEATING WATER.

SPECIFICATION forming part of Letters Patent No. 632,854, dated September 12, 1899.

Application filed April 12, 1899. Serial No. 712,829. (No model.)

*To all whom it may concern:*

Be it known that we, ALBERT STÄGE and CARL TORNOW, subjects of the Emperor of Germany, and residents of No. 3 Plantage, Spandau, in the Empire of Germany, have invented certain new and useful Improvements in Apparatus for Heating Water, of which the following is a full, clear, and exact specification.

Our invention has reference to improvements in apparatus for heating water, and relates more especially to the construction and arrangement of parts, as will hereinafter be particularly described, and set forth in the annexed claim, reference being had to the accompanying sheet of drawing, which shows in the figure our improved apparatus in partial sectional elevation.

Over the two ends *a a'*, respectively, of a coil of pipe are placed and fastened the ends of the water-feed and waste pipes *b b'*, respectively. These pipes or tubes must have enough give to allow of the coil of pipe dropping down for a certain distance. Rubber or asbestos tubing may preferably be made use of for this purpose. The two pipe or tube ends are connected by means of the handle *c* and are slidingly arranged in the tubular guide pieces or muffs *d d'*. These latter are secured in the top surface of the vaulted receptacle or hood *f*. Near the lower edge of the said hood

a flange or collar *f'* is provided, which when the apparatus is put into operation rests upon the rim of the cooking-hole of a range or open stove, preventing the hood from dropping into the cooking-hole. Water is allowed to circulate through the coil, the lowermost turn of which is resting upon the burning fuel. Upon the fuel getting consumed the coil of pipe will sink with it, and is thus always kept within the zone of intense heat. The heat within the hood completely envelops the coil of pipe and heats the water within the upper turns not coming in direct contact with the flames.

What we claim, and desire to secure by Letters Patent, is—

In apparatus for heating water the combination of a coil of pipe, a handle connecting the upstanding ends of said coil of pipe, to which are connected the water-feed and waste pipes respectively, a hood or mantle surrounding the coil of pipe and muffs arranged in the top of said hood and guiding the upstanding ends of the said coil of pipe, the parts being constructed, arranged and working substantially as described.

ALBERT STÄGE.  
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Witnesses:

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