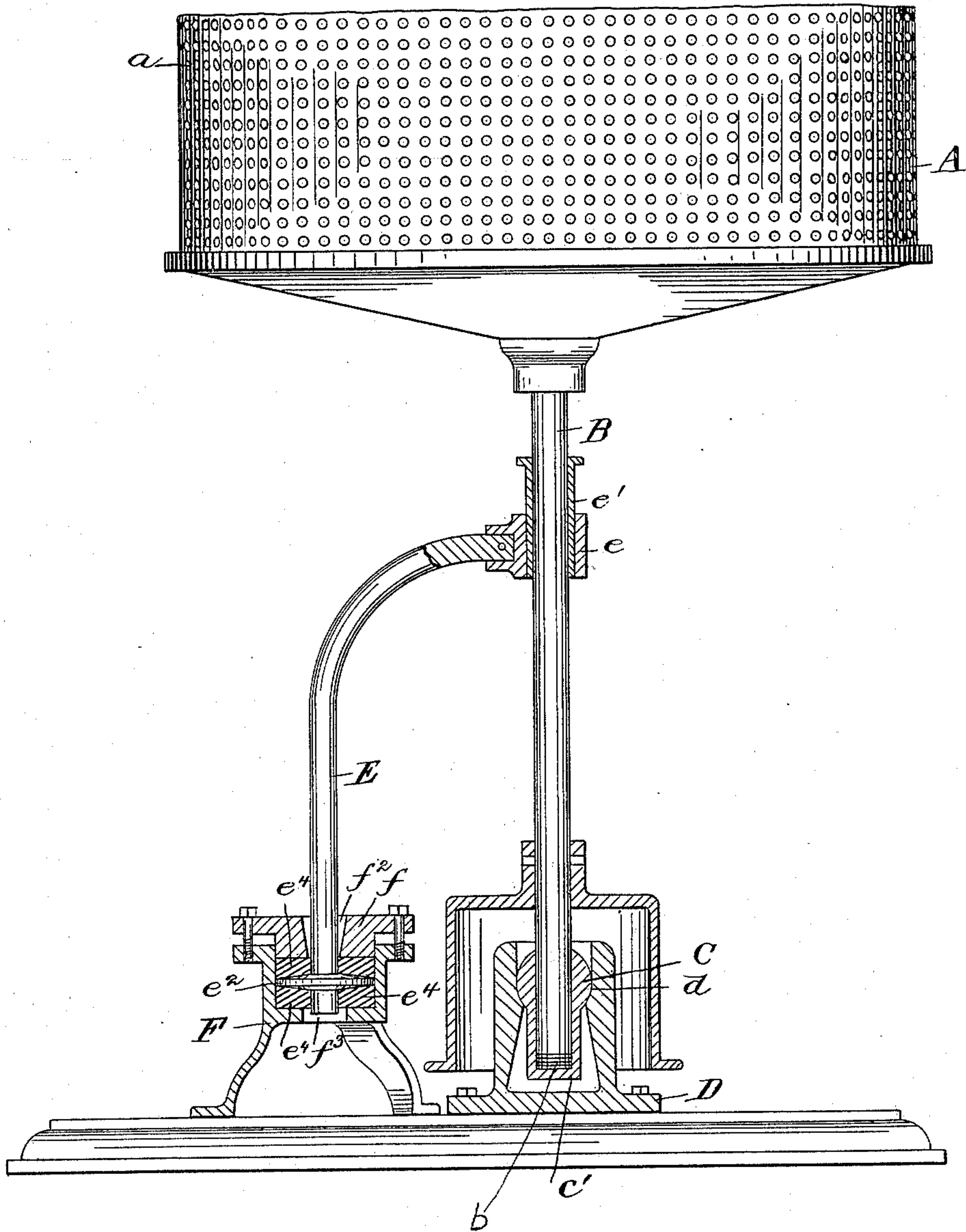


(No Model.)

J. C. & E. F. POLAND.  
BEARING FOR CENTRIFUGAL EXTRACTORS.

No. 509,677.

Patented Nov. 28, 1893.



WITNESSES.

M. W. Jackson.  
A. J. Harrison.

INVENTORS.

J. C. Poland  
E. F. Poland  
by Wright Brown Crossley  
Atty.



# UNITED STATES PATENT OFFICE.

JOHN C. POLAND AND EDWARD F. POLAND, OF BOSTON, MASSACHUSETTS.

## BEARING FOR CENTRIFUGAL EXTRACTORS.

SPECIFICATION forming part of Letters Patent No. 509,677, dated November 28, 1893.

Application filed March 19, 1892. Serial No. 425,574. (No model.)

### *To all whom it may concern:*

Be it known that we, JOHN C. POLAND and EDWARD F. POLAND, of Boston, in the county of Suffolk and State of Massachusetts, have  
5 invented certain new and useful Improvements in Bearings for Centrifugal Extractors, of which the following is a specification.

Our invention relates to apparatus for drying clothing fabrics and like articles by centrifugal action, and has reference more particularly to that class of machines having a basket or circular receptacle situated upon a vertical shaft to which power is applied to revolve the said receptacle.

15 The invention has for its object to construct a machine which will accomplish the desired result with the least strain upon the parts and be simple and efficient in action.

It is well known to those familiar with the  
20 art to which this invention relates, that articles are likely to be placed in the receptacle or basket unevenly, causing a preponderance of weight on one side thereof and when the same is revolving at a high speed a tremendous strain is put upon the supporting shaft, making rapid revolution unsafe and impairing the efficiency of the apparatus. Having  
25 in view these difficulties we have constructed a machine which will absorb, so to speak, the terrific jolts and jars caused by the uneven disposition of articles in the basket.

In a former patent, No. 370,887, granted to J. C. Poland October 4, 1887, a journal bearing is shown which was devised to overcome the difficulty above mentioned, but it  
35 was found that the location of the bearing for the support below that of the bearing for the shaft was detrimental to the operation of the machine.

40 It is the object of the present invention to overcome this objection by locating the bearing of the support at one side of the shaft-bearing whereby the centers of oscillation of the shaft and support are brought into the same horizontal plane.

45 In the accompanying drawings forming a part of this specification, we have shown a contrivance which embodies the principle of our invention, although it will be obvious that

modification in detail of construction may be 50 made without departing from the spirit of the invention.

A represents the circular basket having perforations *a* for the escape of moisture. An upright shaft B is suitably fixed in the 55 bottom of the basket and extends downward through ball-shaped step C and into a downwardly projecting portion thereof, designated by letter *c'*, which serves as a bearing for the shaft. Washers *b* are provided between 60 the shaft and bearing. Ball-shaped portion C rests in seat *d* of socket D which is secured to the base in any desirable manner.

The upright support E is provided with a bearing *e* embracing shaft B. Support E is 65 directed downwardly and is provided near its lower extremity with a disk *e'*, inclosed in a casing F, but free to move therein. Above and below the disk *e'* are closely packed rubber springs *e''* *e'''* of sufficient resistance to 70 hold the support upright while under normal conditions. A gland *f* serves to regulate the pressure of the springs upon the disk and has a beveled opening *f'* to permit a sufficient oscillation of the upright. Another 75 opening *f''* in the lower portion of the casing is large enough to allow lateral play for the bottom of the upright. The centers of oscillation of shaft B and upright E are in the same plane, for the reason that were the 80 centers not so disposed, oscillation would be difficult and the action of the machine impaired.

It will be clear from the foregoing description that we have produced a machine which 85 will be susceptible of the highest speed and will be uninjured by any unequal disposition of articles in the basket.

Having now fully described our said invention, what we desire to secure by Letters Patent, and therefore claim, is— 90

A centrifugal machine comprising in its construction, a vertical rotary shaft supporting a suitable receptacle, a universal step bearing supporting said shaft and permitting 95 its limited oscillation in all directions, an upright brace or support having a lateral portion carrying a bearing which embraces the

said rotary shaft, and a step-bearing supporting said brace and permitting limited oscillation of the latter in all directions and located at one side of the step-bearing for the shaft, the  
5 centers of oscillation of the shaft and brace being in the same horizontal plane.

In testimony whereof we have signed our names to this specification, in the presence of

two subscribing witnesses, this 15th day of March, A. D. 1892.

JOHN C. POLAND.  
EDWARD F. POLAND.

Witnesses:

C. F. BROWN,  
A. D. HARRISON.