

(No Model.)

D. M. WESTON.

CENTRIFUGALLY ACTING DRYING MACHINE FOR CLOTH, &c.

No. 353,390.

Patented Nov. 30, 1886.

Fig. 1.

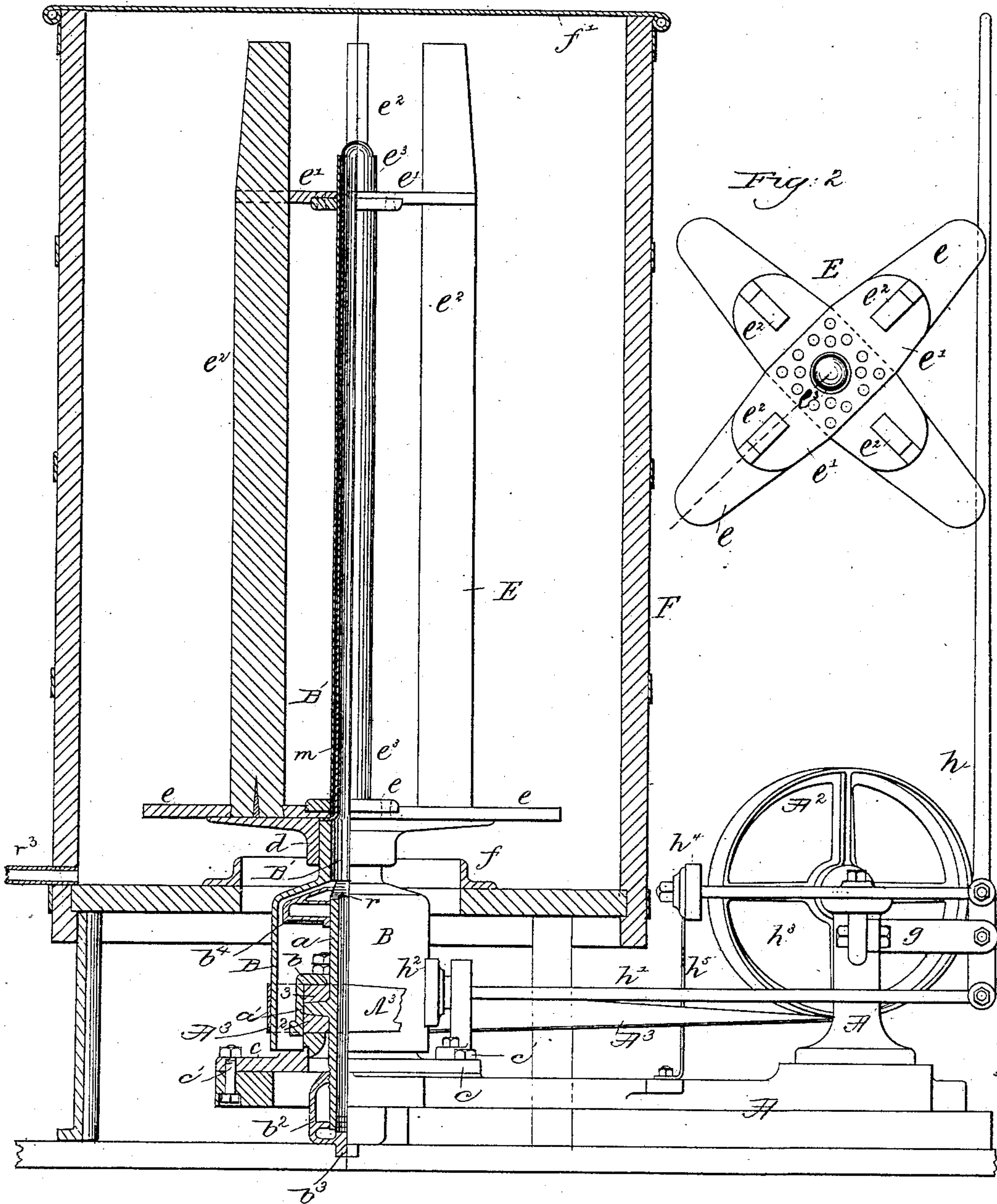
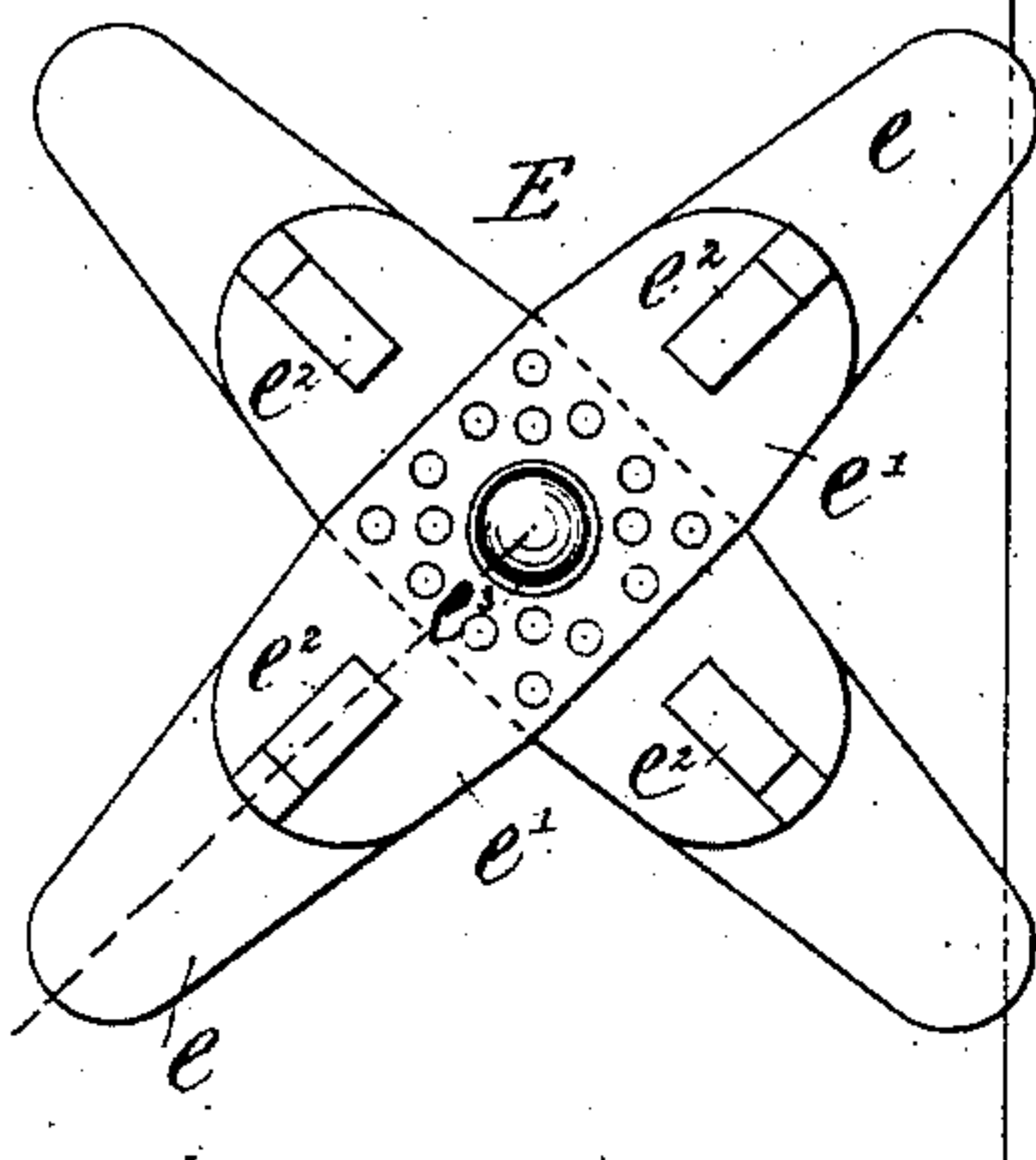


Fig. 2.



Witnesses
J. A. Rennie.
J. L. Curry.

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UNITED STATES PATENT OFFICE.

DAVID M. WESTON, OF BOSTON, MASSACHUSETTS.

CENTRIFUGALLY-ACTING DRYING-MACHINE FOR CLOTH, &c.

SPECIFICATION forming part of Letters Patent No. 353,390, dated November 30, 1886.

Application filed July 24, 1885. Serial No. 172,595. (No model.)

To all whom it may concern:

Be it known that I, DAVID M. WESTON, of Boston, county of Suffolk, and State of Massachusetts, have invented an Improvement in

5 Centrifugally - Acting Drying - Machines for Cloth, Yarn, &c., of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

10 This invention has for its object to provide a machine by which cloth, yarn, &c., may be quickly dried.

In accordance with my invention, I have provided a balanced spindle with a reel and

15 inclosed the same in a case or curb, the cloth to be dried being wound upon the reel, and thereafter the reel with the cloth thereon is rotated rapidly by the spindle.

My invention in a centrifugal drying-machine consists, essentially, in a balanced spindle combined with a reel, the construction and operation being substantially as hereinafter particularly set forth and claimed.

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Figure 1 in partial section and elevation represents a drying-machine embodying my invention; and Fig. 2, a top view of the reel alone, the dotted line showing the line of section of the reel and spindle for Fig. 1.

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The base A of the machine has at one end

30 an upright, A', supporting the usual belt-pulleys, A², (one of which is shown,) which drive the belt A³, passed about the sleeve-whirl B, fast to the spindle B', the pintle of which enters a bolster, a, provided with a flange, a', supported by a yielding block or ring, 2, preferably of india-rubber, a second like block, 3,

35 resting upon the upper side of the flange, and being held down by a cap, b, the block 2 resting upon a plate or ring, c, attached to the bed or base A by screws c', the bolster being thus supported substantially as in centrifugal machines described in other patents granted to me.

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The interior of the bolster and the exterior of the pintle are tapered slightly, and the bolster at its lower end is provided with a step,

45 b², screwed thereto and having an oil-chamber, the step having a foot, b³, placed in a hole in the bed-plate. The upper part of the bolster is provided with a curb or flange, b⁴, to catch oil, and the pintle just above the bolster is provided with a conical collar, r, with its base

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down to cause the oil to be thrown off the spindle into the curb below its lip. The spindle has a bearing only at its foot, and the bearing is a yielding bearing.

The whirl at its upper end has a small neck, upon which is secured a metal flange, d, which serves to support the lower end of a reel, E, composed, as herein shown, of cross-pieces e e' and bars e², properly secured or bolted together, and having at its center a sleeve, e³, to fit over the spindle B', the reel traveling with the spindle, preferably by reason of the friction of its lower end against the top of the disk, such friction being considerable when to the

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weight of the reel is added the weight of the cloth or other material wound upon it.

The arms e' of the reel are shown as terminated within the outer edges of the bars e², so that a roll of cloth or other material may be readily put upon and removed from the reel through the top of the casing F, provided with a cover, f', and properly supported on the base A, the casing having an opening at its bottom plate, which is surrounded by a curb, f, that prevents the escape of water upon the whirl and belt, the casing in practice being connected with a suitable pipe, r³, to lead outward the water or dye forced out of the cloth or other material.

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The cloth or other material to be dried in the piece will be placed or wound upon the body of the reel, so as to be rotated with the reel while the latter is rotated rapidly by the spindle, the speed being sufficient to cause the hollow bolt of cloth or other material to be expanded by reason of centrifugal force, the expansion being to such degree as to expunge the water or other liquid from it, leaving the cloth or other material dry.

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Instead of the particular form of reel shown, I may employ any other usual reel.

The stand A' has a bracket, g, which supports the fulcrum of a lever, h, having connected with its lower end a rod, h', provided with a brake-shoe, h², the said lever having connected with it above its fulcrum a rod, h³, provided with a brake, h⁴, a spring, h⁵, acting normally to hold both brakes from the whirl and from the pulley.

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The spindle above the whirl is provided with a copper or other acid-resisting tube or shield,

m, for the liquid thrown from some kinds of cloth contains acid.

The hollow sleeve e^3 of the reel is placed loosely over the spindle, and its attached shield
5 and the reel may be readily removed from or be placed on the spindle, and in practice each machine may be provided with a number of reels, which may be wound with cloth or other material and be ready for application to the
10 spindle.

I claim—

The combination of an upright balanced

spindle and means, substantially as described, to rotate it, with a skeleton reel applied thereto and rotating with it, and adapted to receive a
15 bolt of cloth to dry it by centrifugal action, substantially as set forth.

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

DAVID M. WESTON.

Witnesses:

G. W. GREGORY,
F. CUTTER.