(Model.)

S. MARDEN.

Starching Machine.

No. 241,554. Patented May 17, 1881.

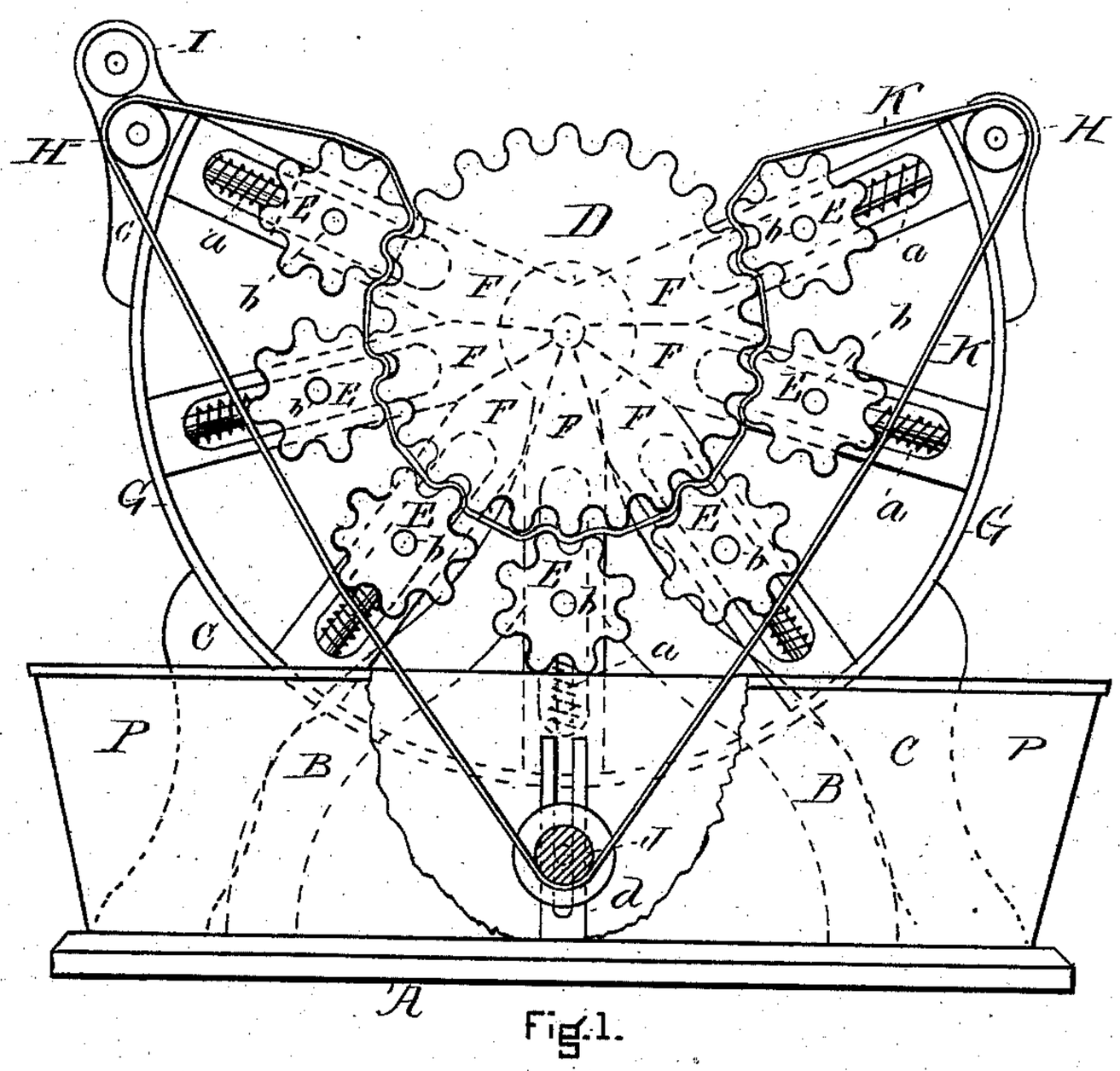

Fig. 1.

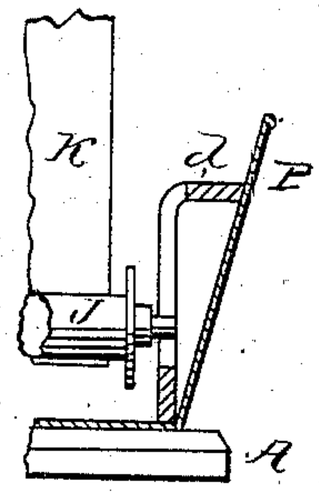

Fig. 3.

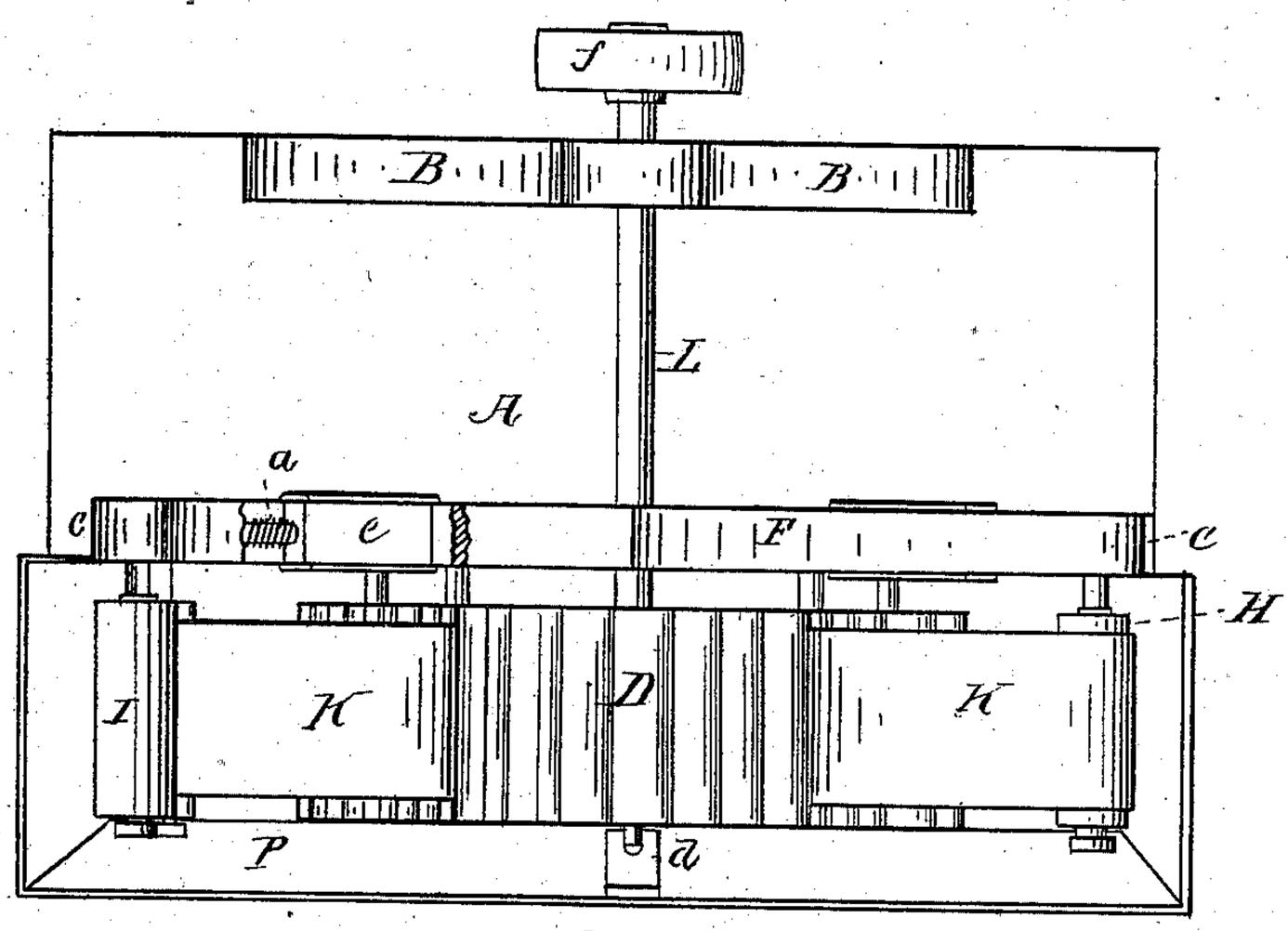

Fig. 2.

WITNESSES

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UNITED STATES PATENT OFFICE.

SAMUEL MARDEN, OF NEWTON, ASSIGNOR TO LEWIS B. PORTER, OF WATERTOWN, MASSACHUSETTS.

STARCHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 241,554, dated May 17, 1881.

Application filed August 11, 1880. (Model.)

To all whom it may concern:

Be it known that I, SAMUEL MARDEN, of Newton, in the county of Middlesex and State of Massachusetts, have invented a new and Improved Starching-Machine, of which the following is a specification.

My invention relates to an improved starching-machine. I use a large central corrugated or geared roller rotated by a shaft supported upon a frame. Around this central roller, except at its top part, is a series of small corrugated or geared rollers, whose corrugated or geared surfaces mesh into the corrugated or geared surface of the central roller. Said small rollers revolve upon axles or spindles, one end of which is fastened into movable blocks or bearings sliding in slots in wedge-shape pieces resembling in appearance and arrangement the spokes of a wheel. The said spokes and a rim form the segment of a wheel, which is stationary, supported on either side by legs fastened to the rim, and extend to the platform of the frame. Between the central roller and the small rollers runs a starch-carrier, which also passes over band-rollers attached to ears fastened to the rim of the wheel, and a weighted roller, which is set in the pan containing the starch.

In order that others skilled in the art may better understand the nature of my improvement, I will explain the same by reference to the accompanying drawings, which are made a part of this specification, in which—

Figure 1 is an end view of the corrugated rollers and a vertical section of the pan and the weighted roller as it sits in the pan. Said figure shows also the wedge-shaped pieces or spokes, the slots therein, and the springs which regulate the movable blocks or bearings in said slots, the rim of the segment of the wheel, and the starch-carrier as it appears in operation. Fig. 2 is a plan of the machine, and Fig. 3 is a section of a portion of the starch-pan, the weighted roller, starch-carrier, and a slotted upright strip in and upon which the weighted roller revolves.

The letter A represents the platform; B, the frame of the machine; C C, legs supporting the rim of the wheel; D, the central roller; E E, &c., the small rollers; F F, &c., the spokes of the segment of the wheel; G, the rim; H H, band-rollers; I, a pressure-roller; J, the weighted roller; K, the starch-carrier; L, the shaft driving the rollers; *a a*, &c., springs; *b b*, &c., axles of the small rollers; *c c*, ears on the rim G; *d d*, slotted upright pieces for the weighted roller J set in the pan; P, the pan containing the starch; *e*, movable blocks or bearings, into which the ends of the axles or spindles of the small rollers are fastened; and *f*, a drum, instead of which I may use a crank on the end of the shaft L.

The starch-carrier is apt to become stretched from use, and thus become loose, so as not to operate well. As an improvement to the operation of said carrier, I have placed the loaded roller J in the starch-pan, near the bottom of the pan, as shown in Figs. 1 and 3, and the roller is left freely to move up and down, conforming to the tension of the carrier, but always keeping said carrier taut. I dispense with gear-wheels, and their shafts also, in revolving the corrugated rollers, thus largely saving friction and expense of gears, &c.

By employing a large central roller, D, and the series of small rollers E E, &c., arranged as shown, I have given greater length of space for filling the articles to be starched with starch, and thus more completely accomplishing the object sought than has been done by any machine hitherto patented, and this improvement is of great practical consideration.

What I claim as my invention, and desire to secure by Letters Patent, is—

In a starching-machine, the combination of the rollers D, the rollers E, which revolve each upon a spindle having its bearing or support in a yielding and movable block, *e*, the band-rollers H and pressure-roller I, the starch-carrier K, the weighted roller J, whereby the tension of the starch-carrier is kept uniformly taut, and the pan P, for containing the starch, substantially as and for the purpose shown and described.

SAML. MARDEN.

Witnesses:
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E. F. PORTER,