Rabbeth & Atwood,

Self-oiling Spindles,

No. 63,561, Patented Apr. 2, 1867.

Fig. 1

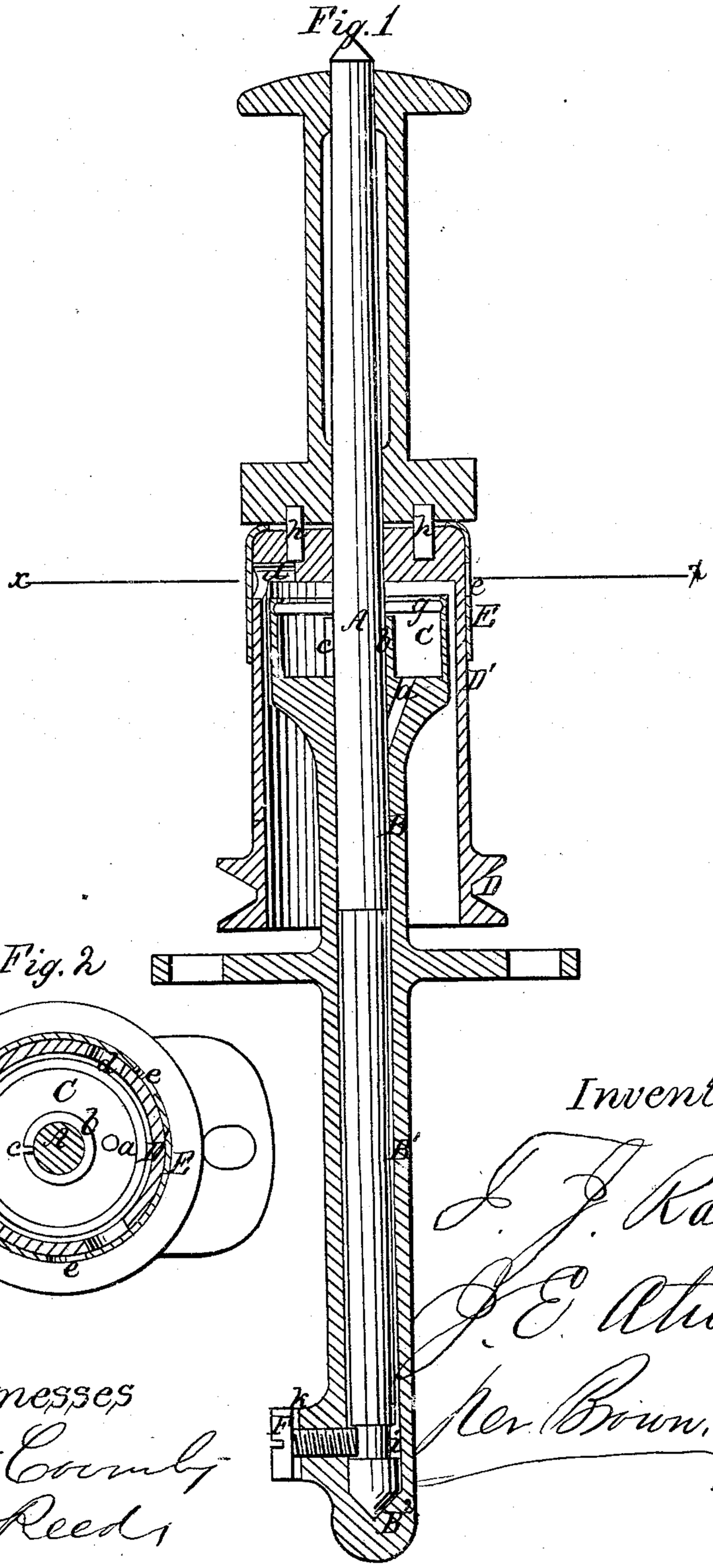

Fig. 2

Witnesses

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UNITED STATES PATENT OFFICE.

F. J. RABBETH, OF ILION, NEW YORK, AND J. E. ATWOOD, OF WILLIMANTIC, CONNECTICUT.

IMPROVEMENT IN SELF-OILING SPINDLES FOR SPINNING-MACHINES.

Specification forming part of Letters Patent No. **63,561**, dated April 2, 1867.

To all whom it may concern:

Be it known that we, F. J. RABBETH, of Ilion, in the county of Herkimer and State of New York, and JOHN E. ATWOOD, of Willimantic, in the county of Windham and State of Connecticut, have invented a certain new and useful Improvement on Self-Oiling Spindles for Spinning-Frames, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing forming part of this specification, and in which—

Figure 1 is a vertical sectional view of a spinning-frame spindle, with its attachments, constructed according to our improvement; and Fig. 2, a horizontal section thereof, through the line *x x* in Fig. 1.

Like letters indicate like parts in both figures.

The nature of our invention consists, first, in an arrangement of an oil reservoir or cup, mounted on and surrounding the oil-box or bolster-extension to the spindle, said extension being slotted to convey oil to or round the spindle, and the cup being provided with an aperture in its bottom, extending down within the bolster of the bearing, the bolster, oil box or tube, and step to the spindle being preferably constructed so as to form but a single structure. Said invention also consists in a combination of oil-cup round the bolster with an outer revolving perforated sleeve, forming part or extension of the whirr, and perforated exterior cap to said sleeve for feeding in the oil, and afterward closing all communication with the outside without removing the sleeve or cap; likewise in locking or retaining the spindle to its place within the tube or on its step by means of a set-screw, in combination with a packing to prevent the escape of oil from the tube.

Referring to the accompanying drawing, A represents the spindle of a spinning-frame, and B B^1 B^2 the bolster, tube, and step thereto, preferably made of one piece, so as to form a single structure. Surrounding the upper end *b* of the bolster is an oil-cup, C, which is in communication with the bearing of the spindle in the bolster by a downwardly-arranged passage, *a*, that serves to convey the oil directly within the bolster, while a slot, *c*, in the upper end *b* of said bolster admits oil around the spindle above as the spindle in rotating presents for the length of the slot its entire surface to the oil in the cup. D is the whirr, and D′ an upward continuation or extension of the same, forming an outer sleeve, covered in at top, and made fast to the spindle, which it, as part of the whirr, rotates. This sleeve has openings *d* at or near its top for feeding the cup C with oil. As, however, it is desirable for the exclusion of dust and other reasons that there should not, except when supplying the oil, be any such direct open communication with the cup C, we arrange on or round the sleeve D′ a cap, E, with perforations *e* in it, which perforations, by simply turning the cap, may either be brought in line with the apertures *d* for feeding in the oil, or be adjusted out of communication therewith, when the apertures *d* will be closed by the cap. This forms a simple and rapid arrangement for the purpose and dispenses with all removal of parts.

The cup C is provided with, at or near its rim, a circumferential groove, *g*, that serves to catch and return to the cup any oil projected by the centrifugal action of the spindle toward the rim, and restrains it from flying over the latter.

To drive the bobbin we dispense with the usual collar for that purpose, and connect the bobbin with the whirr or whirr-sleeve by pins *h* on the latter, that enter apertures in the bottom of the bobbin, which may thus be readily removed and replaced.

F is a set-screw for locking the spindle to its place in the tube or on its step, said screw fitting, at its inner end, a circumferential groove, *i*, in the spindle, and being provided

externally on the inside face of its head with a soft or elastic packing, *k*, which prevents any leakage or escape of oil from the tube.

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

1. The bolster, tube, and step B B^1 B^2, with an oil-cup, C, at its upper end, provided with a passage, *a*, and slot *c*, the whole constructed as and for the purpose set forth.

2. In combination with an oil-cup, mounted on or surrounding the bolster, the perforated whirr or whirr-sleeve D′ and outer perforated cap E, for action as specified.

3. In combination with the spindle-tube, the set-screw F and packing *k*, operating to restrain the spindle to its place and prevent the escape of oil, as herein specified.

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