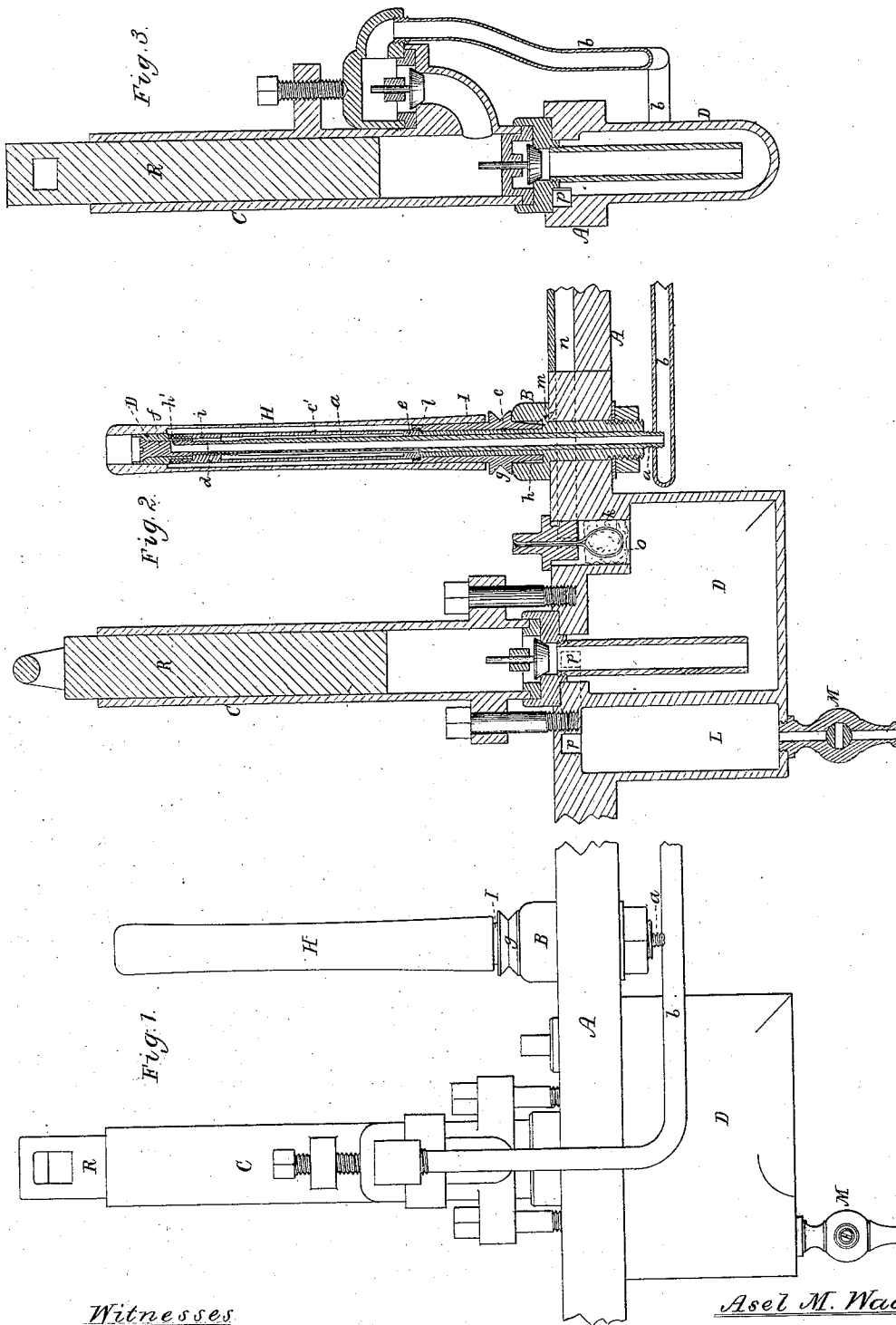


A. M. WADE.
Lubricating Spindles.

No. 153,185.

Patented July 21, 1874.



Witnesses
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UNITED STATES PATENT OFFICE.

ASEL M. WADE, OF LAWRENCE, MASSACHUSETTS.

IMPROVEMENT IN LUBRICATING SPINDLES.

Specification forming part of Letters Patent No. **153,185**, dated July 21, 1874; application filed June 19, 1874.

To all whom it may concern:

Be it known that I, ASEL M. WADE, of Lawrence, of the county of Essex and State of Massachusetts, have made a new and useful invention for lubricating the journals and bearings of the spindles and various parts of a machine for spinning with bobbins; and I do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a front elevation of a spinning mechanism with my oiling apparatus applied to it and its bolster-rail. Fig. 2 is a vertical and longitudinal section thereof. Fig. 3 is a transverse section taken through the pump.

My invention relates to a combination of mechanism for supporting and revolving one or more bobbins of a spinning-frame with an oil-reservoir, a force-pump, and conduits to lead oil from the pump to the surface to be lubricated, and to return the surplus oil from such surfaces to the reservoir.

With my invention all the bearings or rubbing surfaces of the spindles or devices employed for sustaining and revolving the bobbins of a spinning frame or machine may be kept oiled without the necessity of stopping the machine and oiling each or any number of them separately, as heretofore, and thereby wasting the time and labor incident thereto, my invention, by economizing such, enabling the spinning-machine to be operated with better or more advantageous results in pecuniary as well as in other respects.

In the drawings, B denotes a portion of the bolster or spindle rail of a spinning-frame, and B one of the bolsters or bases of its spindles. Concentrically through the said bolster a tube, *a*, is extended from an eduction-conduit, *b*, leading from a force-pump, C, arranged over and to open into a closed oil-reservoir, D, projecting down from the rail A. The educt *b* is to extend along underneath the rail and to communicate with the several tubes *a*, leading upward into the several bolsters of one range, as each bolster is to be provided with a mechanism for supporting and rapidly revolving a bobbin. A stationary tube or standard, *c*, extends up from the bolster, the latter, in this case, constituting a base for the standard, which is tubular, and has the pipe *a* arranged

within and extended above it and into another tube, *c'*, in manner as represented. This tube *c'* has its base a little larger in diameter than the tube *a*, sleeves *d e* being arranged, as shown, between the two. The upper sleeve, *d*, fastened to the outer tube, screws upon the inner one, and has screwed into it a screw or journal, *f*, carrying a rotary head, D, for supporting a bobbin, H, at its upper end. There is placed on the standard *c*, concentrically, a tubular bobbin supporter and driver, I, provided with a whirl, *g*. This driver extends down within a space, *h*, formed in the bolster; the driver resting on the bottom of the said space.

From the above it will be seen that the standard *c* and the tubes *a* and *c'*, connected as described, constitute what may be termed a "dead" or stationary spindle, with which there is combined the rotary head D and the bobbin rotator or driver I.

The journal *f* is hollow or tubular, is open at its lower end and closed at its upper end, and has a hole, *h'*, leading laterally out of its bore. Furthermore, a small passage, *i*, leads down through the sleeve *d* into the space between the tubes *a* and *c'*. If desirable, the tube *a* may be grooved down its outer surface to the top of the standard *c*. A small passage, *l*, leads oil from the space between the tubes *a* and *c'* to and upon the outer surface of the standard *c*, or between such and the contiguous bearing or inner surface of the driver I. Furthermore, a passage, *m*, leads from the space *h* in the bolster into a channel, *n*, arranged in the bolster-rail, and leading from the oil-receiver or a filter-chamber, *k*, connected therewith. The said channel is to communicate with each spindle bolster or base, in order that the surplus oil therefrom may escape into the channel, and by it be returned to the reservoir. The filtering-chamber *k* may contain sponge *o*, or other proper material, for filtering the oil before it may return into the reservoir, and connected with said reservoir, at its end, may be a chamber, L, to open at top, as shown at *p*, into the reservoir. The chamber L is to have a cock, M, opening out of its bottom. This chamber serves to catch and retain any surplus of oil, from which it may be drawn by means of the cock. The bobbin-driver and the bobbin-supporter, where

the bobbin is fit to them, should be tapering to cause it to fit closely, in order that it may be revolved by the driver and revolve the supporter. The piston R of the pump may be operated by any suitable mechanism, in order to cause it to raise oil out of the receiver and force it from the pump-barrel into and through the several spindles, and between them and the parts to revolve on them, and thence into the bolsters, and from such into the bolster-rail channel, and thence back into the reservoir.

I do not claim a bobbin-supporter and a bobbin-rotator arranged and combined with a dead-spindle, such being found in the United States Patent No. 124,290, dated March 5, 1872.

I claim—

1. The dead-spindle composed of the standard *c* and the tubes *a* and *c'*, combined substantially as specified.

2. The dead-spindle as described, consisting of the standard *c* and the tubes *a* and *c'*, arranged and applied together as set forth, in combination with the rotary bobbin-head D and driver I, applied to such spindle, as explained, and with the bolster chambered and provided with the educt, as set forth.

3. The bolster-rail provided with the return-channel, in combination with the reservoir and force-pump, the eduction-pipe and bolster provided with the dead-spindle, and the rotary bobbin head and driver, all being constructed and arranged substantially as set forth.

ASEL M. WADE.

Witnesses:

R. H. EDDY,
J. R. SNOW.