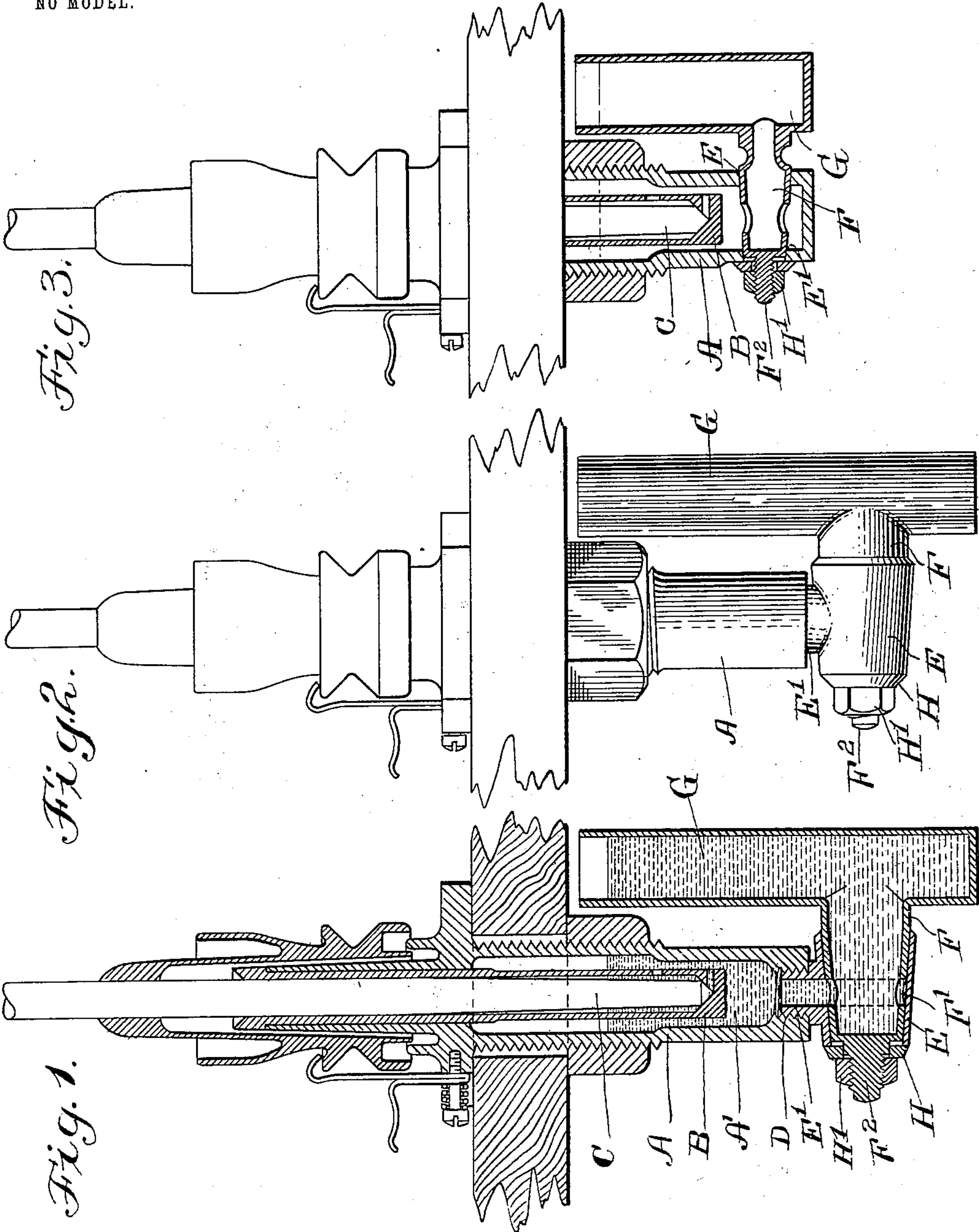


No. 731,111.

PATENTED JUNE 16, 1903.

T. E. LEIGH.
RING FRAME SPINDLE.
APPLICATION FILED SEPT. 22, 1902.

NO MODEL.



Witnesses:
Horace Brown
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UNITED STATES PATENT OFFICE.

THOMAS ERNEST LEIGH, OF MANCHESTER, ENGLAND.

RING-FRAME SPINDLE.

SPECIFICATION forming part of Letters Patent No. 731,111, dated June 16, 1903.

Application filed September 22, 1902. Serial No. 124,274. (No model.)

To all whom it may concern:

Be it known that I, THOMAS ERNEST LEIGH, of Heaton Chapel, Manchester, in the county of Lancaster, England, have invented certain
5 new and useful Improvements in the Spindles of Ring-Frames, of which the following is a specification.

My invention relates to that form of spindle used in ring-spinning and doubling, which,
10 as in the Rabbeth type, is formed with a bolster acting as a reservoir for oil, as well as a support or bearing for the spindle.

The purpose of my invention is to provide a means of supplying the said bolster with
15 oil from a suitable outside receptacle in which it is stored and of discharging the oil contained in the bolster without necessitating the use of pumps or the removal of the spindle.

Reference may be made to the accompanying
20 ing drawings, wherein—

Figure 1 is a sectional view of the lower portion of the bolster with my invention attached. Fig. 2 is a front elevation of the same, and Fig. 3 is a sectional view of a modification of my invention.
25

The bolster-casing A contains, as usual, the inner bearing-tube B, carrying the spindle C, the space surrounding the tube B and the lower space A' of the bolster being ordinarily
30 filled with oil. I bore a hole D in the bottom of the bolster-case and thread the same. Into the hole D, I screw the screwed spigot E' of a hollow tapered barrel, the said spigot E' being bored through, so as to provide a channel for the oil to flow into and out of the space A.
35 The barrel E is accurately bored internally, and a hollow plug F is correspondingly turned, so as to fit accurately the said barrel. The plug F forms a part of the tube or reservoir G, with which it communicates. At the point
40 F' the plug is formed with a ring groove, and holes are also formed in the plug F to enable the oil to flow freely to and from the space A' and the reservoir G. The plug F is retained in position by a washer H and nut H',
45 screwed onto a threaded nipple F², which projects through the barrel E.

It will be easily seen that the reservoir G can be rotated in the barrel E, so that its open

end can either be up or down. When the
50 said reservoir is turned downward, the oil contained within it is freely discharged, together with that contained in the bolster-space A'. When this has taken place, the reservoir is turned upward into the position
55 shown in the drawings and is refilled with oil, which speedily flows into the bolster until it assumes the level of that in the reservoir.

Instead of screwing the barrel E into the bottom of the bolster I may, as shown in Fig.
60 3, bore the bolster itself with taper holes E E', one in each wall of the bolster-case A, and fit therein the plug F, attached, as before, to the reservoir G. The operation of the device is
65 in each case the same.

It will be seen that the rotative connection between the reservoir A' and the supplemental reservoir G enables the latter to be turned
70 from upper to lower position, so that the oil in the former may discharge through the latter, and when the supplemental reservoir is then returned to upper position oil which is poured into the latter will run freely into the bolster-reservoir A'.

Having thus described my said invention,
75 I claim as new and desire to secure by Letters Patent—

1. The combination with the bolster or spindle case having a threaded hole bored in its base, of a hollow barrel internally tapered
80 and screwed into said threaded hole, and a supplemental reservoir having a correspondingly-formed hollow taper plug fitting the internal taper of the said barrel and communicating with the interior of the bolster.
85

2. The combination of a spindle-case, a hollow tapered barrel screwed therein, a receptacle or reservoir having a hollow taper plug, the said plug being fitted and capable of rotating within the barrel whereby the reser-
90 voir may be put into a position to permit the oil to flow from or into the interior of the spindle-case as required as described.

3. The combination with a spindle-case bored transversely through its walls with
95 taper holes, of a receptacle or reservoir having a hollow tapered plug fitted and capable of rotating in the holes formed in the spindle-

case together with the receptacle for the purpose of discharging or supplying oil to the interior of the said case as described.

4. A combined bolster-casing and oil-reservoir having a supplemental oil-reservoir directly and rotatively connected therewith and adapted to be turned from an upper to a lower position to enable oil in the reservoir to be discharged, the relatively movable parts

having a joint adapted to prevent escape of oil at such joint regardless of the extent and direction of rotation.

In testimony whereof I have affixed my signature in presence of two witnesses.

THOMAS ERNEST LEIGH.

Witnesses:

JOSEPH NASMITH,
LEONARD HORNER.