March 13, 1928. 1,662,086

H. F. STUHR

OILING APPLIANCE FOR THREAD OR YARN

Filed Jan. 26, 1925 2 Sheets-Sheet 1

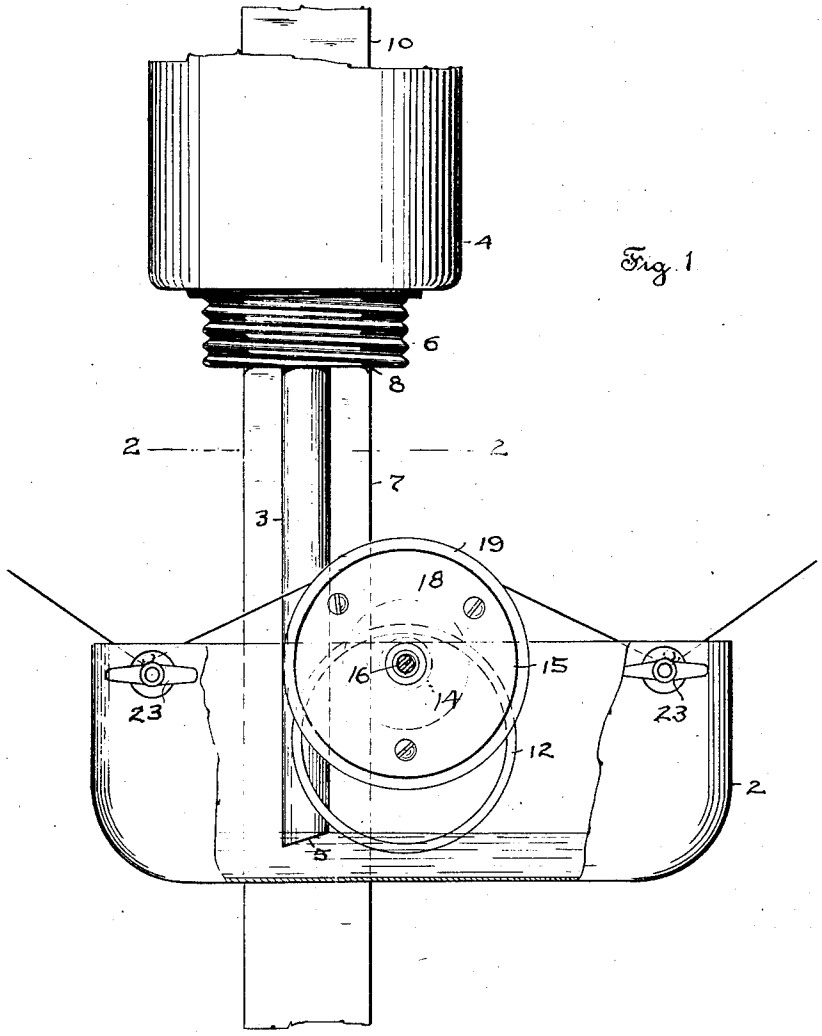


Fig. 1

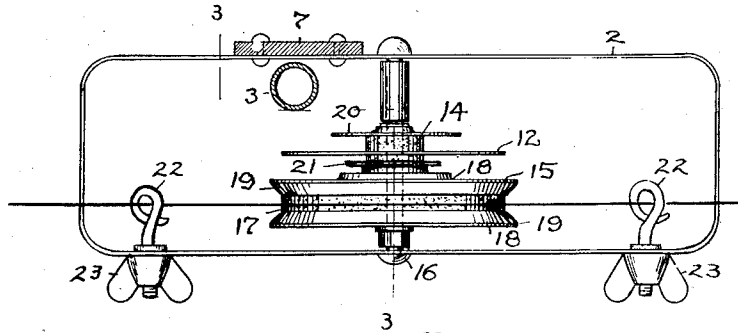


Fig. 2.

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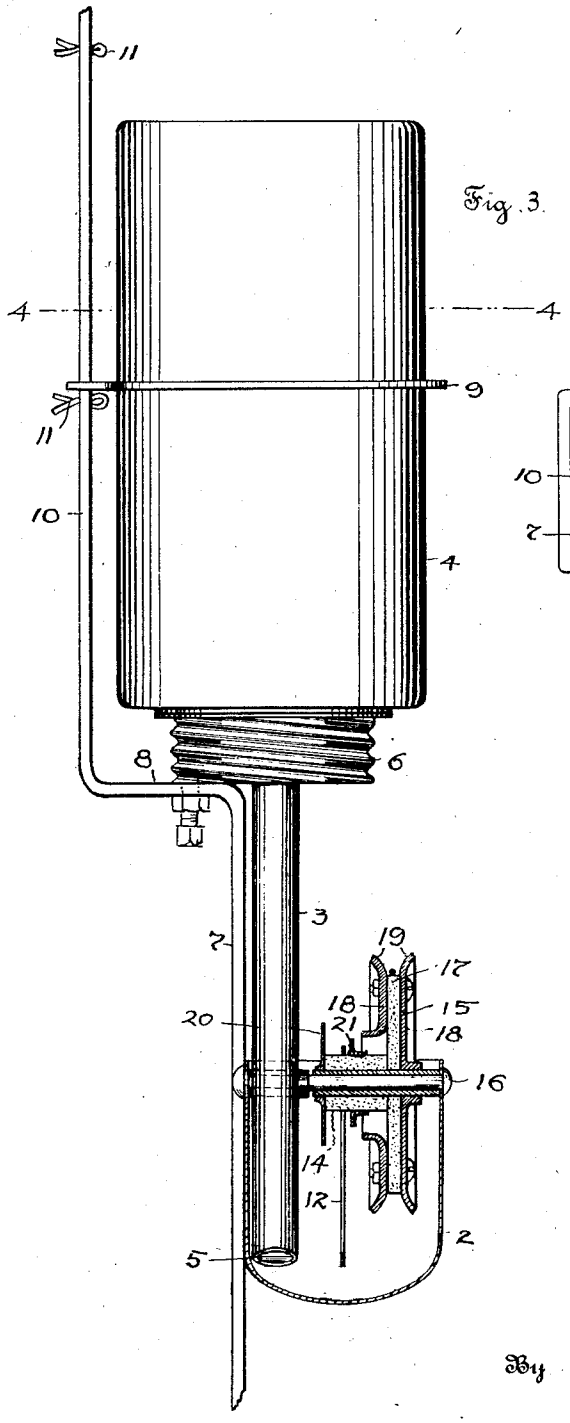


Fig. 3.

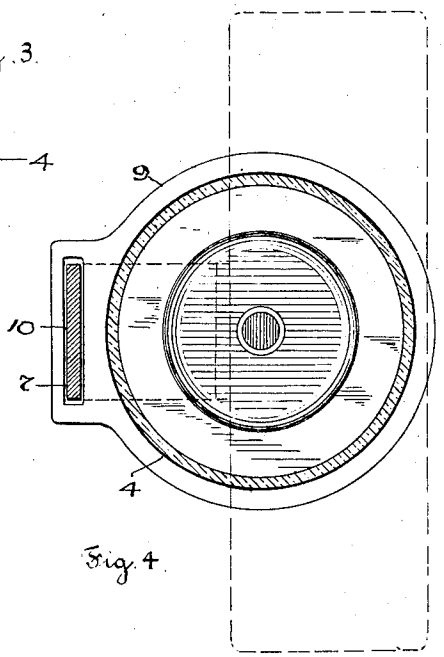


Fig. 4.

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UNITED STATES PATENT OFFICE.

HERMAN F. STUHR, OF CLEVELAND, OHIO, ASSIGNOR TO THE E. KONIGSLOW STAMPING & TOOL COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

OILING APPLIANCE FOR THREAD OR YARN.

Application filed January 26, 1925. Serial No. 4,779.

My invention relates to an improvement in a thread or yarn oiling appliance, my general object being to provide an attachment for any machine which unreels or reels thread or yarn for knitting or weaving purposes whereby the thread or yarn may be oiled lightly or in a manner adapted to prevent excess saturation of the thread or yarn and wasteful use of oil. A further object is embodied in the means adapted to facilitate quick attachment and detachment of the thread or yarn, and in the means for supplying the oil and maintaining a body of oil at a fixed level in respect to an oil carrying ring, so that feeding of oil may be uniform and constant. A further object is to provide absorbent wheels or disks of different diameters adapted to operate with the ring in conveying the oil in restricted or limited degree to the thread or yarn.

In the accompanying drawings, Fig. 1 is a front view of my improved oiling appliance, the front wall of the oil receptacle being broken away to disclose the interior parts. Fig. 2 is a top view and horizontal section on line 2—2 of Fig. 1. Fig. 3 is a side elevation and vertical section of the appliance on line 3—3 of Fig. 2. Fig. 4 is a horizontal section on line 4—4 of Fig. 3.

The oiling appliance comprises an elongated receptacle 2 having an open top and a rounded bottom in which a shallow body of oil is maintained at a substantially uniform level whenever a discharge spout 3 of a closed vessel 4 containing a supply of oil is projected into the top of the receptacle and supported in a stationary perpendicular position therein. The mouth 5 of spout 3 is beveled to promote prompt and steady feeding of the oil from supply vessel 4 which is otherwise sealed to the entrance of air. Spout 3 forms part of a screw-threaded cover 6 for vessel 4 and an upright standard 7 is adapted to support receptacle 2 and vessel 4 adjacent to or upon any kind of a machine wherein thread or yarn is being rapidly unreeled preliminary to knitting or weaving operations. In the present instance standard 7 is formed with an angular bend to provide a horizontal shelf or seat 8 for supply vessel 4, and a holding ring 9 for vessel 4 is sleeved upon a vertically extending offset part 10 of standard 7 and movable vertically thereon within limits as fixed by pins 11 to enable the vessel to be readily seated upon or removed from shelf 8. When vessel 4 is seated its spout 3 extends downwardly at one side of the standard and one side wall of receptacle 2, and its beveled mouth is projected nearly to the bottom of the receptacle. An adjusting screw may be used at shelf 8 to establish a different seating level for vessel 4 and a different level of the oil within receptacle 2.

An oil collecting and distributing ring 12 is suspended at a fixed elevation within receptacle 2 from an elongated hub 14 of a wheel 15 journaled on a shaft 16 extending across the open top of the receptacle. The lower part of the ring is submerged within the oil and the upper part encircles and rides upon hub 14 which is preferably of small diameter to reduce the speed of rotation of the ring. Hub 14 and the central part 17 of wheel 15 is made of felt or other absorbent material, and the oil which is conveyed to the surface of the hub is absorbed and passes to a disk-shaped body 17, which is relatively thin and of greater diameter than hub 14. Disk 17 is supported by face plates 18 of metal having outwardly-curved edge portions 19 extending beyond the periphery of the central disk to confine the thread or yarn in running engagement with the yielding body 17 of felt. Collecting ring 12 may also be confined between an inner flange 20 and a longitudinally adjustable collar 21 on the hub to prevent ring 12 from coming into contact with the inner face plate 18 of the wheel, and the area of absorbent material engaged by the ring may be increased or decreased by shifting collar 21 on the hub.

Wheel 15 is revolved by the running thread or yarn, and ring 12 is in turn rotated at slower speed by frictional contact with the small hub. The oil picked up by the ring impregnates the absorbent hub of the wheel but excess delivery of oil to the thread or yarn is prevented by causing the collected oil to pass through the small hub and a larger body of absorbent material before reaching the thread or yarn. A running tension of the thread or yarn with the felt periphery of wheel 15 is effected by causing the thread or yarn to pass through a pair of open hooks or eyes 22 fixed by thumb screws 23 at opposite ends of the front wall of receptacle 2. These devices permit the thread or yarn to be hooked or unhooked

quickly whenever the operation of the machine requires removal to or replacement of the thread or yarn. If desired, the thread or yarn may be passed underneath the oiling wheel instead of over the same.

I have not shown a cover on receptacle 2, but obviously a cover may be used if desired. Furthermore, the receptacle may be of any desired length and any number of oiling devices may be mounted therein to accommodate a corresponding number of threads or pieces of yarn passing to or from reels or spindles, either in unwinding the thread or yarn from skeins, or in feeding the thread or yarn to spindles or to knitting or weaving mechanism.

What I claim, is:

1. An oiling appliance for thread or yarn, comprising an oil receptacle, a wheel within said receptacle having a central body and a hub of absorbent material, an oil collecting ring suspended from said hub, and tension hooks for the thread or yarn mounted upon said receptacle.

2. An oiling appliance for thread or yarn, comprising an oil receptacle, a wheel for oiling the thread having a hub provided with a collar, and an oil collecting ring suspended upon said hub adjacent said collar.

3. An oiling appliance for thread or yarn, comprising an oil receptacle, a wheel having an oil absorbing body and a hub of absorbent material, an oil collecting ring suspended from said hub, and a slip collar adjustably mounted upon said hub.

4. An oiling appliance for thread or yarn, comprising an oil receptacle having a wheel with an oil absorbent body and a hub of absorbent material therein for oiling the thread or yarn and an oil collecting ring suspended from the hub of said wheel in oil conveying connection therewith, and a supply vessel removably supported above said receptacle having a feed spout with a beveled mouth adapted to extend into the bottom thereof to maintain a shallow body of oil therein.

In testimony whereof I affix my signature.

HERMAN F. STUHR.