C. Hardy.

Lubricator for Spinning Mach.

No. 908.
31,972.

Patented Apr. 9, 1861.

Fig. 2.

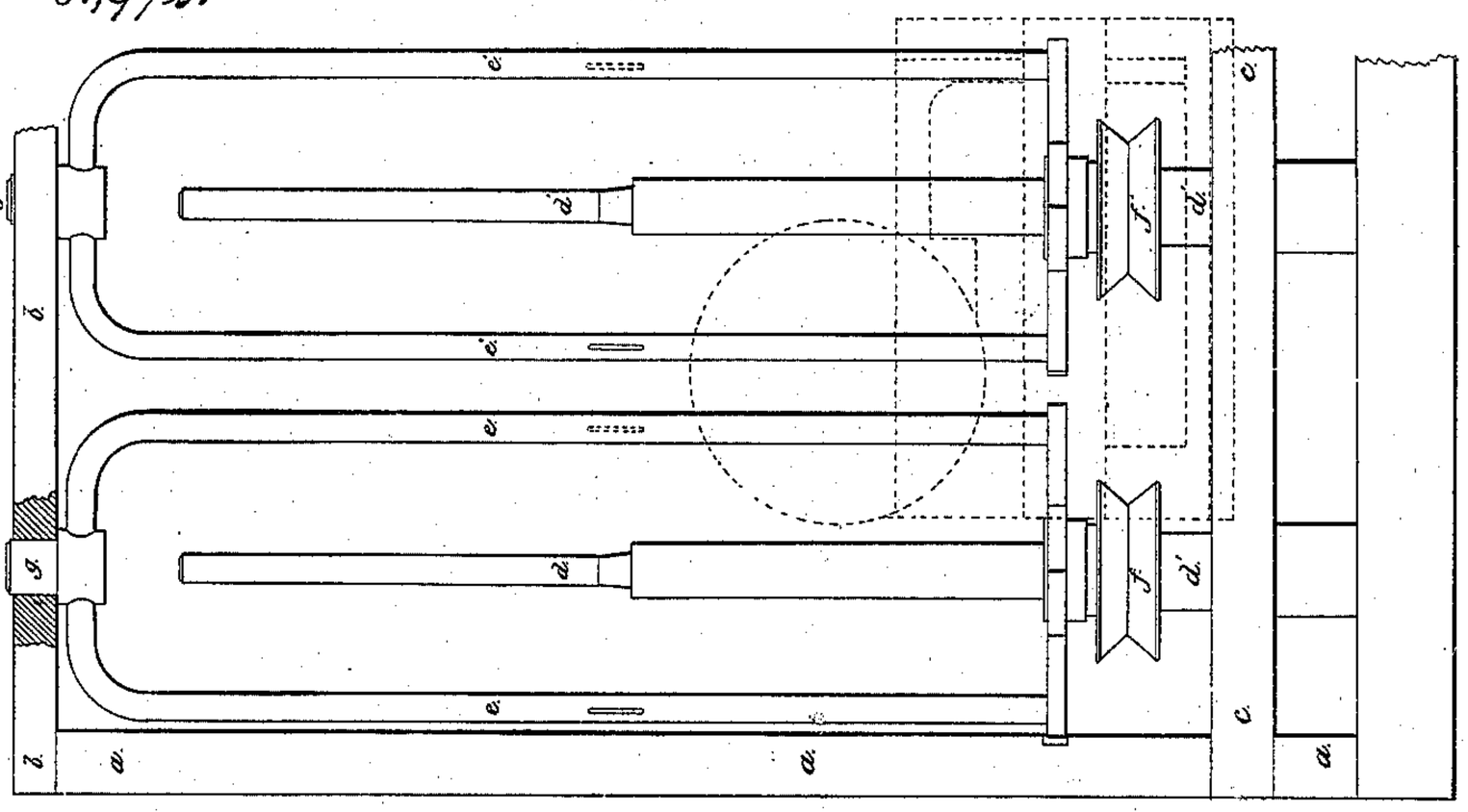


Fig. 4.

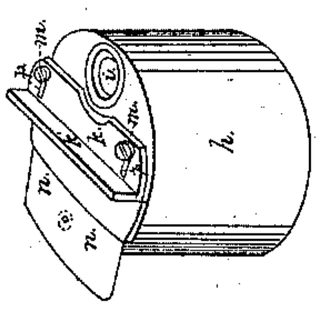


Fig. 3.

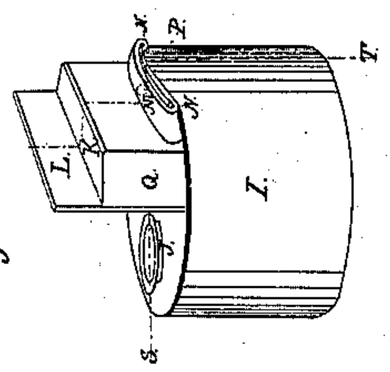


Fig. 5.

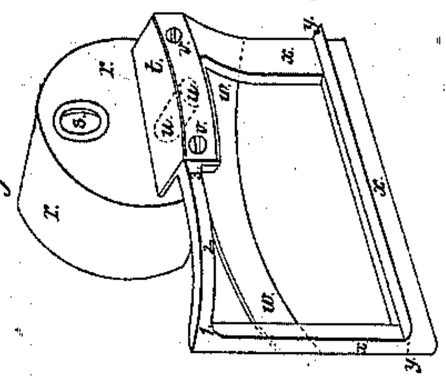


Fig. 6.

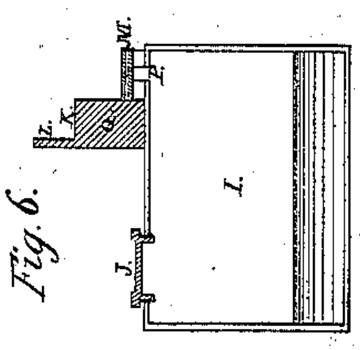
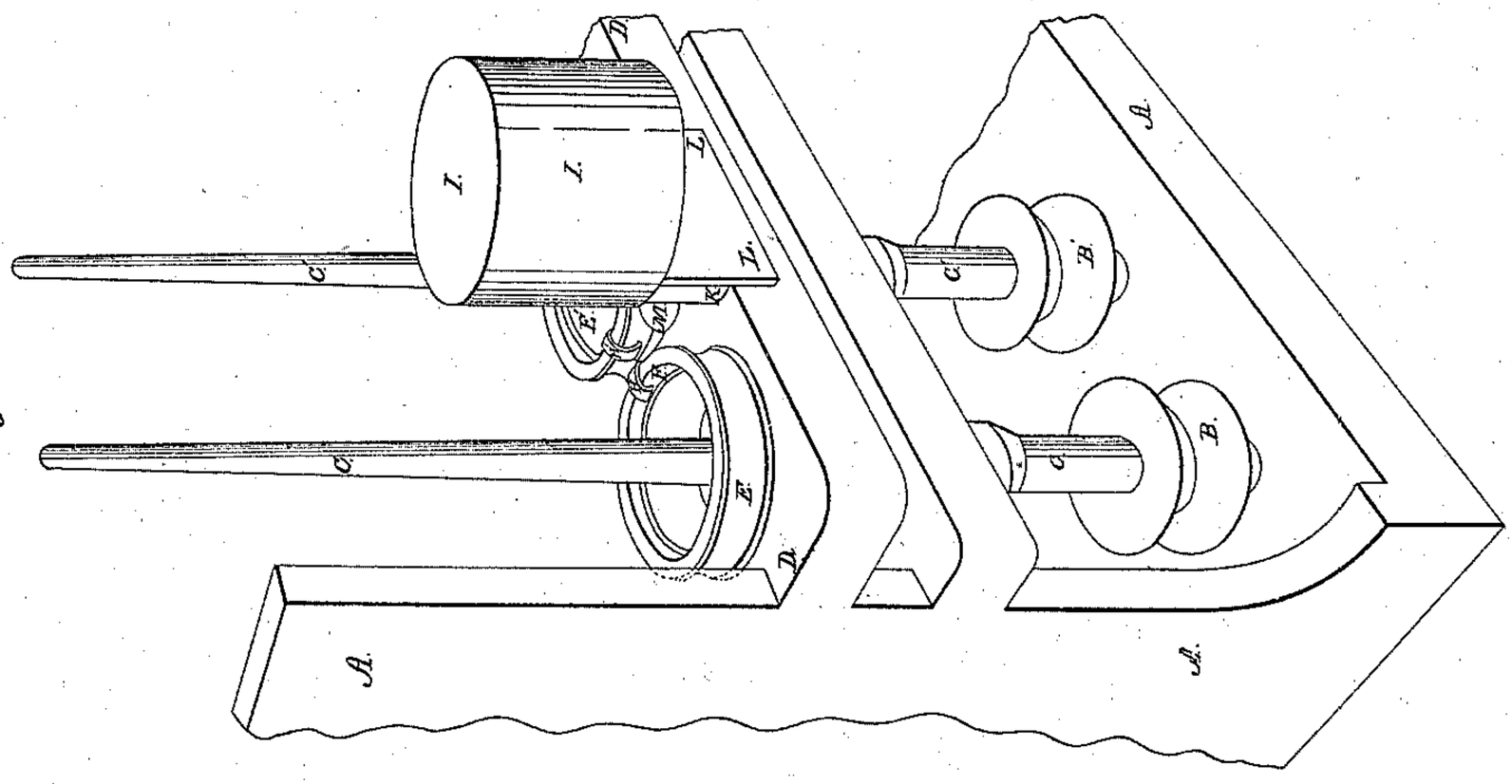


Fig. 1.



Witnesses,
John M. Batchelder
Sam[t] Batchelder Jr.

Inventor:
Charles Hardy

UNITED STATES PATENT OFFICE.

CHARLES HARDY, OF BIDDEFORD, MAINE.

LUBRICATOR FOR SPINNING MACHINERY.

Specification of Letters Patent No. 31,972, dated April 9, 1861.

To all whom it may concern:

Be it known that I, CHARLES HARDY, of Biddeford, in the county of York and State of Maine, have invented an Improvement in Lubricating Apparatus; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters marked thereon.

Figure I is a perspective view of the rings the spindles and rail of a ring spinning-frame, and position of the oil can and its attachments for oiling the rings. Fig. II is a front view of the fliers—the spindles and rail of a throstle spinning frame with outline of the can for oiling the spindles; Fig. III view of the can for oiling the rings; Fig. IV view of can for oiling the tips of the fliers; Fig. V, view of can for oiling the spindles; Fig. VI, vertical section on the line S, T, Fig. III.

It is well known that the present modes of applying oil to machinery for lubricating purposes are in many cases very imperfect, involving great waste of the oil by its application in larger quantity than is necessary and upon parts that do not require it; for instance, the spindles of a throstle spinning frame are usually oiled after each "doffing" by applying one or more drops of oil from the nose of an oil can, which must be moved from one spindle to another, thus requiring much time and wasting the oil as the can passes the spaces between the spindles where no oil is required. A drop of oil is usually applied to the tip of each spindle while only a very small fraction of a drop is actually needed. The oil thus applied in excess is thrown off by centrifugal force, a small portion only remaining upon the parts that require lubrication.

From the trials made with my improved oiling apparatus I find that more than half of the oil usually required in a spinning room can be saved, the best results being attained in those machines that have a large number of bearings, which require oiling often, and occupy a fixed position with reference to certain parts of the machine which serve as guides to the cans or feeders.

I will first describe the mode of oiling the rings of a "ring" spinning frame.

The frame of the machine is seen at A, Fig. I. The whirl B receives the band which drives the spindle C. This is central with the rings E E′ which rest upon the ring rail D.

In order that the travelers H H′ may move freely it is necessary that oil be applied to the rings. This is effected by means of the can and its attachments as represented in Fig. III. The can I, is made of any convenient size, and the oil is introduced at the hole J, in which a screw cap is fitted. On the opposite side of the can there is a small aperture P, through which oil will escape when the can is inverted. Upon each side of this opening there is a small stud or pin N N′ which holds a narrow loop of woolen cloth M; the lower side of the cloth being in contact with the opening. When the can is inverted the oil escapes and saturates the woolen cloth. Upon the top of the can there is a square projection Q, the top of which K is at any required height above the top of the cloth M, and at right angles with it there is a thin, projecting lip L.

The can, Fig. III is designed for oiling the top of the rings E E′, Fig. I, being placed for this purpose in an inverted position. In this instance the height of the part Q K is such that when the face K traverses upon the "ring-rail" D, the woolen cloth may just touch the top of the ring. The thickness of the part K is nearly equal to the space between the face of the rail D and the ring, while the ledge L defines the position of the can in a horizontal position.

To oil the rings, the can is inverted and the parts K L applied to the corner of the ring-rail. It is then pushed, rapidly, from one end of the spinning-frame to the other, a distance of about sixteen feet and applies the oil to sixty or seventy rings in three or four seconds. The woolen cloth being slightly elastic, the oil is applied at F upon the inner edge of each ring and at G upon the outer edge, a small quantity of oil being thus uniformly distributed at the precise point where it is wanted.

Fig. II represents a part of a throstle spinning frame. The spindle is shown at *d*, central with the fliers *e*, which are driven by the whirl *f*:—the parts requiring oil are the tip of the flier-nose *g*, and the lower part of the spindle *d*, the can shown in Fig. V being adapted for this purpose.

The can for oiling the tip *g*, of the fliers is shown in Fig. IV; *h* is the can, *n* saturated cloth over the hole *o*, *k k′* gage, attached to

the top of the can by means of the slot and screws *p m*—*p′ m′* which afford means of adjusting the gage or lip *k′* in any required position. When the can is inverted and the ledge or lip *k′* slides upon the top-plate *b*, oil is applied to the tip of the nose *g*.

In the above description of my system of lubrication I have referred to its use upon spinning machinery only, but it is obvious that the same may be applied to all kinds of machinery where oil is required.

What I claim and desire to secure by Letters Patent is—

The oil-can or feeder having upon its exterior, projecting guides or gages, so placed with reference to the saturated cloth or other fibrous substance that covers the oil-hole, that as the guides traverse upon the fixed parts of any machine the oiled cloth may come in contact with those parts of the machine that require to be lubricated.

CHARLES HARDY. [L. S.]

In presence of—
JOHN M. BATCHELDER,
SAML. BATCHELDER, Jr.