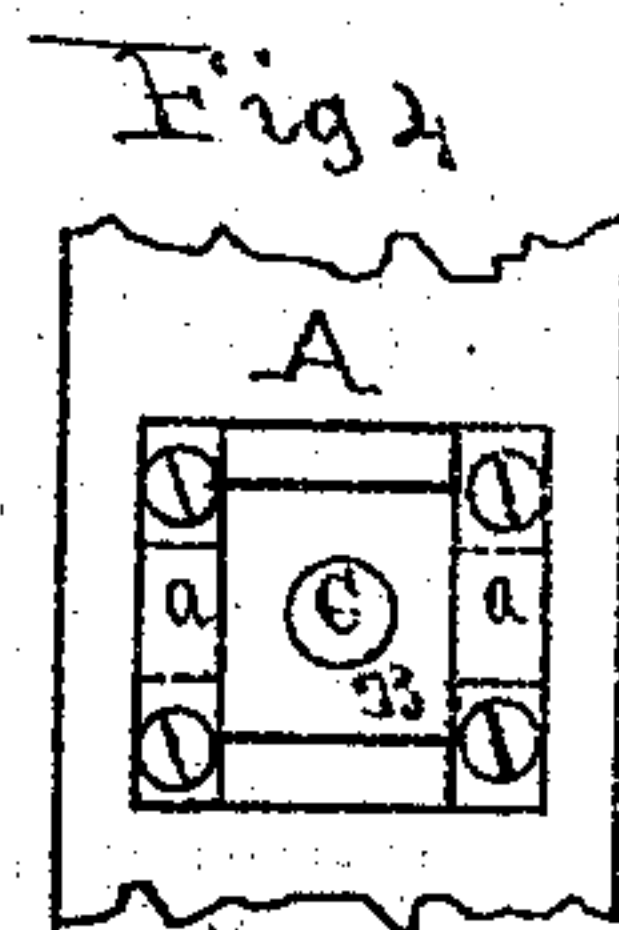
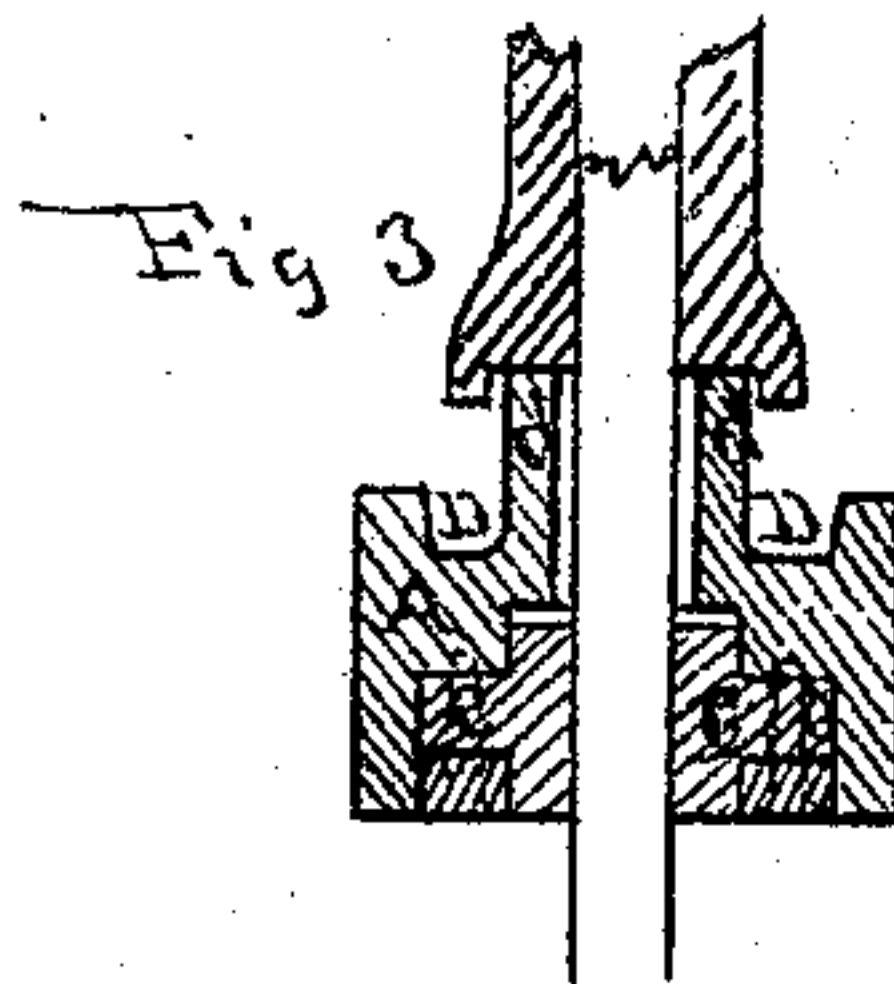


Richard Kitson's improvement in feed regulator
or evener for Cotton Lappers

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PATENTED JUL 11 1871

Fig. 1

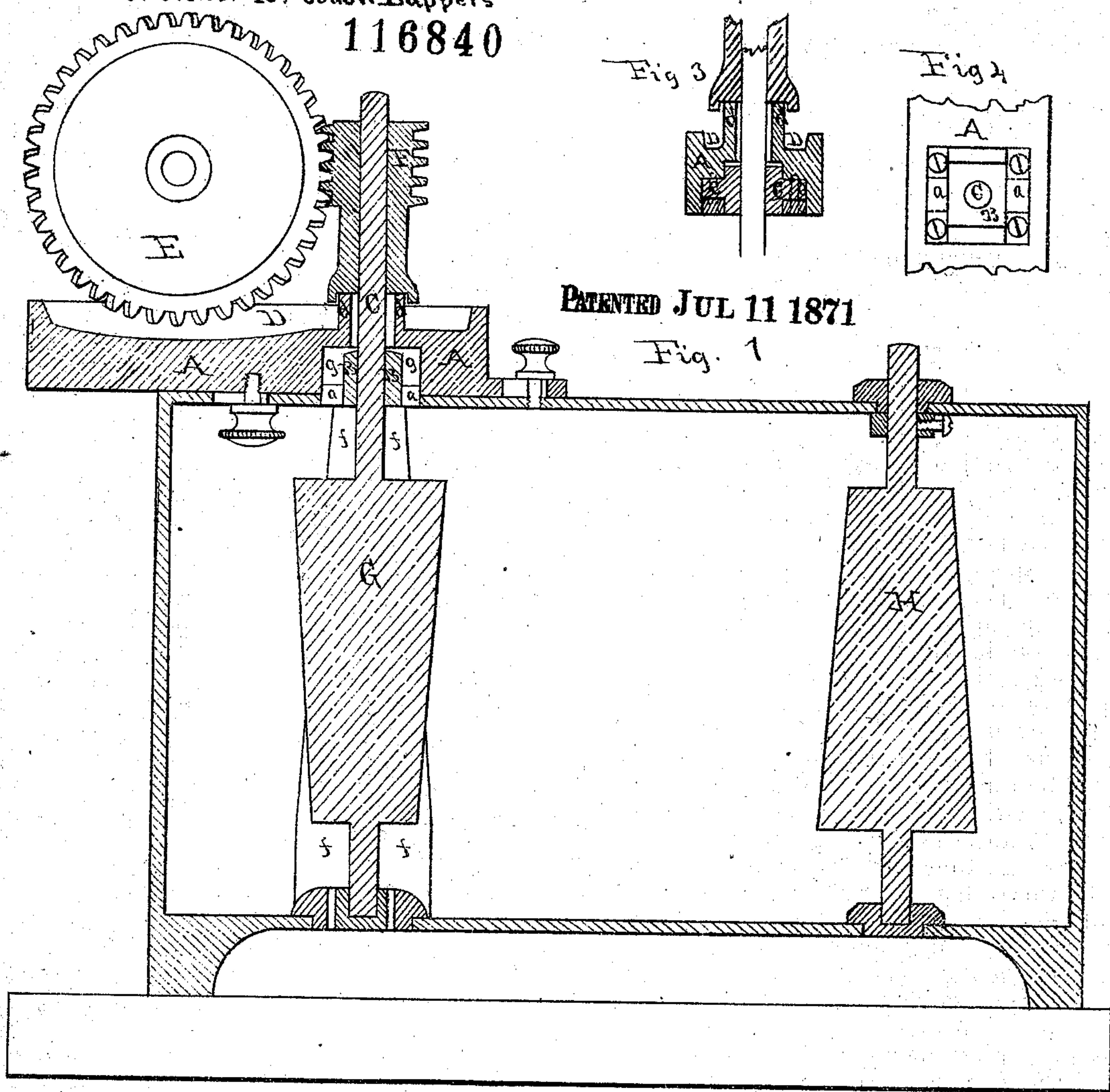
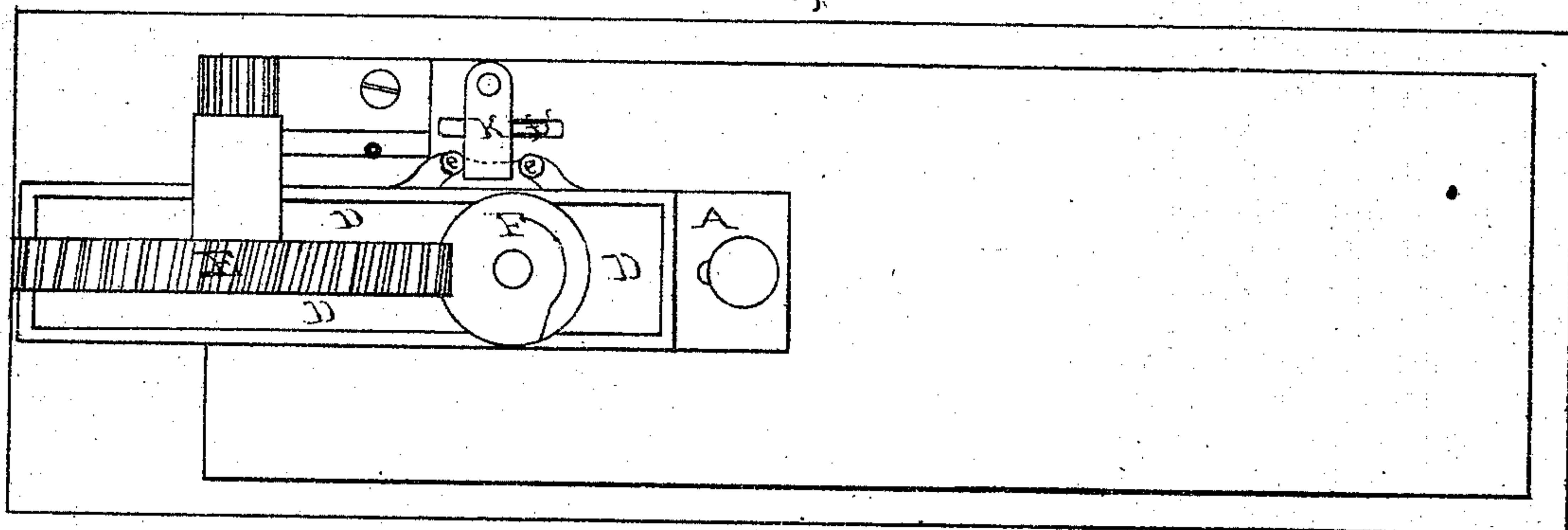


Fig. 2



Witnesses
John C Crane
A A Mast

Inventor

Richard Kitson

UNITED STATES PATENT OFFICE.

RICHARD KITSON, OF LOWELL, MASSACHUSETTS.

IMPROVEMENT IN THE FEED-REGULATING MECHANISMS OF COTTON-LAPPERS.

Specification forming part of Letters Patent No. 116,840, dated July 11, 1871.

To all whom it may concern:

Be it known that I, RICHARD KITSON, of Lowell, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Feed-Regulators or Eveners for Cotton-Lappers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 represents a sectional elevation; Fig. 2, a plan or top view. Figs. 3 and 4 are detached details pertaining to the same; Fig. 3 being a cross-section through the worm-gear shaft, and Fig. 4 a bottom side view of the latter.

This invention relates to the construction of the slide A and the arrangement of the rocking-box B, which supports the upper end of the cone and the worm-shaft C, to the hub *d*, which rises in and above the oil-chamber or trough D to prevent the lubricating material in said chamber passing down the cone-shaft. In the ordinary feed-regulator the rocking-box B is arranged in the top of the slide, and the oil in the chamber D lubricates the top of the cone-shaft, and most of the oil is wasted by running down onto the cone, soaking or saturating the belt and other parts of the machinery. The oil in the chamber D is intended to be carried upward by the rotary motion of the gear E to lubricate its teeth and the screw-threads of the worm F running together. The supply of oil carried up by the gear, being very abundant, runs immediately back down the worm and its hub into the oil-chamber, to be again or constantly carried up, and all the time running back into the chamber, and, in consequence of a constant leakage around the worm and cone-shaft, large quantities of oil are consumed or wasted. To overcome this difficulty I construct the slide with a hub, *d*, rising in and above the oil-chamber, and a recess, *g*, in the under side of the slide; and in this recess I hang the rocking-box B by pivots or trunnions *e* projecting from opposite sides, all substantially as shown in the drawing.

It will be understood that the gear E is on the feed-roll, the motion of which is controlled by the

action of the worm operated by the cones G and H and a belt running around them. It is also understood that as often as a lap of suitable weight or other dimensions is formed by the lap-forming machinery the connecting mechanisms detach or liberate the feeding mechanism, and throw the worm F out of contact with the teeth of the gear E, and this stops the feed while the fully-formed lap is removed and an empty lap-roll placed in the machine. The feed-connecting mechanisms are then operated either by hand or automatically, which brings the worm into operating contact with the gear E, when the machine resumes its feeding and lap-forming operation. In Fig. 2 I have shown the usual pivoted plate K, which operates the slide engaging with the latter between two rising hubs, *e*, connected therewith. The plate K is operated to move the slide by means of a lever, *f*, passing through a slot in the top of the case, as in the common feed-regulator. In practice I recess the lower end of the worm-hub, so as to cap the hub rising in the oil-chamber, and this conducts the oil which flows down the worm-hub directly into the trough and keeps it away from the upper cone-shaft bearing, which should be lubricated with oil from some other direction—that is, by a separate oil-hole leading through the side of the rocking-box, or through the slide above it. The bearings of the rocking-box B may be formed in the sides of the recess *g*, and secured by caps *a* and screws, as shown in Fig. 4. The hub *d* may be cast with the slide, or tightly fitted and fastened, so as to prevent leakage of oil around it.

I claim as my invention—

1. The slide A, constructed, as described, with an under recess, *g*, and a rising hub, *d*, in and above the oil-chamber, in the manner and for the purpose specified.

2. In combination with the slide constructed with the under recess, as described, the rocking-box B, arranged in the manner and for the purpose set forth.

Witnesses:

RICHARD KITSON.

JOHN E. CRANE,

A. A. HART.