

H. GREENWOOD.
Spinning-Jack Register.

No. 98,254.

Patented Dec. 28, 1869.

Fig. 1.

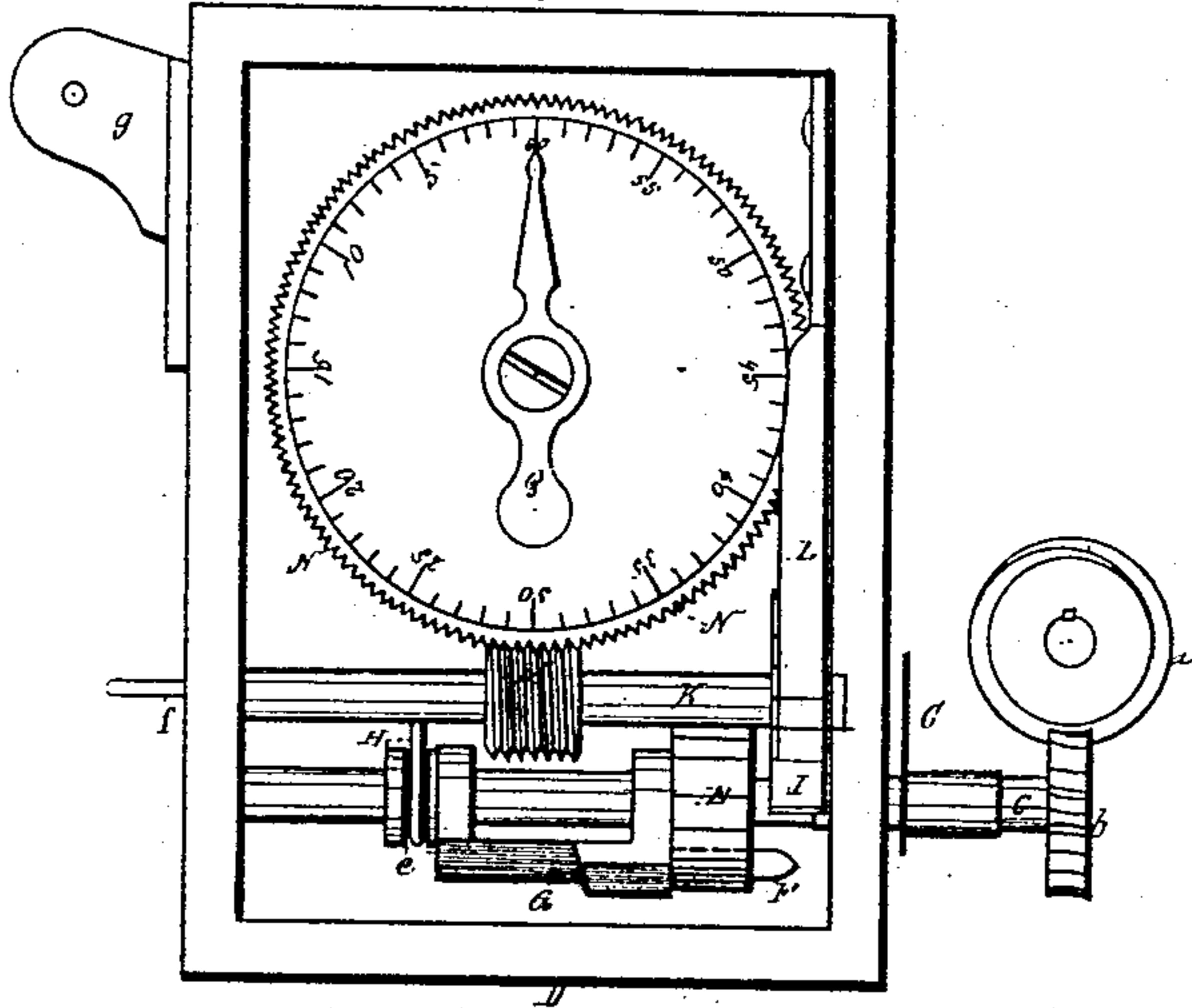


Fig. 2.

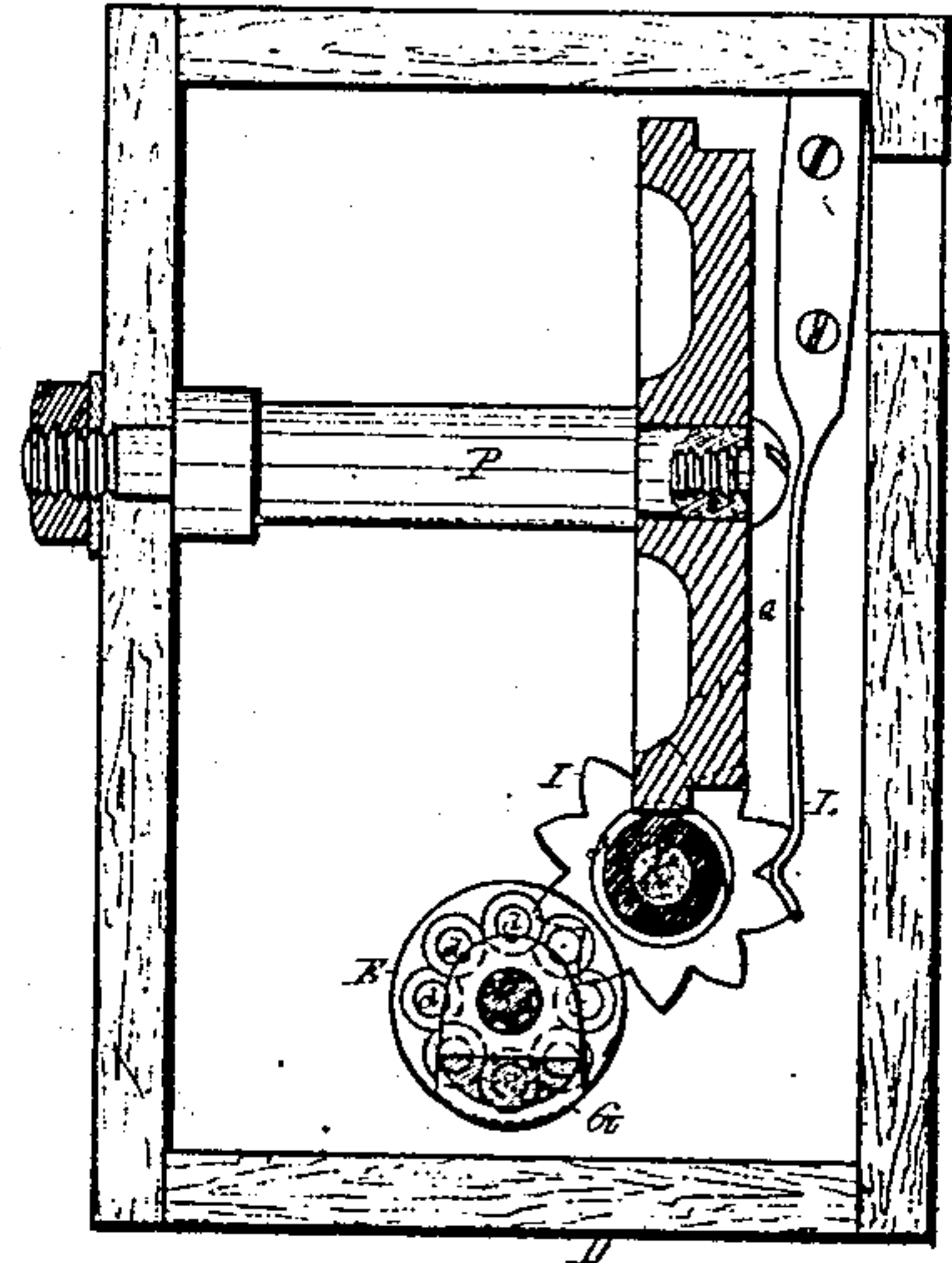


Fig. 3.

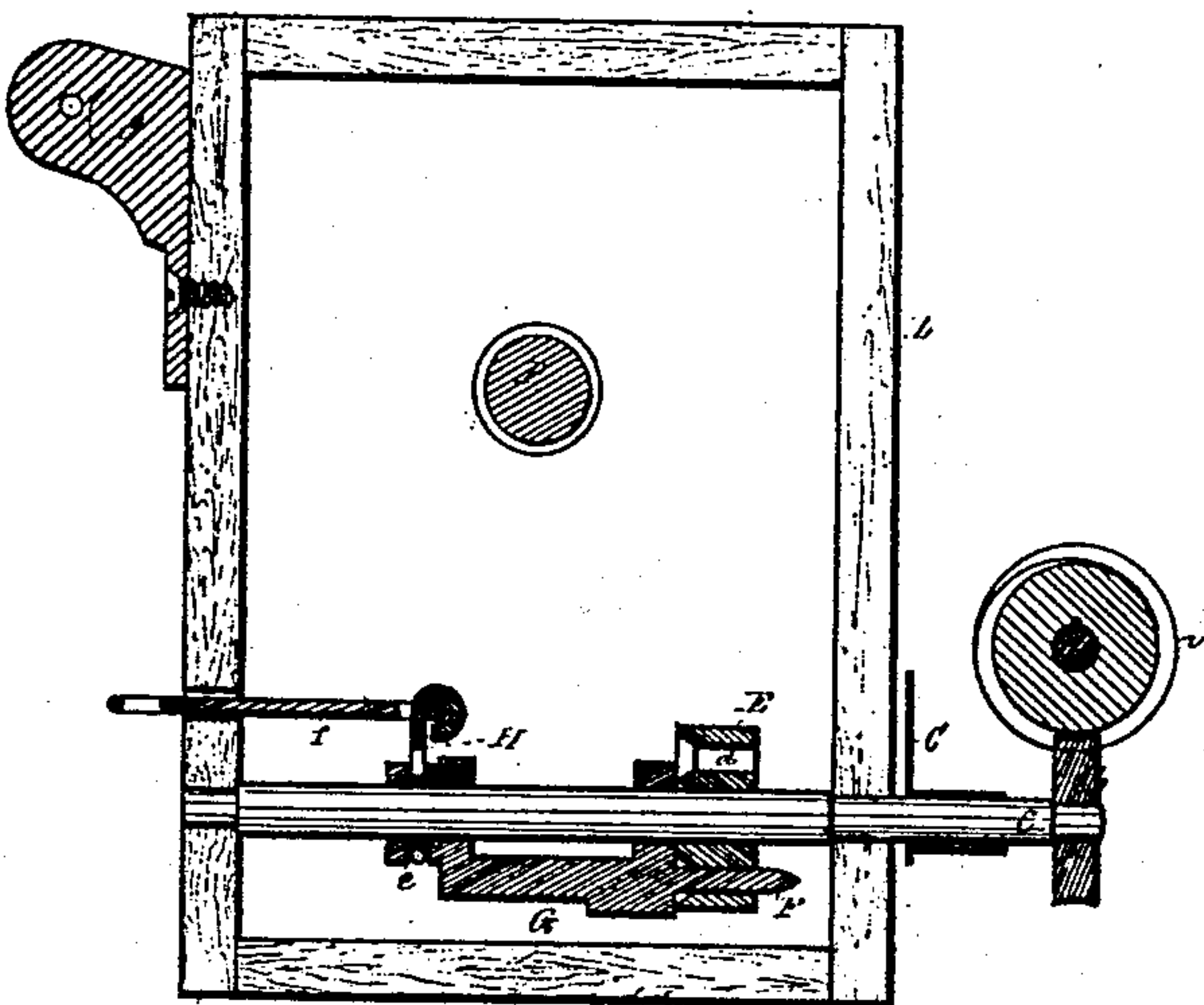
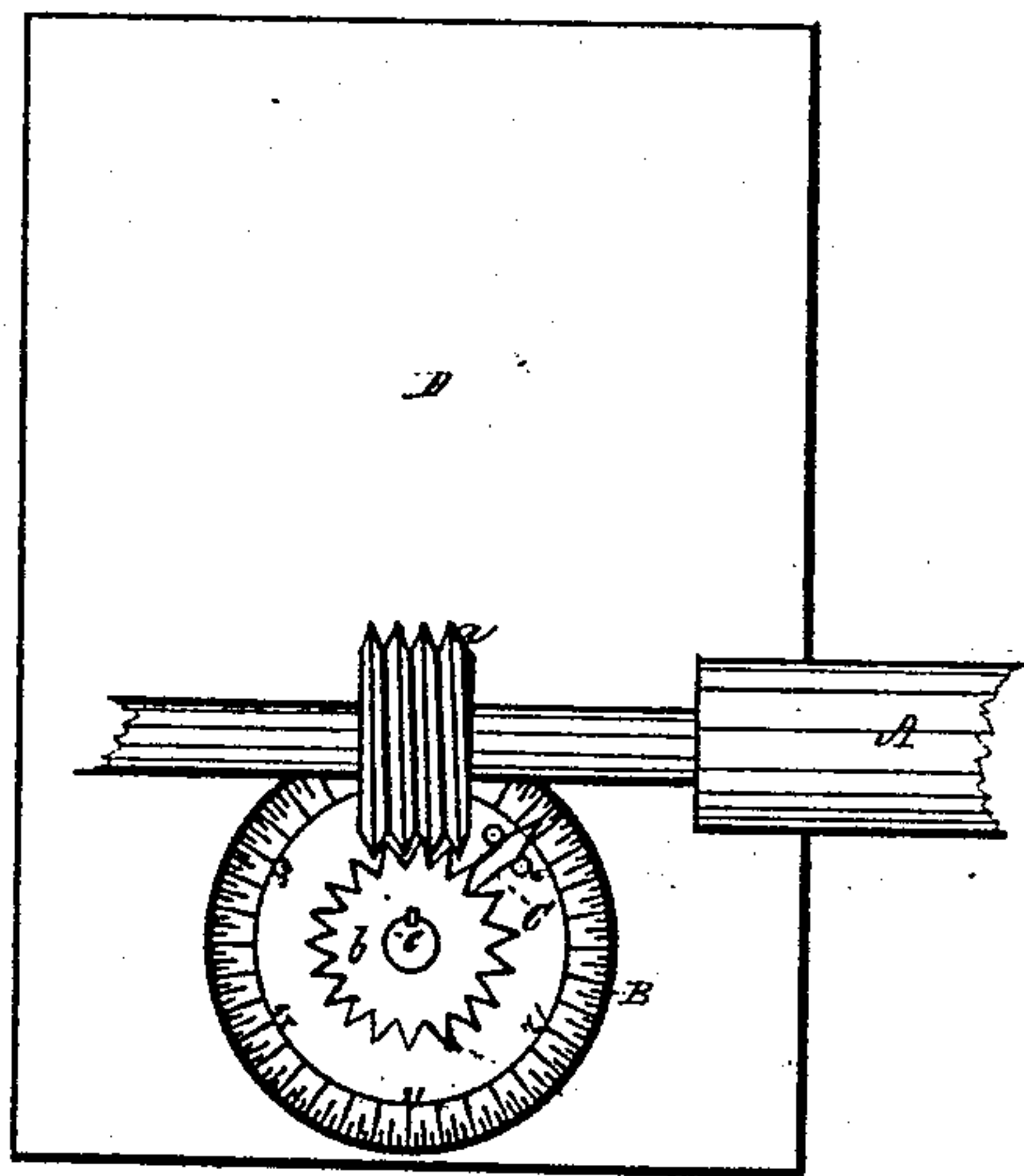


Fig. 4.



Witnesses.

S. N. Piper

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HENRY GREENWOOD, OF GILBERTSVILLE, MASSACHUSETTS.

Letters Patent No. 98,254, dated December 28, 1869.

IMPROVEMENT IN REGISTER FOR SPINNING-JACKS.

The Schedule referred to in these Letters Patent and making part of the same.

To all persons to whom these presents may come:

Be it known that I, HENRY GREENWOOD, a citizen of England, for the present residing at Gilbertsville, in the county of Worcester, and State of Massachusetts, have invented a new and useful Machine or Apparatus for Measuring or Indicating the "Draws" or "Out-Movements" of the Carriage of the Spinning-Machine, usually termed a "jack;" 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 the registering-apparatus as it appears with the cover or front plate of its case removed from the rest of the said case.

Figure 2 is a transverse section,

Figure 3, a longitudinal section, and

Figure 4, a side elevation of the same, the connection of the apparatus with one of the delivery-rollers of the jack being represented in such fig. 4, and also in fig. 1.

The object of the invention is to prevent a spinner from "pumping" the clock or registering-apparatus, or so moving it as to cause it to indicate a greater amount of work than that actually performed.

The apparatus measures, by means of the delivery-rollers, and a registering-mechanism, the number of "draws" or out-movements of the jack-carriage, thereby showing, from time to time, what spinners term the number of "beers," "runs," or "cuts" of yarn.

There are attached to the apparatus a dial, B, and an index-pointer, C, such being to indicate the length of delivery of roving for each draw or out-movement of the carriage.

In the drawings, one of the delivery-rollers of the jack is shown at A, with its shaft or journal provided with a worm or endless screw, *a*, to engage with and impart rotary motion to a worm-gear, *b*, fixed on the driving-shaft *c* of the registering-apparatus.

The dial B is fastened to or formed on the side of the case D of the register, the index-pointer C being fixed on the shaft *c*.

There is also fixed on the shaft *c*, a pawl-clutch, E, which is a wheel provided with a series of apertures *d* extending through it transversely, and arranged in a circular path, and at equal distances apart, the same being as shown in fig. 2.

Each of the passages *d* is formed with a flaring or trumpet-mouth at its inner end, as shown in fig. 3.

This clutch is to receive the pawl F, which is a pointed cylinder or pin projected from a pendulous weight, G, suspended from and so as to be capable of swinging or turning on the shaft *c*, and of being slid lengthwise thereon.

A yoke, H, encompasses a grooved neck, *e*, extended from the weight G, such yoke being jointed to

a rod, *f*, extending through the next adjacent side of the case.

We are to suppose a pendulum or weighted lever to be suspended from an ear, *g*, projecting from the case, and such pendulum to be jointed to the rod *f*, and arranged in such manner that while the carriage is being put in gear, the pendulum or weighted lever will be swung back, so as to cause the weight G to be moved in a manner to draw the pawl F entirely out of the clutch E.

As soon as the pawl F is drawn out of the clutch E, the gravitating pawl-carrier or weight G will fall down to its lowest position, so as to return the pawl to the proper situation for being again engaged with the clutch.

The said engagement will take place at the commencement of the out-movement of the jack-carriage when the pendulum or weighted lever will return to a vertical position, and thereby engage the clutch.

The pawl will be revolved by and with the shaft *c*, and will be caused to be engaged with the toothed wheel I, fixed on another or worm-shaft K, and to move said wheel one tooth forward, to indicate the number of draws or out-movements of the carriage.

A spring-retaining pawl, L, acts against the wheel I, or is arranged therewith in manner as shown in the drawings.

Furthermore, a worm or endless screw, M, fixed on the shaft K, engages with a worm-gear or rotary wheel N, arranged to revolve on and being concentric with a stationary arbor, P.

An index-pointer, Q, fixed to the arbor P, serves to denote, with the scale of divisions found on the face of the plate or wheel N, the extent of rotary motion of such wheel produced by the wheel while in revolution.

The index-wheel N serves to indicate the number of draws of the jack-carriage or amount of yarn spun, and such wheel will be put in motion only while the pawl F may be in revolution by the clutch E.

Were it not for the gravitating weight or pawl-carrier to operate as described, the registering-apparatus would not indicate the correct number of draws, as the toothed wheel L would be liable to be occasionally moved twice, rather than once only for each draw.

I claim as my invention, the following, viz:

The combination and arrangement of the pawl-clutch E and the gravitating and sliding weight G, with the driving-shaft *c*, the pawl F, and the draw-registering mechanism operated thereby, substantially as described.

HENRY GREENWOOD.

Witnesses:

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