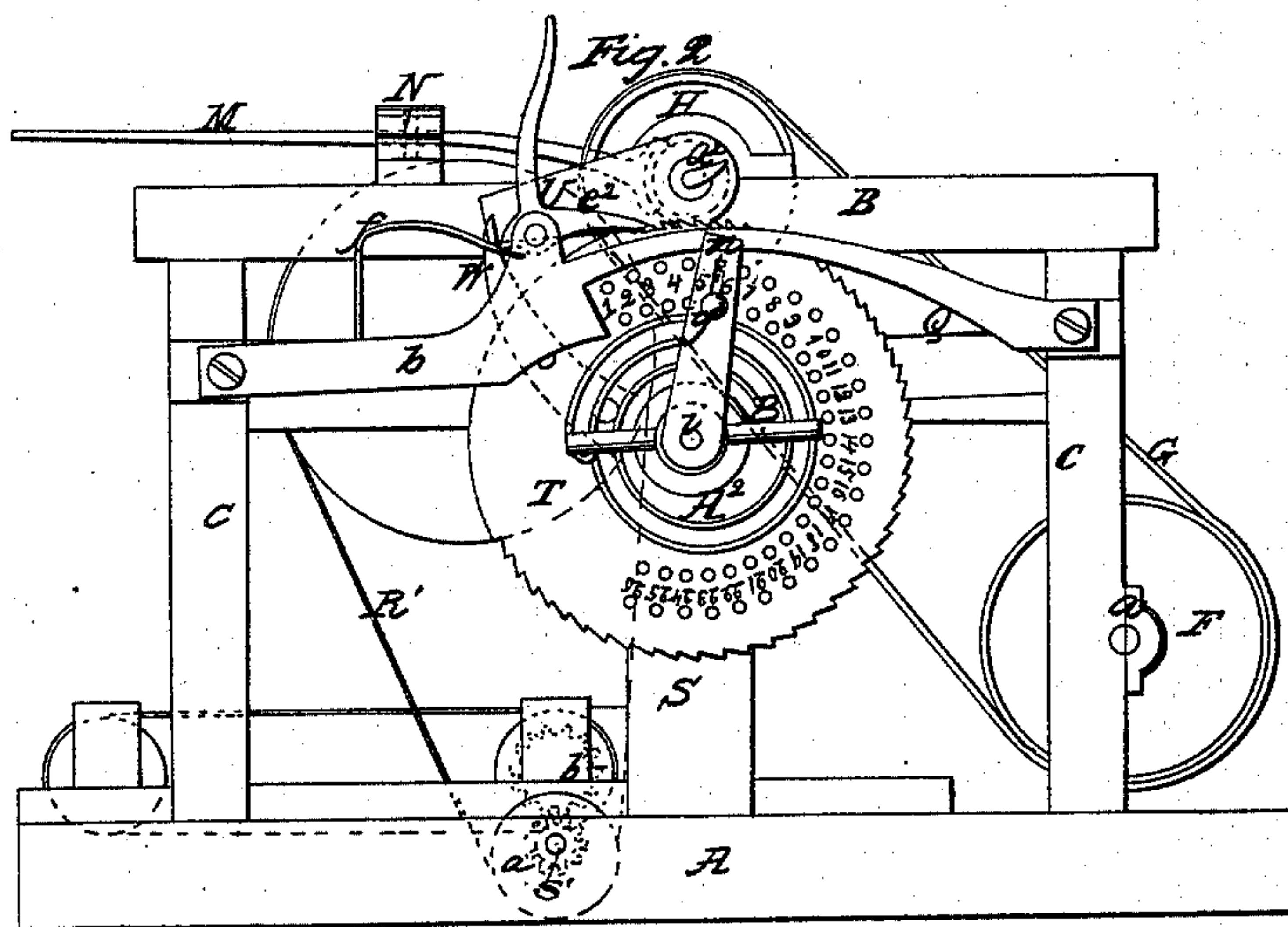
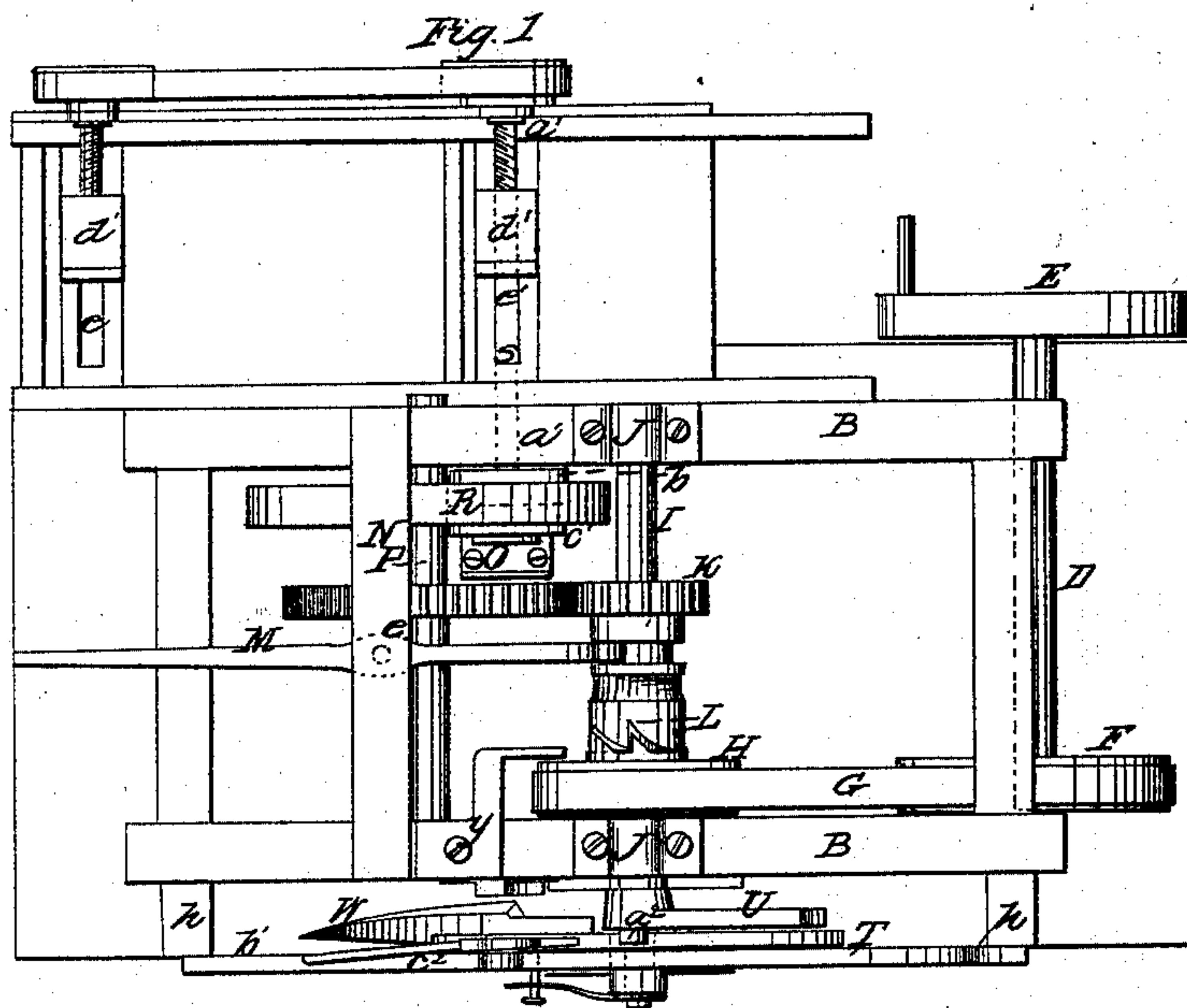


*T. Whitmore,*

*Saw-Mill Head-Block.*

*N<sup>o</sup> 69,055.*

*Patented Sep. 17, 1867.*



*Witnesses:*

*Thos. Tinsch  
J. A. Servin*

*Inventor.*

*T. Whitmore  
Per *[Signature]*  
Attorneys*



# United States Patent Office.

TITUS WHITMORE, OF DUBUQUE, IOWA.

Letters Patent No. 69,055, dated September 17, 1867.

## IMPROVEMENT IN HEAD-BLOCKS FOR SAW-MILLS.

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

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, TITUS WHITMORE, of Dubuque, in the county of Dubuque, and State of Iowa, have invented a new and improved Setter for Saw-Mills; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings forming part of this specification.

The object of my invention is to provide a device by which the logs may be set automatically to a circular mill-saw for manufacturing lumber, and consists in providing an index-plate made in the form of a disk with a cam, and a crank-lever located upon a shaft, for the purpose of throwing off the set of the log to the saw when it has gained the point designed for the thickness of lumber.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

Figure 1 is a top plan view of my improved setter for circular-saw mills.

Figure 2 is a side elevation of the same.

Letters of like name and kind refer to like parts in each of the figures.

A represents the base upon which my setting device is secured. B is a rectangular frame, made of wood or other proper material, mounted and supported upon any suitable number of posts, C C C C. D is a shaft provided with journals which run in bearings, *a*, secured to the posts C C. Upon the outer end of the shaft D, and outside of the post *c*, is a band-wheel, E, for the purpose of driving the machine. F is also another band-wheel secured to and revolves with the shaft D. Around this band-wheel F works the band G that passes over and works around and drives the pulley H that runs loose upon the shaft I, the said shaft I being provided with proper journals which run in suitable bearings, J J, located and secured upon the top of the frame B. Upon shaft I is secured a pinion-wheel, K, provided with a clutch, L, that is designed to engage with a similar clutch upon the band-wheel H, the clutch and pinion K and L being operated by a lever, M, pivoted at *e* to the cross-timber N, for the purpose of throwing the clutch L out and into gear with the clutch upon the band-wheel H, so as to operate the feed-works of the device. The pinion K fits and meshes into and drives a corresponding gear-wheel, O, that is rigidly secured to the shaft P, that has journals which run in bearings located and secured to the timbers Q Q, the said timbers being framed into the posts C immediately under the top timbers or frame B. Upon this shaft P is also secured a band-wheel, R, from which a belt, R', passes, to drive the feed-screw S' that moves the log laterally over to the saw in bearings *a'*, upon the side of the platform A. Upon the inner end of the feed-screw a pulley, *b'*, is secured, over which the belt R' is placed when the log is to be fed to the saw. A loose pulley, C', is placed upon the feed-screw between its inner bearing, secured to the platform A and the fixed pulley. Over this the belt R' is shifted when the log has been fed the required distance. By the operation of the feed-screw, through the medium of suitable gearing, the sliding blocks *d'* are moved in grooves or slots *e'*, formed in the cross-bars of the platform supporting the carriage. But as these do not form a part of my invention, I do not claim them. Upon the side of the post S, and to the timber Q, is secured a bearing or axle, (shown only at *i*, fig. 2,) upon which is a movable index-wheel, T, with the sides perforated in a novel and peculiar manner, in which is fitted a movable point, *y*, that passes through a mortise, *m*, in the spring *n*, that is secured to the axle *i*, to indicate or regulate the thickness of lumber to be cut. The periphery of the wheel T is provided with ratchets, in which work the dog *a''* and pawl-lever *e''*, for the purpose of giving a definite or limited feed to the band-wheel R. *f* is a spring secured to the plate *b*, that is secured to blocks *h h*, which are secured to and project out from the frame or posts C C, so as to bring the pawl-lever *e''* in range or over the face of the index-wheel T. U is an arm secured to the outer end of the shaft I, and engages with the cam W, that is secured to the inside of the index-wheel, for the purpose of throwing out the clutch L when the log has been set over laterally to the saw as far as designed, which, when the clutch becomes disengaged or released from the band-wheel H, stops the lateral movement of the log at a point ready for the saw. Y is a plate of peculiar form, secured to the top of the frame B, to prevent the band G from running off the band-wheel H, and to prevent the wheel from moving with the shaft. It will be understood that the pinion-wheel K is provided with only half as many teeth as the gear-wheel O, consequently makes twice as many turns as the wheel O. The perforations in the side of the index-wheel T are marked by numerals 1, 2, 3, and so on to any desired number, as shown in the drawings. When any given thickness of lumber is required, the pin *y* is set in a perforation in the index-wheel T, numbered to correspond to half the number of revolutions of



the pinion K. For example, if ten turns of the pinion K are desired to move the log the distance required, the point or pin  $y$  is set in the perforation number 5. The clutch L is then engaged with the band-wheel H and the machine put in motion, which, by the action of the dog  $a^2$  upon the index-wheel T, is moved round one notch until ten turns of the band-wheel H are made, which has brought the cam W round so as to engage with the arm U upon the end of the shaft I, which throws the said shaft back in a longitudinal direction, and disengages the clutch; at the same time the bar or plate Y prevents the band-wheel from being moved with the shaft, as it is made to slide through the eye of the wheel, and moves with the shaft only when engaged with the clutch L. When a half-turn or revolution is desired, the point or pin  $y$  is placed in the inside circle of perforations. When the log has been set over to the saw by the device, and the clutch becomes disengaged, by drawing the pawl-lever  $c^2$  back, disengages it from the index-wheel T, when, by the action of the coiled spring  $A^2$ , which is secured to the cross-bar  $B^2$ , throws back the index, when it is ready to set the log over for another cut. It will also be observed that the feed-screw C should be the same pitch as the gear-wheel O, so that both will make the same number of revolutions, thus making a device by which the log will be set to the saw in the most precise and unerring manner.

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

The combination and arrangement of the index-wheel T, having cam W, spring  $A^2$ , slotted arm  $n$ , carrying-pin  $y$ , spring pawl-lever  $c^2$ , arm V, dog  $a^2$  upon shaft I, pinion K, clutch L, gear-wheel O and band-wheel O, and feed-screw  $S'$ , whereby the log is set to the saw, as herein set forth, for the purpose specified.

TITUS WHITMORE.

Witnesses:

H. ROUSE,

P. SAGE.