

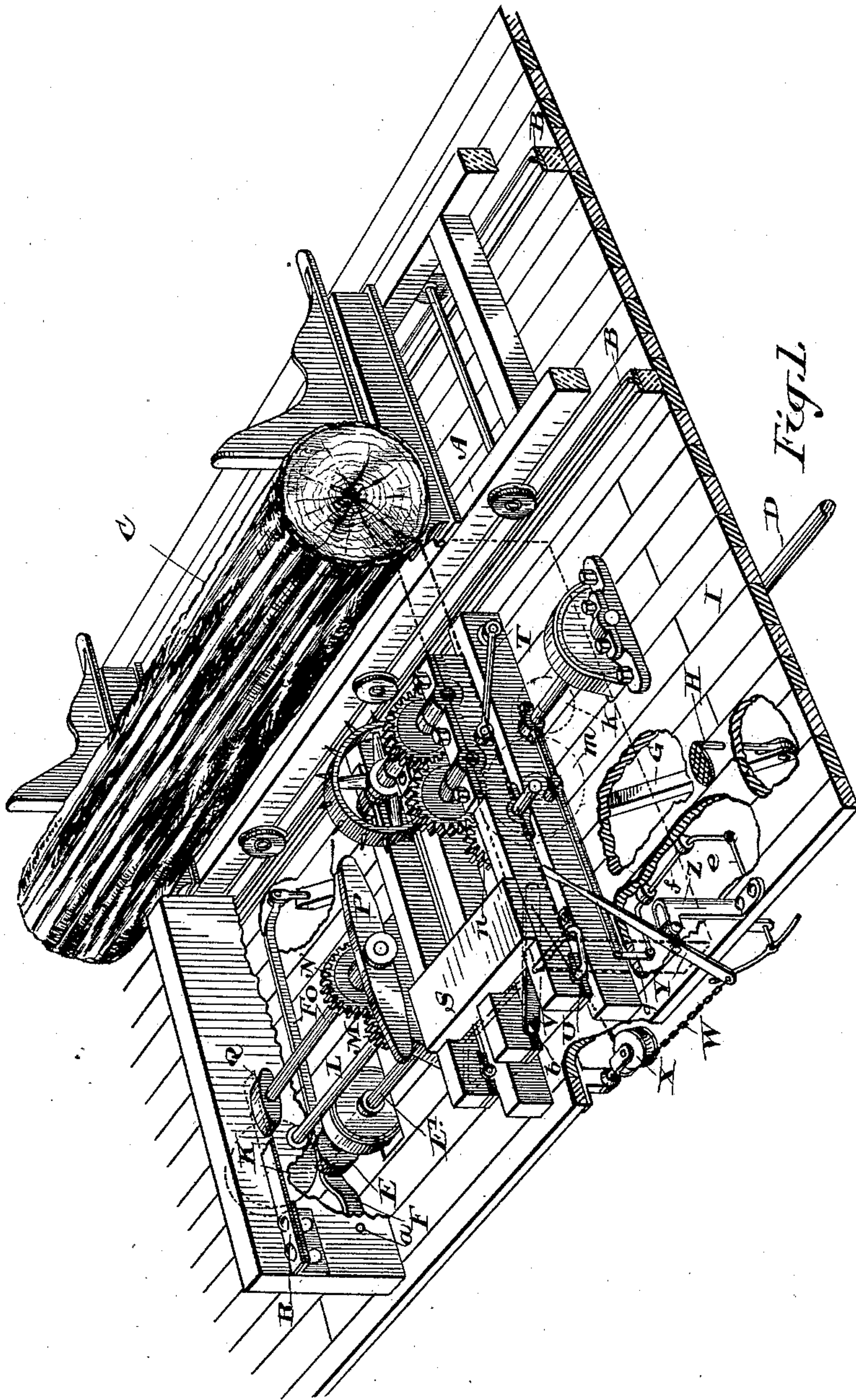
(No Model.)

3 Sheets—Sheet 1.

I. S. WARDELL.  
LOG CANTER.

No. 424,385.

Patented Mar. 25, 1890.



Witnesses.  
J. B. Fehsestouhaugh.  
H. G. McMillan

Inventor:  
I. S. Wardell  
by Donald C. Ridout & Co  
attys

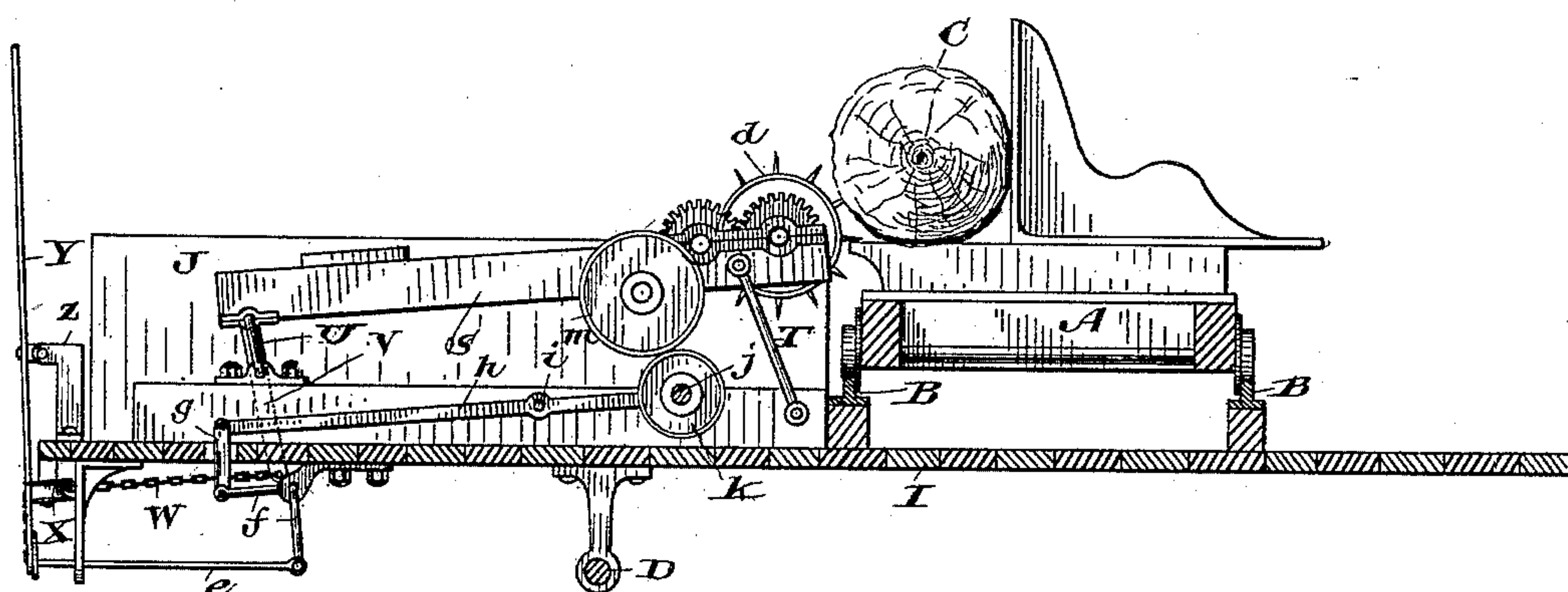
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*Fig. 2.*

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3 Sheets—Sheet 3.

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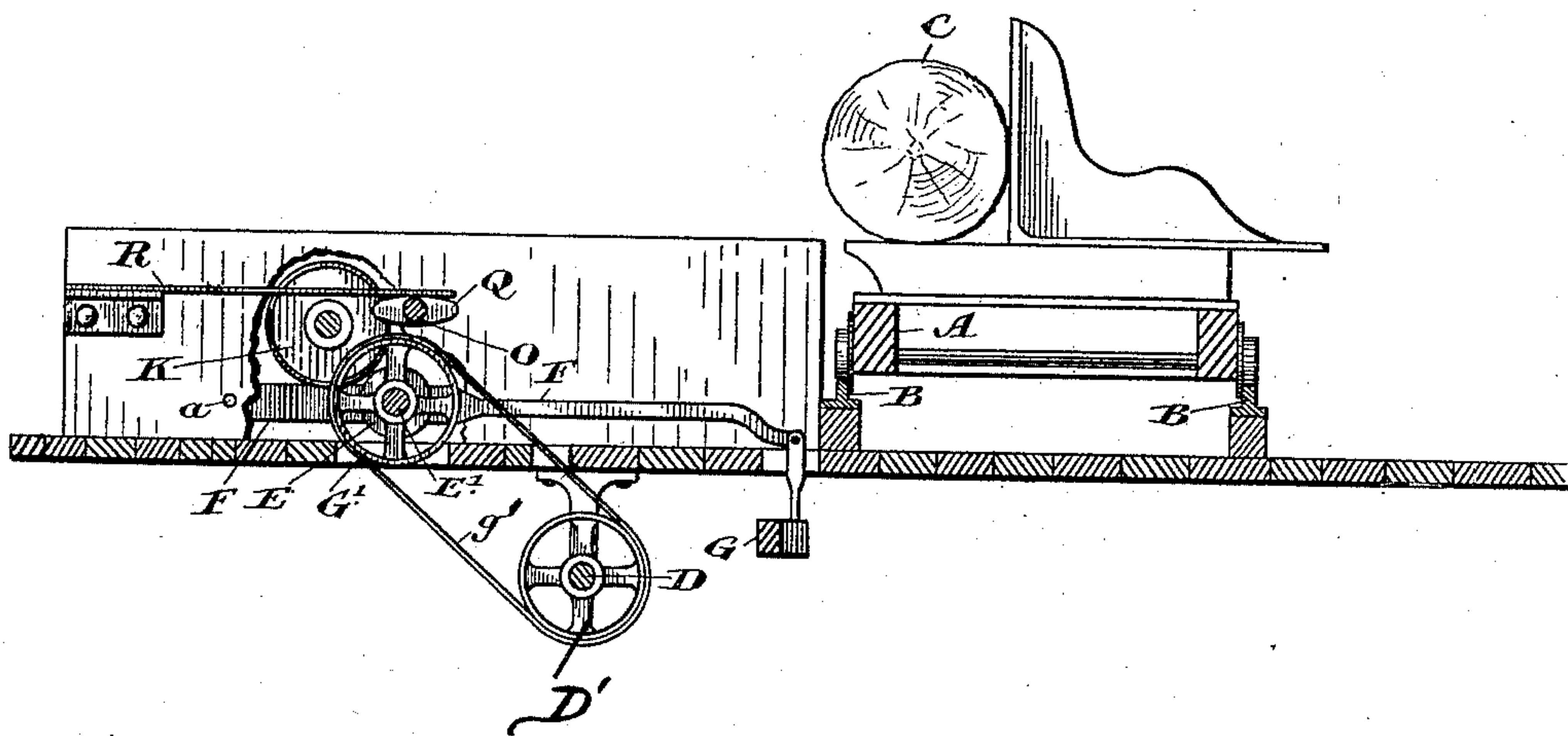


Fig. 3.

Witnesses.

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# UNITED STATES PATENT OFFICE.

ISAAC S. WARDELL, OF VICTORIA HARBOR, ONTARIO, CANADA.

## LOG-CANTER.

SPECIFICATION forming part of Letters Patent No. 424,385, dated March 25, 1890.

Application filed July 8, 1889. Serial No. 316,758. (No model.)

*To all whom it may concern:*

Be it known that I, ISAAC SMITH WARDELL, lumberman, of the village of Victoria Harbor, in the county of Simcoe, in the Province of Ontario, Canada, have invented a certain new and Improved Log-Canter, of which the following is a specification.

The object of the invention is to design a machine which will load a log upon a saw-carriage and adjust it thereon with the least possible labor; and it consists, essentially, in the arrangement of mechanism hereinafter more particularly explained.

Figure 1 represents a perspective view of a saw-carriage and the mechanism connected with my invention. Figs. 2 and 3 are vertical longitudinal sections of the machine, partly in elevation.

A represents an ordinary saw-carriage, and B the rails on which it is carried.

C is a log, shown in position on the carriage A after having been handled by the mechanism I shall now proceed to describe.

D is the main driving-shaft, which revolves constantly in connection with the general machinery of the mill.

E is a friction-pulley mounted on a shaft E', and the friction-pulley is driven by a belt g', passing over the pulley G' on shaft E', and the pulley D', which is secured to the shaft D, the end of which shaft is journaled in the lever F, one end of the said lever F being pivoted at a, while its other end is connected, as indicated, to the lever G. This latter lever is suitably pivoted near its center, and has a foot-step H connected at its other end and projecting through the flooring I. When the log C reaches the skids J, the man in charge of the machinery presses down upon the foot-step H, and, as the lever G is pivoted in its center, the end of the said lever opposite to the foot-step H is caused to move upwardly, carrying with it the friction-pulley E, until the said pulley comes in contact with the friction-pulley K, (see dotted lines,) which latter pulley is keyed to the counter-shaft L. This counter-shaft is suitably journaled, and has a spur-pinion M fixed to it to engage with the spur-wheel N, keyed to the counter-shaft O, on which latter counter-shaft the arm P is fixed. When the friction-pulley E is brought in contact with the friction-pulley K, the

motion of the driving-shaft D is immediately transmitted to the counter-shaft O, which in revolving causes the arm P to act against the log C and push it onto the carriage A into the position indicated in Fig. 1. The moment that pressure is removed from the foot-step H the frictional connection between the pulleys E and K is dissolved, when, of course, the counter-shafts driven by that connection cease to revolve. In order to insure that the arm P shall remain in a horizontal position when it is not revolving, I place a cam Q on the counter-shaft O, and immediately over the said cam I place a spring-plate R, which permits the cam to revolve with the shaft O; but the instant that power is removed from the said shaft the pressure of the spring-plate R forces the cam into the position in which it is indicated in the drawings, when the arm P is horizontal, as shown.

In order to turn the log C and bring its flat side into proper position for squaring the log, I provide the following simply-operating mechanism:

S is a frame supported at one end by a link T on each side of it, one link only being visible in the drawings. The opposite end of the frame S is supported by a crank-rod U. A lever V is fastened to the rod U and is pivoted at one end b to the frame S. A cord or chain W is connected near its other end, and, after passing around a pulley X, is attached to the end of the lever Y. This lever is supported on a beveled pivot by the bracket Z. When it is desired to raise the frame S to bring the canter d in contact with the log C, the lever Y is pulled so as to draw upon the chain W, which action raises the frame S on the links T and crank-rod U, shoving the canter d, as desired, against the log C. When in this position, the lower end of the lever Y is immediately in front of the push-rod e, which push-rod is connected at its other end to a double-crank lever f. The inner end of this crank-lever is connected by a link g to the lever h, which is pivoted at i and has a bearing formed on its end to support the end of the counter-shaft j. A friction-pulley k is connected to the counter-shaft j, which counter-shaft derives motion from the main driving-shaft of the machine. When the lever h is tilted, as described, the friction-pulley k is



brought in contact with the friction-pulley *m*, keyed to the spindle on which the spur-pinion *n* is fastened. This spur-pinion meshes with gearing connected with the spindle of the canter *d*, and consequently, when the friction-pulley *k* is brought in contact with the friction-pulley *m*, the canter *d* is caused to revolve and act against the log C, as indicated.

From this description it will be seen that by the operation of my device the log may be thrown onto the carriage and handled thereon with the least possible manual labor.

What I claim as my invention is—

1. In a log-canter, the combination of the shafts D and E', the pulleys D' and G' on said shafts, the friction-pulley E on shaft E', the levers F and G, the friction-pulley K, the shaft L, the pinions M and N, the shaft O, carrying-arm P and cam Q, and the retaining-spring R for the cam, all arranged and adapted to operate as and for the purpose described.

2. The arm P, fixed to the shaft O, which derives motion as described, in combination with the cam Q and spring-plate R, substantially as and for the purpose specified.

3. The frame S, supporting the canter *d* and its driving mechanism, and carried by the links T and crank-rod U, in combination with the lever V, chain or cord W, and lever Y, arranged substantially as and for the purpose specified.

4. The friction-pulley *m*, connected to the driving mechanism of the canter *d*, the friction-pulley *k*, connected to the counter-shaft *j*, which is supported at one end by the lever *h*, in combination with the crank-lever *f*, push-rod *e*, and lever Y, substantially as and for the purpose specified.

Town of Peterborough, June 22, 1889.

ISAAC S. WARDELL.

In presence of—

R. MAX DENNISTOUN,  
A. STEVENSON.