

(No Model.)

2 Sheets—Sheet 1.

G. M. HINKLEY & R. SCHOFIELD.
OFFSETTING SAW MILL CARRIAGE.

No. 433,681.

Patented Aug. 5, 1890.

Fig. 1

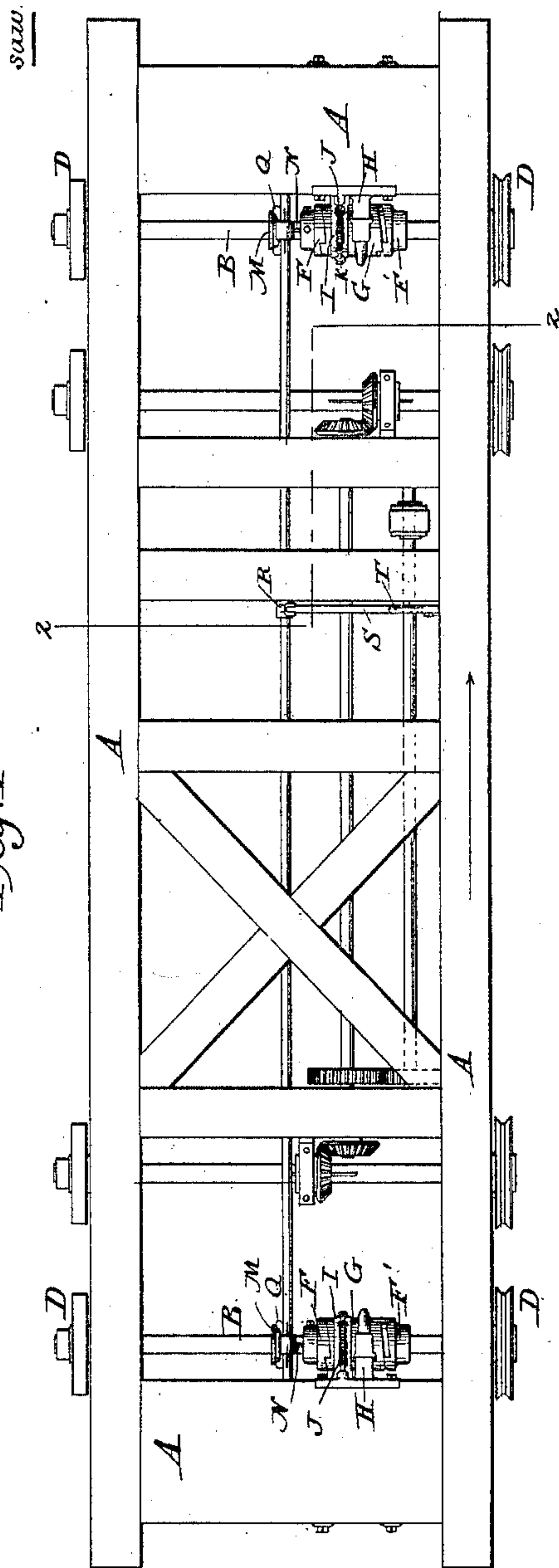
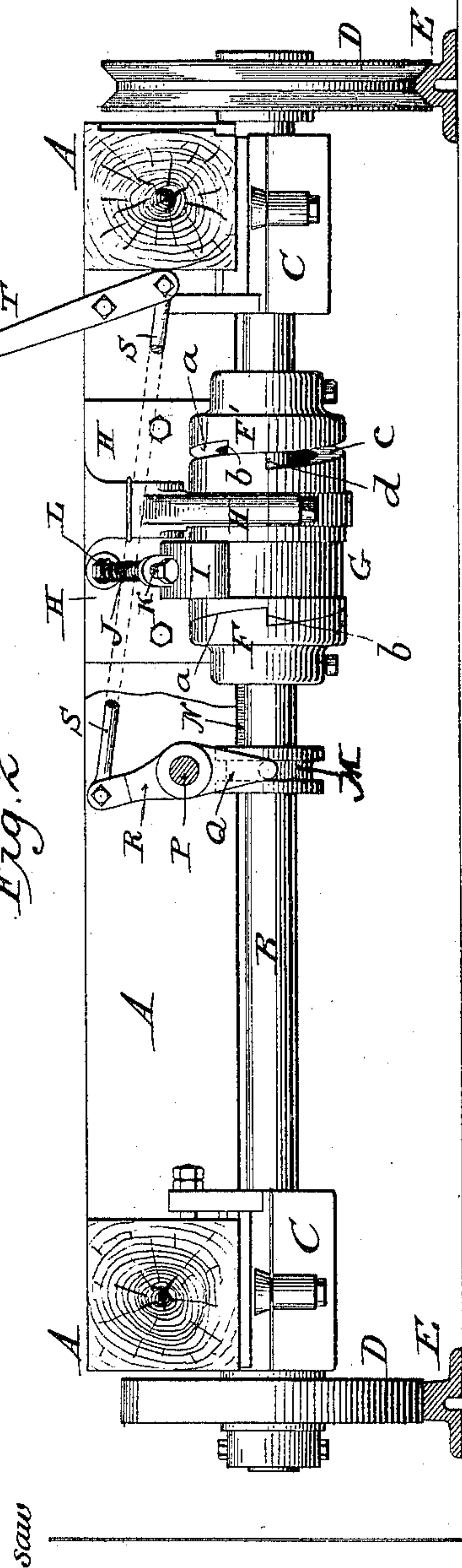


Fig. 2



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Inventors.

George M. Hinkley
Richard Schofield,
by Dodge Sons, Attys.

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Fig. 3.

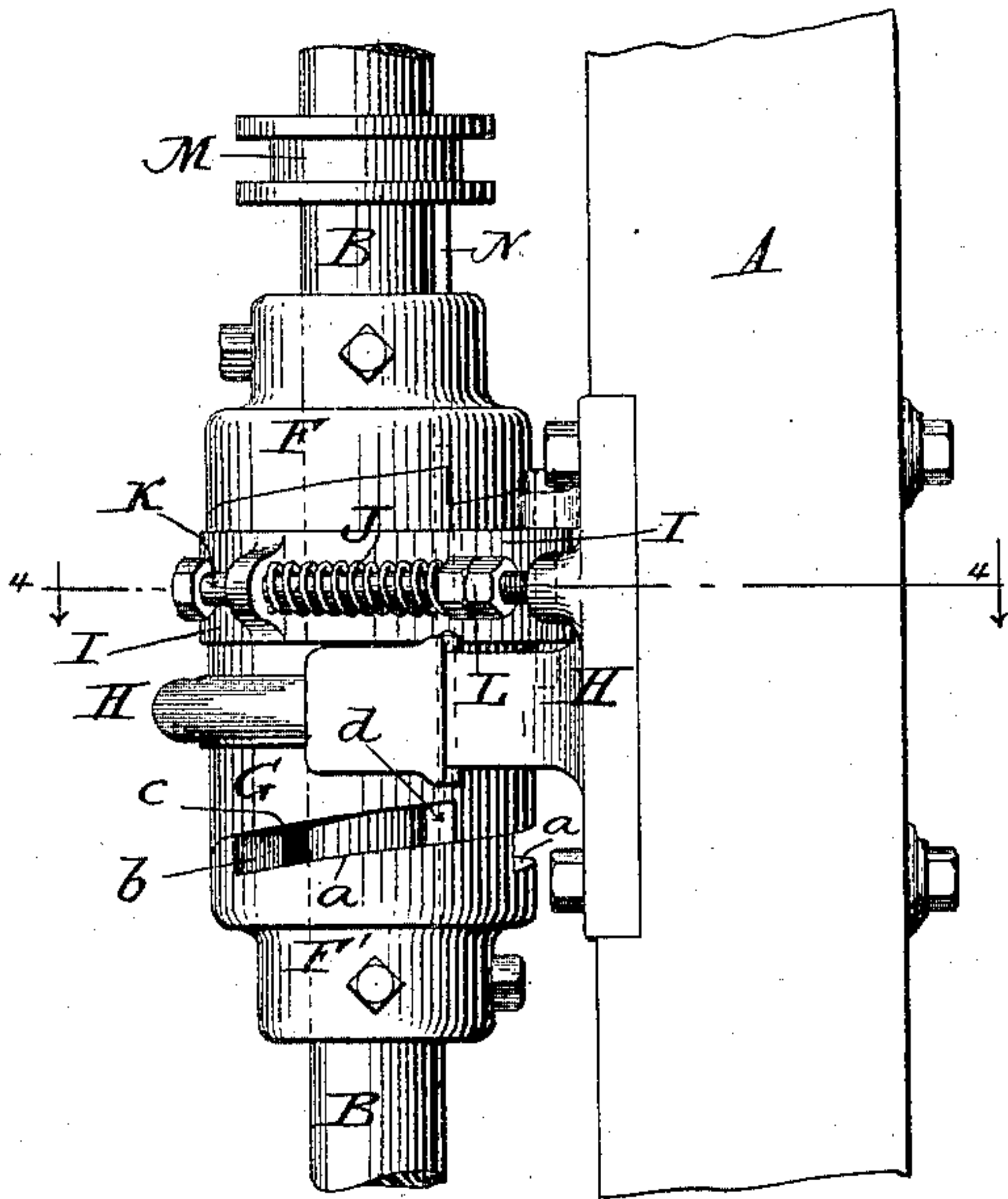


Fig. 4.

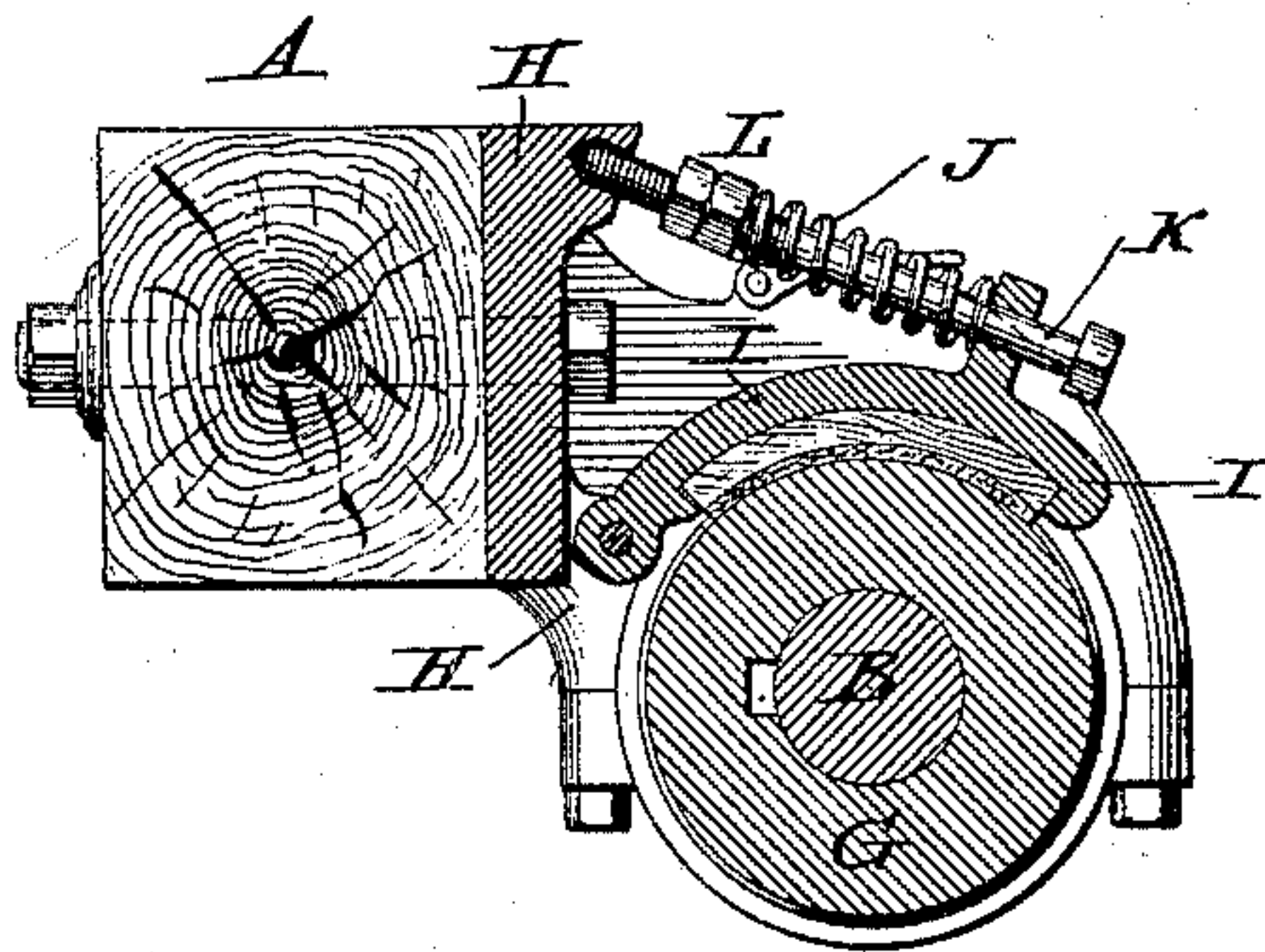
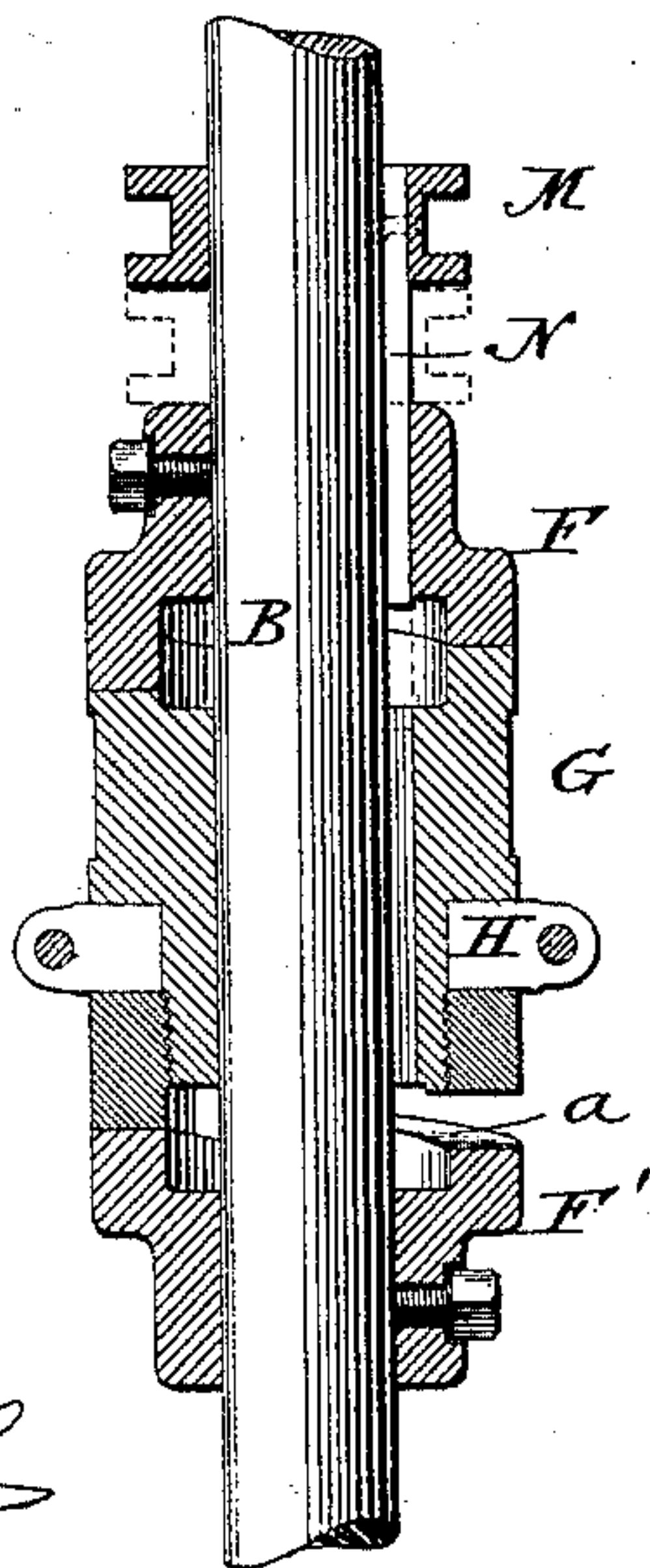


Fig. 5.



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UNITED STATES PATENT OFFICE.

GEORGE M. HINKLEY AND RICHARD SCHOFIELD, OF MILWAUKEE,
WISCONSIN; SAID SCHOFIELD ASSIGNOR TO WILLIAM W. ALLIS,
OF SAME PLACE.

OFFSETTING SAW-MILL CARRIAGE.

SPECIFICATION forming part of Letters Patent No. 433,681, dated August 5, 1890.

Application filed April 16, 1890. Serial No. 348,215. (No model.)

To all whom it may concern:

Be it known that we, GEORGE M. HINKLEY and RICHARD SCHOFIELD, citizens of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Offsetting Saw-Mill Carriages, of which the following is a specification.

Our invention relates to saw-mill carriages, and has reference more particularly to a novel construction and arrangement of devices whereby the carriage will be automatically offset away from the saw after a cut has been made, and will be automatically set up toward the saw preparatory to making the cut.

The invention further consists in a novel construction and arrangement of devices whereby the offsetting action is prevented from taking place in case it should be desired to gig back before a cut is completed.

In the drawings, Figure 1 is a top plan view of a saw-mill carriage provided with our improved devices; Fig. 2, a sectional view on the line 2 2 of Fig. 1; Fig. 3, a top plan view of the clutching mechanism for effecting the automatic movement of the carriage toward and from the saw; Fig. 4, a vertical sectional view on the line 4 4 of Fig. 3, and Fig. 5 a horizontal sectional view of the mechanism for locking the carriage against offsetting.

A indicates the frame-work of the carriage mounted upon the axles B, which turn freely in boxes or bearings C, secured to the under side of the carriage, the axles being provided with supporting-wheels D D to run upon a track E, secured to the floor of the mill, as is usual in this class of devices. It is of course to be understood that the width of the carriage is slightly less than the space between the inner faces of the wheels, so as to permit a limited movement of the carriage as a whole lengthwise upon the axles toward and from the saw.

Secured rigidly upon the axle are collars F F', which on their opposing faces are provided with inclines *a* and abrupt faces *b*. Mounted loosely upon the shaft or axle, between the collars F F', is a third collar G, which, as shown in Figs. 1, 2, 3, and 4, is provided at each end with inclined faces *c* and abrupt faces *d* corresponding to those formed upon the faces of the hubs or collars F F'.

This collar G is grooved circumferentially to receive the bracket H, which is bolted or otherwise rigidly secured to the carriage, and while the collar is free to rotate or turn within the bracket it is prevented from moving longitudinally therethrough.

I indicates a plate, which is hinged or pivoted to the bracket H and provided with a block of wood or other suitable material to bear upon the periphery of the collar G. This plate I is held down in contact with the collar by means of a spring J, encircling a rod K, which latter passes through an ear or lug formed upon the upper face of the plate I, and is seated at its opposite end in a hole or cavity formed in the bracket H, as is clearly shown in Fig. 4. The force or action of the spring J may be varied or controlled by means of the nuts L, screwing upon the threaded portion of the rod or stem J.

In Figs. 1 and 2 the parts are in the position they occupy just after making a cut, preparatory to reversing the direction of movement or travel of the carriage. Now, when the direction of travel of the carriage is reversed and it is moved in the direction indicated by the arrow, the collar F nearest the saw, being fast to the shaft or axle, will turn, and its inclined faces will ride up the inclined faces on that end of the collar G adjacent to the said collar F, and it will be apparent that as the axle or shaft cannot move lengthwise the collar F must of necessity be moved away from the saw; but inasmuch as the bracket H, which is bolted rigidly to the carriage, partakes of the longitudinal movement of the collar G the carriage will be shifted bodily away from the saw. During this initial movement of the carriage the friction-plate I will bear with sufficient force upon the collar G to prevent the latter turning upon the shaft, so that by the time that the collar G has been moved endwise sufficiently far to offset the carriage the required distance and throw the abrupt faces on the outer end of the collar G into engagement with the abrupt faces of the outer collar F' the force of the spring J will be overcome by reason of the engagement of the collar G with the outer collar F'. After the carriage has been giggered back and reversed, preparatory to making a new cut, it will be seen that the inclined faces on the

collar F' will ride against the inclined faces on the outer end of the collar G and move said collar lengthwise upon the axle, and will carry the carriage-frame toward the saw. During this longitudinal movement of the collar the friction-plate again comes into action and holds the said collar against rotation until the inner end of the collar G comes into engagement with the abrupt faces of the collar F. There will be a set of these devices at opposite ends of the carriage, so as to move both ends of the carriage uniformly and equally and prevent any binding upon the axles.

It sometimes happens that it is necessary to gig back before the cut has been completed, and this, too, without offsetting the carriage, for it is clear that if the carriage be offset while the saw is still in the log the result will be a destruction of the saw. To prevent this automatic offsetting of the carriage upon the reversal of the direction of travel of the same, we provide each of the axles B with a grooved collar M, which carries a key or feather N, the said key or feather being seated in the shaft or axle and passing through suitable recesses or seats formed in the collars F and G, as clearly shown in Figs. 4 and 5. It will be seen that when this key or feather is moved inward, as indicated by the dotted lines in Fig. 5, and the collars F and G locked together, said collar G will be prevented from rotating independently of the shaft, and of course the inclined faces upon the ends of said collar will be rendered inactive and the carriage prevented from being offset. In order to actuate this collar M and the feather carried thereby, we provide a rock-shaft P, having at each end a depending yoke Q to engage the collar M, and at a point between its ends with a radial arm R, which latter is connected by means of a rod or pitman S with a lever T.

Having thus described our invention, what we claim is—

1. In a saw-mill carriage, the combination, with the axles and the wheels, of the frame-work movable longitudinally upon the axles toward and from the saw, a bracket secured to the frame of the carriage and provided with a collar G, adapted to turn or rotate, but not to move lengthwise within said bracket, and collars F F', secured rigidly upon the axle and provided with inclined faces to engage corresponding faces formed upon the ends of the collar G.

2. In a saw-mill carriage, the combination, with the trucks, of the frame-work mounted and adapted to slide upon said trucks, a collar carried by the frame-work and loosely encircling the axle, and collars, such as F F', secured rigidly upon the axle and provided with cam-faces to act upon the intermediate collar, all substantially as shown.

3. In combination with the frame-work A, axles B, boxes C, and wheels D, collars secured rigidly upon the axles and separated from

each other, and a collar loosely encircling the shaft between the rigid collars and connected with the frame-work of the carriage, all substantially as shown, whereby when the carriage reverses its movement the said intermediate collar will be shifted longitudinally and the carriage moved toward or from the saw.

4. In combination with the frame-work A, axles B, boxes C, and wheels D, rigid collars F F', provided with inclines *a* and abrupt faces *b*, a bracket H, secured to the frame-work of the carriage, and a collar G, journaled in the bracket, but loosely encircling the shaft, and provided at each end with inclined and abrupt faces.

5. In combination with the frame-work A and the axles B, the former movable longitudinally of the latter, collars F F', secured rigidly upon the axle and provided with inclined faces, a collar G, journaled in a bracket projecting from the frame-work of the carriage and loosely encircling the shafts between the collars F F', and a friction device, substantially such as shown, for preventing the rotation of the collar G, as and for the purpose set forth.

6. In combination with the frame-work A and axles B, collars F, F', and G, mounted thereon, a bracket H, secured to the frame-work and supporting the collar G, a plate I, pivoted to the bracket, and a spring J, acting upon the pivoted plate, all substantially as shown.

7. In combination with the frame-work A, axle B, provided with collars F, F', and G, bracket H, provided with a pivoted plate I, a rod or stem K, and a spring J, encircling the rod or stem K, all substantially as shown.

8. In combination with the frame-work A and the axle B, collars F, F', and G, arranged, substantially as shown and described, to effect the automatic offsetting of the carriage, and sliding collar M, provided with a spline or feather N adapted to engage the collars F and G, all substantially as shown.

9. In combination with the frame-work A, axles B, and wheels D of an offsetting saw-mill carriage, collars F F', affixed to the axle, a collar G, carried by the frame-work and mounted loosely upon the axle, substantially as shown, to move the frame-work lengthwise of the axles toward and from the saw as the direction of travel of the carriage is reversed, and means, substantially such as shown, for locking the collars F F' G against operation, whereby the direction of travel of the carriage may be reversed at any point without causing the offsetting of the carriage.

In witness whereof we hereunto set our hands in the presence of two witnesses.

GEORGE M. HINKLEY.
RICHARD SCHOFIELD.

Witnesses:

FRANK W. GREENLEAF,
D. B. HANSON.