

No. 705,442.

Patented July 22, 1902.

P. M. QVARNSTRÖM.

TIMBER DRAG FOR SAWING CROOKED TIMBER.

(Application filed Apr. 12, 1902.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

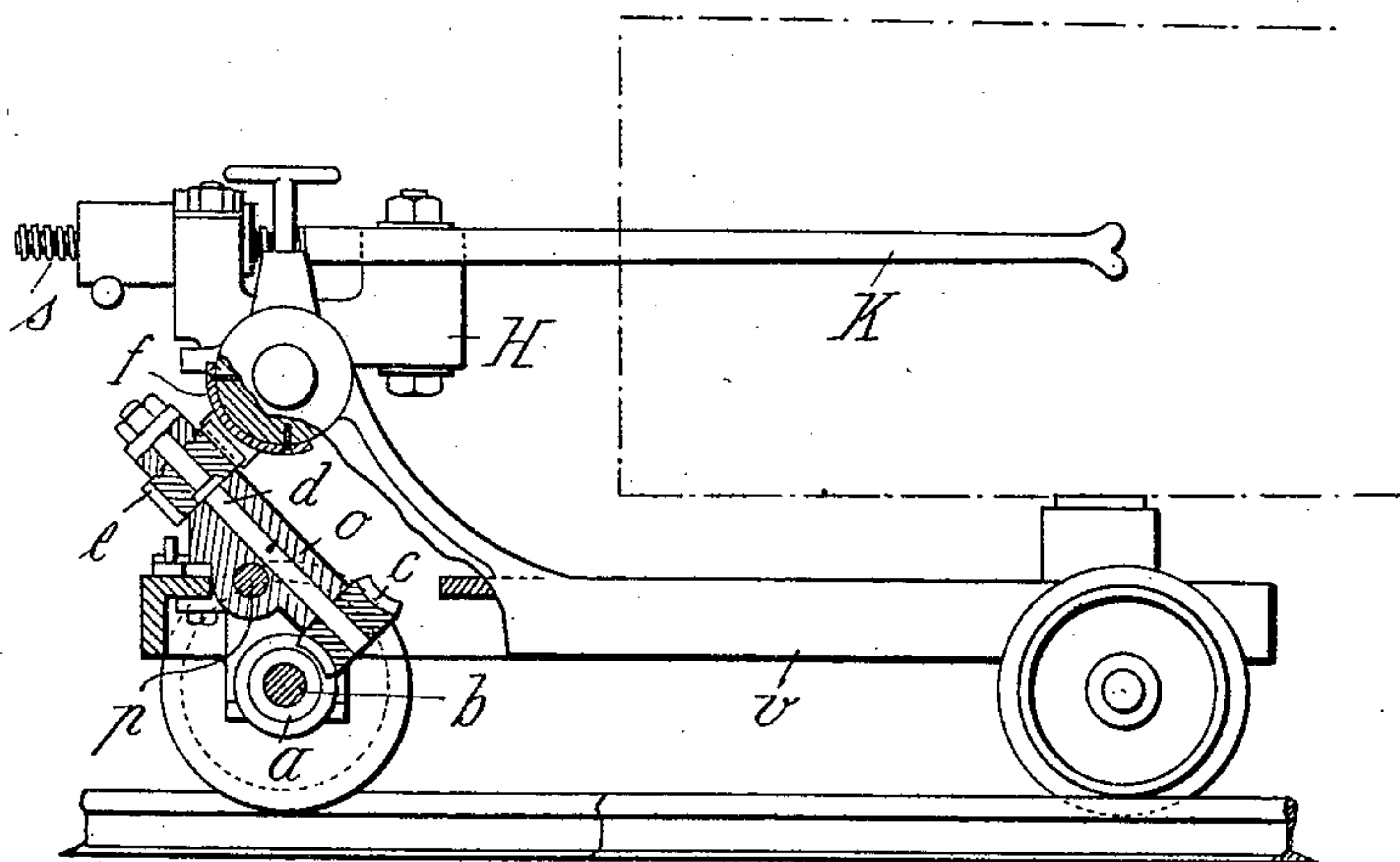
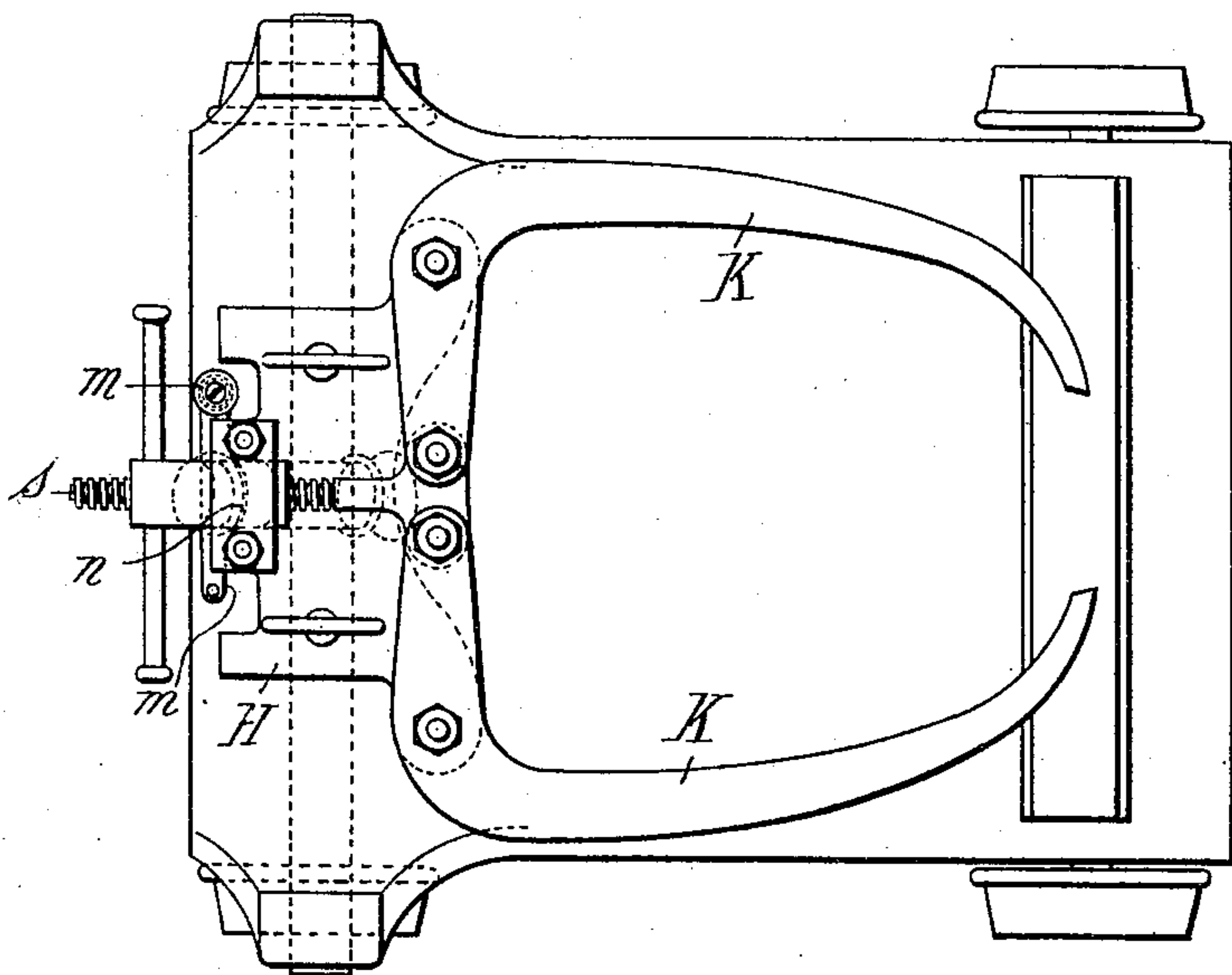


Fig. 3.



Witnesses:

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2 Sheets—Sheet 2.

Fig. 2.

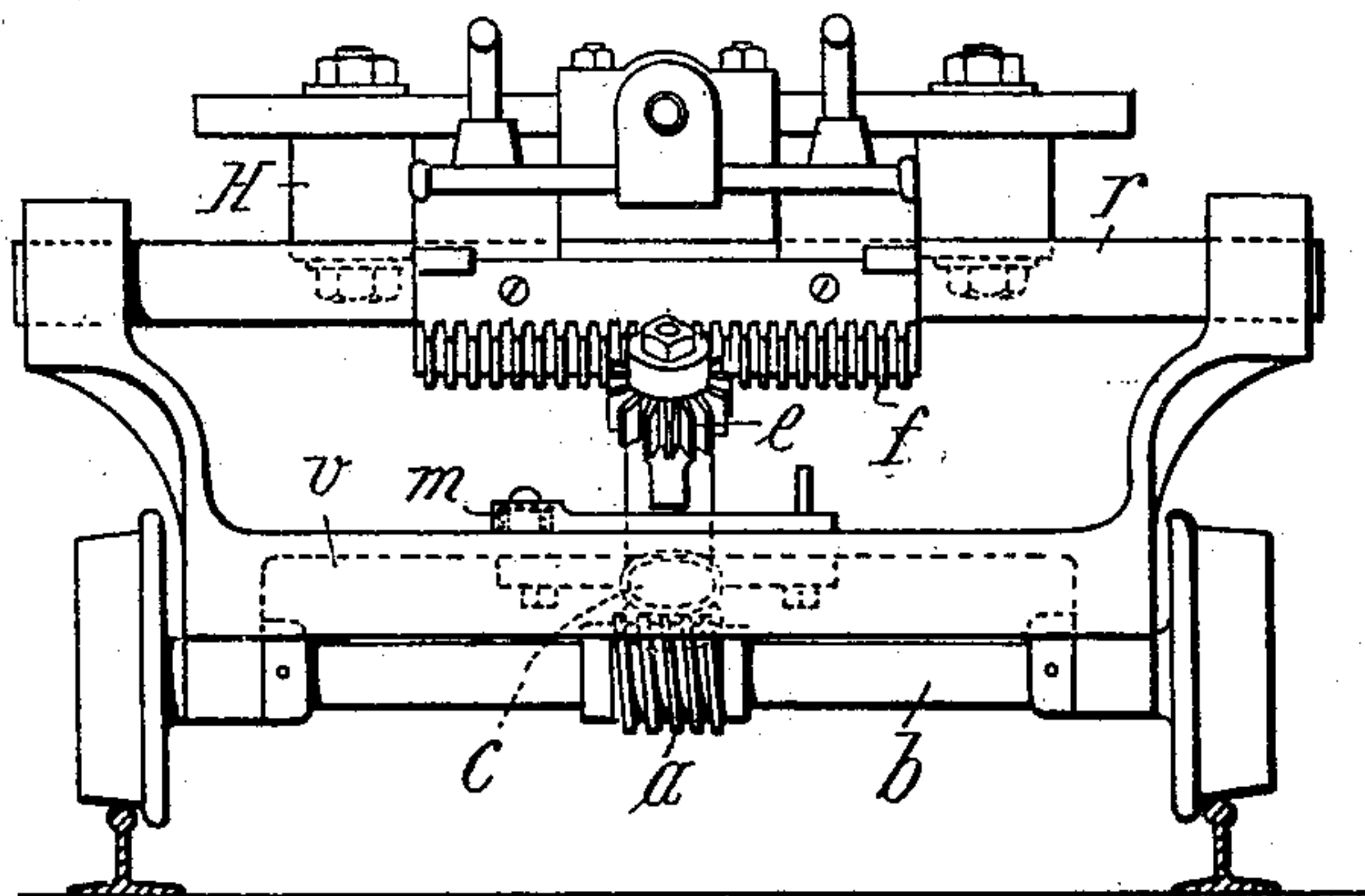


Fig. 5.

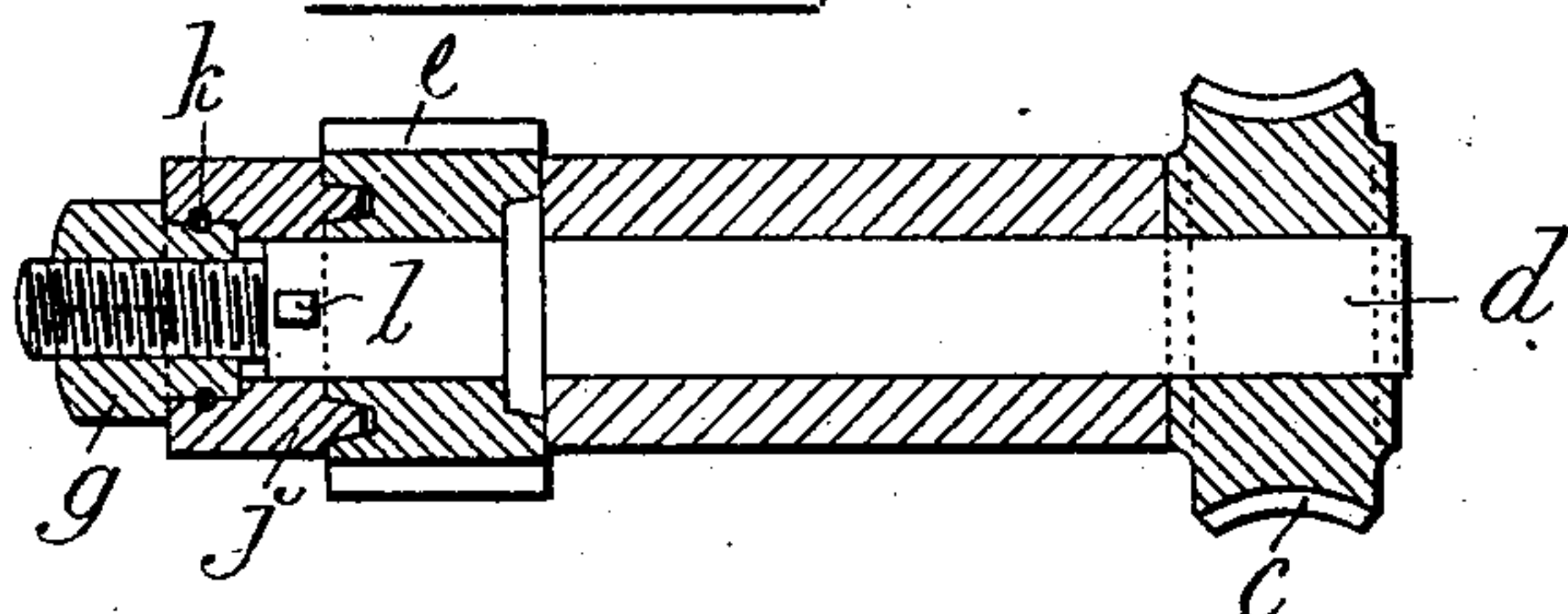
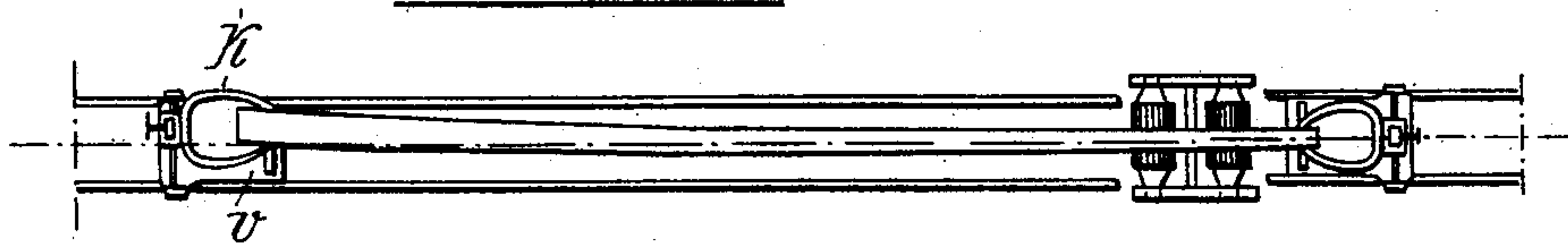


Fig. 4.



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UNITED STATES PATENT OFFICE.

PONTUS MAURITZ QVARNSTRÖM, OF STOCKHOLM, SWEDEN.

TIMBER-DRAG FOR SAWING CROOKED TIMBER.

SPECIFICATION forming part of Letters Patent No. 705,442, dated July 22, 1902.

Application filed April 12, 1902. Serial No. 102,648. (No model.)

To all whom it may concern:

Be it known that I, PONTUS MAURITZ QVARNSTRÖM, mechanical engineer, of 3 Fabriksgränd, Stockholm, in the Kingdom of Sweden, have invented Improvements in Timber-Drags for Sawing Crooked Timber and in what Manner the Same is to be Performed, to be particularly described and ascertained in and by the following statement.

The present invention relates to timber-drags for sawmills, and has for its object to construct such drags in such a manner that the sawing of crooked timber can take place parallel to the curved longitudinal axis of the timber, whereby a greater average length of the planks sawed out will be obtained than when the sawing takes place parallel to the longitudinal direction of the timber, while at the same time a smaller number of slabs is obtained.

In the accompanying drawings such an improved timber-drag is illustrated.

Figure 1 is a side view and a partial vertical section; Fig. 2, a back view, and Fig. 3 a plan view. Fig. 4 illustrates a plan view of a crooked timber while being sawed, and Fig. 5 is a detail of the mechanism.

One axle *b* of the drag on a portion of its circumference is provided with screw-threads *a*, engaging with a worm-gear *c* on an inclined shaft *d*, which latter suitably should rest in a holder *o*, adapted to be turned in a vertical plane about a pin *p*, journaled in the drag-frame *v*. On the shaft *d* a pinion *e* is mounted, preferably loosely, and held in position by means of a collar *j*, arranged to be set up by means of a nut *g*, screwed onto the end of the shaft and secured to the collar by means of pins *k*, compelling the collar to accompany the nut when it is being screwed off or on. In the former case the pinion ceases to press against a shoulder on the shaft, so that the pinion will run loose and not take part in the rotation of the shaft.

l is a key preventing the pinion from sliding outward together with the collar *j* when the nut *g* is slackened. The pinion *e* meshes with a toothed rack *f* on a sleeve *H*, movable on a horizontal cross-shaft *r* on the drag and carrying the two jaws *K*, serving for retaining the end of the timber, said jaws being clamped together in usual manner by means of a screw *s*. The holder *o*, which is movable about the pin *p*, is forced upward, so as to

make the pinion *e* engage with the toothed rack *f*, by means of a spring *m* bearing on the holder at *n*. When the spring is turned aside, the holder can be swung on the pin, whereby the engagement between pinion and rack is interrupted, so that no motion will be transmitted from the axle *b* to the sleeve *H*. The device consequently can be thrown out of action by turning either the nut *g* or the spring *m*.

The device operates as follows: The top end of the timber is introduced into the saw-frame, and its root end is clamped between the jaws *K* on shifting the sleeve *H* on the cross-shaft *r* a distance to one side of the central line corresponding to the curvature of the timber, Fig. 4. The timber being subsequently fed forward, the sleeve *H*, together with the root end of the timber, will in the advancing motion of the drag be successively shifted toward the central line, so that the saws will split the planks parallel to the curved longitudinal axis of the timber.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

1. In timber-drags for sawmills the combination of a wheel-shaft *b* of the drag, provided with threads *a* gearing with a shaft *d*, a pinion *e* on said shaft *d*, and a toothed rack *f* engaging with said pinion and mounted on a sleeve *H* arranged to be shifted crosswise to the drag, said sleeve carrying the jaws *K* by means of which the root end of the timber is retained in place while sawing is going on.

2. In timber-drags for sawmills, the combination of a wheel-shaft *b* of the drag, provided with threads *a* gearing with a shaft *d*, journaled in a holder *o*, movable on a horizontal pin *p* and acted upon by a spring *m* or similar device, a pinion *e* on said shaft *d*, and a toothed rack *f* engaging with said pinion and mounted on a sleeve *H*, arranged to be shifted crosswise to the drag, said sleeve carrying the jaws *K*, by means of which the root end of the timber is retained in place while the sawing is going on.

In witness whereof I have hereunto set my hand in presence of two witnesses.

PONTUS MAURITZ QVARNSTRÖM.

Witnesses:

H. TELANDER,

T. RISBERG.