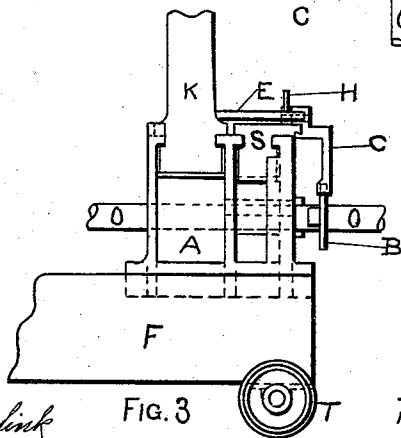
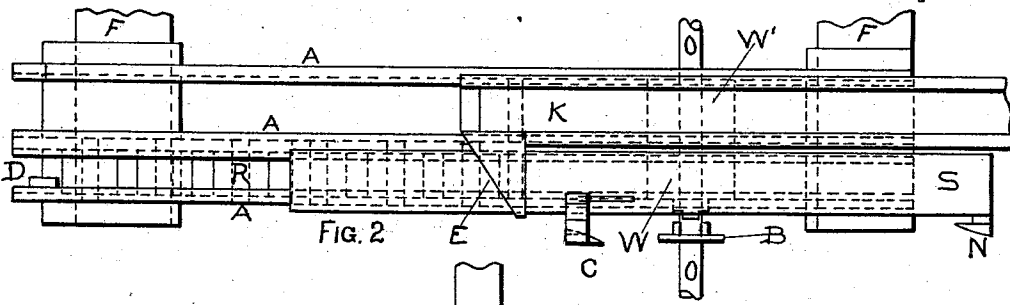
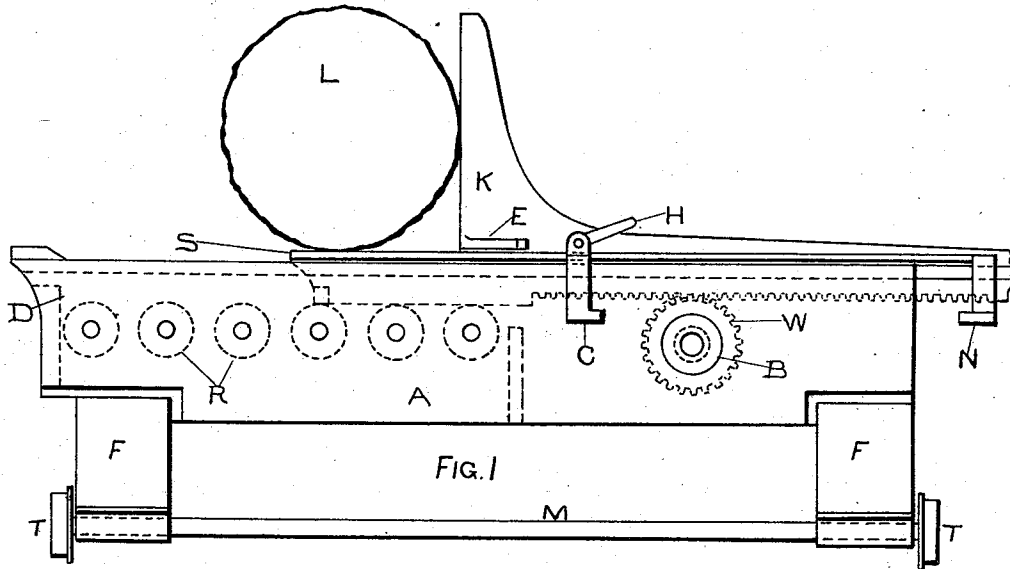


(No Model.)

H. GAWLEY.
SAWMILL HEAD BLOCK.

No. 536,140.

Patented Mar. 19, 1895.



WITNESSES
Christopher Hondelink
Ambrose G. Friedman

INVENTOR
Hector Gawley
By *Edward Jaggard*
His — ATTORNEY.

UNITED STATES PATENT OFFICE.

HECTOR GAWLEY, OF GRAND RAPIDS, MICHIGAN, ASSIGNOR OF ONE-HALF
TO MERCY P. MONTGOMERY, OF SAME PLACE.

SAWMILL HEAD-BLOCK.

SPECIFICATION forming part of Letters Patent No. 536,140, dated March 19, 1895.

Application filed April 24, 1894. Serial No. 508,868. (No model.)

To all whom it may concern:

Be it known that I, HECTOR GAWLEY, a citizen of the United States, residing at the city of Grand Rapids, in the county of Kent and State of Michigan, have invented a certain new and useful Improved Sawmill Head-Block, of which the following is a specification.

My invention relates to a new and improved head-block having a sliding bar supported preferably by the head-block and adapted to support the log and to be moved therewith, the same having suitable mechanism for adjusting it with reference to the knee, the whole resting upon a carriage or supported by a carriage as hereinafter described; and the object of my invention is to reduce the friction, so that the log may be more readily moved to and from its proper position, and also to support the log upon the bar or moving support which is mounted so as to be moved with the log without materially increasing the friction by the weight of the log. These objects I accomplish by means of the mechanism illustrated in the accompanying drawings, in which—

Figure 1, is a side elevation of the head-block and carriage with the log in position resting upon the sliding bar or log support and against the knee; the dotted circles showing rollers, which is my preferred form of construction, upon which the supporting bar rests. Fig. 2, is a plan view with the log removed, the dotted lines showing the part beneath the surface of the plan, illustrating the position of the knee, the sliding supporting bar and rollers. Fig. 3 is an end elevation looking from the left, showing the front of the knee and other parts as they would appear from the front end of the head-block.

Similar letters refer to similar parts throughout the several views.

A is the frame work, constructed in any suitable manner.

F represents the side frames of the carriage.

M shows one of the axles and T—T show two of the wheels.

S represents the log support which, in the example of my invention as shown in the drawings, is provided with a rack at its rear

end and supports the log upon the front upper surface thereof. This support or bar S rests upon a series of anti-friction rollers shown by R—R, &c. These rollers are so arranged that their upper surfaces are in the same plane, and support the bar and through the bar the log.

The rack portion of the bar S, engages with the teeth or cogs on cog wheel W, cog wheel W being placed upon shaft O, and having suitable mechanism for attaching or detaching the same so that it will revolve with the shaft when desired, and also revolve without reference to the revolution of the shaft. The shaft O also has another secondary cog wheel, the position of which is shown by dotted lines in Fig. 2 by W', which engages with cogs or teeth on a rack which is formed on the under side of the horizontal part of the knee K.

The supporting bar S, is adjusted in suitable relation to the knee K, and then cog wheel W is attached and a revolution of the shaft on which cog wheel W is supported will carry forward both the knee K, sliding in suitable ways, and also the supporting bar S sliding upon the rollers R—R—R, &c.

D is a stop which arrests the forward movement of the sliding bar S, at the proper point.

In order to retain the bar S in proper position, an arm or projection E may be used, which is preferably made integral with or rigidly connected to the knee K.

B is a clutch supported upon the shaft O, and adapted to connect and disconnect the gear wheel W from the shaft. When the clutch B is moved outwardly, the cog wheel W is disconnected and revolves as an idler upon the shaft. When the clutch B is driven inwardly the wheel W is attached to the shaft and revolves therewith.

C is a cam or wedged shaped piece adapted to move in the clutch, making the connection between the wheel W and shaft O, and N is a reverse cam or wedge adapted to move the clutch B outwardly and disconnect the cog wheel W from the shaft O; that is, as the supporting bar and knee are moved backward, the wedge or cam shaped piece C comes in contact with the clutch B, moving the same into connection with the cog wheel W thereby attaching the cog wheel W to its shaft, caus-

ing by the rotation of the shaft the knee K and the supporting bar S to be moved in unison.

When the knee K and the supporting bar are moved forward a sufficient distance, the cam shaped piece N, comes in contact with the inner side of the clutch B, withdrawing the same from the cog wheel W, thereby detaching the cog wheel W from the shaft, and allowing said cog wheel to revolve like an idler on the shaft.

It is a handle attached to C, by means of which C may be operated or set in required position to operate the clutch B.

While I have described the operation of the clutch B by means of two cam shaped or wedge shaped surfaces C and N, the clutch B may be operated by any suitable means, and while I prefer to support the log supporting bar S upon rollers at its front end, it might be used without such rollers, traveling in a way which could be lubricated so as to reduce very materially the friction caused by the support of the log. By disconnecting the cog wheel W from the shaft O, the bar S may be set in any required position, and may be readily changed from one position to another.

L represents the log, it being shown an end view in Fig. 1, the same resting upon the bar S.

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

1. The combination of the supporting bar as S, a separate knee as K, and suitable mechanism for moving the knee and bar separately but simultaneously, substantially as described.

2. The combination of the supporting bar as S, the knee as K and shaft as O, and cog wheels as W and W' gearing with said bar and knee respectively and suitable mechanism for operating said shaft and cog wheels, where-

by the knee and bar are moved separately simultaneously.

3. The combination of a log supporting bar, a separate knee moving in ways, anti-friction rollers supporting said log supporting bar and mechanism for moving said bar and knee separately but simultaneously, substantially as described.

4. The combination of a log supporting bar, rollers supporting said log supporting bar, a separate knee moving in ways, a rack upon said knee, a rack upon said bar, a cog wheel engaging with the rack on the knee, a cog wheel engaging with the rack upon the supporting bar, and a shaft supporting both cog wheels so as to move the knee and bar separately but simultaneously, substantially as described.

5. The combination of a log-supporting bar provided with a rack, a separate knee also provided with a rack, a shaft supporting separate cog wheels engaging the racks on said bar and knee, and mechanism for attaching one of said cogs to and detaching it from the cog-supporting shaft, substantially as described.

6. The combination of a knee moving in ways, a log supporting bar as S, rollers supporting said supporting bar, a rack on said knee, a cog wheel engaging with said rack, a rack on the supporting bar, a cog wheel engaging with said rack, a shaft supporting both said cog wheels and suitable mechanism for automatically attaching and detaching the cog wheel which engages with the supporting bar with its shaft, substantially as and for the purpose described.

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

HECTOR GAWLEY. [L. S.]

Witnesses:

ARTHUR C. DENISON,
CHRISTOPHER HONDELINK.