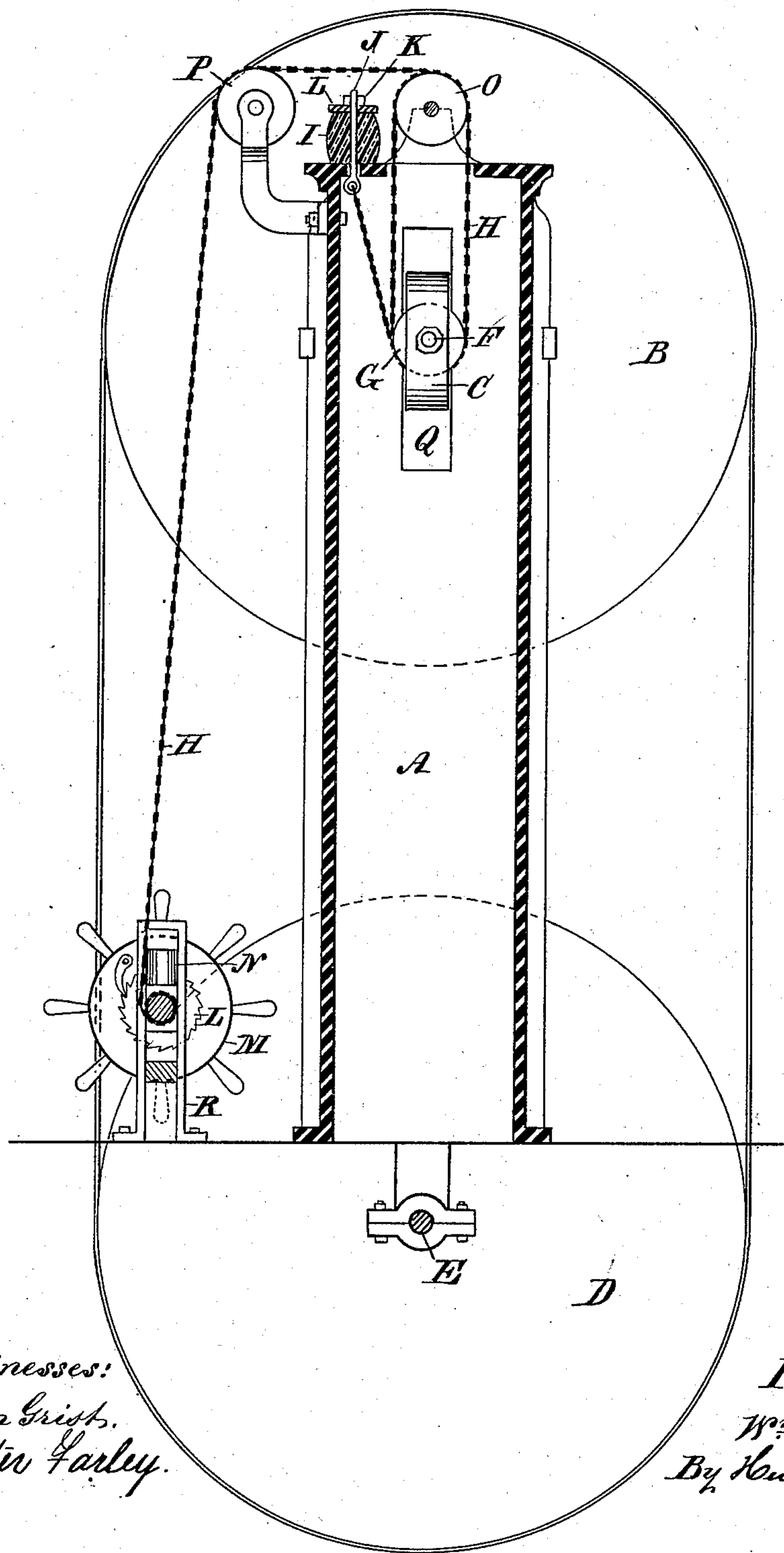


(No Model.)

W. GILLIS.
BAND SAW MILL.

No. 384,252.

Patented June 12, 1888.



Witnesses:
John Grist.
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UNITED STATES PATENT OFFICE.

WILLIAM GILLIS, OF BUCKINGHAM, QUEBEC, CANADA.

BAND-SAW MILL.

SPECIFICATION forming part of Letters Patent No. 384,252, dated June 12, 1888.

Application filed September 29, 1887. Serial No. 251,009. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM GILLIS, of Buckingham, in the Province of Quebec, in the Dominion of Canada, have invented certain new and useful Improvements in Band-Saw Mills; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, which represents in elevation a portion of a band-saw mill provided with my invention.

My invention has for its object to prevent a band-saw from cracking, to provide for taking up expansion of the saw lengthwise in sawing, to allow expansion and contraction of a band-saw without liability of being broken, to cause the saw to remain more securely in proper position on the band-saw wheels when in operation, and to insure a more uniform tension of the saw under all circumstances, and largely do away with the breakage of band-saws, thereby effecting great economy in working band-saw mills.

My invention consists in hanging the upper wheel in a yielding bearing by a chain and pulleys, one end of the chain attached to a spring and the other end winding on a crab or windlass, so that the spring will cause the chain to keep the saw uniformly strained.

Referring to the drawing, A is a hollow column; B, the top wheel journaled in a yoke, C, having a vertical sliding movement in a slot, Q, in the column. The bottom wheel, D, is carried by a shaft, E, journaled in a suitable fixture.

To the shaft F of the top wheel is keyed one or more pulley-sheaves, G, and said sheaves are hung by a chain, H, one end of which is secured to a spring, I, preferably of rubber, by a bolt, J, which passes loosely through the spring and provided at the upper end with a nut, K, bearing on a plate, L, seated on top

of the spring, and a chain connected to the lower end of the bolt, so that the spring will respond immediately to any variable strain on the chain or saw. The chain then passes under a sheave G on the shaft F and over a pulley, O, on the top of the column A, and, if desired, under a second sheave on the shaft F, and then over another pulley at the top of the column, and then over a pulley, P, and then downwardly and around the drum of a windlass or crab, R, having a ratchet and pawl, L, and a hand-wheel, M, whereby the chain may be tightened by operating the windlass to put the required strain on the saw. The drum of the windlass is journaled in the frame of the windlass in movable bearings, above which are springs, N, to allow the chain to have a yielding movement from that end.

I claim as my invention—

1. A band-saw mill comprising, in combination, an upper and lower saw-wheel, the former carried in a yoke and having a pulley on the wheel-shaft, a spring secured to a fixture, a chain attached to said spring and supporting said shaft-pulley, pulleys carrying said chain, and a windlass winding said chain upon a drum journaled on spring-bearings which resist the strain of the chain, whereby all the springs will respond simultaneously to keep the saw at a uniform tension, as set forth.

2. In a band-saw mill, the combination, with the upper saw-wheel journaled in movable bearings and a pulley on said shaft, of a spring secured to a fixture, a chain attached to said spring and supporting said shaft-pulley, pulleys carrying said chain, and a windlass winding said chain to adjust the tension of the saw, as set forth.

WILLIAM GILLIS.

Witnesses:

A. H. PARKER,
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