

motion of said oscillating wheel when the guide bearing is restrained, said guide being made up of parts having a swinging motion in one direction and a sliding motion in another direction, said motions being in a plane perpendicular to the axis of rotation of the oscillating gear wheel, and a brake for restraining the rotation of said guide bearing, substantially as described. 39th. A power transmitting device for connecting a driving shaft with a driven mechanism, consisting of a series of gear wheels, one of said gear wheels having a rotary and also an oscillating motion, a restrainable guide bearing normally rotating with said oscillating wheel, and a guide for restraining the rotary motion of said oscillating wheel when the guide bearing is restrained, said guide being made up of a connecting piece joined to the oscillating wheel by pivoted links and playing along guiding surfaces attached to the guide bearing, substantially as described. 40th. A power transmitting device for connecting a driving shaft with a driven mechanism, consisting of a series of sun and planet gear wheels, a restrainable guide bearing normally rotating with the oscillating member of said gear wheels, and a guide for restraining the rotary motion of said oscillating member when the guide bearing is restrained, said guide being made up of parts having a swinging motion in one direction and a sliding motion in another direction, said motions being in a plane perpendicular to the axis of rotation of the driving member of the gear, substantially as described. 41st. A power transmitting device for connecting a driving shaft with a driven mechanism, consisting of a series of sun and planet gear wheels, a restrainable guide bearing normally rotating with the oscillating member of said gear wheels, a guide for restraining the rotary motion of said oscillating member when the guide bearing is restrained, said guide being made up of parts having a swinging motion in one direction and a sliding motion in another direction, said motions being in a plane perpendicular to the axis of rotation of the driving member of the gear, and a brake for restraining the movement of said guide bearing, substantially as described. 42nd. A power transmitting device for connecting a driving shaft with a driven mechanism, consisting of a series of gear wheels, one of said gear wheels having a rotary and also an oscillating motion, a restrainable guide bearing normally rotating with said oscillating wheel, and a guide mechanism for restraining the rotary motion of said wheel when the guide bearing is restrained, said guide mechanism having a swinging motion in one direction and a sliding motion in another direction, said motions being in planes parallel with the axis of rotation of the oscillating gear wheel, substantially as described. 43rd. A power transmitting device for connecting a driving shaft with a driven mechanism, consisting of a series of gear wheels, one of said gear wheels having a rotary and also an oscillating motion, a restrainable guide bearing normally rotating with said oscillating wheel, a guide mechanism for restraining the rotary motion of said wheel when the guide bearing is restrained, said guide mechanism having a swinging motion in one direction and a sliding motion in another direction, said motions being in planes parallel with the axis of rotation of the oscillating gear wheel, and a brake for restraining the rotation of said guide bearing, substantially as described. 44th. A power transmitting device for connecting a driving shaft with a driven mechanism, consisting of a series of gear wheels, one of said gear wheels having a rotary and also an oscillating motion, a restrainable guide bearing normally rotating with said oscillating wheel, and a guide for restraining the rotary motion of said wheel when the guide bearing is restrained, said guide being made up of a connecting piece joined to the guide bearing by trunnion pins and to the oscillating wheel by trunnion pins, substantially as described. 45th. A power transmitting device for connecting a driving shaft with a driven mechanism, consisting of a series of gear wheels having a rotary and also an oscillating motion, a restrainable guide bearing normally rotating with said oscillating wheel, and a guide for restraining the rotary motion of said wheel when the guide bearing is restrained, said guide consisting of a connecting piece having a swinging motion in one direction and a sliding motion in another direction, said motions being in a plane parallel with the axis of rotation of the driving member of the gear, substantially as described. 46th. A power transmitting device for connecting a driving shaft with a driven mechanism, consisting of a series of gear wheels, one of said gear wheels having a rotary and also an oscillating motion, a restrainable guide bearing normally rotating with said oscillating wheel, a guide for restraining the rotary motion of said wheel when the guide bearing is restrained, said guide consisting of a connecting piece having a swinging motion in one direction, and a sliding motion in another direction, said motions being in a plane parallel with the axis of rotation of the driving member of the gear, and a brake for restraining the rotation of said guide bearing, substantially as described. 47th. A power transmitting device for connecting a driving shaft with a driven mechanism, consisting of a set of gear wheels, one of said gear wheels having a rotary and also an oscillating motion, a restrainable guide bearing normally rotating with said oscillating gear wheel, and a guide mechanism for restraining the rotary motion of said oscillating gear wheel when the guide bearing is restrained, said guide mechanism having a motion of complete rotation about centres, substantially as described. 48th. A power transmitting device for connecting a driving shaft with a driven mechanism, consisting of a series of gear wheels, one of said gear wheels having a rotary and also an oscillating motion, a restrainable guide bearing normally rotating with said oscillating gear wheel, a guide mechanism for restraining the rotation of said oscillating

gear wheel when the guide bearing is restrained, said mechanism consisting of two or more crank shafts or pins journaled in the guide bearing, the crank portions of said shafts moving the oscillating gear wheel in its path of oscillation and restraining it to positions of parallelism when the guide bearing is restrained, and gearing connecting said crank shafts and the driving shaft, whereby the rotation of said crank shafts on their own axis is promoted, substantially as described. 49th. A power transmitting device for connecting a driving shaft with a driven mechanism, consisting of a series of gear wheels, one of said gear wheels having a rotary and also an oscillating motion, a restrainable guide bearing normally rotating with said oscillating gear wheel, a guide mechanism for restraining the rotation of said oscillating gear wheel, when the guide bearing is restrained, said mechanism consisting of two or more crank shafts or pins, journaled in the guide bearing, the crank portions of said shafts moving with the oscillating gear wheel in its path of oscillation and restraining it to positions of parallelism when the guide bearing is restrained, and a brake for restraining the rotation of said guide bearing, substantially as described. 50th. A power transmitting device for connecting a driving shaft with a driven mechanism, consisting of a series of gear wheels, one of said gear wheels having a rotary and also an oscillating motion, a restrainable guide bearing normally rotating with said oscillating gear wheel, a guide mechanism for restraining the rotation of said oscillating gear wheel when the guide bearing is restrained, said mechanism consisting of two or more crank shafts or pins journaled in the guide bearing, the crank portions of said shafts moving with the oscillating gear wheel in its path of oscillation and restraining it to positions of parallelism when the guide bearing is restrained, gearing connecting said crank shafts and the driving shaft, where the rotation of said crank shafts on their own axis is effected, and a brake for restraining the rotation of said guide bearing, substantially as described. 51st. A power transmitting device for connecting a driving shaft with a driven mechanism, consisting of a series of gear wheels, one of said gear wheels having a rotary and also an oscillating motion, a restrainable guide bearing normally rotating with said oscillating gear wheel, and a guide mechanism for restraining the rotation of said oscillating gear wheel when the guide bearing is restrained, said mechanism consisting of two or more crank shafts or pins journaled in the guide bearing, the crank portions of said shafts moving with the oscillating gear wheel in its path of oscillation and restraining it to positions of parallelism when the guide bearing is restrained, substantially as described.

No. 39,294. Band Saw Mill.

(*Sciencie à scies sans fin.*)

The firm of Smith, Myers & Schnier, assignee of Samuel R. Smith, of Cincinnati, Ohio, U.S.A., 13th July, 1892; 6 years.

Claim.—1st. In a band saw mill, the combination, with the band wheels and main supporting frame or column, of an integral standard carrying the front bearings of the upper and lower band wheel shafts, said standard being attached to the front side of said main frame or column between said band wheels, substantially as hereinbefore set forth. 2nd. The combination, substantially as specified, of the hollow supporting column C, and the hollow casting D, D¹, D², centrally secured to said column to furnish rigid support for the front bearings of the upper and lower band wheel shafts. 3rd. A support for the front bearings of the band wheel shafts having the flanged horizontal portion D, to be secured to the supporting frame and the vertical arms D¹, D², cast in one piece with said central portion, the said part D¹ being bored to receive the adjustable bearing of the upper band wheel shaft. 4th. The combination, of the base plate A, cast in a single piece, the column C, having a flanged base to be secured to said base A, the front support for the band wheel shafts, consisting of the casting D, D¹, D², and shield D³, together forming a supporting frame for band saw mills, substantially as hereinbefore set forth. 5th. In a band saw mill, the combination, of the supporting frame, the vertically adjustable bearings for the upper band wheel shaft, mounted in said frame, the transverse shaft G, mounted on knife edge bearings in said frame and having arms g, g¹, secured upon said shaft to support the bearings of said upper band wheel shaft, and the weighted lever K, secured upon said shaft between the knife edge bearings to counterpoise the bearings of the upper band wheel shaft and provide a sensitive automatic adjustment for the same, whereby the saw is kept at the proper tension, substantially as hereinbefore set forth. 6th. The combination, substantially as hereinbefore set forth, of the supporting frame, the transverse shaft G, having knife edge bearings g², secured in it, the supporting plates g¹, resting on brackets in said frame, the arms g, g¹, having steps at their outer ends, the hardened steel adjustment screws g², passing through said steps, the vertically adjustable bearings for the upper band wheel shaft, resting upon said screws, the lever K, secured upon said shaft and projecting through the frame, the rod k, upon the outer end of said lever K, the cap nut k¹, upon said rod, and the removable weights k², for the purpose specified. 7th. In a band saw mill, the combination, of a vertically and axially adjustable support for the rear bearing of the upper band wheel shaft, the said bearing eccentrically pivoted upon top of said support, and means, such as shown, to rotate and at the same time either elevate or lower said bearing, substantially as and for the purposes set forth. 8th. The combination, in a band saw mill, of the supporting column C, the tubular