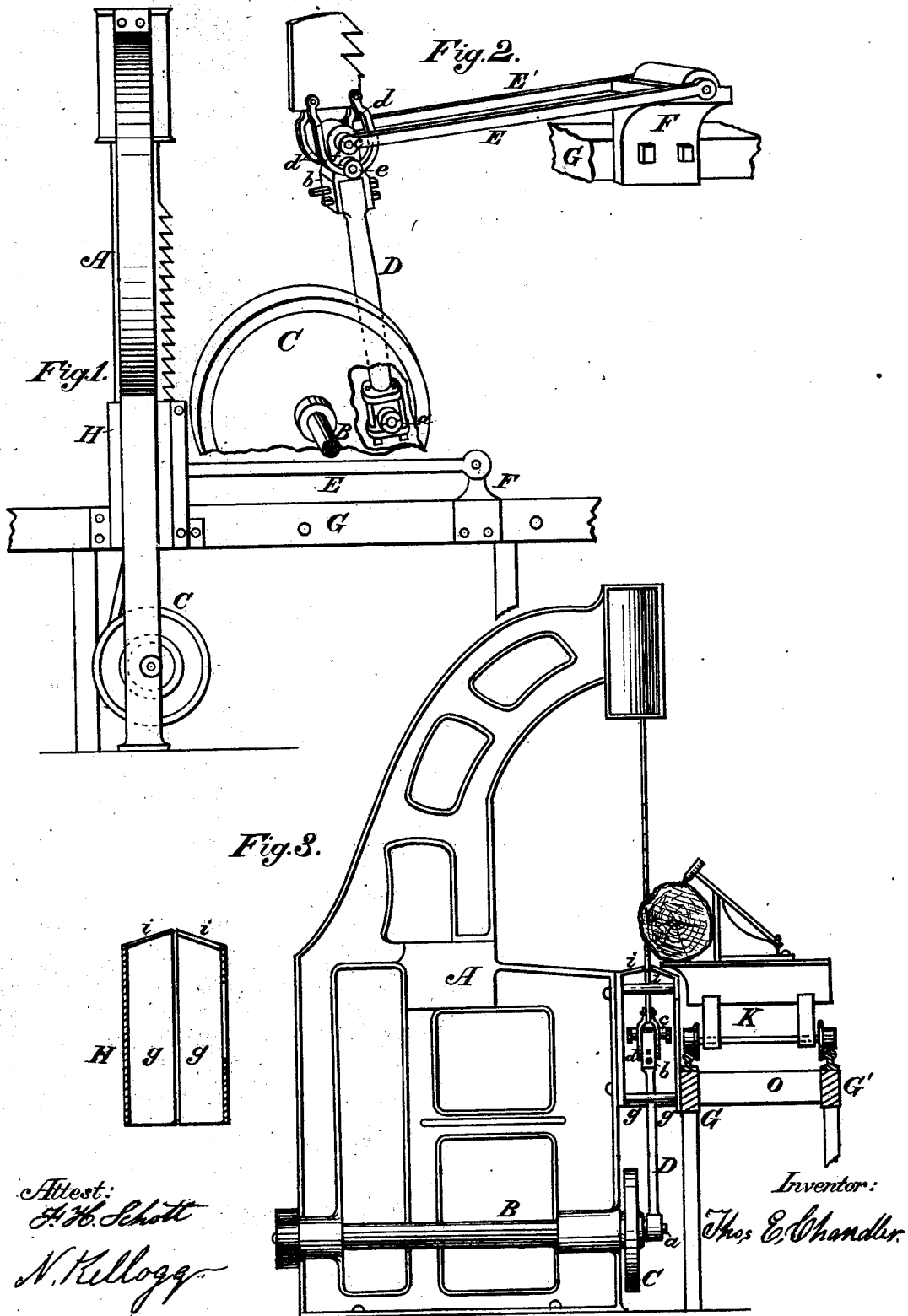


T. E. CHANDLER.
MULEY SAW-MILL.

No. 190,822.

Patented May 15, 1877.



UNITED STATES PATENT OFFICE.

THOMAS E. CHANDLER, OF INDIANAPOLIS, INDIANA.

IMPROVEMENT IN MULEY-SAW MILLS.

Specification forming part of Letters Patent No. **190,822**, dated May 15, 1877; application filed April 14, 1877.

To all whom it may concern:

Be it known that I, THOMAS E. CHANDLER, of Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Muley-Saw Mills; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The object of this invention is to improve that class of side-cutting muley-saw mills commonly called "portable muleys," by substituting for the slides, which ordinarily govern the vertical movement of the lower end of the saw, a simple and efficient arrangement of devices that wholly relieve the mill from the difficulty caused by the heating and wear of the lower slides arising from the shortness of the pitman we are compelled to use in order to make a portable muley-mill having nearly all its working parts attached to a solid iron frame, as shown in the mill for which Letters Patent No. 157,734 were granted to me on the 15th day of December, 1874, and upon which this present invention is an improvement; and the invention consists in the construction and arrangement of the several parts of the machine which guide and control the lower end of the saw, as will be hereinafter fully described, and then specifically pointed out in the claims.

Figure 1 is a side elevation of the mill, showing the relative arrangement of the parts. Fig. 2 shows, in perspective, the principal parts which go to make this invention. Fig. 3 is a front view, partly in section, showing the frame which carries the saw and its operating mechanism, with a vertical section through the attached log-carriage and track.

The iron frame A, which carries the saw, and mechanism by which it is operated, is cast in one piece, and is provided with a broad base, that rests upon, and is secured to, a suitable foundation. Crossing this frame, near its bottom, is the driving-shaft B, provided at one end with a crank or balance wheel, C, in-

to which is inserted the crank-pin *a*, that gives motion to the pitman D. To the upper end of this pitman is secured, by means of the strap *b* and a suitable key and bolts, the journal-box *x*, within which oscillates the pin *c*. To the two ends of this pin *c* are secured the radius-bars E and E', the opposite ends of which bars are pivoted to a bracket, F, which is securely bolted to the inside track-timber G, at a point in front of the saw nearly equal to the length of the pitman, the object being to have them so near the same length that the arc described by one shall substantially equal that described by the other, so that during the descent of the saw it shall move in a vertical line, while during its ascent it retreats a distance equal to the radius of the arc described by the ends of both pitman and radius-bars, thus insuring a steady downward movement while the saw is in the act of cutting, and plenty of clearance during its ascent.

Passing through the pitman, just below the pin *c*, is the noddle-pin *e*, to the ends of which the bifurcated saw-straps *d* are attached. The upper ends of these straps are secured by suitable bolts to the lower end of the saw, and therefore impart to it any motion which the noddle-pin may receive from the pitman and radius-bars. A guide-frame, H, is securely bolted to the main frame, and carries two vertical guides, *g g*, which may be formed of wood or other suitable material, and are so placed as to embrace the back of the saw from just below the cutting-point down to its lower end. Another pair of inclined guides, *i i*, are secured to the top of the frame H, and embrace the saw just below the log upon both sides, coming forward nearly to the roots of the saw-teeth, serving to steady it in the cut, and also acting as a dust-shield to protect the parts below from the direct impingement of the saw-dust as it is thrown downward from the log. To the front side of the guide-frame H the track G is bolted, thus causing it, when once put in place, to always occupy its proper relative position with regard to the other parts of the mill without further adjustment; and as the track G', which supports the opposite side of the carriage, is securely fastened to it by numerous girts *o*, secured to the tracks by

suitable keys, it is, therefore, evident that no difficulty will be experienced in keeping this part of the mill in proper position for doing its work.

The log-carriage K is similar to those employed for the same purpose in mills using circular instead of reciprocating saws, and is usually made in sections, so as to be conveniently handled.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent of the United States, the following:

1. The bifurcated saw- straps *d*, constructed and operating substantially as shown and described.

2. The bifurcated saw- straps *d*, in combination with pitman, radius-rods, and bracket F, as and for the purpose set forth.

3. The iron frame A and guide-frame H, constructed as described, in combination with the vertical guides *g* and inclined guides *i*, as and for the purpose specified.

In testimony that I claim the foregoing as my own I hereunto affix my signature in presence of two witnesses.

THOMAS E. CHANDLER.

Witnesses:

HERMAN O. WERBE,
N. KELLOGG.