

No. 719,585.

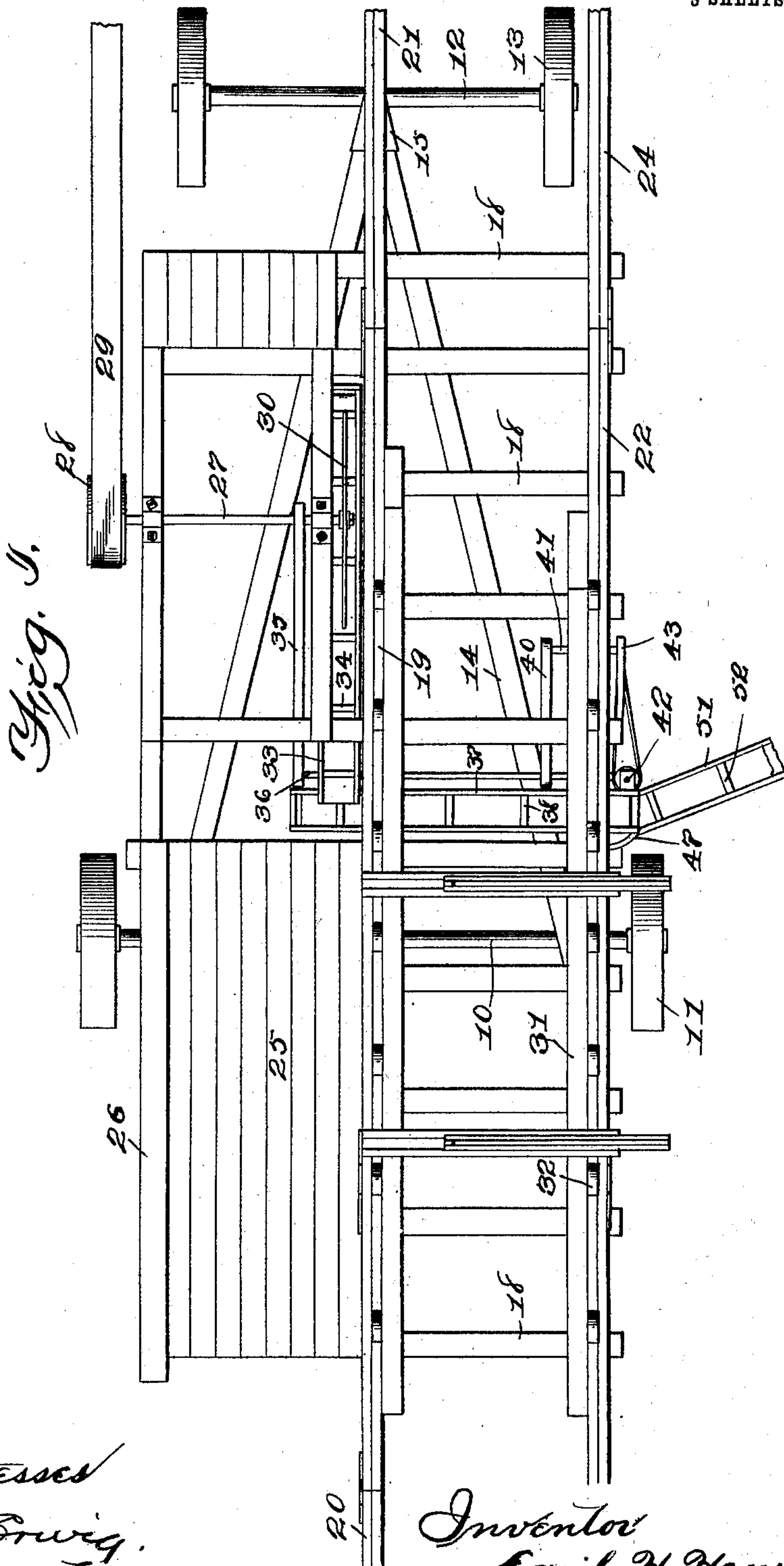
PATENTED FEB. 3, 1903.

E. H. HANSSLER.  
PORTABLE SAWMILL.

APPLICATION FILED DEC. 20, 1901.

NO MODEL.

3 SHEETS—SHEET 1.



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Charles E. Corbett.

by

Inventor

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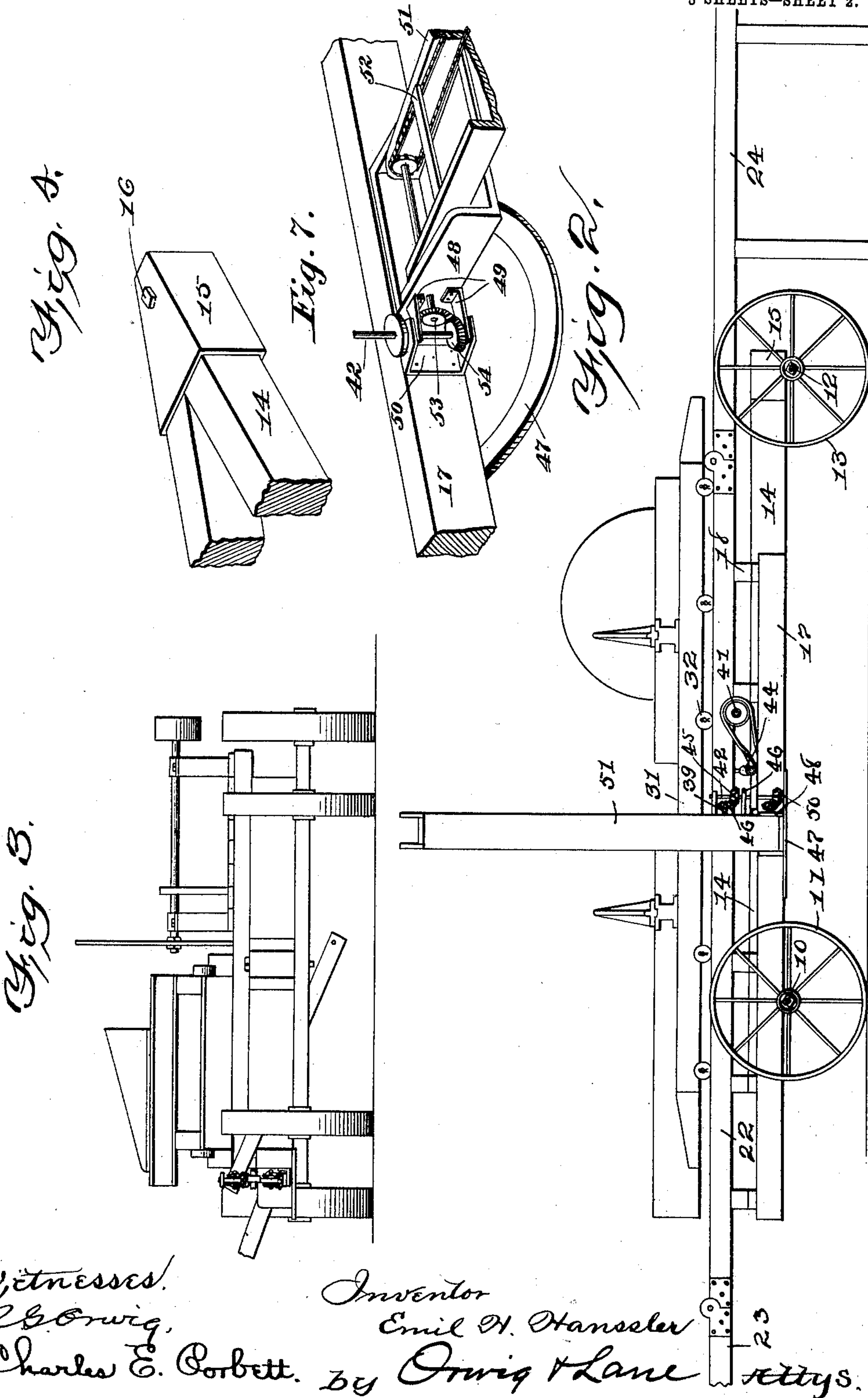
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3 SHEETS—SHEET 2.



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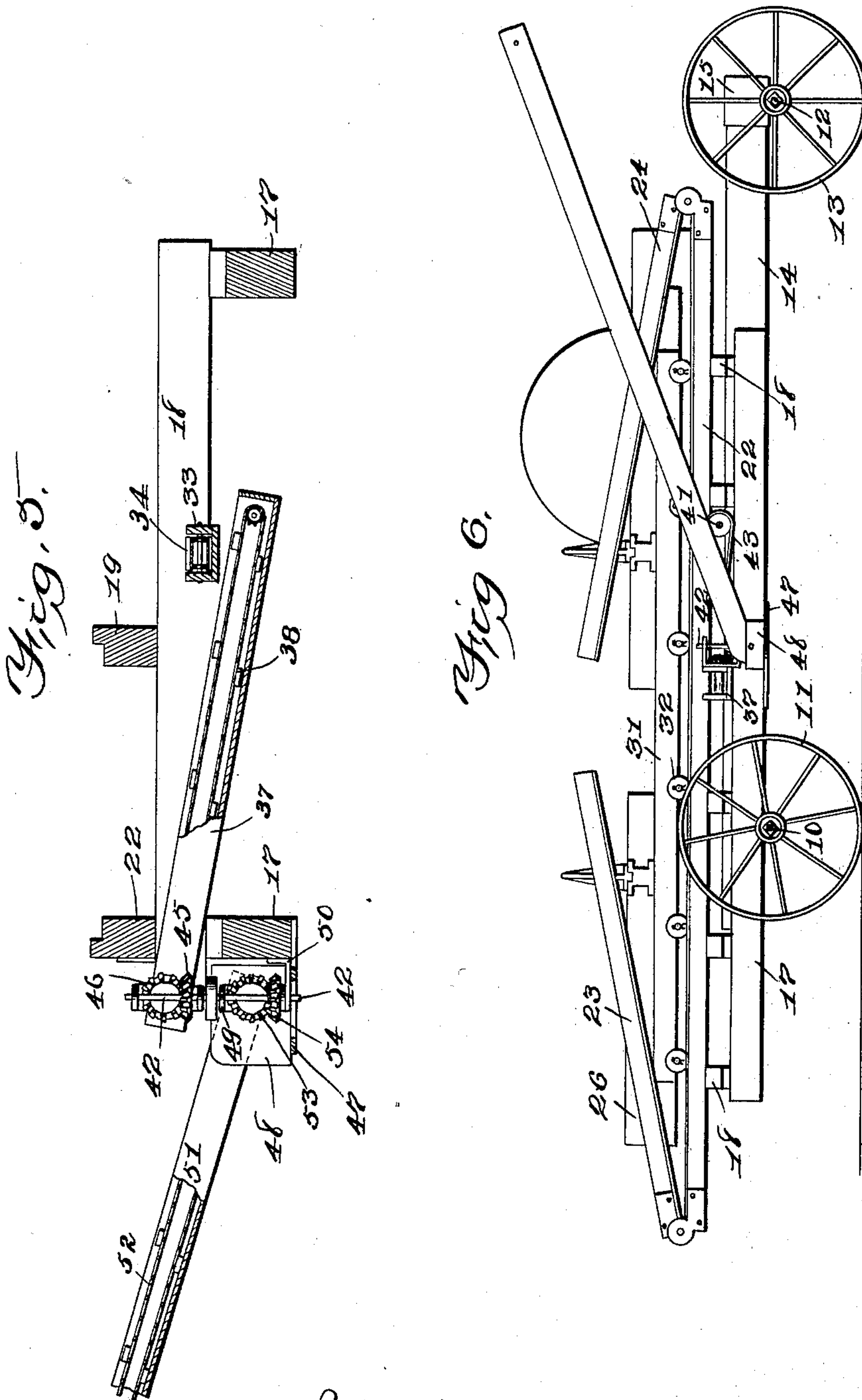
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3 SHEETS—SHEET 3.



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# UNITED STATES PATENT OFFICE.

EMIL H. HANSSLER, OF WEBSTER CITY, IOWA.

## PORTABLE SAWMILL.

SPECIFICATION forming part of Letters Patent No. 719,585, dated February 3, 1903.

Application filed December 20, 1901. Serial No. 86,654. (No model.)

*To all whom it may concern:*

Be it known that I, EMIL H. HANSSLER, a citizen of the United States, residing at Webster City, in the county of Hamilton and State of Iowa, have invented certain new and useful Improvements in Portable Sawmills, of which the following is a specification.

The objects of my invention are to provide a portable sawmill of simple, durable, and inexpensive construction which may be quickly and easily set up ready for use without the necessity of digging a pit beneath the sawmill to receive sawdust; and, more specifically, it is my object to provide simple, durable, and easily-operated means for conducting the sawdust to a point of discharge at the side of the mill.

My invention consists in certain details in the construction, arrangement, and combination of the various parts of the device whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which—

Figure 1 shows a top or plan view of the complete machine, portions of the carriage-track at each end being broken away and the machine shown in position for use. Fig. 2 shows a side elevation of the same. Fig. 3 shows a front end elevation of same, part of the sawdust-conveyer being broken away. Fig. 4 shows an enlarged detail perspective view of the portion of the supporting-frame of the machine designed to rest upon the front axle. Fig. 5 shows an enlarged transverse sectional view through the central portion of the machine-frame to illustrate the sawdust-conveyer mechanism, and Fig. 6 shows a side elevation of the complete machine folded ready for transportation. Fig. 7 shows a perspective view illustrating the swinging delivery-chute and connected parts.

Referring to the accompanying drawings, I have used the reference-numeral 10 to indicate the rear axle of the machine. Upon the ends of the rear axle are the supporting-wheels 11. The numeral 12 indicates the front axle, having thereon the supporting-wheels 13, the said front axle being of materially less length than the rear axle. Fixed to the rear axle are two beams 14. The forward ends of these beams meet directly over

the front axle 12, and a metal cap 15 is provided to cover these ends, and a pin 16 passes through the metal cap and through the front axle to provide for pivoting the axle to the beams 14. When transporting the machine, the power is applied for moving the machine to the front axle in any ordinary way. The said beams 14 and axles 10 and 12 constitute the main frame of the machine. Attached to this frame is a series of longitudinal beams 17, rested upon the axle 10 and extended longitudinally of the machine-frame. These beams 17 are connected with each other and with the beams 14 by means of a series of cross-beams 18, and upon these cross-beams 18 the sawmill proper is supported.

At about the longitudinal center of the machine-frame I have mounted a track-rail 19 to extend from a point beyond the rear end of the machine-frame to a point near the front end thereof, and hinged to the rear end of the track 19 is a track-section 20, capable of swinging upwardly to rest on top of the machine, and to the front end of the track-section 19 is another hinged track-section 21, capable of folding rearwardly over the top of the machine-frame. At a point near one of the ends of the axle 10 is a second track-section 22, parallel with the track-section 19, the said track 22 being arranged on the inner side of the wheel 11 and outside of the wheel 13 on the front axle. To the rear end of the track 22 is a folding track-section 23, parallel with the track-section 20, and to the front end of the track-section 22 is a track-section 24 to lie parallel with the track-section 21. By this means a track is formed which when in its folded position will be of substantially the same length as the machine-frame and when in its position for use will be long enough for all of the ordinary purposes for which the portable sawmill is designed. Furthermore, by locating the track-section 24 outside of the wheel 13 it is obvious that the front axle and its wheels may readily turn in transportation without touching the track. Hence if it is desired to move the machine a short distance without folding the track this may readily be done.

In use the operator need stand only at the side of the track upon which the saw is located,



and hence the portion of the frame on the side opposite from the portion which supports the track is provided at its rear end with a large platform 25. At the outer edge of the platform is a large timber 26, upon which skids may be rested to support logs being rolled upon the platform.

Near the forward end of the machine-frame and in front of the platform 25 is a shaft 27, having at one end a pulley 28, upon which the belt 29 is mounted for turning the shaft. On the end of the shaft 27 adjacent to the track-rail 19 is the saw 30, in position where the log resting upon the carriage will engage the saw.

The numeral 31 indicates an ordinary saw-mill-carriage mounted upon the wheels 32, which wheels rest upon the track, and upon the carriage are the usual devices for supporting a log. Beneath the saw 30 is a chute 33, having an endless conveyer 34 therein, which conveyer is driven by the belt 35, connecting the shaft 36 of the conveyer with the shaft 27, by which means sawdust dropped from the saw will enter the chute and be conveyed rearwardly to the rear end of the chute 33. The said shaft 36 is extended transversely of the machine, and beneath the end of the chute 33 is a chute 37 to receive sawdust from the chute 33 and convey it laterally and upwardly to the opposite side of the machine-frame. In this chute 37 is an endless conveyer 38, and this conveyer is driven by means of a shaft 39, and power is transmitted to the shaft 39 as follows:

The reference-numeral 40 indicates a belt connecting the shaft 36 with a shaft 41, extended parallel with the shaft 36. This shaft 41 is connected with the vertical shaft 42 by means of the belt 43 and a direction-pulley 44, and the shaft 42 is connected with the shaft 39 by means of the bevel gear-wheels 45 on the shaft 42 and the bevel gear-wheel 46 on the shaft 39. Hence when the saw is operated the sawdust will be conveyed first rearwardly through the chute 33 and then laterally through the chute 37. I have provided means for discharging the sawdust that passes through the chute 37 to a point of discharge some distance laterally from the machine-frame, which means may be swung to a position parallel with the machine-frame, as required for transportation. Mounted upon the under surface of one of the beams 17 is a semicircular track 47, and resting upon this track 47 is a box 48, open at its top and outer side, and fixed to the forward face of the box 48 is a bracket 49, which bracket surrounds the shaft 42, and a bracket 50 is fixed to the beam 17 to support the bracket 49 against downward movement.

The reference-numeral 51 indicates a chute having an endless conveyer 52 therein, the shaft at one end of the conveyer extending through the sides of the box 48, and upon this shaft I have mounted a bevel gear-wheel 53, which gear-wheel is meshed with another

bevel gear-wheel, which latter wheel is fixed to the shaft 42. Hence when the shaft 42 is driven the conveyer 52 will also be operated. The said chute 54 is of considerable length and may extend transversely of the machine-frame, and its outer end may be supported in any suitable way. Obviously the chute 51 may readily be raised and lowered even when in operation, and, furthermore, the chute may move laterally to a height parallel with the longitudinal axis of the machine-frame, as required for folding. During this movement the box 48 is supported upon the bracket 50 and the semicircular plate 47.

In practical use and assuming that the machine is folded for transportation, it is obvious that all of the parts are nicely balanced and that the machine may turn sharp corners and be easily transported. When it is desired to set up the machine for use, the operator first digs holes to receive the wheels, and when the wheels are placed in the holes, obviously, the frame will be firmly and securely supported, and the operator need not level off the ground-surface to receive sills, nor need he dig a pit to receive the sawdust. The folding track-sections are placed in a horizontal position and supports provided for preventing them from sagging downwardly at their outer ends. Then the chute 51 is moved to a position substantially at right angles to the longitudinal axis of the machine, and it is suitably supported at its outer end. Obviously skids may be placed upon the timber 26 and logs rolled upon the platform 25 and from thence to the sawmill-carriage. When power is applied to the belt 29, the saw is operated, and the carriage may be advanced toward the saw by means of the usual mechanism provided for that purpose. This mechanism is not shown or described for the reason that it forms no part of my present invention. Obviously during the operation of the saw the conveyer in each of the chutes is also being operated, and any sawdust will be carried from the chute 33 to the chute 37 and from thence to the chute 51, which will discharge it on a pile at the side of the machine. Obviously the end of the chute 51 may be raised and lowered or moved laterally without interfering with the movements of the conveyer therein.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States therefor, is—

In a portable sawmill having a frame mounted on wheels and arranged close to the ground-surface, and a saw supported in the frame, the combination of means for conveying sawdust from the saw to a point of discharge, said means comprising a chute arranged beneath the saw, an endless conveyer in the chute, a shaft for driving the endless conveyer, said shaft being driven from the saw-shaft, a second chute at right angles to the first with one end below the delivery end of the first, a conveyer therein, a conveyer-driv-



ing shaft at the delivery end of the second chute, a bevel gear-wheel thereon, a semi-circular guide fixed to the machine-frame, a box mounted upon said guide, a third chute  
5 having one end inserted in said box, said end being beneath the delivery end of the second chute, a shaft passed through the box and the third chute, a bevel gear-wheel thereon, a conveyer in the third chute driven from  
10 said shaft, a bracket on the side of the box, a vertical shaft in said bracket, a bevel gear-wheel on the vertical shaft in mesh with the upper gear-wheel on the shaft of the second  
conveyer, and another bevel gear-wheel on the vertical shaft in mesh with the gear-wheel 15 on the shaft of the third conveyer, a shaft parallel with the driving-shaft of the first conveyer, and means for gearing these two shafts together, and means for driving the said vertical shaft from the last-mentioned shaft, sub- 20  
stantially as and for the purposes stated.

Des Moines, Iowa, October 31, 1901.

EMIL H. HANSSLER.

Witnesses:

H. F. TURK,

A. S. HOLT.