

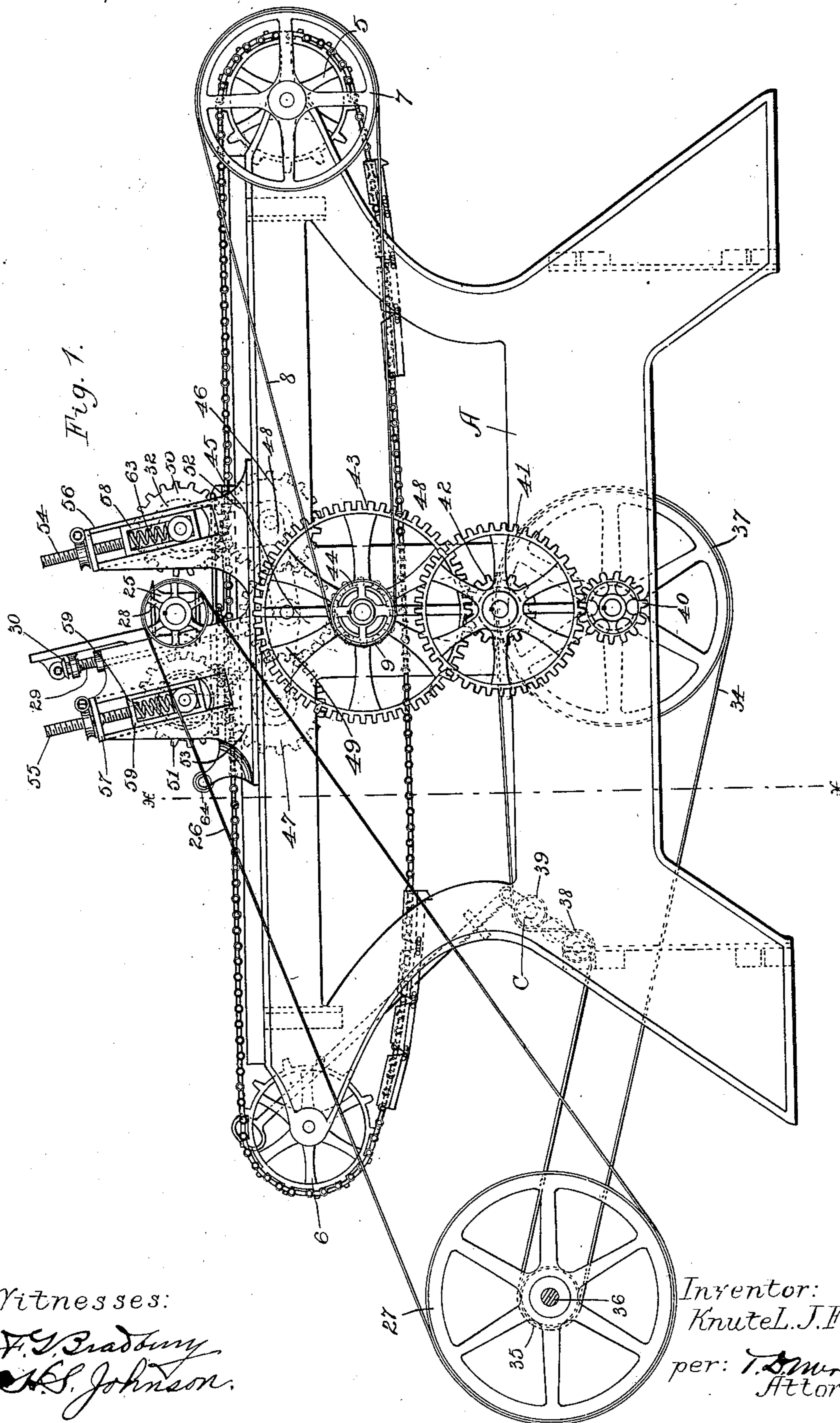
(No Model.)

3 Sheets—Sheet 1.

K. L. J. FRAZER.  
SHINGLE PLANER.

No. 561,103.

Patented June 2, 1896.



Witnesses:

F. T. Bradbury  
W. S. Johnson.

Inventor:  
Knut L. J. Frazer  
per: T. S. Murwin  
Attorney.

(No Model.)

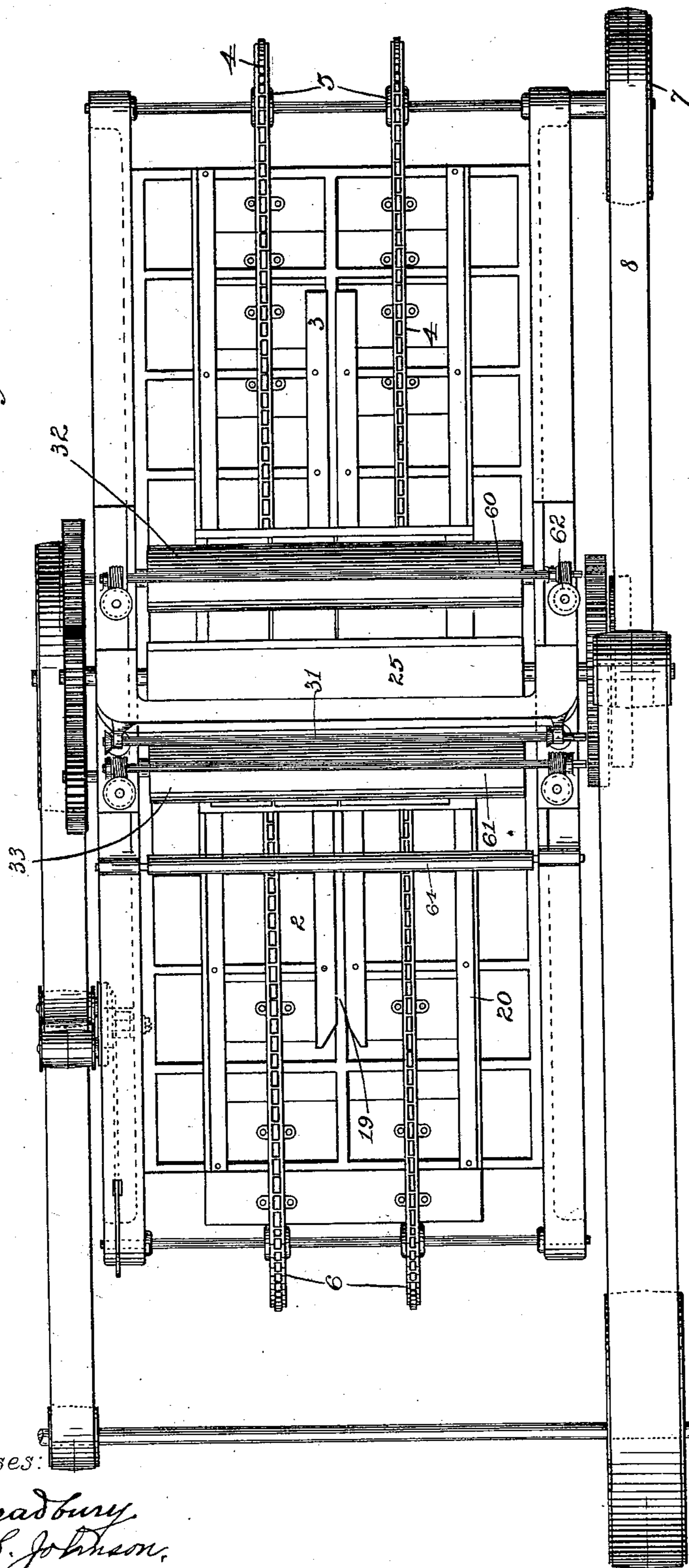
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K. L. J. FRAZER.  
SHINGLE PLANER.

No. 561,103.

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Fig. 2.



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per: T. M. Merwin  
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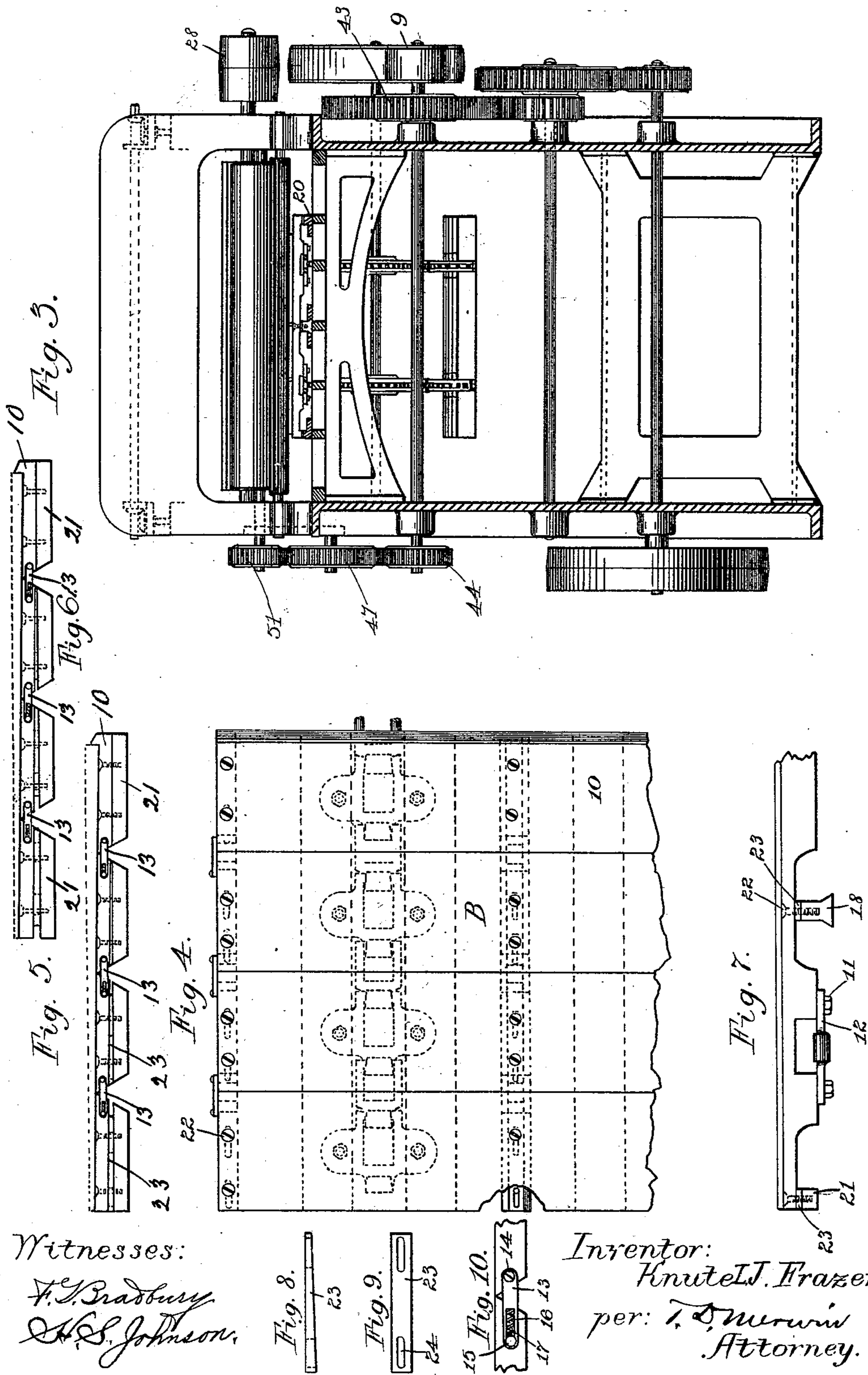
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3 Sheets—Sheet 3

K. L. J. FRAZER.  
SHINGLE PLANER.

No. 561,103.

Patented June 2, 1896.



Witnesses:

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Inventor:

Knute J. Frazer.

per: T. S. Merwin  
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# UNITED STATES PATENT OFFICE.

KNUTE L. J. FRAZER, OF WINONA, MINNESOTA.

## SHINGLE-PLANER.

SPECIFICATION forming part of Letters Patent No. 561,103, dated June 2, 1896.

Application filed February 25, 1895. Serial No. 539,591. (No model.)

*To all whom it may concern:*

Be it known that I, KNUTE L. J. FRAZER, of Winona, Winona county, Minnesota, have invented certain Improvements in Shingle-Planers, of which the following is a specification.

My invention relates to improvements in shingle-planers, its object being to provide means for finishing sawed or split shingles so as to taper them uniformly on both sides; and it consists generally in providing as attachments for the planer endless belts or chains running over the bed of the machine and travelers or holders attached to these chains which run in guides on the bed of the machine and are adapted to receive the shingles and present them in proper position for the cutters to receive the required taper. These travelers are provided with means for adjusting the top or bearing surface at an angle with the bed of the planer, so as to give the stock upon it the necessary incline so that it will give the required taper and so that the rough shingle can be equally tapered on both sides by varying the adjustment for the rough and half-planed stock.

My invention further consists in improved means for adjusting the position of the cutters.

In the accompanying drawings, forming part of this specification, Figure 1 is a side elevation of my improved machine, showing the position of the cutters, the endless belt, and the means for controlling the same. Fig. 2 is a plan view of the same, showing the endless chains for driving the travelers and the traveler-guide. Fig. 3 is a vertical cross-section of the same on line *xx* of Fig. 1. Fig. 4 is a partial detail plan view of one of the travelers. Figs. 5 and 6 are detail side elevations of the same, illustrating the different adjustments. Fig. 7 is a partial detail end view of the traveler, showing the means for connection to the chain and the lug engaging the guide. Figs. 8 and 9 are details of the wedges for adjusting the surfaces of the traveler to receive the shingle, and Fig. 10 is a detail showing the means for connecting the sections of the traveler together.

In the drawings, A represents the frame of the machine, of any ordinary construction,

the bed 2 of which is provided with a longitudinal guide 3, preferably provided with a dovetail slot. On each side of the guide and longitudinally of the bed are arranged endless chains 4, carried by sprocket-wheels 5 and 6, the sprockets 5 being shown connected to the source of power by means of the pulley 7 and the belt 8, running to the pulley 9, connected to the other running parts of the machine. The shingle-holders or travelers B are connected to the chains 4 and carried thereby over the bed of the machine and under the cutters. These travelers are made up of transverse sections 10, each secured by means of bolts 11 to the belt-link 12 in each chain. The sections themselves have their adjacent edges beveled, as shown in Figs. 5, 6, and 10, so that while they meet at the top, forming a continuous surface, they can be folded downward toward each other in passing over a sprocket. The sections are connected together by means of the links 13, having a fixed pivot 14 on one member and carrying a stud 15, which works in a slot 16 in the adjacent section against the tension of the spring 17. The traveler is guided by means of dovetailed depending lugs 18 upon the sections, which run in the corresponding dovetailed guide 19 upon the bed of the machine, the traveler being further controlled and directed by the side guides 20, upon which bear the lugs 21. These lugs are connected to the traveler-sections by means of screws 22, and interposed between each section and the lugs are wedges 23, which have slotted holes 24, through which the screws pass. In making the first cut on the stock these wedges are placed so that the screws stand at the ends of the slots toward the thin end of the wedge, but in making a second cut in order to give the proper taper the screws are loosened and the wedges thrust forward sufficiently to give the proper incline to the bed of the traveler, and the screws are then tightened.

The planer-head or cutter 25 is driven by means of the belt 26 from the drive-wheel 27, running over the pulley 28, and the position of the cutter is vertically adjusted by means of the screws 29, arranged one at each side of the machine and having a beveled-gear connection 30 with the counter-shaft 31, whereby

both ends of the cutter-head are raised and lowered simultaneously and uniformly.

The feed-rolls 32 and 33 are driven as follows: The belt 34, running over a pulley 35 on the main driving-shaft 36, runs over the pulley 37 and the idlers 38 and 39 of the belt-tighteners C. The pulley 37 carries the pinion 40, which meshes with the gear 41, which gear carries a pinion 42, meshing with the gear 43, which carries the pulley 9 for driving the belt 8, and also a pinion 44 upon the opposite end of its shaft. This pinion engages the gear 45, which in turn meshes with the idlers 46 and 47, connected by links 48 and 49 with the shaft of the gear 45. These idler-gears mesh, respectively, with the gears 50 and 51, which are connected by means of the links 52 and 53 with the shafts of the gears 46 and 47. By this means the feed-rolls are constantly geared to the driving mechanism, no matter in what position they may be adjusted. The necessary adjustment is attained by means of the screws 54 and 55, threaded in the frames 56 and 57 and carrying sliding journal-box carriers 58 and 59, which receive the journal-boxes of the feed-rolls. The screws at the ends of the rolls are connected together by means of shafts 60 and 61, having a worm-gear connection 62 with the screw at each end, whereby the adjustment of both ends of the rolls is necessarily uniform. The rolls are further automatically adjustable by means of the cushion-springs 63 over the journal-boxes, by means of which any inequalities of surface upon the stock are compensated for. At the rear of the feed-roll 32 is journaled the freely-turning roll 64, to prevent the stock rising and getting out of place in passing through the machine.

Operation: In use the rough stock is placed upon the traveler with the adjusting-wedges flush with the ends of the sections, as shown in Fig. 5. The traveler is then passed through the machine, so that the stock receives its cut on one side. The stock is then reversed upon the traveler with the finished face down and the wedges adjusted, as in Fig. 6, when it is ready to be passed through the machine to receive the proper taper upon the other side. In order to give the proper incline to the bed of the traveler, the wedges for the different sections are differently adjusted, the wedges for each section being driven in farther than those for the next forward section. It will thus be evident that any desired incline of

the top or bearing surface of the traveler can be attained.

I claim—

1. In a planer of the class described, a stockholder or traveler, comprising in combination the sectional stock-bed, the lugs or guide-blocks, and the adjustable wedges interposed between said sections and blocks for varying the incline of the top or bearing surface of the bed.

2. In a planer of the class described, a stockholder or traveler, comprising in combination, the stock-bed, made up of sections, the lugs or guide-blocks therefor, the interposed slotted wedges for adjusting the incline of the bed with reference to the blocks, and the screws securing said blocks to the bed and passing through the slots in said wedges.

3. In a planer of the class described, the combination of the longitudinal dovetail guide in the bed of the machine, the endless chains running parallel with said guide, the traveler having its bed made of transverse sections and being provided with a dovetail lug traveling in said guide, and the adjustable wedges between said lug and sections for varying the incline of the top or bearing surface of the traveler.

4. In a planer, the combination with the guides upon the machine and the endless chains running parallel with said guides, of the travelers secured to and carried by said chains, made up of flexibly-connected sections, the lugs carried by said sections and traveling in said guides, and the separate adjusting means for said sections, whereby the incline of the top or bearing surface of the traveler with reference to the lugs may be varied.

5. A flexible carrier or traveler made up of sections having top and bottom members and means for vertically adjusting the relative position of said members.

6. In a planer of the class described, comprising in combination the traveler having its stock-bed made up of transverse sections, the link-and-pin connection for said sections, the guide blocks or lugs, and the wedges interposed between said lugs and sections.

In testimony whereof I affix my signature in presence of two witnesses.

KNUTE L. J. FRAZER.

Witnesses:

SMITH JOHNSON,  
D. E. VANCE.