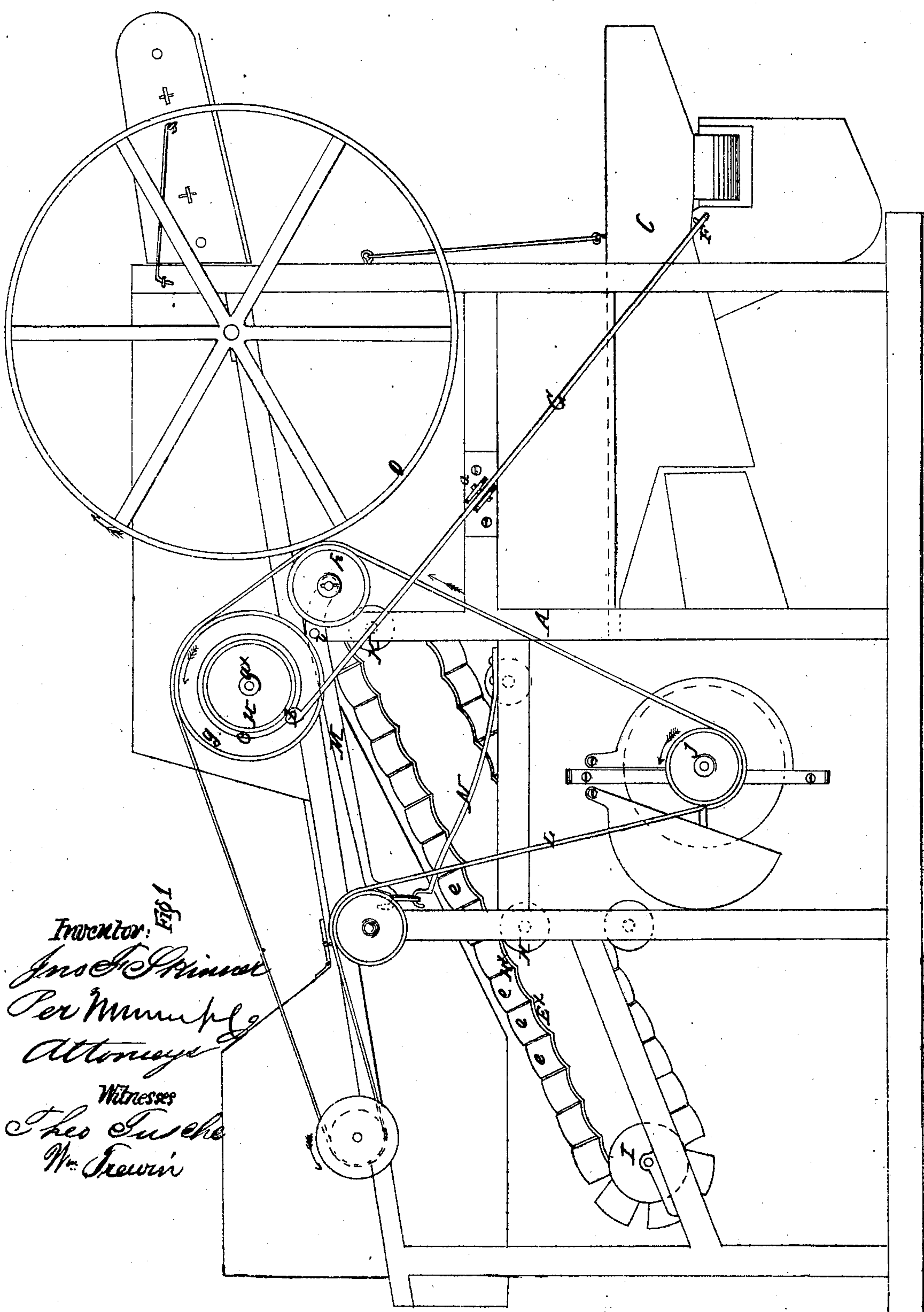


J. F. Skinner.
Threshing-Machine.
N^o 73204 *Patented Jan. 7, 1868.*



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Witnesses
Thos. L. Lusk
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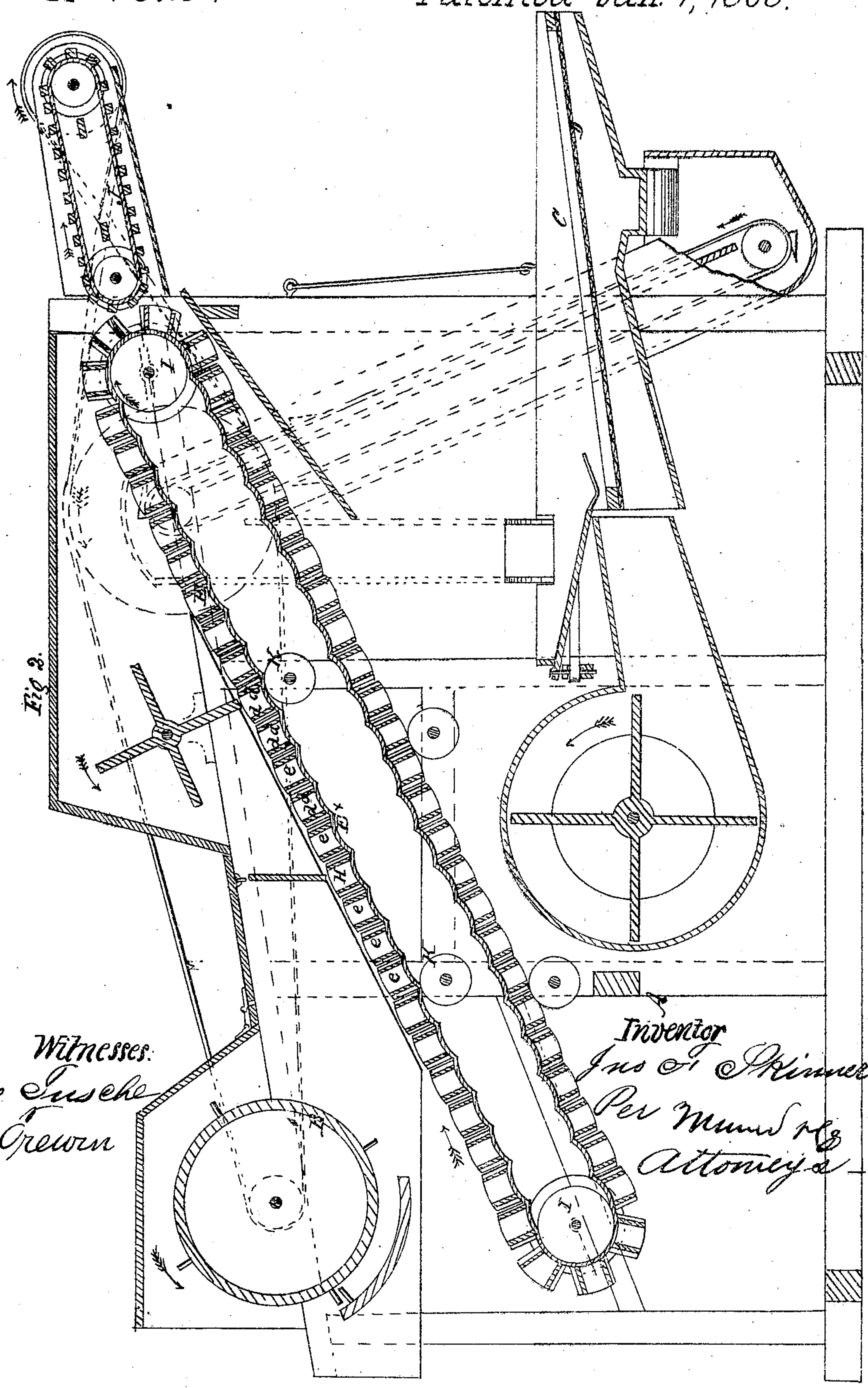


Fig 2.

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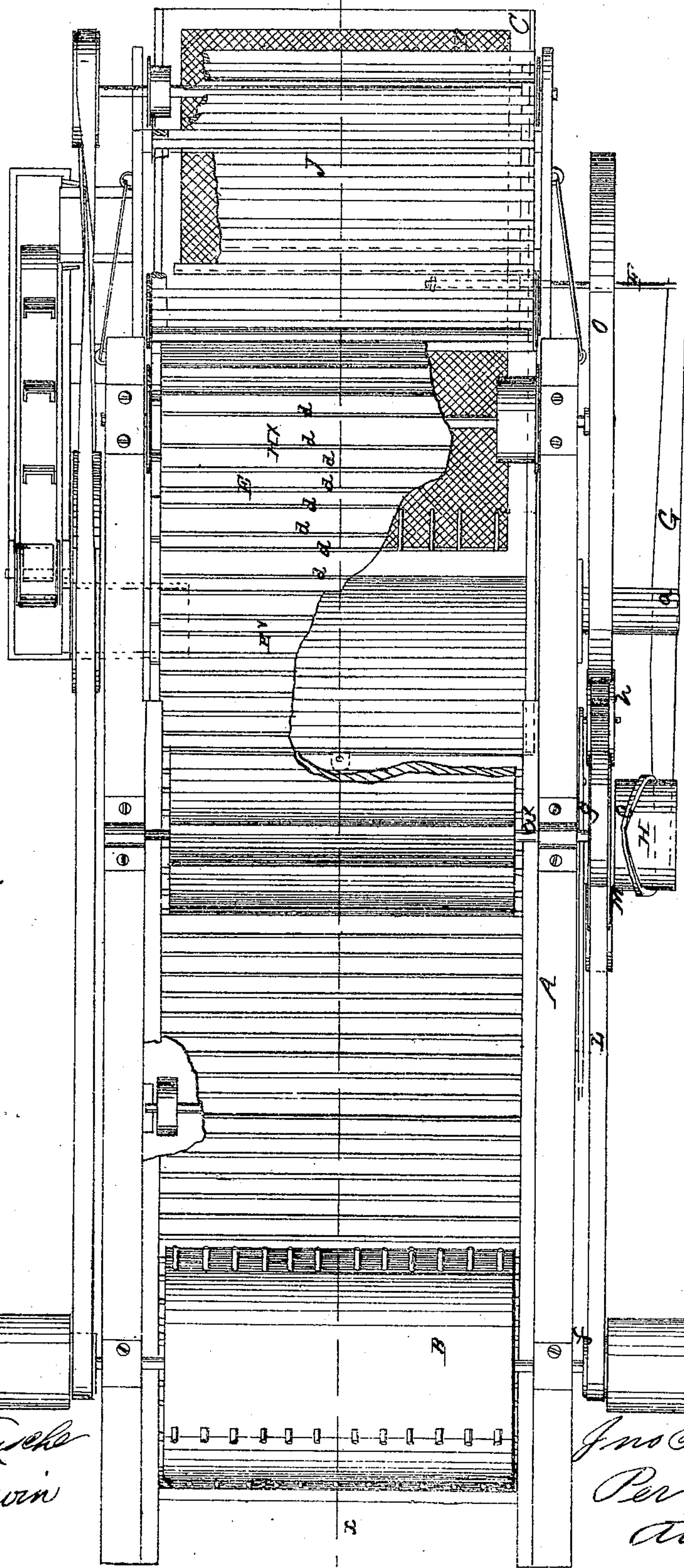


Fig. 3.

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JOHN F. SKINNER, OF BRASHER IRON-WORKS, NEW YORK.

Letters Patent No. 73,204, dated January 7, 1868.

IMPROVEMENT IN TRESHING-MACHINE.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JOHN F. SKINNER, of Brasher Iron-Works, in the county of St. Lawrence, and State of New York, have invented a new and improved Grain-Threshing Machine; 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 make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates, first, to a new and improved means for operating or giving motion to the shoe which contains the grain-screen; second, to an improvement in the construction of the grain and straw-carrier; third, to an improved arrangement of a belt with a pulley and spring, arranged in such a manner as to render a single belt efficient in driving the straw and grain-carrier, fan and beater-cylinder; fourth, to the employment or use of friction-rollers, in connection with the peculiarly-constructed grain and straw-carrier; said parts being all constructed and arranged as hereinafter fully shown and described, whereby certain advantages are obtained, as will be hereinafter set forth. In the accompanying drawings—

Figure 1, Sheet No. 1, is a side view of my invention.

Figure 2, Sheet No. 2, a side sectional view of the same, taken in the line *x x*, fig. 3.

Figure 3, a plan or top view of the same.

Similar letters of reference indicate like parts.

A represents the framing of a grain-threshing machine, constructed in the usual or any proper manner. B is the threshing-cylinder; C, the shoe, which contains the grain-screen; D and E, the grain and straw-carrier. The shoe C is suspended in the usual way, and a rod, F, is connected to its bottom, and extends outward beyond one side of the shoe, and is attached to the lower end of a lever, G, the fulcrum-pin *a* of which is at one side of the framing A. The upper end of the lever G is provided with a notch, or two projections, *b*, between which a thread or flange, *c*, on a pulley, H, works. This thread or flange extends circumferentially around the pulley H, in spiral form, one half being a portion of a right, and the other half a portion of a left-screw thread, the whole thread, in connection with the pulley, forming a zigzag cam, as will be fully understood by referring to fig. 3. The pulley H is at one end of a revolving shaft, *a*^x, placed above the grain and straw-carrier.

It will be seen, from the above description, that the thread or flange *c*, owing to its double or right-and-left spiral form, will communicate a vibrating movement to the lever G, and the latter will give a shake-motion to the shoe C, and without the intervention or aid of any spring or springs. The shake-motion, therefore, will be a positive one, and even or uniform in its operation throughout, and will work much more efficiently than when springs are employed.

The grain and straw-carrier is composed of a belt or apron, E^x, of canvas, or any other suitable textile fabric or flexible material, having buckets H^x attached to it transversely, said buckets being composed of two thin parallel strips, *d d*, of wood or metal, with their ends fitted in heads *e*, the upper and lower edges of which are curved, as shown clearly in figs. 1 and 2, so that the heads will be segments of circles, and pass smoothly over the rollers I I of the apron E, and also admit of the buckets H^x working quite closely to the straw-discharging carrier J, so as to effectually preclude straw passing down between the two carriers, as will be fully understood by referring to fig. 2. Besides these advantages, the curvature of the heads gives a slight shake-motion to the grain and straw-carrier as they pass over the friction-rollers K, and cause the grain to be separated from the loose straw, the grain falling into the buckets, from whence it is discharged upon the screen D as the buckets pass over the more elevated roller I. The straw is discharged from the machine by the carrier J.

L represents a belt, which passes around a pulley, *f*, on the shaft of the threshing-cylinder C, over a pulley, *g*, on the shaft *a*^x, around a pulley, *h*, at one end of a lever, M, having its fulcrum *i* at one side of the framing of the machine, and a spring, N, connected to its opposite end, and also around a pulley, *j*, on the fan-shaft, as shown clearly in fig. 1. The spring N causes the pulley *g* to press the belt L firmly against the periphery of a wheel, O, on the shaft of the more elevated roller I of the grain and straw-carrier. The spring, N, it will be seen, keeps the belt L taut, and admits of the fan-shaft *a*^x and grain and straw-carrier being all operated by one and the same belt.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent—

1. The operating of the shoe C, through the medium of the lever G, and the cam composed of the double spiral thread or flange *c* on the pulley H, substantially as shown and described.
2. The spring N, pulley *h*, and lever M, arranged in connection with the belt L and wheel O, substantially as and for the purpose specified.

JOHN F. SKINNER.

Witnesses:

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