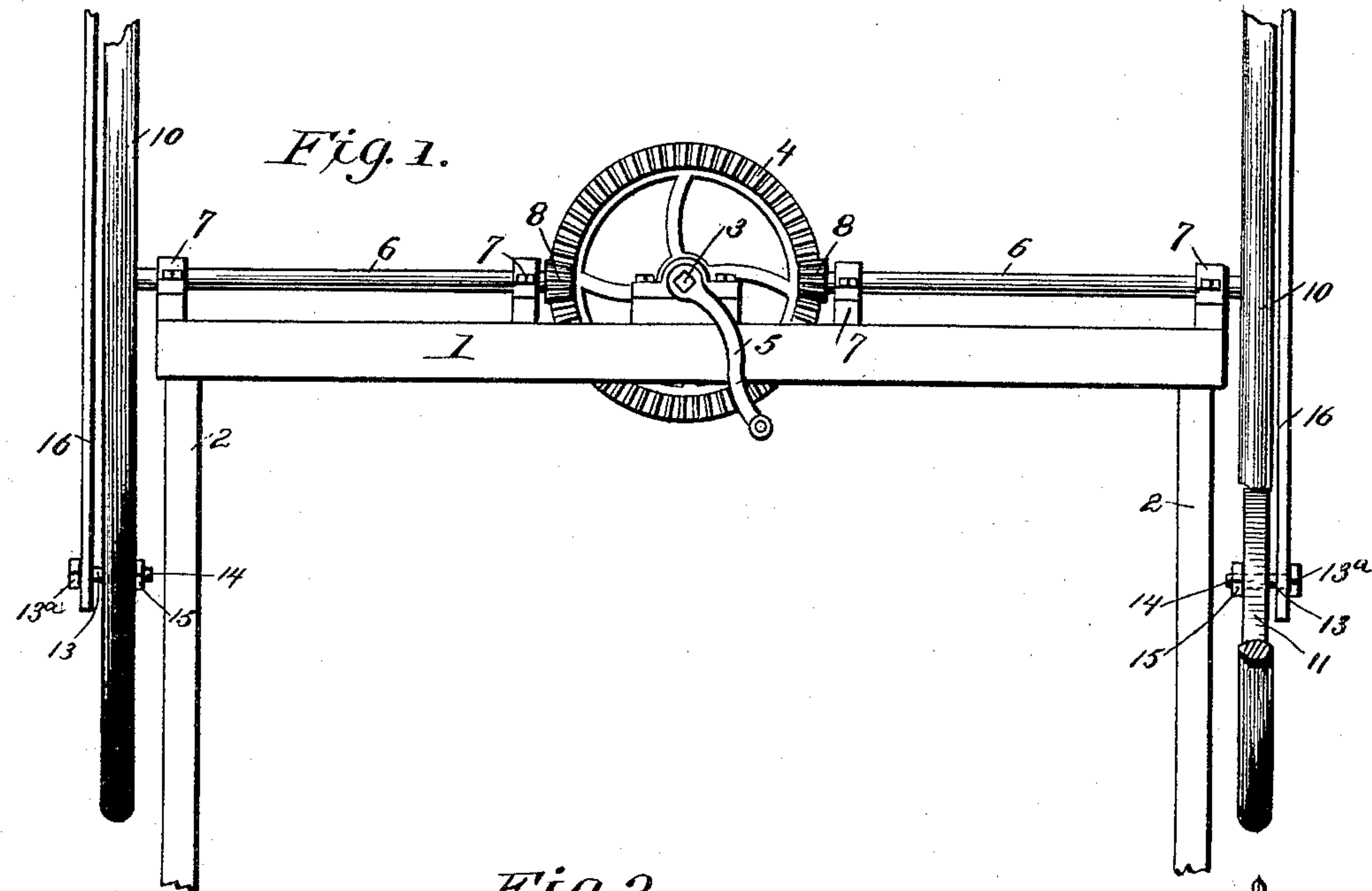


(No Model.)

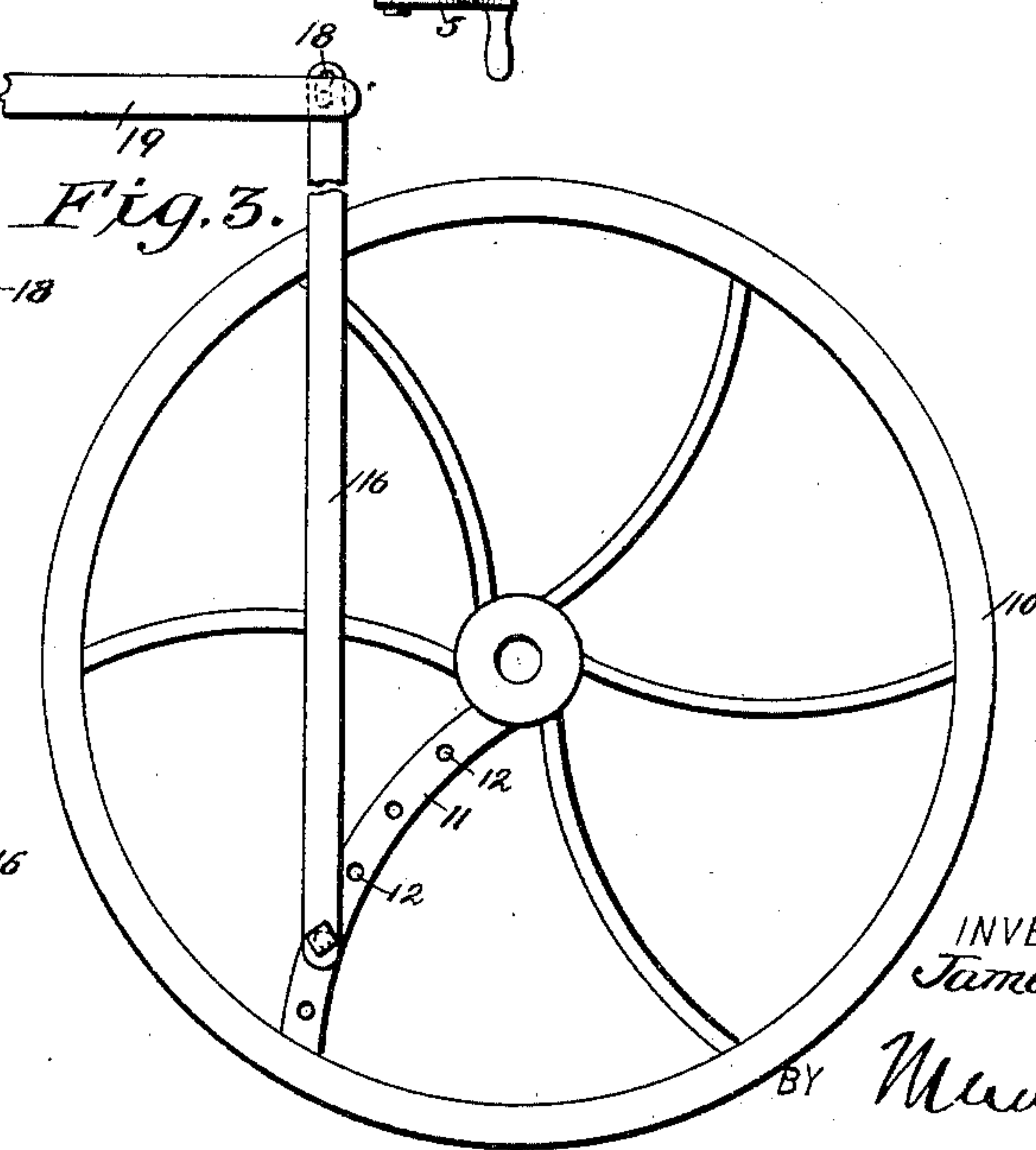
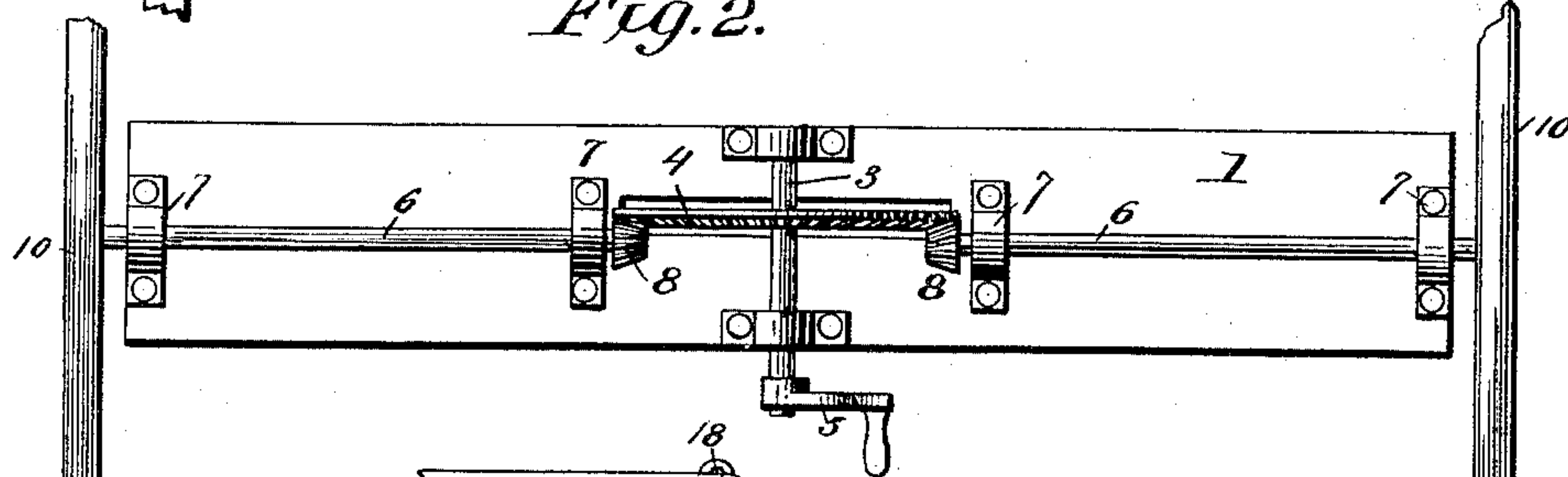
J. NICHOLAS.  
MOTIVE POWER FOR JIGGING MACHINES.

No. 432,892.

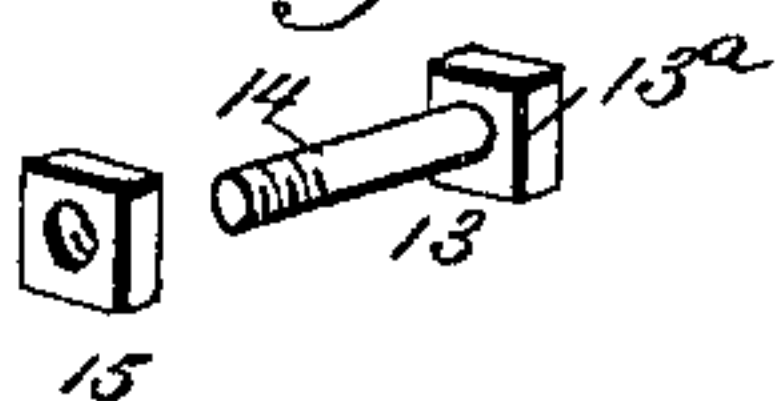
Patented July 22, 1890.



*Fig. 2.*



*Fig. 4.*



WITNESSES:

*Fred G. Dietrich*  
*W. D. Blondel*

INVENTOR:

*James Nicholas.*

BY *Manu L.*

ATTORNEYS



# UNITED STATES PATENT OFFICE.

JAMES NICHOLAS, OF BENTON, WISCONSIN.

## MOTIVE POWER FOR JIGGING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 432,892, dated July 22, 1890.

Application filed May 1, 1890. Serial No. 350,218. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES NICHOLAS, of Benton, in the county of Lafayette and State of Wisconsin, have invented a new and useful  
5 Improvement in Motive Power for Jigging-Machines, of which the following is a specification.

My invention consists in a new and improved motive power, which is especially intended for driving jigging-machines, but  
10 which may be employed for a variety of other purposes, and my invention will be hereinafter fully described and claimed.

Referring to the accompanying drawings,  
15 Figure 1 is a side view of my improved machine. Fig. 2 is a top plan view of the same. Fig. 3 is a detail side view of the fly-wheel. Fig. 4 is a detail view of the pitman-bolt, and Fig. 5 is a detail view of the pitman.

20 The same numerals of reference indicate corresponding parts in all the figures.

Referring to the several parts by their designating-numerals, 1 indicates the rectangular supporting-frame of my machine, this  
25 frame being preferably of oak, and having legs 2, on which it is supported. At about the middle of this frame 1 is mounted in bearings a transverse shaft 3, upon the central part of which is secured a large bevel  
30 cog-wheel 4, and the shaft 3, which may be called the "drive-shaft," has a crank-handle 5 at one end, by means of which the drive-shaft and the wheel 4 are revolved.

6 6 indicate two shafts, which are mounted  
35 longitudinally on the frame 1 in bearings 7. On the inner end of each of these shafts is secured a bevel-pinion 8, which meshes with the drive-wheel 4, while upon the outer end of each shaft 6 is secured a large balance or fly  
40 wheel 10, having one wide spoke with holes for pitmen. The bevel-pinions 8 are of such size that they will make about four revolutions for one revolution of the cog-wheel 4, with which they mesh. The fly-wheels 10, at the outer ends  
45 of the shaft 6, are of such size and weight as are required for the work to be done, but are each formed with one wide spoke 11, formed with a series of adjusting holes or apertures 12, extending out from the hub of the wheel  
50 toward its periphery, in any one of which the pitman-bolt 13 may be placed.

The body of this pivot-bolt, which is shown in detail in Fig. 4, is formed at one end with a flange or head 13<sup>a</sup>, while its other end is reduced to form a pivot-pin 14 and threaded  
55 at its end for a nut 15.

16 indicates the pitman, which is formed at its lower end with a circular opening 17, and it will be seen that when the pivot-bolt is placed through any one of the apertures 12  
60 of the fly-wheel and the apertured end of the pitman placed on the pivot-pin the flanged end of the bolt will hold it in place in the apertured spoke, while the nut 15 will hold the bolt at that end. The pitman has at  
65 its upper end a curved eye 18, by means of which the upper end of the pitman is connected or secured to the outer end of the tongue 19 of a jigging-machine by pressing it through the eye, as shown in Fig. 3, or to  
70 a sieve, a wood-saw, a churn-crank, a grindstone-handle, a pump, &c., my invention being applicable to many different purposes or machines, besides its principal purpose of driving jigging-machines, as will be readily  
75 understood.

From the foregoing description, taken in connection with the accompanying drawings, the construction, operation, and advantages of my new and improved motive power will  
80 be readily seen. The upper ends of the pitmen 16 of the two balance-wheels being secured to the outer ends of the tongues of one or more jigging-machines, as shown in Fig. 1, the large drive cog-wheel 4 is revolved by  
85 turning the crank-handle 5, and this cog-wheel 4, meshing with the small pinions 8 on the inner ends of the longitudinal shafts 6, rapidly revolves the said shafts and the large balance-wheels at their outer ends, which,  
90 through the connecting-pitmen 16, rapidly oscillate and work up and down the tongues of the jigging-machine.

By my invention the old laborious working up and down of the jig-tongue 19 by the hand  
95 is done away with, and the easy rotary motion of the crank-handle 5 substituted therefor, while three times the amount of work is accomplished. The large balance-wheels 10 operate to cause the machine to run easily  
100 and smoothly, while by forming the broad spoke of the balance-wheels with the series of

bolt-apertures 12 the end of the pitman can be moved nearer to or farther from the hub or center of the said wheels, thus increasing or decreasing the length and power of the strokes of the jig-tongues, enabling the operator to regulate the movements or stroke according to the nature of the work to be done.

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

1. The combination of the transverse shaft having the crank-handle, and the beveled cog-wheel mounted on said shaft, the shafts 6, having the bevel cog-pinions at their inner ends and the balance-wheels at their outer ends, and pitmen pivotally connecting the said balance-wheels with the outer ends of the

jigging-machine tongues, substantially as set forth.

2. The combination of the transverse shaft having the crank-handle and the beveled cog-wheel mounted on said shaft, the shafts 6, having at their inner ends the bevel-pinions, the balance-wheels, formed each with a wide spoke having the series of bolt-apertures 12, the removable pitman-bolts 13, and the pitmen formed with the aperture at their lower ends and having at their upper ends the curved eye 18, substantially as set forth.

JAMES NICHOLAS.

Witnesses:

FRANCIS HYNES,  
LOUIS WHITHAM.