

No. 622,255.

Patented Apr. 4, 1899.

F. ORTLIEB.
GOLD WASHING MACHINE.

(Application filed Dec. 31, 1897.)

(No Model.)

2 Sheets—Sheet I.

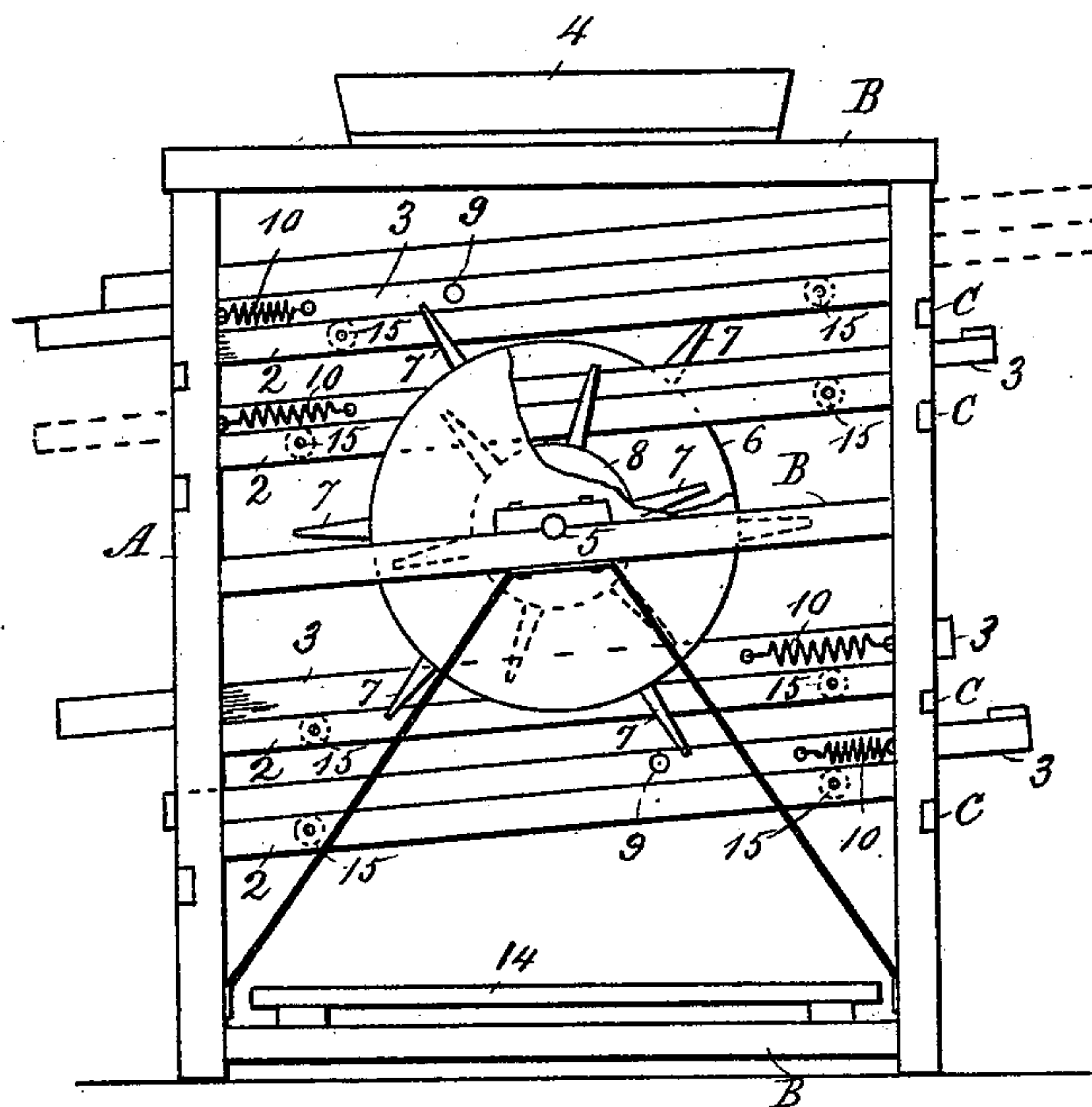


Fig. I.

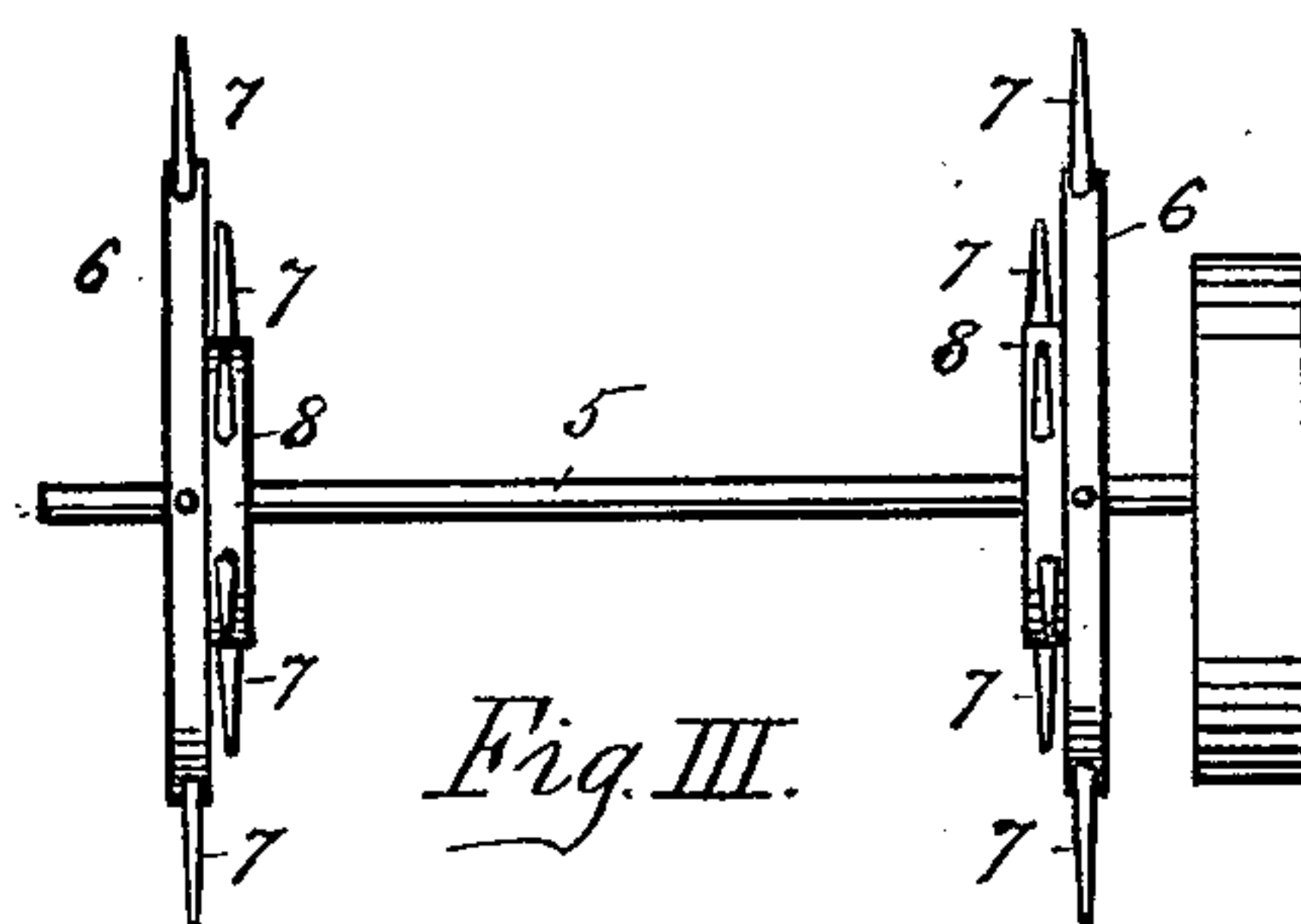


Fig. III.

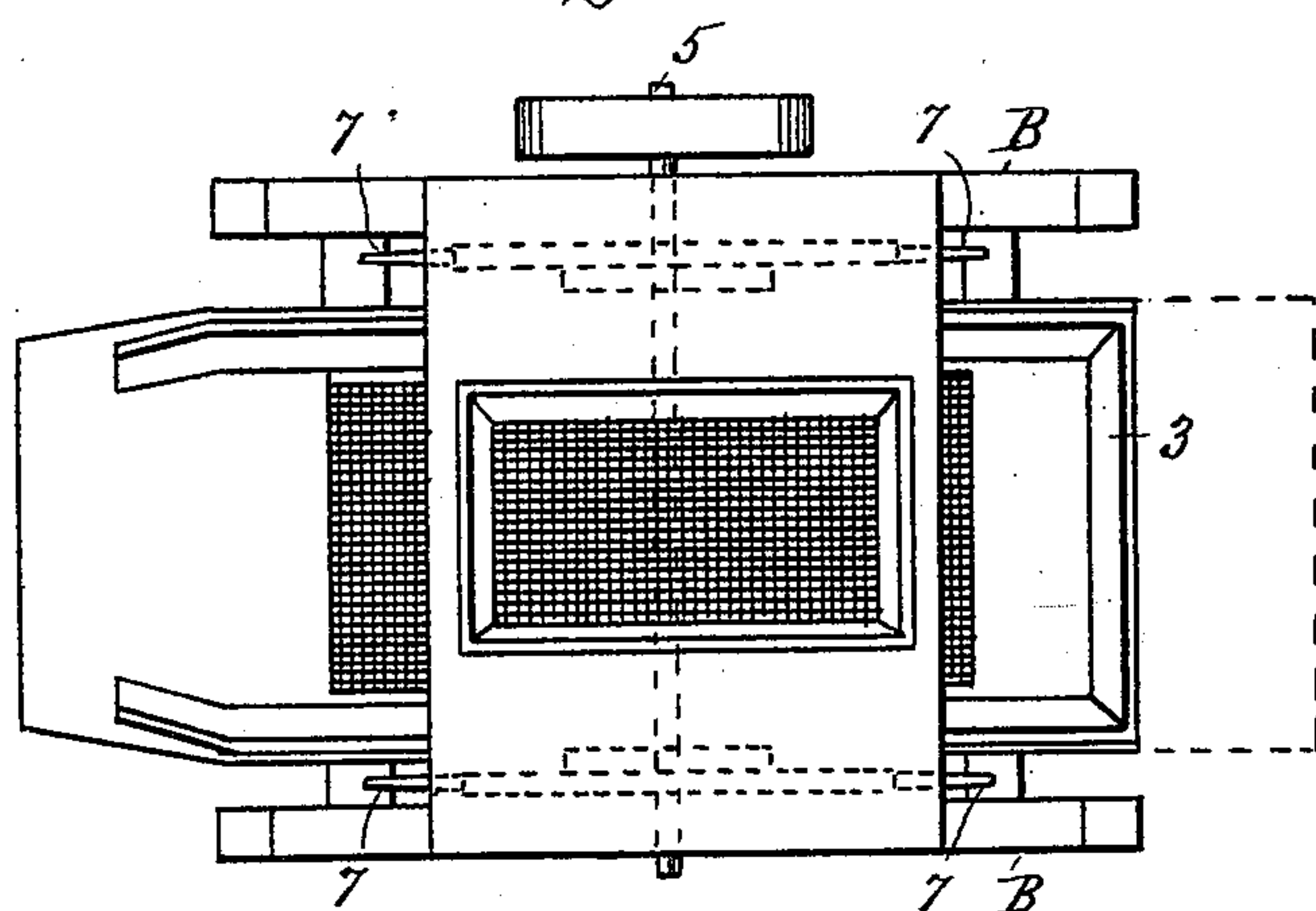


Fig. II.

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R. S. Millar
L. M. Adams

Inventor,
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By *[Signature]*

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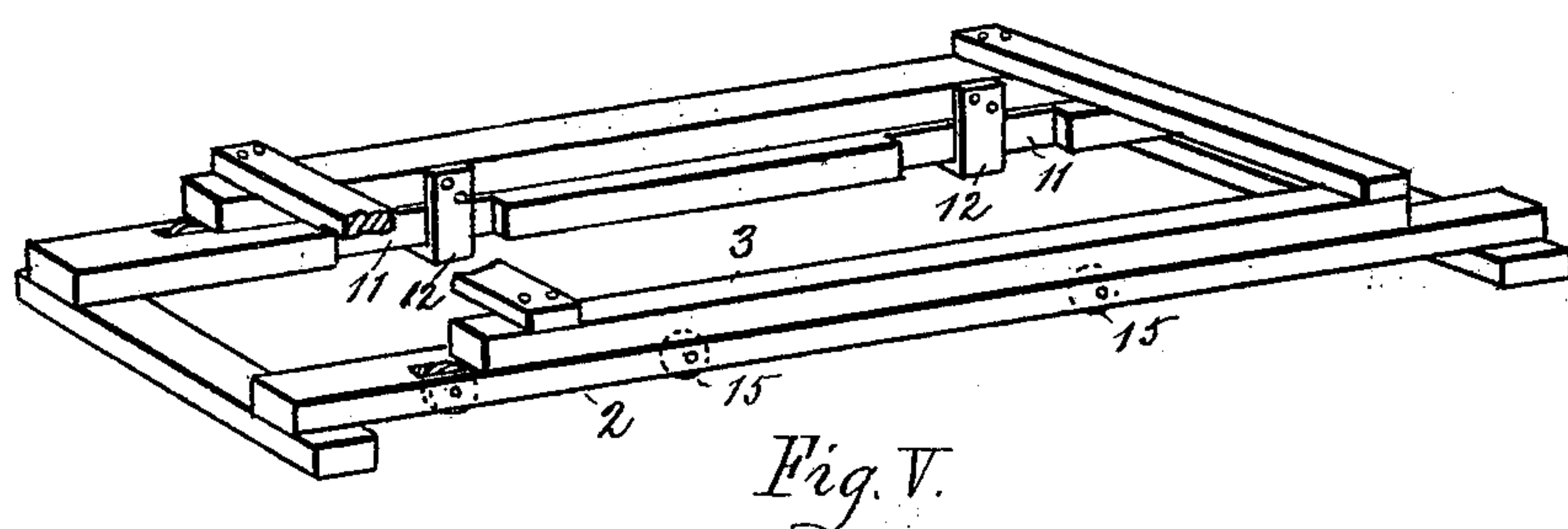
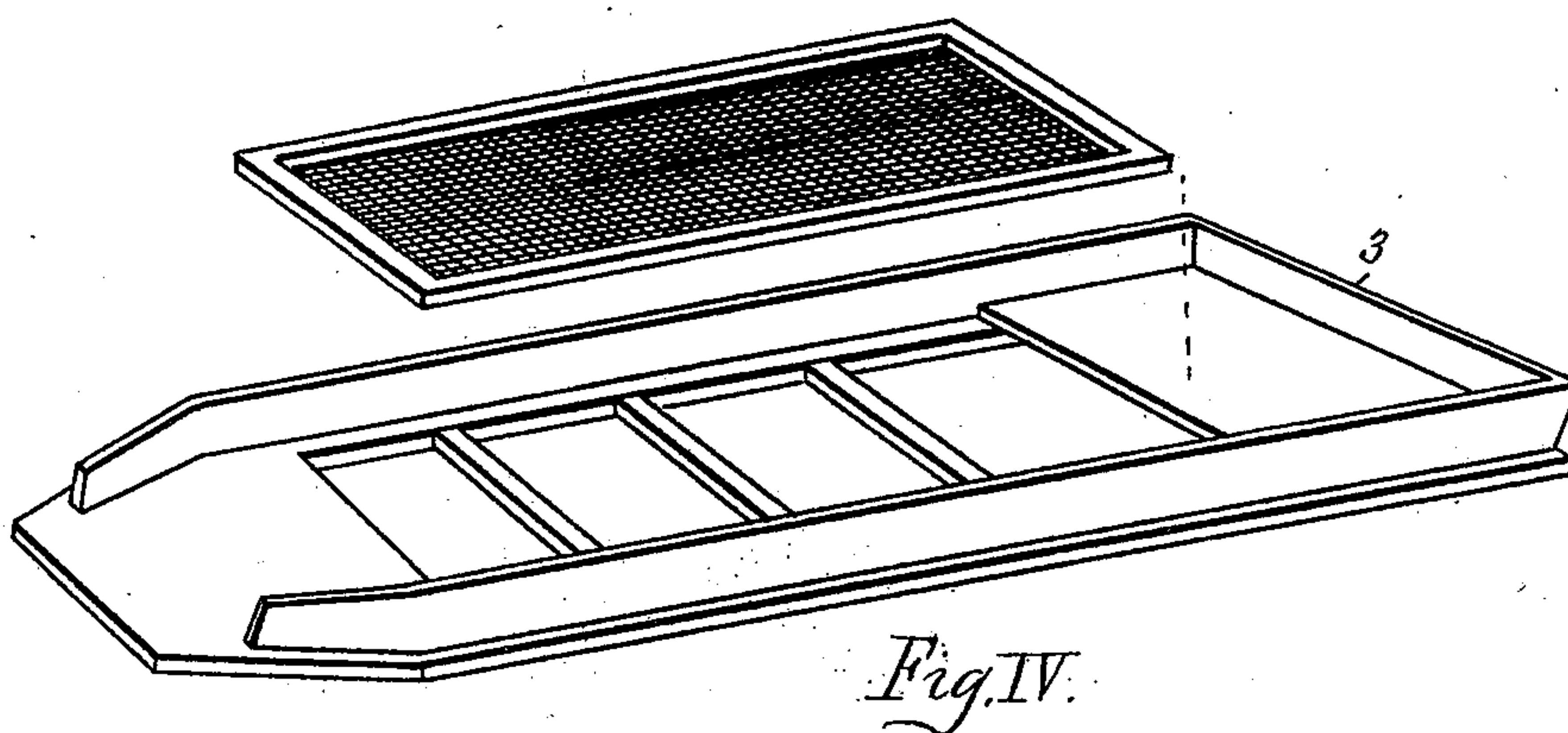
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UNITED STATES PATENT OFFICE.

FREDERICK ORTLIEB, OF LEHIGH, INDIAN TERRITORY. EXAMINED

GOLD-WASHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 622,255, dated April 4, 1899.

Application filed December 31, 1897. Serial No. 665,091. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK ORTLIEB, a citizen of the United States, residing at Lehigh, in the Choctaw Nation, Indian Territory, have invented a new and useful Improvement in Gold-Washing Machines, which improvement is fully set forth in the following specification and accompanying drawings, in which—

10 Figure 1 is a side elevation of my improved gold-washing machine; Fig. 2, a top view; Fig. 3, a detail view of the shaft carrying the main and supplementary wheels, which operate the shaker-frames; Figs. 4 and 5, detail
15 views.

My invention relates to certain improvements in gold-washing machines; and my object is to provide a simple, inexpensive, and useful apparatus specially designed to facilitate the separation of gold from the sand, gravel, &c., in which it is found.

20 The invention consists of a rectangular frame containing a series of longitudinally-reciprocating shaking-frames having a slight downward inclination toward the front of the machine. A central transverse shaft carries
25 two wheels, each provided with a series of radially-projecting arms or spurs and having lateral projections forming hubs, which are also provided with a series of radial arms, both
30 series being adapted to operate the shakers, which are provided with springs to draw them to their initial positions after each movement.

35 The peculiar operation and advantages of the invention will be understood by referring to the accompanying drawings, in which A indicates the framework, consisting of four corner-posts connected at the sides by longitudinal bars B and at the ends by cross-bars C. On the latter are secured longitudinal
40 bed-frames 2, on which the shaker-frames 3 are reciprocated. These frames are substantially similar, differing only in the screens, the upper one having large meshes or openings, those below being graduated in succession, so that the meshes in the lower screen will allow only the water and fine dust to pass through.

50 A hopper 4 is fixed on top of the machine to receive the sand and gravel. A shaft 5 is journaled in the center of the frame and carries

two wheels 6, provided with a series of radially-extending arms 7. Each wheel has on its inner side a laterally-projecting hub 8, also provided with radial arms. It will be understood that the long arms are designed to operate the upper and lower shakers, while the short arms alternately act on the two intermediate shakers.

60 On the outer side of each shaker-frame is fixed a laterally-projecting stud 9, which as the wheels revolve comes within the range of the outer ends of the radial arms, and the frame is thus drawn backwardly until the stud is released. The spring 10 then forces the frame forwardly to its original position, from which it is again drawn back by the next succeeding arm.

In the operation it is obvious that while the upper shaker is being drawn rearwardly by the arm the lowest shaker will be forced forward by the spring. The same order obtains with the intermediate shakers, except that the short arms are so arranged as to divide the intervals between the long arms, thus securing the desired reciprocal action.

In order to prevent accidental detachment of the shaker-frames from their beds, the inner sides of the bed-rails are provided with recesses 11, which engage hangers or stirrups 12, having their upper ends attached to the inner sides of the shaker-frame rails, as shown in Fig. 5.

85 It will be understood that when sand, gravel, &c., are thrown into the hopper and subjected to a stream of falling water the gravel and other coarse material will be discharged from the chute 13, extending from the upper shaker, while the finer particles will filter through the graduated screens of the lower shakers and fall upon a blanket or other suitable strainer, which is stretched upon a removable frame 14 beneath the shakers.

95 It will be evident that a small machine constructed on my plan may be easily operated by hand, and if steam or other power be employed the machine may be enlarged to any extent desired. It will also be seen that only a small quantity of water is required in the operation of the machine. This of itself is an important advantage in view of the fact that in many places water is difficult of access and consequently expensive.

In order to facilitate the movement of the shaker-frames, antifriction-rollers 15 may be inserted in the bed-frames.

What I claim as new is—

5 In a gold-washing machine, the combination with a rectangular frame provided with stationary bed-frames, of an upper and a lower shaker-frame and two intermediate frames, each of said shaker-frames having
10 projecting pins and a spring connection with the rectangular frame, and being recessed to receive guiding stirrups or hangers, a transverse shaft mounted centrally in the rectangular frame and two wheels of different di-
15 ameter mounted at each end of said shaft,

and provided with radially-projecting spurs, the spurs of the larger wheels alternating with those of the smaller wheels, and being so arranged that the spurs of the large wheels strike the pins of the upper and lower shaker-frames, while the spurs of the smaller wheels strike the pins on the intermediate frames. 20

In testimony that I claim the foregoing I have hereunto set my hand, this 26th day of November, 1897, in the presence of witnesses. 25

FREDERICK ORTLIEB.

Witnesses:

JAMES CAINE,
HERMAN EBERLE.