

No. 874,051.

PATENTED DEC. 17, 1907.

N. W. L. BROWN.
SHAKING SCREEN.

APPLICATION FILED APR. 18, 1907.

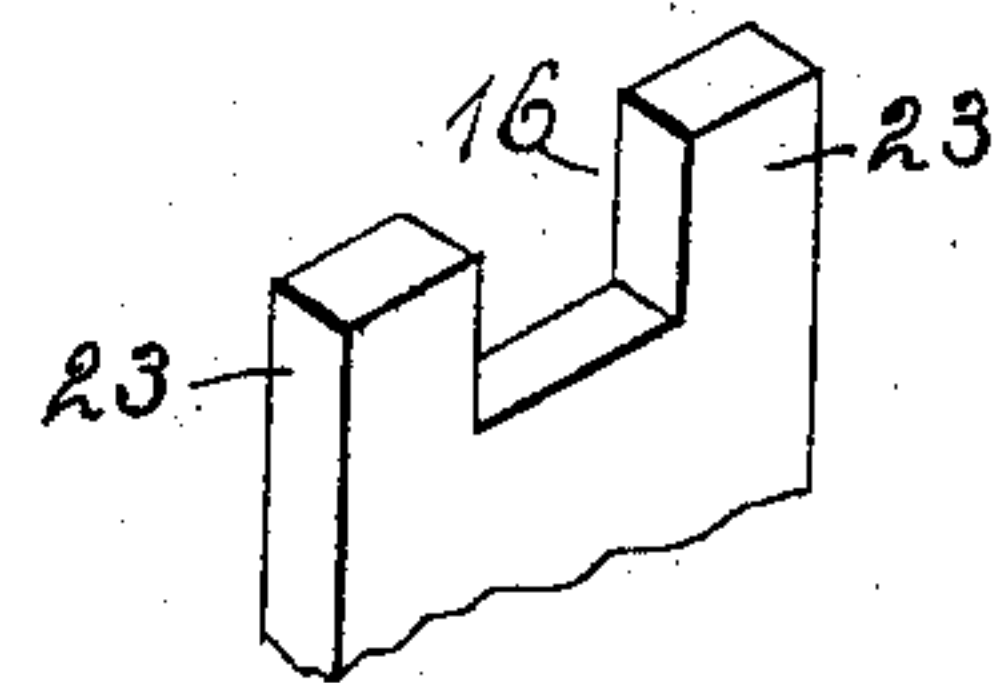
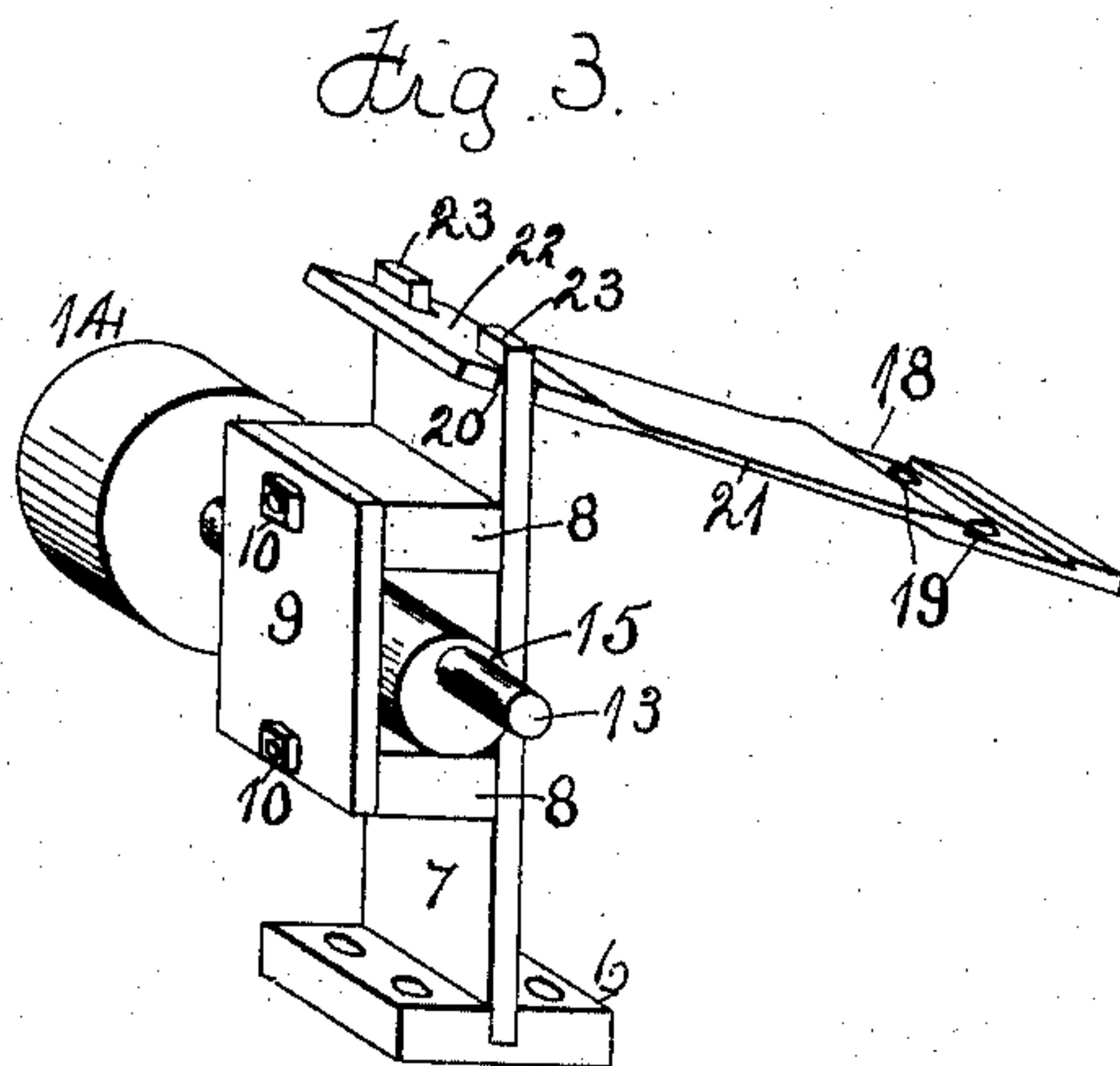
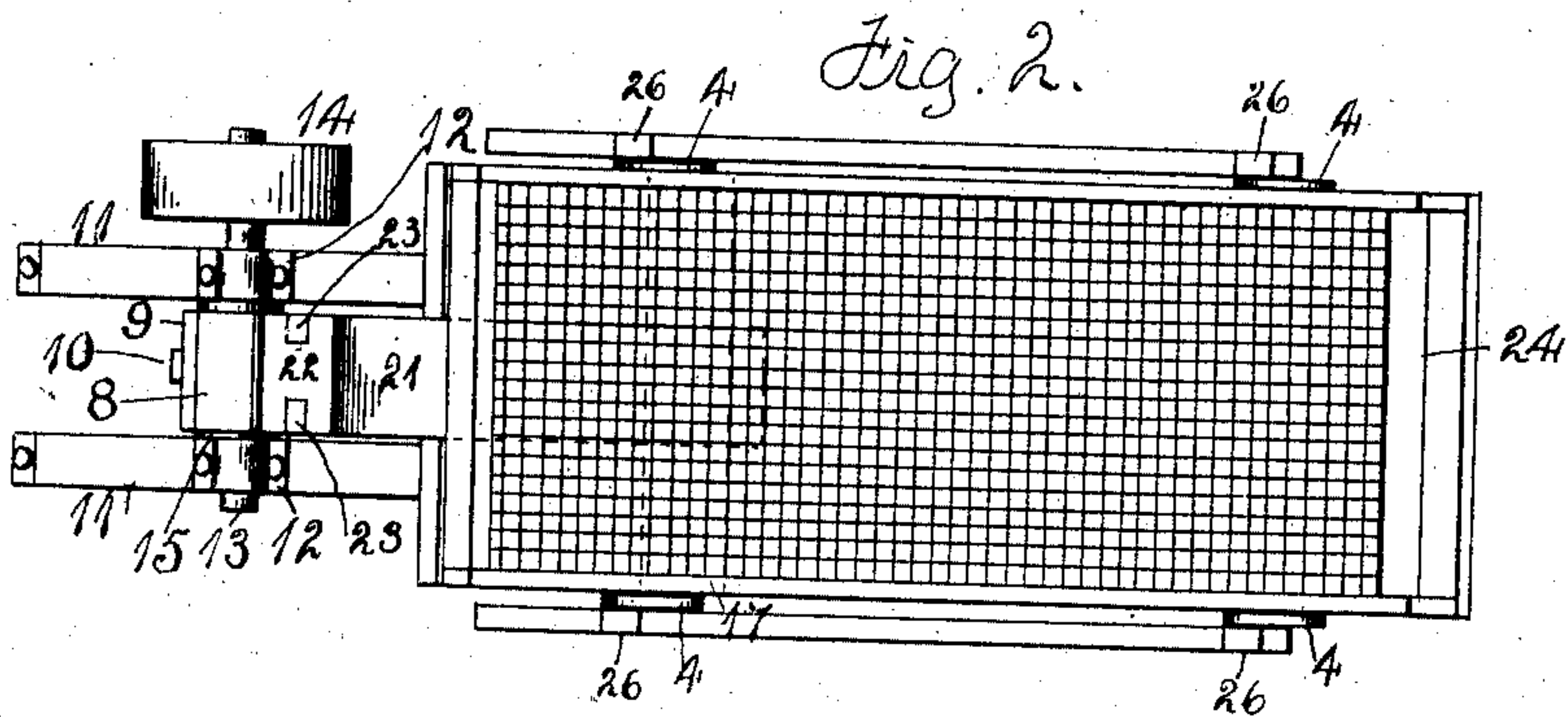
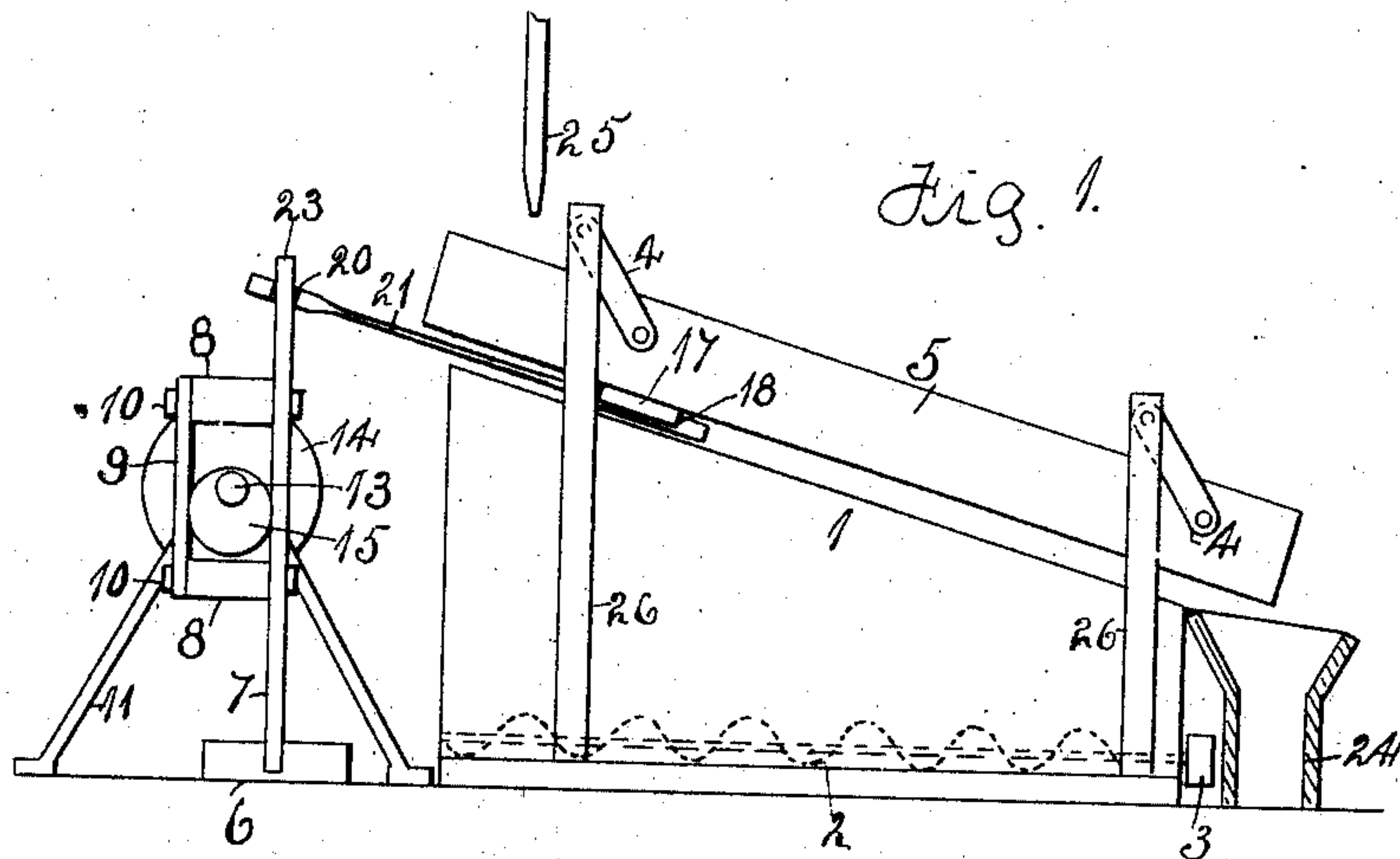


Fig. 5.

Witnesses:
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UNITED STATES PATENT OFFICE.

NIMROD W. L. BROWN, OF THOMASVILLE, ALABAMA.

SHAKING-SCREEN.

No. 874,051.

Specification of Letters Patent.

Patented Dec. 17, 1907.

Application filed April 18, 1907. Serial No. 368,970.

To all whom it may concern:

Be it known that I, NIMROD W. L. BROWN, citizen of the United States, residing at Thomasville, in the county of Clarke and State of Alabama, have invented new and useful Improvements in Shaking-Screens, of which the following is a specification.

The object of this invention is to construct a shaker employed in cleaning cotton seed, and various other grains in which practically all jar is removed, and this is accomplished by a construction that holds the various surfaces forming the joints in close fitting order.

In the accompanying drawings, Figure 1 is a side elevation, partly in section of my improved shaker. Fig. 2 is a plan view. Fig. 3 is an isometrical representation of the parts for imparting a reciprocating movement to the shaker. Fig. 4 is an isometrical representation of the upper end of the bar with which the eccentric engages. Fig. 5 is an isometrical representation of one end of the connecting link.

A trough 1 is supported by the floor, within the trough is located a conveyer 2 which is rotated by the pulley 3. Over the trough is located a sieve 5 which is held suspended by the uprights 26, one located at each corner of the sieve, and each supporting a link 4, the other ends of the links are connected to the sieve in a pivotal manner. To the floor is secured a block 6 which supports a bar 7 in a manner to permit it to vibrate. To the bar 7 above the block 6 are secured two blocks 8 having their free ends connected by a plate 9 which is held in place by the bolts 10. Two supports 11 are located one each side of the bar 7 and have their upper portion in box form as shown at 12. These boxes support a shaft 13, to one end of which is secured a pulley 14. This shaft extends within the opening bounded by the bar 7, blocks 8 and plate 9, and within this opening is located an eccentric 15 which forms a part of shaft 13.

The upper end of the bar 7 is provided with a central notch 16 extending in the direction of the length of the bar. To the underface of the sieve frame 5 is secured a cross-bar 17 which is located near the upper end of the sieve frame. A link has one end provided with a cross-recess 18, which receives the cross-bar 17, and is secured thereto by bolts passing through the holes 19 therein. The other (free) end of the link is formed with two side notches 20, and the center portion 21 of the link is reduced in

thickness in order to make it more elastic. The free end of the link is placed in connection with the upper end of the bar 7 by the neck portion 22 thereof resting in the notch 16 of the bar as shown at Fig. 3. The side notches 20 receive the projecting portions 23 of the bar. When the shaft 13 is rotated, the eccentric 15 will also rotate, which will impart a back and forth movement to the upper portion of the bar 7. This will reciprocate the link, and as the link connects with the sieve 5, the sieve will be reciprocated. There is a given amount of elasticity in the bar 7 which enables this bar to spring a given amount at each end of its stroke, and thus take up part or all of the jar which would otherwise occur at each change of movement of the sieve 5, due especially to the weight of this sieve.

Beneath the lower end of the sieve is located a chute 24, which conveys the larger particles passing off the end of the sieve to a proper place. In separating dirt or particles smaller than cotton seed, from cotton seed, the mesh of the sieve is such as to allow such particles to pass through it, and the cotton seed will pass off the end of the sieve. The cotton seed is then passed over a sieve having a mesh of a size to allow the cotton seed to pass through, and all particles or articles larger than the cotton seed will pass off the end of the sieve, and after this operation there will be three separations, dirt, cotton seed and particles larger than cotton seed.

The shaker herein shown and described is especially used to separate the meats from the hulls, separate foreign articles from seeds and bolt cotton seed meal.

It is evident that I do not limit my improved shaker to the separation of cotton seed from other particles, as the mesh of the sieve can be arranged to separate starch from the husks and bran of ground grain, and can be used for the separation of other grains, and separating certain ores in various milling processes. The material is fed to the sieve through the spout 25.

I claim as my invention.

1. The combination of a sieve, means supporting the sieve in a manner to permit it to reciprocate, a vertically arranged bar having its lower end fixedly held in position, a link forming a connection between the upper portion of the bar and the sieve, and an eccentric located intermediate the ends of the bar

for positively imparting movement to the bar in both directions.

2. The combination of a sieve, a vertically arranged bar having a notch in its upper end
5 and its lower end fixedly held in position, means for imparting movement to the other end of the bar in both directions, and a notched link having its notched end located in the upper end of said vertical bar, the other
10 end in fixed connection with the sieve, and a thinner neck portion intermediate its ends.

3. The combination of a sieve, a vertically arranged bar, means for imparting move-

ment to the bar in both directions, and a link having one end connected with the sieve and
15 its other end connected with the upper portion of the bar, the link having a thinner central portion.

In testimony whereof I have hereunto set my hand in presence of two subscribing wit-
20 nesses.

NIMROD W. L. BROWN.

Witnesses:

W. W. DURDEN,
J. G. CUNINGHAM.