

No. 744,022.

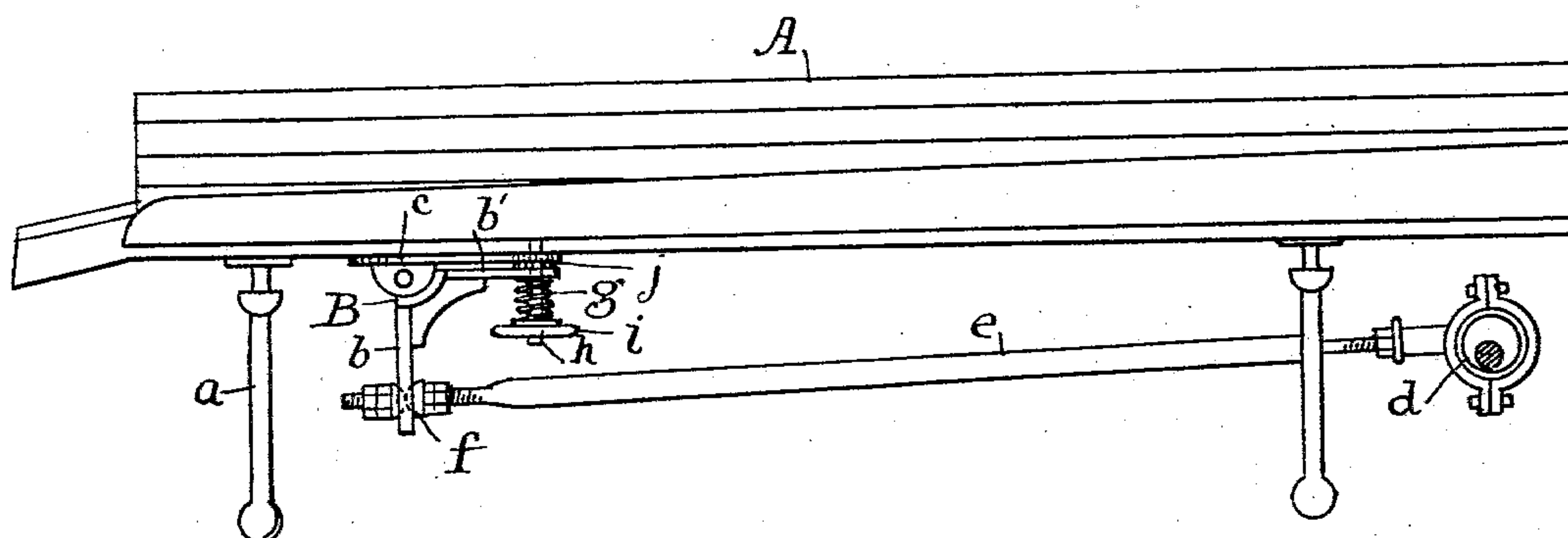
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F. L. BARTLETT.

MOVEMENT FOR SHAKING TABLES OR THE LIKE.

APPLICATION FILED MAR. 20, 1903.

NO MODEL.



Witnesses:
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UNITED STATES PATENT OFFICE.

FRANK L. BARTLETT, OF DENVER, COLORADO.

MOVEMENT FOR SHAKING-TABLES OR THE LIKE.

SPECIFICATION forming part of Letters Patent No. 744,022, dated November 17, 1903.

Application filed March 20, 1903. Serial No. 148,670. (No model.)

To all whom it may concern:

Be it known that I, FRANK L. BARTLETT, a citizen of the United States of America, and a resident of Denver, Arapahoe county, State of Colorado, have invented certain new and useful Improvements in Movements for Shaking-Tables or the Like, of which the following is a specification.

My invention relates to a movement or mechanism to be applied to shaking-tables for concentrating ores, conveyers, or other appliances for moving such materials as ore, grain, coal, &c., either horizontally or up a low incline.

The movement is designed to give the table or platform or whatever the material rests on a horizontal reciprocating motion which will move the material as rapidly as possible ahead; and it consists of an angle-lever having a vertical arm to which the reciprocating motion is applied by means of an eccentric and eccentric-rod or other like means and a horizontal arm which is forced upward by a spring and a buffer or stop for limiting the upward motion of said arm.

I illustrate my invention by means of the accompanying drawing, which shows a side elevation of a concentrating-table with my device applied.

A represents the shaking-table, supported on upright bearings *a a*. On the under side of the table is a rocker-plate *c*, to which is pivoted an angle-lever *B*, having a vertical arm *b* and a horizontal arm *b'*, the latter extending backward toward the head of the table. To the vertical arm is applied a horizontal reciprocating motion, as here shown, by means of an eccentric *d* and an eccentric-rod *e*, the eccentric-rod being connected with the arm *b* by a ball-and-socket joint *f*. A spring is provided for forcing the horizontal arm upward and resisting its downward motion and a stop or buffer for limiting its upward motion. I here show a coiled spring *g* surrounding a bolt *h*, fixed in the table and passing through the end of the arm *b'*. The upper end of the spring bears against the under side of the arm and the lower end against an adjusting-nut *i* on the lower end of the bolt.

The nut is provided with a hand-wheel, by which it can readily be screwed up or down. For the purpose of easing the upward stroke of the arm *b'* I insert a buffer *j*, of rubber or other suitable material, between the arm and rocker-plate.

The movement imparted to the table is as follows: The forward movement is slow, with a gradual acceleration. The spring at first yields and as the end of the stroke approaches forces the horizontal arm upward until at the end of the stroke the horizontal arm comes against the buffer. The return stroke is very rapid, as the lever is perfectly rigid against the action of the backward pull, and as a result of this motion the table is pulled from under the material on its surface, the effect being to feed the material rapidly along. The upward stroke of the horizontal arm on the under side of the table also has the effect of creating a jar which unsettles the material and tends to move it along.

The stiffness of the spring *j* may be regulated by the nut according to the weight of the table and the speed at which it is run.

I claim—

1. In a movement for shaking-tables and the like the combination of an angle-lever pivoted to the table having a vertical and a horizontal arm, means for applying a horizontally-reciprocating motion to said vertical arm, a spring for forcing said horizontal arm upward and a stop or buffer for limiting its upward motion.

2. In a movement for shaking-tables and the like, the combination of an angle-lever pivoted to the table having a vertical and a horizontal arm, means for applying a horizontal reciprocating motion to said vertical arm, a vertical bolt in the table passing through said bar, a horizontal arm, a coiled spring surrounding said bolt and acting against the under side of said horizontal arm and a stop or buffer for limiting the upward motion of the same.

3. In a movement for shaking-tables and the like, the combination of an angle-lever pivoted to the table having a vertical and a horizontal arm, means for applying a horizontal

reciprocating motion to said vertical arm, a
vertical bolt in the table passing through said
horizontal arm, a coiled spring surrounding
said bolt and acting against the under side of
5 said horizontal arm, a nut on the lower end
of said bolt against which the lower end of
said spring bears and a stop or buffer for lim-

iting the upward motion of the said horizon-
tal arm.

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Witnesses:

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