

H. J. AVERBECK.
ROCKER ARM FOR SHAPERS.
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1,009,460.

Patented Nov. 21, 1911.

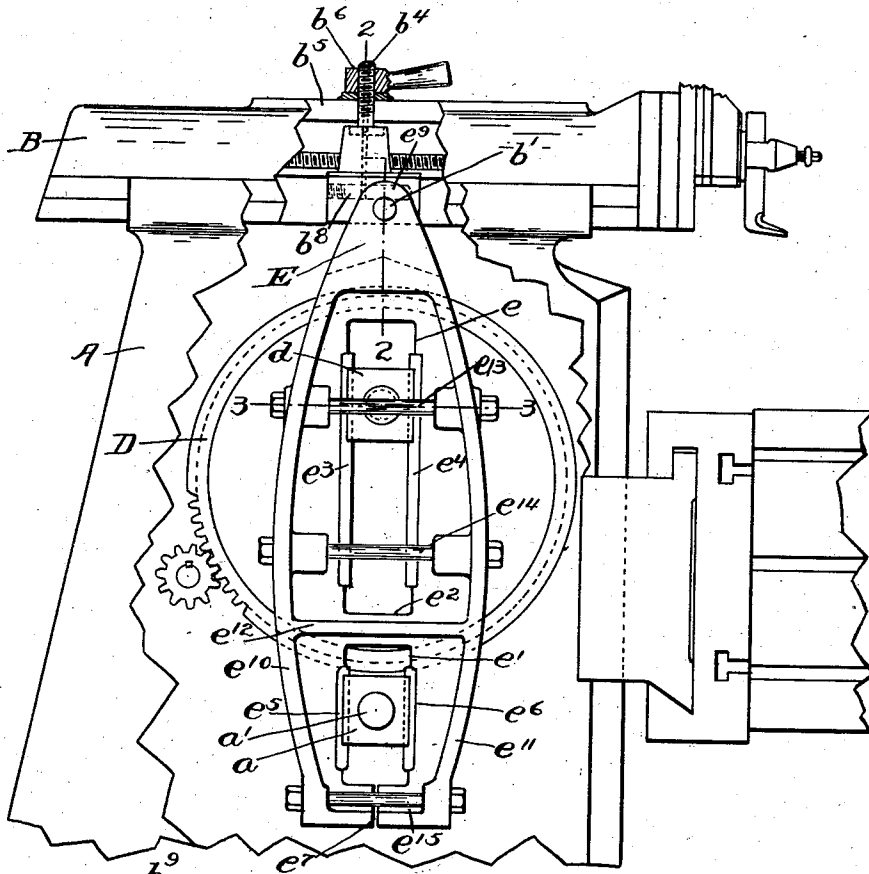


Fig. 1.

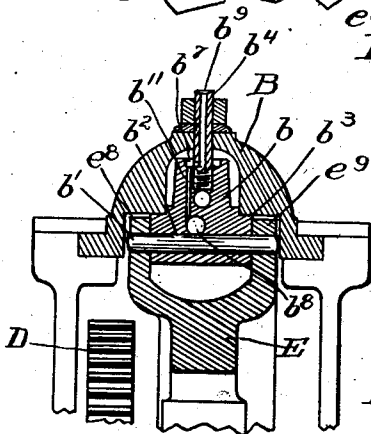


Fig. 2.

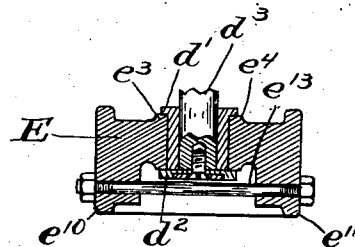


Fig. 3.

Witnesses.
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ROCKER-ARM FOR SHAPERS.

1,009,460.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HENRY J. AVERBECK, a citizen of the United States of America, and resident of Covington, county of Kenton, and State of Kentucky, have invented certain new and useful Improvements in Rocker-Arms for Shapers, of which the following is a specification.

My invention relates to the construction of the pendulum or rocker arm of a shaper, and the means of coupling said rocker arm to the ram, the column, and the driving wheel.

The object of my invention is to simplify and strengthen the aforesaid parts of shapers, to render them less subject to wear, and to provide means for adjusting the parts readily, to compensate for wear. This object is attained by the means described in the specification and illustrated in the accompanying drawings, in which,

Figure 1 is a side elevation of a shaper embodying my invention, part of the column and the ram being shown broken away to expose the parts lying within them. Fig. 2 is a sectional view taken upon line 2—2 of Fig. 1. Fig. 3 is a sectional view taken upon line 3—3 of Fig. 1.

Referring to the parts: Column, A, ram, B, for reciprocating upon the column and driving wheel, D, are of ordinary construction, and need not, therefore, be more specifically described.

The pendulum, or rocker arm, E, has two central longitudinal slots, e , e' , separated by a bridge, e^2 . Upon each side of the slot, e , ways e^3 , e^4 , are formed, and upon each side of the slot, e' , ways e^5 , e^6 , are formed. In the lower end of the pendulum, a cut, e^7 , leads into the slot, e' . The upper end of the pendulum is bifurcated to form arms, e^8 , e^9 , and upon the edges of the rocker arm, E, flanges, e^{10} , e^{11} , are formed. Flanges, e^{10} , e^{11} , are connected by a bar, e^{12} , which crosses the bridge, e^2 . Above the bar, e^{12} , flanges, e^{10} , e^{11} , are connected by adjusting bolts, e^{13} , e^{14} . Below the slot, e' , flanges, e^{10} , e^{11} , are connected by a bolt, e^{15} . Arms, e^8 , e^9 , of the rocker arm, E, straddle a block, b , and the arms and the block are connected by a pin, b' , which is secured in the arms, e^8 , e^9 , and is adapted to rotate in the bore, b^2 , of the block. The block, b , engages longitudinal ways, b^3 , in the ram, B, and may be locked at any position desired by means of a stem, b^4 , which passes up-

ward through a slot, b^5 , in the top of the ram, and is engaged at its upper screw-threaded end by a lock-nut, b^6 . The construction of the sliding block, its ways, and means of sliding the block in the ways is old.

To provide for lubricating the connections between the block, b , and the rocker arm, E, I have made a cup, b^7 , in the top of the block, b , and have made a longitudinal bore, b^8 , in the block, the lower edge of which intercepts the bore, b^2 , as shown in Fig. 2. The end of the bore, b^8 , is plugged, as shown in Fig. 1. Through the center of the stem, b^4 , I make an oil channel, b^9 , which leads into the cup, b^7 , and from the cup, b^7 , I make an oil channel, b^{11} , which runs into the bore, b^8 . Oil in the channel, b^9 , runs into the cup, b^7 , and thence seeps into the bore, b^8 , so that a reservoir of oil is had for lubricating the bearings between the pin, b' , and the bore, b^2 , and the bearings between the arms, e^8 , e^9 , and the block, b .

Within the slot, e , a block, d , is located. Block, d , has ways, d' , upon one side for projecting over the ways, e^3 , e^4 , of the slot, and upon the other side receives a plate, d^2 , whose edges project over the ways of the slot, e . Plate, d^2 , is secured to the outer end of a stud, d^3 , which connects the block, d , to the driving wheel, D. The manner of connecting stud, d^3 , to the driving wheel, D, so that it may be capable of radial adjustment, is also well known, and need not be described.

Within the slot, e' , is a block, a , which has flanges projecting over the ways, e^5 , e^6 , of the slot, e' . Block, a , is journaled upon a pivot rod, a' , which is secured in the walls of the column, A.

The operation of the device is as follows: A swing of the pendulum, or rocker arm, about the pin, a' , is effected by the pin, d^3 , when rotation is imparted to the driving wheel, D. During said rotation, the pin, d^3 , rotates in the block, d . During the swing of the rocker arm, its upper end remains in the same horizontal plane and the lower end moves up and down to compensate for the varying distance of the pin, b' , from the pivot, a' . The block, a' , slides upon the ways, e^5 , e^6 , so as to permit of this varying of the distances between the pivot pins, b' , a' . The wear upon the ways, e^5 , e^6 , may be taken up by tightening the nuts upon the ends of the bolt, e^{15} . The wear upon the ways, e^3 , e^4 , similarly may be taken up by tightening the bolts, e^{13} , e^{14} . Since

the wear upon the ways, e^3 , and e^4 ; and the ways, e^5 , and e^6 , varies, the bar, e^{12} , permits of the adjusting of the ways, e^5 , e^6 , independently of adjusting the distance between
5 the ways, e^3 , e^4 .

What I claim is:

1. A rocker arm having two longitudinally extending slots, intercepted by a bridge integrally formed with the arm,
10 flanges formed on the edges of the arm, a bar formed integrally with the flanges and extending across the bridge, and bolts located upon both sides of the bar passing through the flanges and extending trans-

versely across the arm and adapted to adjust the sides of the slots in relation to each other to compensate for wear. 15

2. A rocker arm provided with a longitudinally extending slot, flanges formed on opposite edges of the rocker arm, bolts projecting through the flanges and extending transversely of the arm and adapted to adjust the sides of the slot to compensate for wear by distorting the metal of the arm. 20

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Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."