May 31, 1927. 1,631,032

O. S. HELLUMS

COTTON CHOPPER

Filed June 29. 1925 5 Sheets-Sheet 1

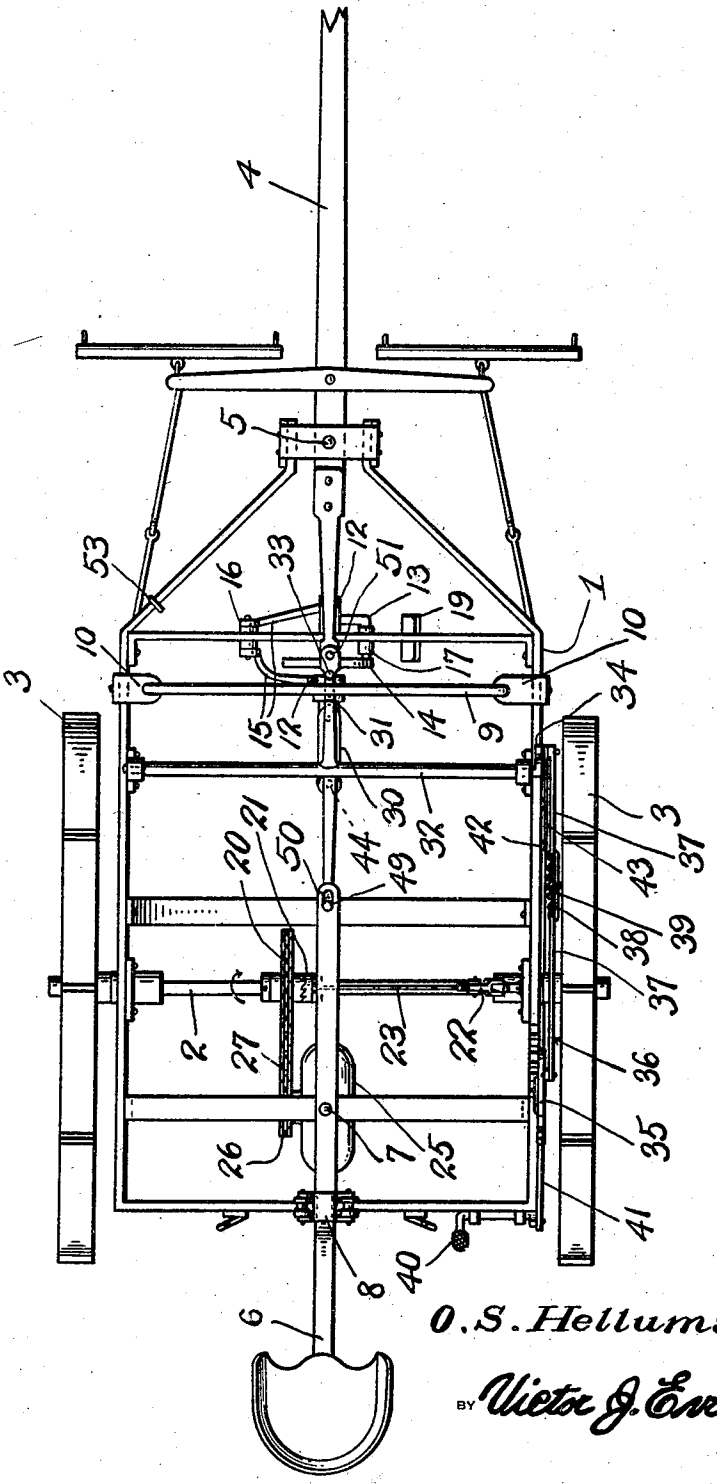


Fig. 1.

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COTTON CHOPPER

Filed June 29. 1925 5 Sheets-Sheet 2

Fig. 1.

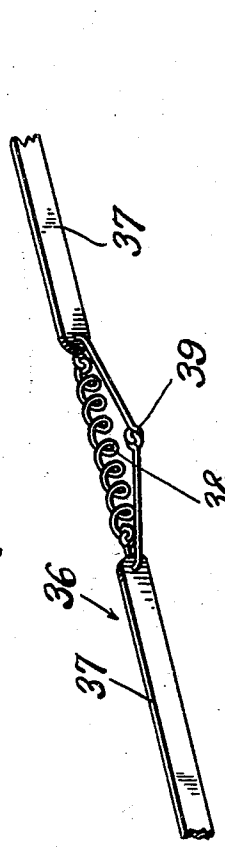
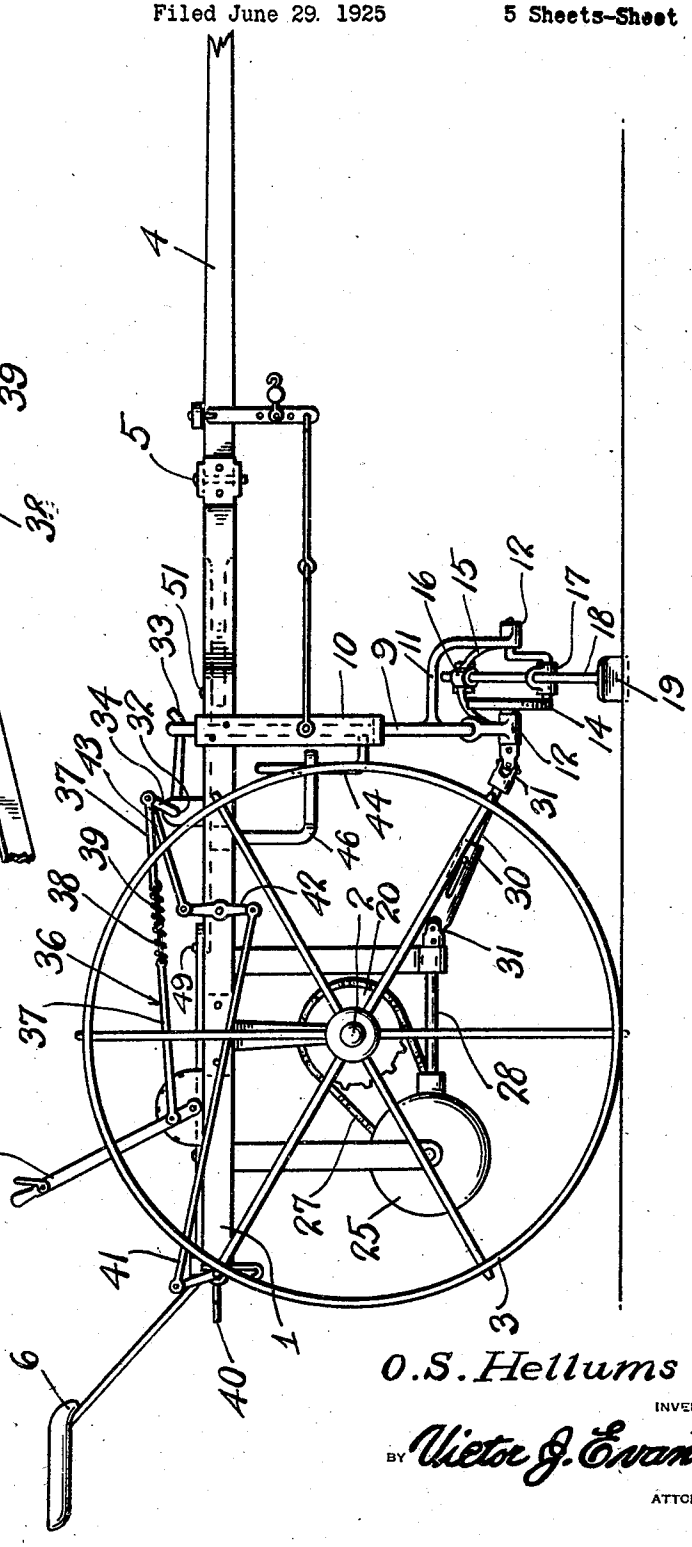


Fig. 2.



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Filed June 29. 1925 5 Sheets-Sheet 3

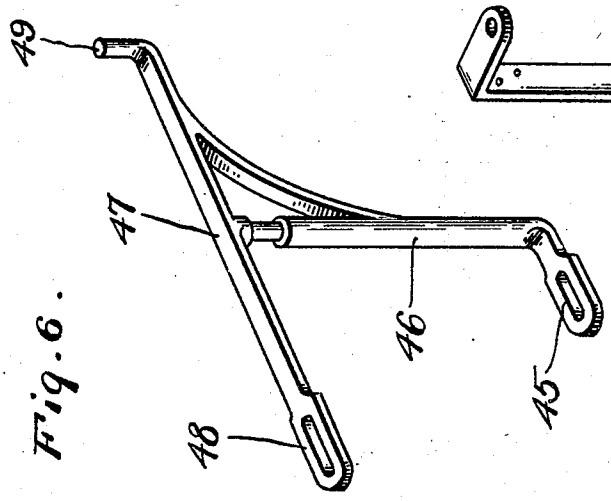


Fig. 6.

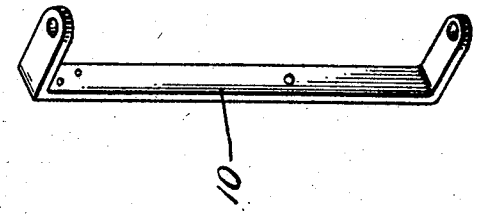


Fig. 7.

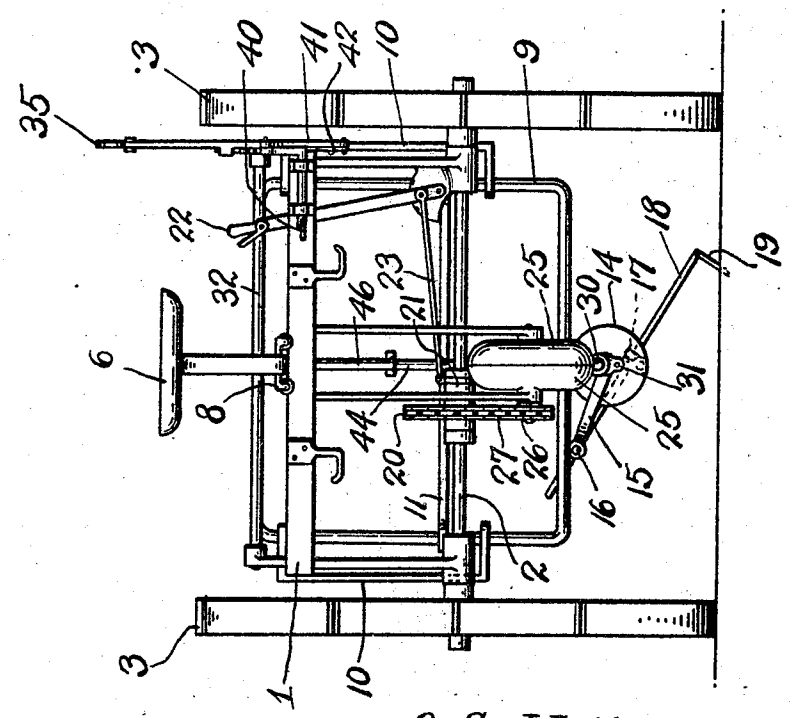


Fig. 3.

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COTTON CHOPPER

Filed June 29. 1925 5 Sheets-Sheet 4

Fig. 8.

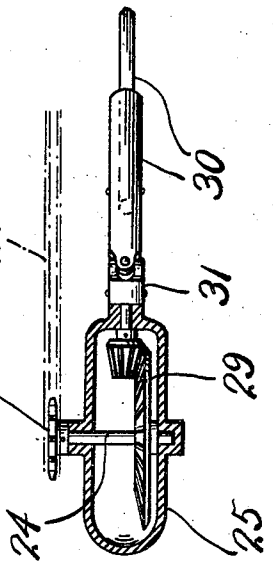


Fig. 9.

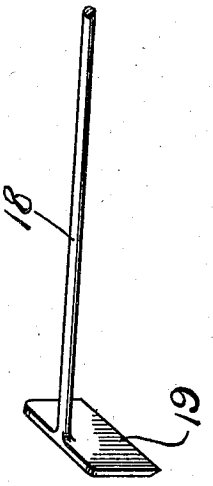
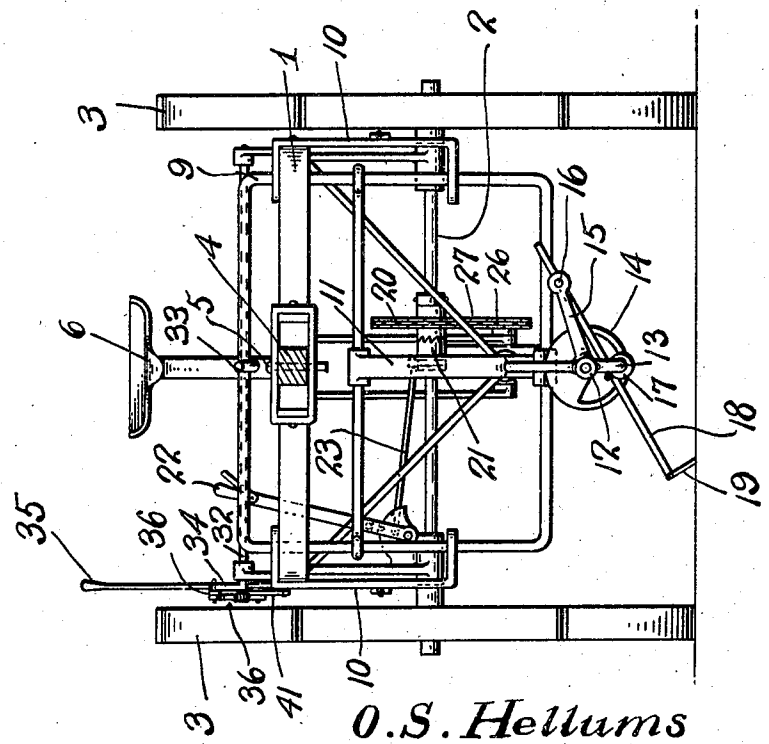


Fig. 4.



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COTTON CHOPPER

Filed June 29, 1925

5 Sheets-Sheet 5

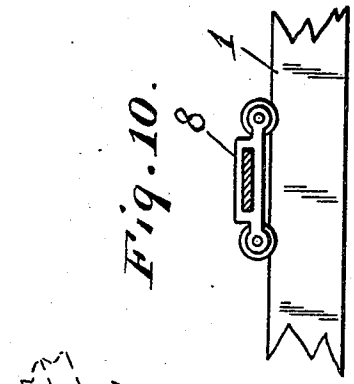


Fig. 10.

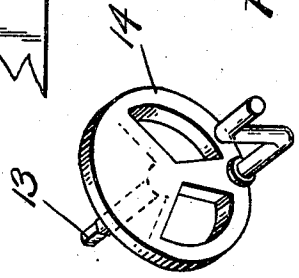


Fig. 11

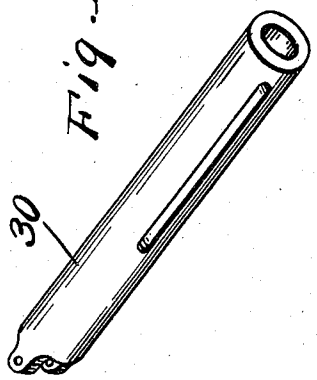


Fig. 12.

Fig. 5.

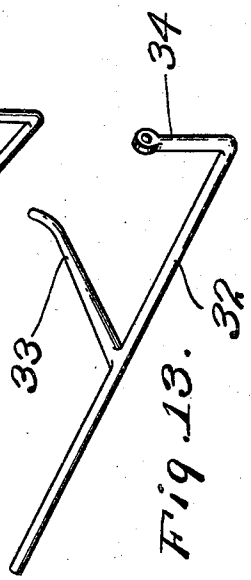


Fig. 13.

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UNITED STATES PATENT OFFICE.

OSCAR S. HELLUMS, OF DAWSON, TEXAS.

COTTON CHOPPER.

Application filed June 29, 1925. Serial No. 40,395.

This invention relates to a cotton chopper, the general object of the invention being to provide means whereby the cutting tool can be adjusted vertically as well as transversely, so that it can be properly positioned with respect to the plants to be cut.

Another object of the invention is to provide a hand lever for raising the tool to its highest point so as to be out of the way when not in use and to adjust the tool relative to the ground and a foot operating member for raising the tool above obstructions and for adjusting it on uneven ground.

A further object of the invention is to provide means for shifting the tool transversely through means of a shiftable seat and the tongue with means for locking the tongue against movement when necessary.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawings and pointed out in the appended claims.

In describing my invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:

Figure 1 is a plan view of the invention.

Figure 2 is a side view thereof.

Figure 3 is a rear view.

Figure 4 is a front view.

Figure 5 is a perspective view of portions of the device.

Figure 6 is a perspective view of the member for shifting the tool transversely.

Figure 7 is a view of one of the supporting brackets for the vertically movable frame.

Figure 8 is a view partly in section of the driving means for the tool.

Figure 9 is a view of the tool itself.

Figure 10 is a view of the carriage for the seat.

Figure 11 is a view of the crank shaft for the tool.

Figure 12 is a view of one of the telescopic members forming a portion of the driving means for the tool.

Figure 13 is a view of the rock shaft.

Figure 14 is a view of the connecting means between the hand lever and the rock shaft.

In these views 1 indicates the frame of the device which is supported by the axle 2 and the wheels 3. A tongue 4 is pivotally connected to the forward part of the frame, as shown at 5, and a seat 6 is pivoted to the rear part of the frame, as shown at 7, a small carriage 8 being connected with a part of the seat standard and engaging the rear part of the frame to facilitate the movement of the seat on its pivot. A vertical frame 9 is slidably mounted in the brackets 10 which are fastened to the side parts of the main frame. A small frame 11 is slidably mounted on the frame 9 so that it can be moved transversely on said frame and this frame 11 has a bifurcated lower end which carries the bearings 12 for a crank shaft 13, one crank of the shaft being formed by a balance disc 14. Curved arms 15 are connected with the bearings 12 and a sleeve 16 is supported by the arms so as to have rocking movement. A clip 17 is carried by the crank shaft and the shank 18 of the chopper tool 19 passes through this clip and the sleeve 16 so that as the crank shaft is rotated the head of the tool will move in a circular path and thus have a chopping action.

A sprocket 20 is loosely mounted on the axle 2 and has a clutch part which is adapted to be engaged by a clutch part 21 which is slidably but non-rotatably mounted on the axle or shaft so that by moving this clutch part 21 through means of the hand lever 22 and the connection 23 the sprocket can be engaged and disengaged from the shaft. A stub shaft 24 is journaled in the housing 25 carried by the frame and this shaft has a sprocket 26 thereon and a chain 27 passes over the two sprockets so that the stub shaft can be driven from the shaft 2. A shaft 28 is geared to the shaft 24 by means of the gears 29 and the telescopic link members 30 are connected with the shaft 28 and crank shaft 13 through means of the universal joints 31. Thus the tool can be driven from the wheels of the device at all times, no matter in what position the tool supporting means may be.

A shaft 32 is journaled in the main frame and has an arm 33 thereon which engages the top of the frame 9 and said shaft has a crank 34 at one end so that it can be rocked to cause the arm 33 to adjust the frame 9 vertically. This shaft can be rocked through means of the hand lever 35 which is connected with the crank by the connecting means 36 which consist of a pair of rods

37 having their adjacent ends connected together by a spring 38 and a pair of links 39, the links 39 permitting the spring to be stretched to a certain extent before the links will act to communicate the movement of one rod 37 to the other. Thus by moving the hand lever 35 the frame 9 can be adjusted to prevent the tool 19 from engaging the ground or plants or the frame can be adjusted through the hand lever to properly position the tool with respect to the plants to be chopped. In order to provide means for raising the tool to prevent it striking obstructions or for temporarily adjusting it on uneven ground, I provide a foot pedal 40 arranged adjacent the seat and connected by the link 41 with a lever 42 which is connected by the link 43 with the crank 34. Thus, by depressing the pedal by the foot the frame 9 can be raised to raise the tool and then by removing the foot the frame will drop to the position in which it is supported by the adjustment of the hand lever 35. The spring part in connection 36 will permit the adjustment of the frame 9 by the foot pedal without interference on the part of the hand lever.

An L-shaped arm 44 is formed on the member 11 and engages a slot 45 in the bent end of a rotatable member 46 which is supported in the main frame and has a cross piece 47 connected with its upper end. One end of this cross piece 47 has a slot 48 therein and its other end is provided with a projection 49. This projection 49 engages a slot 50 formed in the inner end of the standard 6 of the seat and a pin 51 passes through the slot 48 and a slot 52 in the inner end of the tongue for connecting the cross piece with the tongue. Thus the member 46 is rocked when the tongue is moved on its pivot 5 and also when the seat is shifted and this rocking movement will cause the frame 11 to shift in the frame 9 and thus adjust the cutting tool with respect to the row of plants being acted upon. When desired, the pin 51 can be removed so as to free the member 46 from the tongue and a hook rod 53 used to connect the inner end of the tongue with the frame to prevent movement of the tongue. This will still permit the frame 11 to be shifted laterally from the seat.

From the foregoing it will be seen that I have provided means whereby the operator by shifting his weight on the seat can swing the same so as to adjust the frame 11 and thereby the tool laterally so that the tool can be properly positioned over the row of plants being acted upon. By connecting the tongue with the member 46 the tool will be shifted as the tongue turns on its pivot when the implement is moving over crooked rows, so that the tool will automatically be positioned to properly chop the plants in rows which are crooked. The tool is adjusted vertically by the hand lever and the foot lever provides means for quickly raising the tool so as to avoid obstructions or when operating on unlevel stretches of ground.

It is thought from the foregoing description that the advantages and novel features of my invention will be readily apparent.

I desire it to be understood that I may make changes in the construction and in the combination and arrangement of the several parts, provided that such changes fall within the scope of the appended claims.

Having thus described the invention, what is claimed as new, is:—

1. A cotton chopper comprising a wheeled frame, a vertically movable frame carried thereby and including horizontal bars, a laterally movable frame having portions slidably engaging the horizontal bars, a crank shaft carried by the laterally movable frame, a tool actuated by the crank shaft, a tool engaging part mounted for oscillatory movement on the laterally movable frame, means for rotating the crank shaft, means for adjusting the vertically movable frame and means for adjusting the laterally movable frame.

2. A cotton chopper comprising a wheeled frame, a vertically movable frame carried thereby, a laterally movable frame in the vertically movable frame, a crank shaft carried by the laterally movable frame, a tool actuated by the crank shaft, means for rotating the crank shaft through one of the ground wheels and means for adjusting the frames, such means comprising a hand lever for moving the vertical frame, a shiftable seat part for moving the laterally movable frame, a pivoted tongue for moving the laterally movable frame and a foot pedal for adjusting the vertically movable frame.

3. A cotton chopper comprising a main frame, wheels for supporting the same, a vertical frame slidably mounted in the main frame, a small frame laterally adjustable in the vertical frame, a crank shaft carried by the small frame, a cutting tool carried by the crank shaft, means for rotating the crank shaft from one of the ground wheels, a rock shaft journaled in the main frame, an arm thereon engaging the vertical frame, a hand lever, a connection between the hand lever and the rock shaft for rocking the shaft by movement of the hand lever, such means including spring means, a foot pedal, connections between the same and the rock shaft for rocking the shaft by the depression of the pedal, a shiftable seat on the main frame, means for adjusting the small frame laterally by the shifting movement of the seat, a pivoted tongue, and means for adjusting the small frame laterally by the swinging movement of said tongue.

4. A cotton chopper comprising a main frame, wheels for supporting the same, a vertical frame slidably mounted in the main frame, a small frame laterally adjustable in the vertical frame, a crank shaft carried by the small frame, a cutting tool carried by the crank shaft, means for rotating the crank shaft from one of the ground wheels, a rock shaft journaled in the main frame, an arm thereon engaging the vertical frame, a hand lever, a connection between the hand lever and the rock shaft for rocking the shaft by movement of the hand lever, such means including spring means, a foot pedal, connections between the same and the rock shaft for rocking the shaft by the depression of the pedal, a shiftable seat on the main frame, means for adjusting the small frame laterally by the shifting movement of the seat, a pivoted tongue, means for adjusting the small frame laterally by the swinging movement of said tongue, and means for preventing movement of the tongue when desired.

In testimony whereof I affix my signature.

OSCAR S HELLUMS.