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J. W. DUTTON

ACCELERATOR PEDAL CONTROL

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Fig. 1

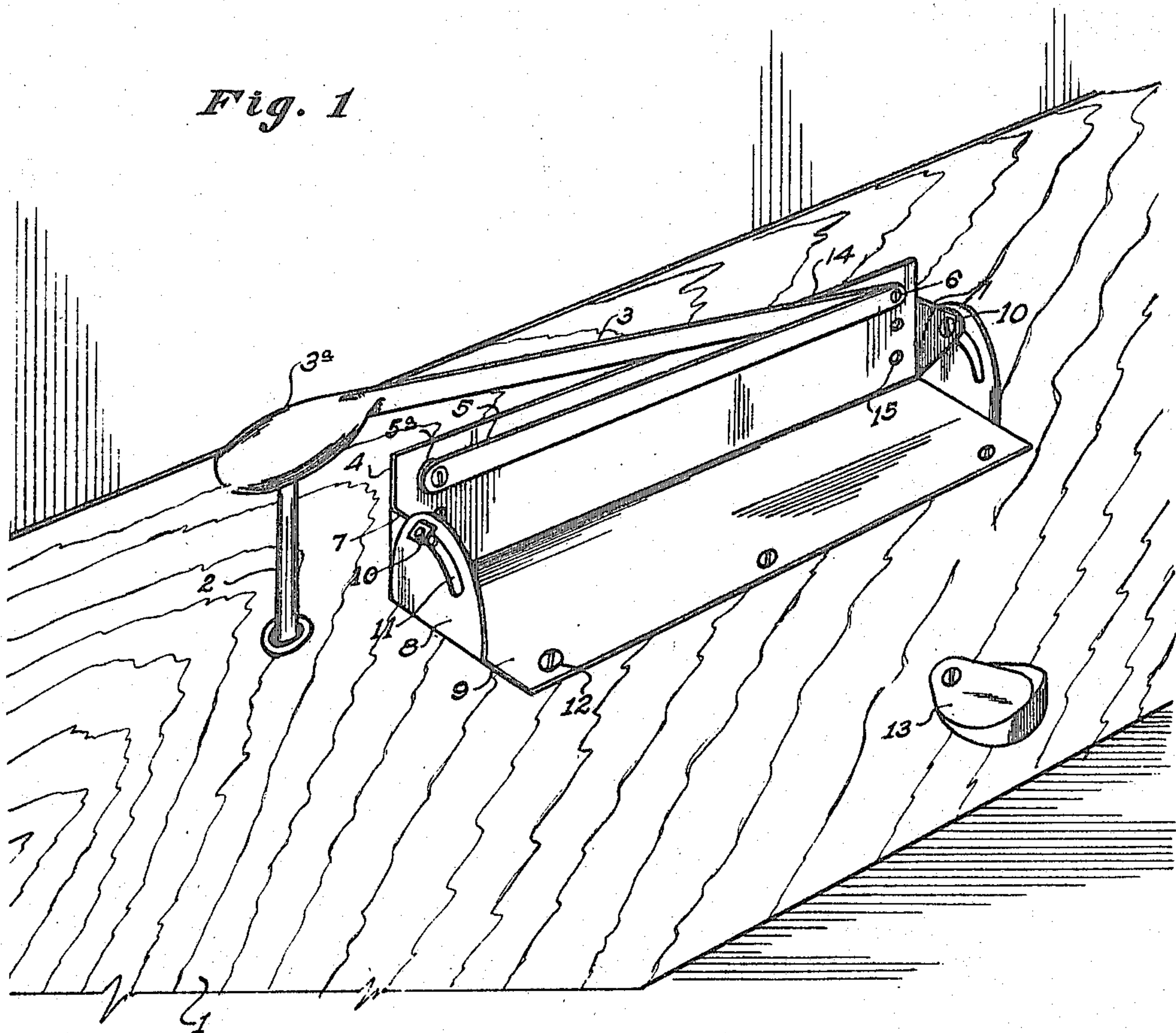


Fig. 2

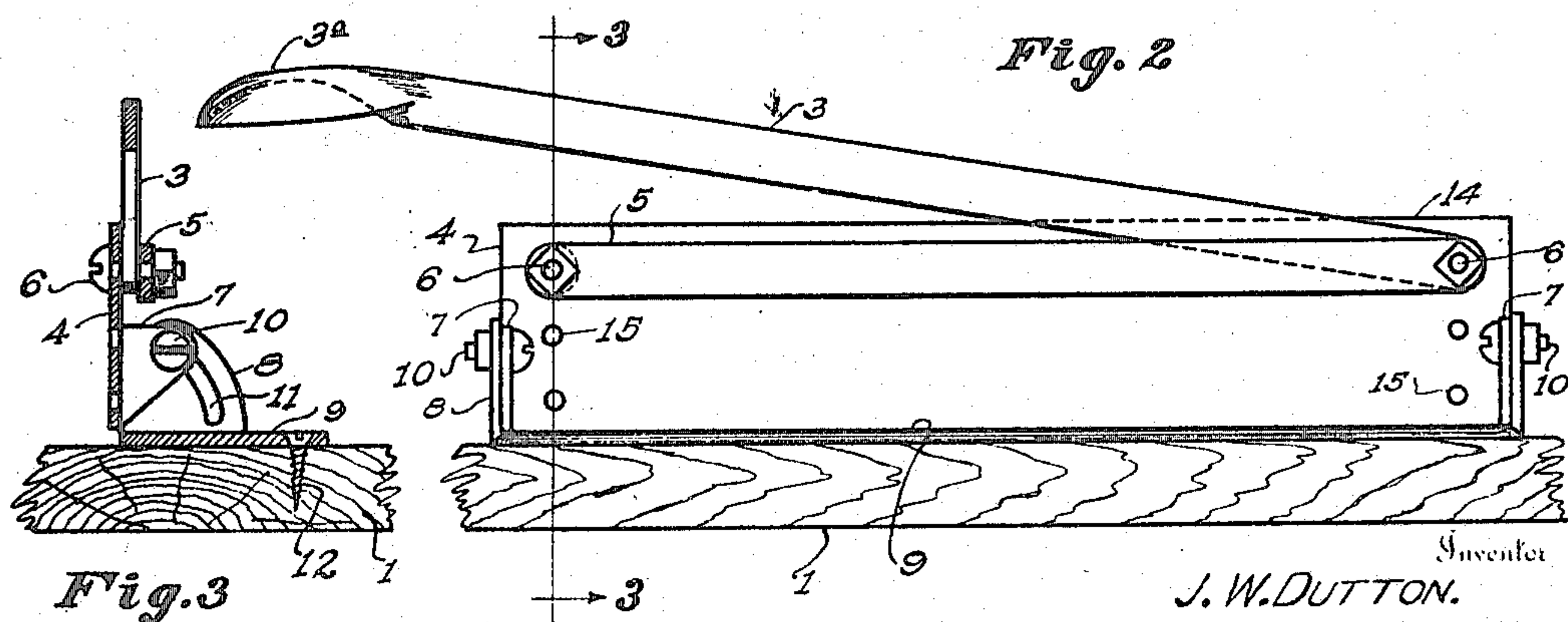
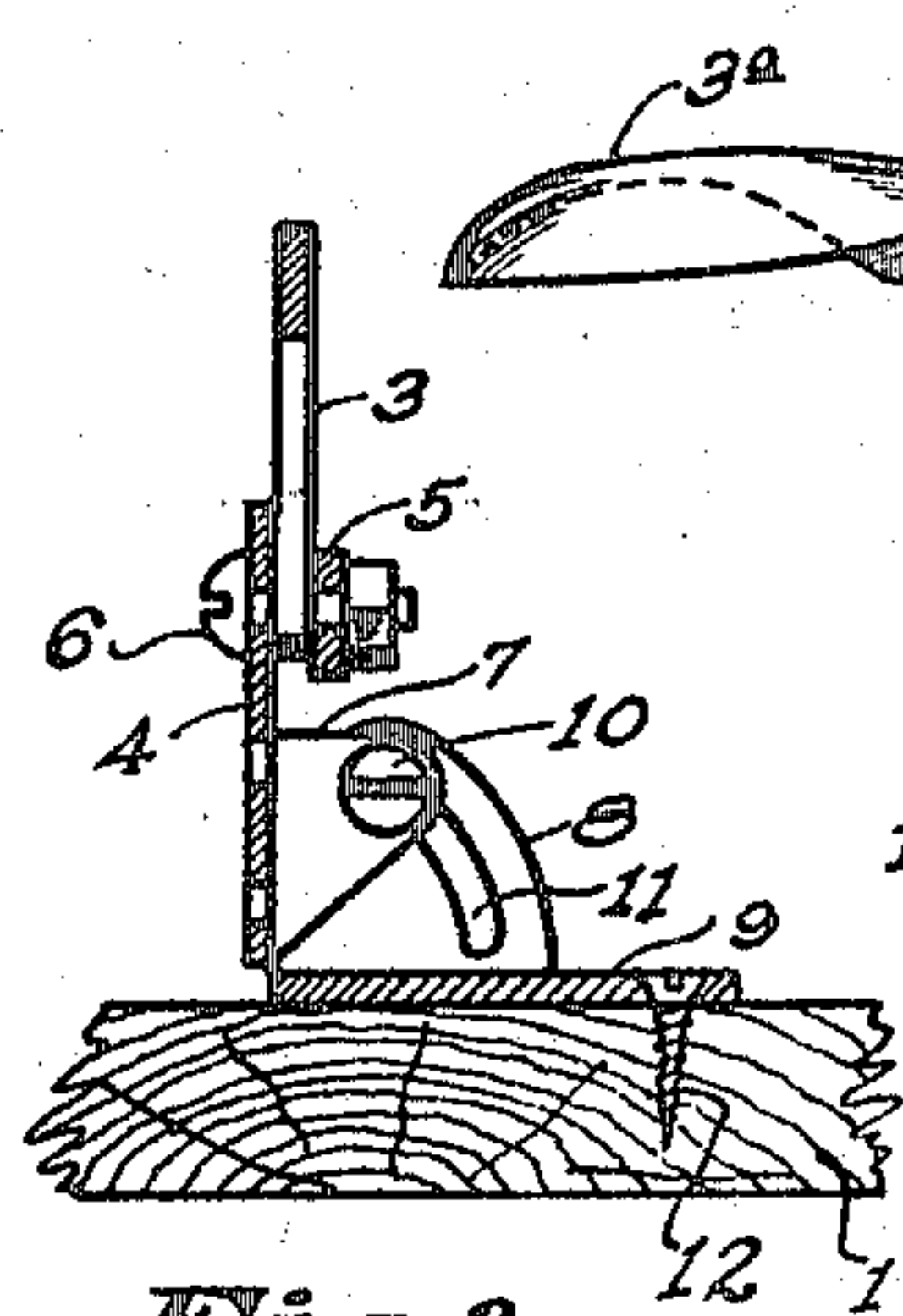


Fig. 3



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JOHN W. DUTTON, OF JACKSONVILLE, FLORIDA.

ACCELERATOR-PEDAL CONTROL.

Application filed February 27, 1922. Serial No. 539,590.

To all whom it may concern:

Be it known that I, JOHN W. DUTTON, a citizen of the United States of America, residing at Jacksonville, in the county of Duval and State of Florida, have invented certain new and useful Improvements in Accelerator-Pedal Controls, of which the following is a specification.

My invention relates to mechanism for controlling the foot operation of accelerator pedals as applied to automobiles. Heretofore the practice has been to have either a hinged accelerator pedal above the floor board or a push rod extending through the floor board. In using either of these arrangements however the driver of the automobile finds it practically impossible, under driving conditions, to give the engine by the foot operation of the accelerator a smooth and positive throttle action.

The object of my invention is to provide a positive accelerator control, simple in operation and inexpensive to manufacture, which will enable the driver at all times to obtain with his foot a throttle control quite as uniform and positive as is now obtained only from the hand throttle lever.

My invention is adapted for use with any type of accelerator pedal, being merely, in its preferred form an attachment of few working parts which are readily adjustable to permit of their adaptation to various cars and various types and sizes of accelerator pedals with all of which it will act to enable the driver to control the accelerator evenly and positively even when driving over the roughest of roads.

My invention further comprises the novel details of construction and arrangement of parts, which in their preferred embodiment only are illustrated in the accompanying drawings, in which:—

Fig. 1 is a perspective front view of a conventional floor board with my accelerator control attached thereto and here shown bearing upon a typical accelerator pedal extending upwardly through the floor board.

Fig. 2 is a front elevation of my accelerator control pedal, while

Fig. 3 is a cross section taken on the line 3—3 of Fig. 2 of said pedal control.

Similar reference numerals refer to similar parts throughout the drawings.

In the embodiment of my invention 1 designates a typically inclined floor board of an automobile, with 2 the accelerator pedal passing therethrough. An operating arm 3 with the cup 3^a is shown bearing upon the top of the accelerator pedal 2. This operating arm 3 attached to the vertical plate 4 is guided by the bar 5 parallel to the plate 4 and attached thereto by the spacer ring 5^a and the bolts 6. At either end of the plate 4 is a portion 7 bent at right angles thereto to provide an attachment to the upturned ends 8 of the base plate 9. The vertical inclination of the plate 4 is adjusted by the bolts 10 carried by the portions 7 and sliding in the curved slots 11 in the ends 8 of the base plate. The combination thus far described is attached to the floor board by the screws 12.

In operation, the driver's heel is placed in the heel plate 13, the ball of the foot resting on the top edge 14 of the vertical plate 4 which thus forms a foot rest. As the foot is moved along the length of this edge it will gradually depress the arm 3 or release the same, thus transmitting the action to the accelerator pedal 2. This results from the divergent relationship of the arm 3 and the foot rest edge 14. I thus provide a means of controlling the action of the accelerator in a smooth and even manner, due to the fact that the foot is resting in all control positions on a rigid foot rest and not merely against the tension of the accelerator spring as is the general practice.

An additional feature of adjustment is the plurality of holes 15 which permits of the raising or lowering of the guide bar 5, thus adjusting the effective height of the operative arm 3 and its angular relationship to the edge 14. While the foot rest edge 14 is shown horizontal and the arm 3 upwardly inclined and, in initial position disposed with the major portion of its upper edge above the foot rest 14, nevertheless it is to be understood that the results contemplated are obtained wherever the upper edges of the foot rest and of the arm diverge with the arm uppermost. For evenness

of control the divergent edges should be straight lines. The adjustment of the bolts 10 enables the arm 3 to be set to move in a plane with the accelerator pedal regardless of the angle of the pedal to the floor board. The adjustment for the arm 3 and its guide bar 5 are provided for in a vertical series of end holes 15 in the foot rest, the arm being so connected to the foot rest as to bring its end in position to engage the accelerator pedal by leaving its upper edge divergent from and above the foot rest.

Though I have described with great particularity the details of the embodiment of the invention herein shown, it is not to be construed that I am limited thereto as changes in arrangement and substitution of equivalents may be made by those skilled in the art without departing from the invention as defined in the appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. In a foot control device for operating an accelerator pedal, a pivoted actuator having its free end adapted to overhang the accelerator pedal and, when depressed, to actuate the pedal, and a foot rest disposed alongside and at an angle to said actuator which rises above its upper edge.

2. In combination, a foot rest adapted to be mounted on an automobile floor board adjacent to the accelerator pedal, an actuator pivotally mounted alongside the foot rest and having its free end rising above and projecting beyond the foot rest and adapted to rest freely on said pedal and, when depressed, to actuate the pedal.

3. In a device for controlling the operation of an accelerator pedal, a base adapted to be mounted on an automobile floor board at one side of the pedal, a rigid foot rest mounted on the base, and an actuating pedal hinged near one end of the base and movable vertically alongside said foot rest, said pedal being inclined upwardly to project above the top level of the foot rest with its free end overhung beyond the foot rest and supported by the pedal and adapted, when depressed, to operate the accelerator pedal.

4. In an accelerator control device, a depressible upwardly inclined pedal adapted to engage and operate an accelerator pedal, and a horizontal foot rest extending lengthwise alongside said pedal and having its upper edge at a gradually increasing distance below the upper edge of the pedal as it approaches the actuator.

5. In an accelerator control device, a pedal mounted at one end to swing in a substantially vertical plane and having its free end adapted to engage and, when depressed, to operate said accelerator mechanism, and a

foot rest carrying a guide for said pedal and having its upper edge disposed below and at an angle to the free end of said pedal.

6. In an accelerator control device, a base plate adapted to be mounted on an automobile floor board, a foot rest mounted on said base, means to adjust said foot rest into different vertical angular relationship with the base, a pedal mounted on the foot rest near one end and inclined to rise above the foot rest, and a guide on the foot rest for the pedal, said pedal being adapted at its free end to engage and, when depressed, to operate the accelerator mechanism.

7. In an accelerator control device, a base adapted to be mounted on an automobile floor board and having at each end a standard, a foot rest disposed lengthwise of the base and having end supports which mount it on said standards for vertical angular adjustment relative to the base, a pedal for actuating the accelerator mechanism having its free end disposed to engage the accelerator mechanism, means to pivotally connect the other end of said pedal to the foot rest, and means on the foot rest for guiding the pedal movements, the pedal being disposed in initial position to rise gradually above the top level of the foot rest throughout the major portion of its length.

8. The combination with an accelerator mechanism projecting above the foot board of an automobile, of a base plate attached to a floor board and having upturned ends provided with curvilinear slots, a foot rest having inturned ends carrying bolts adapted to pass through said slots and to adjustably mount the foot rest on said base, there being a vertical series of bolt holes in each end of said foot rest, a pedal having one end disposed to engage and, when depressed, to operate the accelerator mechanism, a guide plate for said pedal, a bolt connecting the pivot end of the pedal between said guide plate and the foot rest and passing through the desired hole in the foot rest, and means to attach the other end of the guide plate to the other end of the foot rest with spacing means interposed, the upper edges of the pedal and of the foot rest being disposed to diverge at an increasing angle towards the accelerator mechanism with the pedal uppermost.

9. In an accelerator control device, a control pedal disposed with its free end in position when depressed to engage and operate an accelerator pedal, adjustable means to mount and guide the control pedal for play in various planes according to the plane of movement of the accelerator pedal, and a foot rest associated with and disposed in angular relationship to said control pedal.

10. In a foot control device for operating

an accelerator pedal, an actuator mounted to engage the pedal and movable in the direction of movement of the pedal, a rigid foot rest disposed alongside and at an angle to the upper edge of said pedal, and a support to mount said actuator on an automobile which is adjustable to set the ac-

celerator in position to follow the movements of the pedal.

In testimony whereof I, JOHN W. DUTTON, affix my signature.

JOHN W. DUTTON.

Witness:

W. L. MAHON.