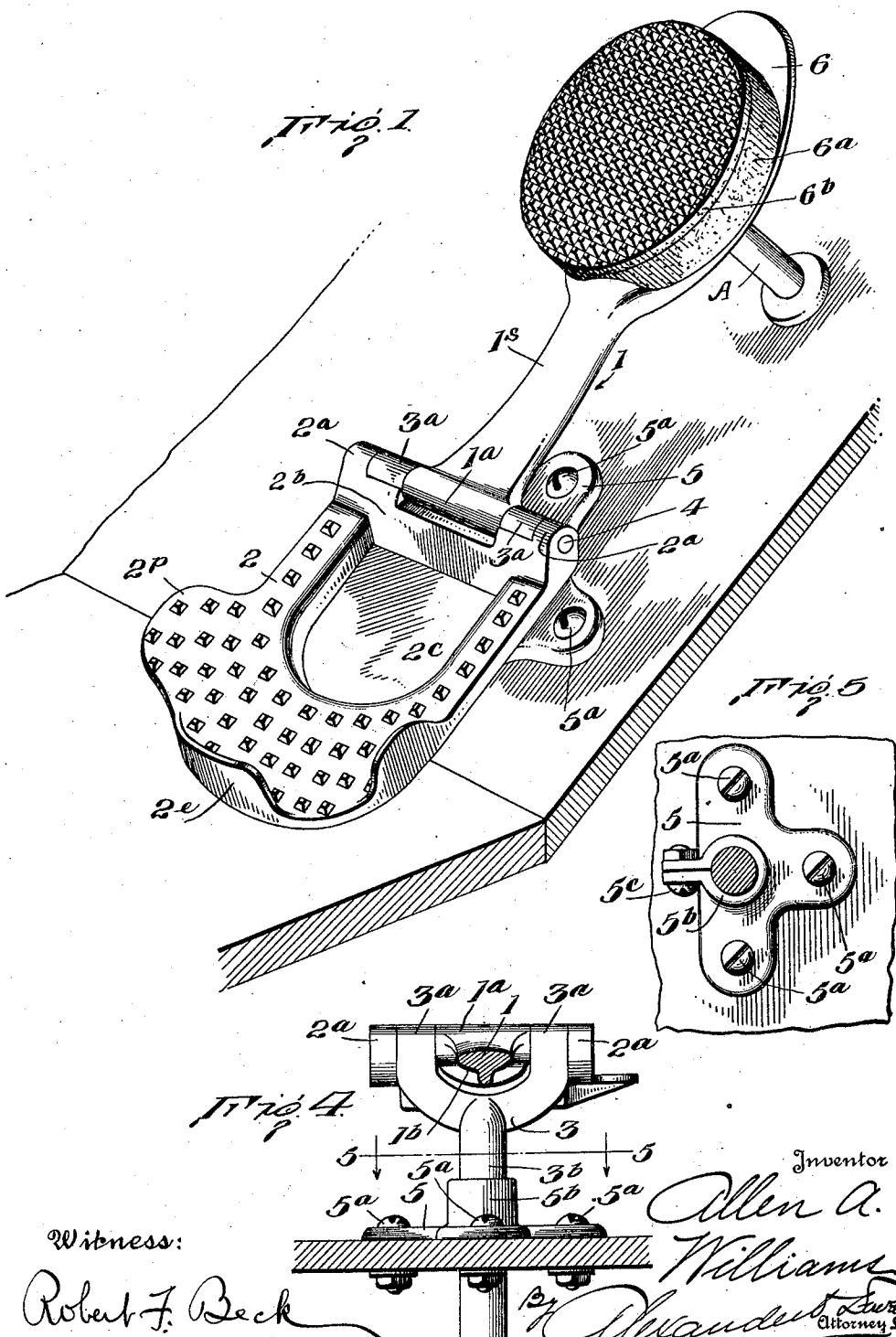


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APPLICATION FILED JUNE 24, 1920.

1,395,781.

Patented Nov. 1, 1921.

2 SHEETS—SHEET 1.

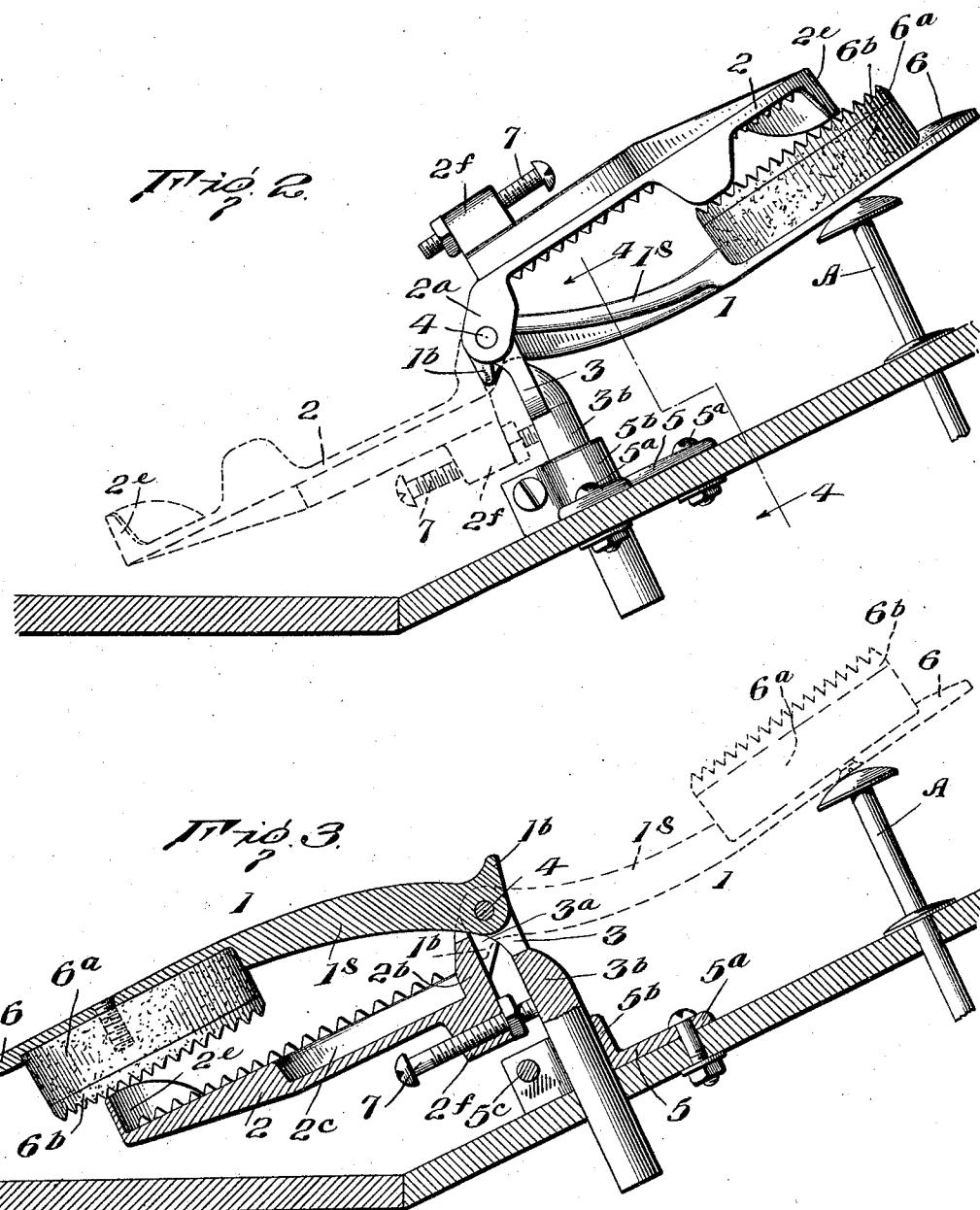


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Witness:

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UNITED STATES PATENT OFFICE.

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PEDAL FOR OPERATING ACCELERATORS OF AUTOMOBILES.

1,395,781.

Specification of Letters Patent.

Patented Nov. 1, 1921.

Application filed June 24, 1920. Serial No. 391,334.

To all whom it may concern:

Be it known that I, ALLEN A. WILLIAMS, a citizen of the United States, residing at Cedar Rapids, in the county of Linn and State of Iowa, have invented certain new and useful Improvements in Pedals for Operating Accelerators of Automobiles; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form part of this specification.

This invention is a novel attachment for use in controlling the fuel supply valves of automobiles, and in particular is an improvement upon the attachment shown in my Patent No. 1,309,347, dated July 8, 1919.

In automobiles the engine fuel supply valve is usually operatively connected with a lever or rod (commonly called an "accelerator") which projects into the machine adjacent the operator's seat so that the operator can by slight pressure of his foot on such accelerator cause an increased supply of fuel to the engine, when he desires to augment the speed or power of the machine, thus varying the supply of fuel by varying the pressure upon said accelerator.

The foot accelerator is ordinarily constructed of metal and when the machine is used for a long time becomes very hot and uncomfortable to the operator, frequently causing him foot trouble when driving a long time without stopping. Furthermore on rough roads the driver's foot is apt to be jarred off the accelerator, unless he holds his foot in a more or less cramped position and under tension, to keep it in contact with the accelerator.

The objects of my invention are to provide an attachment which will prevent transmission of heat from the accelerator to the foot of the driver; lessen wear on the driver's shoe; provide a firm brace for the foot; support the weight of the driver's leg comfortably; enable him to maintain easy control of the accelerator without his foot becoming unduly heated, or cramped, or being jarred out of control of the accelerator on rough roads; and enable him to feed the gas steadily when driving over rough roads without having to resort to the hand control; and in addition the particular object of my present invention, is to provide an improved attachment which will have all the aforesaid advantages of my patented at-

tachment, and which will in addition enable the toe member and the heel member to be independently raised or folded back, so as to permit ready access to the batteries or transmission, or the portion of the vehicle beneath the pedal and floor of car; and which will permit the pedal support to be readily adjusted. The improved attachment can be readily secured to the vehicle; and its parts can be readily inspected and adjusted as may be desired or required in the practical utilization of the invention.

A practical embodiment of the invention is illustrated in the accompanying drawings and hereinafter described; and the claims summarize the novel features and combinations for which protection is desired.

In the drawings:

Figure 1 is a perspective view of the complete attachment in position for use.

Fig. 2 is a side view showing the heel member folded over the toe member.

Fig. 3 is a similar view to Fig. 2, showing the toe member folded over the heel member.

Fig. 4 is a detail section on the line 4—4, Fig. 2.

Fig. 5 is a detail section on line 5—5, Fig. 4.

The attachment as shown comprises a pedal having a toe member 1 and a heel member 2; and a supporting member 3.

Preferably this supporting member is a yoke having perforated eyes^{3a} on its bifurcated upper end for the passage of a hinge pin 4, which also transfixes an eye 1^a on the toe member 1, and eyes 2^a on the heel member 2, as shown. The eye 1^a is hinged on pin 4 between the eyes 3^a; and the eyes 2^a are hinged on pin 4 exterior to the eyes 3^a.

The support 3 preferably has a shank 3^b which may be adjustably secured to the bottom of the vehicle adjacent the accelerator A by any suitable means. As shown I have provided a base casting 5 having flanges by which it can be secured to the flooring of the vehicle body by means of screws or bolts 5^a, and said base has a vertical split-socket portion 5^b for the reception of the shank 3^b, and such shank can be firmly clamped to the base by contracting the split-socket thereon by means of the bolt 5^c, thus firmly and securely supporting the pedal in position.

The base member 5 can be readily secured

in the vehicle in position to support the pedal adjacent the accelerator lever A at a point most comfortable for the operator when seated in the vehicle.

5 The toe member 1 of the pedal is preferably made of metal and has an eye 1^a on one end and a head 6 on its other end preferably connected by a shank portion 1^s. The toe member is hinged on the pin 4 by 10 means of the eye 1^a; and preferably slightly curved downwardly away from the eye and extends forwardly to head 6. This shank portion 1^s is curved between the eye and the head so that it will not cause any pressure 15 upon the shank of the shoe or arch of the foot of the operator. The shank 1^s of the toe member is also preferably narrow so as not to interfere with the operation of the brake lever.

20 The presser head is so positioned relatively to the heel and shank portions of the pedal that it will fit neatly under the sole of the driver's shoe. Said presser head is preferably oblong and of sufficient size to 25 provide a substantial surface contact or bearing for the sole of the operator's shoe and to insure its engagement with the foot 30 accelerator A.

The presser head 6 is preferably provided 35 with a heat insulating plate 6^a of wood, or other suitable material; and with a top wear-plate 6^b of rubber, or other suitable material, to contact with the sole of the shoe. The head 6 itself forms a metal 40 wear-plate directly contacting with the foot accelerator A.

The heel member 2 is provided on its front end with an upstanding portion 2^b from which the eyes 2^a project upwardly, 45 so that (when the pedal is in horizontal position) the heel member lies in a plane below the pin 4 and the head 6 lies, preferably, in a plane somewhat above that of the heel member.

50 The heel member 2 is also provided with an upstanding flange 2^e at its rear end, adapted to engage the rear end of the heel of the operator's shoe and assist in retaining the foot easily in position on the pedal. Said heel member is also preferably provided with a depressed portion 2^c, adjacent the flange 2^e approximately conforming to the shape of the lower part of the heel of a woman's shoe, so that when the pedal is 55 used by a woman, the heel of her shoe will engage the recess and her foot be thereby easily retained in position on the pedal. The heel member 2 is also preferably provided with a lateral projection 2^r at one side upon which the operator can rest his heel with his foot at an angle to the pedal and the toe of his shoe removed from the head 6.

The eye 1^a of the toe member 1 is provided with a depending lip 1^b which bears

against the upstanding end portion 2^b of the heel member 2, when the parts are in operative position as shown, so that depression of the heel member 2 will lift the toe member, or depression of the toe member will 70 lift the heel member 2, practically making the two members move as one when in operation.

The upper surface of the complete pedal (toe and heel members) approximately conforms to the under surface of the shoe of the operator, which rests thereupon so that the weight of the foot upon the pedal is borne by the heel member and the head, and no direct pressure is exerted on the shank 80 or arch of the operator's foot.

To regulate the normal position of the head 6 of the pedal relative to the accelerator A, an adjustable stop bolt 7 may be tapped through a lug 2^f on the underside of 85 the heel member 2 and the head of this bolt engaging the shank of the member 3 (as shown in Fig. 3) limits the depression of the heel of the pedal and correspondingly limits the elevation of the presser head 6; 90 so that the pedal can be adjusted to suit various heights of foot accelerators A, or the projection of such accelerators above the floor of the car; and thus render the pedal very sensitive and easy in its action 95 upon the accelerator, without loss or idle motion.

The head 6^a insulates the operator's shoe from the hot accelerator A, and keeps the foot of the wearer cool, and at the same time 100 provides a substantial broad member for engagement of the foot of the operator; and he does not have to hold his foot in a cramped position in order to keep full control of the accelerator.

The operator's heel is supported on the member 2 in rear of the hinge connection 4, and he can brace his foot solidly against the hinge and by simply slightly depressing his toe can control the accelerator in the 110 same manner as he would if the pedal were not present, but with greater certainty of operation when riding on rough roads, and with a great deal more comfort. The operator can rock the pedal upon the standard; 115 the heel rising as the toe descends, but not to so great an extent; this obviates the necessity of the operator's bending the toe portion of his foot in order to depress the head 6 and accelerator. At the same time, by reason of the peculiar connection or shape of the heel and instep portions of the pedal, the operator can brace his foot and leg firmly against the standard on which the 120 pedal is pivoted and easily control the accelerator at all times.

By having the heel and toe member separately and independently hinged to the standard either or both members can be raised so as to permit ready access to the 130

underlying floor of the vehicle. This enables the complete attachment to be assembled at the factory; and to be readily secured in position; and the height of the 5 standard can be readily adjusted after the base plate is secured to the vehicle by adjusting the screw 5; and the normal angle at which the pedal stands can be readily determined by adjusting the bolt 7. All of the

10 parts are easily accessible; and the floor of the vehicle can be readily cleaned beneath the heel member or the toe member, and access can be readily had to the foot accelerator, batteries, and transmission without having

15 to remove the attachment.

What I claim is:

1. An attachment for operating the accelerator of automobiles, comprising a standard; a heel member pivoted on this standard; and a toe member pivoted on the standard independently of the heel member; the toe member having a portion adapted to engage the accelerator, substantially as described.

25 2. An attachment for the purpose specified comprising a support adapted to be secured to the floor of an automobile adjacent the accelerator; a heel member hinged to said support; and a toe member hinged to said 30 support so that said members can be independently raised.

35 3. An attachment for the purpose specified comprising a support adapted to be secured to the floor of an automobile adjacent the accelerator; a heel member hinged to said support; and a toe member hinged to said support so that said members can be independently raised, the heel member lying below the hinge pintle, and the toe member

40 overlying the accelerator.

45 4. An attachment for operating the accelerator of automobiles, comprising a standard; a heel member pivoted on this standard; and a toe member pivoted on the standard independently of the heel member; the toe member having a portion adapted to engage the accelerator; and the heel and toe members having interengaging parts whereby they are caused to oscillate as one when 50 in operative position.

55 5. An attachment for the purpose specified comprising a support adapted to be secured to the floor of an automobile adjacent the accelerator; a heel member hinged to said support; a toe member hinged to said support so that said members can be independently raised; and means connected with the heel member for regulating the depressed position of the heel member.

60 6. An attachment for the purpose specified comprising a support adapted to be secured to the floor of an automobile adjacent

the accelerator; a heel member hinged to said support; and a toe member hinged to said support so that said members can be independently raised; the heel and toe members having interengaging parts whereby they are caused to oscillate as one when in operative position; and means connected with the heel member for regulating the depressed position of the heel member.

65 7. An attachment for operating the accelerator of automobiles, comprising a standard; a heel member pivoted on this standard; and a toe member pivoted on the standard independently of the heel member; the toe member having a portion adapted to engage the accelerator; the heel and toe members having interengaging parts whereby they are caused to oscillate as one when in 80 operative position; and means connected with the heel member for regulating the depressed position of the heel member.

75 8. An attachment for the purpose specified comprising a supporting member having an upstanding portion providing a brace for the heel of the operator; a heel member hinged to said support and lying below the hinge pintle; a toe member having one end hinged to said support and a presser head on its other end; and means on the heel and toe members whereby they are caused to oscillate as one when in lowered position.

80 9. An attachment for the purpose specified comprising a supporting member having an upstanding portion providing a brace for the heel of the operator; a heel member hinged to said support and lying below the hinge pintle; a toe member having one end hinged to said support and a presser head on 90 its other end; means on the heel and toe members whereby they are caused to oscillate as 100 one when in lowered position; and means on the heel and toe members whereby they are caused to oscillate as 105 one when in lowered position; and means connected with the heel member for regulating the depressed position of the heel member.

95 10. An attachment for the purpose specified, comprising an adjustable supporting member adapted to be secured to the floor of an automobile adjacent the accelerator and providing a brace for the heel of the operator; a heel member hinged to said support and lying below the hinge pintle; a toe member having one end hinged to said support and a presser head on its other end; said heel and toe members being independently hinged; means on the heel and toe members whereby they are caused to oscillate as one when in lowered position; and means connected with the heel member for regulating the depressed position of the heel member.

110 In testimony that I claim the foregoing as my own, I affix my signature.

ALLEN A. WILLIAMS.