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SIGNAL FOR AUTOMOBILES OR OTHER VEHICLES.

APPLICATION FILED OCT. 6, 1910.

1,006,662.

Patented Oct. 24, 1911.

2 SHEETS—SHEET 1.

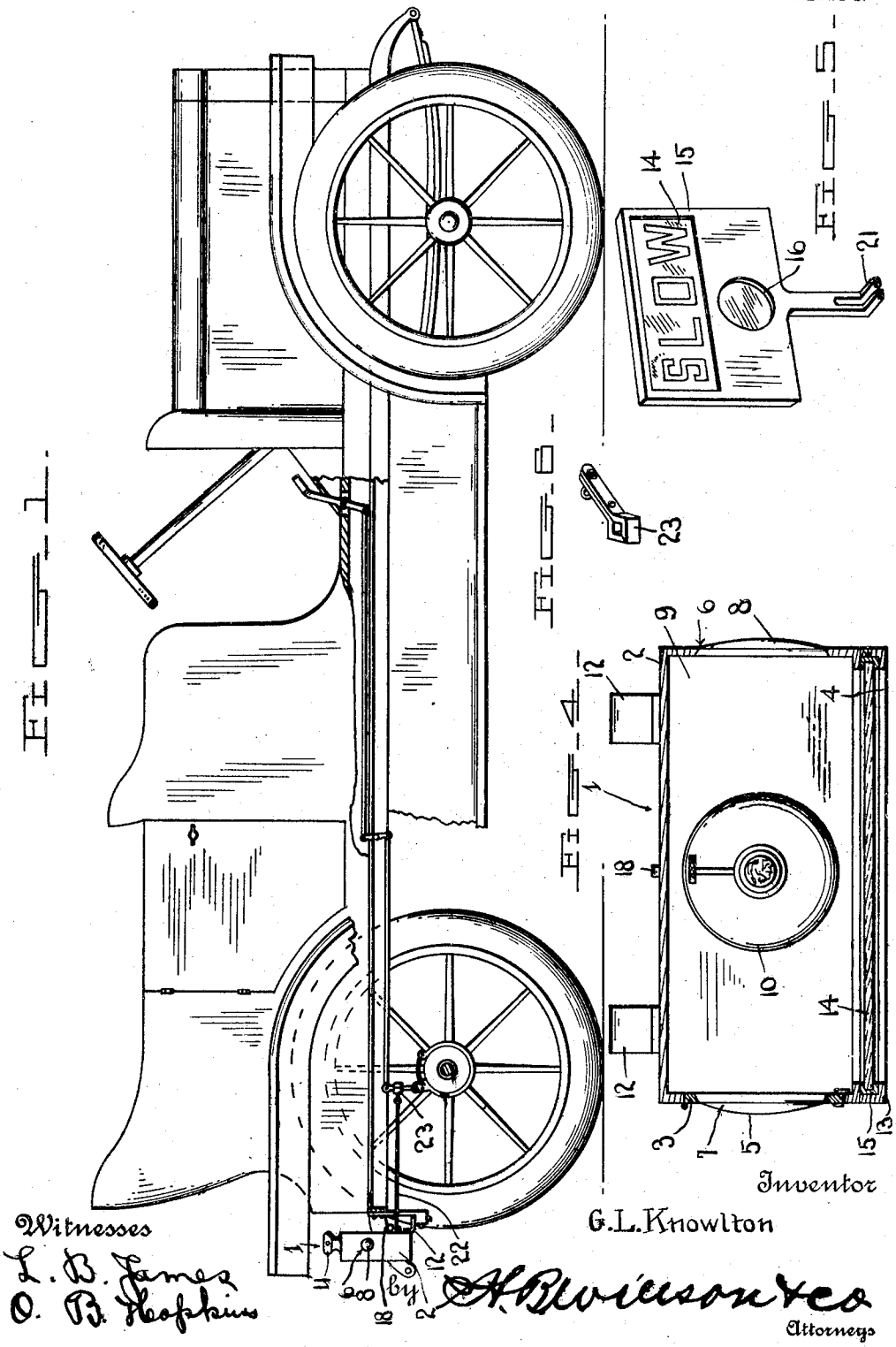

FIG. 1.

FIG. 5.

FIG. 6.

FIG. 4.

Witnesses

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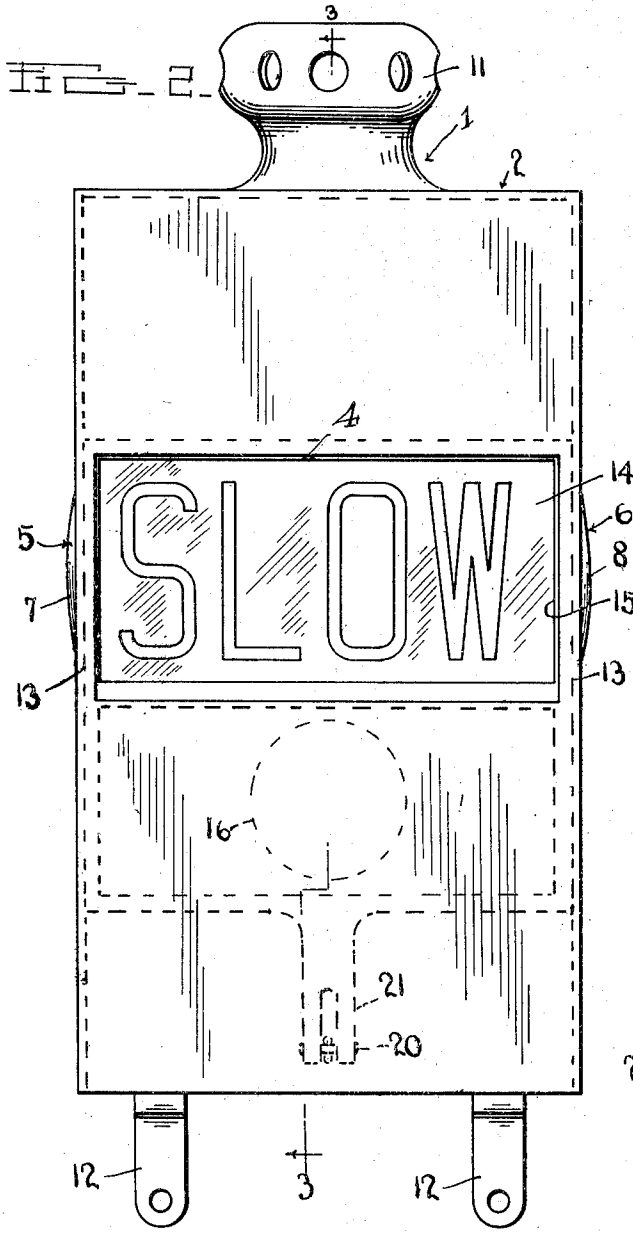
2 SHEETS—SHEET 2.

Fig. 2.



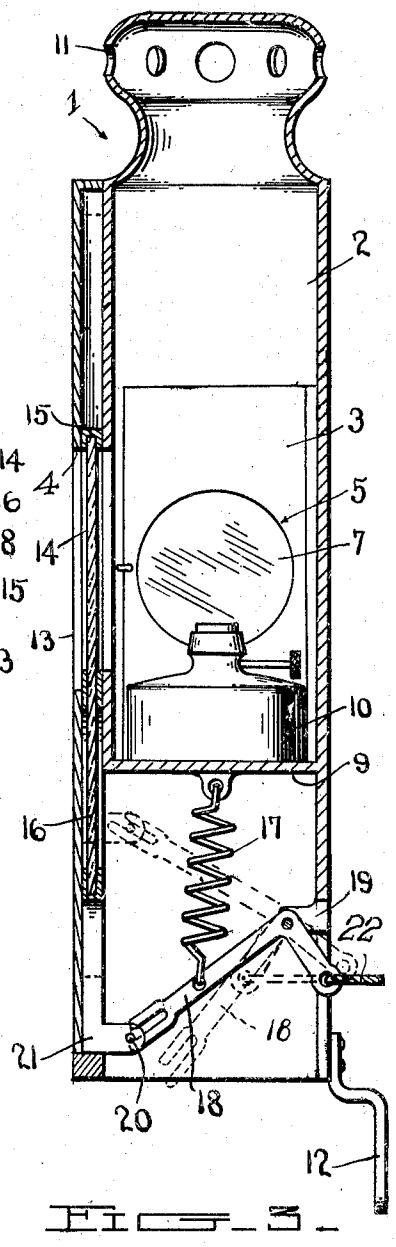
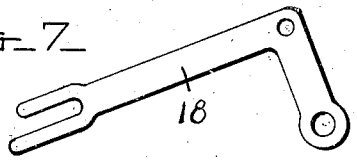


Fig. 3.

Fig. 7.



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SIGNAL FOR AUTOMOBILES OR OTHER VEHICLES.

1,006,662. Specification of Letters Patent. Patented Oct. 24, 1911.

Application filed October 6, 1910. Serial No. 585,669.

To all whom it may concern:

Be it known that I, GEORGE L. KNOWLTON, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Signals for Automobiles or other Vehicles; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in signals for automobiles or other vehicles.

One object of the invention is to provide a signal for the rear end of automobiles or other vehicles whereby any desired instructions or information may be displayed for the observation of drivers or operators of following vehicles.

Another object is to provide means whereby my improved signal is operated by the application of the braking mechanism.

With these and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts as will be more fully described and particularly pointed out in the appended claim.

In the accompanying drawings: Figure 1 is a side view partly in section of a portion of an automobile and the brake applying mechanism thereof showing the application of my invention; Fig. 2 is a front view of my signal displaying lamp showing the signal displayed; Fig. 3 is a vertical sectional view on the line 3—3 of Fig. 2; Fig. 4 is a horizontal sectional view through the signal taken just above the lamp burner; Fig. 5 is a detail perspective view of the glass signal displaying plate and its supporting frame; Fig. 6 is a similar view of the clip for connecting the signal operating rod with the brake operating mechanism. Fig. 7 is a detail side view of the bell crank lever for operating the signal displaying plate.

Referring more particularly to the drawings, 1 denotes my improved signal displaying lamp which as here shown preferably comprises a rectangular casing 2 having its inner side closed by a hinge door 3. In the upper portion of the front of the casing is arranged a signal displaying opening 4. In one side and in the door of the casing are arranged circular light openings 5 and 6. Over the opening 5 of the door of the lamp is arranged a green glass lens 7 through which a green light will be displayed, while over the opening 6 in the inner side of the lamp casing is arranged a white glass lens 8 whereby a white light will be thrown from the lamp onto the number displayed on the rear end of the machine.

In the casing a suitable distance above the lower end thereof is arranged a shelf or horizontally disposed partition 9 on which is adapted to rest the lamp 10, said lamp being thus supported in position to bring the burner thereof opposite the openings 4, 5 and 6 of the casing. On the upper end of the casing above the lamp is arranged a ventilating opening which is covered by a suitable apertured cap or hood 11. On the rear side of the lower end of the lamp casing are arranged lugs 12 whereby the lamp may be engaged with the supporting brackets on the rear end of the machine or otherwise secured in position.

On the inner surfaces or opposite sides of the casing adjacent to the front wall thereof are arranged vertical angle iron guide strips 13 between which and the inner surfaces of the front side plate of the casing is slidably mounted a signal displaying plate 14 which may be formed of glass or other transparent material or may be formed of metal in which is cut the information or signal to be displayed by the lamp. In the present instance the plate 14 is shown as being formed of red glass and set in a metal frame 15. In the upper portion of the red glass plate 14 is arranged the signal to be displayed, said signal being here shown as the word "slow" which is intended to indicate to the drivers of following vehicles that the vehicle containing the signal is about to slow up so that the drivers of the following vehicles can regulate the speed of their vehicles accordingly. The letters of the signal are formed by leaving the glass clear or in any other suitable manner to cause the signal to be prominently displayed by the light of the lamp at night or by day light when the plate is shifted to the proper position to bring the signal opposite to the display opening 4 in the front of the casing. In the center of the frame which supports the plate, and arranged immediately below the signal there is a circular opening 16 through which a red light will be displayed when the plate is lifted to its normal or inoperative position, said red light being produced by

the red glass fixed in the lower portion of the plate supporting frame.

The signal displaying plate 14 is normally held in an elevated or inoperative position wherein the part of the plate containing the signal will be disposed behind the upper portion of the front plate as shown in dotted lines in Fig. 3 of the drawings by means of a coiled retracting spring 17 arranged in the lower portion of the lamp casing and having its upper end connected to the shelf 9 and its lower end connected to a bell crank plate operating lever 18 which is pivotally mounted in a suitable supporting bracket 19 arranged in the casing as shown. The forward end of the bell crank lever 18 is bifurcated and has a loose engagement with a pin 20 arranged in a bracket 21 formed on the frame 15 of the signal displaying plate 14 as shown. When it is desired to display the signal the bell crank lever is rocked and the inner end thereof swung downwardly against the tension of the spring 17 thus retracting or drawing the signal display plate down into the lower portion of the lamp casing thus bringing the signal on the plate opposite the view opening in the casing.

Any suitable means may be provided for operating the plate shifting lever 18, said lever however being here shown as automatically operated when the brake of the vehicle is applied. In order to thus automatically operate the plate shifting lever the forward end of the lever has connected thereto an operating cord 22 which is connected by a suitable clip or clamping device 23 with a suitable part of the brake apparatus whereby when the latter is operated to apply the brakes, the plate shifting lever 18 will be simultaneously operated to bring the plate into position to display the signal and whereby when the brake is released the spring 27 will retract the lever 18 and thus shift the signal plate to an inoperative position and bring the red eye or light opening 16 opposite the display opening in the lamp casing.

It will be noted that the upper finger of the bifurcated upper end of the plate shifting lever 18 is somewhat shorter than the lower finger. This construction of the bifurcated outer end of the lever is provided to enable the signal displaying plate to be drawn down to an operative position by a slight movement of the brake operating mechanism and without fully applying the brakes and bringing the machine to a full stop. By thus forming the signal operating lever and properly connecting the same with the brake mechanism the latter may be operated sufficiently to bring the signal displaying plate to an operative position without applying the brakes as when it is desired to simply slow down. When the plate has thus been brought to an operative position the shorter finger of the upper side of the bifurcated end of the lever will be in position to disengage the pin 20 in the bracket 21 so that a further application of the brakes will permit the lever 18 to swing clear of the bracket 21 and pin 20 and thus not interfere with the complete operation of the braking mechanism. When the brakes are again released the spring 17 will retract the lever 18 and again bring the lower longer finger of the bifurcated end of the lever into engagement with the pin 20 and thus lift the signal plate to an inoperative position. This operation of the lever 18 is clearly shown in dottted lines in Fig. 3 of the drawing.

While I have here shown and described the signal operating lever as being connected with and operated by the braking mechanism of the machine it is obvious that any other suitable means may be employed for actuating the signal operating lever when the signal is applied to vehicles which are not equipped with brakes.

From the foregoing description taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention as defined in the appended claim.

Having thus described my invention what I claim is:

In combination with a brake lever, of a vehicle, of a signal comprising a casing having a display opening, a signal plate slidable vertically over said opening, a bracket projecting inwardly from the lower end of said plate, a pin carried by said bracket, a bell crank lever mounted in the casing and having one end bifurcated for movable and detachable engagement with the pin, the upper branch of said bifurcation being shorter than the lower branch thereof, a rod connecting the opposite end of the bell crank lever with the brake lever, and means for elevating the bifurcated end of the bell crank lever when the brake lever is released.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

GEORGE L. KNOWLTON.

Witnesses:
WM. J. SADLEIR,
JNO. SADLEIR.