(No Model.)

J. H. SURTIN.

CAR GONG.

No. 501,030. Patented July 4, 1893.

Fig I.

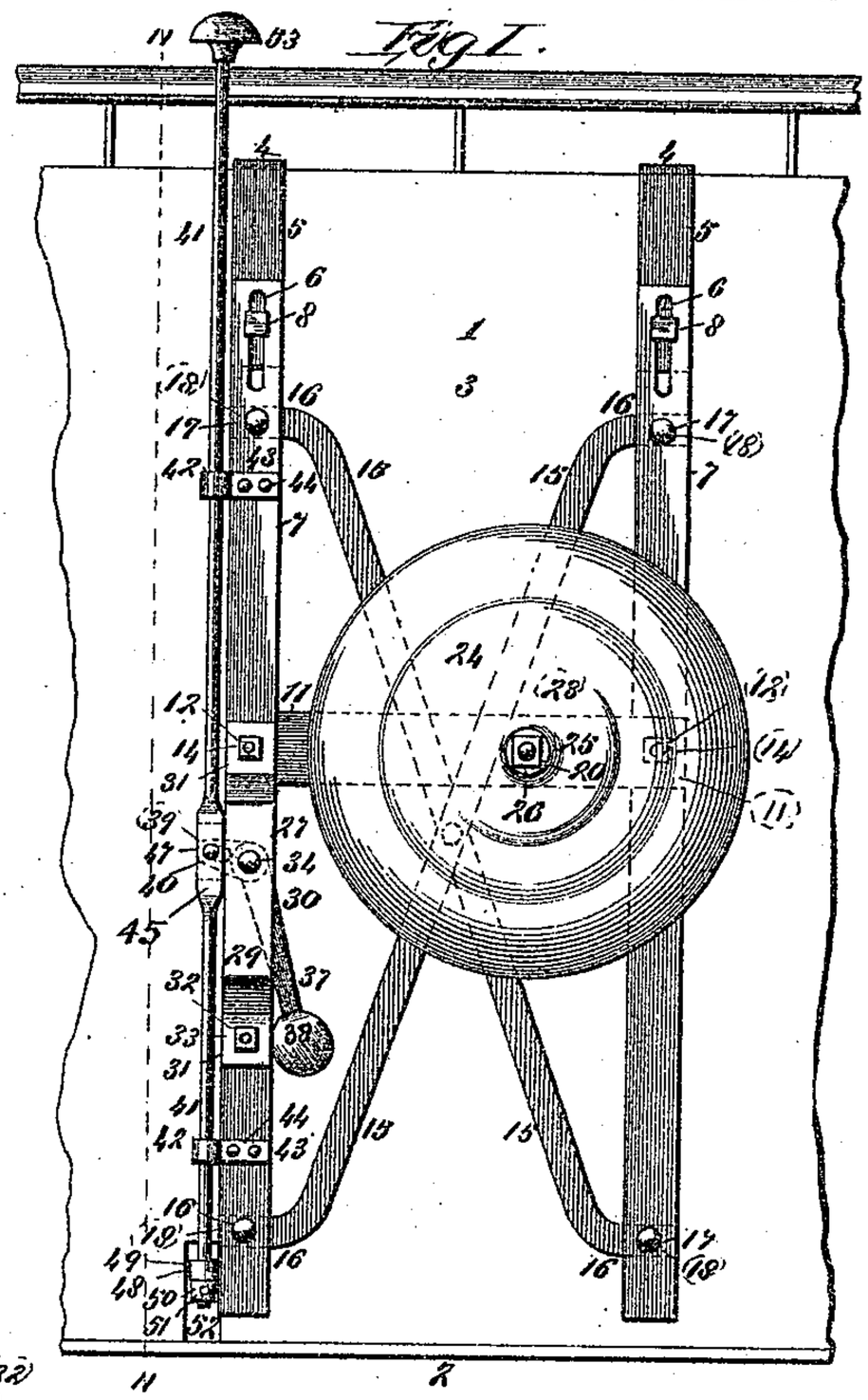


Fig III

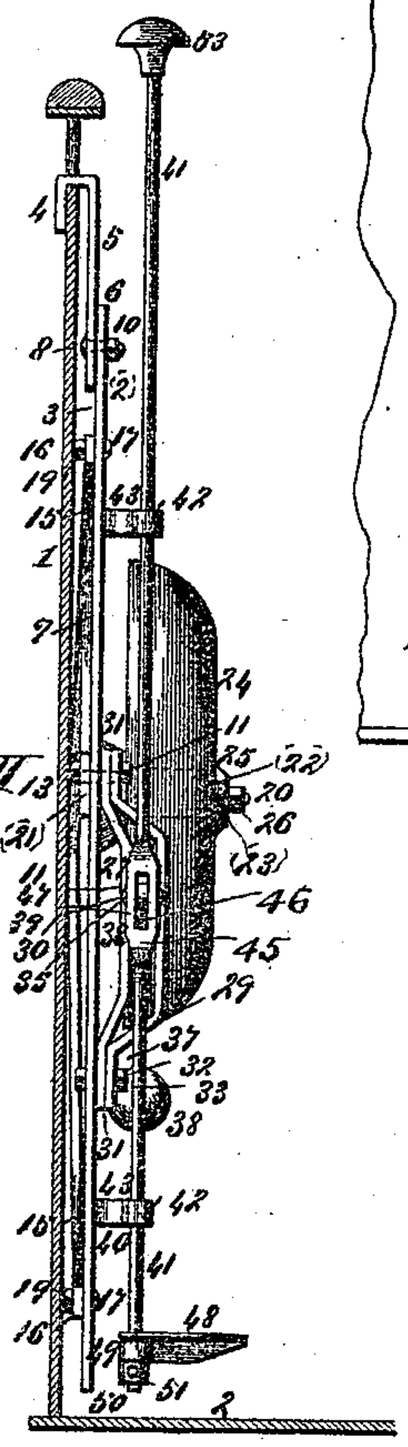


Fig II.

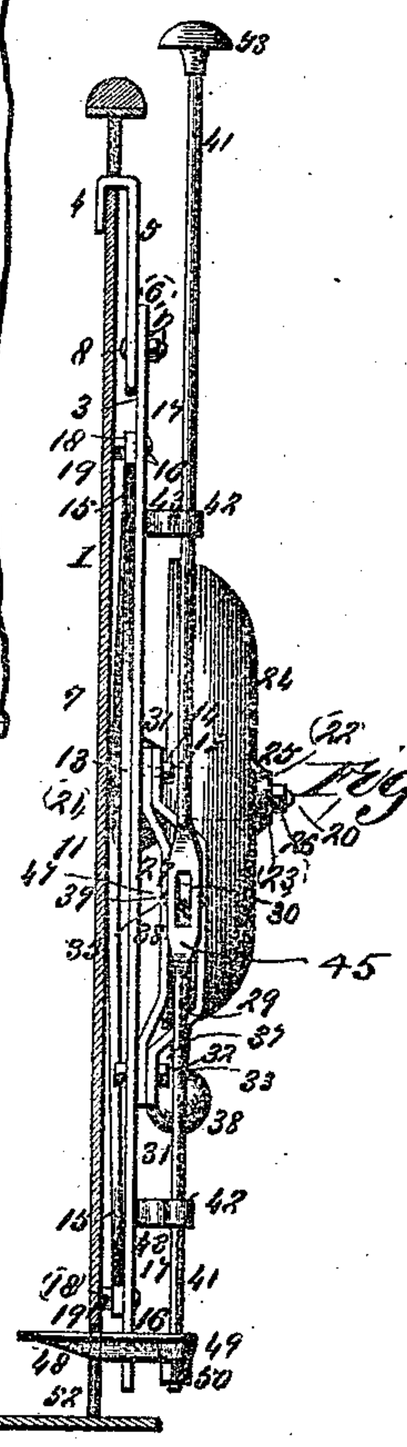
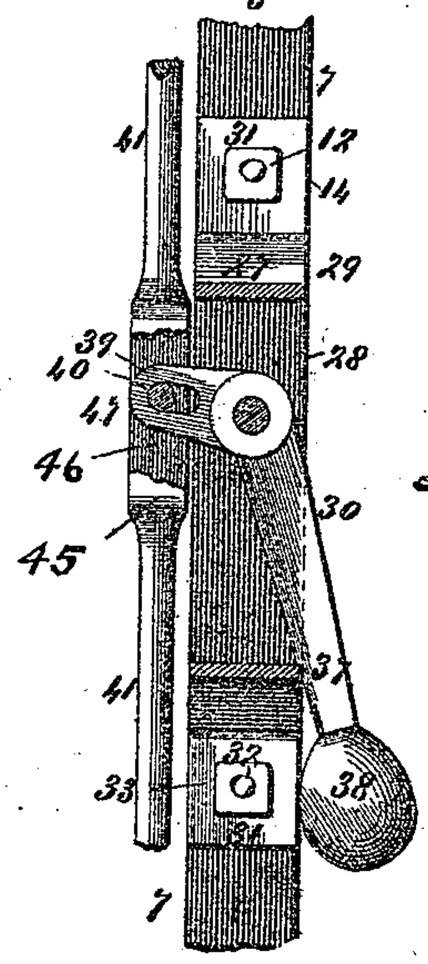


Fig IV.



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UNITED STATES PATENT OFFICE.

JOHN H. SURTIN, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-THIRD TO ROBERT McCULLOCH, OF SAME PLACE.

CAR-GONG.

SPECIFICATION forming part of Letters Patent No. 501,030, dated July 4, 1893.

Application filed July 2, 1892. Serial No. 438,808. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. SURTIN, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Car-Gongs, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to a transferable alarm and signal gong for cars, which is arranged to be suspended from the dash-board of the car, and which is removable from the dash on one end of the car to the other, and from car to car; the annunciator hammer of which gong is on the forward end of a pivoted bell-crank lever, the rear or drive end of which is pivotally connected to a vertical pitman annunciator rod, which rod is loose mounted in bearer lugs that are secured to and project from the frame that carries the gong, and carries a foot treadle at its base and is surmounted by a hand knob; and the invention consists in features of novelty hereinafter fully described and pointed out in the claims.

Figure I is a detail elevation of the front dash-board of a car, and shows the hook frame of my transferable gong hanging pendent from the front thereof, and the treadle passing through and working in a slot in the base of said dash-board, convenient to the foot of the motor-man, or driver who operates it, and presenting the hand knob convenient to the hand-rail of his dash-board. Fig. II is a vertical section, taken on line II—II, Fig. I, and shows the screw set adjustment of the gong frame on its hanger-hook attachment, the pitman rod attachment to the bell-crank lever of the annunciator hammer, with its protruding treadle and surmounting hand knob. Fig. III is a vertical section, and shows the gong and its hanger frame, suspended on the inside of the dash-board; and Fig. IV is an enlarged, detail, vertical section, and shows the compound, slotted, pivotal attachment of the operating pitman rod to the bell-crank lever of the annunciating hammer.

Referring to the drawings:—1 represents the dash-board and 2 the platform of a car, to which dash-board my transferable gong-frame 3, is attached by means of the suspension hooks 4 of the hangers 5, to which hangers the slotted upper ends 6 of the side bars 7 of said hanger frame are adjustably secured by the set-screws 8. The said set screws pass through said slots and through perforations or screw seats 9 in the hangers and their projecting screw tips are firmly secured by the nuts or jam-nuts 10; the heads of said set screws clamping firmly against said slotted side bars.

11 represents a transverse gong-bearing bar, which couples together, and nearly midway from their ends, the vertical side bars 7 of the gong frame, by means of the screw bolts 12 which pass through perforations 13 in near the ends of said gong bearing bars, and midway of said side bars. The said gong bearing bar is secured at and to the rear of the side-bar that carries the operative devices, and in front and to the other side-bar, by the screw nuts 14.

15 represents cross brace bars, the perforate bow-bent ends 16 of which are secured by the screw bolts 17 to said side bars, which bolts pass through perforations 18 in said side bars and through said perforate bow-bent ends of said cross brace bars and the screw threaded tips of said bolts are held by the nuts 19.

20 represents the gong supporting screw-bolt, which passes through a perforation 21 in the gong bearing bar 11, through the elongated sleeve 22, through the center perforation 23 in the gong 24, and through its center bulge 25, and on the projecting end of said bolt the screw-nut 26 is engaged to firmly hold said gong to its mount.

27 represents a compound bridge bracket constituted of the inner bridge plate 28, and the outer bridge plate 29, the latter being extended sufficiently from the former to allow the free working of the bell-crank lever 30 between said bridges of said bracket; and 31 are the perforate attachment flanges of said compound bridge bracket, through the upper flange of which the projecting end of the screw bolt 12 (that secures one end of the gong bearer 11) passes and from which it projects and is fastened by the nut 14. The lower flange 31 of said compound bridge bracket 27 is secured to the side bar 7 by

the screw bolt 32 that passes through the perforate seat in said side bar and through said flange 31, and is fastened by the screw nut 33.

34 represents a pivot bolt, which is secured in its perforate seats 35 in said inner and outer bridge brackets, and is fastened by the screw-nut 36. The bell crank lever 30 is loosely mounted on said pivot bolt, and on its driven end 37 carries the annunciator hammer 38. 39 represents the drive end of said bell-crank lever 30, and 40 is an elongated slot in said drive end.

41 represents a vertical operative pitman rod, which is seated and works in the bearer eyelets 42 of the projecting lugs 43, which lugs are secured to the side bar 7 on the operative side of the device by rivets or bolts 44.

45 represents an expansive bulb on the rod 41 in which the elongated slot 46 is formed to receive the slotted end 39 of the bell-crank lever. The bolt 47, passes from side to side, through perforations in both sides of the expansion bulb 45 and the slotted end of the bell-crank lever.

48 represents a treadle, the socket flange 49 of which is seated on said pitman rod near its foot, and 50 is a supporting ring, which is secured to the foot of said pitman rod, by the rivet or bolt 51.

52 represents a slot, through, near the bottom of the dash-board, through which slot the treadle projects over the platform, when the gong, and its frame, is hung in front of the dash, as shown in Figs. I and II, and, on the other hand, when the gong and its frame are hung inside the dash, as shown in Fig. III, the treadle is turned in toward the foot of the operator as before, convenient for use.

53 represents a surmounting pressure knob, by which the pitman rod may be depressed to operate the ball-crank lever and strike the signal or alarm, at any time when it happens to be more convenient for the operator to use the hand than the foot to effect the same purpose. Now it will be seen that the annunciator hammer being mounted on the long end of the bell-crank lever counter-balances and elevates the operative pitman rod into its then inoperative, normal position, and prevents the striking of the signal or alarm, except at such times as said counter-balance is countermanded by the pressure of the operator's foot on the treadle 48, or of his hand on the pressure knob 53, when with the downward movement of the pitman rod, the annunciator hammer 38, mounted on the bell crank lever flies up and strikes the gong either once, or any given number of times, according to the schedule of the signal, and alarm list, regulated by the respective single or repeated pressure of the foot or hand. When the gong is hung on the dash-board of a grip car of a cable road, the only slight change required in the device is to remove the pitman rod 41, and its bearer lugs 43 from the side bar 7 of the gong frame and attach it to the grip well partition within which the gripman stands. The ordinary, operative chain from said pitman rod may pass around pulley-wheels out of sight and out of the way beneath the grip car, and ascend to and be connected with the drive arm of the bell-crank lever, and operate the same.

It will be seen that the whole device is easily and quickly transferable from the dash-board on one end of the car to that on the other, so that on lines where the track does not loop round and the cars are not turned, so that the rear platform and dash become the forward ones on the return trip, it is but a few second's work to unhook the gong frame from the dash-board on the one end and hang it on the other, on what has become the forward end of the car; and thereby the great expense is saved of having to duplicate gongs for both ends of the car. Also when a car has to be run in for repairs, or any other cause, the gong, with its frame is almost instantaneously transferable to another car in active service. Again, should any accident happen to the gong itself, it is quickly removed and replaced by a competent gong without having to run the car in.

I claim as my invention—

1. In a car gong, the combination of the hangers 5, the hooks 4, the side bars 7 having the slotted, upper ends 6, the set screws 8, the transverse gong bearer bar 11, and the gong secured to said bar; substantially as described.

2. In a car gong, the combination of the adjustable extension and transferable hanger frame suspended on the inside of the dash, the combined signal and alarm gong secured to said frame, the bell crank lever 30 pivotally connected to said frame, the annunciator hammer mounted on the driven end of said lever, and striking on the outside of the gong and the operative pitman rod 41, which rod works in loose bearings mounted on said frame, the said pitman rod pivotally connected to the drive end 39 of said bell crank lever to operate the same, and strike said hammer against said gong; substantially as described.

3. In a car gong, the combination of the adjustable extension and transferable hanger frame 3, the combined signal and alarm gong secured to said frame, the compound bridge bracket 27 having the inner bridge-plate 28 and outer bridge-plate 29, the bell-crank lever pivotally mounted between said bridge-plates, the annunciator hammer mounted on the driven arm of said bell crank lever, the drive arm of said lever provided with the elongated slot 40, the operative pitman rod 41, the bearer lugs 43, in which said rod works, the expansion bulb 45 having the elongated slot 46 on said rod, the traveler drive bolt 47, seated in said bulb, and that carries said bell crank lever; substantially as described.

4. In a car gong, the combination of the adjustable extension and transferable hanger frame 3 having the cross brace bars 15, and the gong bearer bar 11, the gong secured to

said bar 11, the bell crank lever 30, pivotally mounted on said frame, the annunciator hammer mounted on the driven end of said lever, the operative pitman rod 41, the bearer lugs secured to said hanger frame in which bearings said pitman rod works, the pivotal connection of said pitman rod to the drive end of said bell crank lever, the treadle 48, and the push knob 53 on said pitman rod; substantially as described.

5. In a car gong, the combination of the hangers 5, having the hooks 4, the adjustable extension gong frame having the elongated slots 6 in the upper ends of the side bars 7 of said frame, the set screws 8, the gong secured to said frame, the bell crank lever pivotally mounted on said frame, the annunciator hammer mounted on said lever, the operative pitman mounted in bearing lugs secured to said frame and pivotally connected to the drive end of said bell-crank lever, the treadle 48, and the push knob 53 on said pitman rod, the dash-board of the car on which said gong frame hangs suspended, the said dash-board having the open gate or slot 52, for the passage and working of said treadle; substantially as described.

JOHN H. SURTIN.

In presence of—
BENJN. A. KNIGHT,
SAML. KNIGHT.