W. H. CARMICHAEL.

TABULATOR FOR AUTOMOBILES.

APPLICATION FILED MAY 18, 1918.

1,309,841. Patented July 15, 1919.

Fig. 1.

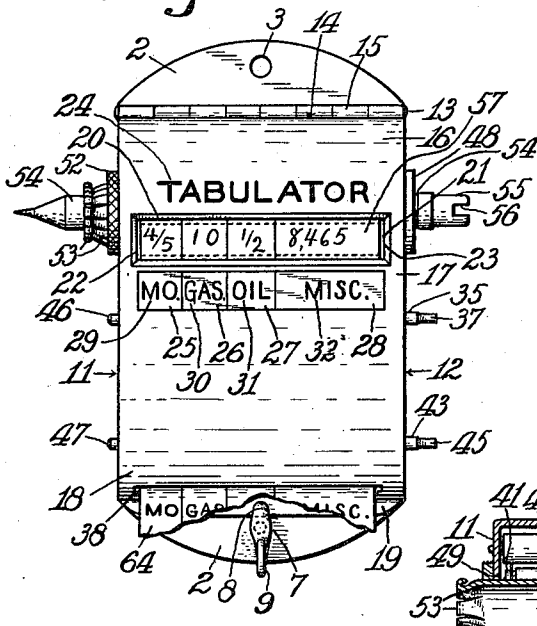


Fig. 2.

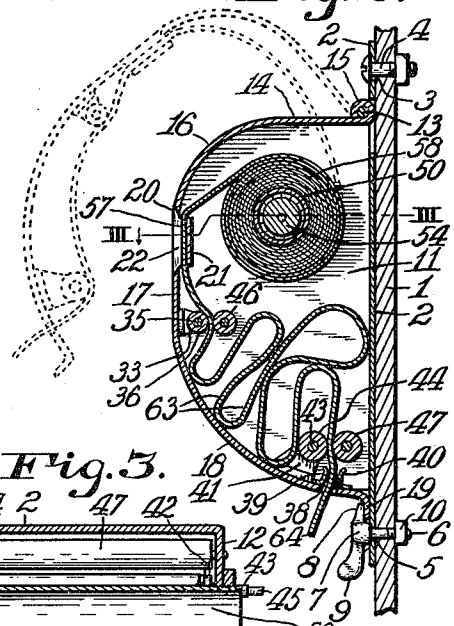


Fig. 3.

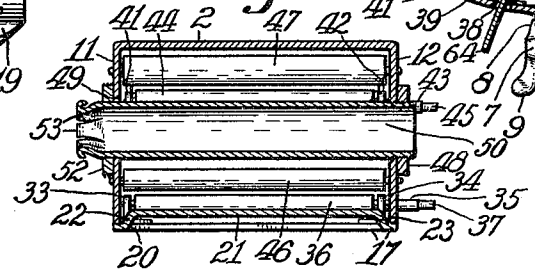


Fig. 4.

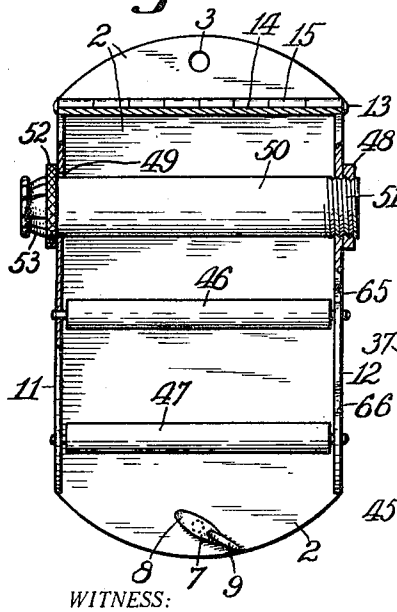


Fig. 5.

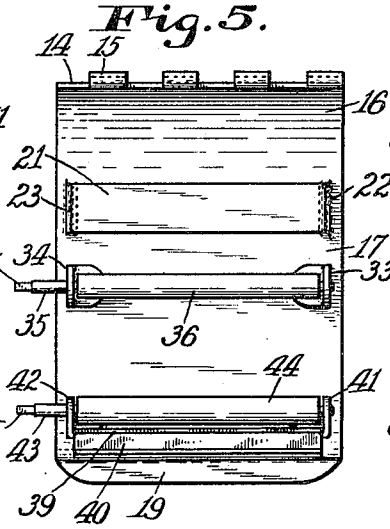
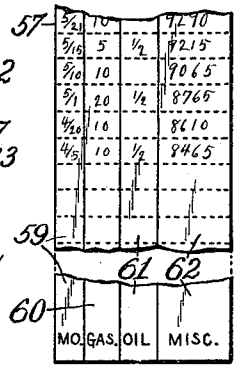


Fig. 6.



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TABULATOR FOR AUTOMOBILES.

1,309,841. Specification of Letters Patent. Patented July 15, 1919.

Application filed May 18, 1918. Serial No. 235,365.

To all whom it may concern:

Be it known that I, WILLIAM H. CARMICHAEL, a citizen of the United States, residing at Miami, in the county of Dade and State of Florida, have invented a new and useful Tabulator for Automobiles, of which the following is a specification, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon.

This invention relates to an appliance whereby records may be kept or data tabulated, the invention having reference more particularly to a tabulator of the above mentioned character that is adapted to be used in connection with an automobile or other motor vehicle.

An object of the invention is to provide an improved tabulator which shall be of simple and inexpensive construction and adapted to be used for recording various facts or data in tabulated arrangement to be readily referred to at any future time.

Another object is to provide a tabulator which shall be so constructed as to be adapted to be carried in a motor car to enable the owner or driver to promptly and conveniently make a record of gasolene and oil received for use in the car, together with the date of receipt and number of miles run by the car.

A further object is to provide a tabulator of the above mentioned character which shall be so constructed as to conveniently hold a sufficiently long strip of paper to contain tabulations extending over a period of a week or a month if desired.

A still further object is to provide a tabulator for automobiles which shall be so constructed as to be capable of conveniently carrying a pencil so that it shall always be readily accessible for use in making records.

With the above mentioned and other objects in view, the invention consists in a casing adapted to hold a roll of paper to receive records, the casing being provided with guide rolls and feed rolls for the paper; and, the invention consists also further in the novel features and also the combinations and arrangements of elements of parts, as hereinafter particularly described and further defined in the appended claims.

Referring to the drawings, Figure 1 is a front elevation of the improved tabulator; Fig. 2 is a vertical section of the tabulator mounted on a support, such as the instrument board of an automobile; Fig. 3 is a section approximately on the line III—III in Fig. 2; Fig. 4 is a front elevation of the casing of the tabulator and parts mounted therein, the cover of the casing being broken away; Fig. 5 is an elevation of the inside or back of the casing cover; and Fig. 6 is a fragmentary front view of the strip of paper, on a reduced scale, with which the tabulator is provided, the paper having examples of data thereon.

Similar reference characters in the various figures of the drawings indicate corresponding elements or features herein referred to in detail.

The numeral I indicates a suitable support for the tabulator and for convenience of description is represented as being vertical. The tabulator casing has a flat back 2 adapted to be placed against the support 1 and it has an aperture 3 in its upper portion to receive a bolt 4 whereby the casing is secured to the support. The lower portion of the back has an aperture 5 therein to receive a bolt or shank 6 which extends through the support 1 and has a head 7 thereon that engages the front of the back 2, the head 7 having a lip 8 on one side thereof to constitute a button element, and a lever 9 on the opposite side of the head for turning the head. Preferably the bolt or shank 6 has a nut 10 thereon. The casing has two side plates 11 and 12 which preferably are integral with the back 2, and the back is provided adjacent to the tops of the side plates with a horizontal hinge pin 13. The casing includes a cover which has a top portion 14 provided with hinge devices 15 which are connected with the hinge pin 13, the cover having a curved portion 16 extending from the top portion 14, a straight front portion 17 extending downward from the curved portion, and a curved portion 18 extending from the straight portion downwardly and rearwardly to the back 2 and having a lip 19 on its lower edge to be connected by the button element 8 whereby to secure the cover in place. Preferably the edges of the sides 11 and 12 are shaped to the contour of the cover so that the cover may rest thereon.

The straight front portion 17 of the cover has an aperture 20 therein, and a table or platen 21 is arranged back of the casing front and opposite to the aperture being supported by means of brackets 22 and 23.

Preferably a name 24, such as the word "Tabulator", is arranged on the curved front portion 16 of the casing cover, being above the aperture 20. Below the aperture a suitable number of label panels 25, 26, 27, 28 are arranged on the front portion 17 of the cover and bear signs 29, 30, 31 and 32, respectively, such as "Mo." to designate a space for entering the month and day of month; the word "Gas." to indicate a space for entering the quantity of gasolene; the word "Oil" to indicate a space for entering the quantity of oil received; and another word or abbreviation of a word to indicate space for entering other data which may be the total number of miles traveled at the time of making the entry.

The inside or back of the straight portion 17 of the cover is provided with a pair of journal boxes 33 and 34 in which a shaft 35 is rotatively mounted and having a rubber composition cover 36 thereon, and constitutes a feed-roll to be suitably operated. The shaft preferably has a squared portion 37 to be engaged by a suitable key at the outside of the side 12 which is adapted to receive the projecting portion of the shaft. The curved portion 18 has a slot 38 therein that is arranged near to the lip 19, and guides 39 and 40 on the inside of the cover at opposite sides respectively of the slot. The inside of the cover is provided adjacent to the slot with two journal bearings 41 and 42 in which a shaft 43 is rotatively mounted and provided with a rubber composition cover 44, one end portion of the shaft normally projecting through the side 12 of the casing and preferably having a squared portion 45 to be engaged by an operating key. A guide-roll or pressure roll 46 is rotatively mounted in the sides 11 and 12 back of the feed-roll, and a guide-roll or pressure roll 47 is mounted also in the casing sides adjacent to the rearward portion of the shaft cover 44 and therewith constitute holding and guiding rolls for the paper strip, the shaft 43 and its cover 44 being adapted to be used as a feed-roll.

The side 12 of the casing preferably has a nut 48 secured thereto, the side plate being relatively thin, and the opposite side 11 has a bearing aperture 49. A hollow cylindrical shaft 50 is provided which has a screw thread 51 thereon that is received in the nut 48 to support one end of the shaft, the latter being provided near its opposite end with a collar 52 which is fixed thereon and normally engages the exterior of the side 11 when the shaft is placed in the aperture 49, so that the shaft may be securely fastened to the sides of the casing. One end portion of the shaft has elastic fingers 53 thereon that are curved inwardly to engage a pencil 54 which may be inserted into the shaft to be carried thereby, the fingers preventing accidental dislodgment of the pencil. The pencil has a metallic head piece 55 in the end of which is a suitable socket 56 adapted to receive the squared end portion of either of the shafts 35 or 43, so that when the pencil is removed from its carrier it may be conveniently used as a key or wrench to rotate the feed-rolls for moving the strip of paper in the casing.

A paper strip or ribbon 57 is arranged on the front of the table 21 and extends from a paper roll 58 arranged on the shaft 50 so as to turn thereon, the strip of paper being ruled so as to have longitudinal spaces or columns 59, 60, 61, and 62 arranged to correspond with the signs or labels on the front of the casing cover. Considerable space is available in the casing between the upper feed-roll and guide roll, which comprise primary feed-rolls and the holding rolls 44 and 47, which comprise secondary feed-rolls so that while the paper strip is held stationary by the holding rolls the upper feed-roll may be operated and cause the strip to be arranged in folds 63 until finally drawn out of the casing for inspection, the strip having a portion 64 projecting through the slot 38.

The cover may be swung upward on its hinge as indicated by dotted lines in Fig. 2 so that a new roll of paper may readily be inserted, and in order to permit the shafts 35 and 43 to be withdrawn with the cover, the side 12 has slots 65 and 66 to normally receive the shafts respectively.

In practical use, having supplied the tabulator with the required paper, the strip is arranged to pass over the table 21 and between the upper feed-roll and the roll 46 or primary feed-rolls and thence between the holding rolls 44 and 47 or secondary feed-rolls so as to extend between the guides 39 and 40, preferably without projecting through the slot 38, so that the paper could not be reached by meddlers. Such entries as it may be desired to make are made by means of the pencil, with the paper resting on the table 21. The month and day of the month may be designated by numerals, and numerals may be used in entering quantities of supplies received and also to record the number of miles traveled. At the end of each day the feed-roll shaft 35 should be turned to draw the paper strip farther downward to expose the spaces for subsequent entries. It being customary for garages and supply stations to render bills periodically for supplies to automobiles, the tabulator is a valuable aid to the automobile owner or driver in checking up the items of the bills rendered, it being necessary only to turn the shaft 43 so as to project the end portion 64 of the strip through the slot 38, after which the strip may be pulled by hand through the slot until the portion of the strip having the records thereon is all drawn out of the casing and then the paper may be

torn off and the removed portion used for reference.

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

1. A tabulator including a casing having a slot in one end portion thereof, a shaft mounted in the opposite end portion of the casing, a table supported adjacent to the shaft, a feed-roll and a pressure roll arranged in the casing adjacent to the table, and a feed-roll and a pressure roll arranged adjacent to the slot in the casing.

2. A tabulator including a casing having a back and sides, a shaft secured to the sides of the casing, a cover hinged to the back of the casing and having a table thereon, the cover having also a slot therein, a pair of feed-rolls arranged in the casing adjacent to the table, and a pair of feed rolls arranged in the casing adjacent to the slot.

3. A tabulator including an inclosing casing having a slot in one portion thereof, a shaft mounted in an opposite portion of the casing to rotatably support a roll of paper, a table in the casing to support a portion of the paper, a secondary feed-roll and a pressure roll arranged in the casing adjacent to the slot and adapted to temporarily hold and prevent the paper from passing through the slot, and a primary feed-roll and a pressure roll arranged in the casing to move the paper into space in the casing in folded order while held by the secondary feed-roll and the adjacent pressure roll.

4. A tabulator comprising a back and two sides thereon, one of the sides having two slots in its forward edge, a shaft supported by said sides, a pressure roll supported also by said sides, a cover hinged to said back and having a slot and also an aperture therein, a table supported on the inside of the cover behind said aperture, a feed-roll rotatably mounted on the inside of the cover adjacent to the table and the pressure roll and having a shaft extension projecting through one of the slots in said side, a feed-roll mounted on the inside of the cover adjacent to the slot in the cover and having a shaft extension projecting through the remaining one of the slots in said side, and a pressure roll supported by said sides adjacent to the slot in the cover.

5. A tabulator comprising a back and two sides thereon, a shaft supported by the upper portions of said sides, an upper pressure roll supported by said sides in proximity to the front edges thereof, a lower pressure roll supported by said sides adjacent to the lower ends thereof, a lock connected with the lower portion of said back, a cover hinged to the upper portion of said back and normally seated on the edges of said sides, the cover being engaged by said lock and having an aperture therein in proximity to said shaft and also a slot adjacent to said lower pressure roll, guides stationarily arranged on the inside of said cover adjacent to said slot, a table supported on the inside of said cover behind said aperture, a feed-roll mounted on the inside of said cover adjacent to said upper pressure roll, and a feed-roll mounted on the inside of said cover adjacent to said guides and said lower pressure roll.

6. A tabulator for automobiles comprising a casing having a back to be uprightly supported, the casing having clear space therein to receive a folded paper strip, the lower portion of the casing below said space having a slot therein through which to withdraw the strip, the casing having also an aperture therein arranged higher than said clear space, a shaft mounted in said casing above said space, a table supported behind said aperture in the casing, operative means in the casing adjacent to said slot adapted on operation thereof to feed the strip through the slot and means below said table adapted to feed the strip into the clear space to be folded therein.

7. In a tabulator, the combination of a casing back and sides thereon, a lock connected to the lower portion of the casing, a shaft mounted in the upper portion of the casing sides, a cover hinged to the upper portion of the casing back and having a lip on its lower portion engaging said back and engaged by said lock, the cover having a slot therein adjacent to said lips and having also an aperture therein opposite to said shaft, a table supported by said cover behind said aperture, and means supported between said casing sides to feed a paper strip from said table to said slot.

8 In a tabulator, the combination of a casing back and sides thereon, one of said sides having a threaded nut fixed thereto, and a hollow shaft extending through said sides and having a screw-thread engaging said nut and having also a collar thereon to turn the shaft, one end portion of said shaft having spring-fingers thereon that project outside one of said casing sides to hold an article in said shaft.

In testimony whereof, I affix my signature in presence of two witnesses.

WILLIAM H. CARMICHAEL.

Witnesses:

CLIFTON A. SAWYER,

ORLO E. HAMLIN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents. Washington, D. C."