No. 893,686. PATENTED JULY 21, 1908.

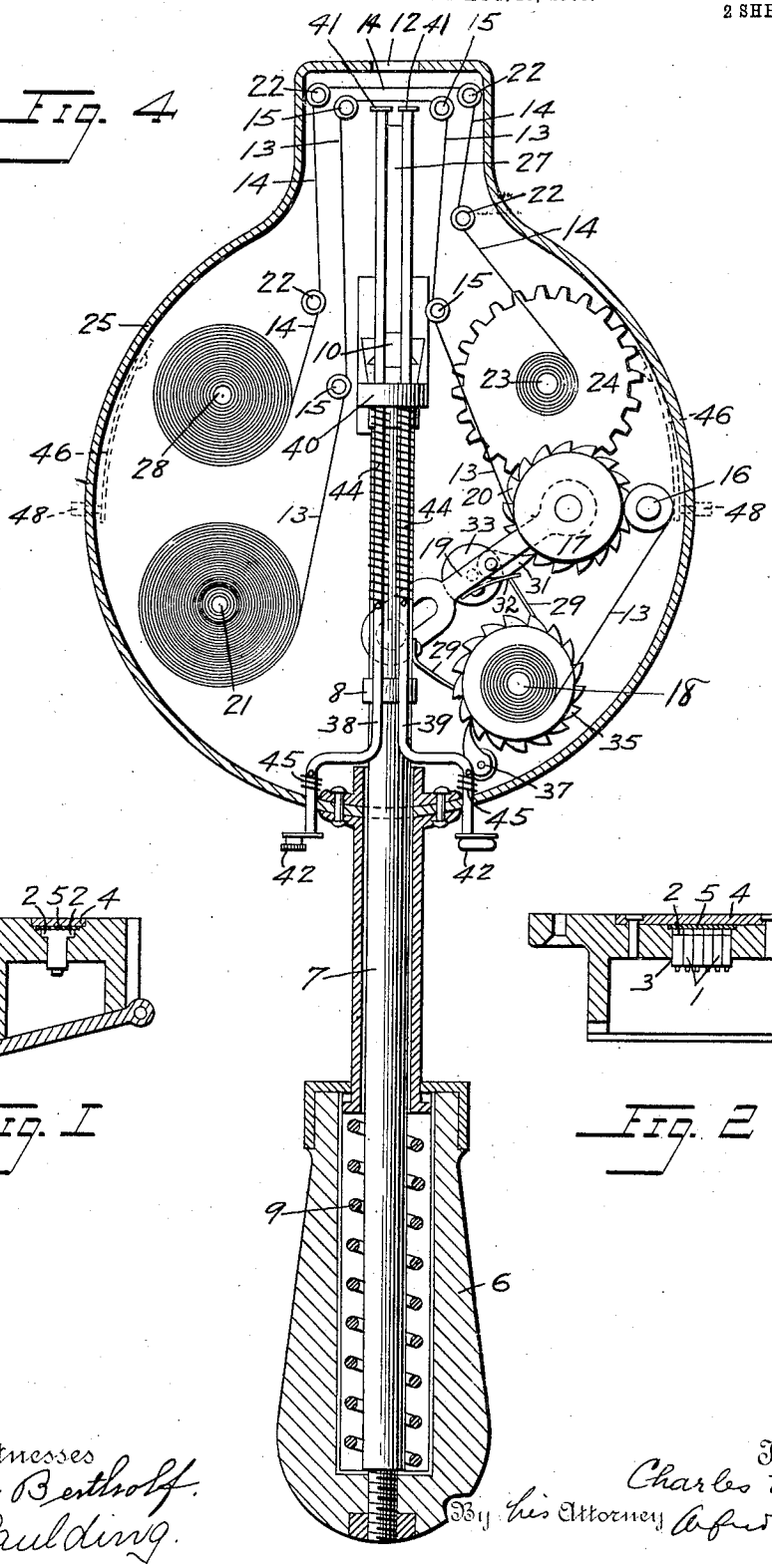
C. WILLE.

APPARATUS FOR RECORDING THE NUMBERS OF VEHICLES, CABS, CARS, AND THE LIKE.

APPLICATION FILED AUG. 18, 1906.

2 SHEETS—SHEET 1.

Fig. 4



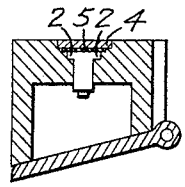




Fig. 1

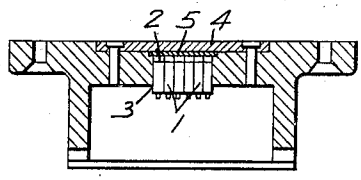



Fig. 2




Witnesses
E. H. Berthold.
L. Paulding.

Inventor
Charles Wille
By his Attorney

No. 893,686. PATENTED JULY 21, 1908.

C. WILLE.

APPARATUS FOR RECORDING THE NUMBERS OF VEHICLES, CABS, CARS, AND THE LIKE.

APPLICATION FILED AUG. 18, 1906.

2 SHEETS—SHEET 2.

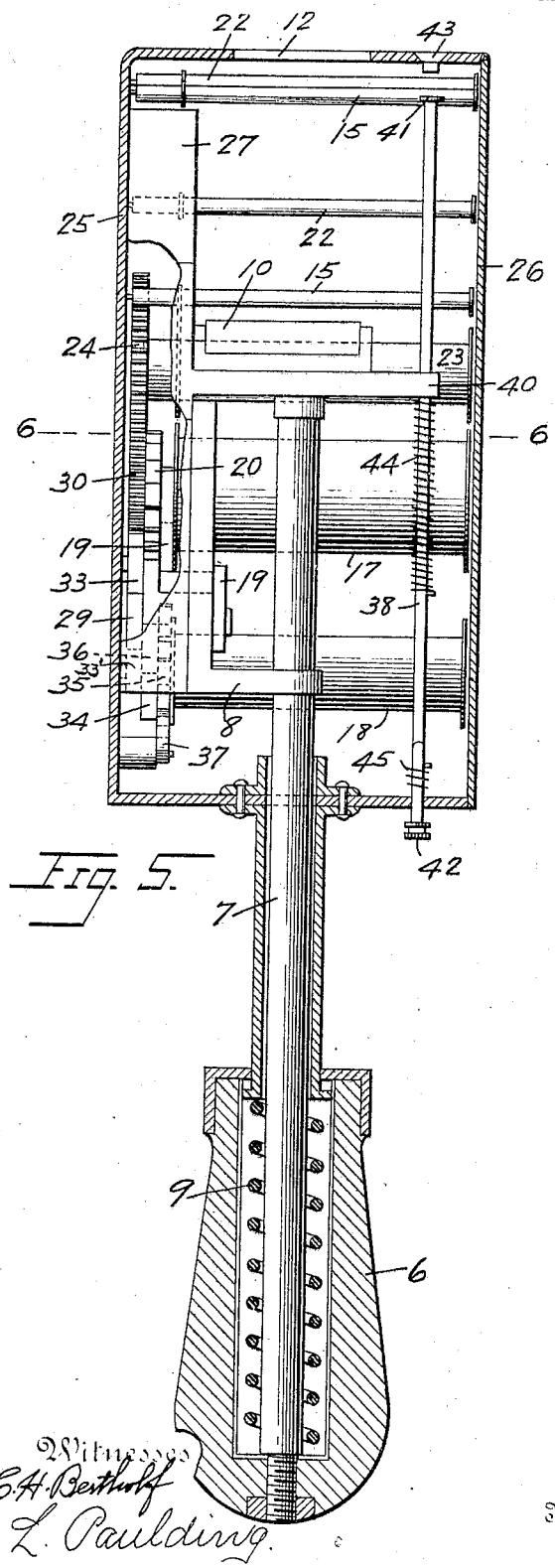



Fig. 5.

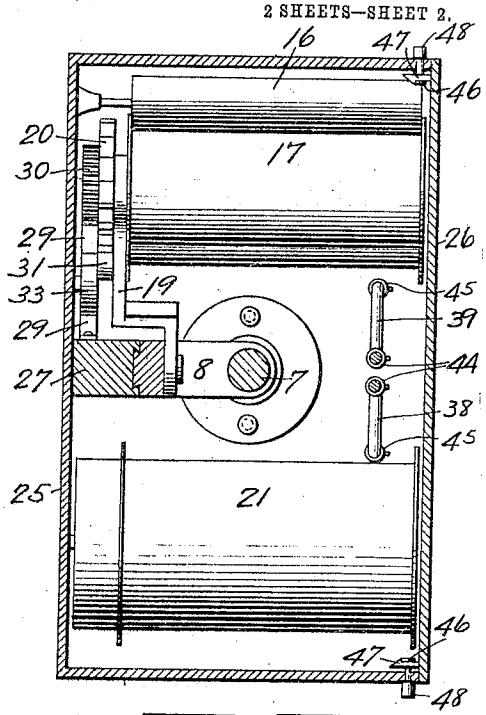



Fig. 6.

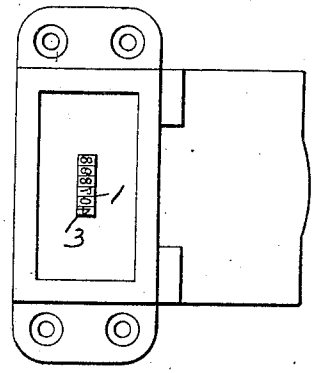



Fig. 3.

Witnesses
C. H. Berthold
L. Paulding.

Inventor
Charles Wille
By his Attorney

# UNITED STATES PATENT OFFICE.

CHARLES WILLE, OF ST. PETERSBURG, RUSSIA.

## APPARATUS FOR RECORDING THE NUMBERS OF VEHICLES, CABS, CARS, AND THE LIKE.

No. 893,686. Specification of Letters Patent. Patented July 21, 1908.

Application filed August 18, 1906. Serial No. 331,135.

*To all whom it may concern:*

Be it known that I, CHARLES WILLE, a subject of the Emperor of Russia, residing at St. Petersburg, Russia, engineer, have invented certain new and useful Improvements in Apparatus for Recording the Numbers of Vehicles, Cabs, Cars, and the Like; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings.

This invention relates to an apparatus for recording the numbers of vehicles, cabs, cars and the like in a simple and effective manner, whereby mistakes are obviated and time is saved.

The invention is used, where it is desired, to keep a record of the numbers of cabs, cars, omnibuses and the like, on entering and leaving railway-stations and other places, where such records are kept.

The apparatus is provided with a printing mechanism, whereby an impression can be obtained from type, contained in a casing fastened to the vehicle, whose number shall be recorded. The type consists of letters or figures and is so arranged in the casing, that it can be easily exchanged and varied to suit different requirements. The case containing the type is provided with an opening, through which the apparatus containing the printing mechanism may be introduced, and, each time, the printing mechanism is operated, the paper-web on which the figures or letters are printed is moved a certain distance, and at the same time a printing-ribbon is moved, which latter is located in front of the paper-web to cause the impression to be made thereon.

The new apparatus is illustrated in the annexed drawings, in which

Figure 1 is a cross-section and Fig. 2 a longitudinal section of the case, containing the type. Fig. 3 is a front view of the case, its lid being in a raised position. Figs. 4 and 5 are partial longitudinal sections in two different planes of the apparatus inclosing the printing mechanism. Fig. 6 is a cross-section on line 6—6 of Fig. 5.

The case containing the type, shown in Figs. 1, 2 and 3, is preferably made of cast iron and fastened to the vehicle by means of screws or the like. The type 1 shown in the illustration as representing figures is provided with shoulders 2, by means of which the type is held on the edges of the opening 3 in the case. The base of the type is supported by an iron plate 4, on which a rubber-plate 5 is placed to cause a good imprint to be made from the type.

The apparatus for taking impressions from the type is illustrated in Figs. 4, 5 and 6. It consists of a casing 25, inclosing a printing mechanism and provided with a removable cover 26. In order to take an impression from the type inclosed in a case like the one shown in Figs. 1 to 3, the casing 25 is inserted with its front end into the case containing the type, after the lid of said case has been raised, as shown in Fig. 3. When the handle 6 of the casing 25 together with the stem 7 fastened to the handle is pressed, the spiral spring 9 placed in the handle 6 and surrounding the stem 7 is compressed, and at the same time the stem 7 is moved towards the front end of the casing 25. The stem is guided in its movement by a slide 8, fastened to the stem, the slide moving along a guide-block 27, on which the slide is held by a dove-tail connection. At the forward end of the slide 8 is attached a cushion 10 made of rubber or other elastic material. This cushion is moved towards an opening 12 in the casing 25, through which opening, upon the insertion of the front end of the casing into the case containing the type 1, the latter enters. If, therefore, due to a pressure on handle 6 the cushion 10 is moved forward and strikes the paper-web 13 and the printing-ribbon 14 passing in front of the opening 12, an impression of the type 1 will be made on the paper web 13. The latter is drawn from a roll mounted on a spindle 21 and is guided over rolls 15 onto a rubber roller 17, from where it passes over the roller 16 to be wound on a spindle 18. The printing ribbon 14 is drawn from a spool 28, passes over the guiding-rolls 22 and is wound upon a spindle 23.

The automatic advance of the web and ribbon is obtained in the following manner. At each forward stroke of the stem 7 secured in the handle 6, a lever 19 pivotally connected to the stem 7 and with its other end loosely surrounding the shaft of the rubber-roller 17, imparts to the latter upon the backward movement of the stem 7 a partial rotation, thereby gradually pulling the web 13 from the roll mounted on the spindle 21. This movement is accomplished by ratchet-wheel 20 fastened on the shaft of the roller 17, and a pawl 31 pivoted to the lever 19,

the pawl being pressed by a spring 32 fastened to the lever against the teeth of the ratchet wheel 20. When the stem 7 is moved towards the left in Fig. 4, pawl 31 will glide over the teeth of the ratchet wheel 20, without rotating the same, while the impression on the paper-web is made. As soon, however, as the pressure on handle 6 is relieved and the stem 7 returned by the spring 9, surrounding said stem, the pawl 31, which is held in engagement with the teeth of the ratchet wheel 20 by means of the spring 32, will impart a partial rotation to the ratchet wheel and thereby to the rubber roller 17, thus pulling the paper-web 13 off the roll mounted on spindle 21, so that for the next impression a fresh portion of the paper web will be in front of the opening 12. On the shaft of the roller 17 is mounted also a gear wheel 30, which engages a gear wheel 24, secured to the spindle 23. Each time, therefore, the roller 17 is rotated, a like rotation is imparted to the spindle 23, whereby the printing ribbon 14 is also moved a certain length and wound on the spindle 23. In order that the paper-web being pulled forward by the roller 17 is wound on spindle 18, a clock-work spring 29 is fastened to the frame 8 (Fig. 4), the spring 29 frictionally surrounding a roller 33′ secured to a ratchet wheel 34, loosely mounted on spindle 18. The free end of the spring 29 is wound around a roller 33, rotatably mounted on a spindle secured in the side wall of the casing. When upon pressing the handle 6, the spring 29 is by means of its connection with the slide 8 pulled towards the left in Fig. 4, the free end of the spring unwinds from the roller 33. When the stem 7 together with the slide 8 returns to its original position, the spring 29 again winds itself upon roller 33, thereby rotating the roller 33′ and the ratchet wheel 34, which, by a pawl 36, engages with the larger ratchet wheel 35, secured to the spindle 18. The latter thus is rotated by means of the ratchet wheel 34, 35 and pawl 36, and the paper-web 13, while being pulled off, is wound onto the spindle 18. The return movement of the spindle is prevented by a pawl 37, which is held in engagement with the ratchet wheel 35.

The apparatus is likewise equipped with a means for marking on the paper-web whether the vehicle, whose number has been printed, was occupied or empty. This means consists of two stems 38 and 39, whose outer ends pass through holes in the upper end of the casing 25. The stems are guided in a standard 40, provided in the casing. The inner ends of the stems carry small cushions 41, which, when the stems are moved upward in Fig. 4, will strike the paper web 13, thereby forcing the same together with the printing ribbon 14 against the inner end of screws 43, screwed into and passing through the wall at the front end of the casing 25. There are two such screws corresponding to the number of stems, each screw being provided on its inner end with a raised type, the type on one screw representing the letter "o", which stands for "occupied", whereas the type on the other screw represents the small letter "e", which stands for "empty". The outer ends of the stem 38, 39 are bent off and provided with buttons 42, which are marked according to the type on the inner end of the screws 43. In order to obtain an impression from said type, it is only necessary, to press the button of the corresponding stem. By means of spiral springs 44 and 45 respectively surrounding the stems, the latter are returned automatically to their original position.

Two flat springs 46 are fastened on each side to the casing 25 at the inner wall thereof to hold the cover 26 closed, the latter being provided with two hooks 47, which are engaged by the springs 46, as shown in Fig. 6. In order to open the cover, it is only necessary to press pins 48, projecting from the sides of the casing, thereby releasing the hooks from the hold of springs 46.

Claims.

1. Apparatus for recording the numbers of vehicles, cabs, cars and the like, comprising a casing, a paper web arranged therein to pass before an opening in said casing, a printing ribbon arranged in front of said paper web, means to cause an impression to be made on the said paper web, said means comprising a movable stem, a guide therefor and a cushion fastened to the forward end of said stem and adapted upon the forward movement thereof to force the said paper web together with the printing ribbon against type, mounted in a case fastened to the vehicle, the type being adapted to project through the said opening for the purpose of printing on the web mounted in the casing of the stem.

2. Apparatus for recording the numbers of vehicles, cabs, cars and the like, comprising a casing, a paper web in said casing arranged to pass before an opening therein, a printing ribbon arranged in front of said paper web, a movable stem, a guide therefor and a cushion provided at the forward end of said stem to cause upon the forward movement thereof an impression to be made on the said paper web and mechanism actuated by the said stem to automatically move the paper web and printing ribbon after each impression, thus bringing fresh surfaces of the paper web into printing position.

3. Apparatus for recording the numbers of vehicles, cabs, cars and the like, comprising a casing, a paper web mounted therein, arranged to pass before an opening in said casing, a printing ribbon mounted in front of said paper web, a movable stem, a guide therefor, and a cushion secured to the for-

ward end of the said stem and adapted to cause upon the forward movement thereof an impression to be made on the said paper web, means to automatically return the said stem to its original position, a lever pivoted to the said stem, a pawl pivoted to the said lever and a ratchet mechanism and gearing adapted to impart movement through the said stem to the said paper web and printing ribbon, upon each return movement of the said stem.

4. Apparatus for recording the number of vehicles, cabs, cars and the like, comprising a casing, a paper web therein arranged to pass before an opening in said casing, a printing ribbon arranged in front of the said paper web, means in the casing to cause an impression on the said paper web and two movable stems each having a cushion at its inner end and a button at its outer end, screws passing through the wall of the casing, one screw opposite each stem, each screw carrying a mark at its inner end and being so arranged that upon pressing one or the other stem an impression of the said mark is made on the paper web.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES WILLE.

Witnesses:
AL. A. LOVIAGUINE,
EDWARD WANSCHEIDT.