

No. 649,219.

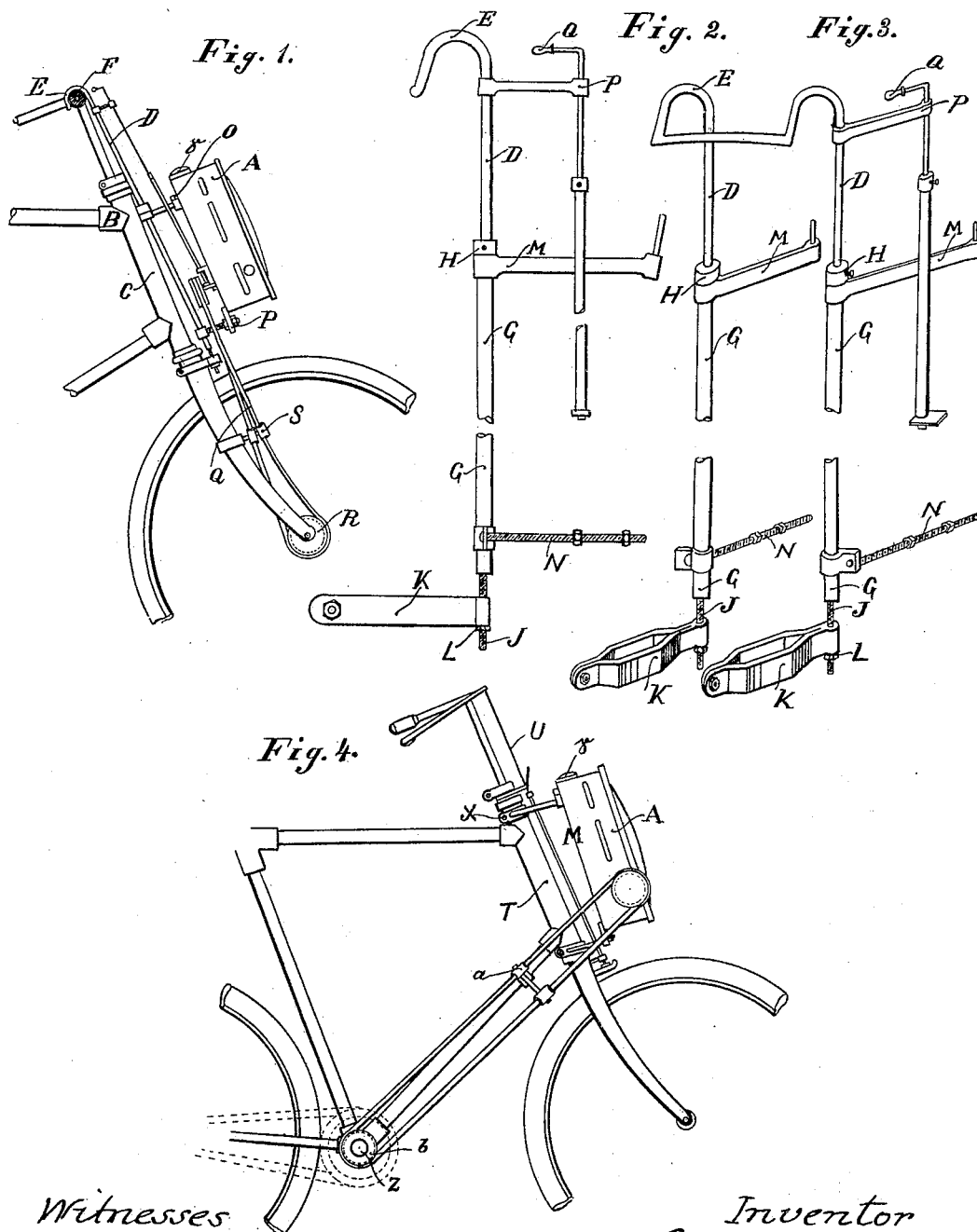
Patented May 8, 1900.

C. SCHÖNLANK.
MUSICAL BOX FOR CYCLES.

(Application filed Oct. 11, 1897.)

(No Model.)

2 Sheets—Sheet 1.



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2 Sheets—Sheet 2.

Fig. 5.

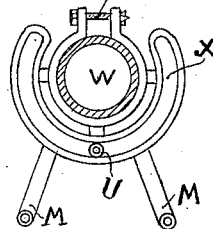


Fig. 7.

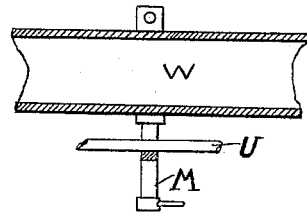


Fig. 6.

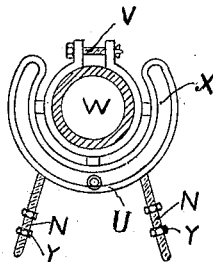


Fig. 8.

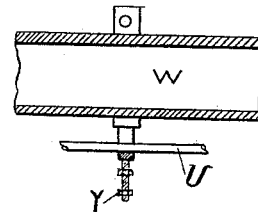
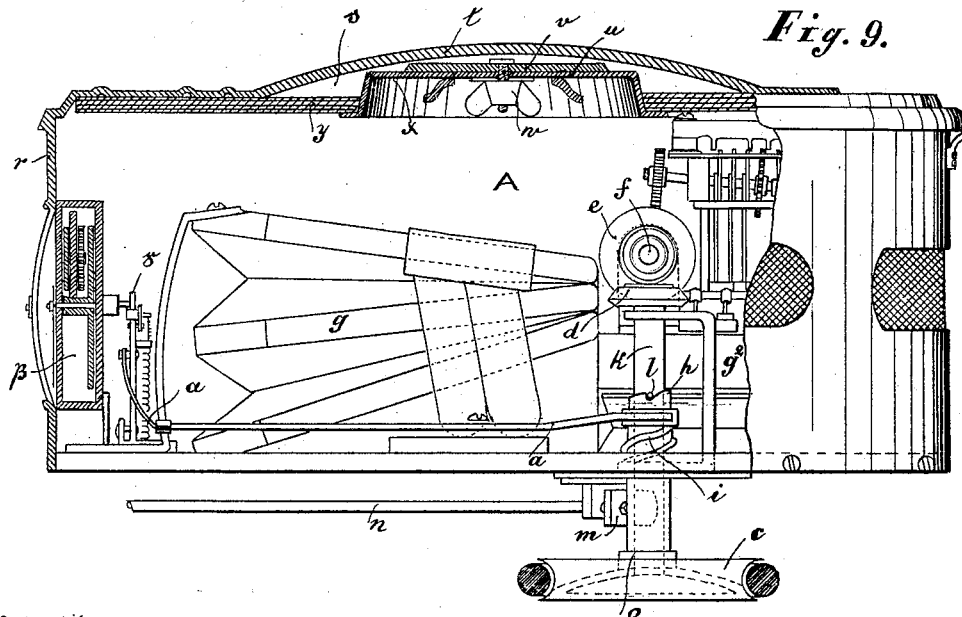


Fig. 9.



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UNITED STATES PATENT OFFICE.

CARL SCHÖNLANK, OF HAMBURG, GERMANY.

MUSICAL BOX FOR CYCLES.

SPECIFICATION forming part of Letters Patent No. 649,219, dated May 8, 1900.

Application filed October 11, 1897. Serial No. 654,871. (No model.)

To all whom it may concern:

Be it known that I, CARL SCHÖNLANK, of Hamburg, in the Kingdom of Prussia, German Empire, have invented Improvements in Musical Boxes for Cycles, of which the following is a specification, reference being had therein to the accompanying drawings.

In Patent No. 593,336 is set forth a device for cycles which is designed to afford the rider a continuous indication to prevent his exceeding a given speed. This indication is effected by the use of a suitable musical box, to the tune of which when set to any given melody the rider will involuntarily strive to accommodate the movements of his pedals. The device set forth in the above-mentioned patent specification has now been modified by the possessor of the said patent, who is also the inventor of the said apparatus, in such a manner that the box-shaped musical box A finds its place upon the front of the cycle-frame, which affords a better symmetry in outward appearance.

Figure 1 of the accompanying drawings illustrates such a modification, and Figs. 2 and 3 show in enlarged and perspective view the apparatus for suspending the same.

The first problem to be solved was that of arranging the apparatus so that upon the turning about of the driving and steering wheel, which according to Patent No. 593,336 also forms the source of power for the musical box, the musical box A will itself be turned about with it, while precisely that portion of the frame which is preferably adapted for the support (the part marked C in Fig. 1) is incapable itself of motion. This problem is solved by placing a frame D D, having its upper ends bent over into the hook E, over the middle of the handle-bar F. Around the arms D of the frame there engage guiding-sleeves G G, which are held fast by means of the screws H H, and thus may be adjusted to correspond to any height of the handle-bar. The lower end of the arms D G is held fast by the screw-bolts J J, which pass through loops K K, which are themselves secured around the front-wheel fork. By screwing up the nuts L L a certain tension is obtained, which prevents any shaking. Upon the frames fixed in this manner the proper holders M M and the screw-pins N N, with

their nuts, are fastened. Over the holder M M the musical box A, provided with corresponding loops O, is hooked, and its lower loops P are passed over the screw-pins N and secured by screwing up the nuts. The revolutions of the front wheel are transmitted to the musical box by means of a tightened strap or cord Q, which passes over a pulley R, fixed upon the wheel-axle, and is guided by a roller-guide S.

Fig. 4 of the accompanying drawings illustrates a method of attachment of the musical box which in outward view is the same as the first, but in which in this case the box is fixed to the fixed parts of the frame T. As, however, the brake-rod U is applied as a rule at the front of the cycle-frame and this so as to move to and fro with the handle-bar in the well-known manner, whereas the musical box must find room in the front of the brake-bar, it becomes necessary to provide for the free motion of the said brake-bar. For the purpose of such a securing of the musical box the apparatuses shown in Figs. 5 and 6 in ground plan and in Figs. 7 and 8 in section have been constructed. These apparatuses, which are secured firmly around the frame-tube W by means of a screw V, possess a curved guide X for the brake-bar U, which projects through them.

The apparatus Figs. 5 and 7, which serves as the upper one, supports the hook M, already described, whereas the apparatus shown in Figs. 6 and 8, serving as the under one, bears the screw-pin N, with its nut Y. In the securing of the musical box thus described the driving must for this purpose take place from the front wheel.

In Fig. 4 the driving is devised direct from the pedal-crank Z. The driving may also be effected in the same manner from the hind-wheel axle by the use of corresponding guide-pieces. In Fig. 4 a roller-bearing *a* for the driving-cord is connected to the frame of the cycle, which serves to guide the same to the pulley *b* of the musical box. The musical box itself has, in view of the different method of actuating as compared with the construction set forth in Patent No. 593,336, also required a corresponding modification.

Fig. 9 shows the said box almost of the natural size. The problem of constructing the

same as compact as possible has been solved by placing all the parts upon a peculiar-shaped foot-plate and arranging the parts one above the other, the operation of which is as follows: The driving-pulley *c* transmits its motion by means of the gear-wheels *d e* to the shaft *f*, connected to the latter, which shaft by means of further gearing actuates the perforated note-disks, of usual construction. Moreover, there is a handle (not shown in the drawings) moved up and down by the shaft *f*, and following these motions is the middle part *g* of two bellows placed one above the other. The bellows occupy the larger half of the base area divided by the shaft *f*. Upon the other side of the shaft are placed the sounding-boxes *g*², and over them are arranged the mechanisms for holding the sound-valves. For the application of the apparatus to a cycle there is, moreover, provided an apparatus for putting in and out of gear of the type of the well-known clutch coupling mechanism. The clutch *h*, connected to the pulley *c*, is under the control of a spring *i* upon the shaft *k*, and in consequence of this the clutch carries with the projecting pin *l*. If the apparatus is to be put out of gear, any suitable device operated by rod *n* may be made use of. The said rod *n* for the uncoupling is prolonged upward to the handle-bar, as shown in Fig. 2, in which *p* indicates a guide for the uncoupling mechanism, and the handle is indicated by the letter *q*. This lid *s* of the cover *r* of the musical box *A* serves to contain the surplus note-disks. The lid is arched at *t* in order to contain the requisite holding devices, and it has

soldered in the interior a flat plate *u*, upon which is secured a threaded bolt *v*, with nut *w*. A plate *x*, of the form illustrated, embraces the inner edges of the note-disks *y*, of ordinary construction. The measurements are so determined that when the nut *w* is screwed up the requisite number of note-disks is held perfectly firm without causing any bending of the inner circular edges, which are fully supported. The outer edges rest directly upon the bottom of the lid. Projections *z*, attached to the plate *x*, serve as handles for the same and facilitate its removal.

The motion conveyed from the moving parts of the cycle in the manner above described to the pulley *c* of the musical box may be further made use of to actuate a cyclometer.

What I claim, and desire to secure by Letters Patent of the United States, is—

In musical boxes for cycles the construction of the covering-lid for holding the spare note-disks, consisting of a flat plate placed in the arch of the lid, having a concentric screw-pin, a plate attached to said pin by an adjusting-nut, said plate having a flange which embraces the inner edges of the concentric apertures of the note-disks, whereby any number of note-disks may be held with a firm pressure without bending them, substantially as described.

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

CARL SCHÖNLANK.

Witnesses:

GUSTAV WEBER,
ERNST BAUMHOFF.