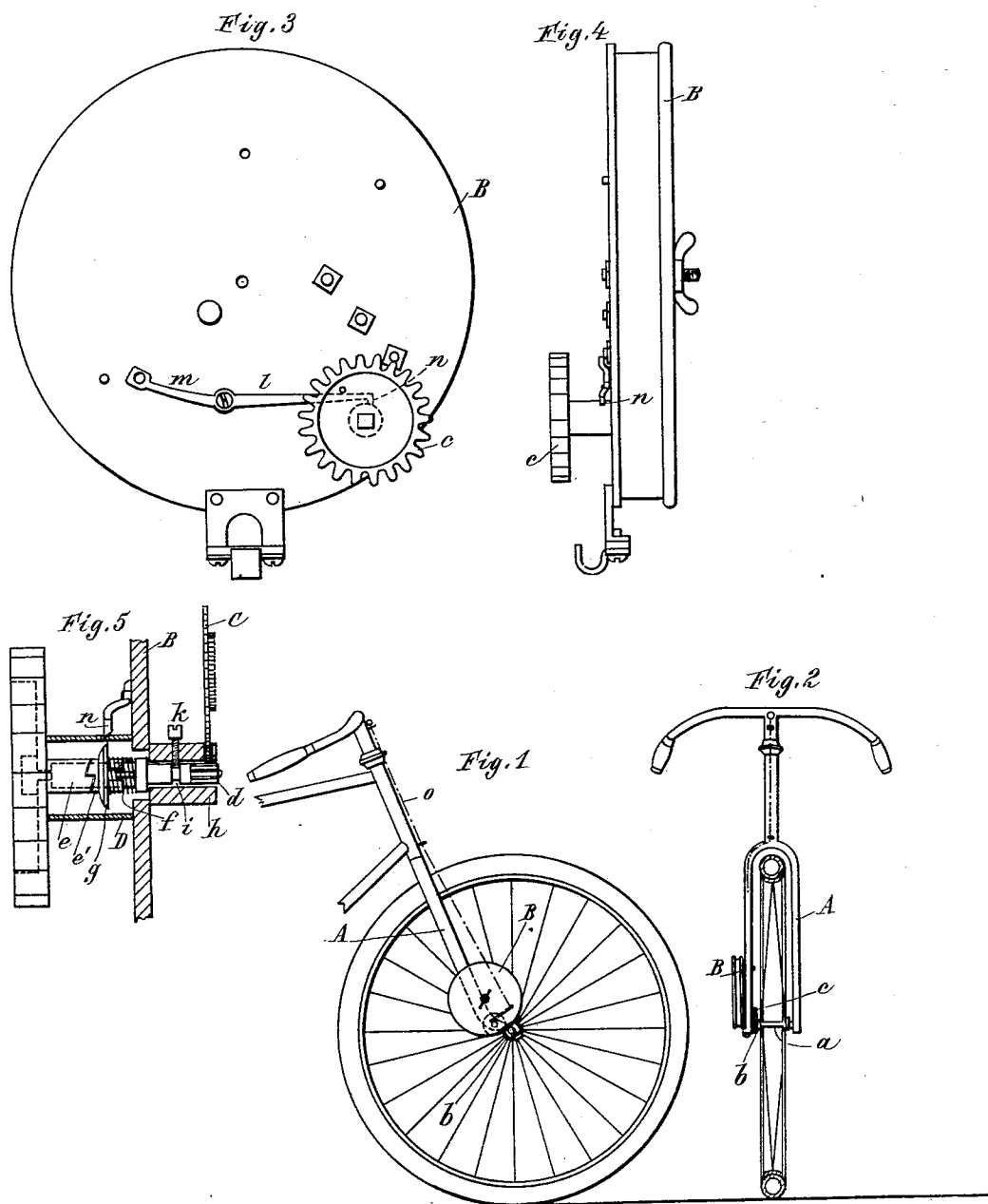


(No Model.)

C. SCHÖNLANK.
BICYCLE ALARM.

No. 593,336.

Patented Nov. 9, 1897.



Witnesses:
Frank S. Ober
Harry Bailey

Inventor:
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by W. M. Rausch
Asso. Atty.

UNITED STATES PATENT OFFICE

CARL SCHÖNLANK, OF HAMBURG, GERMANY.

BICYCLE-ALARM.

SPECIFICATION forming part of Letters Patent No. 593,336, dated November 9, 1897.

Application filed August 25, 1896. Serial No. 603,859. (No model.)

To all whom it may concern:

Be it known that I, CARL SCHÖNLANK, banker, of 14 Holstenplatz, Hamburg, in the Empire of Germany, have invented Improvements in Cycles, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to cycles; and it consists, essentially, in that a mechanical musical instrument fixed to the cycle is adapted to be operated by the rotation of the wheel. It is preferable to employ that class of mechanical musical instruments which are provided with rotating circular music-sheets, so that the rotary motion of the wheel can be conveniently transmitted to the music-sheet.

The principle of this invention may be carried out in various ways.

Referring to the accompanying drawings, Figure 1 is a view in side elevation of the front portion of a cycle, to the front fork of which is attached the musical instrument. Fig. 2 is a vertical section through the axle of the wheel. Figs. 3 and 4 are a rear elevation and a side elevation, respectively, of the musical instrument; and Fig. 5 shows the details of the coupling apparatus on a larger scale.

Throughout the views similar parts are marked with like letters of reference.

To the front-wheel fork A there is attached in any suitable manner the mechanical musical instrument B, which comprises in its interior a rotating circular music-sheet C. By the rotation of the music-sheet C, which is suitably perforated by punching in the usual manner, the reed-comb of the musical instrument is "plucked," and thus the piece of music is rendered audible.

In order to cause the musical instrument to play when the cycle is traveling forward and to prevent the musical instrument from playing when the cycle is moving backward, there is provided a coupling apparatus or clutch, which I shall now proceed to describe more fully. This clutch serves to enable the musical instrument to be placed out of operation at will during the forward movement of the cycle—that is to say, to prevent the instrument from playing. On the axle of the front wheel there is arranged, as shown in Fig. 2, a toothed wheel *b*, with which engages

a toothed wheel *c*, that is connected to the clutch, so that the toothed wheel *c* will always rotate while the cycle is traveling. The axle of the toothed wheel *c* is adapted to be rigidly connected by means of the aforesaid clutch with the axle of the toothed wheel *d*, which engages with the toothed rim of the music-sheet C. The aforesaid clutch consists of a part *e*, which is provided with ratchet-teeth and is fixed on the toothed wheel *c*, and of a movable part *e'*, which is provided with corresponding ratchet-teeth and which is always connected to the axle of the small toothed wheel *d*, that rotates in the hollow axle of the toothed wheel *c*. On the part *e'* there is also mounted the sliding disk *g*, acted upon by the spring *f*, which has a constant tendency to keep the teeth of the part *e'* in engagement with the teeth of the part *e*. The bearing *h* is designed for the axle of the small toothed wheel *d* and is arranged on the bottom plate of the musical instrument B. The axle of the small toothed wheel *d* is held so as to be incapable of longitudinal movement in this bearing by means of a screw-stud *k*, which takes into a groove *i* in the axle *d*.

The ratchet-teeth of the clutch parts *e* and *e'* are arranged in such a manner that when the cycle is moving in a forward direction the rotation of the toothed wheel *c* also produces rotation of the small toothed wheel *d*, and consequently also of the circular music-sheet C; but if the cycle moves in a rearward direction the ratchet-teeth of the clutch parts *e e'* slide over each other, while the sliding disk moves with the clutch part *e'* on the axle of *d*. Consequently no rotation of the small toothed wheel *d* can take place, and therefore the musical instrument cannot come into operation.

Now in order to be able to place the musical instrument out of operation at will the following arrangement is provided: As shown in Fig. 3, there is arranged on the bottom of the musical instrument B a double-armed lever *l m*, which takes, with its wedge-shaped head part *n*, into the bearing box or sleeve D of the clutch. If, now, the arm *m* of the double-armed lever *l m* be pulled, the wedge-shaped head *n* of the arm *l* enters the box D and forces with its wedge surface the sliding

disk *g* out of its former position—that is to say, the teeth of the coupling part *e'* move out of engagement with the teeth of the coupling part *e* and the toothed wheel *c* runs idly.

5 For the purpose of actuating the double-armed lever *lm* there is connected to the arm *m* a rod or cord *o*, Fig. 1, for instance, which is led to the handle-bars and is there provided with a suitable handle.

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

In a cycle, the combination with one of the wheels thereof, of a mechanical musical in-

strument mounted adjacent thereto, a toothed wheel on the axle of the cycle-wheel and another toothed wheel on the instrument, in engagement therewith and means whereby the driving connection may be thrown into and out of operative condition.

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

CARL SCHONLANK.

Witnesses:

J. WOHLGENANT,

E. H. L. MUMMENHOFF.