No. 698,335. Patented Apr. 22, 1902.

K. STRAUSS.

COIN FREED GYMNASTIC APPARATUS.

(Application filed Feb. 16, 1901.)

(No Model.) 3 Sheets—Sheet 1.

Fig. 1

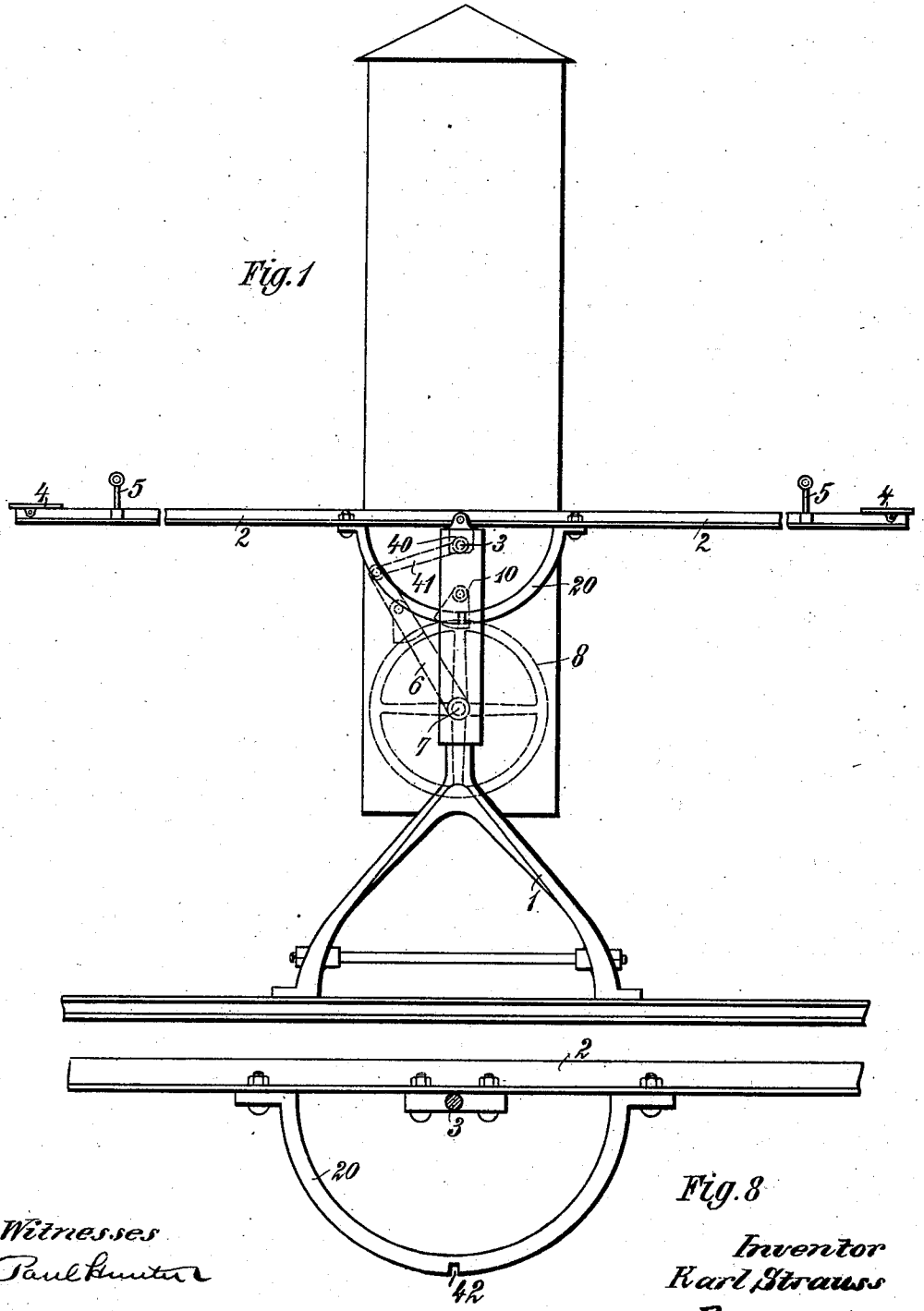


Fig. 8

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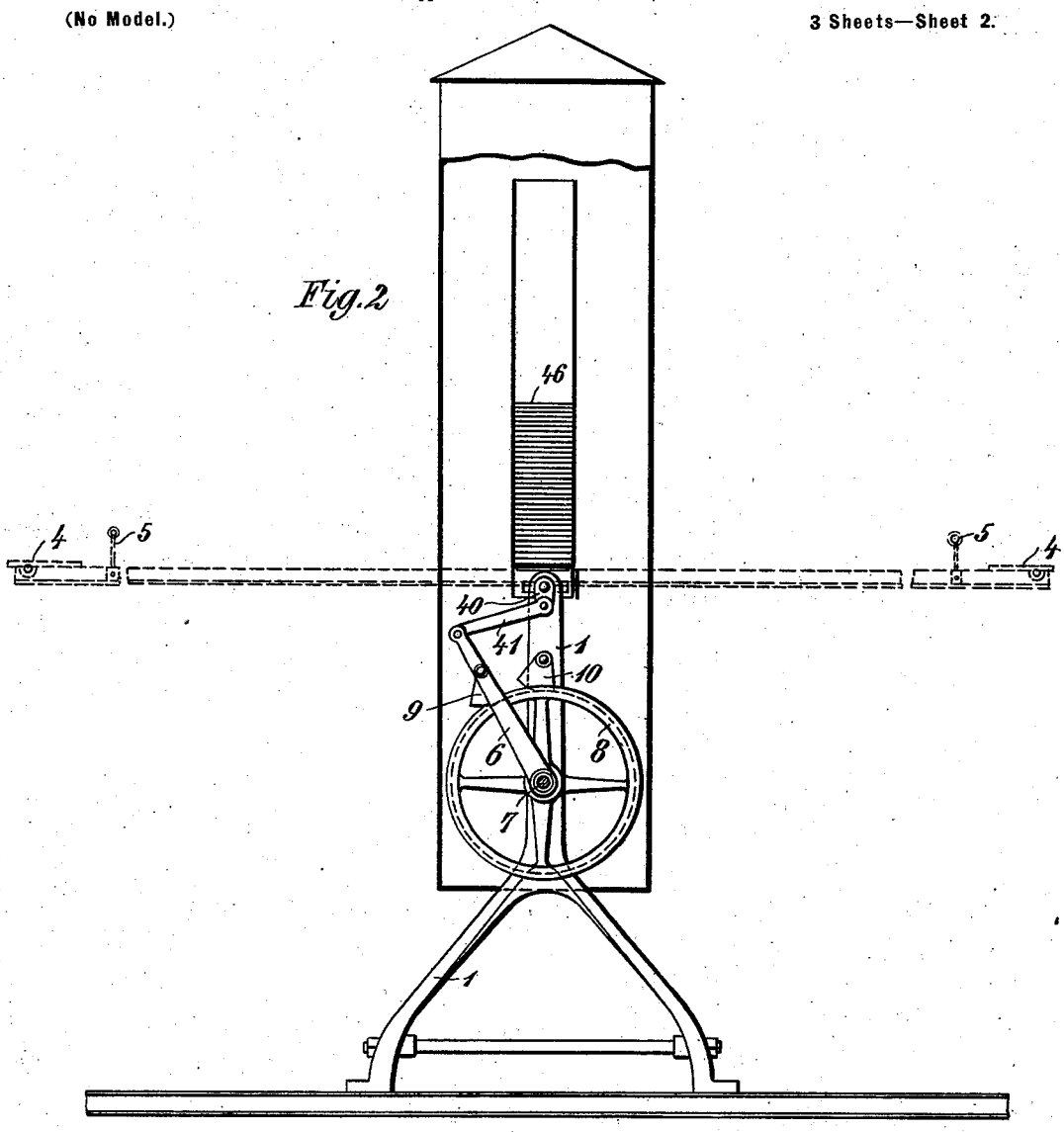
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Fig. 2



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Fig.3

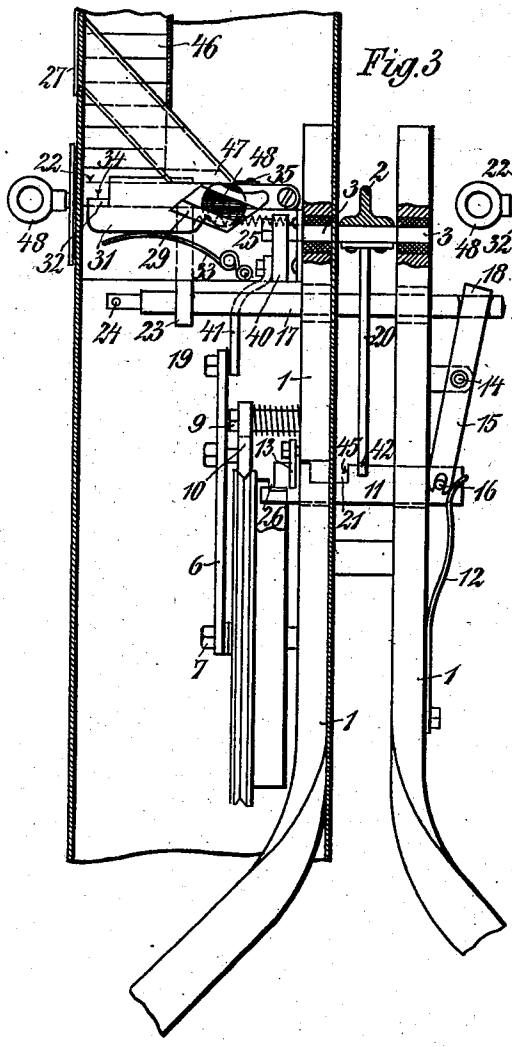
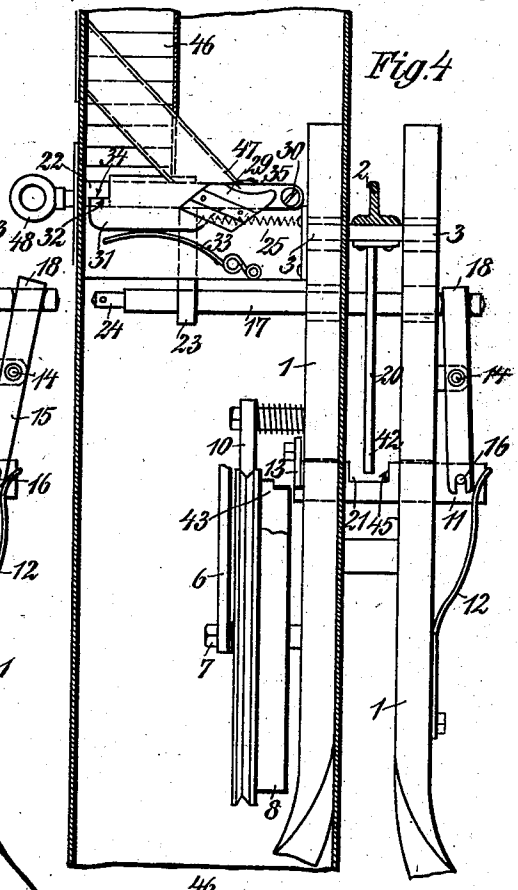


Fig.4



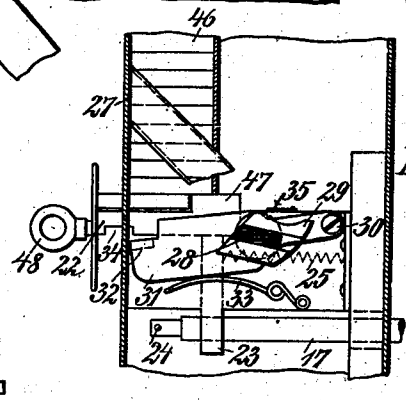


Fig.5

Fig.7

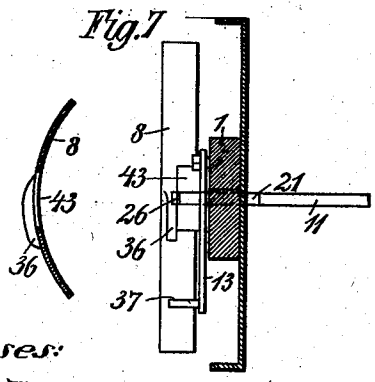
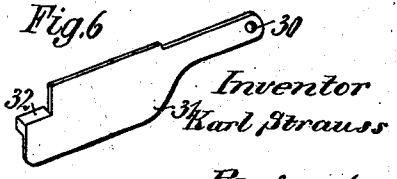


Fig.6



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UNITED STATES PATENT OFFICE.

KARL STRAUSS, OF WIESBADEN, GERMANY.

COIN-FREED GYMNASTIC APPARATUS.

SPECIFICATION forming part of Letters Patent No. 698,335, dated April 22, 1902.

Application filed February 16, 1901. Serial No. 47,586. (No model.)

To all whom it may concern:

Be it known that I, KARL STRAUSS, a subject of the Emperor of Germany, residing at Wiesbaden, in the Empire of Germany, have invented certain new and useful Improvements in and Connected with Coin-Freed Swings or Gymnastic Apparatus, of which the following is a specification.

This invention relates to improvements in coin-freed swings or gymnastic apparatus; and the objects of my improvements are, first, to provide a locking device in connection with the swinging beam for releasing the same on the insertion of a coin and for locking the swinging beam after the use; second, to provide a gearwork for determining the duration of the use after the insertion of the coin in proportion to the number and length of the strokes of the swinging beam and for causing the latter to be locked again, and, third, to provide means for taking up the force of the loads on the swinging beam while the apparatus is locked, whereby these loads are prevented from exercising any influence upon or damaging the locking device and the gearwork. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a front view of the swings or gymnastic apparatus. Fig. 2 is a back view of the same, the casing being partly shown in vertical section. Fig. 3 is a vertical cross-section of the same on the line A B in Fig. 2, the swinging beam being shown as locked. Fig. 4 is a similar vertical cross-section, the swinging beam being shown as released. Fig. 5 is a part of Figs. 3 and 4 comprising the device actuated by the coin inserted; and Figs. 6, 7, and 8 are details which will be referred to later on.

Similar marks of reference refer to similar parts throughout the several views.

The swinging beam 2, Figs. 1 and 2, is mounted on a frame 1 to turn around its shaft 3. This beam preferably consists of an iron rail, to the extremities of which seats 4 and handles 5 are fixed in a suitable manner. To the swinging beam an arc 20 is concentrically affixed, which is provided with a recess 42 in the middle. Across the frame 1 a slide 11 is arranged to slide in either direction and is provided with a recess 21. In the position of the slide 11 shown in Fig. 4 its recess 21 leaves room for the arc 20, so that the swinging beam 2 is allowed to swing under the action of the persons riding on the seats 4 4. In the other position of the slide 11 (shown in Fig. 3) it locks the arc 20 and prevents the swinging beam 2 from being swung, while it takes up all the forces which the persons may try to exercise upon the apparatus. It is the slide 11 which in a manner to be explained afterward is moved in a direction (on the coin being inserted) for releasing the beam 2 and moved in the opposite direction for stopping the beam.

To the shaft 3 of the swinging beam an arm 40 is fastened, which by means of the rod 41 is linked to a lever 6. The latter is loosely mounted on the shaft 7 of a disk 8 and carries an eccentric pawl 9 for engaging with the circumference of the disk 8. Another eccentric pawl 10 is mounted on a bolt affixed to the frame 1. On the beam 2 being swung in one direction the lever 6 will, by the pawl 9, give the disk 8 a rocking advancing movement, while the pawl 10 slides idly on the circumference of the disk 8. On the beam 2 being swung in the other direction the lever 6 will move back, while the disk 8 is stopped by the pawl 10. Thus the one pawl 9 is employed for advancing the disk 8 in the one direction, while the other pawl 10 prevents it from turning in the other direction.

When the disk 8 has made a certain part of a revolution or nearly a complete revolution, it requires to be stopped again to prevent the further use of the apparatus except after the insertion of another coin. For this purpose the slide 11 is pressed against the circumference of the disk 8 by a spring 12, affixed to the frame 1. The disk 8 is provided in its cylindrical part with a recess 43, into which the slide 11 is pushed forward at the proper moment, so that it locks the swinging beam 2 in the manner explained above. On the frame 1 a two-armed lever 15 is mounted to turn around the bolt 14. Its lower arm is linked, by means of the bolt 16, to the slide 11 and its upper arm 18 in a similar manner to a sliding rod 17. Then by the displacement of the arrow 17 in the direction of the rod 19,

Fig. 3, the slide 11 will be displaced in the opposite direction, and thereby withdrawn from the recess 43 of the disk 8, which latter is thus released, Fig. 4.

The mechanism, which is actuated by the coin inserted, is constructed as follows: On the frame 1 a detent 31, Fig. 6, is mounted to turn around the bolt 30. It is pressed upward by the spring 33, so that its nose 32 engages the recess 34 of a slide 22, while the latter occupies the position shown in Figs. 3 and 4. On the detent 31 a casing 29, provided with a slot at the top, is affixed in a slanting position. The slide 22 is provided with a fork 23, gripping over the sliding rod 17, and the latter is provided with a bolt 24, against which the fork 23 may strike for the purpose of taking along with it the sliding rod 17. The coin 28 is introduced at 27 into the money-channel and drops into the casing 29, where it is stopped by a horizontal plate 35, affixed on the upper face of the slide 22, as is shown in Fig. 3. In this position the coin 28 projects a little above the lower face of the plate 35, so that on the slide 22 being drawn out the coin is first revolved a little on the bottom of the casing 29 and then depressed by the plate 35. Thereby also the detent 31 will be depressed and turned downward around the bolt 30, so that it releases the slide 22. This position of the parts is illustrated by Fig. 5. On further drawing out the slide 22 the fork 23 will strike against the bolt 24, and thereby move forward the sliding rod 17, so that the latter by the two-armed lever 15 withdraws the slide 11 from the recess 43 of the disk 8, whereby the swinging beam 2 is set at liberty. In this moment a lever 13, (see Fig. 7,) mounted on the frame 1, drops into the recess 26, Fig. 3, at the end of the slide 11 and locks the latter. When the ring 48 of the slide 22 is released, the latter will be pushed back into the original position by the spring 25, connecting the fork 23 with the frame 1. The parts now occupy the positions illustrated by Fig. 4.

The locking-lever 13 is provided with a bolt 37, which during the use of the apparatus slides on the cylindrical part of the disk 8. When during the oscillations of the swinging beam 2, caused by the persons riding on the seats 4, the disk 8 is intermittently revolved, the bolt 37 of the lever 13 will at last meet with a projection 36 provided on the circumference of the disk, whereby it will be raised. Then the locking-lever 13 will also be moved upward until it releases the slide 11, whereupon the latter is again pushed forward into the recess 43 by the spring 12. Then the swinging beam will be stopped.

As will be evident, the slide 11 on being released by the locking-lever 13 will during the last oscillation of the beam 2 not always at once engage the recess 42 of the arc 20. In such cases the end of the slide 11 will first slide along the arc 20 until it engages the recess 42.

Where it is so preferred, the apparatus may be combined with a device for delivering chocolate tablets or similar eatables, as is illustrated by Figs. 2 to 5. Inside the casing inclosing the several devices a casing 46 is arranged for receiving the eatables. It is open at the top and also at the bottom. The slide 22 is provided with a projection 47 of such size that it will lean against a chocolate tablet and push the same forward on the slide 22 being withdrawn. (See Fig. 5.) In case the size of the eatables should require it the casing 46 may be provided with a bottom which is slotted in the middle to allow of the projection 47 passing freely. The latter may then have arms projecting forward on both sides of the slide 22 to such an extent as to safely engage and shift a piece of the eatables.

The apparatus forming the subject-matter of the present invention works in the following manner: It is supposed that the slide 11 and all connected parts are in the position illustrated in Fig. 3. In order to release the apparatus, a coin 28 is inserted into the money-channel 27. The coin, in combination with the plate 35, allows of the withdrawal of the slide 22 and of the release of the slide 11, the fulcrum 23 pushing against the point 24 and causing the displacement of the slide-rod 17 in the direction of the arrow 19. The displacement of the slide 11 causes the release of the gear-disk 8 and of the beam 2. The slide 11 then is secured in the position illustrated in Fig. 4 by means of the bolt 13. The apparatus is now ready for use until after a certain number of oscillations of the beam the gear-disk is turned around so far that the projection 36 raises the bolt 13, thus effecting an automatic fixing of the disk 8 and of the stopping device connected with the beam 2.

The above-described apparatus can be modified in many respects. The disk 8 and the pawls 9 10, for instance, can be replaced by any other mechanism transforming the oscillating motion of the beam 2 into a rocking advancing motion of a similar registering mechanism.

The release of the slide 22 can be effected by any suitable mechanism. It is not necessary that the sector 20 and the disk 8 are arrested by a common slide 11.

An oscillating arm rigidly connected to the beam 2 can be employed instead of the sector 20.

Having now particularly described and ascertained my invention, I declare that what I claim is—

1. The combination of a swinging gymnastic apparatus, a stopping device for the same, coin-controlled mechanism for controlling the stopping device and a time device connected with the gymnastic apparatus to be driven therefrom for limiting the period of use.

2. The combination of a gymnastic appara-

tus, a swinging beam, a sector connected with the beam, a slide arranged to lock the sector, a time device connected with the slide and operated by the movement of the gymnastic apparatus to limit the period of use of the apparatus, and coin-controlled means for releasing the slide.

3. The combination of a swing, a sector arranged to move in time therewith, a sliding lock for said sector, coin-controlled mechanism for throwing the lock into active position, and time-controlled mechanism for holding the lock inactive.

4. The combination of a swing, a lock for restraining the movement thereof, said lock being normally active, coin-controlled mechanism for releasing the lock, and devices for holding the lock inactive, such devices being periodically actuated from the mechanism of the swing.

5. The combination of a swing, lock devices therefor, such devices being normally active, and coin-controlled mechanism for releasing said lock devices.

6. The combination of a swing, a sliding lock for restraining the movement thereof, such lock being normally active, coin-controlled devices for releasing the lock, and mechanism connected with the swing and driven by the movement thereof, such mechanism serving periodically to return the lock to active position.

7. The combination of a swing, a sector attached thereto, a slide serving to lock the sector, a means pressing the slide normally into active position, coin-controlled mechanism for moving the slide into inactive position, a latch holding the slide temporarily in inactive position, and means driven in time with the movement of the swing, whereby periodically to release said latch.

8. The combination of a swing, a locking device therefor, said device being normally active, coin-controlled mechanism for moving the locking device into inactive position, a latch serving to hold the locking device in inactive position, a cam-wheel actuating the latch periodically to release it, and means including a pawl working on the cam-wheel, said means being in connection with the swing to move in time therewith, whereby to actuate the cam-wheel.

In witness whereof I have hereunto signed my name, this 31st day of January, 1901, in the presence of two subscribing witnesses.

KARL STRAUSS.

Witnesses:
JEAN GRUND,
CARL GRUND.