No. 633,806. Patented Sept. 26, 1899.

H. CIFKA.

BICYCLE STAND.

(Application filed July 11, 1898.)

(No Model.)

Fig. 1.

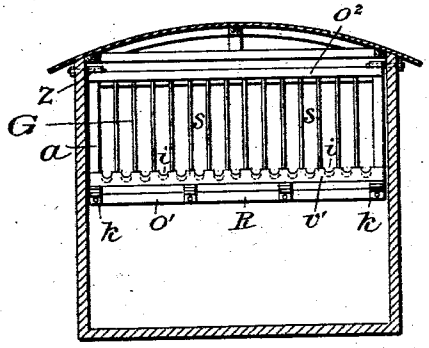


Fig. 2.

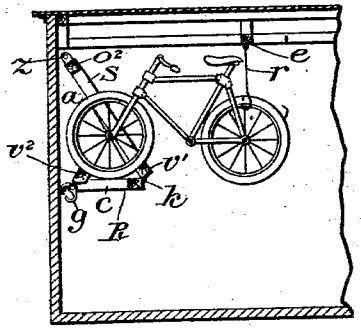


Fig. 3.

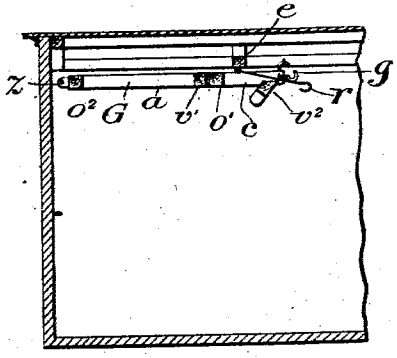


Fig. 4.

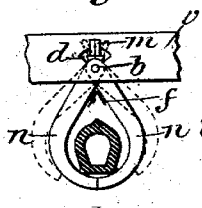


Fig. 5.

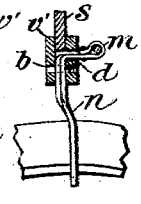
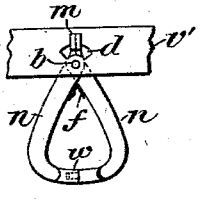


Fig. 6.



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UNITED STATES PATENT OFFICE.

HENRI CIFKA, OF PRAGUE, AUSTRIA-HUNGARY.

BICYCLE-STAND.

SPECIFICATION forming part of Letters Patent No. 633,806, dated September 26, 1899.

Application filed July 11, 1898. Serial No. 685,678. (No model.)

To all whom it may concern:

Be it known that I, HENRI CIFKA, a subject of the Emperor of Austria-Hungary, and a resident of the city of Prague, in the Kingdom of Bohemia, Austria-Hungary, have invented certain new and useful Improvements in Bicycle-Stands, of which the following is a specification.

This invention relates to improvements in bicycle-supports, and has for its object to provide a support which will securely hold and lock the bicycles placed therein and which is especially adapted for use in railway-cars or other places where economy of floor-space is necessary.

In the accompanying drawings, Figure 1 is an end view of my improved stand as applied to a railroad-car, the car-body being in section. Fig. 2 is a sectional elevation of the same, showing a bicycle in place therein. Fig. 3 is a similar view showing the stand in the position which it occupies when not in use. Fig. 4 is an enlarged detail view of the preferred form of locking device shown in clasped or locked position, the position assumed when open being indicated in dotted lines. Fig. 5 is a side elevation, partly in section, of the locking device, showing the preferred method of attaching the same to the support. Fig. 6 shows a slightly-modified form of locking device in front elevation.

Referring to the drawings, G represents a grating, preferably composed of wood, suspended in the upper part of the car by means of pins or rods *z z*, upon which it freely turns. This grating consists of side posts *a a*, a top frame-piece o^2, a bottom piece v', and vertical rods or bars *s s*, suitably mounted therein and dividing the frame into a number of wheel-spaces. One of the longitudinal frame-pieces o^2 or v' of the grating (whichever one may be most convenient, in the construction herein indicated the latter) is formed of two parallel sections secured one on either side of the vertical rods *s*, as represented in Fig. 5. By forming the longitudinal frame-piece in the manner described a space is left between the two sections, in which the locking device is pivotally mounted, as hereinafter described.

R represents a bottom frame connected with the bottom piece v' of the grating G by means of hinges *k* and consisting of end pieces *c* and longitudinal frame-pieces o' and v^2. The bottom piece v' of the grating and the longitudinal bar v^2 of the bottom frame are both provided with deep recesses *i*, which serve to hold the wheels of the bicycles placed in the support.

When the stand is in use, the grating G is placed in an oblique position and the bottom frame R in a horizontal position, the latter being secured at its free end to the car-wall by means of a suitable hook *g* or any other preferred means.

In Figs. 1 and 2 the stand is shown ready for use, and the bicycles are placed therein in such a manner that alternately one bicycle stands with its front wheel in the grating G and the next with its rear wheel therein, the freely-swinging wheel of each bicycle being supported by a hook *r*, secured to a cross-beam *e* of the car. By arranging the bicycles in this manner a large number can be accommodated in a very small space, and at the same time the floor of the car is left free for the storage of trunks or other baggage.

When not in use, the support can be swung to the position indicated in Fig. 3 by unfastening the hook *g*, turning the bottom frame R upon its hinge *k* until its movement is stopped by the engagement of the adjacent faces of the bars v' and o', when the said frame will be in line with and will form a continuation of the grating G, and then turning the whole support upon the pins *z z* until it occupies a position close under the roof of the car and out of the way, as shown in the drawings. The stand is fastened in such position by the hook *g* or any other suitable holding means.

The locking device which forms a part of this invention and is embodied in my bicycle-support consists of two curved clasping arms or pieces *n*, crossed at a point intermediate their ends and pivotally connected together at the point of crossing. The grating G carries a lock of this character between each pair of vertical rods *s s*.

Each device is mounted in the support between the two sections of the double longitudinal frame-piece v' by means of a pin *b*, which also serves as a pivot for the crossed arms *n*. In rear of the pivot the pieces *n* are bent at right angles to the plane of the

clasping-arms and form locking extensions *m*, which project through an aperture *d*, formed for the purpose in one of the sections of the double bar *v'* and are provided at their outer ends with suitable eyes through which the hasp of a padlock may be passed and secured. The opposite or free ends of the arms *n* are preferably provided with registering devices which serve to hold the arms from slipping past each other when in their closed position, one form of such device being shown in Fig. 6, wherein the pin *w* registers with a corresponding recess in the opposing arm. A spring *f* normally holds the clasping-arms apart or in an open position, so that the rim of the wheel can be readily introduced between the said arms.

By crossing the arms of the locking device and arranging it in the supporting-frame as above described several desirable results are obtained. The position of the padlock or other securing means is entirely outside of the wheel-rim and sufficiently removed from every part of the bicycle to enable the person using it to operate the lock without having his movements hampered by the proximity of the bicycle-wheel or his hands soiled by contact with the same. This construction also affords a ready means for closing the spring-held clasping-arms *n* about the wheel-rim by simply pressing together the crossed extensions *m*, which may be easily done with one hand, leaving the other hand free to manipulate the padlock.

I prefer that the locking device should be applied in the present instance to the longitudinal frame-piece *v'* of the grating G, when, as can be readily seen, the locking extensions would project from the front of the said frame-piece in such a position that the padlock carried thereby could be easily reached and quickly manipulated. It is not to be understood, however, that I limit myself to this precise construction, as the double bar, carrying its locking devices, might be arranged to engage with other parts of the wheel, and suoh positions will readily suggest themselves.

What I claim, and desire to secure by Letters Patent, is—

1. In a bicycle-stand, a support for one wheel comprising a depending grating, a horizontal bottom frame pivotally connected thereto, and detachable connections for uniting the free end of said bottom frame with a fixed support, combined with means for supporting the other wheel of the bicycle, substantially as set forth.

2. In a bicycle-stand adapted for use in railway-cars, a support for one wheel of a bicycle comprising a depending grating pivoted at its upper end, a horizontal bottom frame hinged thereto and adapted to be detachably connected with the wall of the car at its free end, whereby the support may, when not in use, be swung to a position close against the roof of the car, and means for securing the said support in such position, combined with means for supporting the other wheel of the bicycle, substantially as set forth.

3. In a bicycle-stand, a support for one wheel of a bicycle, comprising an inclined, depending grating pivoted at its upper end, a horizontal bottom frame hinged thereto and detachably connected to a fixed support at its inner end, whereby the bottom frame may be moved to a position in the same longitudinal plane as the grating, so as to form a continuation thereof, and the whole may be swung to a substantially horizontal position, combined with means for supporting the other wheel of the bicycle, substantially as set forth.

4. A bicycle-support provided with a longitudinal frame-piece composed of two parallel sections, one of which is provided with apertures, *d*, and a locking device consisting of two curved clasping members pivotally supported between the two sections of the said longitudinal frame-piece and having locking extensions extending beyond the pivot and arranged to project through the said apertures, *d*, whereby the said extensions may be locked together, substantially as set forth.

5. A bicycle-support provided with a grating having a longitudinal frame-piece composed of two parallel sections, one of which is provided with apertures, *d*, and a locking device mounted between the said sections and consisting of two curved clasping-pieces, *n*, pivoted together intermediate their ends and having locking extensions, *m*, extending beyond the pivot and bent at right angles to project through the said openings, *d*, and locking means for uniting the said extensions, *m*, substantially as set forth.

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

HENRI CIFKA.

Witnesses:
HUGO DONZELMANN,
MILORLOV HENBY.