

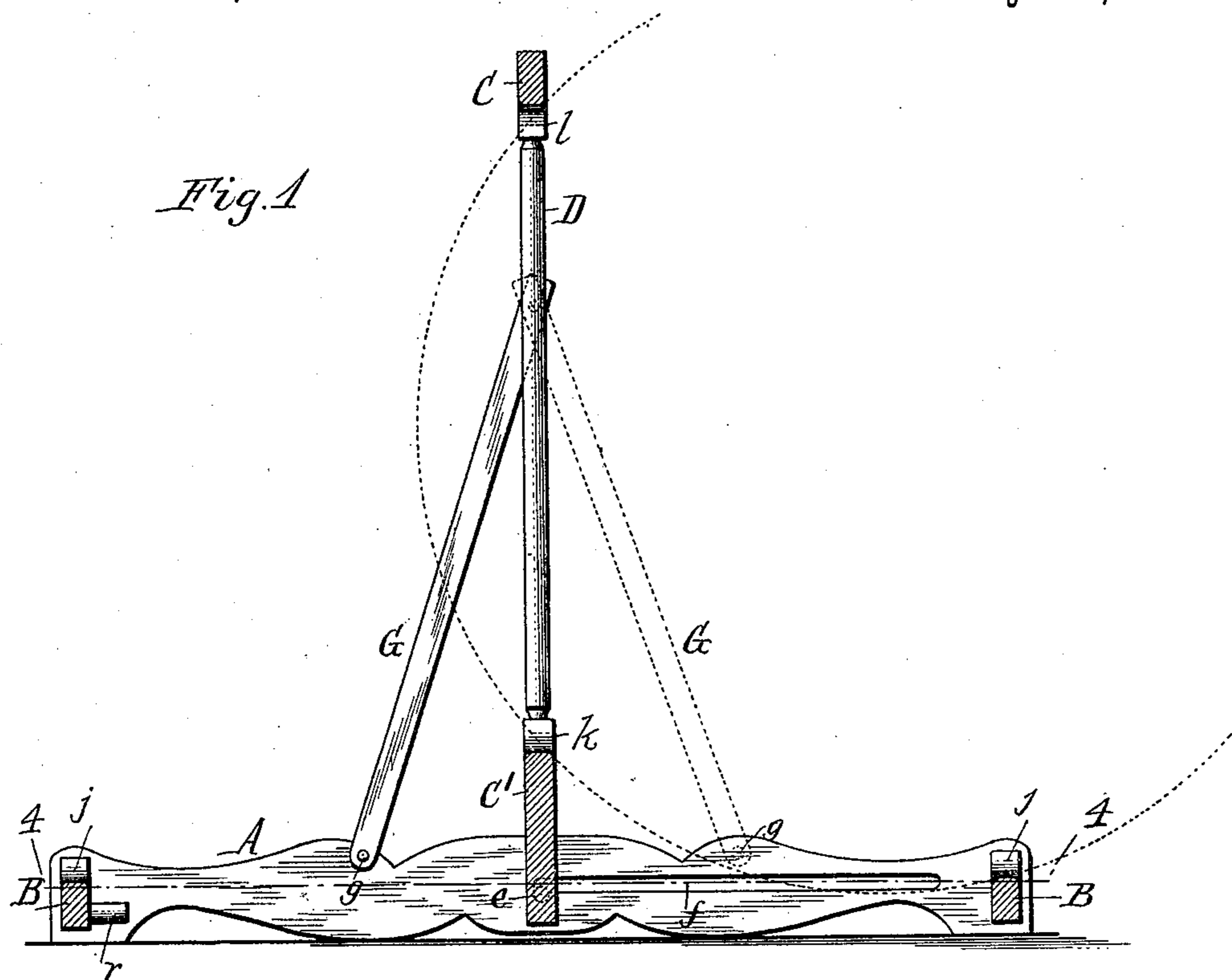
(No Model.)

2 Sheets—Sheet 1.

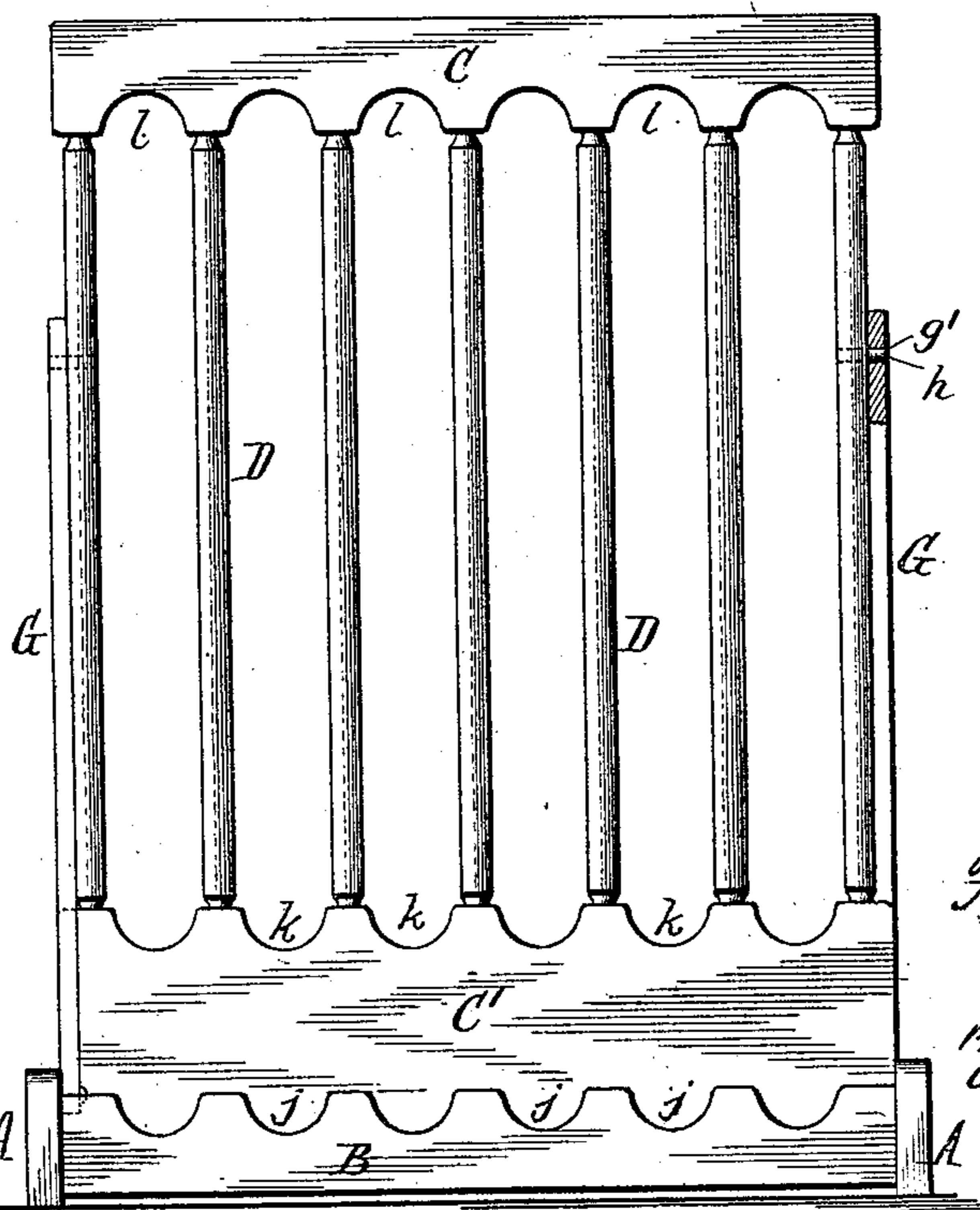
F. X. HEIN.  
BICYCLE RACK.

No. 587,147.

Patented July 27, 1897.



*Fig. 2.*



WITNESSES:

*Chas. F. Burkhardt*  
*Henry L. Deck*

INVENTOR.

ATTORNEYS.

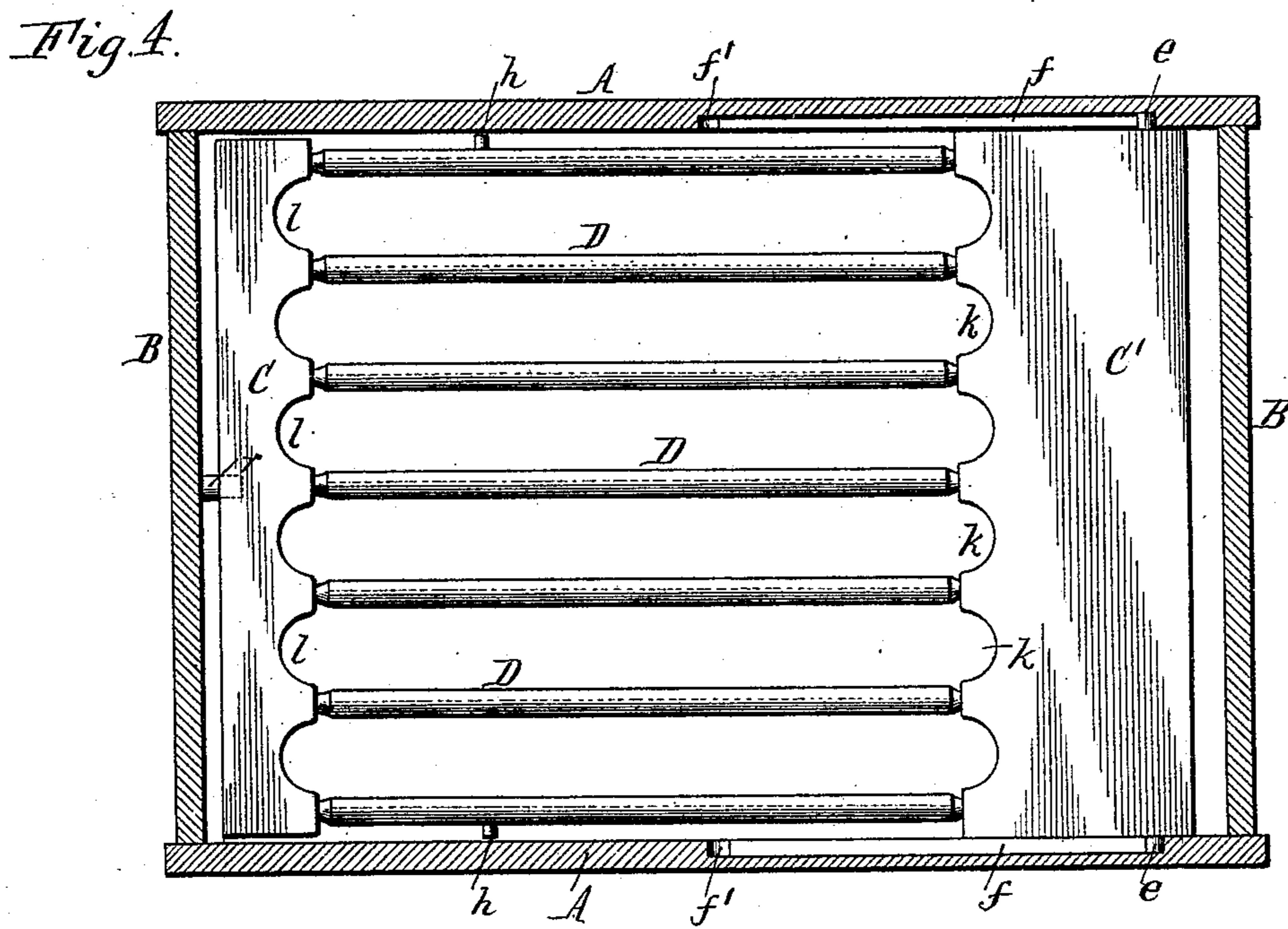
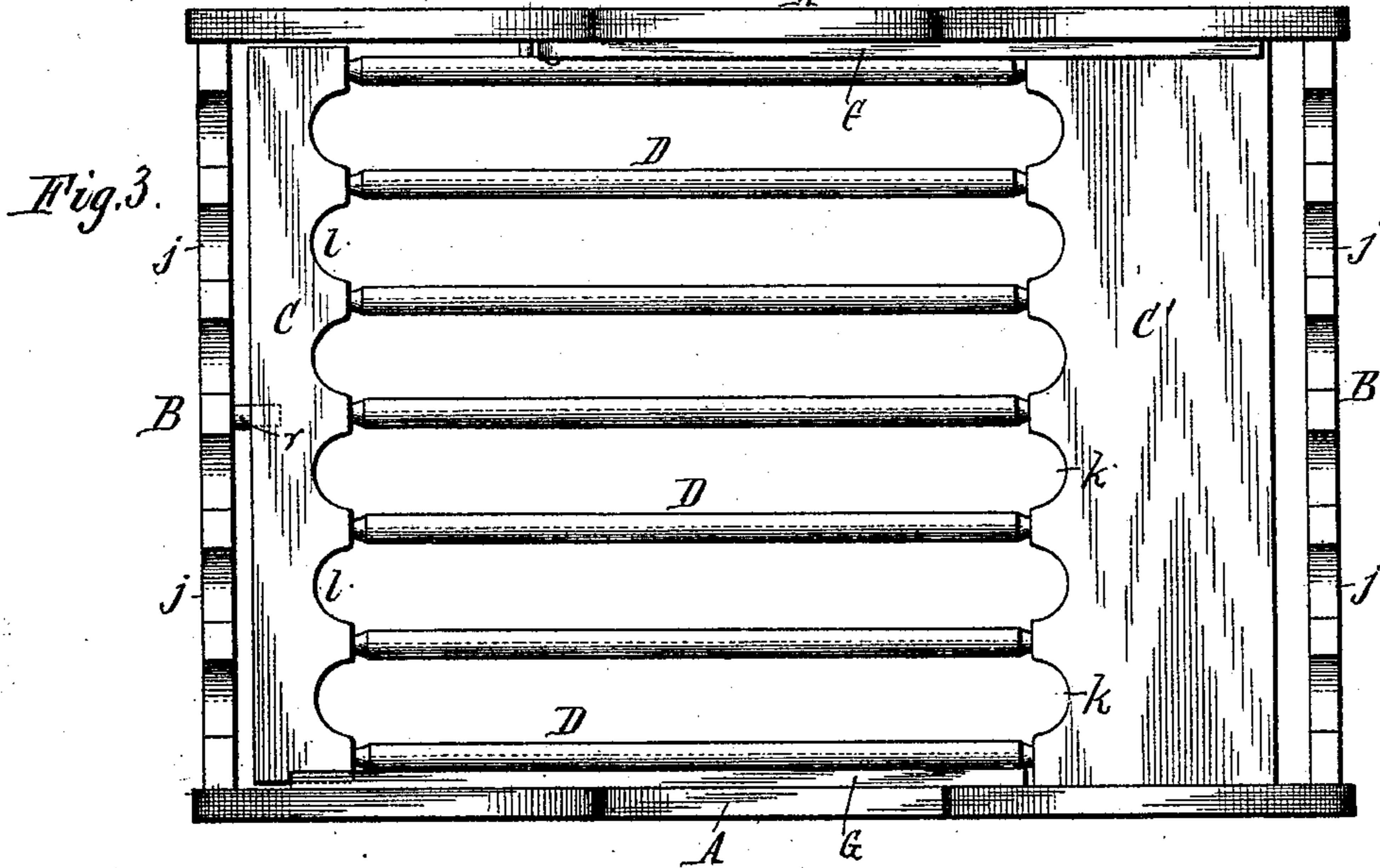
*F. X. Hein*

*Wm. Wilhelm Hornum*

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*Chas. F. Burkhardt.*  
*Henry L. Deck.*

*F. X. Hein* INVENTOR.

*By Wilhelm P. Pinner*

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# UNITED STATES PATENT OFFICE.

FRANK X. HEIN, OF BUFFALO, NEW YORK.

## BICYCLE-RACK.

SPECIFICATION forming part of Letters Patent No. 587,147, dated July 27, 1897.

Application filed July 20, 1896. Serial No. 599,796. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK X. HEIN, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Bicycle-Racks, of which the following is a specification.

This invention relates to the racks or supports employed in front of stores or in other public places for supporting bicycles, and more particularly to racks of this kind which comprise, essentially, a base and an upright frame supported thereon and composed of a series of separated vertical rods or bars between a pair of which one of the wheels of the bicycle is placed, so that the bars prevent overturning of the machine.

The object of my invention is the production of a rack of this character which can be folded into a small compass when not in use, so as to facilitate its transportation and reduce the shipping-charges and also enable the device to be compactly stored.

In the accompanying drawings, consisting of two sheets, Figure 1 is a longitudinal sectional elevation of my improved rack, showing the same unfolded. Fig. 2 is an end or face view thereof in the same condition. Fig. 3 is a top plan view of the rack, showing the same folded. Fig. 4 is a horizontal section thereof in the same condition, the plane of section being in line 4 4, Fig. 1.

Like letters of reference refer to like parts in the several figures.

The base-frame of the rack preferably consists of a pair of horizontal side bars A and end bars B, which connect the side bars.

The upright wheel-supporting frame of the rack, which is attached to this base-frame, is preferably composed of transverse top and bottom boards or bars C C' and upright rods or bars D, connecting said boards and separated by spaces, each of which is of sufficient width to receive one of the wheels of a bicycle. This upright frame is pivoted at its lower end to the base in such a manner as to be capable of folding between the side bars of the base, as shown in Figs. 3 and 4. In the construction shown in the drawings this is accomplished by providing the upright frame at its lower end with pivots or journals e, extending laterally from the ends of the bottom

board and entering longitudinal grooves or ways f, formed in the inner sides of the side bars A. These grooves extend from about the middle of the side bars toward one end thereof and are provided at their inner ends with bearings, notches, or depressions f', which receive the journals of the folding frame, whereby said journals are retained at the inner ends of the grooves.

G represents a pair of inclined folding braces whereby the wheel-supporting frame is held in its normal upright position. These braces are arranged at opposite sides of the folding frame and on the front and rear sides of the same, respectively. They may be pivoted at one end to either of the two parts of the rack and detachably connected at their opposite end to the other part thereof; but each brace is preferably pivoted at its lower end to the inner side of the adjacent side bar of the base, as shown at g, and provided near its upper end with an opening g', which engages with a pin or stud h, projecting laterally from the end bars of the folding frame, the brace having sufficient elasticity or being fitted loosely to permit its opening to spring over said stud.

When the rack is unfolded, the journals e of the upright frame are seated in the notches f' of the grooves f, and the frame is firmly held in position by the braces G. When it is desired to fold the rack, the upper free ends of the braces G are disengaged from the upright frame, folded down beside the side bars of the base, and the upright frame, which is now released, is folded down into the open base-frame, as shown in Figs. 3 and 4. The folded frame is then slid lengthwise on the base-frame in the proper direction to move its journals toward the outer ends of the grooves or ways f, as shown, thereby not only folding the frame, but also shifting it lengthwise thereon. The grooves f of the base-frame are made so long that the folded frame can be slid lengthwise sufficiently to bring it wholly within the dimensions of the base, thus preventing the same from projecting beyond one end of the base, which would be the case if the frame were pivoted permanently to the middle of the same. The base is preferably made of the proper length and width to permit the upright frame to enter between

its side and end bars, as shown in Figs. 3 and 4, thus rendering the rack very compact when folded. The wheel-supporting frame when folded is supported at its free end upon a pin or stop *r*, projecting inwardly from the adjacent end bar of the base.

In unfolding the rack the pivoted supporting-frame is drawn lengthwise on the base until its journals enter their seats at the ends of the grooves *f*. The frame is then swung into its upright position, and the braces *G* are finally unfolded and interlocked with the studs *h* of the frame.

A bicycle is supported in the rack by placing one of its wheels between a pair of the rods *D* of the upright frame, the wheel resting upon the bottom board *C'* of the upright frame and the adjacent end bar *B* of the base, while its upper portion rests against the lower edge of the top board *C* of said frame, as shown by dotted lines in Fig. 1. The rack shown in the drawings has retaining-spaces for six bicycles, three machines being placed on one side of the upright frame and three on the other and the wheels on opposite sides of the rack being adapted to alternate.

In order to more reliably retain the bicycles in position in the rack, the end bars *B* of the base-frame and the bottom board *C'* of the upright frame are provided in their upper sides with semicircular notches or seats *j* *k*, respectively, and the top board *C* is provided in its lower edge with similar notches or seats *l*,

these several sets of seats coinciding with the spaces of the upright frame. By this construction the wheel of each bicycle which rests in the rack is confined at three points by the notches or seats *j*, *k*, and *l* of the rack, thus effectually preventing the bicycles from slipping laterally against each other. The notches of the end bar alone will resist slipping of the wheels, but the upper and lower bars of the upright frame are also preferably notched, as shown, to more reliably hold the wheels.

I claim as my invention—

A bicycle-rack comprising a base-frame having the sides and the cross-pieces at the ends thereof, said sides being grooved longitudinally of their inner faces from their central portion to near one end, a single wheel-holding frame adapted to coact with each cross-piece to form a holding-rack therewith, said frame having a sliding connection with the base-frame in the grooves of the side pieces and folding means for determining the upright position of the holding-frame with respect to the base-frame whereby the holding-frame will be reared and held centrally thereof, or may be folded entirely within the base-frame when not in use, substantially as described.

Witness my hand this 16th day of July, 1896.  
FRANK X. HEIN.

Witnesses:

JNO. J. BONNER,  
ELLA R. DEAN.