No. 648,402. Patented May 1, 1900.

G. HAARMANN & L. DERICHS.

BICYCLE STAND.

(Application filed Jan. 25, 1900.)

(No Model.)

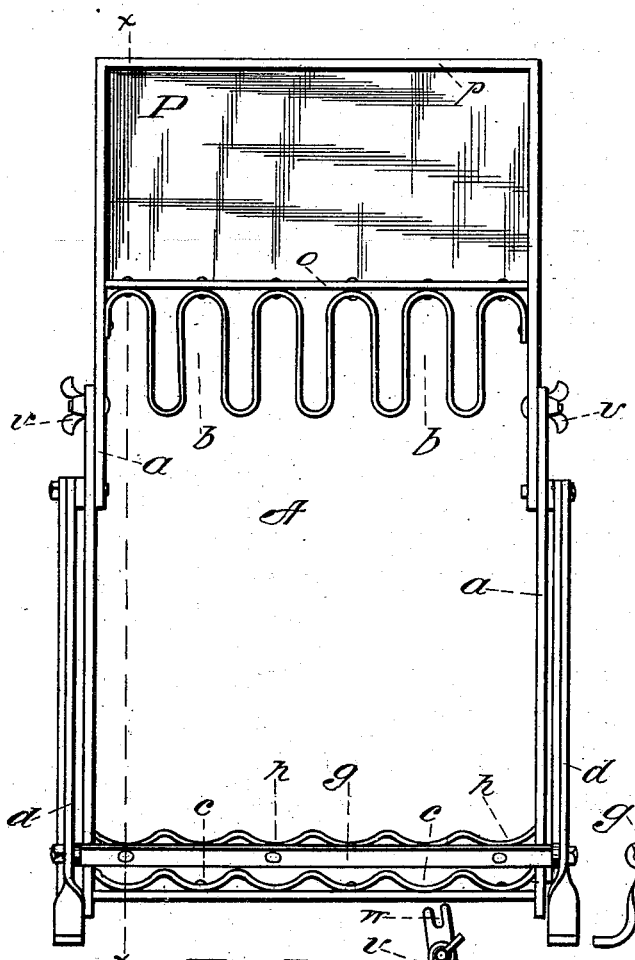

Fig I,

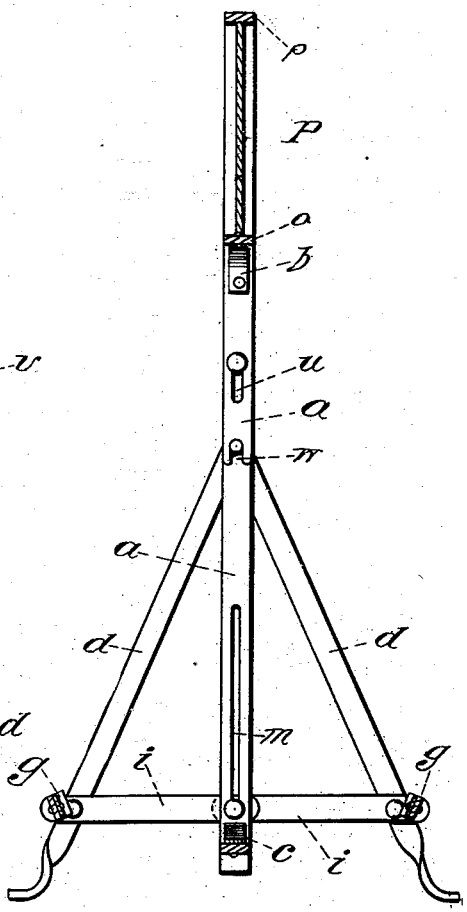

Fig II,

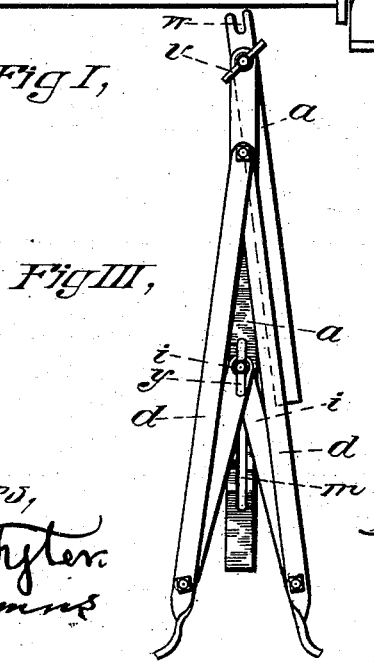

Fig III,

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

GUSTAV HAARMANN AND LAMBERT DERICHS, OF HOLYOKE, MASSACHUSETTS.

BICYCLE-STAND.

SPECIFICATION forming part of Letters Patent No. 648,402, dated May 1, 1900.

Application filed January 25, 1900. Serial No. 2,759. (No model.)

To all whom it may concern:

Be it known that we, GUSTAV HAARMANN and LAMBERT DERICHS, residing at Holyoke, county of Hampden, and State of Massachusetts, have invented certain new and useful Improvements in Bicycle-Stands, of which the following is a specification, reference being had to the accompanying drawings.

Our invention relates to a bicycle-stand adapted to fold from its operative position to occupy a small space and be thereby easily portable, so that it can be readily removed from a place out of doors to the inside of the house for its preservation and can be shifted without trouble from place to place, as may be needed; and the invention consists in the combination and arrangement of parts, as hereinafter described, and more particularly pointed out in the claims.

Our invention is fully illustrated in the accompanying drawings, in which—

Figure I is an elevation of one face of the device; Fig. II is an inside elevation of one end of the device and on the dotted line *x x* of Fig. I, and Fig. III is an outside end elevation of the device folded.

Referring to the drawings, A is a frame, in a vertical plane when the device is in an operative position and comprising two side pieces *a a*, forming hinged sections, as hereinafter described. A top having dependent therefrom in the plane of the frame a series of sockets *b*, adapted to receive and hold the top of a bicycle-wheel, and a bottom piece seating a series of sockets projecting upward in the plane of the frame and adapted to receive and seat at one point in its periphery the bottom of a bicycle-wheel. These sockets *c* are alined with the ones *b*, and the distance between them is adapted to take in a wheel and support it in an upright position.

Hinged to the sides *a a* of frame A at opposite points and at their ends are legs *d d*, which, being provided on their free ends with feet, extend downward and outward on each side of frame A and support it above the ground. The pair of legs on each side of frame A are connected at their free ends together by a transverse bar *g*, seating a series of sockets *h*, for holding a wheel resting in one, each socket being in line with a socket *b* and *c*, and the bar *g* when the device is in operative position, as seen in Figs. I and II, while holding its sockets parallel to the ones *c*, is above the bottom of frame A, so that sockets *c* and *h* form points of contact with a wheel whose top is pushed into one of the sockets *b*. Braces *i*, hinged at their outer ends to the legs *d d*, have each an end hinged to the frame side *a*, so that, as seen, there are two braces to each end of the device. The bolt forming the hinge-joint for contiguous ends of braces *i* with frame side *a* passes freely through an elongated slot *m* in side *a* and is provided with a thumb-nut *y* for compressing or releasing the ends of the braces between it and the head of the bolt bearing on the inside of side *a*, so that the legs may be clamped in their fully-extended position or at any point intermediate to that and their folded position. When the legs are opened to their full extent to support the device, the braces, as seen more particularly in Fig. II, are prolonged in a horizontal straight line, with the hinge-bolt of their joined ends resting on the bottom of slot *m*. The legs thus held by the braces on a center can neither be pushed together nor further extended, and a firm support is assured for the stand. When it is desired to fold the device, by loosening the thumb-nut *y* the bolt hinging the ends of the braces can be slid up to slot *m* to carry the brace ends with it and cause the legs to fold, as shown in Fig. III. Without any provision for further compressing or folding the parts this folding of the legs would much improve the portability of a stand and enable it to be stored in comparatively small space when not in use; but to still further reduce its dimensions for purposes of transportation and storing the upper half of frame A is formed to fold against the other folded portions, as shown in Fig. III, as follows: The frame A is made in two sections, the sides *a* of the upper section fitting within and being overlapped by the sides of the lower section. At the top of the lower section a bolt passes through said end and through an elongated slot *u* in the contiguous side of the upper section, where a head of the bolt bears upon each side of slot *u*, and a thumb-nut *v* upon the bolt bears upon the outside of the lower

section. The pin forming the joint common to the legs *d d* is prolonged inwardly through side *a* of the lower section a distance equal to the diameter of side *a*, and a socket *w* is formed in the free ends of the sides of the upper section to pass over and partially inclose the projecting pin ends of the leg-joint. This construction is shown more particularly in Fig. II, and it will be seen that while the upper end of slot *u* is resting on the hinge-bolt the socket *w* is resting upon the joint-pin of the legs and the two sections of frame A are held in prolongation of each other, and that when the compressing thumb-nut that prevents any sliding of one section upon the other when tightened is loosened the upper section of frame A is free to be slid upward to release its socket ends from the pins seating them, and thus permit the upper section to be swung down on hinges to the position shown in Fig. III and make of the entire stand a compact bundle easily lifted by one person to be transported.

As an essential top piece to frame A to support the sockets *b*, the transverse piece *o* is sufficient; but the sides *a a* are extended above to, with a top rim *p*, inclose a bulletin-surface P, which is very useful upon which to post directions for use of the device and also as an advertising medium where the device is used in the front of halls, restaurants, and road-houses.

In practice the entire framework is formed of metal, as affording the most desirable weight combined with strength, the socket-pieces being each of one piece of strap, bent to shape and riveted to the transverse bars seating them.

As shown in the drawings, contiguous sockets are too close together to permit them to hold two wheels upon the same face of the device, owing to the interference of the pedals; but by skipping one socket every other one can be utilized on one face, so that in the stand illustrated six wheels could be held, three on each face of the device.

Now having described our invention, what we claim is—

1. A bicycle stand or frame, comprising two slotted side pieces, a top frame hinged to said side pieces so as to turn down if desired, and having a series of depending sockets to separate the wheels, legs hinged to the top of the slotted frame-pieces and connected by cross-bars at their lower ends and having sockets for the wheels, and braces hinged to the legs near the bottom and connected to pins passing through the slots in the side pieces, all combined substantially as described so that the stand may be folded or extended, substantially as described.

2. A bicycle frame or stand having a top piece provided with sockets, slotted side pieces connected to each end of the top piece, legs hinged to the upper part of the slotted side pieces and connected near their lower ends with bottom pieces having sockets as described, and braces hinged at their outer ends to the legs, each pair of braces connected at their inner ends to a clamping device passing through the slot in the side piece to which the braces adjoin, all combined substantially as described.

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