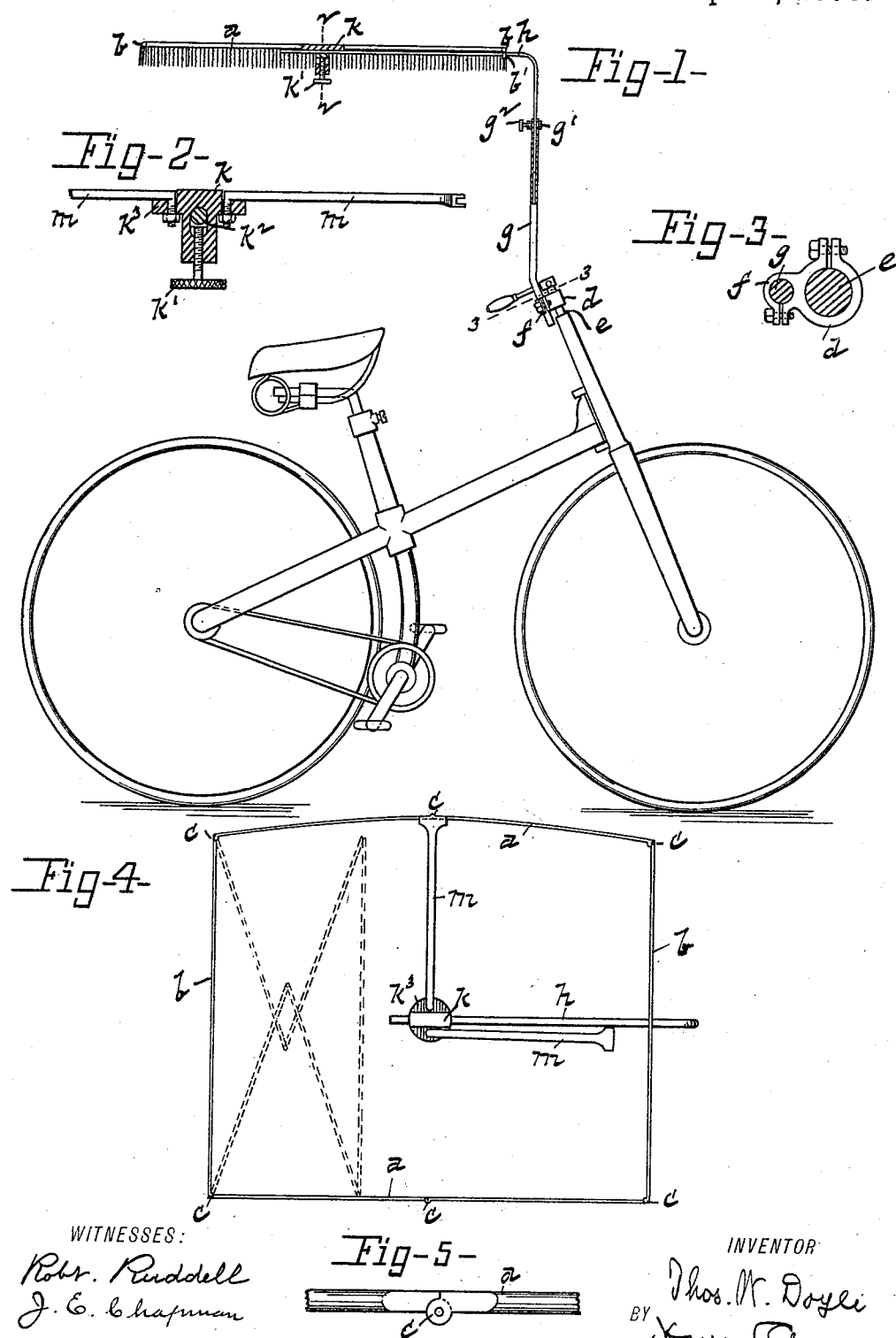


(No Model.)

T. W. DOYLE.  
CANOPY ATTACHMENT FOR VELOCIPEDES.

No. 494,556.

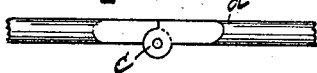
Patented Apr. 4, 1893.



WITNESSES:

Robt. Riddell  
J. E. Chapman

Fig-5-



INVENTOR

Thos. W. Doyle  
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# UNITED STATES PATENT OFFICE.

THOMAS W. DOYLE, OF HOLYOKE, MASSACHUSETTS.

## CANOPY ATTACHMENT FOR VELOCIPEDES.

SPECIFICATION forming part of Letters Patent No. 494,556, dated April 4, 1893.

Application filed March 16, 1892. Serial No. 425,090. (No model.)

### *To all whom it may concern:*

Be it known that I, THOMAS W. DOYLE, of Holyoke, in the county of Hampden and State of Massachusetts, have invented a new and useful Improvement in Canopy Attachments for Velocipedes, of which the following is a specification, reference being had to the accompanying drawings, forming part thereof.

My invention relates to canopy devices adapted to be attached to velocipedes for the purpose of shielding the rider from the sun's rays, and it has for its object to provide a device for this purpose which will be of but slight weight; which can be very quickly and easily attached to and removed from the machine; which will present practically no opposing surface to the wind; and, which can be folded, when not in use, into compact form and readily carried upon the machine.

To these ends, my invention consists in the canopy attachment for velocipedes constructed and operating as hereinafter fully described and particularly pointed out in the claims.

Referring to the drawings, in which like letters designate like parts in the several figures, Figure 1 is a side elevation, partly in section, of a bicycle equipped with a canopy attachment embodying my invention. Fig. 2 is a cross-section of the central portion of the attachment, taken upon line 2—2 of Fig. 1. Fig. 3 is a cross-section of the means for clamping the attachment to the steering post, taken upon line 3—3 of Fig. 1. Fig. 4 is a top plan view of the canopy frame, with the cloth removed and one of the center braces swung to its inoperative position, said figure also representing by broken lines the position taken by the sides and ends of the frame when the same is folded together. Fig. 5 is an enlarged view of one of the hinged joints of the frame.

The frame proper of the attachment is composed of two side pieces *a a*, and two end pieces *b b*, which are connected together at their ends by hinge-joints *c*, the two side pieces being also divided midway between their ends and united by similar joints *c*, one of which joints is shown enlarged in Fig. 5. Said frame, when in its open position, is substantially rectangular in shape, and is de-

signed to be flat or very nearly so. It will be covered with a suitable quality of lightweight cloth, as represented in Fig. 1, and the preferred means for attaching it to the machine are as follows:

The letter *d* designates a split collar adapted to embrace the steering post of the machine, designated by the letter *e*, and having a locking screw whereby it can be tightened about said post, said collar having at one side thereof a split socket *f*, provided with a similar locking screw, which socket receives the lower end of a standard *g*, preferably composed of a light steel tube and having a bend therein near its lower end, as shown, to cause its upper portion to occupy a vertical position.

The letter *h* designates a light steel rod, bent at a right-angle, one part of which rod enters the tubular standard *g* and is rendered vertically adjustable therein by a clamping collar *g'* and screw *g''*, which screw and collar serve to compress the upper end of the standard upon said rod and rigidly hold the latter in position. The other part of said rod *h* enters a center-piece *k*, which has a vertically elongated socket to receive the same, and a set-screw *k'* entering said socket to bear against the rod, preferably through an interposed follow-block *k''*, swiveled to said screw and lock the center-piece securely upon the rod. Said center-piece is provided near its upper end with a circular flange *k'''*, and within said flange, upon opposite sides of the center-piece, are made holes to receive the bent ends of the two center-braces *m*, which ends are threaded to receive a nut below the flange, as shown in Fig. 2, whereby said braces are securely fastened to the center-piece in such manner as to be capable of a swinging movement laterally, but are firmly supported vertically. Said braces have their outer ends forked as shown to cause them to embrace the side pieces of the frame when moved into engagement therewith. One of the end pieces *b* of the frame is provided, midway between its ends and upon its lower side, with a loop *b'*, see Fig. 1, to embrace the rod *h*, and, in securing the extended frame to said rod, the latter is thrust first through said loop and then through the socket in the center-piece, after which said center-piece is securely

clamped to the rod by its set-screw. The center-braces are then swung to a position at a right-angle to the rod, whereby their forked ends are caused to embrace the side pieces of the frame at the point where the hinges *c* are located in the latter, slightly bowing said side pieces outwardly, as represented in Fig. 4. Said braces are thus caused to not only afford a rigid support to the frame vertically, but, by bearing against the side pieces upon both sides of the hinge joint therein, they rigidly hold the frame against collapsing horizontally, and render the entire frame rigid. When thus attached to the machine the canopy effectually shields the rider from the rays of the sun, and adds greatly to the pleasure of riding the machine on a warm day. Being flat and sustained in a horizontal position, the canopy presents no obstructing surface to the wind and, therefore, does not at all interfere with the steering of the machine or impede its movement, and being of a light and graceful form it adds to rather than detracts from the appearance of the machine.

To fold the canopy frame together it is necessary simply to swing the center-braces to a position parallel with the rod *h* and swing the side pieces inwardly, as represented by broken lines in Fig. 4, thereby drawing the end pieces toward each other, and continuing said movement until the end pieces are brought close together and the frame is reduced to a very compact form. The frame thus folded can then be swung down to a position parallel with the standard *g* and secured to the latter, without disconnecting the loop *b'* from the rod *h*, or the frame can be entirely removed from its supports and carried across the handle-bar or behind the seat, ready to be again utilized when desired. The rod *h* and the standard can be left in position when the frame is thus removed, or can themselves be removed and disconnected, as may be desired. The cloth covering of the frame readily adapts itself to the folding movement of the latter just described, and the entire attachment can be carried upon the machine as readily as the ordinary folded umbrella. The vertical adjustment afforded by the described connection between the rod and standard en-

ables the frame to be set at different heights to suit the height of the rider.

While I have shown and described the preferred manner of constructing a canopy attachment embodying my invention, it is obvious that modifications in some of the minor details of construction can be made within the spirit of the invention. It is obvious also that, while devised especially for use on bicycles of the "safety" type, as herein shown, the attachment is adapted to be applied to velocipedes generally.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A canopy attachment for velocipedes, consisting of a substantially rectangular frame having its side and end pieces connected by hinge-joints and having its side pieces provided with a hinge-joint midway between their ends, whereby said frame is adapted to be folded to a compact form, a fabric cover for said frame, a vertically disposed standard and means for securing it to the steering post of the machine, a horizontally disposed rod detachably secured to said standard, a center-piece and means for detachably securing it upon said rod, and two center-braces pivotally connected at their inner ends to said center-piece, and having their outer ends forked to embrace the side pieces of said frame respectively, combined and operating substantially as set forth.

2. The canopy attachment for velocipedes herein described, comprising the collapsible frame *ab*, rod *h*, center-piece *k* having a socket to receive said rod and set-screw *k'*, center-braces *m* pivotally secured to said center-piece at their inner ends and having their outer ends forked to embrace said frame standard *g* adjustably connected at its upper end to said rod, and means, as the collar *d* and socket *f*, for securing said standard at its lower end to the machine, combined and operating substantially as described.

THOMAS W. DOYLE.

Witnesses:

W. H. CHAPMAN,  
J. E. CHAPMAN.