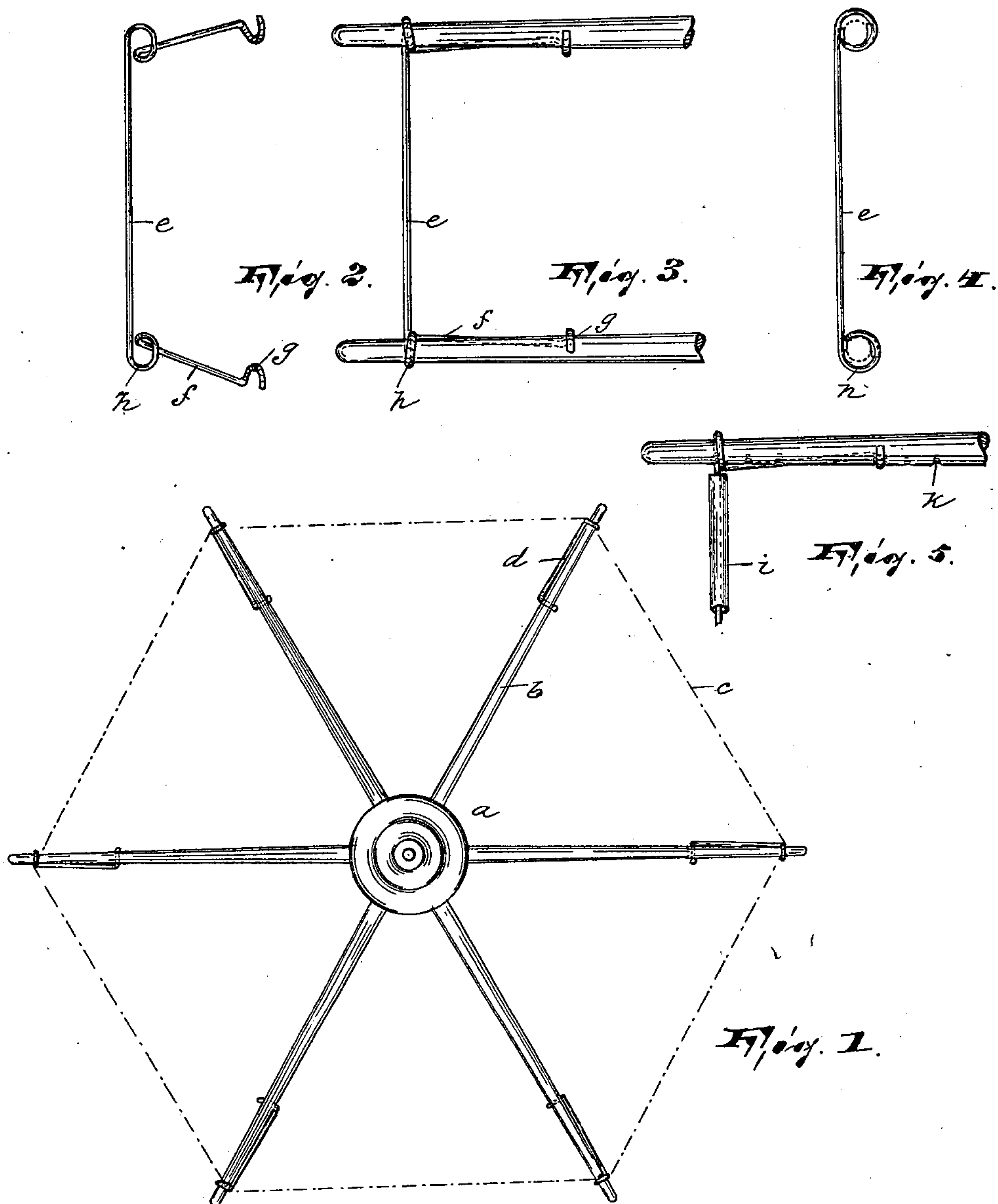


No. 631,086.

Patented Aug. 15, 1899.

R. MAUCHLINE.  
ATTACHMENT FOR SWIFTS.  
(Application filed Dec. 29, 1898.)

(No Model.)



WITNESSES:

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# UNITED STATES PATENT OFFICE.

ROBERT MAUCLINE, OF NEW HOLLAND, PENNSYLVANIA.

## ATTACHMENT FOR SWIFTS.

SPECIFICATION forming part of Letters Patent No. 631,086, dated August 15, 1899.

Application filed December 29, 1898. Serial No. 700,603. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT MAUCLINE, a citizen of the United States, residing in New Holland, in the county of Lancaster and State of Pennsylvania, have invented certain new and useful Improvements in Attachments for Swifts; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to devices known as "swifts" and employed for winding thread, yarn, &c. The swift usually consists of a revolving hub, from which project pairs of radial arms or spokes, the members of each pair being connected by a flexible band or cord over which the yarn or thread is wound. The use of flexible bands or cords for connecting the members of the pairs of arms and for supporting or sustaining the thread or yarn is objectionable, for the reason that the weight of the yarn and its tension upon the band or cord tend to sag it, and this defect is augmented, moreover, where dampness of the atmosphere effects a stretching of said cord.

The object of my invention, therefore, is to provide a rigid device for connecting the members of the pairs of swifts and sustaining the yarn, so that the action of the yarn, whether due to gravity or the tension of winding it upon the swift, will not produce the sagging referred to and a consequent drawing toward each other of said members and the danger of breaking them, it being remembered that the arms or spokes are usually of delicate construction. I propose to form this device preferably of appreciably inflexible but elastic wire; and a further object of the invention, therefore, is to so shape said wire that it will be sustained on the arms or spokes of the swift by virtue of a gripping or clasp- ing of them, as also by virtue of the fact that its elasticity tends to crowd or force the arms or spokes in opposite directions, thus acting as a clamp and being readily adjustable longitudinally of said arms or spokes.

My invention therefore consists in an appreciably inflexible but elastic bent-wire de-

vice for supporting or sustaining the yarn upon the swift, said device being formed or shaped substantially as hereinafter described and for the purposes above mentioned.

The invention also consists in the combination of said device with the swift.

Referring to the accompanying drawings, Figure 1 is a view in side elevation of a swift provided with my improved yarn supporting or sustaining devices. Fig. 2 is a view in elevation of my improved device. Fig. 3 shows a pair of spokes of said swift carrying and connected by my improved device. Fig. 4 is a top plan view of my improved device, and Fig. 5 is a view of a certain modified form of my invention.

In said drawings, *a* indicates a swift having pairs of radial arms *b*, upon which the yarn *c* is supported by means of my improved yarn sustaining or supporting device or attachment *d*. The device referred to consists of a wire the central portion *e* of which constitutes the connection between the members of a pair of swifts and the end portions *f* of which serve as spreaders, which act against said members to maintain said portion *e* at the desired position. Between each end portion and the central portion of said wire an open contractile loop *h* is formed, which receives the end of the spoke of the pair of spokes upon which the attachment is mounted and the free end of each of the portions *f*, which portions are bent substantially at right angles, and downwardly from the central portion is formed into a hook *g*, adapted to partially surround and bear against the spoke. The wire should have sufficient elasticity so that the portions *f*, constituting the spreaders, may readily act to sustain the device in the desired position not only because of the thus-augmented contact of their hook portions with the arms or spokes, but because the spreading action of the portion *f* tends to contract the loops and effect a gripping or clasp- ing of the arms or spokes at this point.

If desired, the central portion *e* may carry a glass rod or tube *i*, which it penetrates and which extends throughout the length of said portion. If the glass rod or tube is not provided, this part of the wire should be lac- quered or enameled, so that rust that may form on the wire will not discolor the yarn.



In order to augment the sustaining of the attachment in the desired position upon the pair of arms, slight recesses *k* may be provided in the inner surfaces of said arms or spokes, said recesses being adapted to receive the hooks *g*; but such recesses obviously need not be so deep as to appreciably weaken the arms or spokes.

In view of the foregoing it will be seen that my device is especially desirable, for the reason that it acts in the direction of the length of the spokes rather than to draw them toward each other. This is because of the rigidity of the central portion *e* of the wire, and it is also due to the provision of the spreaders *f*, which, it is obvious, also act to prevent the sagging of said body portion *e* of the wire. Furthermore, if the glass rod or tube *i* is employed, as hereinbefore described, it will be apparent that therein will exist a further medium for preventing the sagging of the body portion of the wire which it incloses and a consequent drawing together of the arms or spokes of the swift. It will also be seen that my device is readily adjustable longitudinally on as well as removable from the spokes of the swift.

I have hereinbefore referred to the downwardly-bent end portions *f* of the device as "spreaders." This term has been applied to them for the reason that, as described and shown, they act against the inner sides of the swift arms or spokes or away from each other; but as my invention is limited no further in this respect than that these end portions should be adapted to act in opposite directions against the spokes or arms of the swift (whether toward or away from each other) in sustaining said device, so that it may be readily adjustable longitudinally on said spokes or arms, it is manifest that it is within the spirit of my invention that the device be so formed that these end portions may act toward each other and against the outer sides of the arms or spokes.

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

1. A yarn-sustaining device for swifts consisting of an appreciably inflexible elastic wire provided with open contractile loops adapted to receive and grip a pair of swift arms or spokes and having its extremities bent downwardly from said loops, constituting clamps or spreaders and formed with hooks at their ends adapted to receive and bear against said arms or spokes and coact with the loops to sustain the device in position thereon, substantially as described.

2. The combination, with a swift having notches or recesses in its arms or spokes, of a yarn-sustaining device therefor consisting of an appreciably inflexible elastic wire provided with open contractile loops adapted to receive and grip a pair of said arms or spokes and having its extremities bent downwardly from said loops, constituting clamps or spreaders and formed with hooks adapted to receive and bear against said arms or spokes in engagement with said recesses or notches and coact with the loops to sustain the device in position, substantially as described.

3. The combination, with a swift having notches or recesses in its arms or spokes, of a yarn-sustaining device therefor consisting of an appreciably inflexible elastic wire provided with open contractile loops adapted to receive and grip a pair of swift arms or spokes and having its extremities bent downwardly from said loops, constituting clamps or spreaders and formed with hooks adapted to receive and bear against said arms or spokes in engagement with said recesses or notches and coact with the loops to sustain the device in position, and a vitreous element disposed upon said wire between the loops thereof, substantially as described.

4. A yarn-sustaining device for swifts consisting of an appreciably inflexible elastic wire provided with open contractile loops adapted to receive and grip a pair of swift arms or spokes and having its extremities bent downwardly from said loops, constituting clamps or spreaders, and formed with hooks at their ends extending substantially parallel to said loops and adapted to receive and bear against said arms or spokes and coact with the loops to sustain the device in position thereon, substantially as described.

5. In a yarn-sustaining device for swifts, the combination of an elastic wire provided with loops adapted to receive a pair of swift arms or spokes, and having its extremities bent downwardly from said loops and adapted to engage said arms or spokes to sustain the device in position thereon, and a glass rod or tube penetrated by said wire and disposed between the loops thereof, said glass rod being adapted to brace the wire, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 27th day of December, 1898.

ROBERT MAUCHLINE.

Witnesses:

MARGARET BRITTON,  
JOHN J. BRIERLEY.