

No. 619,781.

Patented Feb. 21, 1899.

I. W. NILES.  
FLY BRUSH.

(Application filed May 27, 1897.)

(No Model.)

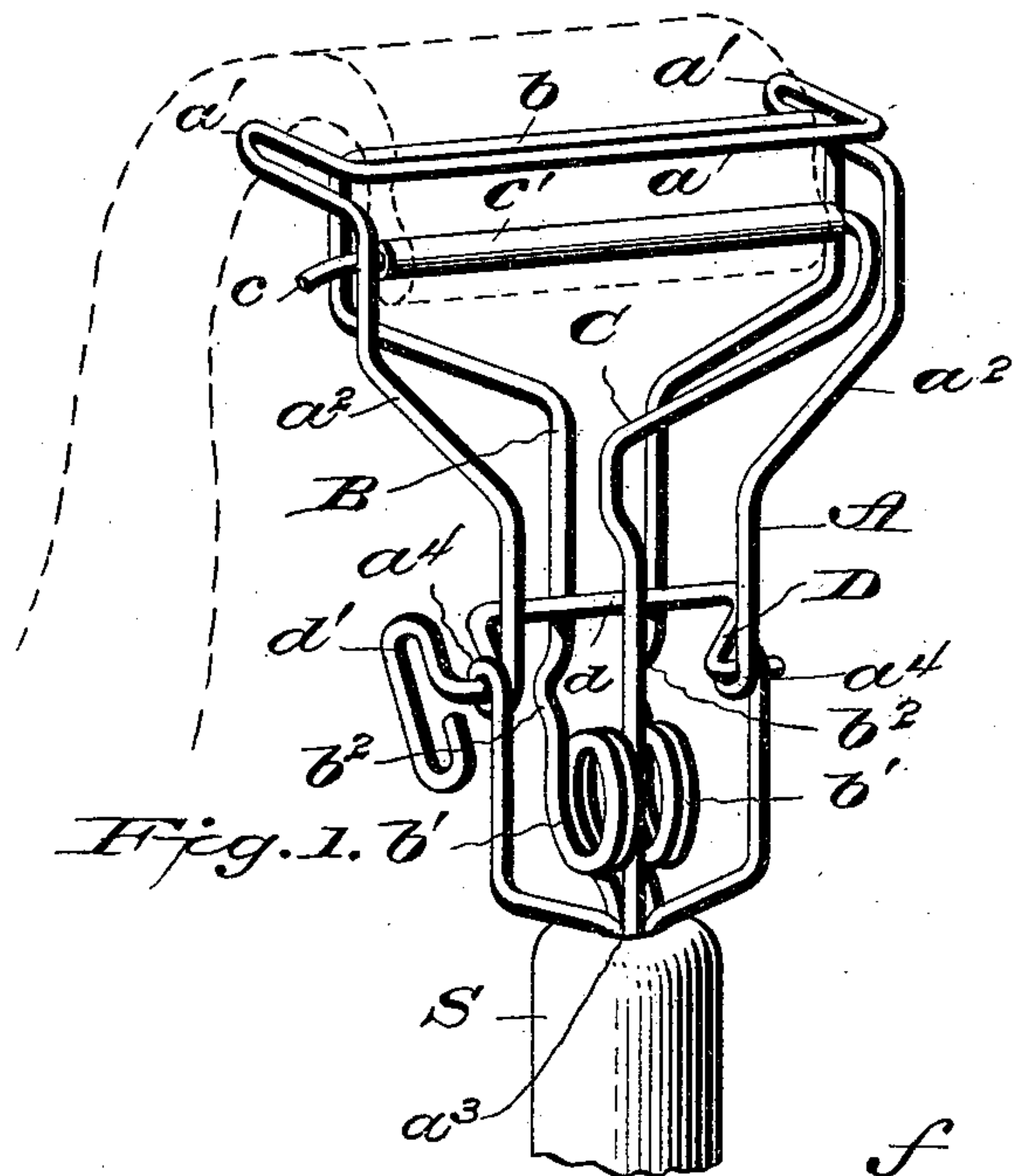


Fig. 1.

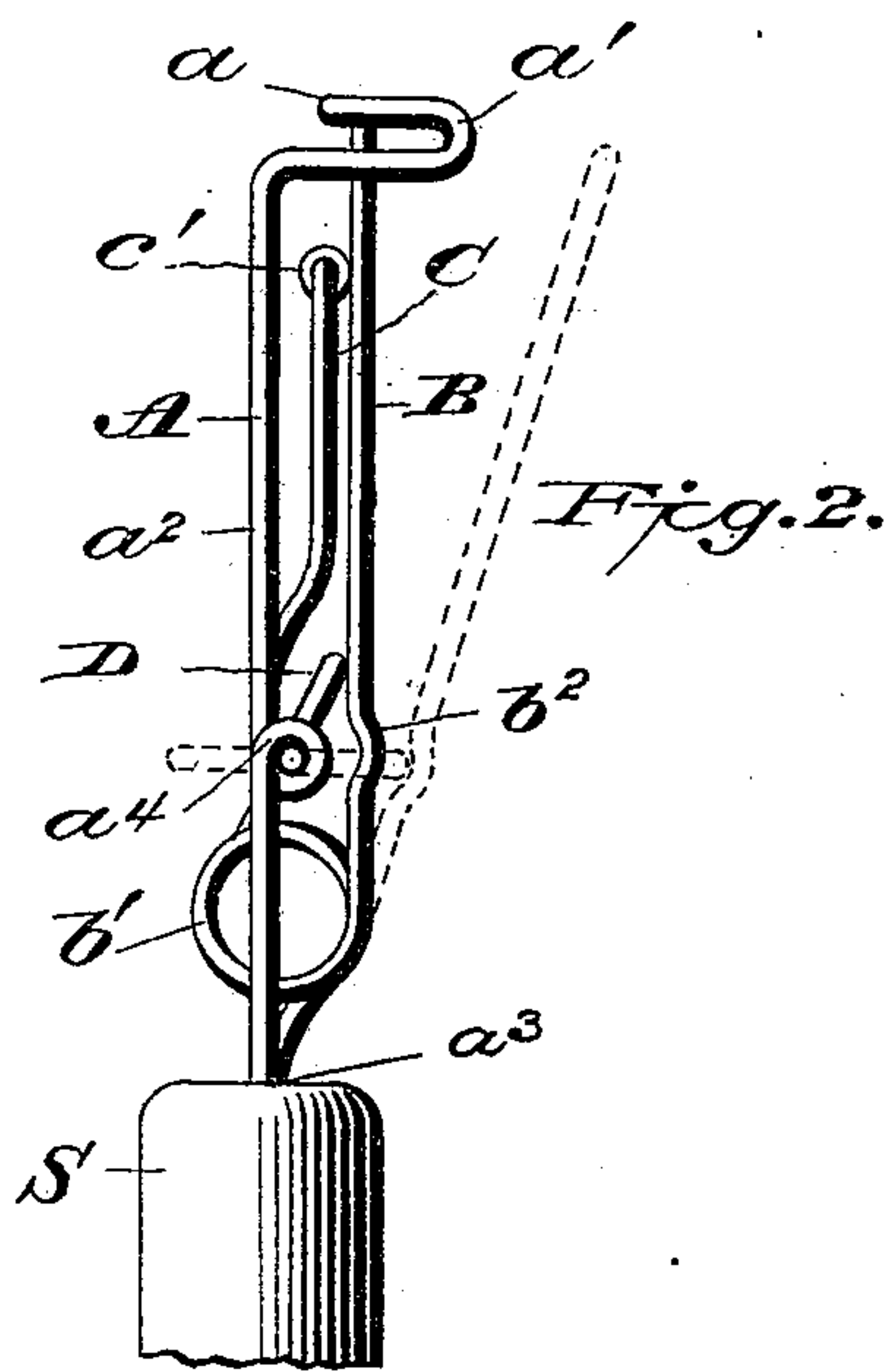


Fig. 2.

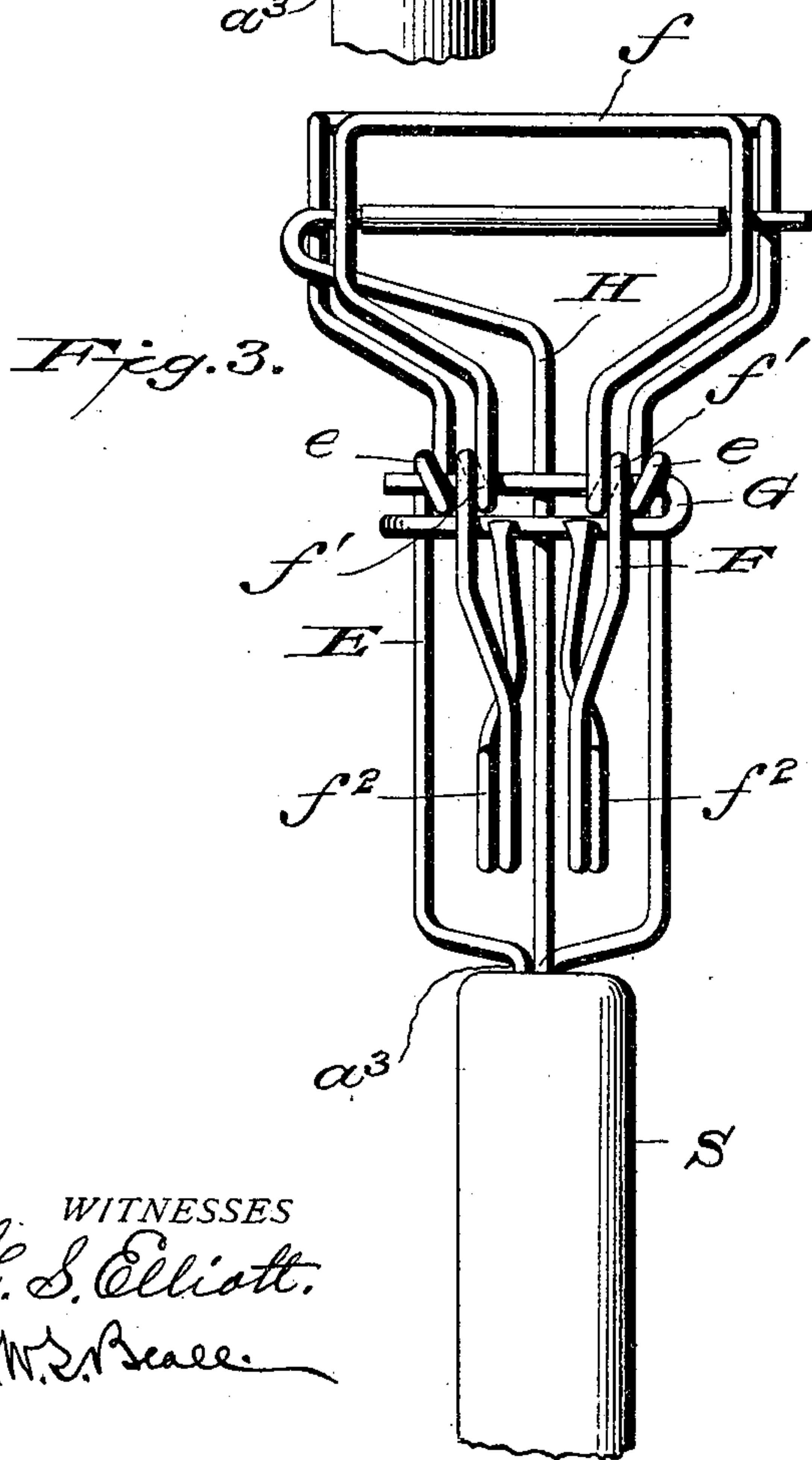


Fig. 3.

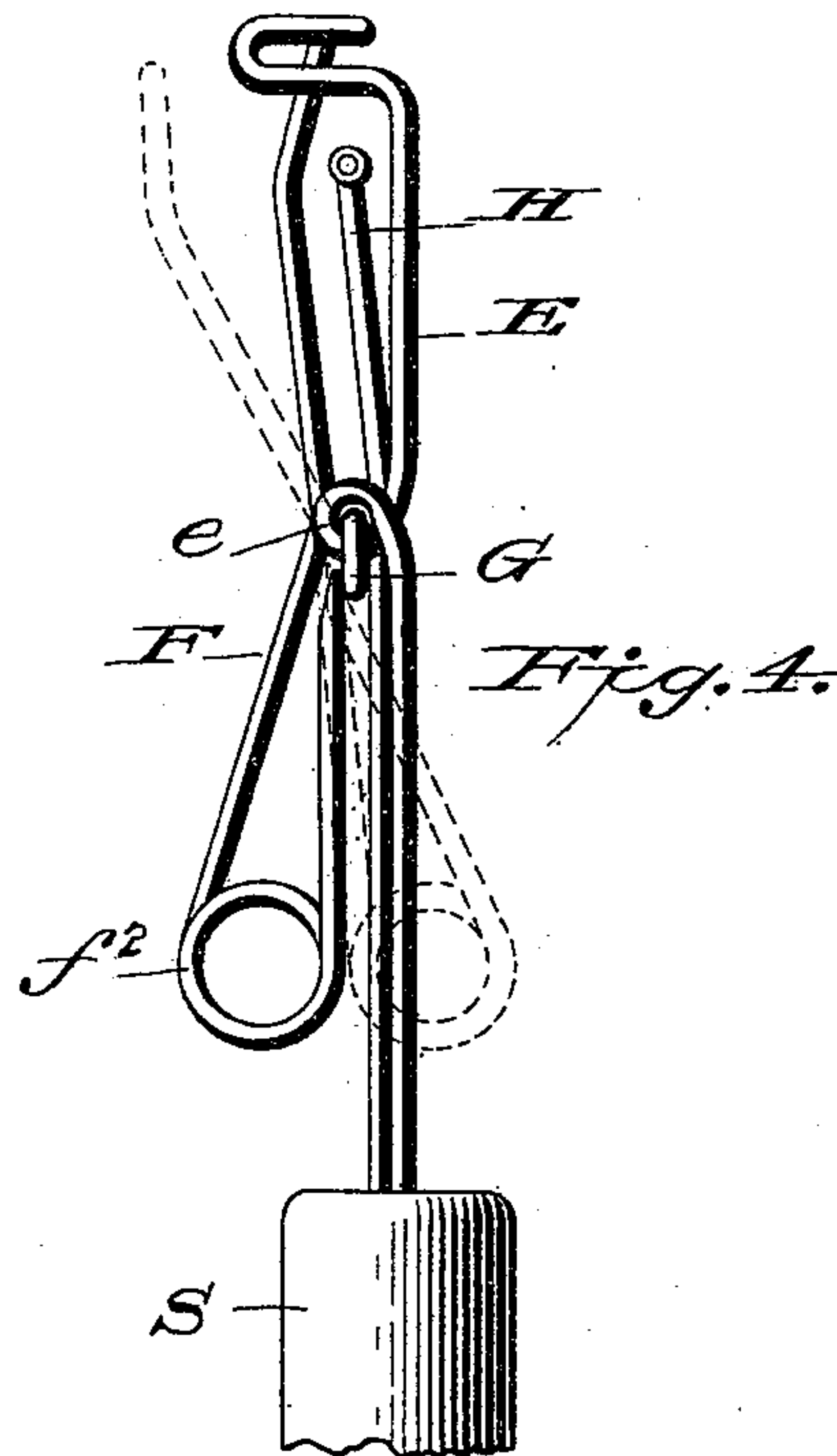


Fig. 4.

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# UNITED STATES PATENT OFFICE.

IRVING W. NILES, OF ODELL, ILLINOIS.

## FLY-BRUSH.

SPECIFICATION forming part of Letters Patent No. 619,781, dated February 21, 1899.

Application filed May 27, 1897. Serial No. 638,442. (No model.)

*To all whom it may concern:*

Be it known that I, IRVING W. NILES, of Odell, in the county of Livingston and State of Illinois, have invented certain new and  
5 useful Improvements in Fly-Brushes; 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  
10 same.

This invention is an improvement in fly-brushes; and the object of the same is to provide a clamping head or holder in which strips of paper or like material may be readily  
15 and conveniently placed in engagement and securely held for the purpose of forming a brush to be used as a fly-brush. The ordinary practice of forming a fly-brush of this particular character is to cut paper, usually a paper  
20 bag or flour-sack, into strips and tack them to the end of a stick; but aside from the inconvenience in renewing the brush proper a rather cumbersome appearance is given to the brush. In order to provide for quickly  
25 applying the paper strips or brush and to present a neat and durable device of this character, I have devised a clamping-head for the stick which can be cheaply manufactured and will effectually hold the strips, being also  
30 easily operated.

With these objects in view my invention contemplates a construction by which the clamping head or holder is made up entirely of wire, said wire being bent to form a pair  
35 of spring clamping members or jaws, a hook or engaging member located between the jaws, and means to provide for moving one of the clamping-jaws away from the other, the stationary clamping member having ex-  
40 tensions to close the ends of the head and more securely hold the strips in place.

In the following specification I have entered into a detailed description of my improvement in clamping heads or holders for  
45 fly-brushes, reference being had to the accompanying drawings and to the letters thereon, which designate the different parts, and what I consider to be the novel features in the construction and combination of parts are more  
50 specifically set forth in the appended claims.

In the drawings forming a part hereof, Fig-

ure 1 is a perspective view of a fly-brush constructed in accordance with my invention and showing the preferred form of clamping-head. Fig. 2 is a side elevation of Fig. 1, the movable jaw being shown closed in full lines and  
55 open in dotted lines. Fig. 3 is a front elevation of a modification embodying a different means of operating the movable jaw. Fig. 4 is a side elevation of the modification, the  
60 movable jaw being closed in full lines and open in dotted lines.

With reference to said drawings, and particularly Figs. 1 and 2 which show the preferred form of construction, A designates the  
65 stationary clamping member, B the movable clamping member, and C an interposed hook forming an engaging cross bar or member over which the paper strips forming the brush proper are looped, as will hereinafter appear. 70

The two clamping members and hook are each made up of a single piece or length of wire. In forming the stationary clamping member the wire is shaped to present an upper cross-bar  $a$ , at each end of which said  
75 wire is bent inward and doubled upon itself to provide the extensions  $a'$ , from which depend the side members  $a^2$   $a^2$ , bent, as shown, and brought together at their lower ends to form a shank  $a^3$ . At an intermediate portion  
80 the side members  $a^2$  of the stationary clamping member are turned into eyes  $a^4$  to receive and form bearings for the operating means hereinafter described.

The wire forming the movable clamping  
85 member is first bent to provide an upper cross-bar or jaw  $b$ , opposed to the cross-bar or jaw  $a$ , the side members being then brought toward each other and extended downward substantially parallel to a point near the stick  
90 or handle, where they are formed into independent coils  $b'$   $b'$ , while the terminals of the wire form a shank by which the clamping member is connected to the stick or handle. The terminal portions of both clamping mem-  
95 bers are preferably soldered together to form practically a single shank by which said clamping members are attached to the stick or handle, (designated by the letter S.) It will be understood that the portion of the wire  
100 which forms the movable jaw extends from the coils in such manner that the tendency



of said coils is to bring the movable jaw against the stationary jaw and that the extensions  $a'$  overlap the ends of the movable jaw.

Interposed between the clamping members A and B, at a slight distance below the upper cross-bars or jaws thereof, is a cross-bar  $c$ , formed at the upper end of a wire C, which extends upward from the stick or handle S, between the coils  $b' b'$ , and is bent, as shown, so that the cross-bar thereof will extend across from one side of the head to the other. The straight portion of the wire C leading from the stick extends for a distance parallel with the side members of the stationary clamping member and is then bent inward to position the cross-bar between the clamping members, so as not to interfere with the operating device hereinafter described. This operating device for the construction of clamping-head illustrated in Figs. 1 and 2 consists of a wire loop D, the ends of which bear in the eyes  $a^4$  of the stationary clamping member, and presents a cross-bar  $d$ , adapted to be brought into contact with the side members of the clamp B, the side members being given short bends  $b^2$  to receive the cross-bar when the clamp is open and hold the parts in this position. One end of the wire loop D is extended beyond its bearing-eye and formed into a handle or grasping portion  $d'$ . The wire forming the hook or cross-bar  $c$  is soldered at its lower end to the terminals of the clamping members, and in attaching the head to the stick or handle the shank formed by these terminals is let into the ends of the stick. I also propose to place a sleeve  $c'$  over the cross-bar  $c$ .

In use strips of paper, of a width equal to the space between the extensions of the stationary clamping member, are doubled and placed in looped engagement with the cross-bar  $c$  after the movable jaw has been opened by turning the wire loop D, the paper projecting out between the jaws, after which the said wire loop is turned to release the movable jaw and permit it to clamp upon said strips. The paper strips may then be cut into narrower strips down to the clamping-jaws. In renewing the paper strips the movable clamping member or jaw is opened by turning the wire loop D, leaving the cross-bar  $c$  free for the removal of the old strips and insertion of a new set. It will be noted that when the strips are clamped in the head the extensions  $a'$  close the ends of the head and prevent lateral displacement of said strips.

In the modification shown in Figs 3 and 4 the stationary clamping member (designated by the letter E) is similar to the clamping member A of the preferred form of construction, with the exception that the eyes  $e e$  are formed higher up to receive a stationary wire loop G, one member of which is passed through said eyes. The wire forming the movable clamping member F of this modification is bent to form the cross-bar or jaw  $f$ , the side

members being brought toward each other and bent into eyes  $f'$ , from which they are extended downward and formed into coils  $f^2 f^2$  and the terminals brought back to bear upon the lower cross-bar of the wire loop G. The movable clamping member F is hinged upon the upper cross-bar of the loop G, which passes through the eyes  $f'$ , and the disposition of the coils and terminals tends to bring the cross-bar or jaw  $f$  against the cross-bar of the other clamping member. It will be noted that in this construction the lower part of the movable clamping member being free below the hinge permits of the jaw being opened by pressure upon said lower part or coils, and thus dispenses with the turning device or loop D in Figs. 1 and 2. This modification also embodies the cross-bar or hook H, similar to the hook C in Figs. 1 and 2, and, in fact, this hook is an essential part of the clamping-head, as it prevents the paper strips from being pulled out of the clamping-jaws.

From the foregoing description, in connection with the accompanying drawings, the construction, operation, and practical advantages of my improved clamping-head for fly-brushes will be apparent, for it not only provides a very neat contrivance, but one that is simple and durable. It will be appreciated also that the device could be effectively used to hold a dust-cloth, and by employing stout wire in its construction it would be equally serviceable as a mop-head.

By making up the improved clamping head or holder entirely of wire the cost of production is reduced to a minimum and a very neat and attractive appearance is had.

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

1. A clamping-head for the purposes set forth, comprising two clamping members, a cross-bar or hook interposed between the clamping members a slight distance below the cross-bars or jaws thereof, and means for separating the clamping members or jaws, together with a stick or handle to which the clamping-head is attached, substantially as shown and described.

2. A clamping-head for the purposes set forth, comprising two clamping members, extensions formed at the ends of one clamping member to overlap the ends of the other, and a hook interposed between the clamping members below the cross-bars or jaws thereof, together with a stick or handle to which the clamping-head is attached, substantially as shown and described.

3. A clamping-head for the purposes set forth, comprising two clamping members, extensions formed at the ends of one clamping member to overlap the ends of the other, a hook or cross-bar interposed between the clamping members below the cross-bars or jaws thereof, and means for separating the clamping members, together with a stick or



handle to which the clamping-head is attached, substantially as shown and described.

4. A clamping-head for the purposes set forth, comprising two clamping members, extensions formed at the ends of one clamping member to overlap the ends of the other, a hook or cross-bar interposed between the clamping members below the cross-bars or jaws thereof, and a loop pivoted to one of the clamping members and presenting a cross-bar adapted to engage and move the other clamping member outward, together with a stick or handle to which the clamping-head is attached, substantially as shown and described.

5. A clamping-head for the purposes set forth, comprising a stationary clamping member formed of a single piece of wire bent to form a cross-bar, forward extensions at the ends thereof and side members terminating in a shank; a second clamping member made of a single piece of wire presenting a cross-bar or jaw, side members having intermediate coils and terminating in a shank; and a hook made up of a piece of wire forming a shank and cross-bar, the latter being positioned between the clamping members below the cross-bars or jaws thereof, together with a stick or handle to which the clamping-head is attached, substantially as shown and described.

6. A clamping-head for the purposes set forth, comprising a stationary clamping member, formed of a single piece of wire shaped to present a cross-bar or jaw, forward extensions at the ends thereof and side members terminating in a shank; a second clamping member made of a single piece of wire bent to form a cross-bar or jaw and side members having intermediate coils and terminating in

a shank; and a hook made up of wire presenting a shank and cross-bar, the latter being positioned between the clamping members below the cross-bars or jaws thereof; together with a looped wire pivoted in eyes in the stationary clamping member and presenting a cross-bar adapted to engage the other clamping member, and a stick or handle to which the clamping-head is attached, substantially as shown and described.

7. A clamping-head for the purposes set forth, comprising a stationary clamping member formed of wire presenting a cross-bar with extensions at its ends and side members having eyes, said members terminating in a shank; a second clamping member made of wire bent to form a cross-bar and side members, the latter being bent at an intermediate portion into coils and given a sharp bend above said coils; a wire bent into a hook presenting a cross-bar located between the clamping members below the cross-bars thereof, and a wire loop pivoted in the eyes of the stationary clamping member and having a cross-bar adapted to engage the side members of the other clamping member and enter the sharp bends therein, the wire loop being extended at one end and bent into a grasping portion, together with a stick or handle to which the clamping-head is attached, substantially as shown and described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

IRVING W. NILES.

Witnesses:

W. J. DOWNIE,  
JOHN HARTLEY.