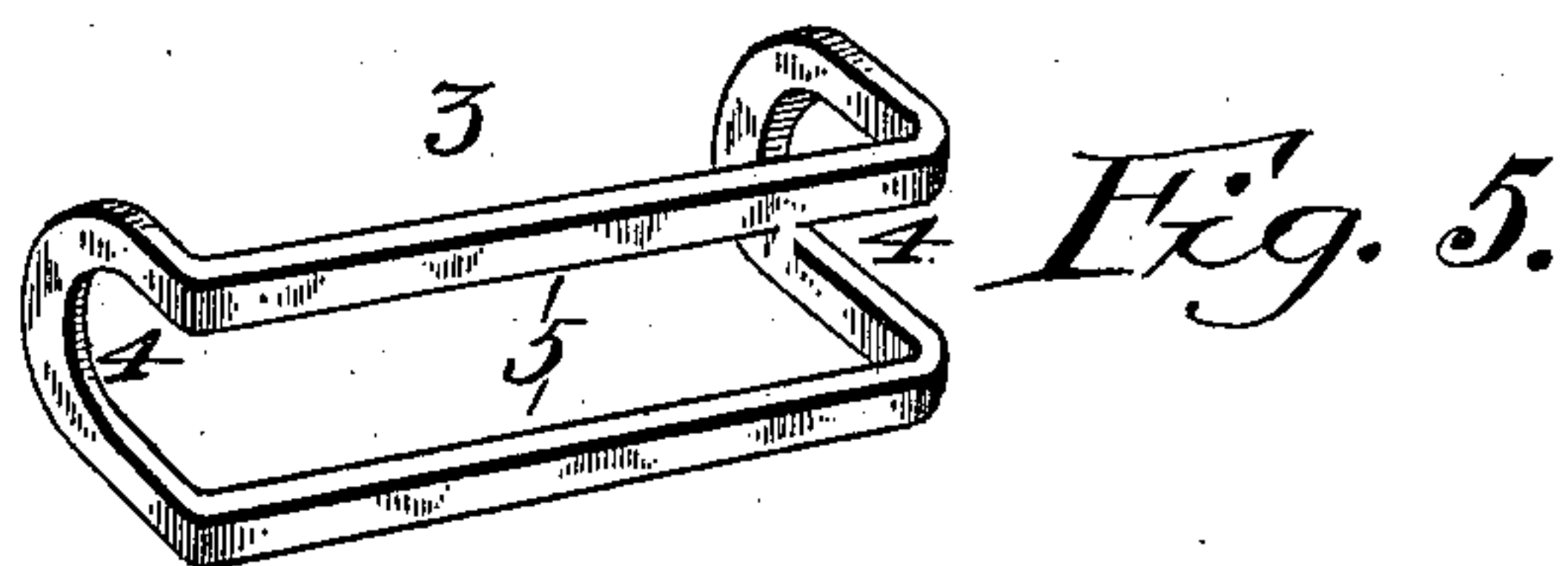
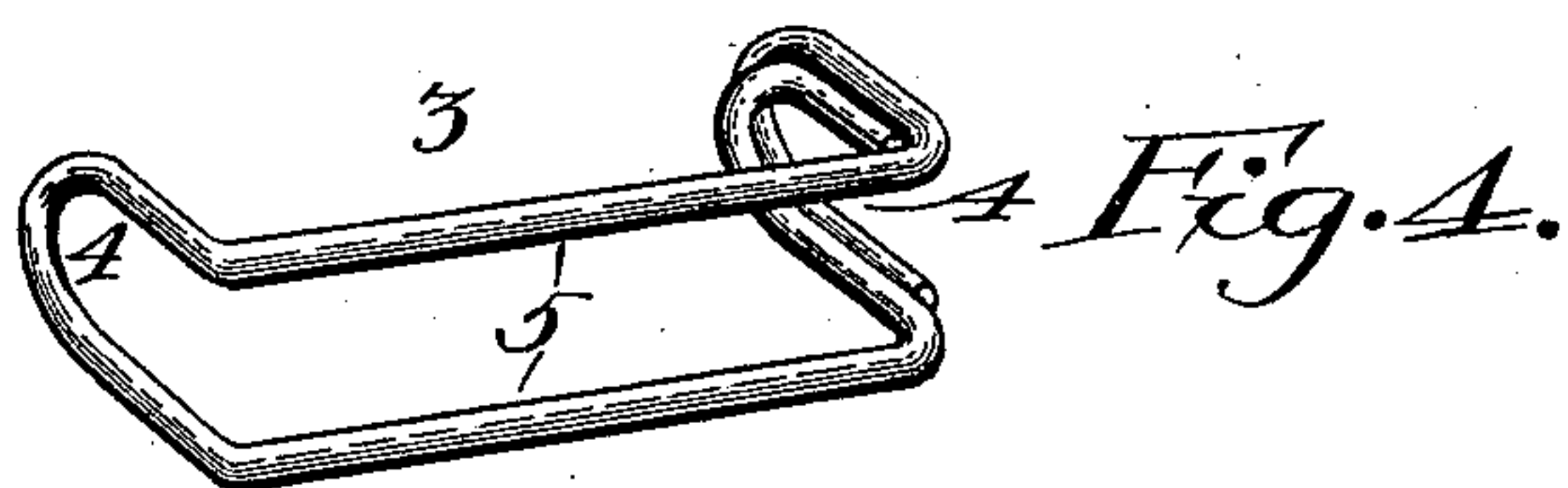
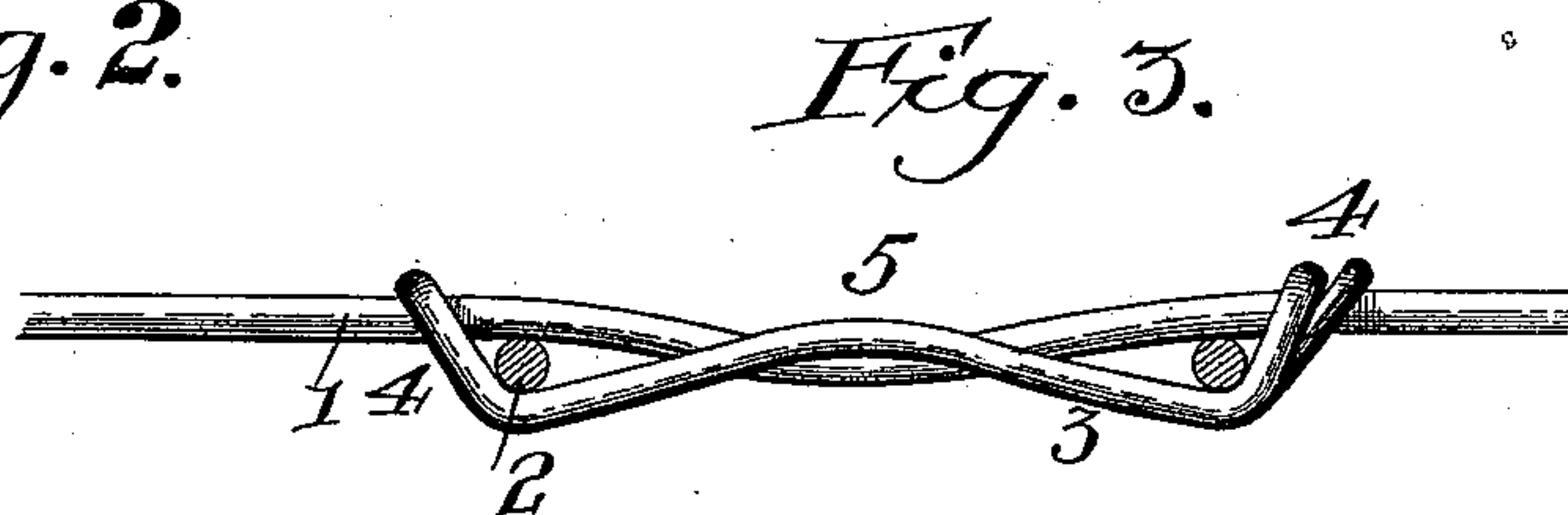
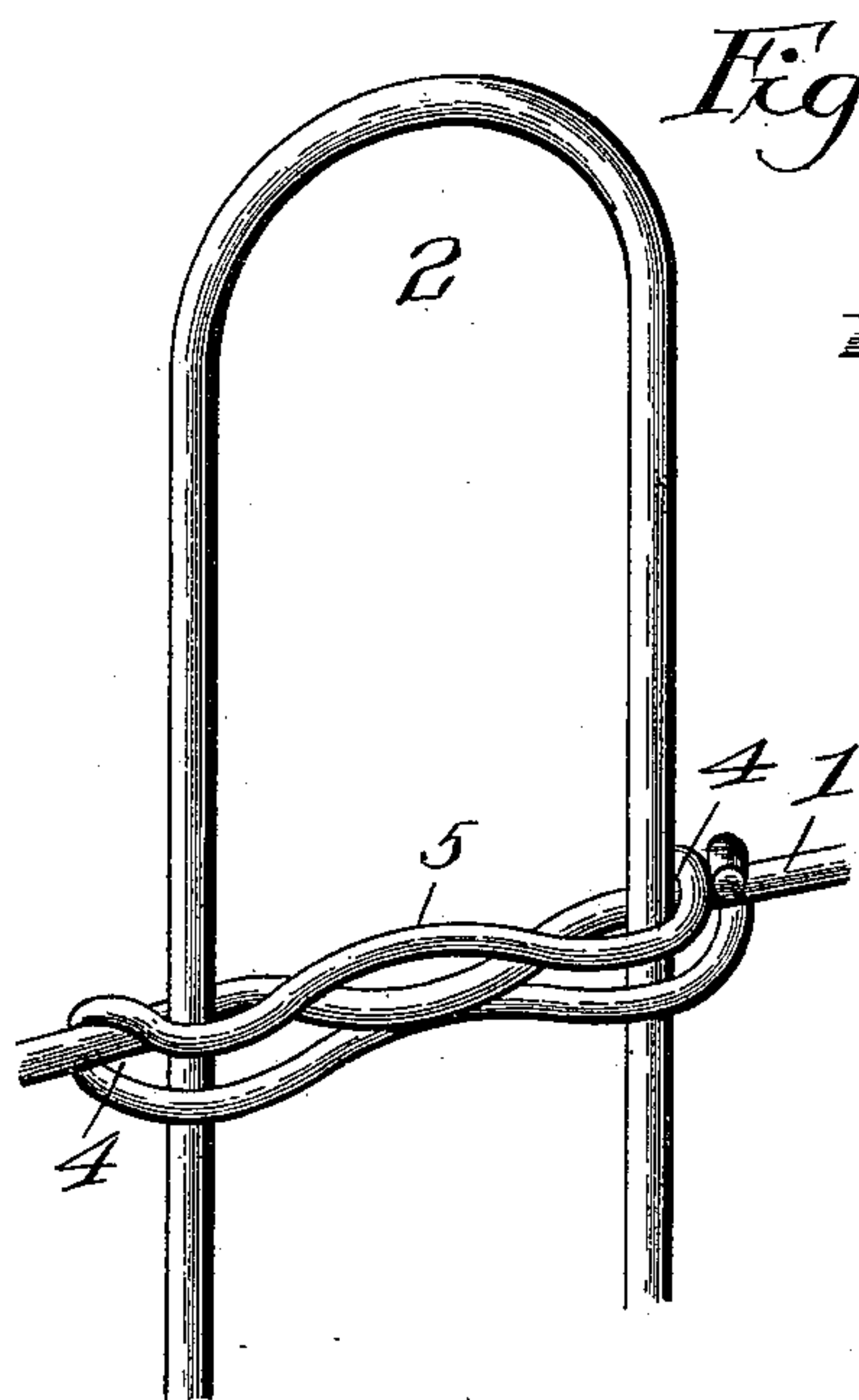
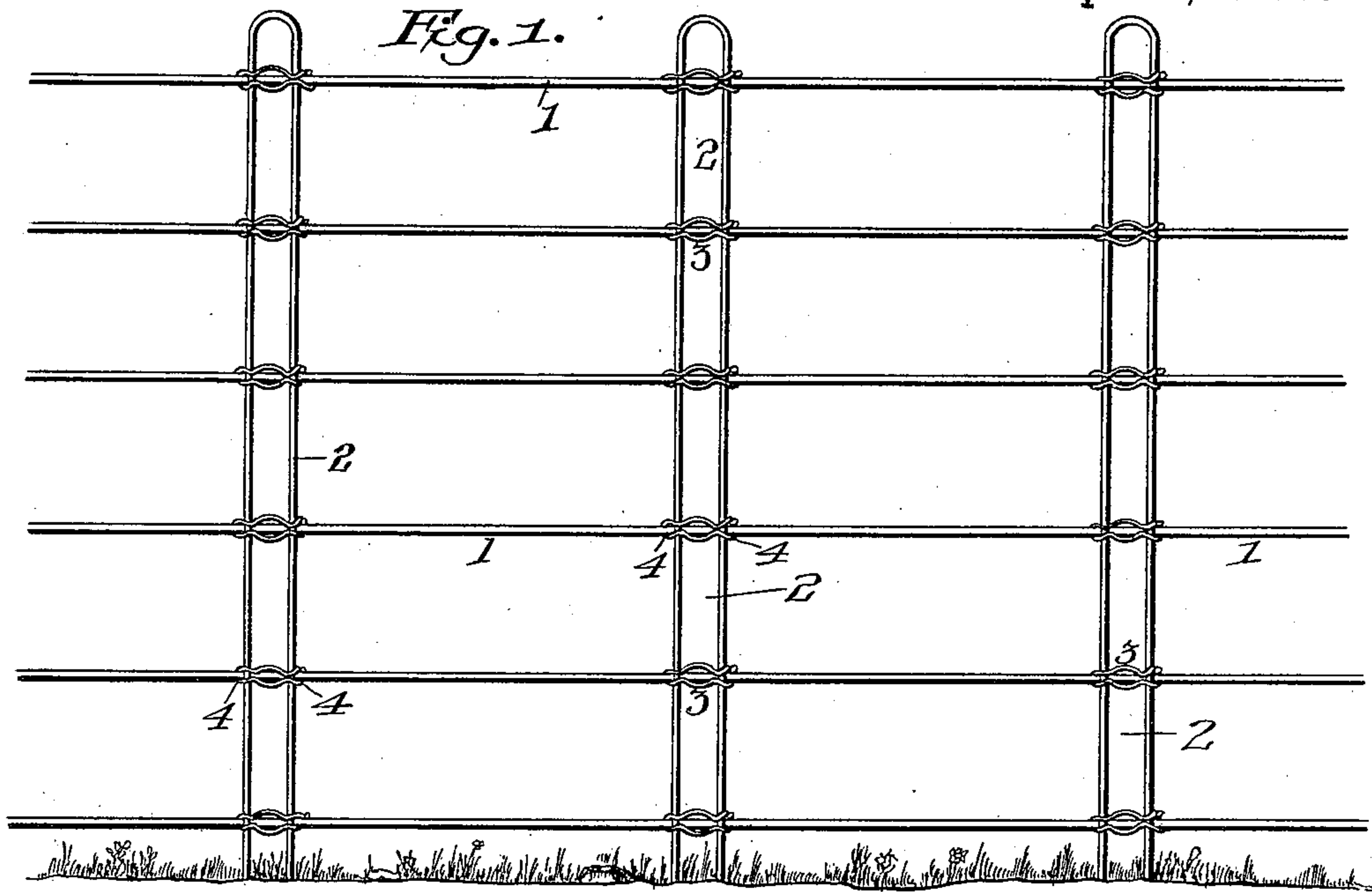


(No Model.)

P. J. SCHILD.
WIRE FENCE.

No. 601,986.

Patented Apr. 5, 1898.



Inventor

Peter J. Schild.

Witnesses

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UNITED STATES PATENT OFFICE.

PETER J. SCHILD, OF IONIA, MICHIGAN.

WIRE FENCE.

SPECIFICATION forming part of Letters Patent No. 601,986, dated April 5, 1898.

Application filed July 22, 1897. Serial No. 645,539. (No model.)

To all whom it may concern:

Be it known that I, PETER J. SCHILD, a citizen of the United States, residing at Ionia, in the county of Ionia and State of Michigan, have invented a new and useful Wire Fence, of which the following is a specification.

My invention relates to wire fences, and particularly to a tie or securing device for connecting the members of a wire fabric or structure at their points of intersection, one of the intersecting members having spaced, preferably parallel, parts or legs.

The object in view is to provide a simple, inexpensive, and efficient tie or connection which may be applied with facility and which is adapted to connect smooth-surfaced cross-sectionally-round fabric members, such as wire, to prevent the relative displacement of either of the members.

A further object of the invention is to provide a simple specific form of link constituting the improved tie and consisting of a single blank of wire, said link being formed without welding or otherwise permanently connecting the extremities of the blank.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings, Figure 1 is a view of a portion of a fence, showing the tie embodying my invention applied in the operative position thereto. Fig. 2 is a detail view in perspective of the tie and the contiguous portions of a stay and a runner of a fence. Fig. 3 is a plan view of the tie, showing the contiguous portions of a stay and runner. Fig. 4 is a detail view in perspective of the tie previous to application to a fence. Fig. 5 is a similar view of a slightly-modified form of tie consisting of an endless link.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

In disclosing my invention I have deemed it sufficient to show and describe the tie as applied to the intersecting members of a wire-fence structure; but it will be understood that the improvement is equally applicable to any other analogous wire fabric or any other structure in which it is necessary to

firmly connect and bind together wires, rods, or analogous members intersecting each other approximately at right angles, and while the tie constituting the essential novel feature is designed especially for connecting smooth-surfaced intersecting members to prevent relative displacement of either of those members it will be understood that the utility of the tie is not limited solely to smooth-surfaced members, but that the same may be applied to intersecting members of a crimped or corrugated construction.

Referring to the drawings, 1 designates a single-strand member of a wire structure, such as the runner of a fence, and 2 designates a double-strand member of a wire structure, such as the stay of a fence, said double-strand member when in a fence structure preferably consisting of a hairpin or looped stay of which the spaced parts or legs are arranged in contact with the runners at contiguous points.

The tie 3, by which the intersecting parts of the structure are secured together, consists of a link of elongated construction having terminal loops 4 and parallel connecting portions or sides 5, said looped extremities being upturned from the plane of the connecting portions or sides to occupy a position approximately perpendicular to said plane of the connecting portions, (previous to the application of the tie to the fence, as shown in Fig. 4,) the connecting or parallel-sided portion of the tie being of a length approximately equal to the interval between the parts or legs of the looped or double-strand member of the structure. Said connecting or parallel-sided portion of the tie is arranged to span the double-strand member or stay in contact with that side of the stay which is opposite to the intersecting single-strand member or runner, the terminal loops of the tie being engaged with the single-strand member or runner at the opposite edges of the stay or contiguous to the outer or remote sides of the parallel parts or legs of said stay, whereby the stay is fitted between the runner and the connecting or parallel-sided portion of the tie.

In constructing a fence the runners are first stretched, as in the ordinary practice, after which in the plane of each proposed stay a tie is fitted upon each runner, this engagement

being accomplished by applying the tie later-
ally or transversely to the runner to cause the
latter to be seated in the upturned looped ex-
tremities of the tie. The stay is then threaded
5 through the aligned series of ties, between the
connecting or parallel-sided portions thereof
and the plane of the runners, and it is obvious
that this engagement of the stay with the ties
will permanently hold the ties from accidental
10 disengagement until, as hereinafter more
fully explained, the ties are crimped or bowed
to securely lock the parts with the stay at the
desired elevation.

As before described, the upturned looped
15 extremities of the tie are preferably disposed
approximately perpendicular to the plane of
the connecting or parallel-sided portion of the
tie previous to the application of the latter to
the structure, the opposite or deflected ex-
20 tremities of the link being of sufficient length
to enable the loops thus formed to receive the
runners and still leave sufficient space be-
tween the plane of a runner and said connect-
ing or parallel-sided portion of the tie to al-
25 low the parallel parts or legs of the stay to be
introduced with facility; and in order to sub-
sequently clamp the members of the fence
structure together to prevent displacement
said connecting or parallel-sided portion of
30 the link is crimped or deflected inwardly or
toward the plane of the runner, and obviously
upon opposite sides of or above and below the
runner to draw the looped extremities of the
tie in the opposite direction, and thus force a
35 runner into frictional contact of the desired
severity with the parts or legs of the stay.
This central bowing of the connecting portion
of the tie between the parts or legs of the stay
and toward the runner forms depressions or
40 seats between the bow and the upturned ter-
minal loops, said seats receiving and firmly
holding the parts or legs of the stay from lat-
eral displacement. I have found it desirable
in practice, however, to not only crimp or bow
45 the connecting or intermediate portion of the
tie inwardly or toward the runner, but also to
crimp the runner inwardly or toward the tie,
and hence in the opposite direction to the
bow of the tie and between the points of con-
50 tact of the runner with the stay, as clearly
shown in Fig. 3, thus producing a double lock,
which effectually prevents the displacement
of either of the intersecting members of the
fence or other structure. A further effect of
55 the inward bowing of the central or interme-
diate portion of the tie is to deflect the looped
terminal portions of said tie outwardly, the
parallel parts or legs of the stay forming ful-
crums about which the upturned looped ex-
60 tremities of the tie swing, and it is obvious
that this outward deflection of the terminal
looped portions of the tie causes them to bind
firmly against the runner beyond the edges
or legs of the stay, the pressure of said looped
65 portions of the tie being in a direction to force
the runner toward said parallel parts or legs

of the stay and thereby lock the stay against
movement parallel with the runners.

The tie which I prefer to employ in this con-
nection by reason of its simplicity and cheap- 70
ness of construction is formed of a single
blank of wire doubled upon itself at its cen-
ter to form a loop and having its extremities
in turn doubled upon themselves in opposite
directions to form registering hooks, which 75
lie in contact or contiguous to each other,
and thus form a reinforced loop, as clearly
illustrated in Fig. 4; but it is obvious that
this construction is susceptible of modifica-
tion, as may be seen by reference to Fig. 5, 80
wherein the tie consists of a continuous or
endless link, which may be formed either by
welding or brazing the extremities of the
blank together or by stamping the link from
plate metal. Either of these forms of the tie 85
is capable of application to a wire structure
by the means and in the manner hereinbefore
specifically described; but, as above indi-
cated, the construction illustrated in Figs. 1
to 4, inclusive, wherein the link consists of a 90
continuous blank of wire doubled upon itself
to form an intermediate loop and terminal
registering hooks, is preferable by reason of
its cheapness and the fact that it can be made
by means of the ordinary tools at the com- 95
mand of a wire-worker of ordinary ability.
In other words, the link which I prefer to use
in connection with wire-fence construction is
adapted to be made without recourse to skilled
labor, and hence is adapted to be formed and 100
applied by the consumer.

Various changes in the form, proportion,
and the minor details of construction may be
resorted to without departing from the spirit
or sacrificing any of the advantages of this 105
invention.

Having described my invention, what I
claim is—

1. A wire fabric having intersecting single
and two strand members, the two-strand 110
member comprising spaced parts or legs, and
ties connecting said members at their points
of intersection, each tie consisting of a link
having upturned terminal closed loops en-
gaging a single-strand member respectively 115
beyond the opposite edges of the intersecting
two-strand member, and having a connecting
portion, between said terminal loops, ar-
ranged in contact with the two-strand mem-
ber upon the opposite side from the single- 120
strand member and bowed inwardly between
the parts or legs of the two-strand member,
substantially as specified.

2. A wire structure having intersecting
single and two strand members, and ties con- 125
necting said members at their points of in-
tersection, each tie consisting of an elongated
closed link having terminal upturned closed
loops engaging a single-strand member re-
spectively beyond the parts or legs of the 130
two-strand member, and having a connect-
ing parallel-sided portion between said ter-

5 minal loops arranged in contact with, and spanning the interval between, the parts or legs of the two-strand member at the opposite side from the single-strand member and bowed inwardly between said parts or legs, substantially as specified.

10 3. A fence having runners intersected by a stay provided with spaced parts or legs, and a tie consisting of a link having looped upturned extremities engaging a runner beyond the parts or legs of the stay, the portions of the tie and runner between the parts or legs of the stay being bowed inwardly or toward each other, substantially as specified.

15 4. A fence having runners intersected by a stay provided with spaced parts or legs, and a tie consisting of an elongated parallel-sided link, having upturned looped extremities engaging a runner beyond the parts or
20 legs of the stay, the connecting portion of

the link having its parallel sides arranged to span the interval between the parts or legs of the stay upon the opposite side thereof from the runner, and respectively above and below the plane thereof, and the portions of 25 the runner and the parallel sides of the link, between the parts or legs of the stay, being bowed inwardly or toward each other between said parts or legs of the stay, whereby the bowed portion of the runner lies between the 30 planes of the bowed portions of the sides of the link, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

PETER J. SCHILD.

Witnesses:

GEORGE L. KELNER,
CHARLES C. SCHILD.