

(No Model.)

G. H. FINGER & W. J. FORD.
LEG COVERING.

No. 571,918.

Patented Nov. 24, 1896.

Fig. 1.

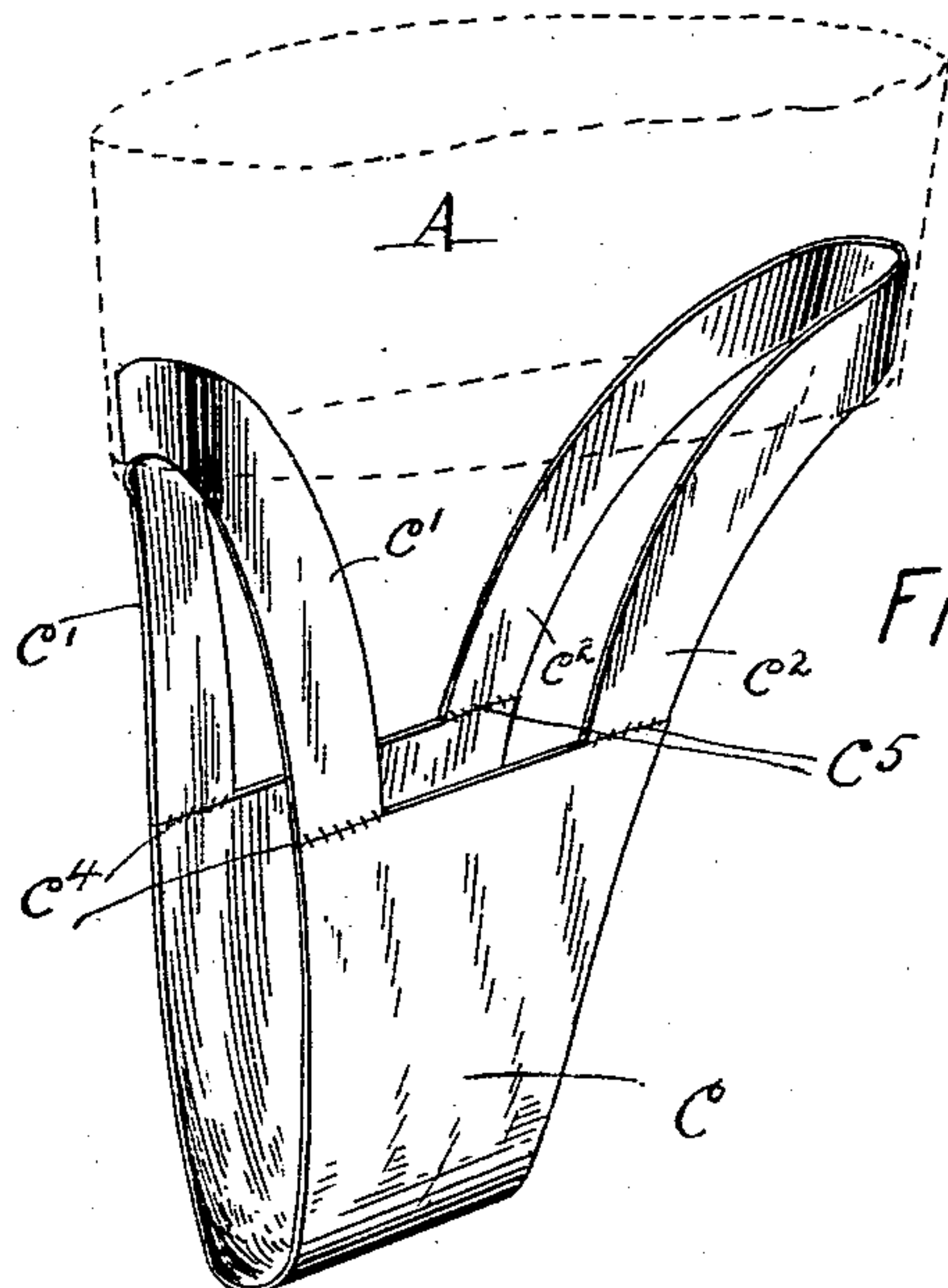
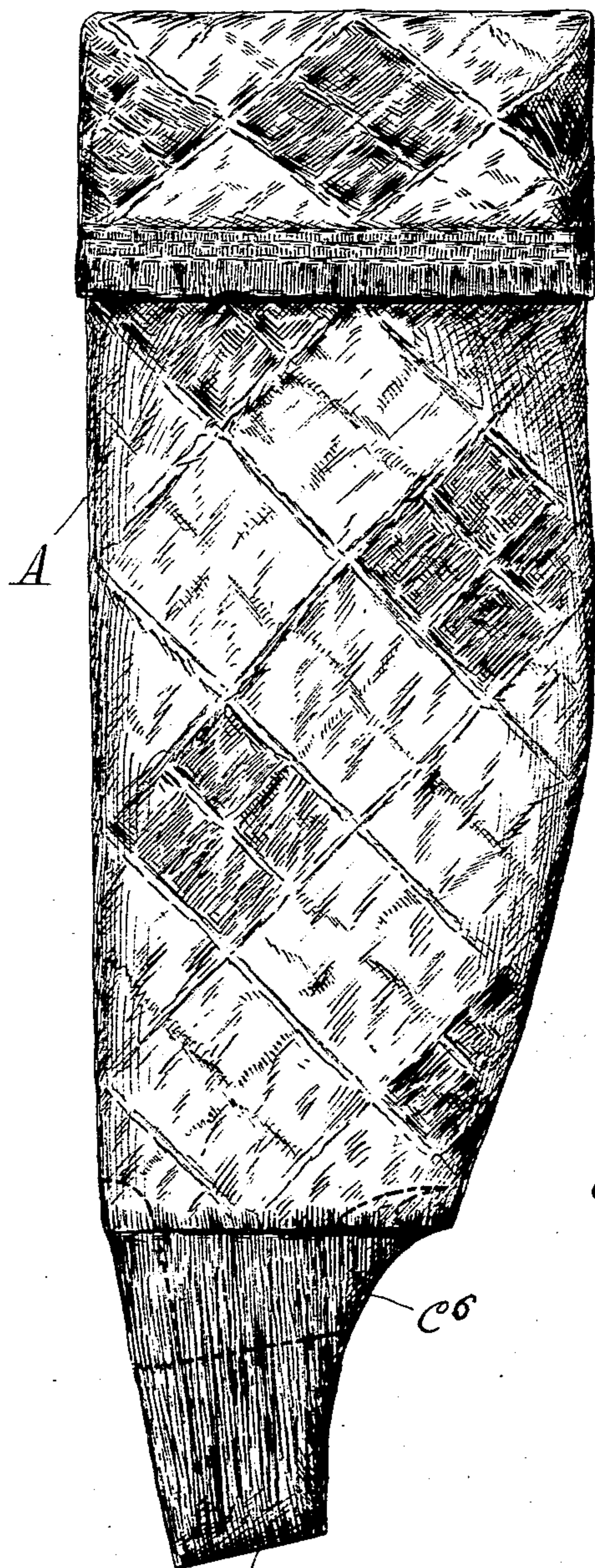


Fig. 3.

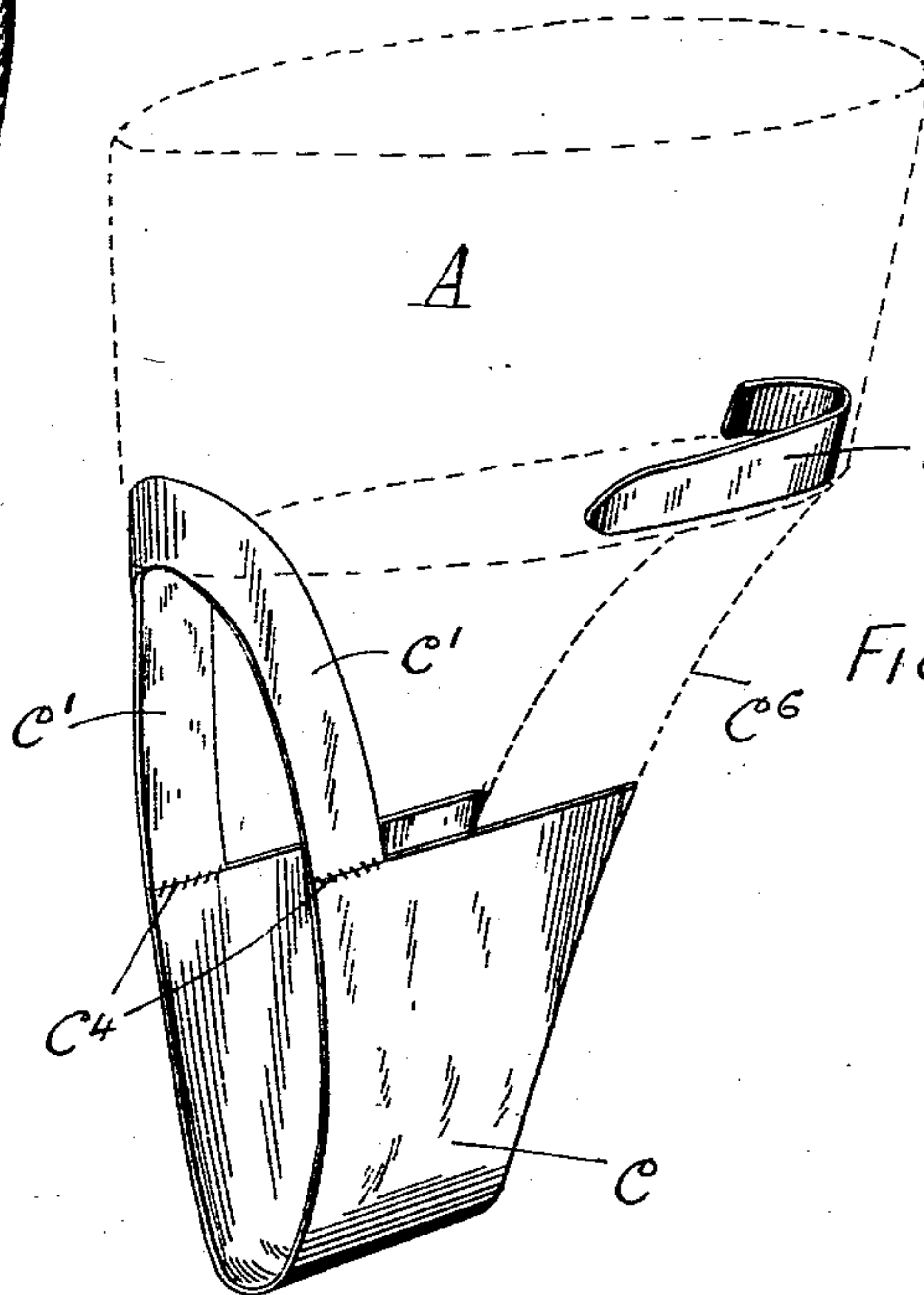


Fig. 2.

Witnesses: B
L. C. Hall
L. S. Kingsbury

Inventors:
Gilbert H. Finger,
William J. Ford,
By Wm. C. Boulter,
Attorney

UNITED STATES PATENT OFFICE.

GILBERT HENRY FINGER, OF NEW YORK, N. Y., AND WILLIAM JAMES FORD, OF LEICESTER, ENGLAND.

LEG-COVERING.

SPECIFICATION forming part of Letters Patent No. 571,918, dated November 24, 1896.

Application filed December 11, 1895. Serial No. 571,808. (No model.)

To all whom it may concern:

Be it known that we, GILBERT HENRY FINGER, a citizen of the United States, residing in the city of New York, State of New York, and WILLIAM JAMES FORD, a subject of the Queen of England, residing at Leicester, England, have invented certain new and useful Improvements in Leg-Coverings Applicable for Cycling, Touring, Shooting, and other Purposes, of which the following is a specification.

This invention has reference to leg-coverings such as are now used for cycling, touring, shooting, and other purposes, and relates to that class of leg-coverings made without a foot, but provided with a strap which is passed under the foot of the wearer to maintain it in its proper position during wear.

The said covering, so far as it relates to that part thereof which is worn over the leg as contradistinguished from the foot, may be made upon straight-bar or circular knitting machines of any of the well-known types and of any of the large variety of ornamental or patterned fabrics which are characteristic of stockings or leg-coverings for any of the purposes named.

The present invention embodies improvements in the means adopted for securing the said covering to the foot of the wearer.

In leg-coverings of the character referred to a knitted strap or band passes under the foot to keep the said covering in position, but in actual wear the selvages of the said strap or band have a tendency to curl up and come together, and instead of a flat strap a thick rope-like band is formed under the foot and is uncomfortable in wear. One part of our invention is designed to remedy this defect, which is effected by lining the strap or attaching thereto a layer of chamois leather or any other suitable non-elastic material which will maintain the flat condition of the strap before stated and render it more comfortable in wear. The said non-elastic lining may be attached a short distance up the leg part of the covering and thereby strengthen the strap or band.

Another disadvantage in connection with the before-mentioned strap made in the ordinary way is that in wear it becomes stretched

or elongated and thereby permits the instep part of the covering to work upward and show the ordinary half-hose or foot-covering of the wearer. By means of the inextensible lining before mentioned this objection is obviated.

A further part of the invention relates to an improved formation of strap for passing under the foot and by the use of which the stress or tension on the strap is more evenly distributed over the whole width of the stocking.

According to this invention the two ends of the strap where they join the leg-covering are each commenced to be knitted on one-half, or thereabout, of the full complement of needles employed in the knitting of the lower part of the leg, and narrowings are made at intervals on the back selvage only of the strap, so that a shaped opening is made for the heel to project through, and which is absolutely perfect in fit. The said strap may be of other than knitted material and cut and shaped by hand to form the opening for the heel to pass through. Additional strength is also obtained by the application of a chamois gore or gusset located both in the front and back of the within-described leg-covering at the juncture of the strap, thereby evenly distributing the strain in front and back thereof and protecting the stitches against breakage or unroving.

Referring to the accompanying drawings, Figure 1 is a diagrammatic side view of a leg-covering of the character described made in accordance with this invention. Figs. 2 and 3 are views of two forms of non-elastic linings shown detached from the knitted foot-strap for the sake of clearness.

A represents the leg-covering, formed of any of the well-known patterned fabrics, and B the knitted strap which passes under the foot. To prevent this strap stretching or curling up, as hereinbefore described, it is provided with a chamois leather or other non-elastic lining, which may be sewed thereto. The said lining may be of the same length and width as the foot-strap or slightly longer, so that its ends extend into and may be sewed to the inner side of the lower part of the leg-covering A, or the said non-elastic lining C

may be formed as indicated in Fig. 2—viz., of the same width but slightly shorter in length than the foot-strap B and provided with a narrow upwardly-extending strip or continuation C' of similar material, which may be attached to the marginal edge of the strap and form a reinforce at the juncture of the leg-covering A and strap B, as shown most clearly in dotted lines in Fig. 1. In this formation a separate reinforce C³ of non-elastic material is also attached at the juncture of A and B on the opposite side or back of the leg.

In Fig. 3 the non-elastic lining is shown as having two side continuation-strips C' C², which are sewed to C at C⁴ C⁵, respectively, and extend into the leg-covering, so as to form a reinforce and strengthen the two parts where the ends of the foot-strap B are attached to A.

The improved formation of strap as hereinbefore mentioned is effected as follows: The foot-strap may be knitted to the bottom of the leg-covering, for which purpose the latter is run onto the needles of a circular-knitting machine of the reversible type, or the strap may be knitted separately and subsequently sewed or otherwise attached to the bottom of the said leg-covering. In either case the knitting of the strap is commenced upon one-half, or thereabout, of the full complement of needles employed in the knitting of the lower part of the leg by reciprocating the thread-carrier over such needles. Then one or more end needles are placed out of action at each or every other subsequent course, so that a shaped or fashioned selvage C⁶, Fig. 1, is formed at the back of the strap, which will fit closely against the side of the wearer's heel. A number of courses is then knitted upon the minimum number of needles to form the narrower part of the strap, which passes under the wearer's foot and is continued until one-half of the entire length of the strap is knitted.

If the complete strap is to be finished at the one operation, a further number of courses is knitted upon the minimum number of needles, and then the needles previously rendered inactive are again brought into work in the inverse order to that in which they were placed out of action.

When the knitting of the strap is completed, the latter is run off the needles and sewed to

the leg-covering A, and the two fashioned selvages C⁶ then form a shaped opening for the reception of and which fits the wearer's heel.

The method preferably adopted is to knit the two halves of the strap separately, as before described, commencing at the part which is connected to the leg and continuing until one-half of the strap is knitted. The ends of the two halves are then linked or otherwise connected together to form the center of the strap, which in wear is located under the foot.

If the knitting of the strap is carried out upon a straight-bar-knitting machine, the shaping of the selvage C⁶ of the fabric may be effected by transferring the loops upon the back-selvage needles onto adjacent needles, as will be understood by those versed in the art of knitting.

In cheaper classes of goods it is obvious that the shape of the back selvage C⁶ to form an opening to fit the wearer's heel may be produced by cutting the material by hand.

Having fully described our invention, what we claim, and desire to secure by Letters Patent, is—

1. A leg-covering provided at its lower end with a strap adapted to pass beneath the foot of the wearer, a non-elastic lining secured to the strap over that portion which passes beneath the foot, and an upwardly-extending strip forming a portion of the lining and attached to and extending around the marginal edge of the instep-opening of the strap.

2. A leg-covering provided at its lower end with a strap adapted to pass beneath the foot of the wearer, a non-elastic lining secured to the strap over that portion which passes beneath the foot, said lining having upwardly-extending front and rear strips attached to and extending around the marginal edges of the instep and heel openings respectively of the strap.

In testimony whereof we have hereunto set our hands in the presence of the two subscribing witnesses.

GILBERT HENRY FINGER.
WILLIAM JAMES FORD.

Witnesses:

FREDERICK JAMES BATES,
E. N. LEWIS.