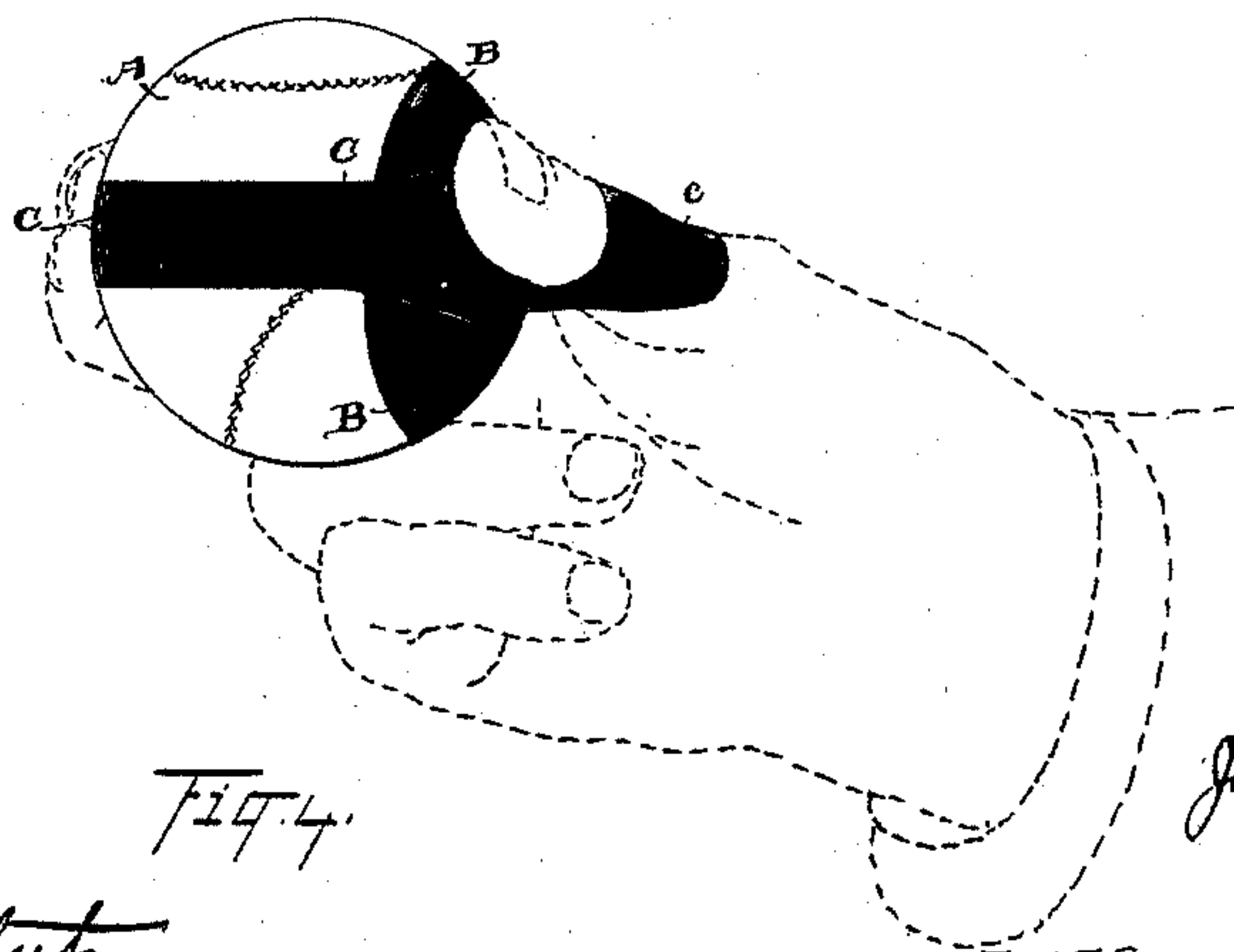
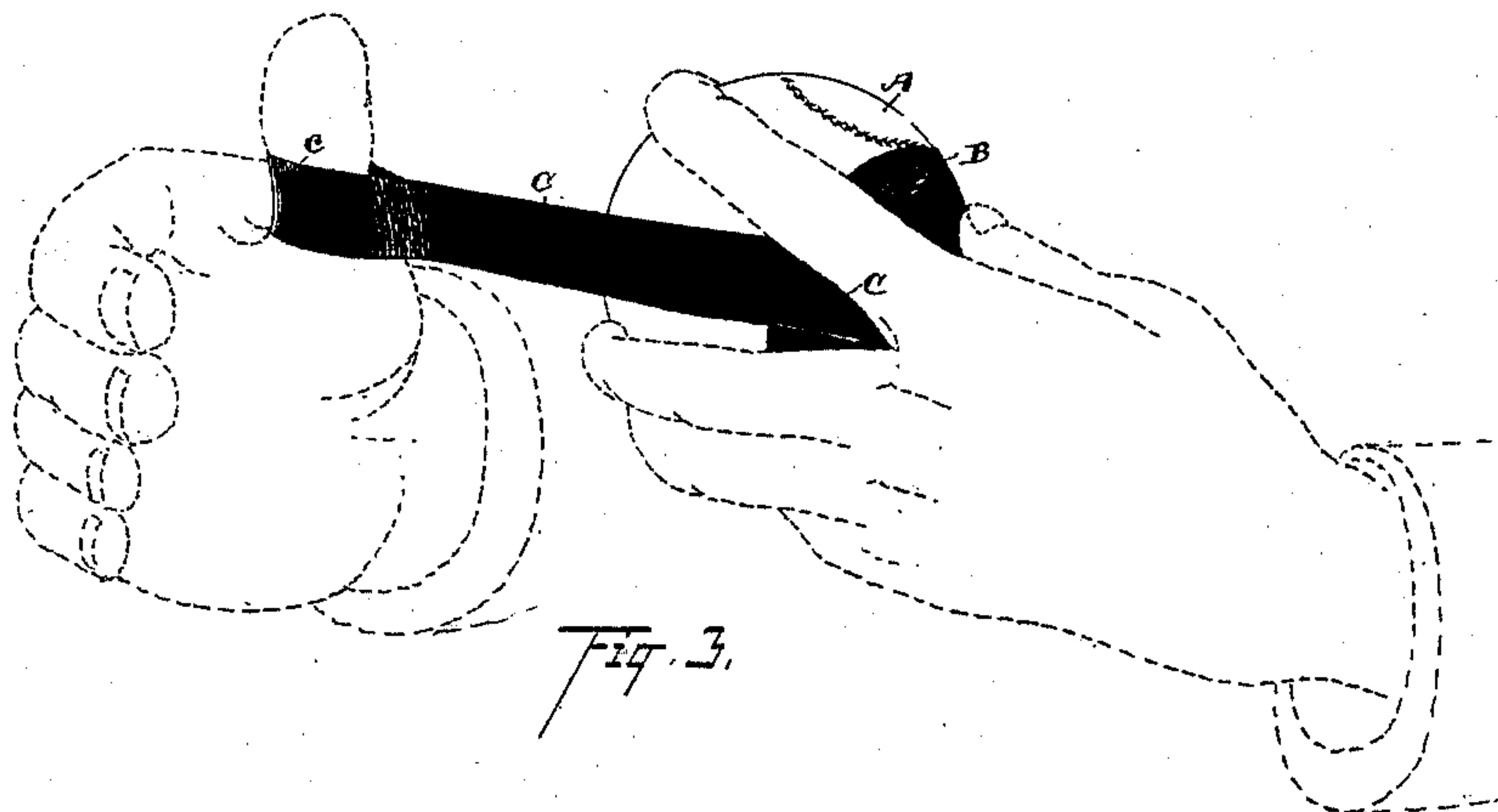
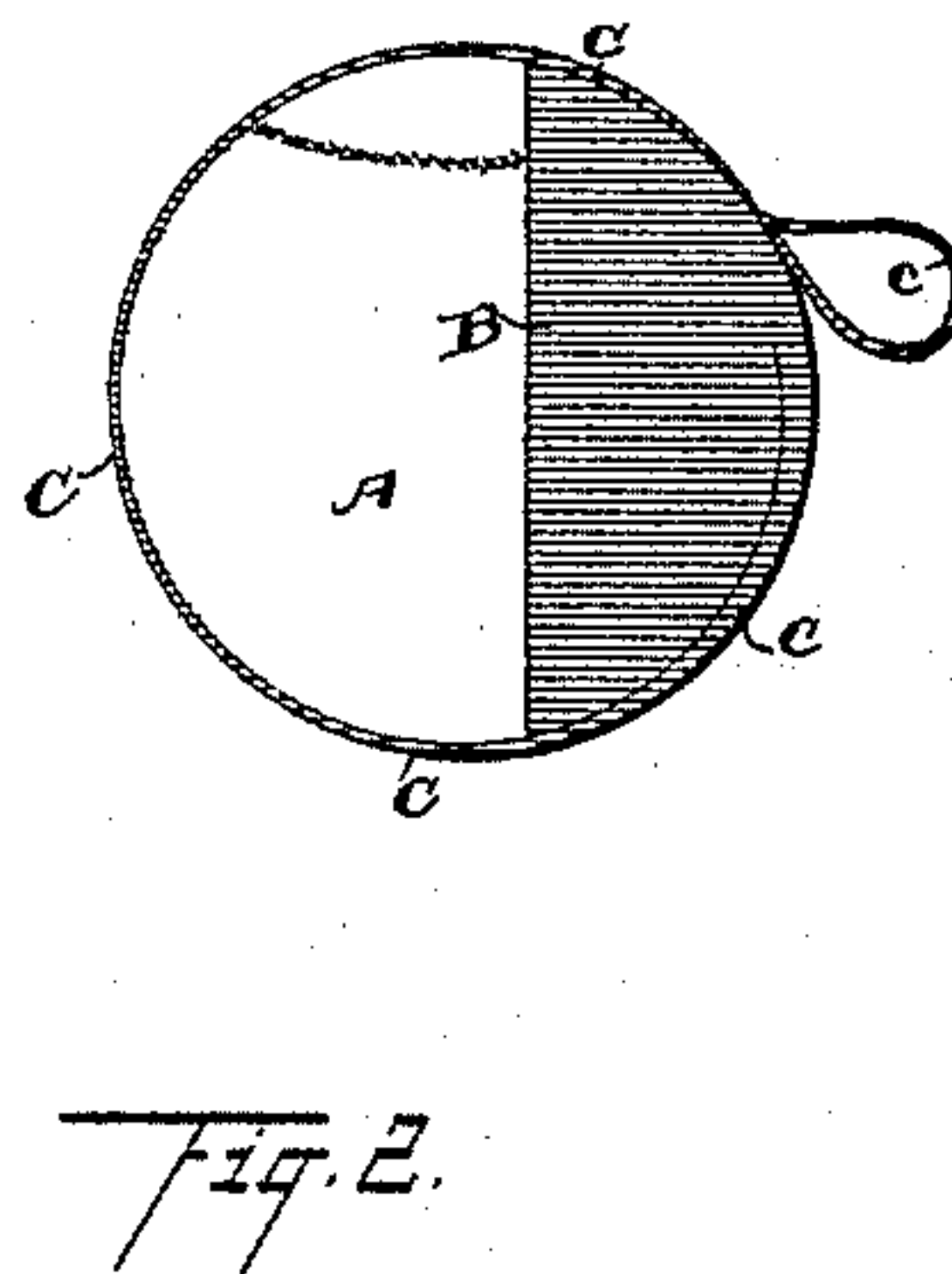
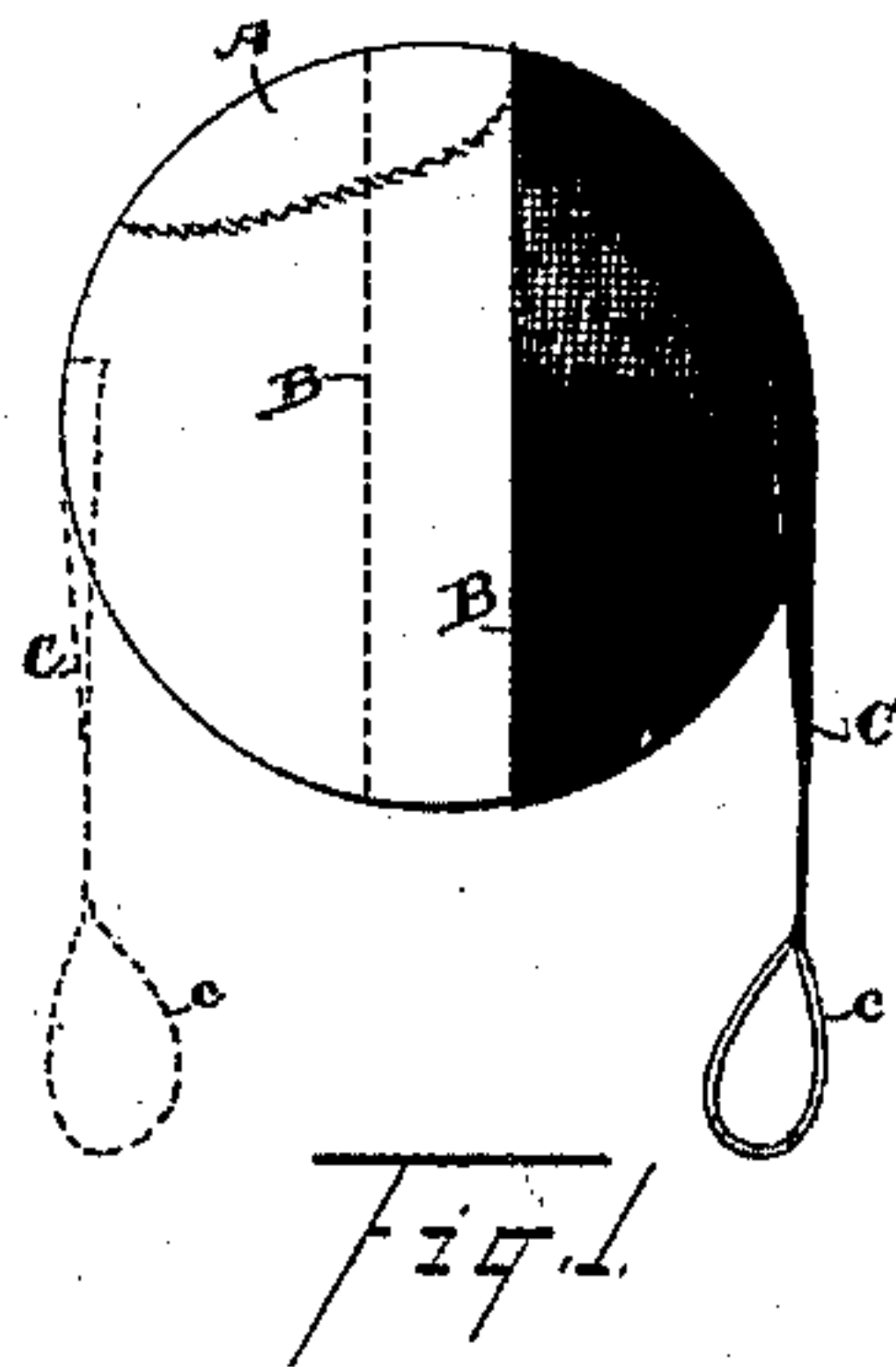


(No Model.)

J. H. BURNS.
BASE BALL CURVER.

No. 443,036.

Patented Dec. 16, 1890.



WITNESSES:
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ATTORNEYS

UNITED STATES PATENT OFFICE.

JOSEPH H. BURNS, OF CLEVELAND, OHIO.

BASE-BALL CURVER.

SPECIFICATION forming part of Letters Patent No. 443,036, dated December 16, 1890.

Application filed September 29, 1888. Renewed July 22, 1890. Serial No. 359,505. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH H. BURNS, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and
5 useful Improvements in Base-Ball Curvers; 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 pertains to make and use the
10 same.

My invention relates to improvements in base-ball curvers; and it consists in certain features of construction and in combination of parts hereinafter described, and pointed
15 out in the claims.

In the accompanying drawings, Figure 1 is a plan of the curver in position on the ball before the strap of the curver is stretched. Fig. 2 is a plan showing the curver-strap
20 stretched and wound upon the ball. Figs. 3 and 4 are views in perspective, the former showing the manner of applying the curver to the ball and the latter showing the position of the ball and curver for throwing.

25 A represents a base-ball. The ball-curver is preferably of rubber, and it consists of a segmental section B and an elastic strap C, these two members being connected or integral and the free end of the strap terminating in a loop c for embracing, preferably, with
30 a tight fit the thumb of the hand used in throwing the ball. Section B internally is adapted to fit nicely the periphery of the ball. Loop c had better have a lining of smooth
35 soft cloth, wool, or other suitable material to prevent the loop from clinging to or chafing the thumb, it being somewhat difficult to place the loop upon or remove it from the thumb without such lining and with the rubber engaging the thumb. With the loop c in
40 position upon the thumb the ball is placed in section B of the curver. (See Fig. 3.) Next strap C is stretched and wound around the ball, overlapping section B, as shown more
45 clearly in Figs. 2 and 4. In such position of parts the ball is held for throwing. When

the ball is thrown, the one side of the ball for an instant is held in check by the strap, the ball, so to speak, unwinding itself from the strap, by reason of which a rotary movement
50 is imparted to the ball, the axis of such rotary movement being approximately at right angles to the projectile line of the ball. Such rotary movement of the ball causes the latter to follow a lateral curve instead of a straight
55 projectile line. The curving of a base-ball, at least in theory, is well known to persons skilled in the art; but in practice the matter is exceedingly difficult, and there are but few players that can successfully curve the ball,
60 and their success is somewhat limited. By means of my ball-curver the ball can be curved much more than by hand, and may be curved in either direction at will of the thrower simply by turning the hand. If the strap draws
65 on the right-hand side of the ball, the ball when thrown will curve to the right hand; but if the strap draws on the left-hand side of the ball when the latter is thrown the latter will curve to the left hand. By turning
70 the hand then as the ball is thrown the strap is made to draw for the instant on the right-hand or on the left-hand side of the ball at the will of the operator, and consequently the ball is curved in the desired direction.
75

What I claim is—

1. A base-ball curver consisting of a segment of a sphere adapted to receive a section of the ball, and a flexible strap connected to said segment, substantially as set forth.
80

2. A base-ball curver consisting of an elastic strap having a thumb-loop at one end and connected at its opposite end to a segment of a sphere, the latter being shaped to receive a section of the ball, substantially as set forth.
85

In testimony whereof I sign this specification, in the presence of two witnesses, this 19th day of April, 1888.

JOSEPH H. BURNS.

Witnesses:

CHAS. H. DORER,
ALBERT E. LYNCH.