

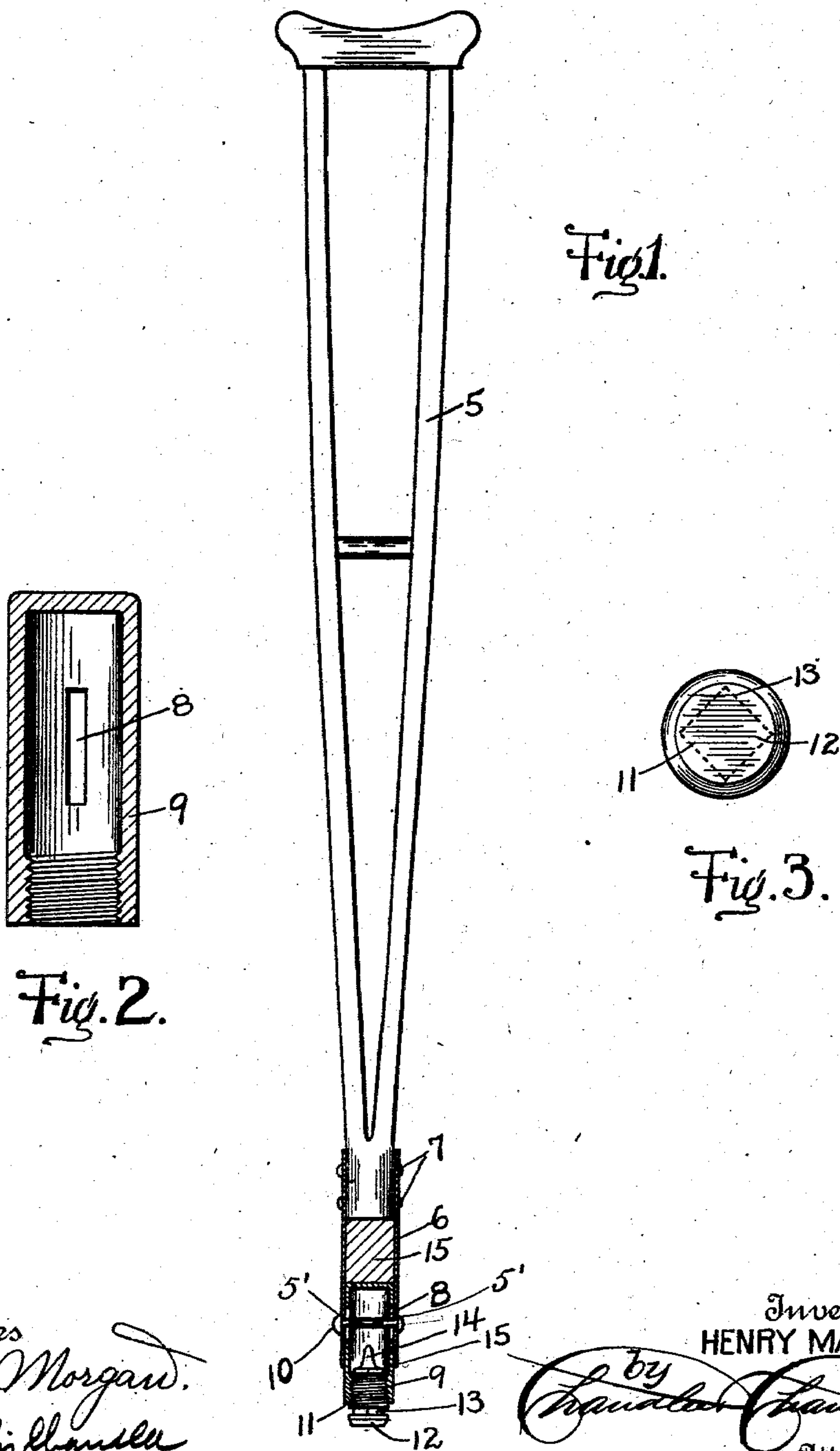
No. 730,466.

PATENTED JUNE 9, 1903.

H. MAASS.
CRUTCH.

APPLICATION FILED APR. 6, 1903.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

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CRUTCH.

SPECIFICATION forming part of Letters Patent No. 730,466, dated June 9, 1903.

Application filed April 6, 1903. Serial No. 151,304. (No model.)

To all whom it may concern:

Be it known that I, HENRY MAASS, a citizen of the United States, residing at Jersey City, in the county of Hudson, State of New Jersey, have invented certain new and useful Improvements in Crutches; 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.

This invention relates to crutches, and more particularly to the tips thereof; and it has for its object to provide a construction including a tip having a smooth end for use indoors or out of doors during pleasant weather and a spike for use out of doors when the streets are slippery and in which construction the tip may be easily and quickly adjusted to present either end to correspond to the conditions of use of the crutch.

A further object of the invention is to provide a construction wherein the tip will be held yieldably projected under all conditions, so that the same ease will be obtained as if a rubber tip were used and the tip will not be subject to the rapid wear of the rubber tip.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a view showing a crutch embodying the present invention, the lower end of the crutch being in section to illustrate the arrangement of the parts. Fig. 2 is a longitudinal sectional view of the tubular sliding core of the ferrule. Fig. 3 is a view showing the flat end of the reversible tip.

Referring now to the drawings, there is shown a crutch 5, having a ferrule 6 of tubular form and into the upper end of which the lower end of the crutch proper is engaged, the ferrule being held in place by means of the transverse screws 7. The tubular ferrule 6 projects downwardly below the lower end of the crutch proper, and this lower portion of the ferrule, or what may be termed the "casing" of the ferrule, is provided with opposite alining perforations 5'. In the lower portion of the casing of the ferrule is disposed a tubular core 9, which is slidable in the casing and is limited in its sliding movement by means of the transverse pin or screw 10, which is passed through the casing 6 and through

the slots 8, the core being thus permitted a longitudinal movement equal to the lengths of the slots 8. When the core is moved in one direction to its limit, its lower end projects from the lower end of the casing 6, and this lower projecting end of the core is interiorly threaded to receive the threaded cylindrical tip 11, which is removably engaged in the core by screwing into the lower end of the latter.

One end of the tip 11 is flat, as shown at 12, and above this flattened portion is formed angular, as shown at 13, to receive a wrench for rotating it into and out of engagement with the core 9, this flat end of the tip being designed for use indoors and out of doors in fine weather. When the streets are slippery, there is danger of the crutch slipping, and for this reason the opposite end of the tip 11 is provided with a spike 14, at the base of which is the angular portion 15, which is adapted to receive a wrench, and it will be understood that the tip may be engaged in the core to project either end thereof, as may be desired.

To hold the core 9 at the outer limit of its movement, with the tip projected from the end of the ferrule-casing, a block 15, of rubber, is disposed within the casing 6 between the lower end of the crutch and the upper closed end of the core, and as the core is free to move longitudinally in the casing the rubber filling or cushion serves to absorb the vibration. With this construction it will be seen that whether the spike is projected or the flat end of the tip is projected the rubber cushion will be active and by holding the core yieldably will absorb vibration, the crutch being as easy upon the user at all times as if a rubber tip were employed, while the tip is not subjected to the rapid wear of a rubber tip.

In practice modifications of the specific construction shown may be made and any suitable materials and proportions may be used for the various parts without departing from the spirit of the invention.

What is claimed is—

1. A crutch having a tubular ferrule at its lower end, a core slidably engaged in the lower end of the ferrule, a cushion disposed between the inner end of the core and the

adjacent end of the crutch proper, means for limiting the sliding movement of the core and for holding the core at all times in contact with the cushion, and a reversible tip
5 removably engaged with the core.

2. A crutch comprising a body portion, a tubular ferrule disposed upon the lower end of the body portion and having longitudinal slots at diametrically opposite points, a hollow core slidably engaged in the lower end
10 of the ferrule and projecting therefrom, a pin passed transversely through the ferrule and through the slots of the core, a cushion disposed between the inner end of the core and the end

of the crutch-body and adapted to hold the core
15 yieldably with the pin against the inner ends of the slots of the core, and a metal tip including a centrally continuously threaded body portion for reversible engagement in the core, said tip having a spike at one end and
20 having its opposite end flattened.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY MAASS.

Witnesses:

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