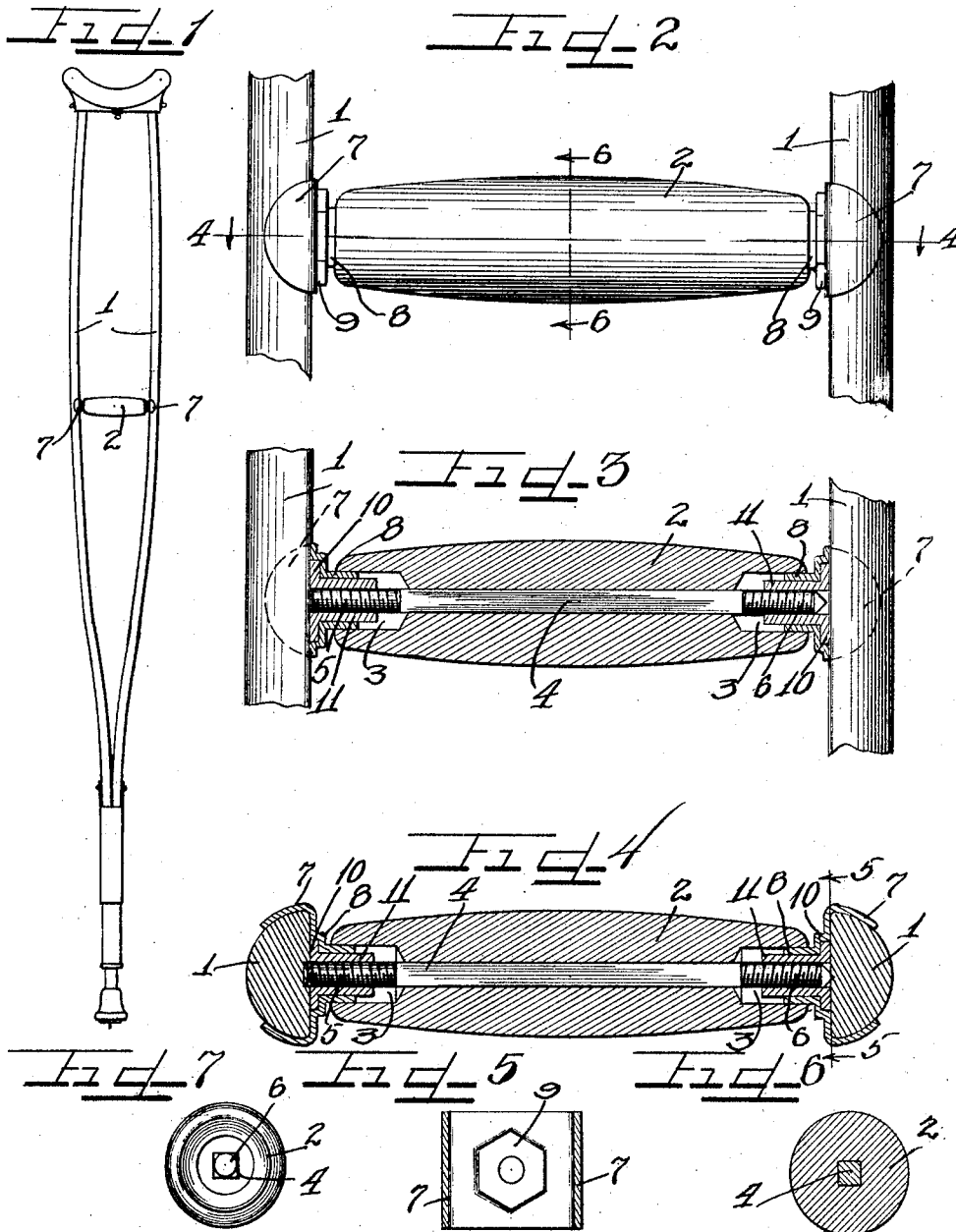


J. B. GLOWACKI.
ADJUSTABLE HAND GRIP FOR CRUTCHES.
APPLICATION FILED JULY 3, 1920.

1,400,600.

Patented Dec. 20, 1921.



WITNESSES

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by

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Att.

UNITED STATES PATENT OFFICE.

JOHN B. GLOWACKI, OF CHICAGO, ILLINOIS.

ADJUSTABLE HAND-GRIP FOR CRUTCHES.

1,400,600.

Specification of Letters Patent.

Patented Dec. 20, 1921.

Application filed July 3, 1920. Serial No. 393,791.

To all whom it may concern:

Be it known that I, JOHN B. GLOWACKI, a citizen of the Republic of Poland, having declared my intention to become a citizen of the United States, being a resident of the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in an Adjustable Hand-Grip for Crutches; and I do hereby declare that the following is a clear, full, and exact description of the same, reference being had to the accompanying drawings, and to the numerals of reference marked thereon, which form a part of this specification.

This invention relates to an adjustable hand grip for crutches. It is very desirable that crutches, and particularly the hand grips thereof, be conveniently adjustable to the physical requirements of users thereof. The adjustment of the position of the hand grip must necessarily be very accurate if the crutch is to be used with comfort and it is also desirable that it be possible to easily change this adjustment, to adapt the crutch to various conditions and uses.

It is therefore an important object of this invention to provide a hand grip for crutches which may be conveniently adjusted to the physical requirements of crutch users.

It is also an important object of this invention to provide an adjustable hand grip which may be conveniently and exactly adjusted to any desired position.

Other and further important objects of this invention will be apparent from the disclosures in the specification and the accompanying drawings.

The invention (in a preferred form) is shown on the drawings and hereinafter more fully described.

On the drawings:

Figure 1 is a view in elevation of a crutch equipped with the improved hand grip of this invention.

Fig. 2 is an enlarged elevation of the hand grip.

Fig. 3 is a longitudinal, vertical section therethrough.

Fig. 4 is a section on the line 4—4 of Fig. 2.

Fig. 5 is a section on the line 5—5 of Fig. 4.

Fig. 6 is a section on the line 6—6 of Fig. 3.

Fig. 7 is an end elevation of the hand grip.

As shown on the drawings:

The improved adjustable hand grip of this invention is adapted to be used on any crutch and is shown in Fig. 1, mounted between the forked supporting members 1 of an improved crutch of the type described in my application for Patent, Serial No. 366,865 which was filed on March 18, 1920. Said hand grip comprises an oblong handle 2 which is ordinarily constructed of wood, hard rubber, or other suitable material, and which is provided with a longitudinal squared recess therethrough, the outer ends of said recess being enlarged to form cylindrical chambers 3, as clearly shown in Figs. 3, 4 and 7. Extending through the squared longitudinal recess in said handle 2 is a squared rod 4, the outer ends of which are turned down and threaded at 5 and 6, the end 5 being cup-shaped while the end 6 is pointed for a purpose to be specified hereinafter. For supporting said handle 2 in the forked members 1, clips 7 are provided. Said clips are formed so as to partially engage around said forked members, and have inwardly extending sleeves 8 integral therewith, extending into the cylindrical chambers 3, in the handle 2. Integrally formed between each of the clips 7 and the sleeves 8, is a hexagonal depression which provides a recess 9 which is adapted to receive the hexagonal head 10 of a sleeve nut 11, non-rotatably seated therein. The threaded portions 5 and 6 on the rod 4 are engaged in said sleeve nut 11, and since said portions are right and left threaded, the rotation of the rod 4 in one direction acts to loosen the handle 2 from the forked members 1 and the rotation thereof in the opposite direction acts to tighten the same. Since the rod 4 is squared and engaged in a squared recess in the handle 2, the rotation of said handle 2 of course rotates said rod.

The operation is as follows:

The clips 7, which are ordinarily integral with the sleeves 8, are formed so that they conform with the outer contour of the forked members 1, as shown in Fig. 4, and said clips are engaged over the end of said forked members 1, when the crutch is assembled, the handle 2 and the sleeve nut 11 being placed in position prior to this engagement. The handle is then slipped downwardly between the forked members until in the de-

sired position when rotation thereof is effected to draw the clips 7 inwardly, the pointed and cupped ends of the threaded portions 6 and 5 at the same time engaging in the inner faces of the forked members 1, and the handle is thus held firmly in position by said engagement and by the frictional engagement of the clips 7 with the outer of said forked members 1. When it is desired to loosen the handle to move it to some other position of adjustment it is only necessary to rotate the same in a reverse direction whereupon the clips 7 and the points of the rod 4 are released.

It is thus apparent that the adjustment provided by this invention is an exact one and that it is possible to effect the same conveniently at any time without the aid of tools. The construction of the hand grip is a strong one and when once adjusted there is no danger of its slipping, because it is locked to both the outer faces and the inner face of the forked members 1.

I am aware that numerous details of construction may be varied through a wide range without departing from the principles of this invention, and I therefore do not purpose limiting the patent granted otherwise than necessitated by the prior art.

I claim as my invention:

1. In a crutch, two supporting members, a hand rest forming a cross piece between said supporting members, a rod of noncircular cross-section extending longitudinally through said hand rest and oppositely threaded at each end, one end of said rod being pointed and the other end presenting a bearing in a plane at right angles to the rod, fixtures clasp ing the supporting members and a threaded connection between said fixtures and the threaded portions of the rod.

2. In a crutch, two wooden supporting members, a hand rest forming a cross piece between said supporting members, a rod of noncircular cross-section extending longitudinally through said hand rest fixtures clasp ing said supporting members and screw threaded connections between said fixtures and said rod whereby the supporting members may be drawn toward each other, one end of the rod being sharpened whereby when the supporting members approach each other the end of the rod will indent the wood.

3. In a crutch, two wooden supporting members each having a plane face and a rounded face, a hand rest forming a cross piece between the plane faces of said supporting members, a rod of noncircular cross-section extending longitudinally through said hand rest, a fixture of sheet metal having a plane surface on one side bearing against the plane surface of one of said supporting members and curved surfaces adjacent to said

plane surface partly inclosing the rounded face of said supporting member and forming the other side of said fixture, the edges of said curved surfaces farthest from the plane surface being separated, said fixture having a socket upstanding from the plane side, one portion of said socket being noncircular, said socket being opposite the space between the said curved surfaces, a thread on said rod, a threaded sleeve inside the socket and coöperating with the threads on said rod and a noncircular flange on said sleeve coöperating with the noncircular portion of said socket to prevent relative rotation of said socket and sleeve.

4. In a crutch, two wooden supporting members each having a plane face and a rounded face, a hand rest forming a cross piece between the plane faces of said supporting members, a rod of noncircular cross-section extending longitudinally through said hand rest, a fixture of sheet metal having a plane surface on one side bearing against the plane surface of one of said supporting members and curved surfaces adjacent to said plane surfaces partly inclosing the rounded face of said supporting member and forming the other side of said fixture, the edges of said curved surfaces farthest from the plane surface being separated, said fixture having a socket upstanding from the plane side, one portion of said socket being noncircular, said socket being opposite the space between the said curved surfaces, a thread on said rod, a threaded sleeve inside the socket and coöperating with the threads on said rod and a noncircular flange on said sleeve coöperating with the noncircular portion of said socket to prevent relative rotation of said socket and sleeve, a fixture and sleeve at the other end of said rod, a thread on the last-named end of said rod coöperating therewith, the last-named fixture sleeve and thread being like the corresponding parts on the first-named end of the rod except that the thread is oppositely directed whereby rotation of the hand rest will draw the supporting members toward each other.

5. In a crutch, two wooden supporting members each having a plane face and a rounded face, a hand rest forming a cross piece between the plane faces of said supporting members, a rod of noncircular cross-section extending longitudinally through said hand rest, a fixture of sheet metal having a plane surface on one side bearing against the plane surface of one of said supporting members and curved surfaces adjacent to said plane surfaces partly inclosing the rounded face of said supporting member and forming the other side of said fixture, the edges of said curved surfaces farthest from the plane surface being separated, said fixture having a socket upstanding from the

plane side, one portion of said socket being noncircular, said socket being opposite the space between the said curved surfaces, a thread on said rod, a threaded sleeve inside the socket and cooperating with the threads on said rod and a noncircular flange on said sleeve cooperating with the noncircular portion of said socket to prevent relative rotation of said socket and sleeve, a fixture and sleeve at the other end of said rod, a thread on the last-named end of said rod cooperating therewith, the last-named fixture sleeve and thread being like the corresponding parts on the first named end of the rod except that the thread is oppositely directed whereby rotation of the hand rest will draw the supporting members toward each other the ends of said rod being sharpened to indent the wood when the supporting members so approach each other.

6. In a crutch, two wooden supporting members each having a plane face and a rounded face, a hand rest forming a cross piece between the plane faces of said supporting members, a rod of noncircular cross-section extending longitudinally through said hand rest, a fixture of sheet metal having a plane surface on one side bearing against the plane surface of one of said supporting members and curved surfaces adjacent to said plane surfaces partly inclosing the rounded face of said supporting member and forming the other side of said fix-

ture, the edges of said curved surfaces farthest from the plane surface being separated, said fixture having a socket upstanding from the plane side, one portion of said socket being noncircular, said socket being opposite the space between the said curved surfaces, a thread on said rod, a threaded sleeve inside the socket and cooperating with the threads on said rod and a noncircular flange on said sleeve cooperating with the noncircular portion of said socket to prevent relative rotation of said socket and sleeve, a fixture and sleeve at the other end of said rod, a thread on the last-named end of said rod cooperating therewith, the last-named fixture sleeve and thread being like the corresponding parts on the first-named end of the rod except that the thread is oppositely directed whereby rotation of the hand rest will draw the supporting members toward each other, one end of said rod being pointed and the other end having a bearing in a plane at right angles to the rod, both ends of said rod being sharpened to indent the wood when the supporting members so approach each other.

In testimony whereof I have hereunto subscribed my name in the presence of two subscribing witnesses.

JOHN B. GLOWACKI.

Witnesses:

CHARLES W. HILLS, Jr.,
CARLTON HILLS.