

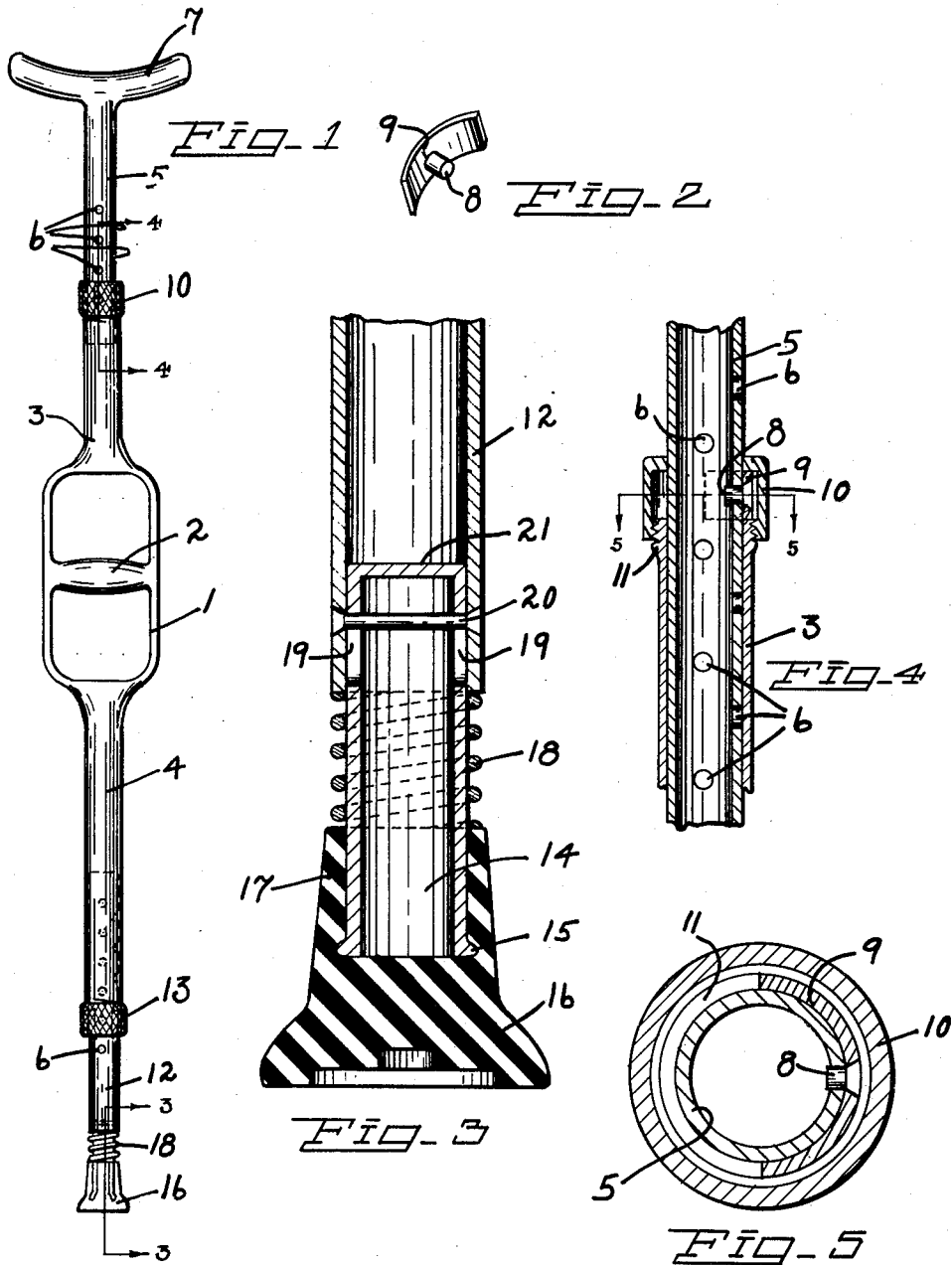
Nov. 7, 1950

G. E. OSBORN

2,528,706

EXTENSIBLE CRUTCH

Filed Aug. 13, 1946



INVENTOR.
George E. Osborn
BY
Shawn L. Fish
ATTORNEY

UNITED STATES PATENT OFFICE

2,528,706

EXTENSIBLE CRUTCH

George E. Osborn, Spokane, Wash.

Application August 13, 1946, Serial No. 690,132

1 Claim. (Cl. 135—53)

1

My present invention relates to the general class of crutches, and more specifically to an improved extensible crutch of the sectional, longitudinally adjustable type including a resiliently mounted tip or foot-pad. The primary object of the invention is the provision of a strong and durable, light-weight sectional crutch, that may readily be adjusted with relation to the arm and leg for personal use, and rigidly locked in adjusted position to insure comfort and safety, and to assure facile manipulation by the user.

In the physical embodiment of my invention I utilize a minimum number of component parts that may readily be manufactured at low cost of production; some of the parts are interchangeable; and they may be assembled with facility and accurately adjusted without necessity for skilled labor.

The invention consists in certain novel combinations and arrangements of these parts as hereinafter described and more particularly set forth in the appended claim.

In the accompanying drawings I have illustrated one complete example of the physical embodiment of my invention wherein the parts are combined and arranged in accord with one mode I have devised for the practical application of the principles of my invention. It will be understood that changes and alternations are contemplated and may be made in these exemplifying drawings and mechanical structures, within the scope of my claim without departing from the principles of the invention.

Figure 1 is a view in elevation of a crutch in which my invention is embodied.

Figure 2 is an enlarged detail perspective view of one of the interchangeable lock-pieces, or locking dogs.

Figure 3 is an enlarged detail vertical sectional view at line 3—3 of Fig. 1 illustrating the resilient mounting of the foot-section and resilient pad.

Figure 4 is a detail vertical sectional view, on a smaller scale, as at line 4—4 of Fig. 1 disclosing one of the locks between telescoping sections of the crutch.

Figure 5 is an enlarged, detail transverse horizontal sectional view at line 5—5 of Fig. 4 disclosing the locking position of the lock-piece or dog.

In carrying out my invention the sectional crutch is built upwardly and downwardly from a main supporting section that includes an intermediate hand-hold formed as a loop 1 having an integral cross bar 2 for use as a hand grip.

The sections of the crutch are fashioned of

2

light but strong metal, and the main, hand-hold, section is formed with an integral upper tube 3, and a lower tubular end 4.

In the upper tubular end 3 of the main-section a tubular arm-section 5 is telescopically mounted and provided with holes or sockets 6 which are staggered and longitudinally spaced for use in adjusting or extending the crutch, and an arm-rest 7 is rigidly mounted upon the arm-section 5.

The extensible sections of the crutch are rigidly held in adjusted position by means of two interchangeable lock-pieces, or dogs, one of which is shown in Fig. 2 with a pin 8 for co-action with sockets 6, and the pin is rigidly mounted on the piece or metal block 9 of arcuate or crescent shape. The curved head or block 9 conforms to the shape of the cylindrical tubular section on which it is mounted and the pin 8 fits neatly within a selected socket of this section, and against the end of a complementary section.

One of the lock-pieces is employed in an adjustable joint in the upper portion of the crutch, and a similar lock piece is utilized in another joint in the lower portion of the crutch.

As best seen in Fig. 4 one of the lock-pieces is enclosed by an open center, knurled, locking nut 10, which encircles the arm-section 5 and is screwed down upon an externally threaded head 11 of the tubular section 3 to form a holder or housing for the enclosed lock-piece.

An aligned leg-section 12 of tubular cylindrical shape, which telescopes within the lower end 4 of the main tubular section is also locked to the main section by means of a similar lock-piece 8—9, and a lock nut 13 rigidly unites these jointed parts.

A tubular, telescoping foot-section 14 is resiliently mounted on the lower end of the leg-section 12 and fashioned at its lower end with an integral annular exterior flange 15, and a rubber tip or foot-pad 16 having an upper collar 17 is pressed or molded upon the lower open end of the foot-section 14.

For resiliently supporting the crutch, a helical spring 18 which is coiled about the foot-section 14 is interposed between the lower free end of the leg-section 12 and the upper edge of the collar 17.

The resilient movement of the telescoping leg-section 12 and the foot-section 14 is limited by co-acting parts of these sections, and for this purpose the leg-section is provided with a pair of longitudinally extending diametrically spaced and opposed slots 19, through which a retaining and guide pin 20 is passed. The upper end 21

of the foot-section 14 within the leg-section 12 is closed as indicated, thus providing for a piston-action within the leg-section 12 that stabilizes the resilient movement under weight of the load that is imposed from the upper parts of the crutch. 5

Having thus fully described my invention what I claim as new and desire to secure by Letters Patent is:

In an extensible crutch, the combination with a main section, a telescoping tubular leg-section, and means for locking these sections in adjusted position, of a tubular foot-section having a pair of opposed slots and telescoping the leg-section, a transversely arranged retaining pin mounted in the leg-section and passed through the slots, 15 a pad on the foot section, and a spring coiled

about the foot section and interposed between the pad and the upper end of the leg-section.

GEORGE E. OSBORN.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

10	Number	Name	Date
	834,205	Jones -----	Oct. 23, 1906
	1,630,032	Rood -----	May 24, 1927
	1,733,430	Shahan -----	Oct. 29, 1929
	2,116,730	Menton -----	May 10, 1938
15	2,373,045	Osborn -----	Apr. 3, 1945
	2,397,499	McGowan -----	Apr. 2, 1946