March 1, 1960 H. E. HIPPS 2,926,661

HEEL PAD

Filed June 7, 1957

Fig. 1.

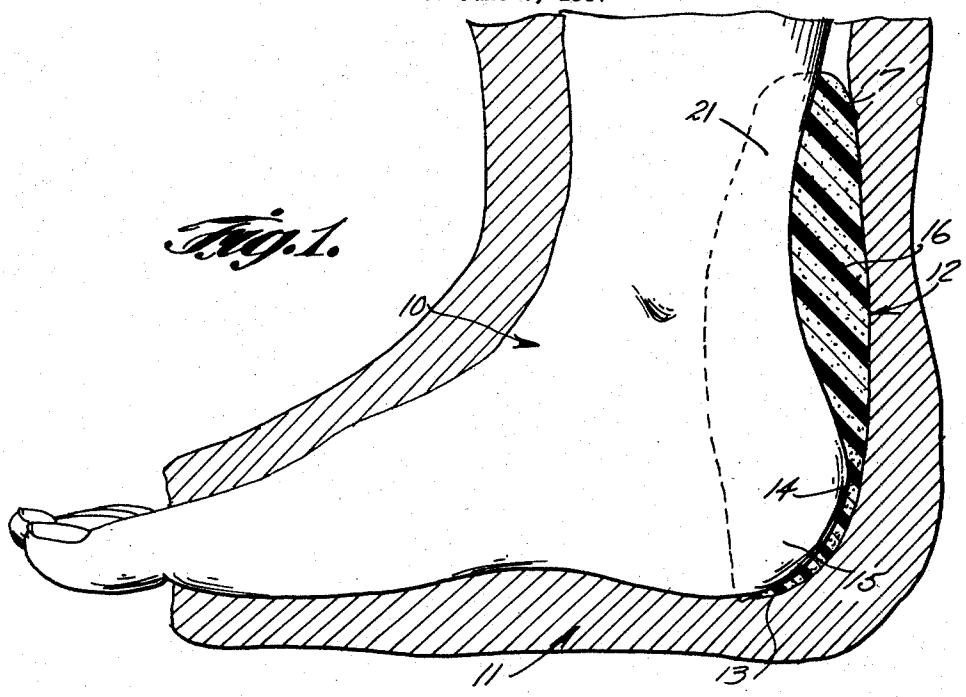
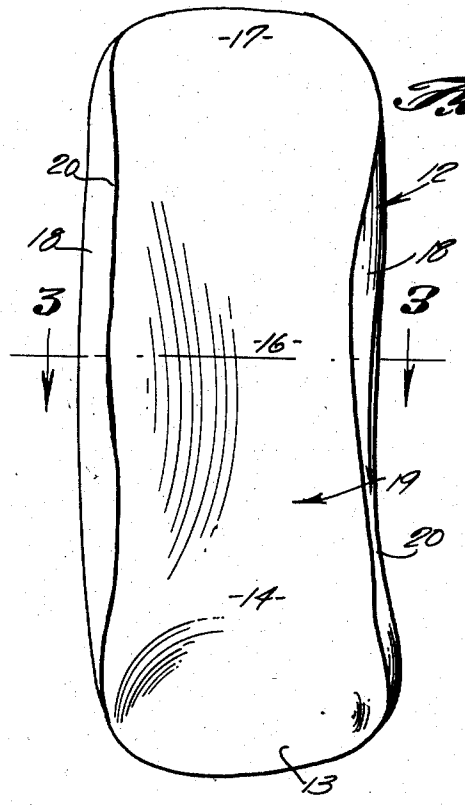


Fig. 2.



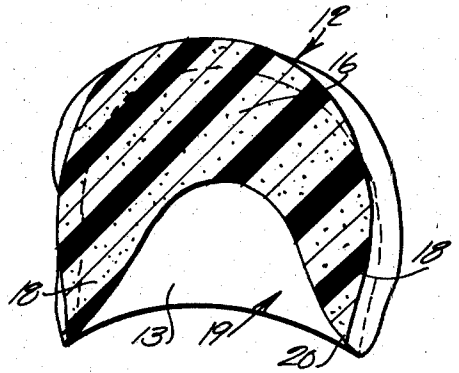


Fig. 3

INVENTOR.

Herbert E. Hipps

BY Victor J. Evans & Co.

ATTORNEYS

United States Patent Office 2,926,661 Patented Mar. 1, 1960

2,926,661

HEEL PAD

Herbert E. Hipps, Waco, Tex.

Application June 7, 1957, Serial No. 664,410

1 Claim. (Cl. 128—80)

This invention relates to a heel pad, and more particularly to a heel pad for application to a patient's heel before a cast is applied.

The object of the invention is to provide a heel pad which is adapted to be used with a cast so that the cast can be worn with greater comfort.

Another object of the invention is to provide a heel pad which is adapted to be fabricated of a single piece of yieldable resilient material such as rubber or plastic, and wherein the pad is adapted to be arranged contiguous to a person's heel so that when a cast is applied to the person's heel or leg, the cast will be prevented from harshly rubbing against the person's heel or leg, the heel pad of the present invention being constructed in such a manner that it has a configuration which insures that all of the necessary portions of the heel or leg will be properly protected from rubbing against the cast which is being worn by the patient.

A further object of the invention is to provide a heel pad which is extremely simple and inexpensive to manufacture.

Other objects and advantages will be apparent during the course of the following description.

In the accompanying drawings, forming a part of this application, and in which like numerals are used to designate like parts throughout the same.

Figure 1 is a sectional view taken through a cast, and showing the heel pad of the present invention being used.

Figure 2 is an end elevational view looking at the heel pad of the present invention.

Figure 3 is a sectional view taken on the line 3—3 of Figure 2.

Referring in detail to the drawings, the numeral **10** indicates a portion of a person's foot which is encased in a cast such as the cast **11**. The present invention is directed to a heel pad which is indicated generally by the numeral **12**, and the heel pad **12** is adapted to be made of a single piece of yieldable or resilient material such as rubber or plastic.

The heel pad **12** includes a first portion **13** which has a thin tapered shape and which is adapted to be positioned beneath the rounded rear portion **15** of the patient's heel as shown in Figure 1, when the cast **11** is being worn. The first portion **13** terminates in a substantially upstanding portion **14** which is arranged rearwardly of the rounded heel portion **15**, and the second portion **14** terminates in an enlarged thicker portion **16** which is arranged beneath the heel cord **21**. The portion **16** terminates in an upper tapered end portion **17**, as shown in Figure 1 for example.

Formed integral with the body of the heel pad or secured thereto, is a pair of spaced apart flanges **18**, and the flanges **18** coact with the remaining portions of the heel pad to define an elongated recess **19**. The free edges of the flanges **18** taper to a pointed edge as indicated by the numeral **20**.

From the foregoing, it is apparent that there has been provided a heel pad which is especially suitable for use by persons or patients who are wearing a cast on their

foot, as for example as shown in Figure 1. The heel pad **12** of the present invention is adapted to be made of a single piece of yieldable material such as sponge rubber or a suitable plastic, and when the heel pad **12** is being used, it is positioned as shown in Figure 1 so that the thin portion **13** is arranged beneath the rounded portion **15** of the person's foot. Then, the potrion **14** of the heel pad is arranged to the rear of the rounded portion **15** of the person's foot, and the enlarged or thicker portion **16** engages the recessed portion at the back of the leg as shown in Figure 1, and the portion **16** is arranged beneath or immediately below the heel cord **21** of the person's leg or foot. With the pad **12** positioned as shown in Figure 1, and with the flanges **18** arranged on opposite sides of the heel, it will be seen that the person's heel or adjacent portions of the foot will be protected against injury from the rough cast **11**. Thus, the heel pad will permit patients to wear a cast such as the cast **11** without rubbing a sore on the heel or without otherwise causing injury to the heel.

The heel pad **12** is made of yieldable material so that it will readily conform to the configuration of the person's foot, and the heel pad will provide a means by which a cast can be worn with greater comfort.

The heel pad of the present invention may be made of sponge rubber, or else it may be made of a very light plastic material, and the device is adapted to be applied to the back of a patient's heel before a cast is applied. The heel pad **12** is constructed so that when it is worn on the heel under a cast, there is no chance that a patient will get a pressure sore on his or her heel, and that this is a very common occurrence particularly when an inexperienced doctor, such as a doctor who doesn't often put on a cast, applies a cast to a leg.

As shown in the drawings, it is to be noted that the portion **13** of the heel pad is thin and soft and the portion **14** is arranged rearwardly of the rounded portion **15** of the heel so that the back of the heel gets some shielding from the hard and rough inner plaster Paris surface. The portion **16** of the heel pad underneath the heel cord **21** is thick. Thus, since the heel cord **21** is soft, it will expand, and it will tolerate prolonged pressure for long periods of time, whereas the heel bone itself will not. Furthermore, the heel bone is simply a bone covered with skin, and it will not tolerate even the softest of pressure for a very long period of time. Furthermore, the heel bone cannot move in a cast so that any pressure there by the cast or by the padding will definitely make a pressure sore at that point. However, the heel cord is itself a soft, broad, and long structure and it is covered by skin but underneath the skin, there is between the skin and the heel cord a fibro-fat layer. The heel cord, therefore, being soft and being somewhat capable of spreading sideways a little bit with pressure, will tolerate pressure. Also, the heel cord moves a little bit from time to time in a cast as the patient alternately relaxes and contracts that muscle in the normal movement of his or her leg here and there on the bed and around in crutch walking and in other ways.

Thus, it will be seen that the heel pad of the present invention is constructed so that it will catch the major part of the weight and pressure on the heel cord where it will tolerate it and not on the heel bone where it will not tolerate it.

By using the heel pad according to the present invention, the redness of the heel skin will be prevented when a cast is being worn, and the patient will not have any discomfort over the heel or the heel cord area, as previously described.

While I have shown a preferred form of my invention, I reserve all rights to such modifications as properly fall within the scope of the invention as claimed.

I claim:

In a heel pad for use by patients who have broken legs and who are wearing a cast and may get a heel sore from the cast, said pad serving to prevent the heel sore, said heel pad preventing pressure on the back of a heel of a patient wearing a cast, said heel pad being shaped to fit the back of a heel only, said heel pad being fabricated of a single piece of yieldable material and shaped to include a substantially horizontally disposed lower first portion adapted to be arranged beneath the rounded portion of a patient's foot, a substantially horizontally disposed second portion extending upwardly from said first portion and adapted to be arranged to the rear of the rounded portion of a person's foot, said second portion terminating in an enlarged third portion of increased thickness which is adapted to engage the recessed portion at the back of the leg, said third portion terminating in a fourth portion of tapered formation which terminates in a thin upper edge, the third portion adapted to be arranged immediately below the heel cord of a person's leg or foot, and spaced apart flanges extending from the sides of the pad co-acting with the first, second, third and fourth portions to define an elongated recess, the flanges adapted to be arranged on opposite sides of the heel, and whereby the heel pad will catch the major part of the weight and pressure on the heel cord where it will tolerate it, and not on the heel bone where it will not tolerate it, said pad being thin high up, two or three inches above the ankle, and getting thicker all the way down to the heel and being thickest at a point contiguous to the rear of the heel, the heel pad adapted to catch the weight of the foot when the patient is lying on his or her back, on the heel cord, and not on the heel.

References Cited in the file of this patent

UNITED STATES PATENTS

2,550,869	Salisbury	May 1, 1951

FOREIGN PATENTS

804,453	Germany	Apr. 23, 1951

OTHER REFERENCES

Orthopaedic Appliances Atlas, American Academy of Orthopaedic Surgeons, volume 1, pages 112–113. (Copy in Div. 55.)

The Lancet, "Plastic Appliances Moulded Direct to Patient" Brennan, April 23, 1955 (page 844 relied on). (Copy in Div. 55.)