

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 21

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DONALD BROWN

Appeal No. 96-2490
Application 08/369,357¹

ON BRIEF

MAILED
AUG 30 1996
PAT.&TM. OFFICE
BOARD OF PATENT APPEALS
AND INTERFERENCES

Before ABRAMS, FRANKFORT and STAAB, Administrative Patent Judges.
FRANKFORT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1, 7 through 10, 12, 14 through 29, 35 through 38 and 41 through 45. Claims 39 and 40, the only other claims remaining in the application, stand withdrawn from consideration under 37 CFR 1.142(b). Claims 2 through 6, 11, 13 and 30 through 34 have been canceled. On page 1 of the examiner's answer it is indicated that claims 8, 16, 17, 24 and 25 are now

¹ Application for patent filed January 6, 1995, which is a continuation-in-part of Serial No. 08/271,525, filed July 7, 1994.

Appeal No. 96-2490
Application 08/369,357

objected to as being dependent on a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Accordingly, the appeal as to claims 8, 16, 17, 24 and 25 is dismissed, leaving only claims 1, 7, 9, 10, 12, 14, 15, 18 through 23, 26 through 29, 35 through 38 and 41 through 45 for our consideration in this appeal.

Appellant's invention relates to an exercise device for exercising the abdominal muscles by allowing a user in a supine position to conduct a "curling" exercise. As noted on pages 2 and 3 of appellant's specification,

"the invention provides an abdominal exerciser device which is comprised of a pair of support rails for resting on a support surface, a pair of arcuate rocker portions each of which extends forwardly from a respective support rail and a pair of arm rest portions, each of which extends rearwardly from a rocker portion to receive an elbow or arm of a person disposed between the support rails in a supine position.

When in use, the person rests on his or her elbows or arms on the arm rest portions while in a supine position and then curls his/her body forwardly while rocking on the arcuate rocker portions. Repeated rearward and forward rocking allows the user to strengthen the abdominal muscles.

The exercise device is preferably constructed of a skeletal frame, for example using a single hollow tube or the like to define the support rails, rocker portions and

Appeal No. 96-2490
Application 08/369,357

arm rest portions. In addition, the tube defines an upstanding arch-shaped portion connected to and between the support rails to define a space to receive the head of a person disposed between the support rails.

A support means is also secured to and across the arch-shaped portion of the skeletal frame for supporting the neck and head of a person disposed between the support rails."

Claims 1, 14, 22, 35 and 41 through 45 are representative of the subject matter on appeal and a copy of those claims is attached to this decision.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Anderson	4,141,588	Feb. 27, 1979
Birch	4,367,870	Jan. 11, 1983
Buoni	4,902,003	Feb. 20, 1990
Tecco	5,169,372	Dec. 8, 1992

The appealed claims stand rejected under 35 U.S.C. §102(b) or §103 as follows:

a) claims 1, 7, 9, 10, 14, 15, 19, 20, 22, 23, 27, 35 through 38 and 41 through 45 under 35 U.S.C. §102(b) as being anticipated by Birch;

Appeal No. 96-2490
Application 08/369,357

b) claims 22, 23, 35, 38 and 41 through 45 under 35 U.S.C. §102(b) as being anticipated by Buoni;

c) claims 12, 18 and 21 under 35 U.S.C. §103 as being unpatentable over Birch;

d) claim 26 under 35 U.S.C. §103 as being unpatentable over Buoni in view of Tecco; and

e) claims 28 and 29 under 35 U.S.C. §103 as being unpatentable over Birch in view of Anderson.

Rather than reiterate the examiner's full statement of the above-noted rejections and the conflicting viewpoints advanced by the examiner and appellant regarding those rejections, we make reference to the examiner's answer (Paper No. 15, mailed May 2, 1996) for the examiner's complete reasoning in support of the rejections, and to appellant's brief (Paper No. 13, filed March 22, 1996) for appellant's arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to appellant's specification and claims, to the applied prior art references, and to the respective positions

Appeal No. 96-2490
Application 08/369,357

articulated by appellant and the examiner. As a consequence of our review, we make the determinations which follow.

We turn first to the examiner's rejection of appealed claims 1, 7, 9, 10, 14, 15, 19, 20, 22, 23, 27, 35 through 38 and 41 through 45 under 35 U.S.C. §102(b) as being anticipated by Birch. Each of these claims, in one form or another, recites, a combination "[i]n an abdominal exerciser device" (claim 1), an "abdominal exercise device" (claims 41-45), or a "skeletal abdominal exercise frame" (claim 14), comprising or consisting essentially of certain elements, for example, in claim 1, a pair of laterally spaced apart support rails (12) for resting on a support surface, a pair of laterally spaced arcuate rocker portions (13) each extending forwardly from a respective one of the support rails for rocking of the device back and forth on the support surface, a pair of arm rest portions (14) each extending rearwardly from a respective rocker portion, and a connecting portion (15) connected to and between the support rails. As a further example, in claim 42, the abdominal exercise device is defined in terms of comprising a skeletal frame including a pair of rocker portions (13) defining a space for receiving a person therebetween in a supine position, an upstanding portion connected to and between the rocker portions, and a support means secured to the frame for supporting the head and neck of a person

Appeal No. 96-2490
Application 08/369,357

supinely disposed between the rocker portions during rocking of the rocker portions. These appealed claims also each recite a functional "whereby" clause relating the claimed structure to the manner of using the device or frame to perform a "curling" exercise to exercise the abdominal muscles. Again looking to claim 1 as an example, this claim sets forth the functional limitation as follows:

"whereby a person disposed supinely on said support surface and between said rocker portions and with one of the hands or arms of the person engaging said connecting portion is able to conduct a curling exercise to exercise the abdominal muscles of the person while rocking said device."

In evaluating the exercise device of Birch vis-a-vis that claimed by appellant, we note that Birch discloses a device for enabling a person who is unskilled and untrained in Yoga to assume or perform a particular Yoga exercise called a shoulder stand. See Figure 1 of Birch. As further seen in Figures 2 and 3, the device of Birch includes vertical (13) and horizontal (14) body supporting portions connected by an arcuate portion (12) and side walls (15, 16). In using the device of Birch (column 2, line 33, et seq), a person seeking to perform a shoulder stand sits down on the horizontal portion (14), raises his arms and leans backwards, with the device thereby easily rolling backwards 90° so that the user's head, neck and upper part of his shoulders are

Appeal No. 96-2490
Application 08/369,357

parallel to the floor and the rest of the body assumes the angle of a perfect shoulder stand, the legs being in a vertical position relative to the floor. Birch then indicates that the user's arms can be folded (Fig. 1) and the position held for as long as desired. When the user decides to return to the sitting position, he extends his arms forward and the device will rotate forward 90°, thereby returning the user to a sitting position.

Like appellant, and in contrast with the examiner's position, it is our opinion that the exercise device of Birch is not an abdominal exerciser device as claimed by appellant, notwithstanding that it may be interpreted to include certain structural elements such as support rails, rocker portions and a connecting portion generally as set forth in the body of appellant's claims on appeal. In this instance, after considering the entirety of appellant's disclosure to gain an understanding of what the inventor actually invented and intended to encompass by the appealed claims, we are of the view that the preambular recitation of an abdominal exerciser device, coupled with the "whereby" clause of each of the appealed claims, does more than merely state a purpose or intended use of the claimed structure, but instead serves to provide a definition of the invention and give "life and meaning" to the claimed subject matter such that it must therefore be considered as a positive limitation in

Appeal No. 96-2490
Application 08/369,357

determining patentability. See Corning Glass Works v. Sumitomo Electric U.S.A., Inc., 868 F.2d 1251, 1257, 9 USPQ2d 1962, 1966 (Fed. Cir. 1989) and Diversitech Corp. v. Century Steps, Inc., 850 F.2d 675, 7 USPQ2d 1315 (Fed. Cir. 1988). Thus, we consider that the claimed subject matter before us on appeal is limited to those types of devices that are intended to enable, and are capable of enabling, the user to perform a "curling" exercise to thereby exercise the abdominal muscles of the person using the device.

Given that the user's body in the device of Birch has both the buttocks and thighs supported by the planar portion (14) and the head, neck, shoulders and a portion of the back supported by the planar portion (13), we fail to see how this device would exercise the abdominal muscles of a person using the device. We consider it to be total speculation on the examiner's part to say (answer, page 11) that one of ordinary skill in the art "would know" that when using Birch's device the abdominal muscles would be exercised (i.e., tensed) in maintaining the position as depicted in Figure 1 of the patent. We see no reasonable basis in the Birch disclosure from which the person of ordinary skill in the art would reach such a conclusion.

Appeal No. 96-2490
Application 08/369,357

Since we have determined that the device of Birch is not an abdominal exercise device which would allow a user supinely disposed between the rocker portions thereof and with one of the hands or arms of the person engaging the connecting portion to conduct a "curling" exercise to exercise the abdominal muscles of the user, it follows that we do not consider Birch to be an anticipatory reference with regard to appellant's claims on appeal. For this reason alone we would reverse the examiner's rejection of claims 1, 7, 9, 10, 14, 15, 19, 20, 22, 23, 27, 35 through 38 and 41 through 45 under 35 U.S.C. §102(b) based on Birch.

In addition to the foregoing, we also focus on the language of independent claims 1, 14 and 41, noting, for example, in claim 1, that the abdominal exerciser device therein comprises "a pair of laterally spaced apart support rails for resting on a support surface" (emphasis added), "a pair of laterally spaced arcuate rocker portions for rocking of the device back and forth on the support surface" (emphasis added), a pair of arm rest portions each extending rearwardly from a respective rocker portion, and a connecting portion connected to and between the support rails, "whereby a person disposed supinely on said support surface and between said rocker portions... is able to conduct a curling exercise to exercise the abdominal muscles of the person while

Appeal No. 96-2490
Application 08/369,357

rocking the device" (emphasis added). In contrast to the examiner's position, we are of the opinion that this claim language positively requires the user of the device to be disposed supinely on the same support surface as the pair of support rails and rocker portions of the device during an exercise, and precludes an arrangement like that in Birch wherein a major portion of the device itself is interposed between the person using the device and the support surface on which the device rests. Similar limiting language is found in independent claims 14 and 41, and also distinguishes the claimed abdominal exercise device therein from that of Birch. For this additional reason, we will reverse the examiner's rejection of claims 1, 7, 9, 10, 14, 15, 19, 20 and 41 under 35 U.S.C. §102(b) based on Birch.

Regarding the examiner's §103 rejections of dependent claims 12, 18 and 21 based on Birch alone, and dependent claims 28 and 29 based on Birch in view of Anderson, we note that even if the examiner's assertions concerning the modifications in these rejections are correct, there is nothing the examiner relies upon in these rejections which would overcome and provide for the deficiencies in the Birch device as already noted above. Thus, the examiner's rejections of these dependent claims under 35

Appeal No. 96-2490
Application 08/369,357

U.S.C. §103 relying on Birch as the primary reference must also be reversed.

The next rejection for our consideration is that of claims 22, 23, 35, 38 and 41 through 45 under 35 U.S.C. §102(b) as being anticipated by Buoni. Buoni discloses an exercise device and method for performing "sit-up type exercises" wherein the user lays on the device (Figures 4-6) with his knees bent and feet resting on a support surface and with his back positioned in a curved forward orientation by supporting means (17, 23, 25) on the device, whereby the exerciser is permitted to rock his shoulders forwardly (Fig. 6) to stress the abdominal muscles while the support means of the device prevents the user's back from straightening from the curved forward position. Thus, the device of Buoni, unlike the device of Birch, is an abdominal exercise device.

According to the examiner, the device of Buoni includes a skeletal frame (column 2, lines 44-53) having a pair of rocker portions (19), an upstanding connecting portion (the lower part of curved portion 25) and a support means (the upper part of curved portion 25) secured to the frame for supporting the head and neck of a user. The device also includes an upper curved supporting surface (17) on which the trunk of the exerciser rests

Appeal No. 96-2490
Application 08/369,357

for causing the back of the exerciser to be curved forwardly and for preventing the back of the exerciser from straightening from the curved forwardly position during sit-up type exercises.

Claim 22 on appeal defines "[i]n an abdominal exerciser frame," the combination comprising a pair of arcuate rocker portions for receiving a person therebetween in a supine position, and an upstanding connecting portion connected to and between the rocker portions providing a surface above the rocker portions to be engaged by one of the hands or arms of a person in said supine position during rocking of the rocker portions back and forth "whereby a person disposed supinely on a support surface and between said rocker portions and with one of the hands or arms... engaging said connecting portion is able to conduct a curling exercise to exercise the abdominal muscles of the person while rocking the frame" (emphasis added). Looking to appellant's specification to understand the claim language regarding the interrelationship between the claimed structure and the user of the device, and the limitations that such relationship provides on the claimed structure, we are of the opinion that the broadest reasonable interpretation of the terminology "between" and "therebetween," consistent with appellant's specification (In re Sneed, 710 F.2d 1544, 218 USPQ 385 (Fed. Cir. 1983); In re Tanaka, 551 F.2d 855, 193 USPQ 138

Appeal No. 96-2490
Application 08/369,357

(CCPA 1977)), is that the pair of arcuate rocker portions define a space separating the rocker portions and into which the person using the device is received in a supine position. See, for example, Figure 6 of appellant's drawings. Thus, claim 22 on appeal requires the structure of the exercise frame to be such as to allow the user to be positioned within the space separating the two rocker portions in a supine position (Fig. 6), and to engage a surface of the connecting portion above the rocker portions with one of the hands or arms to enable the user to conduct a curling exercise to exercise the abdominal muscles of the user while rocking the exercise frame. Similar language in independent claims 35 and 41 through 45 also requires the structure of the exercise device to be such as to allow the user of the device to be positioned "within" the skeletal frame of the device, and/or "between" the rocker portions of the device in the space separating the rocker portions, in a supine position and to permit the user to conduct a curling exercise to exercise the abdominal muscles of the user.

We share appellant's view (brief, page 33), that Buoni does not disclose or teach an exercise device having a frame which would allow the user to be positioned within the space separating the rocker portions of the frame, as required in appellant's claims on appeal and seen in Figure 6 of appellant's drawings.

Appeal No. 96-2490
Application 08/369,357

Instead, the exercise device of Buoni provides a frame (column 2, lines 44-53) and supporting surface (17) which supports the exerciser above the level of the rocker portions, and wherein said supporting surface is critical to the device of Buoni for supporting the back of the exerciser in the required curved forward position during use of the device for exercising. Thus, the device of Buoni does not have a structure which will allow the user of the device to be positioned "within" the frame of the device and/or "between" the rocker portions of the device in a supine position to conduct a curling exercise to exercise the abdominal muscles of the user. Accordingly, Buoni does not anticipate the abdominal exerciser frame or device required in appellant's claims 22, 23, 35, 38 and 41 through 45, and the examiner's rejection of those claims under 35 U.S.C. §102(b) based on Buoni will not be sustained.

The examiner's position that the user (13) of the device in Buoni is "between" the rocker portions of the exerciser device and positioned "therebetween," even though he is located above the level of the rocker portions of the device (answer, page 19), is contrary to any reasonable interpretation of the claim language based on appellant's specification, as noted supra, and also based on the dictionary definition of the term "between." The dictionary definition of "between" is "1. in... the space

Appeal No. 96-2490
Application 08/369,357

that separates (two things)."² A user located above the level of the rocker portions, as in the device of Buoni, is not in the space that separates the rocker portions, but is, as appellant has argued, located above and outside such space.

The examiner's position with particular regard to claim 41 is also untenable. Claim 41 requires the abdominal exercise device therein to include "a pair of arcuate rocker portions for resting on a support surface to define a space for receiving a person therebetween in a supine position and on said support surface" (emphasis added). In contrast to the examiner's view, we are of the opinion that such claim language positively requires the user of the device to be disposed supinely on the same support surface as the pair of arcuate rocker portions of the device during an exercise, and precludes an arrangement like that in Buoni wherein the device itself is interposed between the person using the device and the support surface on which the device rests. For this additional reason, the examiner's rejection of claim 41 under 35 U.S.C. §102(b) based on Buoni will not be sustained.

² Webster's New World Dictionary, Second College Edition, Prentice Hall Press, 1986.

Appeal No. 96-2490
Application 08/369,357

With respect to the rejection of dependent claim 26 under 35 U.S.C. §103 as being unpatentable over Buoni in view of Tecco, we will likewise not sustain this rejection, since Tecco fails to address or account for the deficiencies in Buoni noted above.

Pursuant to the provisions of 37 CFR §1.196(b), we enter the following new ground of rejection against claims 35 through 38 under 35 U.S.C. §112, second paragraph.

Claims 35 through 38 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Independent claim 35 sets forth an exercise device comprising "a skeletal frame" to receive a person lying in a supine position on a support surface, with "said frame being movable forwardly and backwardly in a rockable manner relative to a front part thereof" (emphasis added). This claim language would appear to require the skeletal frame as a whole to move relative to itself, which it cannot do. Thus, the claim is both inaccurate and indefinite. Dependent claims 36 through 38 are indefinite due to their dependence from claim 35.

To summarize our decision,

Appeal No. 96-2490
Application 08/369,357

the examiner's rejection of claims 1, 7, 9, 10, 14, 15, 19, 20, 22, 23, 27, 35 through 38 and 41 through 45 under 35 U.S.C. §102(b) based on Birch has been reversed;

the examiner's rejection of claims 22, 23, 35, 38 and 41 through 45 under 35 U.S.C. §102(b) as being anticipated by Buoni has been reversed;

the examiner's rejections of appealed claims 12, 18, 21, 28 and 29 under 35 U.S.C. §103 relying on Birch as the basic reference (rejections c and e above) have been reversed; and

the examiner's rejection of appealed claim 26 under 35 U.S.C. §103 relying on Buoni as the basic reference (rejection d above) has also been reversed.

Pursuant to the provisions of 37 CFR §1.196(b), we have entered a new rejection of claims 35 through 38 under 35 U.S.C. §112, second paragraph.

In accordance with the foregoing, the decision of the examiner is reversed.

Appeal No. 96-2490
Application 08/369,357

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APPENDIX

1. In an abdominal exerciser device, the combination comprising
a pair of laterally spaced support rails for resting on a support
surface;
a pair of laterally spaced arcuate rocker portions for rocking of the
device back and forth on the support surface, each rocker portion extending
forwardly from a respective one of said support rails;
a pair of arm rest portions, each arm rest portion extending
rearwardly from a respective rocker portion to receive an elbow of a person
disposed between said rails in a supine position; and
a connecting portion connected to and between said support rails
whereby a person disposed supinely on said support surface and between said
rocker portions and with one of the hands or arms of the person engaging said
connecting portion is able to conduct a curling exercise to exercise the abdominal
muscles of the person while rocking said device.

Appeal No. 96-2490
Application 08/369,357

14. A skeletal abdominal exercise frame comprising

- a pair of arcuate rocker portions for rocking back and forth on a support surface with a person disposed therebetween in a supine position;
- a pair of arm rest portions, each arm rest portion extending from a respective rocker portion to receive an arm of a person disposed between said rocker portions in a supine position; and
- a connecting portion connected to and between said rocker portions and defining a space to receive a head and neck of a person disposed between said rocker portions whereby a person disposed supinely on said support surface and between said rocker portions and with one of the hands or arms of the person engaging said connecting portion is able to conduct a curling exercise to exercise the abdominal muscles of the person while rocking said frame.

22. In an abdominal exercise frame, the combination comprising
a pair of arcuate rocker portions for receiving a person therebetween
in a supine position; and

an upstanding connecting portion connected to and between said
rocker portions, said connecting portion providing a surface above said rocker
portions to be engaged by one of the hands or arms of a person in said supine
position during rocking of said rocker portions back and forth whereby a person
disposed supinely on a support surface and between said rocker portions and
with one of the hands or arms of the person engaging said connecting portion is
able to conduct a curling exercise to exercise the abdominal muscles of the
person while rocking said frame.

35. In an exercise device for exercising abdominal muscles, the
combination comprising

a skeletal frame to receive a person lying in a supine position on a
support surface, said frame being movable forwardly and backwardly in a
rockable manner relative to a front part thereof during manually gripping thereof
by the supinely disposed person to effect an abdominal exercise; and

a support means secured to said frame at a rear part for supporting the head of the person supinely disposed within said frame during movement of said frame forwardly and backwardly whereby the person is able to conduct a curling exercise to exercise the abdominal muscles of the person while having the head and neck of the person supported and while gripping said frame.

41. An abdominal exercise device for exercising abdominal muscles comprising

a pair of arcuate rocker portions for resting on said support surface to define a space for receiving a person therebetween in a supine position and on said support surface;

an upstanding portion connected to and between said rocker portions, said upstanding portion providing a surface to be engaged by one of the hands or arms of a person in said supine position; and

a support means for supporting a head and neck of a person supinely disposed between said rocker portions during rocking of said rocker portions

whereby a person disposed supinely between said rocker portions with the head and neck of the person supported on said support means and with one of the hands or arms of the person engaging said upstanding portion is able to conduct a curling exercise to exercise the abdominal muscles of the person.

Appeal No. 96-2490
Application 08/369,357

42. An abdominal exercise device for exercising abdominal muscles, said device comprising

a skeletal frame including a pair of rocker portions defining a space for receiving a person therebetween in a supine position and an upstanding portion connected to and between said rocker portions, said upstanding portion providing a surface to be engaged by one of the hands or arms of a person in said supine position; and

a support means secured to said frame for supporting a head and neck of a person supinely disposed between said rocker portions during rocking of said rocker portions whereby a person disposed supinely between said rocker portions with the head and neck of the person supported on said support means and with one of the hands or arms of the person engaging said upstanding portion is able to conduct a curling exercise while rocking said frame on said rocker portions.

43. An abdominal exercise device for exercising abdominal muscles, said device consisting essentially of

a skeletal frame including a pair of rocker portions defining a space for receiving a person therebetween in a supine position and an upstanding portion connected to and between said rocker portions, said upstanding portion providing a surface to be engaged by one of the hands or arms of a person in said supine position; and

a support means secured to said frame for supporting a head and neck of a person supinely disposed between said rocker portions during rocking of said rocker portions whereby a person disposed supinely between said rocker portions with the head and neck of the person supported on said support means and with one of the hands or arms of the person engaging said upstanding portion is able to conduct a curling exercise while rocking said frame on said rocker portions.

44. An abdominal exercise device for exercising abdominal muscles, said device comprising

a skeletal frame for resting on a support surface, said frame including a pair of arcuate portions defining a space for receiving a person therebetween in a supine position and a third portion connected to and between said arcuate portions; and

a support means mounted on said third portion for supporting a head and neck of a person supinely disposed between said arcuate portions during rocking of said frame whereby a person disposed supinely between said arcuate

portions with the head and neck of the person supported on said support means and with the hands of the person engaging said frame is able to conduct a curling exercise while rocking said frame.

45. An abdominal exercise device for exercising abdominal muscles, said device consisting essentially of

a skeletal frame for resting on a support surface, said frame including a pair of arcuate portions defining a space for receiving a person therebetween in a supine position and a third portion connected to and between said arcuate portion; and

a support means mounted on said third portion for supporting a head and neck of a person supinely disposed between said arcuate portions during a rocking of said frame whereby a person disposed supinely between said arcuate portions with the head and neck of the person supported on said support means and with the hands of the person engaging said frame is able to conduct a curling exercise while rocking said frame.