The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 33

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte CHARLES H. CHURCHES
and
ANTHONY SCAVO

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Appeal No. 2004-1798
Application 08/883,387

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ON BRIEF

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Before FRANKFORT, STAAB, and McQUADE, Administrative Patent Judges.

FRANKFORT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 27 through 29, 31 through 115, 117 through 155 and 157. Claims 1 through 26 and 156, the only other claims remaining in the application, have been withdrawn from consideration by the examiner as not being directed to the

elected invention. Claims 30, 116 and 158 through 164 have been canceled.

Appellants' invention is directed to a new and improved multi-story building structure and method for constructing the same wherein the building structure is capable of lateral and vertical support without the need for lateral support from exterior walls or framework. Another aspect of appellants' invention addresses a new and improved self-supporting exterior wall for a high-rise structure wherein only lateral loading normal to the plane of the wall need be carried by the adjacent framework. Independent claims 27 and 157 are representative of the subject matter on appeal and a copy of those claims can be found in the Appendix to appellants' brief.

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

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| Hughes | 3,350,826 | Nov. 7, 1967 |
| Livingston | 3,902,287 | Sept. 2, 1975 |
| Yarnick | 4,145,861 | Mar. 27, 1979 |

Claims 27 through 29, 31 through 33 and 46 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Livingston.

Claims 34 through 45, 47 through 115, 117 through 155 and 157 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Livingston in view of Yarnick and Hughes.

Rather than attempt to reiterate the examiner's full commentary with regard to the above-noted rejections and the conflicting viewpoints advanced by appellants and the examiner regarding those rejections, we make reference to the examiner's answer (Paper No. 25, mailed April 21, 2003) for the reasoning in support of the rejections, and to appellants' brief (Paper No. 22, filed January 13, 2003) and reply brief (Paper No. 26, filed June 26, 2003) for the arguments thereagainst.

## OPINION

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

articulated by appellants and the examiner. As a consequence of our review, we have made the determination that the examiner's rejections will not be sustained. Our reasoning follows.

Independent claim 27 reads as follows:

A multi-story building comprising:

(a) a foundation;

(b) a supporting framework coupled to the foundation, wherein the supporting framework comprises:

(1) a central rectangular shearwall,

(2) a first rectangular end shearwall,

(3) a second rectangular end shearwall, and

(4) plurality of spaced apart floors arranged in a substantially parallel manner relative to each other and the foundation, and wherein:

(5) each shearwall includes a top edge, a bottom edge, and two opposing side edges, the edges defining first and second opposing faces, and each shearwall forming a vertical support plane;

(6) each floor includes at least three side edges, the edges defining a top face and an opposing bottom face, and each floor forming a horizontal support plane wherein each floor is coupled to at least two of the shearwalls;

(7) the bottom of each shearwall is coupled to and supported by the foundation;

(8) the vertical support plane of each shearwall is aligned substantially normal to the foundation;

(9) the central shearwall is coupled proximate the first side edge to the first end shearwall;

(10) the central shearwall is coupled proximate its second side edge to the second end shearwall; and

(11) the central rectangular shearwall, the first rectangular end shearwall and the second rectangular end shearwall in cooperation provide all necessary lateral support for the building and all necessary vertical support for the floors of the building; and

(c) at least one vertically self-supporting exterior wall that is vertically self-supporting along a vertical support plane, the vertically self-supporting exterior wall including a top vertical wall edge, a bottom vertical wall edge, and two opposing vertical wall side edges, the vertical wall edges defining first and second vertical wall opposing faces, and the vertically self-supporting exterior wall coupled to the foundation and coupled to the supporting framework, wherein the supporting framework provides all necessary lateral support for the vertically self-supporting exterior wall.

In the rejection of claims 27 through 29, 31 through 33 and 46 under 35 U.S.C. § 102(b), the examiner urges (answer, pages 3-5) that Livingston discloses a multi-story building construction (e.g., Fig. 6) comprising: a supporting framework inherently coupled to a foundation (Fig. 22), the supporting framework including

> at least two rectangular end shearwalls (the load bearing walls 50, 52 and 132, 134), at least one central rectangular shearwall (62 or 104), each shearwall inherently including top and bottom edges, two opposing side edges, and two opposite faces, each shearwall forming a vertical support plane, the bottom of each shearwall being inherently coupled to a foundation, each shearwall aligned substantially normal to the foundation, the central rectangular shearwall (60 or 62, 104) having two opposite side edges being laterally coupled between said two end shearwalls (50, 52), the end shearwalls capably defining two exterior walls of the building construction, and a plurality of spaced apart floors (90 or 128 or more) each having side edges (54', 54) being coupled to at least two of the shearwalls (50, 52 or 132, 134)(see figures 3 and 5), wherein each of the shearwalls and floors is formed by plurality of monolithic reinforced concrete panels (50, 52, 62, 90 on first lever story, and 132, 134, 104 on the upper lever story) and with hollow planks (see Fig. 12a) and reinforcing rebars (70), and jointed adjacent one to another in vertical and horizontal directions, said end shearwalls (50, 52 and/or 132, 134) being in cooperation to provide all necessary of lateral support for the building and providing substantial all vertical supports for the floors without any intermediate vertical supports in the building

and contends 13that Livingston further teaches

> at least one exterior wall (94, 96 and/or 140, 142) formed by a plurality of panels (94 and 140, see Fig. 6) being vertically coupled one to another along a vertical support plane, the exterior wall inherently including a top vertical wall edge, a bottom vertical wall edge, two opposing vertical wall side edges, and two opposing vertical wall faces, wherein the bottom vertical wall edge of the exterior wall (94) is inherently coupled to the foundation, the two opposing vertical wall side edges are laterally coupled to the

> end shearwalls respectively (see col. 10, lines 17-18), but the exterior walls (94, 140) is unnecessary to connect the floors (see col. 8, lines 36-38). The exterior wall functions to enclose the ends of the stories of the building construction. Since there is no other support to the exterior wall, the exterior wall is, therefore, considered to be vertically self-supported along a vertical support plane to the foundation, and the supporting framework such as the end shearwalls provide all necessary lateral support for the vertically self-supporting exterior wall.

Our reading of Livingston reveals that the method therein for constructing a multi-story building structure (48) begins with the installation of two vertically oriented, prestressed concrete load bearing wall panels (50, 52), presumably on a foundation, and proceeds with the installation of a pre-fabricated service core (60) which, as seen in Figure 2 of Livingston, is installed between the load bearing wall panels (50, 52) and supported on members (56) projecting from a bottom portion of the wall panels. The service core (60) comprises a prestressed concrete pallet (62) and an enclosure (64) formed on the concrete pallet. As noted at column 6, lines 59-65, the enclosure (64) is formed from materials of the type used in constructing conventional homes and similar buildings, i.e.,

two by four and two by six studs, drywall panels, and similar materials.

Next in the process of construction, a pair of prestressed concrete pallets (90) are installed between load bearing wall panels (50, 52) and supported on members (56) projecting from the wall panels (Fig. 3). The decks of pallets (90) are positioned so as to be aligned with the deck (66) of pallet (62), whereby the pallets (90) and (62) cooperate to form the floor of a dwelling unit. As seen in Figure 4 of Livingston, the installation of the pallets (90) is followed by installation of a pair of prestressed concrete shear wall panels (94, 96), which shear wall panels are connected to the load bearing wall panels (50, 52) by welding of the reinforcing members of the respective panels together or via other techniques commonly employed in the construction industry to connect prestressed concrete structural members. As indicated at column 8, lines 20-22, the shear wall panels (94, 96) "serve the dual functions of enclosing the ends of the dwelling unit and maintaining the load bearing walls erect." Livingston notes at this point that the lowermost apartment of the apartment building (48) is complete.

The next step in the construction process is to mount a service core (102) for a second story dwelling unit on the load bearing wall panels (50, 52). As can be seen from Figure 5, the service core (102) comprises a prestressed concrete pallet (104) and an enclosure (106) formed on the pallet. The deck (108) of pallet (102) is discontinuous at spaced points and portions thereof fit into and engage with notches (54) on the load bearing wall panels (50, 52). Following installation of the service core (102), a pair of blank prestressed concrete pallets (128) are mounted to the load bearing wall panels (50, 52) and aligned with pallet (102) to form the floor of the second story dwelling unit. At this point, a second set of prestressed concrete, load bearing wall panels (132, 134) are positioned on the load bearing wall panels (50, 52) and a pair of shear wall panels (140, 142) are mounted on the shear wall panels (94, 96). As noted in column 10, lines 25-28, of Livingston, the shear wall panels (140, 142) function to enclose the second story apartment of apartment building (48) and "to maintain the load bearing wall panels 132 and 134 erect." At this juncture, the second story apartment of apartment building (48) is complete and the steps associated with its construction are then repeated to form

additional apartments thereon. When all of the apartments comprising the apartment building are constructed, prestressed concrete pallets similar to pallets (90) are positioned on the uppermost load bearing wall panels to form a roof of the apartment building.

Contrary to the examiner's stated position, it is clear to us from the foregoing disclosure in the Livingston patent that the "central rectangular shearwall" of claim 27 on appeal, having a top edge, a bottom edge, and two opposing side edges, wherein the edges define first and second opposing faces, and the shearwall forms a vertical support plane which is aligned substantially normal to the building's foundation, is not readable on the horizontally disposed pallet (62) of Livingston's service core (60). Moreover, even if we assume that the load bearing wall panels (50, 52) and one of the vertical walls of the service core (60) of Livingston together define an I-shaped structure of load bearing walls generally corresponding to appellants' central rectangular shearwall and first and second end shearwalls, we must agree with appellants that there is no reasonable basis to conclude that this structure in Livingston

inherently provides "all necessary lateral support for the building and all necessary vertical support for the floors of the building," as set forth in claim 27. Indeed, the disclosure in Livingston that the shear wall panels (94, 96, 132, 134) are connected to the load bearing wall panels and "serve the dual functions of enclosing the ends of the dwelling unit and maintaining the load bearing walls erect" (e.g., col. 8, lines 20-23), belies any such conclusion that the structure (50, 52, 60) provides all necessary lateral support for the building, especially since Livingston notes (col. 8, lines 32-37) that it is often unnecessary to even connect the pallets of the service cores (60, 102) to the load bearing wall panels (50, 52).

As an additional note, we also agree with appellants that the examiner's conclusion that the end wall panels (94, 96 and/or 140, 142) of Livingston define at least one exterior wall that is inherently vertically self-supporting, is based entirely on speculation and conjecture.

Since we have determined that the teachings and suggestions in the Livingston patent would not anticipate the multi-story

building defined in independent claim 27 on appeal, we must refuse to sustain the examiner's rejection of that claim under 35 U.S.C. § 102(b). It follows that the examiner's rejection of dependent claims 28, 29, 31 through 33 and 46 under 35 U.S.C. § 102(b) on the basis of Livingston likewise will not be sustained.

Looking next to the examiner's rejection of claims 34 through 45, 47 through 115, 117 through 155 and 157 under 35 U.S.C. § 103(a) as being unpatentable over Livingston in view of Yarnick and Hughes, we note that the disclosures of Yarnick and Hughes fail to supply or render obvious that which we have found above to be lacking in Livingston. Accordingly, even if one of ordinary skill in the art were to combine the aspects of Yarnick and Hughes as relied upon by the examiner with Livingston, it is clear to us that the particular form of multi-story building claimed by appellants would not be the result. Thus, the examiner's rejection of dependent claims 34 through 45, 47 through 115 and 117 through 155 under 35 U.S.C. § 103(a) as being unpatentable over Livingston in view of Yarnick and Hughes will not be sustained.

With particular regard to method claim 157, this claim essentially sets forth method steps necessary to arrive at a multi-story building of the type generally set forth in appellants' claim 27. The examiner's treatment of this claim (answer, page 6) reads as follows:

> In regard to claim 157, the operational expedients of the secondary references may obviously to [sic] selectively use or substitute in the method of Livingston modified by Yarnick and Hughes before him particularly at the time of the reduction to practice of the subject matter of these claims

Like appellants (brief, page 8), we are at somewhat of a loss to understand exactly what the examiner intended by the above-quoted cryptic statement purportedly addressing method claim 157 on appeal. Suffice to say that the examiner has made no effort to follow the guidance provided by the Supreme Court in Graham v. John Deere, 383 U.S. 1, 148 USPQ 459 (1966), or Office policy as enunciated in MPEP § 2141, for making an obviousness rejection. As a result, the examiner has failed to establish a prima facie case of obviousness with respect to appellants' three page long method claim 157. For that reason, the examiner's

rejection of claim 157 under 35 U.S.C. § 103(a) will not be sustained.

In light of the foregoing, the decision of the examiner rejecting claims 27 through 29, 31 through 115, 117 through 155 and 157 of the present application is reversed.

REVERSED

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|---|---|---|
| CHARLES E. FRANKFORT<br>Administrative Patent Judge | ) | |
| | ) | BOARD OF PATENT |
| LAWRENCE J. STAAB<br>Administrative Patent Judge | ) | APPEALS AND |
| | ) | INTERFERENCES |
| JOHN P. MCQUADE<br>Administrative Patent Judge | ) | |

CEF:psb

Louis J. Hoffman, P.C.
14614 North Kierland Boulevard, Suite 300
Scottsdale, AZ  85254