

## The Seidner Legacy

*Three Generations of Cross-Industry Innovation — Operating Expertise in Forest Products, Patented Solutions, and Industrial-Scale Platforms*

### **Foundations in West Africa — Summit Lumber Company and the Pioneering of an American Forest Industry Under Ecological Imperative**

The Summit Timber Concession — the largest ever American timber concession in Africa, totaling more than 1.5 million acres — was created by the father-and-son team of Leo S. Seidner and Marc A. Seidner with the endorsement of then-President William V.S. Tubman of Liberia.<sup>1</sup> Through their Summit Lumber Company, the Seidners built in Liberia a fully integrated, value-added logging, sawmilling, veneer, and plywood manufacturing industry, and pioneered the first American timber operation in West Africa where none had existed before. Summit's joint-venture partner, Skelly Oil of Tulsa, Oklahoma — later absorbed into Getty Oil — subsequently continued to develop and operate the Liberian project under the name Vanply of Liberia.<sup>2</sup>

From the outset, ecological protection and environmental concern were operating conditions at Summit Lumber Company — structural to the conduct of the business, not aspirations layered upon it. The Seidners instituted sustainable harvesting and production standards in Liberia, and built a market for *Tetraberlinia tubmaniana*,<sup>3</sup> a Liberian timber species named in honor of the Seidners' benefactor, then-President William V.S. Tubman. The commercial development of this species — until then little utilized outside Liberia — exemplified the Seidners' lifelong pattern: find value in an underused natural resource and build an enterprise around it, in a manner that respects the land from which it came.

### **FibreForm — Pioneering MDF Moulding and Cultivated-Radiata Millwork**

Continuing in the 1970s, the Seidners formed FibreForm Wood Products, Inc. and built the first medium-density fiberboard (MDF) moulding and millwork plant in the United States, in Rocklin, California.

During the 1980s and 1990s, FibreForm expanded domestically with an MDF moulding plant in Martell, California and a sawmill and logging operation in Eureka, California focused on second-growth softwood species. Internationally, the company added moulding plants in Juarez and Tijuana, Mexico; a U.S. forest-products distribution operation in Taichung, Taiwan; and sawmilling, moulding, and millwork plants operating in Australia, New Zealand, and Chile, all focused on plantation-grown, cultivated *Radiata* pine.

Seeking to improve production efficiencies, the Seidners invented and patented more than a dozen U.S. and foreign technologies for high-speed, high-quality manufacturing of linear mouldings, door and window millwork, and furniture components from MDF.<sup>4</sup> Their patents

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<sup>1</sup>William V.S. Tubman (William Vacanarat Shadrach Tubman) served as President of Liberia from 1944 until his death on July 23, 1971.

<sup>2</sup>Skelly Oil Company (founded 1919, Tulsa, Oklahoma) was acquired in stages by interests controlled by J. Paul Getty beginning in the 1930s through Mission Corporation, and was fully absorbed into Getty Oil Company in 1977. See Skelly Oil Company (Wikipedia), available at [https://en.wikipedia.org/wiki/Skelly\\_Oil\\_Company](https://en.wikipedia.org/wiki/Skelly_Oil_Company).

<sup>3</sup>*Tetraberlinia tubmaniana* J. Léonard (Fabaceae), a timber species endemic to Liberia, first formally described in 1965. See Royal Botanic Gardens, Kew, *Plants of the World Online*, available at <https://powo.science.kew.org>.

<sup>4</sup>The Seidner patent record for wood-products-era MDF and composite-moulding manufacturing technologies is available through the U.S. Patent and Trademark Office and via Justia Patents at

increased single-machine production outputs by a factor of no less than 15X, and as much as 25X, against all existing production methods. Demand rose accordingly. The Seidners faced a shortfall of MDF feedstock against the radically accelerated production capabilities their patents unlocked, and against the newly created purchase demands of customers including The Home Depot, Lowe's, Georgia-Pacific, Huttig, and major U.S. home builders. FibreForm responded by developing domestic and then international markets for environmentally protective composite wood millwork and smooth primed white mouldings from MDF, with new facilities across multiple continents.

FibreForm's customers also sought domestic finger-joint pine mouldings and millwork in addition to the MDF it supplied. In keeping with FibreForm's environmental and sustainable focus, the company determined that a fast-growing cultivated *Radiata* pine species of the Southern Hemisphere — historically used for pulp, boxes, and crating — could be manufactured into high-quality millwork using special techniques invented and patented by the Seidners. From the 1980s through 2010, FibreForm converted low-grade crating and concrete-forming plantation pine into premium millwork products fully competitive with U.S.-sourced pine, and in doing so built the largest *Radiata* value-added export operation in the Southern Hemisphere through a set of international joint ventures.

FibreForm developed methods for the quality production of cultivated *Radiata* pine moulding, millwork, doors, furniture, and engineered wood building materials. These efforts resulted in significant export capacity from new facilities: in Chile with CAP, Andinos, and Terranova; in New Zealand as FibreForm Red Stag, partnered with the state-run Forestry Corporation of New Zealand; in Australia with CSR Ltd., one of that country's largest companies; and by FibreForm itself in Mexico and the United States. Together, these joint ventures and family-owned production facilities employed more than six thousand workers fabricating environmentally sound, sustainable forest products for U.S. distribution.

FibreForm's North Coast division exported forest products to China and, through the Taichung distribution operation, was the largest exporter and distributor of U.S. forest products in Taiwan, with products ranging from composite panels to logs and lumber. FibreForm operated six production divisions in North America during this period, along with its own charter-vessel company for global shipment and distribution of bulk forest products.

## Permanente Corporation — Turning Waste into Industrial-Scale Green Fuels

The Seidners formed Permanente Corporation to shift their focus from value-added forest-products manufacturing toward green-energy fuels and engineered forest products derived from waste cellulosic biomass. They foresaw the valuable opportunity to transform abundant, scarcely used logging, sawmilling, and agribusiness by-product waste into viable energy on a global basis. They determined that industrial-scale solutions needed to be developed to bring millions of tons per year of unused waste biomass into viable business and trade — and they set about creating them.

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<https://patents.justia.com/inventor/marc-a-seidner>. Representative grants naming Marc A. Seidner as inventor include: U.S. Patent No. 4,402,170, *Millwork member of folded construction* (1983); U.S. Patent No. 5,447,686, *Method for heat-treating wood and wood products* (1995); U.S. Patent No. 5,578,274, *Shipboard apparatus for heat-treating wood and wood products* (1996); U.S. Patent No. 5,735,326, *Split jamb for a door frame opening and method of making a split jamb* (1998); U.S. Patent No. 5,817,202, *Composite moulding and method of making* (1998); U.S. Patent No. 5,944,928, *Method for making composite panels and engineered mouldings* (1999); U.S. Patent No. 6,143,119, *Composite moulding and method of making* (2000); U.S. Patent No. 6,203,653, *Method of making engineered mouldings* (2001); and U.S. Patent No. 6,309,492, *Polymer fill coating for laminate or composite wood products and method of making same* (2001), together with additional U.S. and foreign patents.

## **Afghanistan — Reforestation, Agriculture, and a Peaceful Development Mandate**

Very shortly after the tragic events of September 11, 2001, Permanente Corporation and the Seidners were asked by Afghan Americans involved with the Task Force for the Reconstruction of Afghanistan to help in rebuilding the country and to organize an effort to bring reforestation and an agribusiness industry to Afghanistan. The Seidner principals — by then including Leo, Marc, and Marc's son Daniel — formed Afghan Development Company under Permanente Corporation and organized and led a consortium of U.S. and international agribusiness companies, including Burchell Nurseries, Langer's Juice, Netafim, Seminis Seeds, Sunsweet Growers, and the University of California at Davis, to focus on a peaceful transition to an agribusiness economy through horticulture and the cultivation of trees for reforestation and fruit crops.

Under license from the Transitional Government of Afghanistan and as a member of the Task Force for the Reconstruction of Afghanistan, Permanente's principals established the largest and most productive tree nurseries in the country, built new infrastructure including buildings and wells, trained hundreds of people, and fostered stable and fruitful development with an emphasis on peace and tranquility through the cultivation of fruit trees and reforestation. The facilities included separate sanitary accommodations for men and women, enabling the participation of both in the workforce. Permanente operated these programs until 2008.

No financial help was provided by the U.S. government for Permanente's work in Afghanistan; in fact, just the opposite. Permanente supplied trees from its own inventory for Afghan planting regimes and festivals. When a Syrian contractor engaged by USAID failed to deliver, the Seidners supplied more than 4.5 million seedlings in their place. When the Seidners exited Afghanistan, they gave several million of their nursery Afghan pine seedlings to the Afghan people and donated three million of their own cultivated fruiting pomegranate orchard trees to non-governmental organizations for distribution to Afghan farmers.

## **Patented Technologies for Green-Energy Production at Industrial Scale**

Thereafter, the principals of Permanente returned their focus to the development of industrial-scale, environmentally protective methods and technologies for converting abundant forest-products waste and agribusiness by-products into carbon-neutral and carbon-negative products, including liquid and solid green fuels. Those activities included the safe and environmentally protective processing of cellulosic biomass into biocarbon, biofuels, and biochar for heat, energy, and carbon sequestration. In doing so, the Seidners developed several important patents and proprietary know-how for high-volume, low-cost, and environmentally safe production of green, sustainable biofuels and soil amendments — with three generations of the Seidner family now named as inventors on the Permanente patent record: Leo, Marc, and Marc's children, Daniel and Hanya.

The Seidners' key green-industry patents include those covering GRC88®, a drop-in marine fuel that is carbon-neutral, free of sulfur, toxics, and heavy metals, burns cleanly, and has energy density equivalent to Bunker C and No. 6 Residual Fuel Oil (RFO) — and is made cost-effectively through the Seidners' patented continuous processing technologies for the carbonization of cellulosic biomass.<sup>5</sup> Subsequent inventions resulted in high-volume, low-cost

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<sup>5</sup>Permanente Corporation's green-energy patent portfolio includes U.S. Patent No. 9,758,738 B2, *Green Renewable Liquid Fuel* (issued September 12, 2017; inventors Marc Seidner, Leo Seidner, and Hanya Seidner); U.S. Patent No. 10,961,459, *System for production of a renewable liquid fuel* (2021); U.S. Patent No. 11,345,860, *System and method for continuous production of a renewable liquid fuel* (2022); U.S. Patent No. 11,674,086, *System and method for continuous production of renewable liquid fuel* (2023); and U.S. Patent No. 12,595,340 B1, *Ammonia treatment of*

production methodologies that enable the conversion of cellulosic waste into millions of tons per year of highly adaptable, carbon-neutral and carbon-negative products, produced either in a fixed facility or in a modular, mobile, and scalable configuration. These subsequent advances include the Seidners' patented densification technology for value-adding waste cellulosic biomass, and their patent-pending co-processing of bauxite-process red mud with cellulosic biomass for the simultaneous recovery of biofuel and mineral values, including rare-earth elements.<sup>6</sup>

The Seidners' research and development efforts, which concluded with granted patents, were inclusive of comprehensive feedstock, equipment, and materials testing, together with process evaluation, analysis, and verification spanning more than a decade. Suitable equipment and machinery providers were effectively vetted, and extensive engineering and testing were successfully completed. These processes were conducted under confidential agreement between Permanente and a select group of partners and collaborators, whom Permanente now stands ready to direct in the scale implementation of its patented capabilities.

## A Prescient Pattern — Green Before “Green” Was Fashionable

For more than a half-century, the Seidners have developed successful and valuable international businesses grounded in a keen sensitivity to what was “green” before the word and the mission were part of the zeitgeist. Each iteration of the Seidners' business development enabled a prescient awareness of what would be “next” in global environmental importance.

The early Summit Lumber Company efforts of the 1960s created the operating foundation for wood-waste awareness and the benefits of MDF as a non-structural building material. FibreForm's operations, in turn, developed and patented technologies for the scalable production of MDF-based wood products. The rapid growth of the Seidner-led MDF wood-products industry necessitated the commissioning of the Seidners' own international charter-vessel operations, and with that, a deepening awareness of both the operational needs and the environmental consequences of international commercial shipping. The Seidners' decades of involvement in industry development across Latin America and Asia-Pacific, and their direct exposure to the critical energy needs of those developing regions, further underscored the need for yet another industrial-scale enabling technology: sustainable, industrial-volume liquid and solid green-fuel production.

Permanente's decade-long development effort now positions it to deliver what governments and industry alike seek: green fuels capable of sustaining existing business operations, scaling with increases in global demand, and doing so *without subsidy* and without increases in existing cost.

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*densifiable cellulosic biomass feedstock* (issued April 7, 2026; inventors Marc Allen Seidner and Daniel Jakob Seidner), together with Canadian Patent No. 309645 and Canadian application 3,280,527 (pending); European Patent EP3841184, *Method for Production of a Renewable Liquid Fuel*; and additional U.S. and foreign patents pending.

<sup>6</sup>The densification methodology referenced here is protected by U.S. Patent No. 12,595,340 B1 (see note 5). The red-mud co-processing is the subject of U.S. Provisional Patent Application No. 63/884,446, *Co-Processing of Red Mud and Cellulosic Biomass for Simultaneous Biofuel and Mineral Recovery*, filed September 19, 2025 (patent pending).