

PATENT ATTORNEY BRIEF

Caffevolve™ Dual-Hopper Caffeine Customization
Brewing System with In-Stream Additive Dispensing

Inventor / Applicant:

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1. Executive Summary

Caffeolve™ Corporation is seeking patent counsel to prepare and file one or more utility patent applications for a novel coffee brewing system. The system enables users to precisely customize the caffeine content of their coffee (from 0% to 100%) by blending same-origin caffeinated and decaffeinated beans in specified ratios before grinding, while maintaining identical taste characteristics. The system also incorporates an in-stream additive dispensing mechanism that introduces health supplements, vitamins, or flavor enhancers during the brewing process.

A provisional patent application has been filed (or will be filed in Q1 2026), and the inventor seeks to file a utility application to secure comprehensive patent protection. The business model is entirely IP licensing—Caffeolve™ will not manufacture appliances but will license the patented technology to premium appliance manufacturers. The strength and breadth of patent claims are therefore the primary asset of the company.

2. Inventor and Company Information

Field	Details
Inventor Name	Brent Langevin
Title / Role	Founder
Company	Caffeolve™ Corporation
Address	3412 56th Ave, Kenosha, WI 53144
Phone	(571) 464-9451
Entity Type	Startup (formation pending; evaluating Delaware incorporation)
Business Model	Asset-light IP licensing to premium appliance manufacturers
Target Licensees	Breville, Fellow, Ninja, De'Longhi, and similar premium brands
Provisional Filing	Q1 2026 (filed or in progress)
Revenue Projection	\$892M projected five-year revenue through licensing partnerships

3. Problem Statement

Research indicates that approximately 64% of coffee drinkers avoid afternoon coffee due to concerns about caffeine's impact on sleep quality. This creates what we term "the 3 PM dilemma"—coffee enthusiasts who want the taste and ritual of their preferred coffee but cannot consume full-caffeine beverages later in the day.

Current solutions are inadequate. Decaffeinated coffee often tastes noticeably different due to the decaffeination process altering flavor compounds. Switching between separate caffeinated and decaffeinated coffee supplies is inconvenient and still does not allow for intermediate caffeine levels (e.g., 40% or 70%). No existing consumer appliance enables precise, on-

demand caffeine customization while preserving the exact taste profile of the user's preferred coffee.

Additionally, the growing intersection of coffee culture and wellness trends has created demand for convenient ways to incorporate health supplements into daily routines. No existing system integrates supplement dispensing directly into the brewing process in a measured, automated fashion.

4. Technical Description of the Invention

4.1 Blend-Then-Grind Dual-Hopper System

The core innovation is a dual-hopper coffee brewing system that stores matched caffeinated and decaffeinated beans from the same origin (same farm, same harvest, same processing—differing only in that one has undergone decaffeination). The user selects a desired caffeine level via the appliance interface (0–100%), and the system:

- Calculates the precise ratio of caffeinated to decaffeinated beans needed to achieve the target caffeine level
- Dispenses the calculated quantity from each hopper into a common blending chamber
- Blends the beans before grinding (this is the critical differentiator—blend-then-grind, not grind-then-blend or post-brew mixing)
- Grinds the blended beans together, producing a uniform particle distribution
- Brews using standard methods (drip, pour-over, or espresso depending on the product tier)

The blend-then-grind approach ensures that the caffeinated and decaffeinated grounds are completely homogenous before water contact, eliminating variability that would occur with post-grind or post-brew mixing approaches.

4.2 In-Stream Additive Dispensing System

A secondary innovation is the integration of a pharmaceutical-grade additive dispensing mechanism that introduces measured quantities of supplements, vitamins, or flavor enhancers directly into the coffee stream during the brewing process. Key technical aspects include:

- Dispensing occurs in-stream (during active brewing), not post-brew, allowing for thermal integration and mixing with the brewing liquid
- Vibration-assisted mixing ensures uniform distribution of additives throughout the brew
- Pharmaceutical-grade precision in measurement, suitable for supplements where dosage accuracy matters
- An Additive Integration Timer that synchronizes dispensing with the optimal point in the brew cycle for maximum solubility and bioavailability

4.3 TwinOrigin Certified Bean Pairing Program

A quality assurance methodology that may warrant method/process claims. Same-origin caffeinated and decaffeinated beans are sourced, processed identically (except for decaffeination), and certified as taste-matched pairs through a standardized evaluation protocol. This certification ensures that caffeine customization does not alter the flavor profile, which is the fundamental value proposition of the system.

4.4 Product Architecture (Three Tiers)

The technology is designed to be implementable across three product tiers, which is relevant to the breadth of patent claims needed:

Product	Price Point	Features
Originara	\$199	Dual-hopper blend-then-grind system with basic caffeine ratio control. Consumer entry point.
Advancara	\$599	Full dual-hopper system plus in-stream additive dispensing, advanced user interface, daily-fresh water reservoir technology.
Culminara	\$2,499+	Commercial-grade system for cafes, offices, and hospitality venues. Multi-user profiles, high-volume capacity, network connectivity.

5. Points of Novelty (Inventor's Assessment)

The following aspects are believed to be novel based on the inventor's knowledge of the market. These should be evaluated against prior art search results.

- Blend-then-grind methodology:** Existing systems that offer caffeine variability (e.g., Keurig pods) use pre-ground, pre-portioned approaches. No known consumer appliance blends whole caffeinated and decaffeinated beans in a variable ratio before grinding.
- Same-origin bean pairing for taste preservation:** The use of identical-origin beans to eliminate flavor variation during caffeine customization is a novel quality assurance approach.
- In-stream (not post-brew) additive dispensing:** Existing supplement-in-coffee products add ingredients after brewing. The in-stream approach during the brew cycle enables thermal integration and vibration-assisted mixing that improves solubility.
- Precision caffeine selection (0–100%):** Continuous, granular caffeine control rather than binary (caf/decaf) or limited preset options.
- Combination of blending + additives + water filtration:** The integrated system architecture combining all these features in a single platform may constitute a novel combination even if individual elements have some prior art.

6. Existing Documentation and Materials

The inventor has developed extensive technical documentation that will be provided to counsel upon engagement. Available materials include:

- Detailed technical specifications for all three product tiers (Originara, Advancara, Culminara)
- USPTO-compliant patent drawings (prepared by Patent Drawing Experts; currently being revised)
- Component inventories and bills of materials
- Dual-hopper blending system mechanical specifications
- In-stream additive dispensing mechanism design documents
- Additive Integration Timer feature specifications
- Water filtration and daily-fresh reservoir system documentation
- Maintenance design specifications
- Prior art search results (to be provided after completion of prior art search)
- Market analysis including competitive landscape and target licensee profiles
- Investor presentation materials including \$892M five-year revenue projections

7. Strategic Questions for Counsel

The following questions reflect key decisions the inventor would like to discuss with counsel during the initial engagement:

Filing Strategy

- Should the innovations be filed as a single utility application or as multiple applications (e.g., separate patents for the blending system, the additive dispensing system, and the TwinOrigin certification method)?
- What are the cost and strategic tradeoffs of filing multiple applications versus a single comprehensive application with multiple independent claims?
- Given the IP licensing business model, how should claims be structured to maximize licensing value and coverage against design-arounds?

Claim Scope

- How broadly can claims be drafted for the blend-then-grind concept while maintaining validity?
- Should method claims, apparatus claims, or both be pursued for each innovation?
- Is the TwinOrigin Certified bean pairing methodology patentable as a process/method claim?

- Can the software/UI aspects of the caffeine selection interface support additional claims?

International Protection

- Given that target licensees (Breville, De'Longhi, etc.) manufacture and sell globally, should PCT filing be pursued?
- What is the recommended timeline and budget for international protection?

Business Considerations

- What entity structure is recommended for holding the IP (Delaware corporation vs. other)?
- Are there any freedom-to-operate concerns the inventor should be aware of based on an initial review?
- What is counsel's experience with patent licensing in the consumer appliance / kitchen appliance space?

8. Desired Scope of Engagement

The inventor is seeking counsel for the following scope of work:

1. Review prior art search findings and advise on patentability and claim strategy
2. Draft and file one or more utility patent applications with the USPTO
3. Prosecute the application(s) through examination, including responding to office actions
4. Advise on international filing strategy (PCT and national phase entries as appropriate)
5. Provide general IP strategy guidance relevant to the licensing business model

The inventor requests a fee estimate and engagement terms covering the above scope, including an estimate for the utility filing, anticipated office action responses, and any recommended professional prior art search.

9. Preferred Attorney Qualifications

- Registered USPTO patent attorney or agent
- Technical background in mechanical engineering, electromechanical devices, or consumer product design
- Experience drafting patents in the consumer appliance, kitchen appliance, or food/beverage technology space
- Experience with IP licensing strategy and drafting claims optimized for licensing programs
- Familiarity with startup IP needs, including working within budget constraints

- Responsive communication and willingness to explain strategy decisions to a technically knowledgeable inventor

10. Supplemental Patent Claims: User-Programmable Customization Profiles

Note: This section presents supplemental dependent claims developed after the original brief. These are intended for inclusion in a supplemental provisional application to be consolidated with the original provisional filing into a single non-provisional application within the 12-month priority window.

10.1 Overview and Rationale

The Caffevolve™ system includes a user-programmable customization profile system that goes beyond conventional software-based user preferences. Each stored profile directly controls physical hardware actions within the novel brewing system—triggering servo-actuated proportioning gates, adjusting grind mechanisms, controlling additive dispensing sequences, and managing vibration mixing cycles. This hardware-actuated profile control represents a patentable enhancement to the core invention.

Why these claims are patentable: Unlike purely software user preferences (which face §101 abstract idea challenges), Caffevolve™ profiles are tightly coupled to physical hardware actuation. A stored caffeine percentage doesn't just display a number—it causes servo motors to open proportioning gates and dispense specific ratios of beans from dual hoppers. This mechanical tie-in distinguishes these claims from prior art in consumer electronics.

10.2 Profile System Architecture (Across Product Tiers)

The profile system scales across all three product tiers, providing enablement support for a broad range of embodiments:

Product	Profiles	Capabilities
Originara	2	Caffeine level, temperature, strength/size, additive presets, profile name, preset avatar. Hold-to-save function (3 sec). Dedicated buttons with LED indicators.
Advancara	5	All Originara features plus PIN protection, app sync, custom avatar upload, brew history.
Culminara	10 + 30 sub	All Advancara features plus 3 time-of-day sub-profiles per user (Morning, Afternoon, Evening). Auto-selection based on real-time clock. 10 users × 3 slots = 30 configurations.

10.3 Proposed Dependent Claims

The following dependent claims reference the independent apparatus claim (Claim 1), method claim (Claim 2), and system claim (Claim 3) from the original provisional filing.

Group A: Profile-Driven Hardware Actuation Claims

Claim A1. The apparatus of Claim 1, further comprising a non-volatile memory module configured to store a plurality of user customization profiles, wherein each profile comprises at least a caffeine percentage parameter and a brew temperature parameter, and wherein

selection of a stored profile causes the control system to actuate the proportioning mechanism to dispense caffeinated and decaffeinated beans from the first and second storage chambers in a ratio corresponding to the stored caffeine percentage parameter.

Claim A2. The apparatus of Claim A1, wherein each user customization profile further comprises at least one of: a grind coarseness parameter that adjusts the grinding mechanism; a brew strength parameter that controls water-to-grounds ratio; a serving volume parameter; and an additive selection parameter that controls the supplement dispensing system.

Claim A3. The apparatus of Claim A1, wherein the non-volatile memory module is configured to store at least two and up to ten distinct user customization profiles, each profile being independently selectable through the control system's user interface.

Claim A4. The apparatus of Claim A1, wherein the user interface comprises dedicated profile selection elements, each associated with a stored user customization profile, such that activation of a profile selection element initiates a complete beverage preparation cycle using all parameters stored in the associated profile without requiring additional user input.

Group B: Time-Based Automated Profile Selection Claims

Claim B1. The apparatus of Claim A1, further comprising a real-time clock module, wherein each user customization profile includes a plurality of temporal sub-profiles, each temporal sub-profile associated with a time-of-day window and comprising distinct caffeine percentage, additive selection, and brew parameters, and wherein the control system automatically presents the temporal sub-profile corresponding to the current time-of-day when a user profile is selected.

Claim B2. The apparatus of Claim B1, wherein the temporal sub-profiles comprise at least a morning configuration, an afternoon configuration, and an evening configuration, each having independently programmable caffeine percentage parameters ranging from 0% to 100%.

Claim B3. The apparatus of Claim B1, wherein the control system is configured to suggest the temporal sub-profile corresponding to the current time-of-day while permitting the user to override and manually select any stored profile or temporal sub-profile.

Group C: Profile-Driven Additive Dispensing Claims

Claim C1. The apparatus of Claim A1, wherein each user customization profile further comprises additive dispensing parameters specifying: which of a plurality of additive cartridges to activate; a dispensing quantity for each activated cartridge; and a dispensing sequence relative to the grinding and brewing cycle, such that selection of a stored profile causes the supplement dispensing system to automatically dispense the specified additives in the specified quantities and sequence.

Claim C2. The apparatus of Claim C1, wherein the additive dispensing parameters stored in a user profile are coordinated with the caffeine percentage parameter such that the control system adjusts additive quantities proportionally to the serving volume specified in the profile.

Group D: Method Claims for Profile-Based Beverage Preparation

Claim D1. The method of Claim 2, further comprising the steps of: storing, in a non-volatile memory, a user customization profile comprising at least a caffeine percentage and a brew temperature; receiving a profile selection input from a user; retrieving the stored caffeine percentage from the selected profile; and calculating and dispensing proportions of caffeinated and decaffeinated beans from separate storage chambers based on the retrieved caffeine percentage, without requiring the user to manually specify the caffeine percentage at the time of brewing.

Claim D2. The method of Claim D1, further comprising: determining a current time-of-day; comparing the current time-of-day against a plurality of temporal sub-profiles associated with the selected user profile; and automatically applying the brew parameters of the temporal sub-profile corresponding to the current time-of-day.

Claim D3. The method of Claim D1, further comprising: receiving user-adjusted parameters during a brew cycle; and storing the user-adjusted parameters as an updated profile or a new profile in the non-volatile memory upon user confirmation.

Group E: System Integration Claims

Claim E1. The system of Claim 3, wherein the digital control interface is configured to: display a plurality of stored user profiles with associated identifiers; permit one-touch selection of a stored profile to initiate a complete beverage preparation cycle; and concurrently control the pre-grind blending subsystem, post-grind fortification subsystem, and vibration mixing chamber according to parameters retrieved from the selected profile.

Claim E2. The system of Claim E1, further comprising a hold-to-save function wherein the control system stores current operational parameters as a new user profile upon sustained activation of a profile selection element for a predetermined duration.

Claim E3. The system of Claim E1, further comprising a guest mode of operation wherein the apparatus operates with default parameters without accessing or modifying any stored user profiles, and without recording usage data.

10.4 Filing Strategy for Supplemental Claims

These claims should be filed as a **supplemental provisional patent application** and then consolidated with the original provisional into a single non-provisional application. The recommended approach:

1. **File a new provisional application** containing these dependent claims along with supporting specification text describing the user profile system architecture, memory storage configuration, user interface elements, and time-based automation logic. Estimated cost: ~\$320 for a small entity.
2. **Include the detailed User Profile Feature Specification** (previously developed) as supporting enablement documentation, covering the profile feature matrices across all three product tiers.

3. **Consolidate into a single non-provisional** within 12 months of the original provisional filing date. The non-provisional claims priority to both provisionals. New material receives the supplemental filing date as its priority date.

10.5 Licensing Implications

These profile claims strengthen the Caffevolve™ licensing position significantly. A licensee implementing the dual-hopper blend-then-grind system would need to also license the profile control system to deliver the full consumer experience. The time-based automation and one-touch profile selection represent high-value consumer features that differentiate licensed products in the market, creating additional incentive for licensing partners to engage with the complete Caffevolve™ technology portfolio.

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