

Prior-Art Search Report

Invention: Collapsible pet water bottle with fold-out drinking trough
Generated: 2026-10-14 | **Source:** Google Patents Public Data via BigQuery: derived table of ~9.67M US/WO English patent families since 2000 (search scanned 13.0 GB)

IMPORTANT: Automated informational search, not legal advice and not a patentability, validity or freedom-to-operate opinion. No attorney-client relationship. The search covers a limited database and may miss relevant references. Consult a registered patent attorney or agent.

Summary

This summary covers a prior-art search conducted on a limited database for a collapsible pet water bottle. The closest references, such as US-11950581-B1, disclose folding pet water bottles with pivotally connected drinking basins. Other references, like US-6101974-A and US-11439122-B1, describe various bottle and bowl combinations utilizing spring-biased water sealing valves and triggering members. Additionally, patents like US-2026248101-A1 discuss features including backwater holes, while US-2010072167-A1 and US-2010072166-A1 show general collapsible beverage bottles with collapsible grooves. However, based strictly on the results within this limited database search, none of the reviewed references appear to simultaneously combine all four specified features—specifically, the collapsible silicone bottle body, the hinged drinking trough on the cap, the push button water-releasing valve, and the mechanism for returning unused water back into the bottle—into a single integrated design. This overview is for informational purposes based solely on the searched records.

Features searched

- F1. collapsible silicone bottle body for carrying water
- F2. hinged drinking trough attached to the bottle cap
- F3. push button valve releasing water into the trough
- F4. returning unused water from the trough back into the bottle

Feature matrix (top 8) — D = disclosed (quote verified), P = partial (quote verified), ? = model claimed a match but quote could not be verified, – = not found

Reference	Rel.	F1	F2	F3	F4
US-11950581-B1	7	–	D	–	–
US-6101974-A	5	–	–	P	–
US-7490577-B2	5	–	P	–	–
US-11439122-B1	4	–	–	P	–
US-2026248101-A1	4	–	–	–	P
US-9901073-B2	4	–	–	P	–
US-2021235665-A1	4	–	–	–	–
WO-0130685-A1	4	–	–	?	–

Closest references

1. US-11950581-B1 — Folding pet water bottle

Assignee: SHENZHEN RONGCHENG INNOVATION TECH CO LTD | Published: 2024-04-09 | Priority: 2023-03-22 | CPC: A01K A45F Y02W
<https://patents.google.com/patent/US11950581B1>

What it is: A folding pet water bottle featuring a drinking basin pivotally connected to a water bottle component.

F2 disclosed: "one end of the water bottle component being pivotally connected to the drinking water basin"

2. US-6101974-A — Combination pet water bottle and bowl

Assignee: n/a | Published: 2000-08-15 | Priority: 2000-01-27 | CPC: A01K
<https://patents.google.com/patent/US6101974A>

What it is: A combination pet water bottle and bowl with a spring-biased water sealing valve and a pull handle.

F3 partial: "allows water to pass from the inside of the vessel to the bottom of the bowl by use of a pull handle"

3. US-7490577-B2 — Portable water drinking trough for pets

Assignee: STEPHANOS PRODROMOS PERICLES | Published: 2009-02-17 | Priority: 2003-11-05 | CPC: A01K
<https://patents.google.com/patent/US7490577B2>

What it is: This reference is about a portable water drinking trough for pets used with a sports water bottle.

F2 partial: "the device includes a lapping pan and a clip assembly for carrying the water bottle"

4. US-11439122-B1 — Pet water bottle

Assignee: SHANGHAI MIMENG NETWORK TECH CO LTD | Published: 2022-09-13 | Priority: 2021-08-27 | CPC: A45F A01K
<https://patents.google.com/patent/US11439122B1>

What it is: A pet water bottle including a shell, a triggering member, and a first sealing member.

F3 partial: "A cavity for water storage is formed inside the shell, a first recessed region is formed on an outer surface"

5. US-2026248101-A1 — Portable Pet Water Bottle

Assignee: PAIKENI SUZHOU PET PRODUCTS TECH CO LTD | Published: 2026-08-27 | Priority: 2025-02-26 | CPC: A01K B65D
<https://patents.google.com/patent/US2026248101A1>

What it is: A portable pet water bottle featuring a backwater hole and various seals and covers.

F4 partial: "a lanyard, a backwater hole and a glass bead"

6. US-9901073-B2 — Disposable pet water bottle and bowl combination

Assignee: HUNT JAMIE | Published: 2018-02-27 | Priority: 2016-04-15 | CPC: A01K
<https://patents.google.com/patent/US9901073B2>

What it is: A disposable pet water bottle and bowl combination with a valve at the top of a threaded protrusion.

F3 partial: "A valve is present at the top of the threaded protrusion in the base of the bowl"

7. US-2021235665-A1 — Pet water bottle

Assignee: BROWN CLARICE | Published: 2021-08-05 | Priority: 2020-01-30 | CPC: A01K A45F B65D
<https://patents.google.com/patent/US2021235665A1>

What it is: A portable drinking system for canines where a water bottle casing splits lengthwise down hinges.

No feature matches.

8. WO-0130685-A1 — Owner/pet water bottle

Assignee: GRAY LESLIE M | Published: 2001-05-03 | Priority: 1999-10-26 | CPC: B05B B65D A01K A45F
<https://patents.google.com/patent/WO0130685A1>

What it is: A multi-purpose beverage bottle for humans and animals with a bottle detachably connected to a cup.

F3 partial?unverified: ""

9. US-2010072167-A1 — Collapsible bottle

Assignee: DICKIE ROBERT G | Published: 2010-03-25 | Priority: 2008-09-25 | CPC: B65D

<https://patents.google.com/patent/US2010072167A1>

What it is: This reference is about a collapsible beverage bottle.

F1 partial: "A collapsible bottle is particularly useful as a beverage bottle such as a water bottle"

10. US-2010072166-A1 — Collapsible bottle

Assignee: DICKIE ROBERT G | Published: 2010-03-25 | Priority: 2008-09-25 | CPC: B65D

<https://patents.google.com/patent/US2010072166A1>

What it is: This reference is about a collapsible bottle with grooves to facilitate collapse.

F1 partial: "A collapsible bottle is particularly useful as a beverage bottle such as a water bottle"

Method

Gemini query expansion (5 queries + 12 terms) -> retrieval (max TF-IDF similarity across queries, or BigQuery keyword filter) -> top 40 candidates
-> Gemini feature mapping with mandatory verbatim quotes -> every quote string-matched against the reference text (unmatched = downgraded) ->
rerank by verified coverage + relevance -> Gemini summary with no-legal-advice constraints.