

Title (en)
PUMP DEVICE WITH COLLAPSIBLE PUMP CHAMBER HAVING INTEGRAL SHIPPING SEAL

Title (de)
PUMPVORRICHTUNG MIT EINER ZUSAMMENFALTBAREN PUMPKAMMER MIT EINER EINTEILIGEN VERSANDDICHTUNG

Title (fr)
POMPE A CHAMBRE PLIANTE ET BOUCHON DE TRANSPORT NE FORMANT QU'UNE SEULE PIECE AVEC CELLE-CI

Publication
EP 0705144 A1 19960410 (EN)

Application
EP 94919979 A 19940418

Priority
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• US 20332194 A 19940228

Abstract (en)
[origin: WO9501226A1] A liquid dispensing pump (20) for use with consumer product packages is provided with a shipping seal. The housing of the pump device includes an upper housing (24) and a lower housing (26) which are movable relative to each other between open and closed shipping seal positions. The liquid dispensing pump (20) includes a collapsible pump chamber (40), e.g. a bellows. Integral with the bellows (40) is at least one functional element of the shipping seal. The housing includes cooperating actuation elements which prevent actuation of the pump device when the shipping seal is closed. The housing may also include a tamper evident device which prevents actuation of the pump device prior to removal of the tamper evident tab; and may prevent movement of the housing from the closed shipping seal position to the open shipping seal position prior to removal thereof. The bellows (40) may also include an integral valve including a valve member, a valve seat and a valve opening which are all integral components of a wall of the collapsible pump chamber (40), the valve seat facing one side of the wall and the valve member being formed at an angle away from the other side of the wall so that upon pushing the valve member through the valve opening the valve member is biased against the valve seat.

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