

EXHIBIT A

**IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF MISSISSIPPI
EASTERN DIVISION**

Capsa Solutions LLC.,

Plaintiff,

v.

Howard Industries, Inc.,

Defendants.

C.A. No. 2:22-cv-00065-HSO-BWR

**DECLARATION OF PINHAS BEN-TZVI IN SUPPORT OF PLAINTIFF CAPSA'S
REPLY CLAIM CONSTRUCTION BRIEF**

I, Pinhas Ben-Tzvi, declare as follows:

INTRODUCTION

1. I have been retained by Plaintiff Capsa Solutions LLC (or "Capsa").
2. I have personal knowledge of the facts stated herein, unless stated otherwise, and I would testify truthfully to those facts if called as a witness.
3. My background and qualifications were submitted in my declaration provided in support of Plaintiff's Opening Claim Construction Brief, which I incorporate here by reference.
4. Gas driven pistons have been around for decades before the invention of the '650 and '668 Patents and their operation and design for use in different applications are well known to a POSITA.
5. Gas driven pistons (e.g., gas springs, gas cylinders or gas struts) are well-known, widely available, off-the-shelf components.
6. There are generally two main types of gas driven pistons: 1) open type gas driven pistons

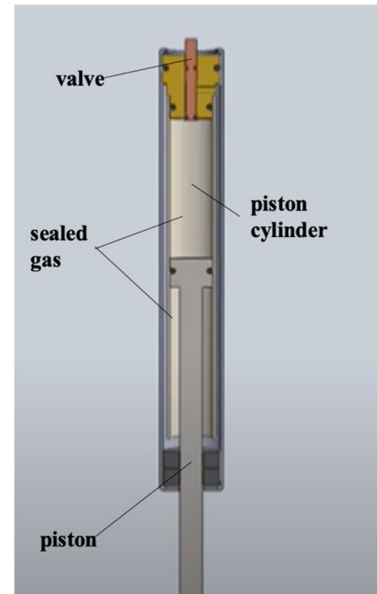
that have input and output ports for the flow of gas from and to an external source (e.g., gas is pumped in or out of the gas piston cylinder using hose connectors); or 2) closed/sealed type gas driven pistons where the gas inside the piston cylinder is pressurized and sealed and where the stored gas moves internally in and out of the piston cylinder via the opening and closing of the internal valve (e.g., using a button-type actuator).

7. From a review of the figures and description of the ‘650 and ‘668 Patents, a POSITA would understand that the type of gas driven piston described in the example embodiments of the ‘650 and ‘668 Patents uses a closed/sealed type of gas driven piston (or a gas spring) because there are no input or output gas hoses or ports on the gas driven piston shown in the figures of the ‘650 Patent and because the gas driven piston imparts motion to the work platform by raising or lowering it when the user presses the actuator button. *See, e.g.*, ‘650 Patent, claim 8, col. 9:1-38. In other words, if the gas cylinder was open to the ambient environment, as alleged by Defendant, it could not impart motion to the work platform as described and recited in claim 8 of the ‘650 Patent. The very name of the component “gas driven piston” even conveys that the internal “piston” is “driven” by “gas.” Thus, contrary to the Defendant’s allegations, the gas driven piston described in the ‘650 and ‘668 Patents does impart motion – consistent with the plain and ordinary meaning of “driver” and “gas driven piston.”
8. Because there are no ports shown in the figures of the gas driven piston of the ‘650 and ‘668 Patents, one of ordinary skill in the art would understand the claim term “permits gas to flow into the piston” [or out of it] as used in the ‘650 Patent to mean to flow into or out of the piston cylinder – it does not mean to flow into/out of the entire gas driven

piston from/to the ambient atmosphere as alleged by Defendant.

9. Gas springs typically use sealed nitrogen gas to provide the gas pressure, and these gas driven pistons are closed/sealed systems where no gas enters into or leaves out of the piston cylinder. Nitrogen gas, or some other type of gas, stored in the gas spring, moves in and out of the piston cylinder chamber (when the internal valve within the gas spring is opened and closed) to drive the piston up or down.

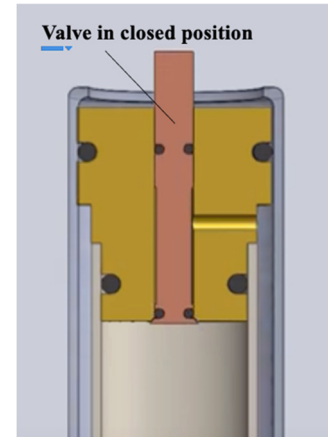
10. For example, the figures pasted in this declaration show the stored gas in a sealed-type gas driven piston (e.g., gas spring) flows, internally in a closed circuit, in and out of the piston cylinder via the opening and closing of the internal valve to impart or drive motion to the piston (and the component connected to the piston, e.g., office chair, work platform, car trunk hood).



11. These figures are true and accurate copies of screenshots obtained from a Youtube video that accurately illustrates the operation of one example gas driven piston (a sealed/closed type gas spring of a height-adjustable office chair). Youtube Video “*The Mystery of the Sinking Office Chair – Can We Fix It?*” <https://www.youtube.com/watch?v=zBB8DQOrvek&t=98s>.¹

¹ The figures have been annotated with components labeled.

12. These figures show a cross-sectional view of one example gas spring if it were cut down the middle of the piston cylinder along its axis. Thus, the figures show a cut-away view of the inside of one example gas spring that could be used to adjust the height of the work platform of the present invention or adjust the height of an office chair. The figure to the right shows the top portion of this example gas spring showing the valve in the closed (“locked”) position.

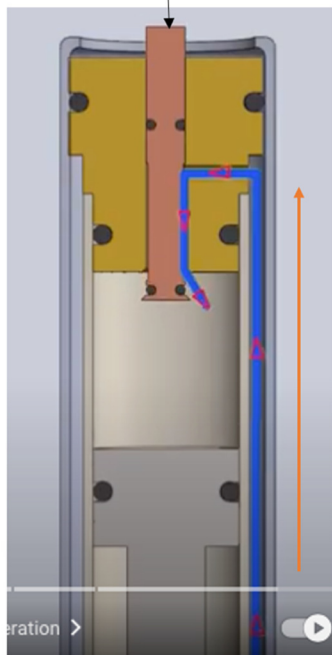


13. If the user presses the valve down (via a connected actuator, *e.g.*, button, lever, etc.), the valve will open and compressed gas will either flow out of the top of the piston cylinder to the bottom of the cylinder (to move the chair down) or the compressed gas will flow into the top of the piston cylinder from the bottom of the cylinder (to move the chair up) depending on whether the gas pressure is higher in the top of the piston cylinder or the bottom at the time of actuation.

14. See figure to the left (with direction of gas flow shown by the blue line and arrows)

showing that when the valve is pressed down, the valve is opened which lets high

Valve pressed down (opened)



Gas moves to the top of piston cylinder to drive piston down

pressure gas from the bottom of the piston cylinder to travel up a gap in the sidewall of the piston cylinder and enter the top of the piston cylinder (again via the valve opening) to drive the piston down and out of the cylinder bottom causing the chair seat to raise up. Vice versa, if the user presses the actuator button which causes the valve on the piston to be pressed down and opened when the pressure is higher at the top of the piston cylinder (*e.g.*, when a user is sitting on the chair), then pressurized gas will flow out of the top of the piston cylinder to the bottom of the cylinder causing the piston to move back into the cylinder and cause the seat to go back down.² This description of the operation of one

example gas spring for an office chair is similar to the description provided in the '650 and '668 Patents describing the operation of the gas driven piston for the invented medical cart. '650 Patent, col. 9: 1-38; claim 8.

15. It is known to a POSITA that gas springs can be designed or calibrated to move the component by using pressurized gas alone or it can be designed so that the user assists in the moving the component. For example, for some consumer products, for safety reasons, the manufacturer typically prefers to design the gas spring with lower internal pressures. These types of gas springs with lower internal pressures are designed to

² It is appreciated that a POSITA would know that a gas driven piston can be configured so that the piston extends out of the piston cylinder in the upward direction instead of the downward direction as shown in the figures.

impart motion slowly to the attached component (again for safety reasons), and designed to allow the user to assist the gas spring in moving the connected components up to their desired height. However, in these cases, the pressurized gas is still doing much of the heavy lifting via stored gas pressure (e.g., stored energy).

16. Alternatively, one of ordinary skill in the art would also know how to design a gas spring to drive or impart motion to the attached component slowly without the assistance of a user at all (e.g., using higher internal pressure). Thus, contrary to Defendant's arguments, the internal gas pressure (stored energy) of a gas spring does impart motion to the piston and connected work platform.
17. If the gasket seal(s) of the gas spring is broken and stored gas is allowed to leak into the ambient atmosphere, then the gas spring would be useless and would not work. For example, the internal gas pressure would go to zero as the gas leaks out of the piston cylinder into the ambient atmosphere and there would be no gas pressure (e.g., stored energy) to drive the components or releasably lock them in place. For example, if a person sat on a height adjustable chair with a gas leak in the gas spring, the chair would sink to the bottom and would not stay at the desired height. Thus, a gas spring with a leaky gasket would eventually lose all internal gas pressure and would not work to impart motion *or* impede motion.
18. Contrary to Defendant's argument, a POSITA would understand that "drivers" and "gas driven pistons" (e.g., gas springs) do impart motion to other components – that is one of their primary functions. As found in a height-adjustable office chair as one example, gas driven piston drivers can assist the user in driving the work platform to the desired height by use of internal gas pressure and then by releasing the actuator, the gas driven piston

(e.g., gas spring) is locked in place until the user again actuates the actuator to release the gas driven piston from the locked position to adjust the work platform to another desired height.

19. Finally, anybody at home can easily verify that the gas driven piston (e.g., gas spring) imparts motion in driving the piston (and attached components) because office chairs pop-up when they are compressed all the way down to their lowest setting and the piston valve is opened or one person can easily move a gas-spring-assisted heavy car trunk hood by using just one finger.³ Without the gas driven piston (e.g., gas spring) this would not be possible – they would be much harder to lift.
20. One of the main goals of the ‘650 and ‘668 Patents is to design an ergonomic medical cart that alleviates the physical strain on nurses. Forcing a nurse to lift the entire work platform (with laptop, keyboard, storage container and contents, etc.) without the aid of a driver that assists in driving the work platform up is illogical and contrary to the explicit definition and plain and ordinary meaning of a driver and gas driven piston.
21. Actuators are a well-known general class of structures to a POSITA that are used to actuate or activate something.
22. One of ordinary skill in the art, reviewing the ‘650 and ‘668 Patents would know that the term “actuator” is used consistently with its plain and ordinary meaning to refer to a known general class of structures used to actuate or control another device (e.g., push

³ One reason many gas springs are configured or calibrated to move up slowly, including with the assistance of a user (e.g., by using his finger to assist in lifting), is because manufacturers do not want to calibrate the gas springs with high pressure because it is dangerous. Calibrating a gas spring with too much pressure can cause the piston to move with too much force (and speed) which could injure the user. Additionally, calibrating with excessive pressure can even cause the gas spring to explode. Thus, manufacturers use lower pressure so the piston moves more gradually and less explosively (e.g., lifting/opening a car trunk hood).

buttons, levers, knobs, pedals, etc.).

23. One of ordinary skill in the art would know that the “actuator” can be implemented in various ways such as using a push-button, lever, knob, foot pedal, etc. configured to send electrical, mechanical, hydraulic, or gas control signals.
24. Commercially known, off-the-shelf, drivers and actuators can be used with the invention of the ‘650 and ‘668 Patents.
25. Provisional applications are informal that are filed to preserve the filing date. 35 U.S.C. 111(a). The provisional patent applications are then converted into a nonprovisional patent application within a year of filing the provisional patent application, that is then examined by the Patent Office. Thus, the later-filed nonprovisional patent application is the more complete, and most current, patent filing that demonstrates the true intent of the patent Applicant and the true scope of the claims.

I declare under penalty of perjury that the foregoing is true and accurate.

Executed this 16th day of June, 2023.



Pinhas Ben-Tzvi