

CREATING CLOUD CONDENSATION NUCLEI IN A THERMALLY STABLE CONTAINER TO PRODUCE A MULTITUDE OF SNOW SUBSEQUENTLY MELTED INTO WATER

ABSTRACT

Supercooled air, using the ColdSNAP process (or other money-saving method), is injected into an insulated aluminum alloy or HY-80 steel container enabling stable supercooled air down to -45 degrees centigrade to exist within the aforesaid container. An artificial windstorm is created with a turbine fan or other device, mounted to the aluminum alloy wall within the container. The container has been previously populated by silicon dioxide (sand) or other particles found to be appropriate. The aforesaid artificial windstorm randomly places the sand particles in frenetic motion throughout the container filled with supercooled air. After being zapped by electrostatic forces in an electric field catalyst (increasing the speed of reaction between the sand particles and the supercooled air by a magnitude of 14). The newly formed clumps of snow formed around the sand particles (Cloud Condensation Nuclei) are filled in the aforesaid container to a previously calculated amount to completely fill the aforesaid container. Melting the snow is accomplished by heating coils in the walls of the container, or by other means. Sand is mechanically separated out, or by other means, collected, and discharged from the aforesaid container. The process is controlled autonomously from a computer center to make the process operate on a continuous basis utilizing CPU's, sensors, actuators, transformers, servos, etc., strategically placed to maximize performance. The aforesaid process is scalable from the size of backpacks to huge containers producing 300,000,000 liters per hour and up.

To confirm interest in producing a prototype, contact Dr. Atila Ertas, Chairman at the Texas Tech School of Transdisciplinary Engineering at (806)834-5788



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63/372,966	04/20/2022		75			

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CONFIRMATION NO. 5021
FILING RECEIPT



Date Mailed: 05/04/2022

Receipt is acknowledged of this provisional patent application. It will not be examined for patentability and will become abandoned not later than twelve months after its filing date. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

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Inventor(s)

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Applicant(s)

Joel Arthur Epstein, Las Vegas, NV;

Power of Attorney: None

Permission to Access Application via Priority Document Exchange: No

Permission to Access Search Results: No

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 05/04/2022

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 63/372,966**

Projected Publication Date: None, application is not eligible for pre-grant publication

Non-Publication Request: No

Early Publication Request: No

**** MICRO ENTITY ****

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Electric Charger,
Hydraulic Ram (See fig. 1, 2,
and 3)

X-Aerogel Crosslinked
Polymer

Stationary Water
Manufacturing Site

Helium Storage
Chamber

Computer Control
Center

Load Sand

Helium
Generator

Cold Snap
Super-Cooled
Air-Heat
Exchanger
Generator

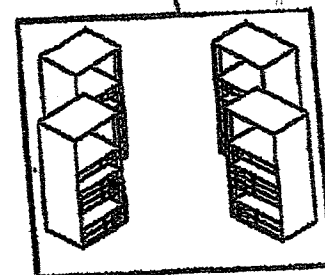
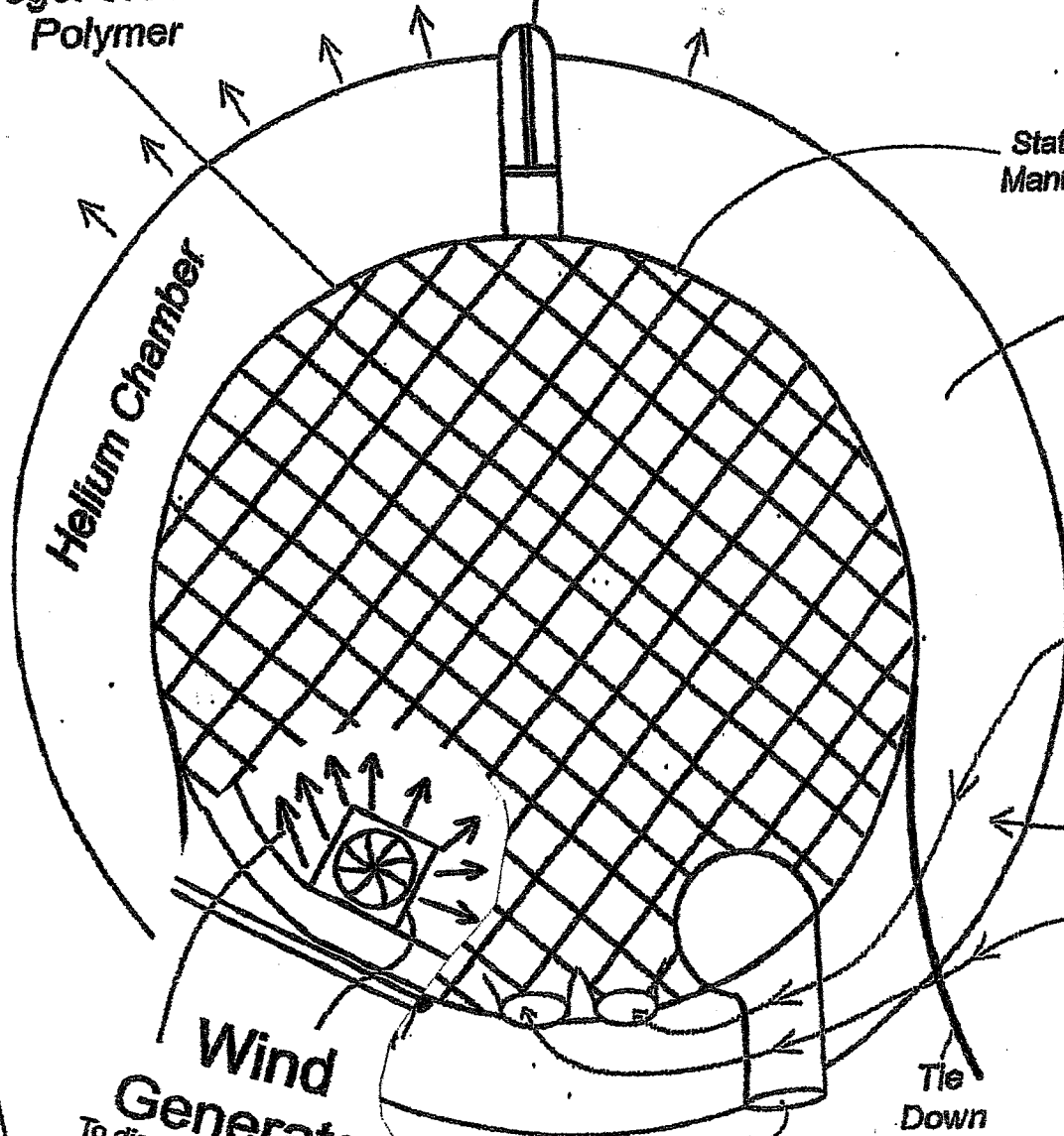
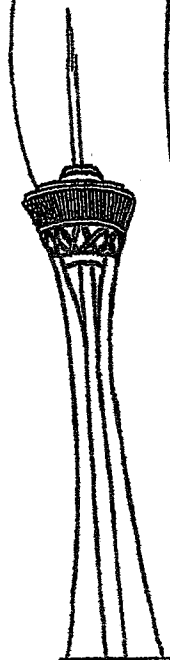
Tie
Down

Wind
Generator
To disperse sand and to help
blow sand and snow out

Manufactured Water

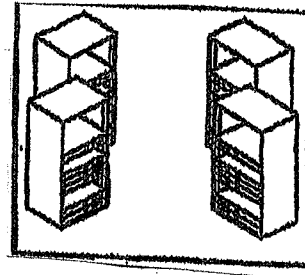
Helium Chamber

Las Vegas
Strat



Prototype for Cloud Condensation Nuclei

Computer Control Center



Electric Charge

① Supercooled Air

④ HY-80 steel

or

Insulator

Alloy Aluminum Sheet

⑤ Cloud Condensation Nucleus Surrounded Clumps of Snow

Insulator

Closable Opening

Steel Stand

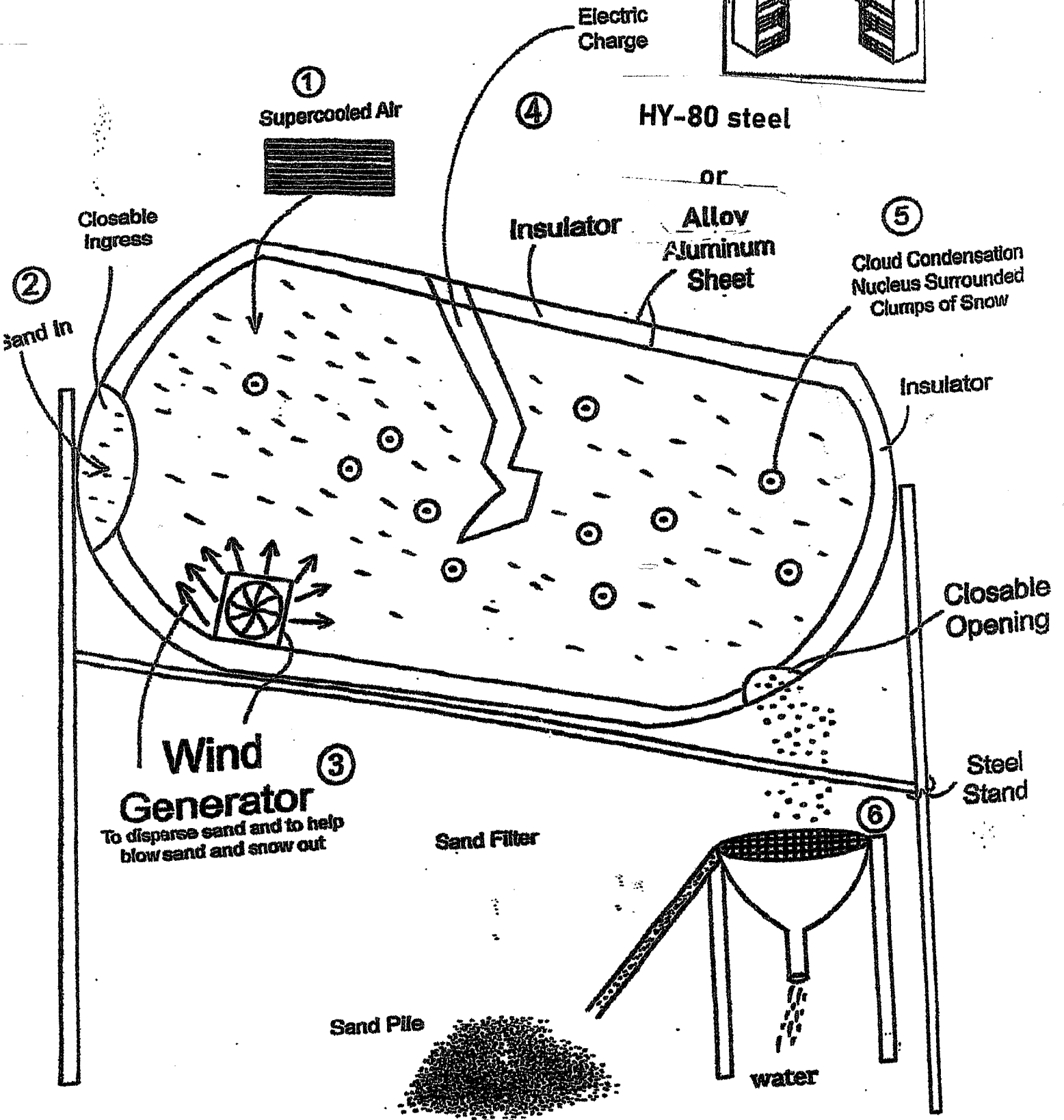
③ Wind Generator

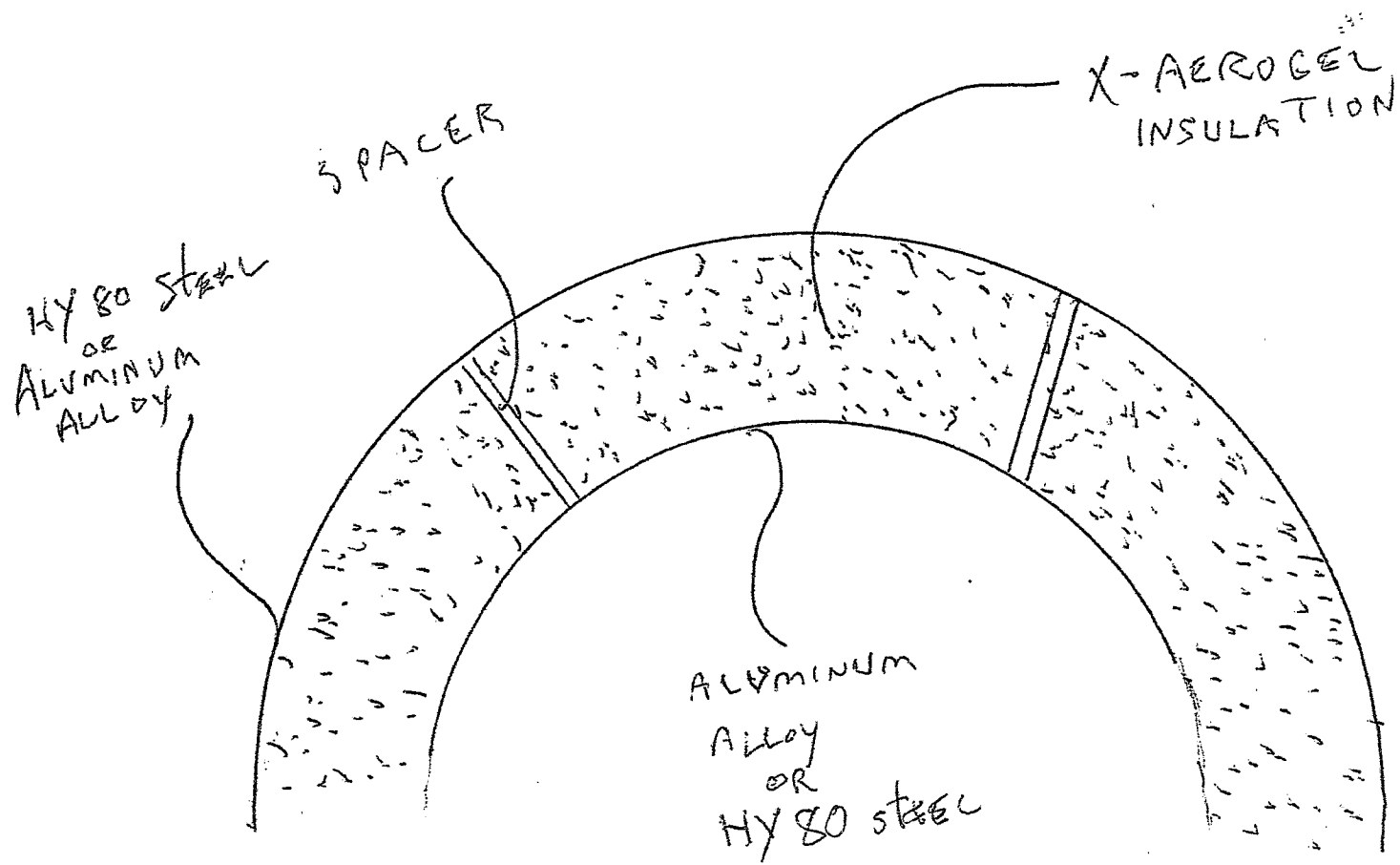
To disperse sand and to help blow sand and snow out

Sand Filter

Sand Pile

⑥ water







Science, Tech, Math › Science

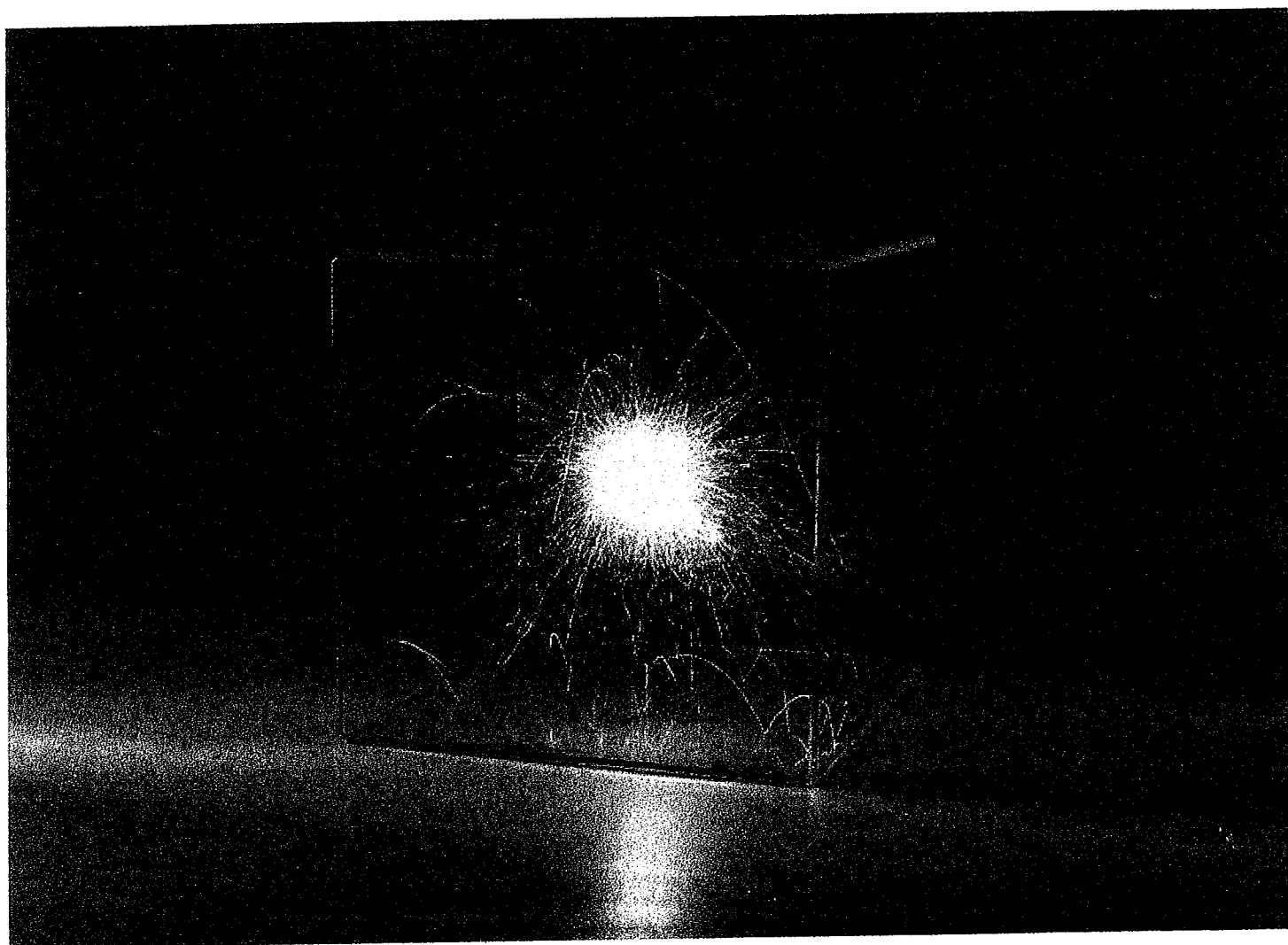
Chemistry Definitions: What are Electrostatic Forces?


The attractive or repulsive force between electrically charged objects

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 Electrostatic forces are forces caused by electric charge. PM Images/Getty Images

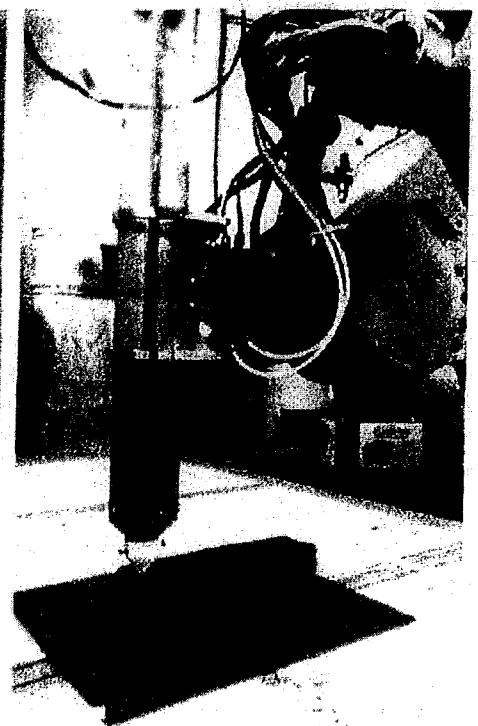
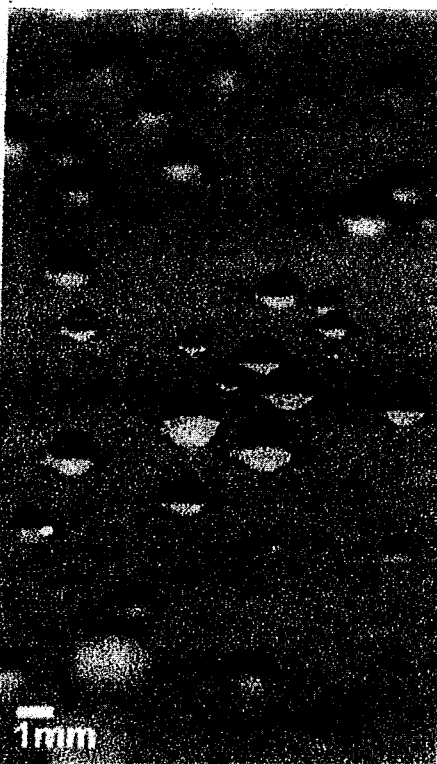
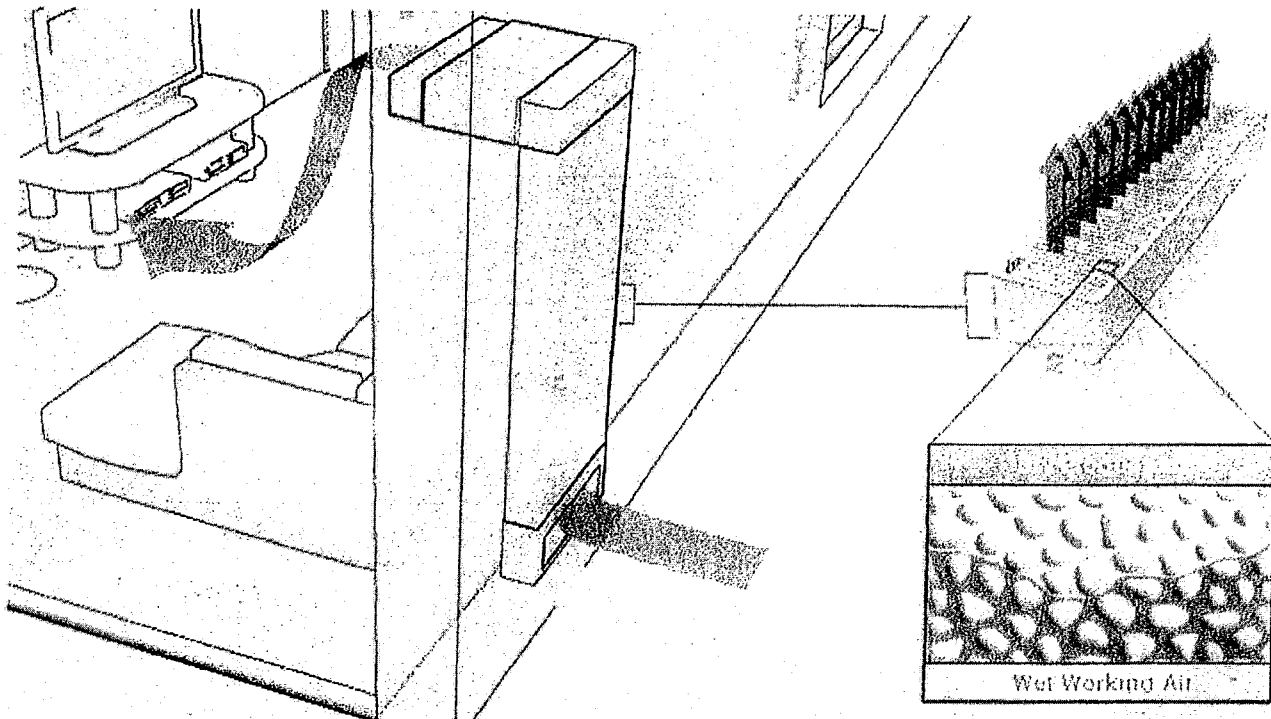
By Anne Marie Helmenstine, Ph.D.

Updated on January 17, 2020

There are several types of forces that relate to science. Physicists deal with the four fundamental forces: gravitational force, weak nuclear force, strong nuclear force, and electromagnetic force. The electrostatic force is associated with the electromagnetic force.

A new spin on an old technology cools air without adding humidity at a fraction of the energy cost

by Lindsay Brownell, Harvard University



cold-SNAP employs a nanoscale surface coating (left) that is highly water-repellent (center) selectively applied to the surfaces of 3D-printed ceramic (right) to make a cheap, low-power heat exchange unit to cool buildings without adding humidity. Credit: Wyss Institute at Harvard University

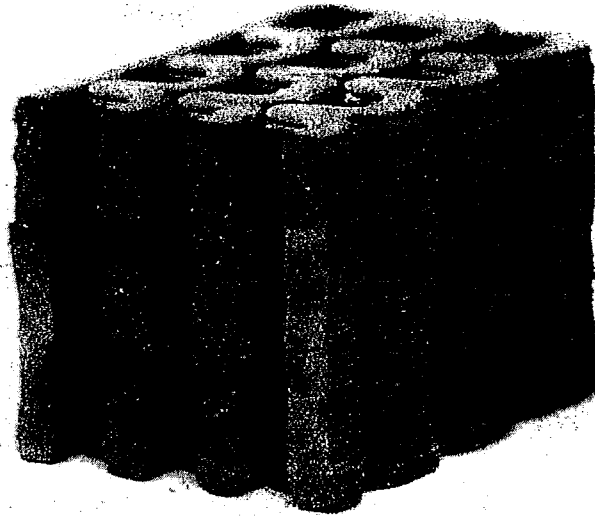
A cold blast from the past

Sometimes in order to make forward progress on a problem, you have to look backward. Around the same time that mechanical vapor compression was invented in the early 20th century, a variant on EC called indirect evaporative cooling (IEC) also debuted in the United States. IEC cools buildings via the evaporation of water as well, but IEC systems contain a heat exchange unit that isolates the evaporating water from the air that is directed inside the building, thus removing heat from it without adding humidity to it. IEC systems require very little energy to run, but are difficult to manufacture due to the complexity of the heat exchange unit, which makes them expensive and their performance difficult to optimize. As a result, they have remained a distant second fiddle to mechanical vapor compression units, which dominate the market.

Jack Alvarenga, M.S. and Jonathan Grinham, D.Des. are working to change that by infusing 21st-century technology into IEC systems, allowing them to effectively cool air at low cost in both humid and dry climates. Their technology, dubbed cold-SNAP (short for cold Superhydrophobic Nano-Architected Process), uses up to 75% less energy than mechanical vapor compression air conditioners, and relies on water rather than environment-damaging refrigerants.

"The impact that cold-SNAP can have globally is twofold: first, its projected low cost will allow people in poorer areas to afford effective cooling; and second, its low energy requirement will help bring down overall electricity use as people switch or upgrade their aging A/C systems, which will help mitigate further temperature increases," said Grinham, a former graduate student at the Wyss Institute who is now a Lecturer and Research Associate at the Harvard Graduate School of Design.

cold-SNAP achieves its high performance thanks to the integration of old and new: ceramic, one of the earliest, cheapest, and most widely available building materials; and a novel surface coating developed recently in the lab of Wyss Core Faculty member Joanna Aizenberg, Ph.D. The coating's nanoscale roughness makes it super water-repellent and, when applied to a slab of highly water-absorbent ceramic, the result is a very efficient heating exchange unit that can effectively isolate evaporating water from cooled air. Because ceramic is very malleable, an entire heating exchange unit can be produced via the extrusion or 3-D printing of a single piece, and its shape can be adjusted to maximize the surface area available for heat transfer and evaporation. The hydrophobic coating is then selectively applied to the components that will manage the flow of dry air, coupled to a water pump, fan, and controls, and voilà: cold-SNAP.



cold-SNAP creates a ceramic-based heat exchange unit for indirect evaporative cooling that can be manufactured in one step and easily modified to optimize the surface area available for heat transfer, making them cheaper and more efficient than current air conditioners. Credit: Wyss Institute at Harvard University

Helping HVAC go green

With additional support from the Harvard University Climate Change Fund, The Harvard Center for Green Buildings and Cities, and industrial partners, Alvarenga and Grinham are forging ahead on their quest to bring green cooling to the world. Preliminary studies have indicated that the cold-SNAP system can be up to four times more efficient than conventional air conditioners as measured by the Coefficient of Performance (COP), which is the ratio of how much useful cooling a system provides over the amount of energy required to produce that cooling. The better a system's COP, the less energy it consumes, and the lower its operating cost. This aspect is crucial, not only so that cold-SNAP can compete with today's conventional air conditioners, but also because the world's poorest people live along the equator, where air conditioning is most needed but electricity is prohibitively expensive.

"HVAC is a really outdated business that hasn't changed much over the last 50 years, because for a long time nobody really factored in the hidden costs of its environmental impact. Now, we're seeing a shift and informed consumers are choosing greener alternatives in many areas of their lives. We want to be able to offer cold-SNAP as a radically different approach to cooling that isn't just cheaper, it's better for the planet, too," said Alvarenga, who is a Research Scientist at the Wyss Institute.

Based on its promise in controlled tests, in 2019 cold-SNAP was named Wyss Institute Validation Project, a program that aims to de-risk technologies and demonstrate that they can be successfully scaled up.

Hello my name
is Jason King

gtexpress702
@gmail.com
702-283-8089

~~Hello~~ I am here today ~~to~~ understand further of the ordinance
to help others and my self.

11.52.305

~~Subject~~
Subsection

(B) titled commercial vehicles, recreational
vehicles and trailers

~~It~~

In another section of the chapter

11.10.010

~~parking~~ titled Violation, Infraction

Handicapped parking - Definitions

park or parking means standing, stopping or halting
whether occupied or not, upon a street

~~loading~~ while engaged in loading or
unloading freight, cargo, merchandise, or other
goods

— NEVADA LAW NRS. 97.035 goods mean

All Tangible personal property

NRS 10.045 personal property is defined
personal property, goods

NRS. 205.2195 property is defined as
personal goods, personal property

Submitted at City Council

Date 7/20/22 Item 91

By: JASON KING

my question is how is ~~the~~ goods
defined ~~according to~~ with the city of las Vegas.
municiple code

Is it different from the ~~previous~~ NRS STATUES
That I have read is it different from the
websters ~~websters~~ dictionary, how are goods defined.

URGENT
DOCUMENTS
ENCLOSED

ONE TRIP
ONE ENVELOPE
EVERY TIME!