

**JOINT STOCK COMPANY “VIETNAM MAGIC FLAME “
INTRODUCE ABOUT STOVES AND FUEL
" VIETNAM MAGIC FLAME ”**

FROM THIS YEAR (2018), VIETNAM STARTED MANUFACTURING STOVES AND FUEL "VIETNAM MAGIC FLAME " AND THE USER CAN CREATE FUELS SUCH AS MODERN LIQUEFIED PETROLEUM GAS RIGHT AT HOME WITHOUT HAVING TO BUY ANY ONE DROP OF LIQUID GAS!.

**This special document introduces
Achievements of Vietnamese scientists and technology
invented the stoves and fuels "Vietnam Magic Flame"
since 2002 and has been granted by the National Office of**

Intellectual Property of Vietnam

Patent No. 9688 as decided

36540 / QD-SHTT dated 28.09.2011:

1. Prof. Dr. Eng. Tran Binh (Newtech Co. Ltd., Binh Dinh): **The main author**
2. Prof. Dr. Sc. Pham Pho (Saigon Economics and Technology College)
3. Tran The Trung Electronic Engineering (Saigon Hoang Thuong)
4. Ho kim Thuong Lawyer (Joint Stock Company “Vietnam Magic Flame”)
5. Nguyen Van Dr. Eng. (Silkworm Corporation of Vietnam)
6. Do Trong Truong Msc (Truong Giang Consultant Company, Hanoi)
7. Do Van Thai Msc (Hanoi University of Civil Engineering)
8. Nguyen Dinh Quy Engineer (People's Credit Fund of Cam Hoang commune, Cam Giang district, Hai Duong province)

Vietnam - The land of peaceful villages is surrounded by golden rice fields that stretch to the horizon, the country of the East Sea, the open sea and the vast forests of the region. The country was severely damaged by the bloody hands of foreign aggressors who wanted to impose dominance on the country and the people of Vietnam were diligent, intelligent, gentle and hospitable.

Thanks to the unparalleled talents of the Vietnamese revolutionaries, the leader of the great Ho Chi Minh and the generous and heartfelt help of the entire revolutionary world today at the moment. In the beginning of this year 2018, Vietnam has become the owner of the country to build a small industry that is very respectful and admirable and as a result many cities have become magnificent and splendid in Vietnam. this beautiful.

Vietnam's population is also growing rapidly and demand for energy is growing. Fuel, especially clean fuels, has become a burden for all Vietnamese households, especially for low income households, mainly farmers in rural and urban areas. mountain workers and wage workers in cities and large cities.

Depending on living conditions and family income, Vietnamese people use different fuels for cooking every day.

In rural areas far away from the city, farmers use agricultural residues such as garbage around the house and straw to cook three meals a day in a simple, inexpensive and convenient way. This type of stoves emits a lot of CO and CO₂ gas when cooking, especially cooking in the house.

Farmers also use a lot of firewood from plants around the house and planted forests for cooking are convenient and simple. Fire from firewood has a burning temperature in the kitchen from 400 to 500 degrees Celsius It is very easy to use. This type of wood stove has simple structure so it is easy to use but it also emits a lot of smoke and noxious gas for human health and cooking stove is not effective. It also contributes significantly to the reduction of forest plantation efficiency.

In large rice growing areas, people like to use rice husks for cooking at home. Improved types of cooking hobs type TLUD are easy to use, have less smoke than those mentioned above, but the cooking time is also very limited due to the low proportion of rice husk (1.1-1.2 ton / m³), the burner stove is full of complicated structure and much more expensive so also less used.



Figure 1. Photo of rice husk " Vietnam Magic Flame " by Professor Tran Binh



Figure 2. Rice husk photo on the top of rice husk of Professor Tran Binh

In Vietnam, sawdust is also widely used and economical, but it also emits more toxic smoke and is limited by the amount of sawdust because of the low density of sawdust.

In cities and towns the Vietnamese prefer to use charcoal for convenience, but because of the high price of charcoal and when the smoke is too much smoke, use is limited. Charcoal is commonly used for barbecues and for high income families.

In recent years, people have started using a variety of improved firewood to reduce harmful emissions, reduce the amount of fuelwood consumed, and still emit toxic gases and dust that have spread to the environment.

Kerosene and alcohol are also precious fuels, cleaned but high fuel costs should be used only in high-income families or in restaurants.

In recent years, in urban areas and cities, electric stoves and electric-magnet cookers have been popular, especially in the restaurant and in the well-off families.

Most widespread in Vietnam is cooking by liquid gas. Liquefied gas used for cooking is widely used in all urban and large cities in Vietnam as well as in suburban areas and in rural poor households.

Liquefied gas is easy to use, fast cooking, convenient and everyone likes to use liquefied gas. People find ways to use liquefied gas as long as they have enough money to buy liquid gas for each month. The most hindrance for using liquefied gas is the high cost of purchasing liquefied gas and especially ensuring the explosion-proof safety of liquefied gas.

Like other countries in Southeast Asia, Vietnam is a long-standing source of domestic coal. People use coal in the form of lumps in boilers, use the charcoal to cook in restaurants, widely use charcoal to cook and boil water at home from rural to urban. Coal is the most popular fuel in Vietnam, easy to use, cheap and where on the territory of Vietnam can buy coal at home, at the market. The biggest barrier to the use of coal is that the coal stove emits a lot of toxic gases, long lasts and emits a lot of carbon dioxide into the atmosphere, which pollutes the environment.



Figure 3. A modern honeycomb coal stove but still emits a lot of smoke and toxic gases

Particularly in Hanoi, the number of honeycomb stoves is about 525,000 large and small stoves, consuming about 485 tons of coal daily and emitting 800 tons of CO₂ per day. It is intended to remove all honeycombed cooking in Hanoi City from 2020 onwards.

This is a very decisive decision but is there any other way to solve this problem in a scientific, intelligent and simple way?

Perhaps the "Vietnam Magic Flame" stoves will help us do that!

BIOMASS ENERGY ANFD FOSSIL ENERGY

As we know, biomass energy is the energy obtained from all plants and their waste.

At the global level, biomass energy (agricultural residues such as rice husks, straws, seedlings of crops, animal manure and waste from the wood processing industry account for 14% -15% Total energy consumption in the world, while in developing countries like Vietnam, biomass energy accounts for about 35% - 40% of total energy consumed by the whole society. plays a very important role in the lives of all human beings and will play an increasingly important role in the future.

Fossil energy is the energy produced during the burning of fossil fuels. Fossil fuels are mainly coal, gas and oil. As we all know, the production of coal, gas and oil is a multi-million-year process. So, when burning fossil fuels, CO₂ emissions, the amount of CO₂ that millions of years after new plants (CO₂) are absorbed to create CO₂ balance, will occur. Fossil fuels are considered non-renewable. On average, in natural conditions of the earth, for burning 1 ton of coal we will emit no less than 1.64 tons of CO, CO₂ and lots of carbon black and so present People are looking for ways to reduce emissions of CO, CO₂ and carbon black and other toxic gases such as SO₂, NO₂, ...

. Nevertheless, little is known about the danger of emitting fumes (mainly CO and other toxic gases) when cooking fuel of any kind in the absence of oxygen. Currently, nearly 2 billion people cook in their homes by using fires in traditional furnaces to fuel fossil fuels and biomass fuels. According to UN statistics, the number of deaths from indoor air pollution can reach 1.5 million - 1.6 million people each year, meaning that in the world every 20 seconds there is one person. died of toxic gases for indoor cooking, in which women and children accounted for no less than 85%!

It is very important for biomass fuels that we have not paid much attention to recently: the CO₂ emissions of biomass fuels.

Indeed, from the very beginning of their lives, biomass has started to attract CO₂ to help people escape the genocide of carbon dioxide (C) in their bodies and days. Growing up with the time of survival and that is the source of fuel (carbon) that people will use for cooking every day. When cooking, the amount of CO₂ emitted by carbon dioxide is about the same as or much less (by knowing how to cook scientifically) the amount of CO₂ the plant has attracted during its survival, meaning that the source Biomass does not increase the total amount of earth's CO₂ and this is a way of cooking for the environment! .

It is a worrying fact that all of the above biomass is boiled in very obsolete stoves and stoves, emit a lot of toxic gases, especially CO and SO₂, very low cooking efficiency and consuming a lot of fuel, causing a lot of trouble for the people, especially women.

At present, there are many research projects on economical, low toxicity cooking systems but still many shortcomings, still emit CO, CO₂ and carbon black, It is not suitable for the pockets of poor people and there are still many technical inadequacies so it is not widely disseminated !!! .

For more than 30 years, Prof. Tran Binh (NewTech Corporation, Quy Nhon City, Binh Dinh) has been very diligent and patient in researching this field. In the past 30 years, the research fee of about 27 billion VND (over 1.2 million USD) has been completed and registered at the National Office of Intellectual Property of Vietnam from 2008-2009 and by 2011 has been granted the patent No. 9688 of September 28, 2011 by Decision No. 36540 / QĐ-SHTT.

Stoves and Fuels "Vietnam Magic Flame" invented by scientists and technology in Vietnam fuel produced from waste, sludge, all kinds of waste biomass of agriculture. industrial, all kinds of coal, lignite, peat ... burning into gas as modern liquefied gas, smoke-free, almost no emission of CO poisonous gas because the main fuel used to burn fuel into gas low-CO₂ stoves like liquefied gas stoves, sulfur deodorizers when lightened with herbal extracts and sulfur retention in coal slag in the form of solid compounds and septic tanks. Other toxic gases, as well as carbon black and CO₂, are simply and cheaply used to capture toxic gases.

The stoves was invented to support the poor of Vietnam as well as around the world who could use the daily clean fuel as described above to burn gas to a modern liquefied gas without having to go up bought a drop of liquefied gas, which is what all humanity and all the poor of our world have ever dreamed of.

This invention by Vietnamese scientists and technology has really revolutionized the cooking technology of a very large proportion of the Vietnamese population and billions of poor people around the world to help people. Daily low-carbon cooking is done at home, saving many times the cost of cooking gas without the expensive modern gas, cooking is not harmful, never fire and protect protect the living environment and fight global climate change and make a real revolution in cooking for all poor people in Vietnam as well as around the world.

THE STOVES "VIETNAM MAGIC FLAME"

The Stoves " Vietnam Magic Flame " has a special structure that can automatically ignite all types of coal as mentioned above in the blue gas stove easily and does not emit toxic gases such as stoves. modern liquefied gas

The Stoves consists pod, clean insulation and modern insulation made of foam concrete with added strength and harmless health of users, combustion chamber with heat resistance up to 1720 degrees Celsius ,directional gas cooker, cooker lid and grate .

The gas-fired stove is equipped with three levels of air supply 1, 2 and 3, which are specially arranged inside the stove.

The stove " Vietnam Magic Flame " automatically generates its own voltages to control the entire combustion process into gas and without the use of batteries, batteries or electricity. This is an extremely important success. Because it helps the user can cook wherever desired and completely eliminate the use of electricity when cooking the " Vietnam Magic Flame ".

The stove "Vietnam magic flame" always burned into blue gas like modern LPG during cooking 24 hours or many days. The kitchen can also burn the terminal interrupt with fire duration into the blue waters of the in six hours and continued to fire until the Cup 8 -10 hours, longer than the 2-2.5 times the length of the, not the coal stove burning hives.

. The stove " Vietnam Magic Flame " allows the charcoal to be incubated at any time and burns it to a green at any time.

The kitchen "fire spirit" was rekindled very fast, no smoke and no smell of sulfur because coal was deodorants and detoxifying (especially reduction of SO₂) in the production process before closing on coal and containers for users.

The stove "vietnam magic flame" not waste and no leakage of LPG and is clearly not as fire gas stove using liquid ga was very reassuring for the user.

Thanks to the burning of gas during cooking and thanks to the technology of fuel gasification at temperatures above 1000 degrees Celsius, the " Vietnam Magic Flame " can be made from coal with very high content of fuel high :

- CO 48%
- H₂ 35%
- CO₂ 14%
- CH₄ 2%
- N₂ 1%

And the stove always burns mainly with CO and H₂ gases like liquefied petroleum gas and lowers the amount of CO₂ that is very precious and virtually eliminates toxic gas, just like when it is liquefied.

In addition, the " Vietnam Magic Flame " stove provides a simple and inexpensive set of equipment for the user to safely store CO (if any) and CO₂ and Carbon Black (if any).) at home .

Doing all of the above, the stove " Vietnam Magic Flame " has become a cheap, handy and modern cooking tool that completely replaces honeycomb stove and stove Modern liquefied gas at any place on the ground, at sea, in the high mountains, deep forests, arctic or polar regions, in deep seas, on boats of all kinds and so on. All the poor of the world.

. FUELS " VIETNAM MAGIC FLAME "

As mentioned above, the use of rice husk as fuel for the " Vietnam Magic Flame " cooking boiler to burn gas to the gas also has a very clear cooking effect and compared to the gasifier This type of rice husk stove is also cheaper $(11,14 / 3,8) = 2,93$ or nearly 3 times (According to Professor Alexis Belonio Philippines).

It is easy to see, however, that it is not always possible to have a rice husk for daily cooking and that the supply of rice husk to remote areas is very expensive. such as waste, sawdust, rotten peat, shavings, bark of plants, root tops of harvesting plantations, waste from wood processing plants, waste fumes of all animals, coal, peat, brown lignite, and perennial sediment in the ground are very rare biomass fuels that are difficult to collect and will also be difficult to burn and hard to boil in conventional and conventional cookers. This explains why the world's current types of stoves are very difficult to use, expensive and can not be widely spread around the world. do a revolution in cooking as a non-profit company Enviofit US and global oil corporations SHELL powerful ever wished.

Professor Tran Binh, after decades of concern, has invented a whole new direction of global cooking technology that involves processing all kinds of biomass fuels and coal, coal brown, peat, and other underground vegetation (due to earthquakes and tsunamis that bump up dense forests on the planet) into coal pellets suitable for gasification in the kitchen system. " Vietnam Magic Flame' in all regions of the world with the technology and equipment of simple self-created by Professor Tran Binh wherever in the world and people can organize themselves. can do right at home.

This invention helps human beings to accomplish the following three very important tasks:

- One is a natural biomass that has a calorific value of 3000 Kcal / kg to produce biomass charcoal pellets of 4,000 to 4200 Kcal / Kg and burns in the " Vietnam Magic Flame " kitchen in gasification mode. Perfect as other modern solid fuels and have very high cooking efficiency.

Secondly, these biomass pellets have easy conditions to add gas additives of Professor Tran Binh to always burn into a green gas in the kitchen. " Vietnam Magic Flame " is different from all kinds stoves and fuels of countries around the world.

Three are the biomass pellets that can be produced in coal fired boilers of Tran Binh Retort to reduce the harmful CO emissions and then bring CO₂ to the user and regulate the calorific value. Charcoal is a special requirement of biomass fuels " Vietnam Magic Flame"

Prof. Tran Binh organizes the production of coal for the "Vietnam Magic Flame " in the following three forms:

Pellet-shaped tablets are 6-8 mm in diameter.

- Ellipsoid tablets Dk₁ = 22-25, Dk₂ = 18-22, Dk₃ = 12-15 mm

Dk = 120 mm, Dk = 150 mm and Dk = 180 mm, height H

taken at the request of the user.

Below is a picture of the above types of coal produced from different biomass types:



. Figure 4. Pellet produced from sawdust does not mix other types of coal burned into blue gas



Figure 5. Peat cores made from sawdust, sawdust, not mixed with other coal burned to blue gas



. Figure 6. Pellets produced from waste burns into a blue gas



. Figure 7. Fruit pods produced from solid waste burned to blue gas



Figure 8. Pellet produced from waste forest burns into green gas



Figure 9. Fruit peel produced from burned forest waste into blue gas

Coal, brown coal, amber, and other sedimentary rocks in the soil are solid fuels formed under a variety of earth conditions and therefore have specific characteristics. The fuel is very different and especially contains a lot of toxic gases that are harmful to the user when cooking them. Prof. Tran Binh and Engineer Tran The Trung have successfully researched modern technology solutions that allow easy processing of coal, brown coal, peat and other sediment in the ground. High quality clean coal and easy burning gas.

Accordingly, in 2013, Professor Tran Binh invented an "ant nest" coal for boiling coal or coal, peat, lignite mixed with processed biomass and mixed with The active ingredients create gas to always burn into a gas fire blue, not toxic, easy to use as liquid gash, save energy, not explosive and environmentally friendly and it is clear that the " "This can completely replace all types of honeycomb charcoal that are obsolete in Vietnam as well as around the world.



Figure 10. fuel "Ant nests" fire burn into a blue gas as modern liquefied gas produced by Vietnam Flame and Stove Company (Nguyen dinh Quy)

In order to boil fuel "ant nests" in continuous cooking stoves, we can use the fuel "ant nests" with a height of 90 mm and in Figure 11 these are the coal.



Hinh 11. fuel "ant nest" fire burns into a blue gas modern liquefied gas for the kitchen "vietnam magic flame" to cook continuously save 24 hours or days without needing to rekindle the kitchen. This is a very intelligent cooking method of the old kitchen!

According to this continuous cooking method, in the first group, we put the ants' nest in the bottom of the combustion chamber and fire the coal, then place the second one on top of the first and cook the pot often. After 6-8 hours we took the second tablet to get the first tablet, then put the second tablet to the bottom and immediately after that hit the new coal on the second tablet and still proceed to the boiler. When the bottom of the bottom burns out, then we proceed with the coal as before and proceed to cook continuously. In this way the stove always burns into a blue gas Without burning any more throughout. Cooker for 24 hours continuous or more.

All of these pellets have different heights for large and small kitchens that have been brewed with gas additive so they always burn to the blue gas in the "Vietnam magic flame" stoves.

Here are the images of the kind of fire " Vietnam Magic Flame ".

a. The charcoal pellet burns to a blue gas modern liquefied gas

In Figure 12, we introduce the kind of " Vietnam Magic Flame " to burn fuels pellets into a small blue gas for households with 1 to 4 people.



Figure 13. The pellet fired charcoal burns to a small blue

This type of stove is reminiscent of the top of the coal and operates under the principle of conventional TLUD. The fire will be burned under the anaerobic digestion mode from top to bottom to rapidly gasify all the coal in the combustion chamber of the kitchen and burn it into the green gas. The burning of the gas for many hours is a very important gasification characteristics of this type of kitchen and thanks to that this type of kitchen can be used in all regions with all kinds of charcoal pellets mentioned above just cheap, medium convenient, smoke free, non-toxic and non-explosive. This stove helps the poor in Vietnam as well as around the world to create and burn green gas at home without having to buy any liquids.

Vietnamese flaming pellet boilers have a larger variety for medium and large sized households.



Figure 14. Vietnamese fire viewed from the top of the pellet stove fires into the blue gas .



Figure 15. Vietnamese fire flames peering at the top of the charcoal stove What kind of coal will the coal be !



Figure 16. Blue gas image of the pellet stove " Vietnam Magic Flame " on the bottom of the pot is like modern liquefied gas at all!

b. fuel fired stove " Vietnam Magic Flame " burned into the blue gas as modern liquefied gas

Fuel gas stoves " Vietnam Magic Flame " by Professor Tran Binh has a special structure and completely different than the honeycomb stove used in Vietnam as well as in other countries around the world. This structure is designed to create an annealing coal gas stove which burns to a blue gas as a modern liquefied gas.

The anthocyanin gasification process is carried out in the combustion chamber of the cooker. The combustion chamber is a high temperature resistant tube that can reach up to 1720 degrees Celsius and has very high mechanical strength to withstand the weight of the cooker. It is possible to have the weight of the boiler with a capacity of 120 liters of water plus 20-30 kg of food cooked in a boiler.

Thanks to the gasification process, the kitchen has created a very large amount of CO and H₂ as mentioned above that other types of cookers can not do, while minimizing the amount of gas. CO₂ emissions are what the whole world desires and then the cooking of charcoal sticks " Vietnam Magic Flame" is quite similar to the modern gas stove.

The charcoal stove with the " Vietnam Magic Flame " has actually become a stove as a modern liquefied gas and we are completely assured about the issue of the charcoal fire ant nest " male " as for the liquefied gas stove.

In addition, the charcoal stove for the " Vietnam Magic Flame " is a completely non-explosive kitchen that is as dangerous as a gas stove, which everyone is afraid of!

. In the future, stove and fuel " Vietnam Magic Flame " will be mass produced and people can buy at their place cheap and never have to go out. buy any drop of liquefied gas!

Professor Tran Binh and engineer Tran Trung Trung organize the production of the stoves " Vietnam Magic Flame " with three sizes: the Small STOVE , the Medium STOVE and the Large STOVE . Small STOVE for small household under 4 people and hot water boiler, Medium STOVE for under 6-7 people, cooking noodles, cooking medium and hot water, Large STOVE for households Larger family, cooked noodle, large restaurant and hot water heater. Users can request to make larger kitchen combinations at will.

Below are the pictures of the stove for the " Vietnam Magic Flame " of small, medium and large fire are as green as modern liquefied gas.



Figure 17 .Three sizes of stoves " Vietnam Magic Flame "

b1. Large STOVE "Vietnam Magic Flame" to burn green gas as modern liquefied gas:



Figure 18. The green fire of 'vietnam magic flame" has covered the pot as a modern liquefied gas.

As mentioned above, if you use continuous cooking technology, the stove can cook continuously with the green light during day and night or many days, just first and then Just need to island coal without recollecting is what the professional cooks have long been desired.

During this cooking process, the flame of the Great Kitchen can be adjusted to be light and small enough to fit the cooking requirement and is exactly the same as the gas cooker.

In Figure 19, we see Vietnam magic flame go up vertically in the direction of the gas line in the hole system and the relatives in the first contact with the kitchen " Vietnam Magic Flame " As if this magical gas fire escaped and flew from a gas tank somewhere in the stomach, it was the fire of the gods who was very interested and grateful to the Vietnamese scientists and technology. has researched and invented this magic kitchen!



Figure 19. The blue gas of “vietnam magic flame” fire goes up vertically with the cone directed from the gas line in the hole system of the magical ants and the ancestors and the country of Vietnam have helped the houses Vietnamese science and technology researched and invented this fire and they have gained the name " Vietnam Magic Flame "!

. It is easy to regulate the gas for easy cooking as shown in Fig 20



Figure 20. Gas liquefied gas stoves is very Esy .

Thanks to the good heat, the kitchen does not heat up the kitchen much and in the winter, cats and dogs love to play around the kitchen " Vietnam Magic Flame”



Figure 21 Simmer cooking saver and prolong cooking time.



Figure 22. Puppies still play warm next to the STOVE " Vietnam Magic Flame ".

b2. Medium STOVE " Vietnam Magic Flame " to burn fuel "ant nests " for blue gas as modern liquefied gas:



Figure 23. gas of stove has covered the cooking pot.



Figure 24. kettle so it boils well



Figure 25. The stove of the " Vietnam Magic Flame " manufactured by Saigon Trading Co. of Prof. Tran Binh and Tran The Trung.



Figure 26. Lower to save coal on the stove



Figure 27. The stove is very convenient for cooking with small pots

b3. Small Stove " Vietnam Magic Flame " to burn fuel to burn blue gas as modern liquefied gas:

Stove " Vietnam Magic Flame " burns green gas like the type of medium stove capacity and is used for households under 4 people eat, For small and boiling water, especially in Hanoi is very convenient thanks to the continuous boil for days or days without coal for the coal.

Small stove " Vietnam Magic Flame" burned into the Ant nest coal heat gas plunging as the kitchen but are smaller and used fire for under 4 who eat, small restaurants and the kettle boiling , especially in Hanoi is very convenient thanks to continuous heat mode all day, night or several days without the need for the staff the following coal coal appears.



Figure 28. The kitchen of the " Vietnam Magic Flame " burns coal for burning blue gas as modern liquefied gas



Figure 29. Lowering the gas in the stove " Vietnam Magic Flame " is as easy as the modern liquefied gas



Figure 30. Stove "Vietnam Magic Flame " in the household less than 4 people eat and boil water is very convenient



Figure 31. On the stove can create a high-temperature gas (800-900 degrees Celsius)
It's as easy as the LARGE and MEDIUM!

. The following important conclusions can be drawn from the contents of the " Vietnam Magic Flame " as presented above:

1. Stove " Vietnam Magic Flame " is a gasifier of coal, pellet, charcoal and charcoal "nest" in the high temperature layer invented and developed by Vietnamese scientists and technology. These charcoal fire burns as green gas as modern liquefied gas to produce high levels of CO and H₂ gas so that the poor in Vietnam and billions of poor people in the world can cook with self-made gas at home without having to go to the city to buy any drop of liquefied gas is what all humanity and all the poor in the world have ever dreamed of!

The stove " Vietnam Magic Flame " is different from all types of cookers available in the world and has been granted patent No. 9688 dated 28/9/2011 according to Decision No. 36540 / QĐ-SHTT Vietnam.

2. These types of fuel are produced from garbage, sludge, all kinds of waste biomass of agro-forestry, all kinds of coal, brown coal, peat ... always burning to gas Modern liquid, smoke-free, almost no gas CO, because the stove uses CO as the fuel for burning gas, the stove generates low CO₂, such as gas stove, sulfur stove. Grabbing with herbal additives and storing sulfur in coal slag in the form of solid compounds and stoves capable of capturing other toxic gases as well as carbon black and carbon dioxide by capturing toxic gases Simple and cheap way.

3. This invention of Vietnamese scientists and technology has really revolutionized the cooking technology of a large proportion of the Vietnamese population and billions of poor people around the world to help people. Daily low-carbon cooking is done at home, saving many times the cost of cooking gas without the expensive modern gas, cooking is not harmful, never fire and protect protect the living environment and fight global climate change and make a real revolution in cooking for all poor people in Vietnam as well as around the world.

4. Doing all of the above, the stove " Vietnam Magic Flame" has become a modern stove, cheap and convenient cooking tool and can completely replace all the honeycomb stoves and stoves with modern liquid gas at any place on the ground, at sea, in the high mountains, deep forests, arctic or polar regions, in deep seas, on boats of all kinds and so on. All the poor of the world.

5. In the future, fuels and stove " Vietnam Magic Flame " will be mass produced and people can buy in their place at a cheap price and never need to buy any street. a drop of liquefied gas!

6. Professor Tran Binh, the main author of this invention is very much looking forward to the Vietnamese scientists and technology as well as all over the world to try to study and cooperate research to improve the magic effect of the stove " Vietnam Magic Flame " To further spread to the world.

Professor Tran Binh is looking forward to the Vietnamese leaders taking a moment to approach this document in order to find a way to deploy the " Vietnam Magic Flame " to all provinces, cities and regions. have more waste to help the poor more!

Professor Tran Binh is very pleased to welcome the financial contributions and investments made by finance, banking, science and technology management agencies, humanitarian agencies and investment funds. foreign and overseas Vietnamese, environmental agencies to build more centers for production of fuels and stoves " Vietnam Magic Flame " to serve the people better.

Any contact with us would be done by the following Mail addresses:

Prof. Tran Binh : gstranbinh1937@gmail.com
Eng. Tran Trung Trung : saigonhoangthuong@gmail.com
Lawyer Ho Kim Thuong : ngonluathanvietnam@gmail.com
Eng. Nguyen Dinh Quy : dinhquykps@gmail.com



BỘ KHOA HỌC VÀ CÔNG NGHỆ
CỤC SỞ HỮU TRÍ TUỆ

CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT NAM
Độc lập - Tự do - Hạnh phúc

BẰNG ĐỘC QUYỀN SÁNG CHẾ

Số: 9688

Tên sáng chế: BẾP LÒ TẠO KHÍ ĐỐT DÙNG NHIÊN LIỆU SINH KHỐI DẠNG RỜI

Chủ Bằng độc quyền: 1. TRẦN BÌNH (VN)
71/12/15 Nguyễn Bắc, phường 3, quận Tân Bình, thành phố Hồ Chí Minh
2. (Danh sách kèm theo)

Tác giả: Trần Bình (VN), ALEXIS BELONIO (PH), Nguyễn Văn (VN), Phạm Phố (VN), Bùi Đình Hải (VN), Doan Thị Minh Nguyệt (VN)

Số đơn: 1-2010-00881

Ngày nộp đơn: 09.04.2010

Số điểm yêu cầu bảo hộ: 01

Số trang mô tả: 13

Cấp theo Quyết định số: 36540/QĐ-SHTT, ngày: 28.09.2011

Có hiệu lực từ ngày cấp đến hết 20 năm tính từ ngày nộp đơn.



KT. CỤC TRƯỞNG

PHÓ CỤC TRƯỞNG



Phạm Phi Anh



VN 1-0009688