**JEL-TOM** 

#### **WAVE BREAKER**

#### **DESCRIPTION OF THE INVENTION**

#### **FIELD OF THE INVENTION**

The present invention relates to wave breaking consisting of PES / PVC fabric, highly open mesh with openings, steel cable, steel profile, steel chains and concrete weights, classified according to International Classification (MKP), class 17

# **Technical problem**

Big damage is caused every year by sea waves around the world, one of the most complex problems. This problem is especially troublesome in coastal cities, ports, as well as ships in marinas, coastal cafes that flood every year and cause damage from sea waves. The problem is how to reduce the damage caused by storm sea waves. Guided by these issues, we have entered into the development of the 'Wave Breaker' item.

#### The state of the art

Today, there are sinks that are made of metal that are complicated to manufacture, heavy-duty requiring mechanization, tugs, trucks, long hauling times is days and set-ups and takes 50 people to complete the process and cannot be assembled in multiple locations in a single day rigid is metal.

# **Exposition of being an invention**

The primary object of the invention is to improve and facilitate existing metal sinks to be able to manipulate 5 people in one day at multiple different locations as a wave shield. It is a secondary object of the invention to provide better efficiency and flexibility of wave protection. The further goal is to provide better protection against waves, because our system is more flexible than metal sinks that are not suitable for wind but for flood protection. Our system has three functions:

#### a) Goals:

Primary

- 1) protects protection against marine flooding in coastal areas
- 2) protects coasts from sea erosion
- 3) The use of wave energy to generate electricity

Secondary

4) collects waste from sea with a wave breaker

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## b) Main activities:

#### 1. Basic research

- a) establishment of a system for monitoring indicators (wind speed, sea level, impact force and wave position, pollution monitoring, energy production)
- b) forecast models for monitoring wind-waves-sea currents
- c) modeling (sizing and testing the behavior of wave breakers )
- d) reception, conversion and transmission of electricity
- e) waste collector system with wave breaker
- f) integration, monitoring and management platforms (Internet of Things)

## Method of Application of the Invention

In this way, the invention provides a practical, durable and useful device that can be economically produced, and which includes substantial improvements over previously known devices. It will be apparent to those skilled in the art that numerous modifications and changes to the present invention could be made without leaving the scope and spirit of the invention

You see on youtube video wave breaker:

https://www.youtube.com/watch?v=cTYiIRqBc5k&t=44s

The present invention is innovative because of the flexibility and simplicity of the invention, because the materials for making the innovative product are environmentally friendly, quick product placement, do not need a lot of people ie divers, protects against shock waves, produces energy other than, protects ships, housing from devastating waves, is a worldwide problem and environmentally conscious product, collects bulky waste above and below the sea (bags, oil stains from ships and all kinds of waste) makes the coast cleaner and quieter for swimwear and protecting eco-cafes and cities and produces energy from natural sources from the sea (through our collectors moving under the sea and thus generating energy, which will allow the houses along the coast to have electricity and solar panels can be installed on the pipes, ie the wave breaker, to produce energy over the sun and to generate energy via the waves, means the product has four functions and therefore deserves a reward. Impact on the economy would have for my small country Croatia, which is rich in fish, clean sea, the sun producing wave breakers, thus hiring skilled workers in production, improving my country in GDP as well as the budget, strategic product of my country,

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exports to all countries that have the sea and thus reduce the catastrophes that always happen in countries in the world where there are strong winds that allow high winds and make people aware that the system must be an environmentally sound system and not concrete pillars which would improve the quality of a healthier life.