# Roller Shutters Inflatable Folding Mosquito Net Fenglan Wang<sup>1, a</sup>,Xingyang Jia<sup>2, b</sup>,Shuai Jiang <sup>3, c</sup>,Bo Zhang<sup>4, d</sup> Shenyang University, No.21, Wanghua South Street, Dadong District, Shenyang City, Liaoning Province, China <sup>a</sup>flwang1965@sina.com, <sup>b</sup>2009198901@163.com

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**Abstract.** Traditional nets made of soft rope support, the four corners fixed to the roof, don't have to put in the roof, the nets continue to cause people to space smaller, living space narrow is easy to make people depressed. It is not about the concept of healthy and happy life. In addition to, mosquitoes into the net during the day easily. For these shortcomings, the institution to solve these problems. A comprehensive innovation reform not only avoids the above drawbacks, but also this design are lightweight, simple in structure, easy to carry, installation, etc.

### 1. Introduction

New shutter inflatable bed nets are designed specifically for people life convenient and comfortable. At present, the institution style of mosquito is single. There are less innovation. It is not easy to hang. The location of mosquito net is not suitable for bed and the shortcoming of small active space. Some shortcomings has plagued the people such as not easy to install and put down. With life are becoming better and better at the same time if we have a safe good sleep, it is very good. People need to have a simple, convenient, safe and humane equipment to guarantee in the evening from mosquito bites especially, to make sure the heated summer have a good night's sleep every night.

If the shutter inflatable folding bed nets can be used for life, does not it contributed a lot to improve people's lives? On purpose of practical with people-oriented social, it is very important.

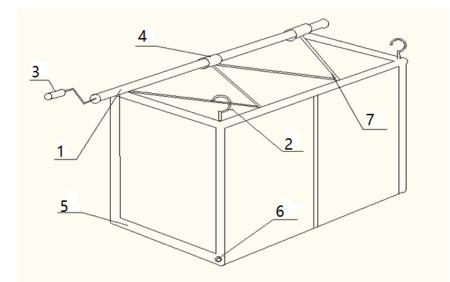
#### 2. The ideas of general design

Because of the curtain is not easy to find the direction of the door and on to match the bed position, so the new design using a cylindrical sponge stick, such nets can be hung in any position. To find the place is convenient. There are two inflatable small hook can maintain the balance of the mosquito net.

Using nets stent for portable inflatable, so the idea of using the folding, just like a balloon. It can put out the gas when is not to use, folding up, go to anywhere. And finishing nets don't need too large volume. It can be put into a backpack and carry them wherever you go. Spreading is also very easy.

For the space can be larger for people, it is designed two small ring. It can take advantage of the small ring of sliding on the rod to slide the nets to a side to give a person with a lot of room. You can roll up net by using rocker, if it is not enough. Truly nets take up minimal space standards.

#### Picture1 Roller Shutters Inflatable Folding Mosquito Net



In the picture: 1 - long cylindrical rod, 2 -pothook, 3 - rod, 4 - iron pipe, 5 - nets box, 6 - filling pores, 7 - inflatable stents

#### 3. The determination of design scheme and description

#### 3.1 The process of using mosquito nets before you go to sleep.

Put the sponge round 1 in proper place, rotary rocker 3 nets slow down, then to aerate mosquito nets at 6. Meanwhile mosquito nets 5 will expansion gradually. First filling a small part, to determine the direction of the position of the hook 2 preliminary and move the tube 4 to an appropriate position of cylindrical rod 1 (hook 2 to 5 disconnected), then aerate the hook2 and hang the hook to appropriate position. Then we aerate the mosquito until proper level. As picture.

## 3.2 The process of finishing nets in the morning.

After wake up, we will give out the gases of the mosquito net 5 from the hole 6, and taking off the hook 2, and put off the gas so as to avoid accidentally crush, after put mosquito net aside by tube 4 along the rod 1. It can make a space. It also can continue to pass a handle 3 roll up nets. In order to obtain a bigger space.

#### 4. Conclusions

(1)Through this design can achieve the function of mosquito nets folding. After folding bed nets spend very little space and easy to carry. It also can put into a backpack. Using or pack up are very convenient, It can decorate or pack up just a few steps. It is very convenient.

(2)Aeration way can quickly build nets stent, need not care about the front and back when the first use, also need not worry drop down quadrangle after use of the mosquito net to make body uncomfortable, because the inflatable frame can support nets.

(3)Through the rocker can roll up nets convenient, just a couple of shakes rocker can pack up nets, make sure it is convenient and quick from beginning to end

(4) Shutter inflatable folding bed nets are designed successfully realize some functions such as increasing active space, changing the face of the mosquito net, making people fall asleep more likely at night, preventing the mosquito noise affects sleep, and increase the activity space, powerful implement the people-oriented policy, ensuring the night comfortable life for people.

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