addition, after the use of electrical appliances, spring 1will hold up the automatic clamping mechanism. Clip is opened by the force of torsion spring (spring 2).And it plays an effect to power off. Finally the plug is locked tightly after being inserted into the socket. After the end of use, the plug bounces automatically. Figure 9 is a positive view of the automatic clamping device.Figure 10 is a side view.

4.4 The automatic bouncing creative socket start power after being clamped

The automatic bouncing creative socket use “automatic bouncing structure” (as shown in Figure 11) to take place of the copper-bolt electricity of the ordinary household outlet. Its “locking mechanism” can ensure that bolt is clamped tightly after being pressed. And automatic bouncing household energy-saving sockets are electrified in a particular position in its “locking device”. It ensures the bolt is energized after being fully clamped. This makes sockets more secure.

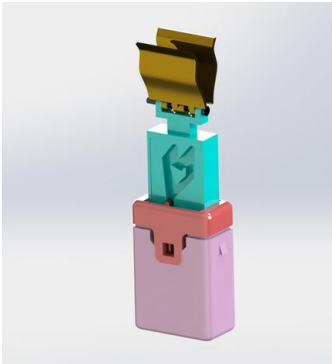

Figure 11. The structure of the automatic bouncing device

4.5 Automatic bouncing household sockets can avoid getting an electric shock

The appearance design of this socket can avoid electric shock. The appearance of this socket is design as a groove. When the plug insert into the socket, 1/3 of the plug is not insert into the groove of the socket. This will cause there is no place to catch when the plug is pulled out. But the way pulling out the plug of this socket is different from the traditional household socket. It’s only force on the back of the plug. This can avoid the danger of getting an electric shock.

5. CONCLUSIONS

The structural design of the household plug and socket in China is related to the safety of the users. Therefore, the design of the plug in the socket should be all aspects of the safety and convenience of use. In order to solve a few problems on the structure of socket, we combined with some developed countries on the design of socket and our idea, and we has created “automatic bouncing creative socket”. Its automatic bouncing structure solves the problem of difficultly pulling the plug and getting the electric shock easily on pulling the plug. Its shell is designed to ensure the safety of the use of sockets. We hope that this socket can be widely known through this paper, and it can improve the household socket to make everyone's life more convenient and safe.

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