

The 24th intermediate principle, it combines the object not easy to move and the other object. For example, a small escape device for family or company can be installed on the pedestal of outdoor air conditioner installation box on the basis of not adding lots of cost. The small and firm air conditioner installation pedestal can drive the escape work of one or two persons.

The 34th abandon and repair principle: New fire escape basket gives up the previous complex survival equipment. The new fire escape basket is composed of a box-type steel shell and the folding metal basket for people. Inside the shell are drum wheel, steel cable, wheel gear system, transmission motor and other major parts, and outside the shell is the operating mechanism which is installed at the bottom of steel shell. The new fire escape basket can take 4-5 persons to the ground steadily and safely from high buildings. Its functions are not second to general aerial ladder truck and the height is not limited^[8].

The 25th self-service principle, known as "High-altitude Soft Escape Slideway". The descending speed can be controlled by itself. This slideway is an auxiliary mode of high-altitude rescue by aerial ladder truck. The maximum advantage is that the escape speed is rapid and the user can independently finish the escape action^[10] (see Fig. 4).



Fig4: High-altitude Soft Escape Slideway

V. CONCLUSION

It analyzes the original high building fire escape device by application of TRIZ principle to discover the problems very well, so that the innovation and design is rational. Because of the theory, high building fire escape device becomes the general escape device that every person holds and can use, which increases the popularization of high building fire escape device. The precise escape device reaches the purposes^[9] of high efficiency and high escape rate while saving resources. Of course, with the progress of science and technology and continuous perfection of TRIZ theory, high building fire escape device has huge development space in the aspects

of design material, functions, design style and design cost. The future high building fire escape device will be more convenient, more comfortable, more durable and more amiable.

REFERENCES

- [1] Zhao Xinjun. Technical Innovation Theory (TRIZ) and Application. Chemical Industry Press. 2004, 5.
- [2] Sun Bochun. Prevention of High Building Fire. Work Research [J]
- [3] Kalevi Rantanen, Ellen Domb. Research on the Method of the Mechanical Innovation Based on TRIZ and Bionic Engineering [M]. Mechanic industry Press. 2010-11-1
- [4] Liu Hua. Product Concept Design Method and Application Based on TRIZ Theory [D]. Nanjing: Nanjing University of Science and Technology. 2005
- [5] Chai Yanan. Based on the theoretical and engineering bionics TRIZ mechanical creative methods [J]. Gi Lin University. 2009
- [6] Chen Guang. TRIZ Research and Promotion in Chinese Mainland: Status Quo and Problem. Academic Observation [J]. February 2009
- [7] Qin Libing, Cheng Jun, and Han Zhensen. Debugging Technology of High Building Fire Automatic Alarming System. Building Safety [J]. 2001. The Seventh Version
- [8] Hua Yunong. High Building Fire Escape Basket. Zhejiang Firefighting [J]
- [9] Yang Qingliang. Invention is born: so for all the contact TRIZ theory [M]. Mechanic industry Press. 2006-7-1
- [10] Picture Source: <http://www.jhxxw.gov.cn/article/7/11/2009/2009032514354.htm>