

APPLICATION OF GRAPHIC EXPRESSION IN THE DESIGN OF "NEW ROLLING SYSTEM FOR HORIZONTAL BLINDS" APPLIED TO DOORS

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INTRODUCTION

The main objective of this research is to show the development of a new horizontal blind and to emphasize the interaction between:

- The geometry and
- The different area of science

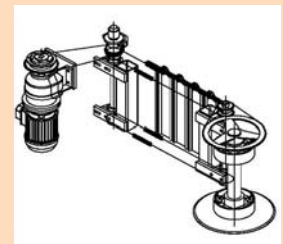
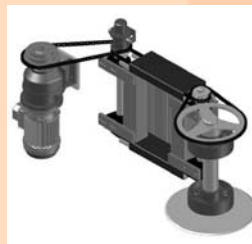
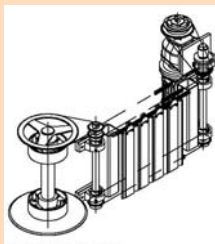
This project emphasised the importance of geometry in the design of prototypes for specific applications.

In this study, geometry, physics and mechanics were intertwined, which culminated in a final design.

We define the geometric design and the technology characteristics that allow its manufacture

Adapted design and Idea Analysis

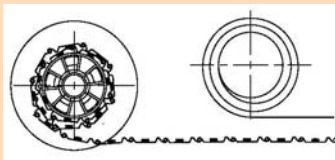
After several initial approaches, it was concluded that the best way to minimise the vertical space was to first set a minimum constraint for the distance along the top of the ceiling. After minimising the vertical space and analysing different systems, we decided to adopt a design with two guided trails on the floor and the ceiling



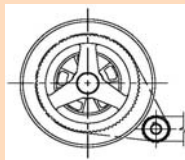
General Scheme. External and internal view

Searching for design solutions

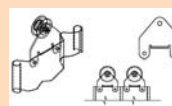
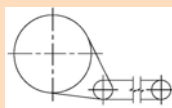
1. Platform for the horizontal rolling of the blinds, which consists of an Archimedes spiral originating from the inner diameter.
2. Design of the drag head with the transmission chain between the motor axis and the pulling axis.
3. The wall pulling mechanism support was designed such that the rotating mechanism occupies a minimal space
4. Design of the support wheel
5. . Design of a rigid lever
6. Design of the support wheel
- 6.. support template
- 7.Design of the bracket, which disengages the motor system, consisting of a hollow, octagonal prism



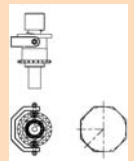
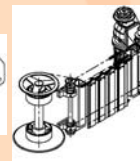
Platform for the horizontal rolling



drag head



support template design



Bracket

◆ CONCLUSION

In this study, a mechanical device was developed through the synergy created by a work team, where creativity, innovation and knowledge of materials, power tools and available technologies were taken into account.

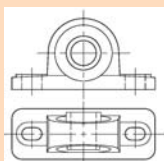
This project development highlighted the importance of sharing knowledge between the various branches of mechanical engineering.

In addition to consulting with companies in the particular sector to cultivate solution ideas, innovation should be emphasised in product design (production engineering).

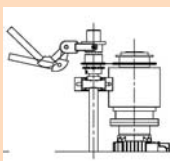
Therefore, we must insist that college engineering students know the basic concepts, particularly the underlying ideas behind the concepts so that their capacity for analysis and synthesis can be developed.

◆ ACKNOWLEDGEMENT

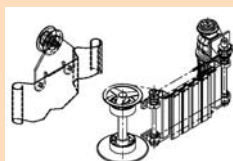
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Support



Clutch lever



Support wheel