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## DESIGN ON WALL MACHINE

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**Abstract:** The Main aim of project is to provide a accurate designs on wall. This machine can be use in during various programs celebration in office and schools etc. This machine can solve the problem of accuracy and time consumption at less economy in designs. This can also be useful at different events in hotels and resorts for making beautiful designs. It is very useful to make designs at economically.

### I. INTRODUCTION

A **design** is a plan or specification for the construction of an object or system or for the implementation of an activity or process,

Nowadays, everywhere people whether they are in developing or develop country people wants a beautiful design a resorts and hotels to increase the beauty and as well as increase earning.

The events in offices and school class rooms for small children is one of the important place where designs plays a important role like improve productivity and gives a motivations to complete work in office.

And another important place is in school class rooms where small children's mind can understand alphabetical order and number orders and poems easily due to designation on wall in school.

The boundaries between art and design are blurred, largely due to a range of applications both for the term 'Art' and the term 'design'. Applied arts can include fashion design, and the decorative arts which traditionally includes craft objects.

### II. WORKING OF PROJECT:-

In today world the designing is an important thing which provides a pleasant mood and for that the designer is also one of the important who produces that designs in all areas like Schools, Colleges, offices etc ,for the reason of increasing accuracy and reducing the time which is require to draw designs in wall for that purpose we have designed " **DESIGN ON WALL MACHINE**".

This machine can solve the problem of less accuracy and more time taken to design in wall. This Machine converts the electrical signals to mechanical work and produces good accuracy drawing and decrease time taken for drawing the designs on wall. This machine can be used in resorts, schools, and new start ups etc.

First of all proper G-CODE command is supply to arduino through cable and then CNC slider is attached above arduino and all stepper and servo motors get command provides rotation and servo motor moves according to motors and designs are make in wall with more accuracy and less time consumption.

### III. FIVE REASONS FOR SELECTING PROJECT:

- This system is very easy and one can easily operate
- This mechanism is more effective as compared to other mechanism
- In this mechanism you can change a tool at any time

### IV. CONSTRUCTION OF PROJECT:-

#### 1. SERVO MOTOR:-

Servo provides the micro motion to pen or marker which is used to draw its only work is to take back pen or marker when drawing is not running.

#### 2. STEPPER MOTORS:-

Stepper motors are used to provide rotational moment to v thread lead screws through electrical commands from pc.

#### 3. PILLOW BLOCK BEARING:-

Pillow block bearing is used in machine to give proper support to v-thread lead screw by which proper and sufficient rotation easily done.

#### 4. POWER SUPPLY:-

Power supply is used to provide and supply 12V require power to machine and important components of machines to work properly without any restrictions.

#### 5. ARDUINO UNO:-

Arduino Uno is used to get the commands from the pc and that command transfer to all steppers and servo motor for making the design on wall and it is also “heart” of machine.

### V. DETAILS OF INSPECTION CARRIED OUT:-

#### 1. Inspection and Testing of Servo Clamp:

INSPECTION	REMARK
Testing of Spring	No Fault Found
Adjustable Holder	No Fault Found
Testing of Servo Body	Fault Found ( Big Length )

Table No.1:- Inspection and Testing of Servo Clamp

#### 2. Inspection and Testing of V-thread Rod:-

INSPECTION	REMARK
Testing of V-Thread Rod	Fault Found ( More Diameter)
Stepper Motor	No Fault Found
Testing Servo motor	No Fault Found

TABLE NO.2:- Inspection and Testing of V-Thread Rod

### 3. Inspection and Testing of Arduino Uno:-

INSPECTION	REMARK
Testing of Arduino Uno	Fault Found ( Not Working )
Circuit Box	No Fault Found
Testing of Power Supply	No Fault Found

TABLE NO.3 :- Inspection and Testing of Arduino Uno

#### VI. ADVANTAGES:-

1. Provide good accuracy on wall.
2. Less time consumption for designing as compare designer man.
3. Easy to use and operate.
4. It requires less space for designing.
5. It is compact and smooth running operation.

#### VII. LIMITATIONS:-

1. If designing require area is more than large machine have manufacture.
2. If Arduino orientated circuit is used then replacement cycle may be more as compare to plc circuits.

#### VIII. APPLICATIONS:-

1. Engineering Prototype.
2. Can be used in marriage ceremony.
3. New product design and development
4. In schools, offices and resorts.
5. In Marriage ceremony for mahendi designing on hand.
6. In 3D printing.
7. Power and time consumption decrease.

#### IX .REFERENCES:

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2. PLASTERING MACHINE BY ANKUSH N. ASKAR
3. AUTOMATIC WALL PLASTERING MACHINE BY ARUNKUMAR BIRADAR

**REFERENCES LINK:**

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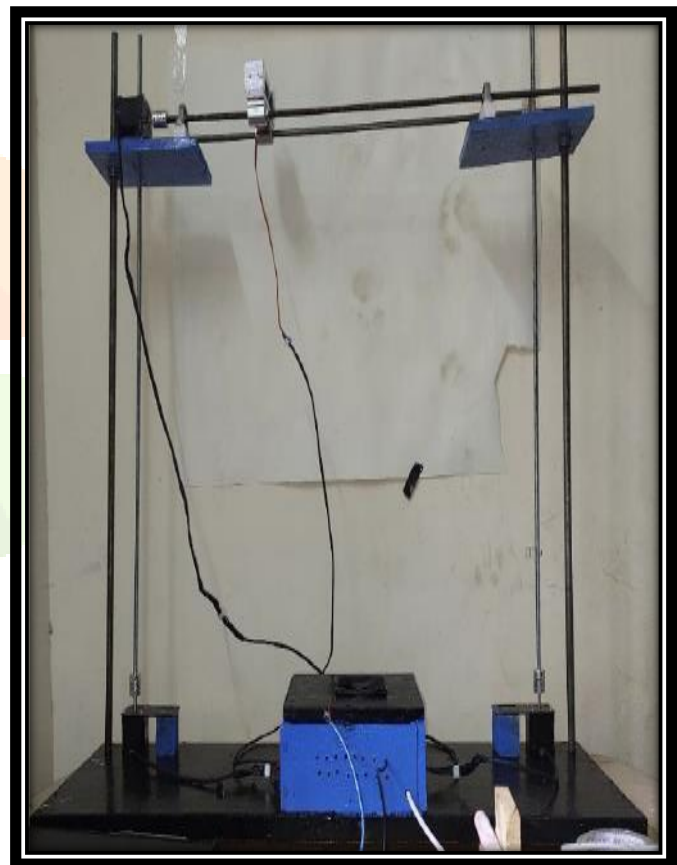
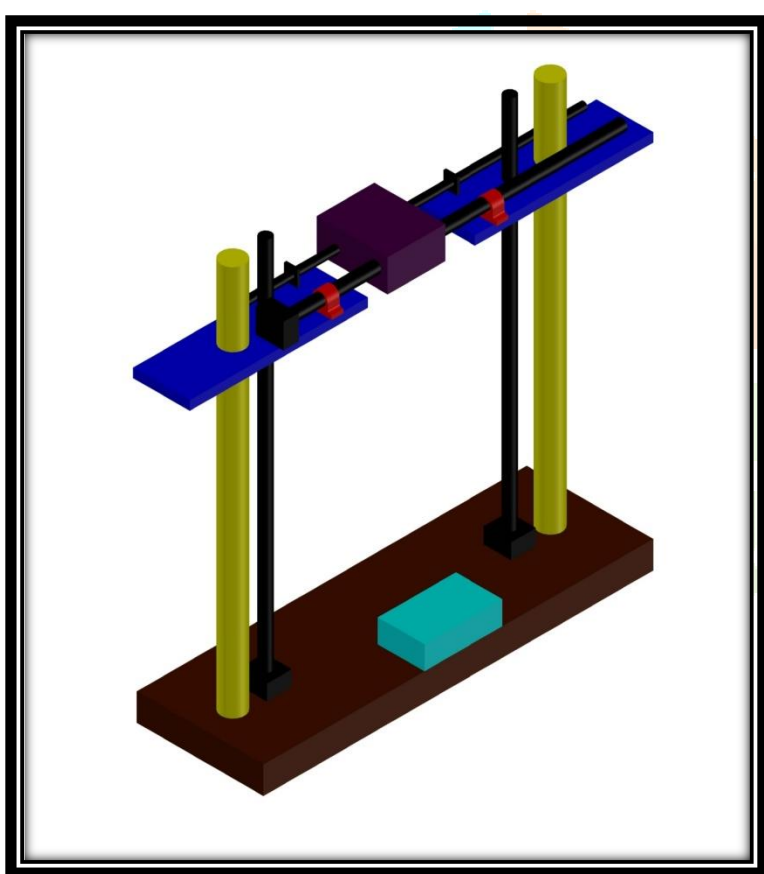
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**X. ASSEMBLY AND DISASSEMBLY OF PARTS: - IMAGE OF PROJECT MODEL**

## XI. DISASSEMBLY OF PARTS:-

