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TWO SIDED HAND PRUNING SAW

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Abstract

The issue is about the about manpower a gardener requires to cut a branch of the tree, and on a daily basis they do a lot of amount of work in the heat of fun . A regular hand pruning saw is difficult to handle it requires skills , manpower and knowledge to cut the branch. Our team went to survey to a nearby village near our college where the gardeners were hired by for pruning trees to a particular shape so that they look attractive. They discussed out the problems such as time requirement, Hard work, , particular precautions before cutting. We searched in internet about the existing product which could deal with their particular problems. Later , our team had a discussion and came up with an idea that could deal with their related problems. The proposed solutions consists of two hand pruning saw and two rod which is attached to one saw and the other saw is free to move in a one direction and a spring between them which in tension tends to move the saw towards each other which in turn is beneficial since a force had to be applied. This solution is very effective which can be purchased under 1000/-

1. INTRODUCTION

Gardeners plays an important role in maintaining beautiful gardens around the globe. They are hired in places such as amusement parts, historical places, religious places, schools, Universities, they are also hired by government to shape the trees which are planted near the roads, army centers, courts, etc. The branches of these trees are not easy to cut though it seems to be easy. They had to make various calculations especially if the trees are planted for vegetation purpose and also they had to put much effort and time in doing so. We went through with needs and requirement of these gardeners by visiting a community near our college and came up with idea of making two sided hand pruning saw.

2. RELATED WORK

Pruning is at the heart of arboriculture, one of the most important services arborists provide. To paraphrase AlexShigo (1989), pruning can be one of the best things an

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arborist can do for a tree and one of the worse things an arborist can do to a tree. Pruning impacts both tree health and structure. It is practiced worldwide. In 2007, the International Society of Arboriculture (ISA) contracted Hortscience, Inc. to prepare a literature review on the topic of pruning. The focus of the review was the research literature. The emphasis was on arboriculture but the review could reference forestry and pomology literature as appropriate.In developing the review, the authors focused on peer-reviewed sources, particularly scientific journals. The process was initiated by compiling references from standard industry references such as Gilman's Illustrated Guide to Pruning (2nd edition, 2002), and Arboriculture (Harris et al. 2004). The authors also relied on O'Hara's review of the forestry literature dealing with pruning and wounding (2007). The online archive of the Journal of Arboriculture and Arboriculture & Urban Forestry were searched for titles containing the word "pruning." There were 42 citations, some of which appeared prior to 1990—a period when articles in the Journal of Arboriculture were not necessarily research based. Major industry standards used in the U.S. (ANSI 2008) and Europe (British Standards Institute 1989; ZTV-Baumpflege 2001; European Arboricultural Council 2008) were then reviewed as well as their supporting publications (Gilman and Lilly 2002; Kempter 2004; Lonsdale 2008). ISA specifically requested an effort to access literature from non-English sources. Literature from outside North America was queried in several ways. First, two English-language journals published in Europe, the Arboricultural Journal (Arboricultural Association, UK) and Urban Forestry and Urban Greening (Springer) were reviewed. This approach yielded good results with Schwarzeetal. (2007) and Dujeseifken (2002) as examples. Second, links to non-English publications were searched. Finally, a draft of the literature review was sent to scientists in Germany, Denmark, Italy, and France for comment.

3. IMPLEMENTATION

As we have gone with the need statement, we gone through a literature review so that we can know what exactly our prototype must contain, what kind of updates it should have. While going through this process we came across constraints like:

1. it should be easy accsess.
2. It should be portable.
3. It should have an adjustable distance from where hand should be shown.
4. Easily used by elders.
5. .It should be shock proof.

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On behalf of community visit, we have visited a village near to our college. There we have identified many problems like sanitation problems, mosquitoes, security problems , no proper streetlights, problem faced by the people while fixing the lights etc., Out of all these problems we have decided and chose to make a two sided hand pruning saw.

Cutting a single branch of tree takes a lot of effort and time for the gardener and has to consider many points while making a cut.

So, we have designed a project that is user friendly, that can be used with a simple mechanism.

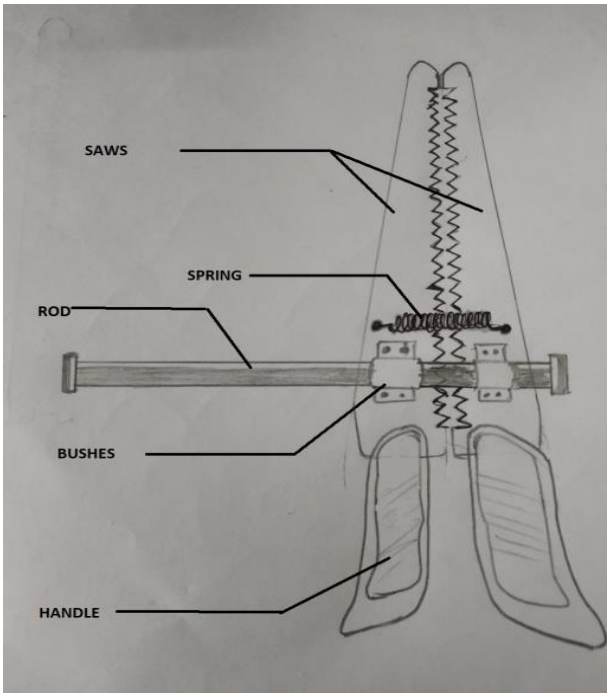
1. The saw must be easily used by everyone.
2. The cost should be economical. .
3. If any problem arises it should be easily repaired.
4. doesn't need to consider many points while making a cut

Our problem is to design a saw that can be used simply without much effort(that of normal saw) and can be cut without much calculations

At the first we have to separate the saws from each other and place them between the branch we want to cut after which remove the trigger (which was separately two saws from each other).The saws comes towards each other because there is a spring attached between them .Now, both the saws are holding the branch hardly and at a fixed place .Now we just need to move if forcefully forth and less forcefully back

4. EXPERIMENTAL RESULTS

Our design includes very simple mechanism. The design of the prototype is as shown in the next page



The following design consists of two hand pruning saw and two rod which is attached to one saw and the other saw is free to move in a one direction and a spring between them which in tension tends to move the saw towards each other which in turn is beneficial since a force had to be applied.

5. CONCLUSION

User friendly: The user will finds it easy to cut a branch both horizontally and vertically and wouldn't find any improper cuts on branch. **Replaceable:** If any saw breaks it can be replaced with a new one instead of buying the whole set.**Cost-effective:** The two sided hand pruning saw is available under 1000/-Rs and satisfy our competetors. **Convenient:** It allows the user to conveniently cut the branch without more effort Our tool reflects both mechanism as well as sophistication with flaunt design and aims to reduce man effort

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