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THE POD STRIPPER

P.F. Robinson  
and  
R.E. Pierre

INTER-AMERICAN INSTITUTE OF AGRICULTURAL SCIENCES - OAS

NATIONAL LEGUME AND CASSAVA PROGRAMME

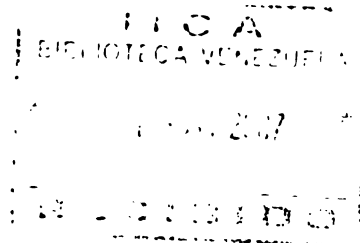
SIMON BOLIVAR FUND

GUYANA

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## INTRODUCTION

Food production is of vital importance in developing countries whether it be on large-scale fully mechanised farms or small units operated on a family basis. With small family farms, production depends on the amount of manual effort a farmer makes during the day. Output of the small farmer can be considerably increased and farming operations made less fatiguing by the introduction of simple, low cost equipment, and every effort should be made to provide the farmer with such equipment.

This publication describes one such piece of equipment - The POD STRIPPER - which is capable of greatly increasing the normal output per man compared to hand picking of mature bean pods prior to threshing. The Pod Stripper was developed specifically to assist the small farmer in the harvesting of cowpea (blackeye) but it has been shown to be quite suitable for stripping peanuts and beans. It is very simple in design and can be easily constructed locally at very little cost.

## DESCRIPTION

The POD STRIPPER is essentially a wooden hopper with a metal comb at each end. An overall view is presented in Fig.1. The sides are sufficiently deep to accommodate the heads of two or three plants and to prevent spillage of the pods. The bottom of the hopper slopes from either end towards the middle with a space large enough to allow the free flow of pods into a collecting chamber. Four pegs at the base permit the attachment of a bag which serves as a receptacle for the pods. Detailed dimensions are given in Fig. 2 and 3.

The metal comb consists of a metal plate 8.25" x 3" x 0.25" (21 x 7.5 x 0.4 cm) with holes drilled along the centre line. The holes should be large enough to accommodate 6" (15 cm.) nails (gauge No, 5) which are secured into position by welding the heads onto the metal plate. Six screw holes drilled along the edges of the plate enable it to be securely fastened into position.

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The POD STRIPPER is mounted on a simple wooden frame with projections at the front and rear to facilitate carrying as shown in Fig. 4. This frame should be of a comfortable height to reduce fatigue in the stripping operation and should be sufficiently light to facilitate transportation in the field. A height of 2.5 feet (76 cm) has been found to be suitable. The frame can be enclosed to serve as a receptacle for the pods instead of bags but this will increase its weight.

#### OPERATING PROCEDURE:

- Pull the whole cowpea plant out of the ground.
- Hold two or three plants together by their bases in the right hand and press the tops of the plants bearing the pods onto the comb with the left hand. Use of a heavy glove on the left hand facilitates the stripping operation and protects the operator's hand.
- Pull the plants firmly through the comb.

The action of pulling the plants through the comb results in the removal of pods which then fall into the collecting receptacle. The following should be noted:-

- At least 90% of the pods need to be mature at the time of harvest if maximum yields are to be obtained.
- Two persons, one on either side, can use the pod stripper at the same time.
- The carrying frame can be made sufficiently large to accommodate two Pod Strippers thus permitting four persons to be involved in the stripping operation.

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures transparency and allows for easy verification of the data.

Additionally, it is noted that the records should be kept in a secure and accessible format. Regular backups are recommended to prevent data loss in the event of a system failure or disaster.

The second section focuses on the process of reconciling accounts. It describes how to compare the internal records with the bank statements to identify any discrepancies. This step is crucial for ensuring the accuracy of the financial statements.

Any differences found should be investigated immediately to determine the cause. Common reasons include timing differences, bank errors, or overlooked transactions. Once the cause is identified, the records should be corrected accordingly.

The third part of the document addresses the preparation of financial statements. It outlines the steps for calculating the net income, assets, and liabilities. These statements provide a clear overview of the organization's financial health at a specific point in time.

It is stressed that these statements should be prepared on a regular basis, typically at the end of each month or quarter. This allows for timely identification of trends and potential issues.

Finally, the document concludes with a summary of the key points discussed. It reiterates the importance of accuracy, transparency, and regular review in financial management.

By following these guidelines, organizations can ensure that their financial records are reliable and that their financial statements accurately reflect their performance.

**CONSTRUCTION COSTS**

<b>Materials &amp; Inputs</b>	<b>Cost</b>
Two pieces Hardwood (30" x 6" x 0.75")	G\$ 3.00
Two pieces Hardwood (12" x 8.5" x 0.75")	2.00
36 x 6" Nails	2.50
24 Wood Screws	2.50
Charge for constructing Metal Combs	10.00
<b>Total</b>	<b>G\$20.00</b>

**OPERATING EFFICIENCY**

Hand Harvesting Rate - 31 lb. dry pods/Person/Day (5 hr.)

Using Pod Stripper - Three persons ( Two stripping and one gathering plants) harvested 54 lb. dry pods/hr. equivalent to 270 lb./day (5 hr.) or 90 lb. dry pods/person/day (5 hr.)

Use of the POD STRIPPER has resulted in a three-fold increase in output per man. The initial capital expenditure for the equipment is G\$20.00 approximately and with proper care it can last for a very long time. Maintenance costs are virtually nil.

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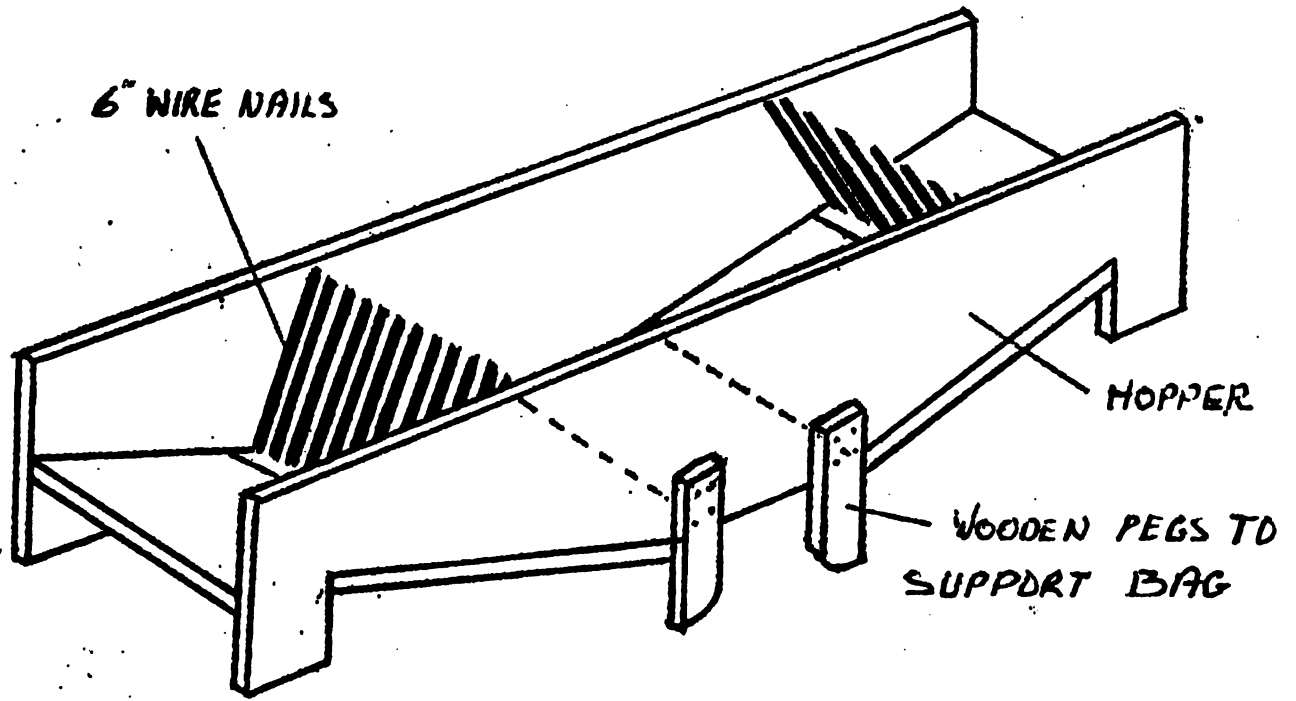
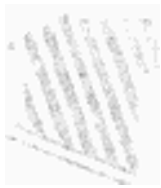
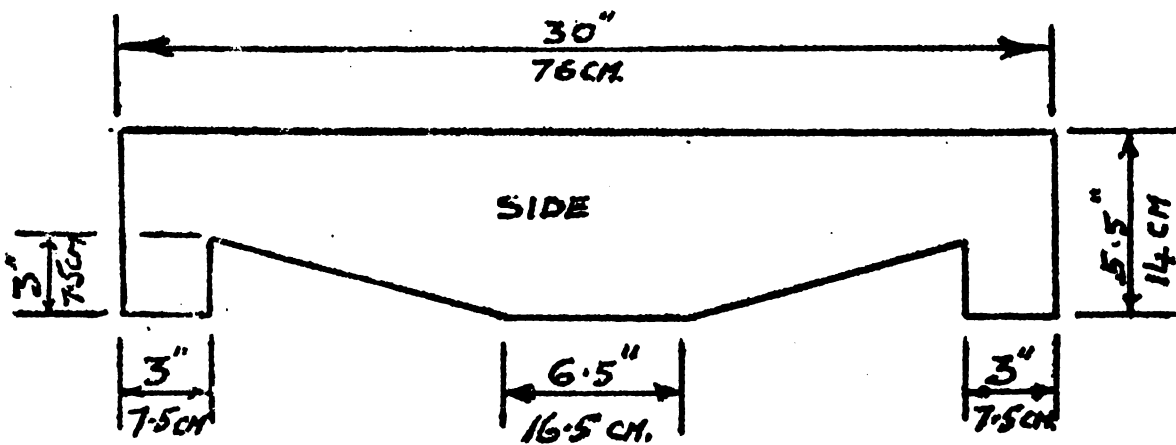
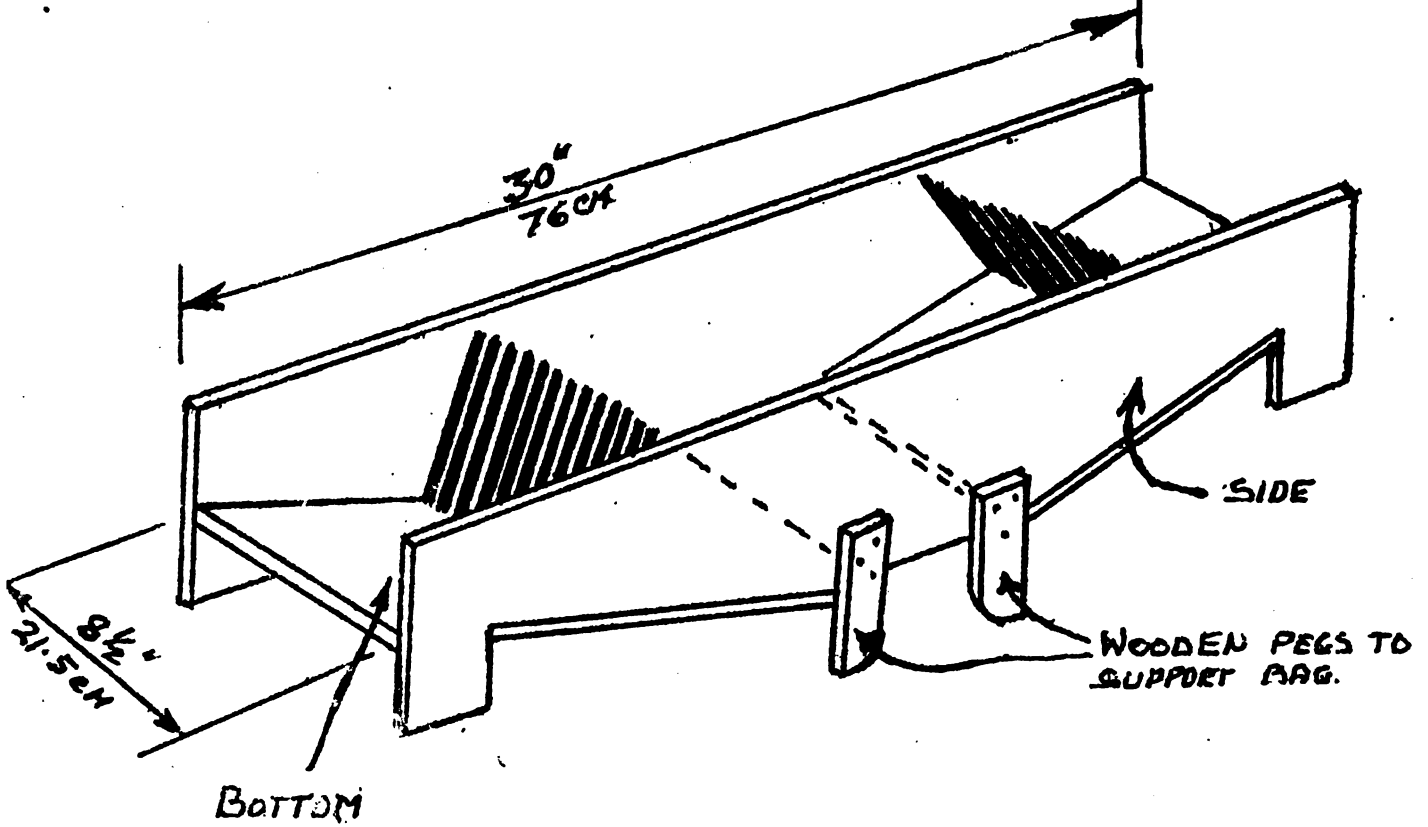
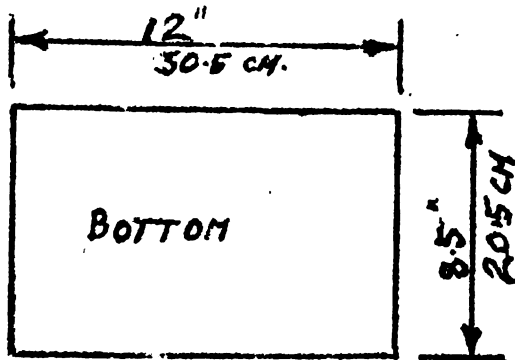


FIG. 1 OVERALL VIEW OF POD STRIPPER





TWO SIDES MADE FROM HARDWOOD  $\frac{3}{4}$ " (2cm) THICK

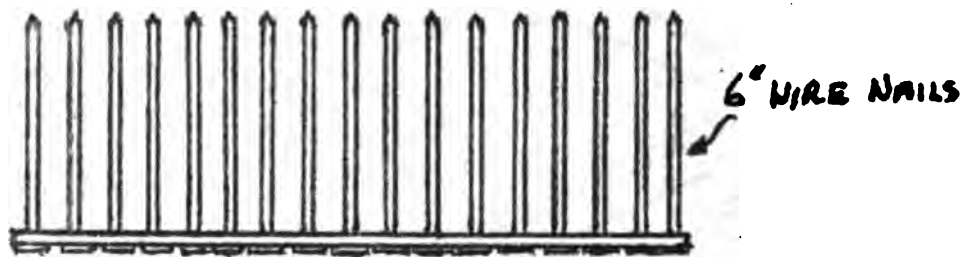
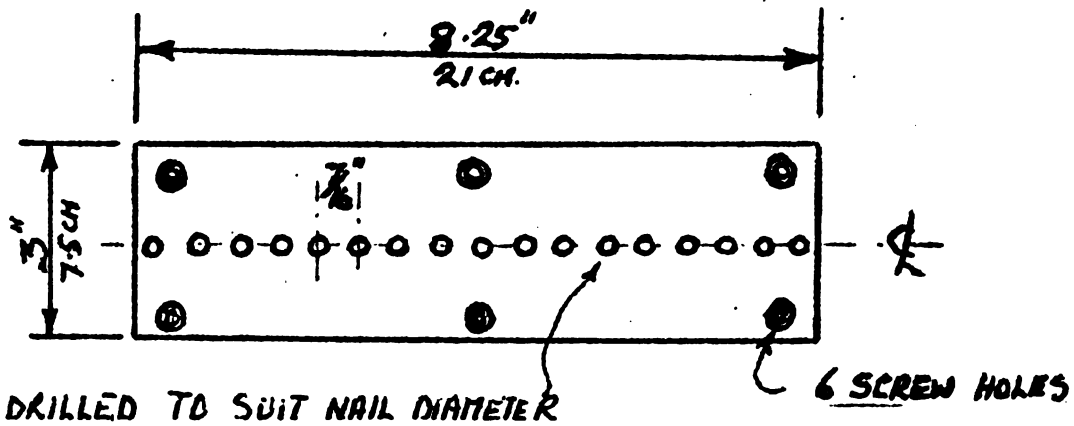


BOTTOM IN TWO PIECES MADE FROM HARDWOOD  $\frac{3}{4}$ " (2cm) THICK

FIG. 2 ASSEMBLY DETAILS FOR POD STRIPPER







METAL COMB MADE FROM M.S. PLATE 1/8" THICK.

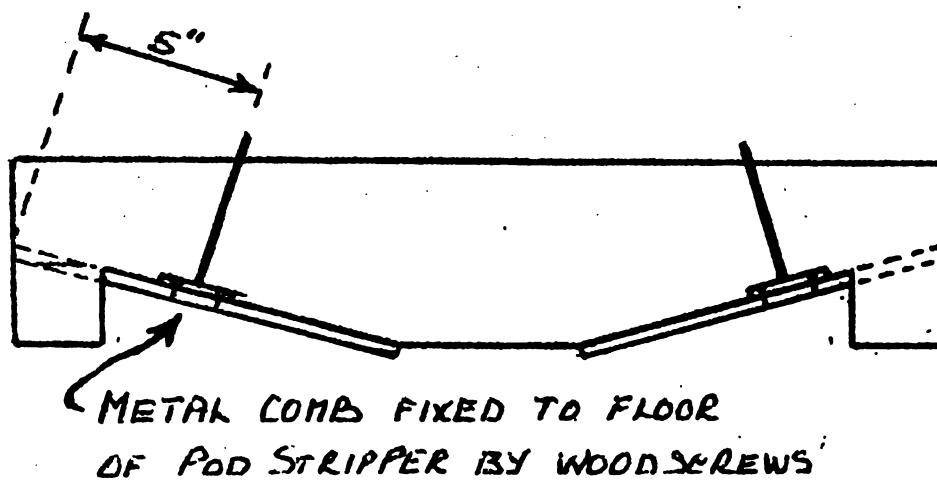
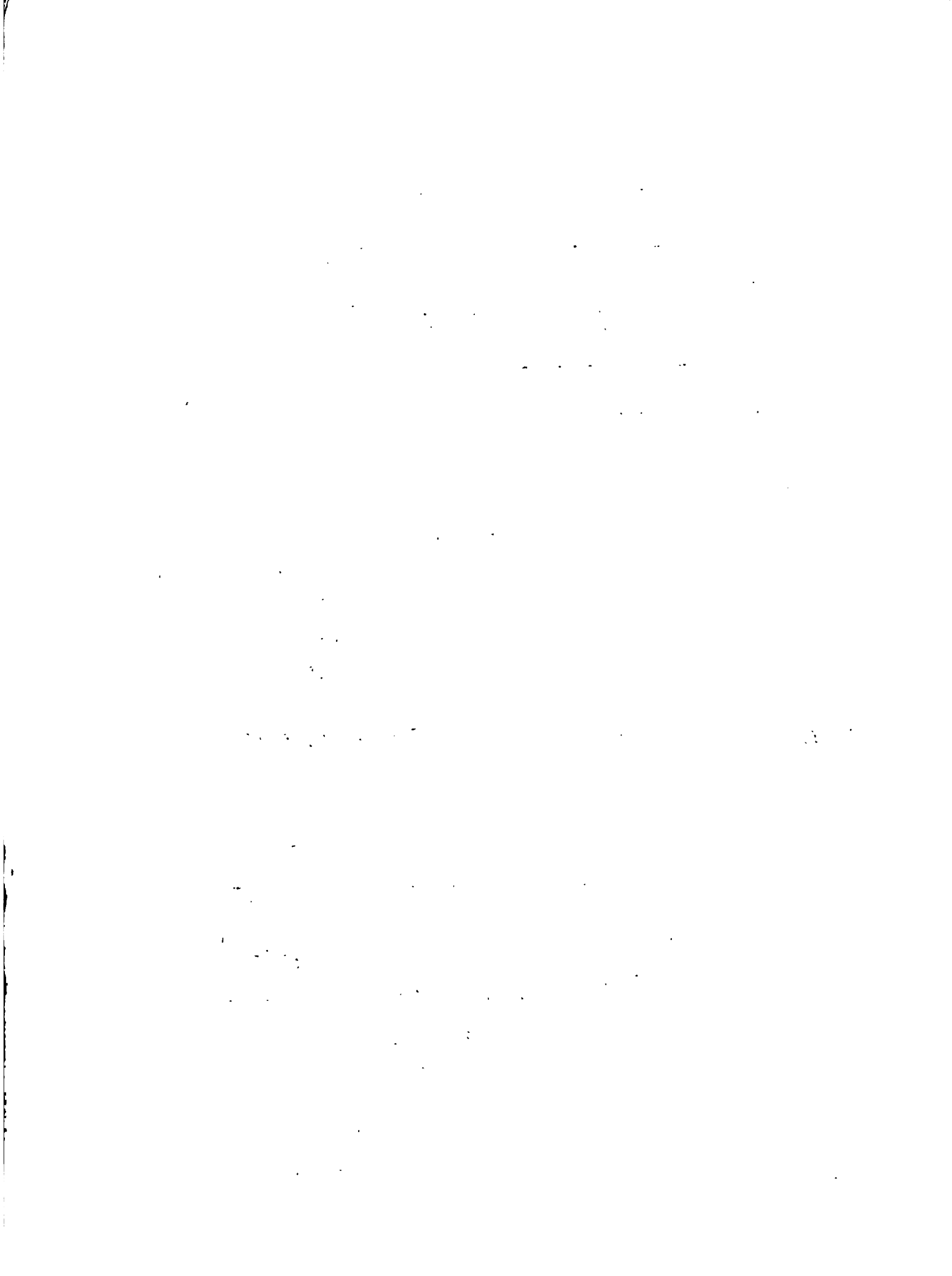


FIG. 3. ASSEMBLY DETAILS OF METAL COMB



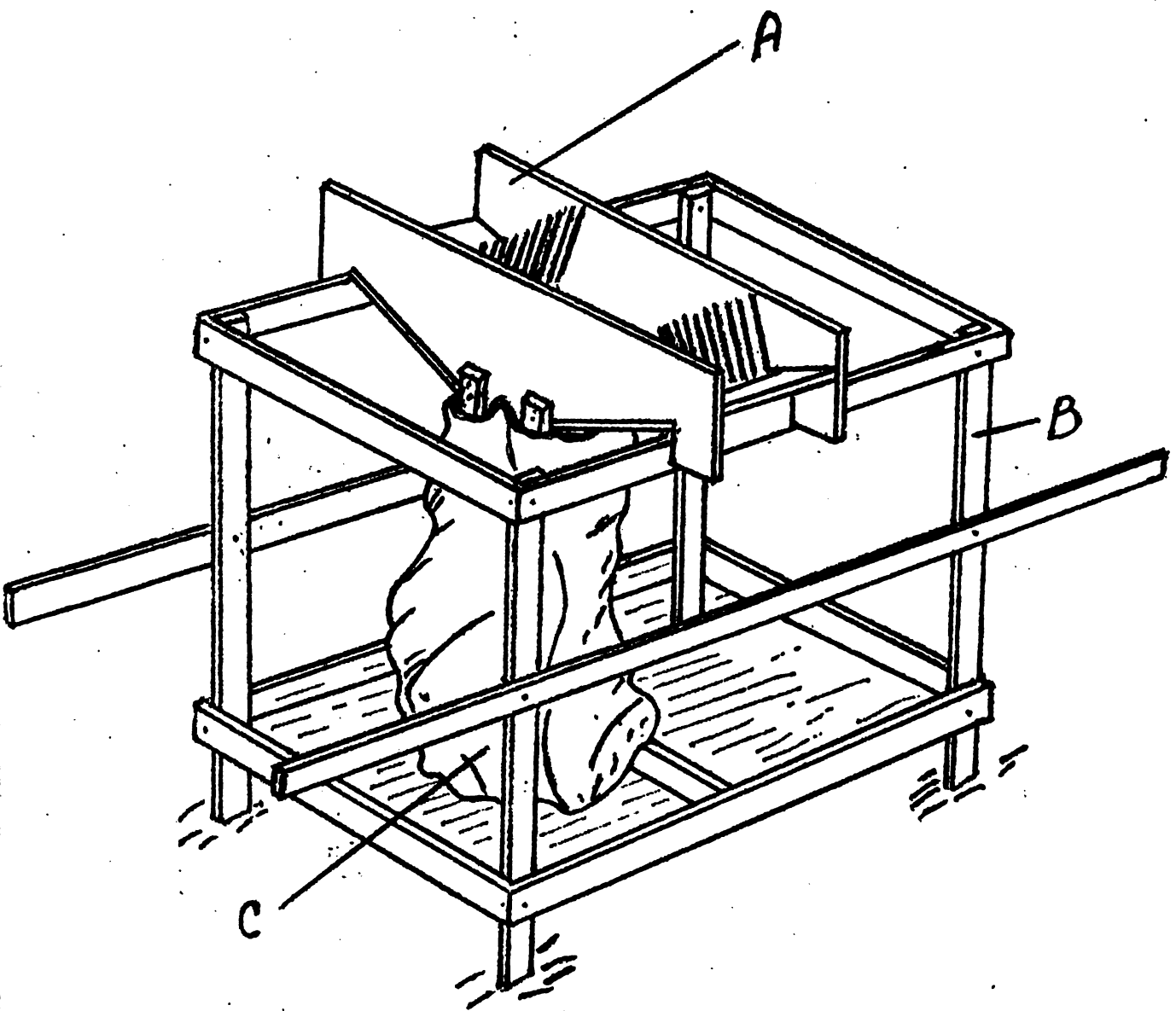
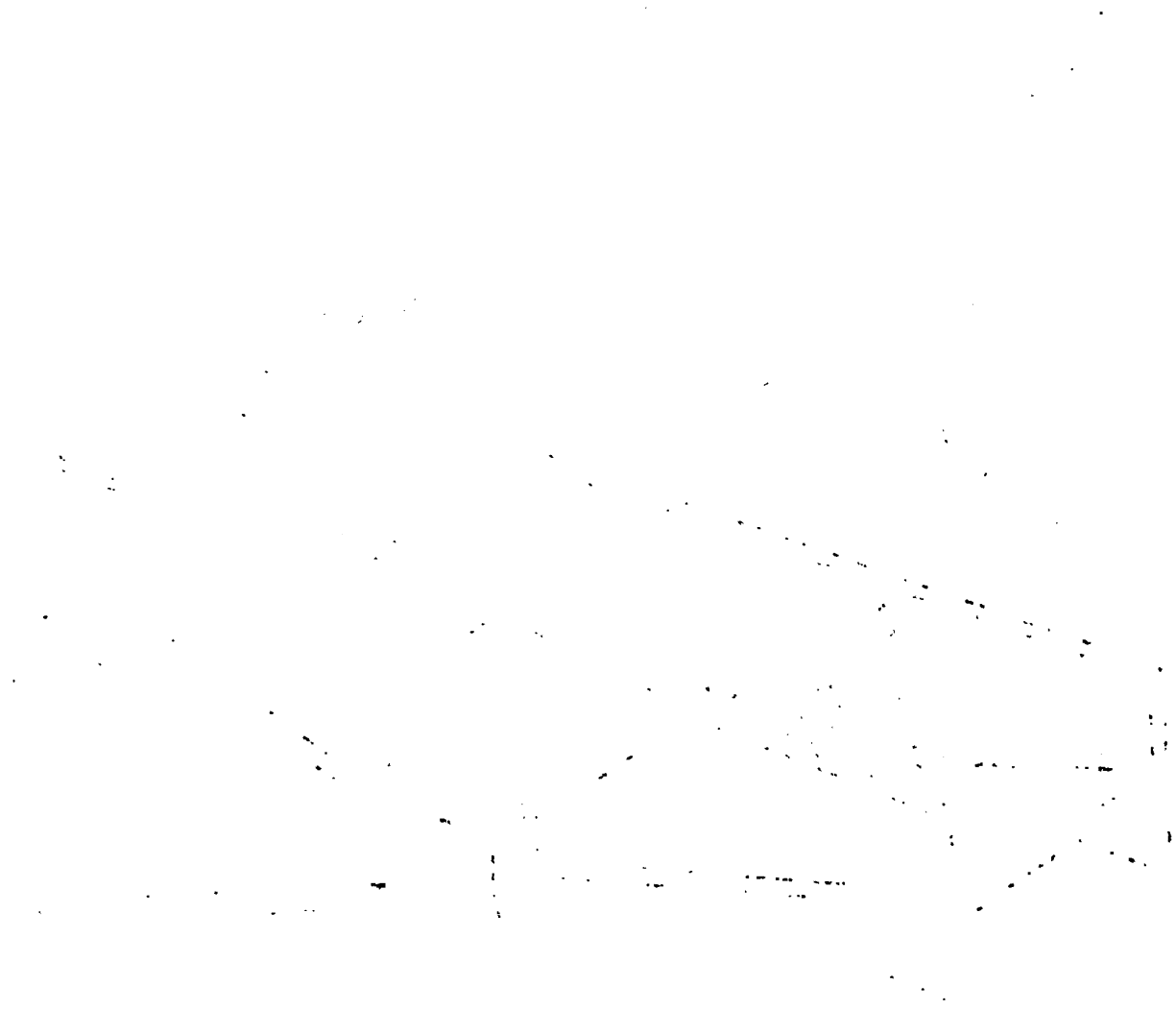
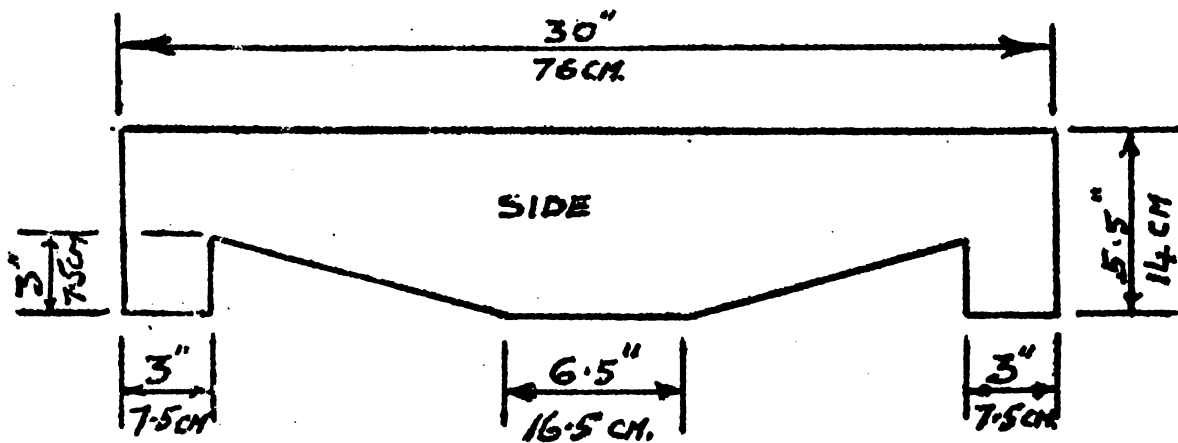
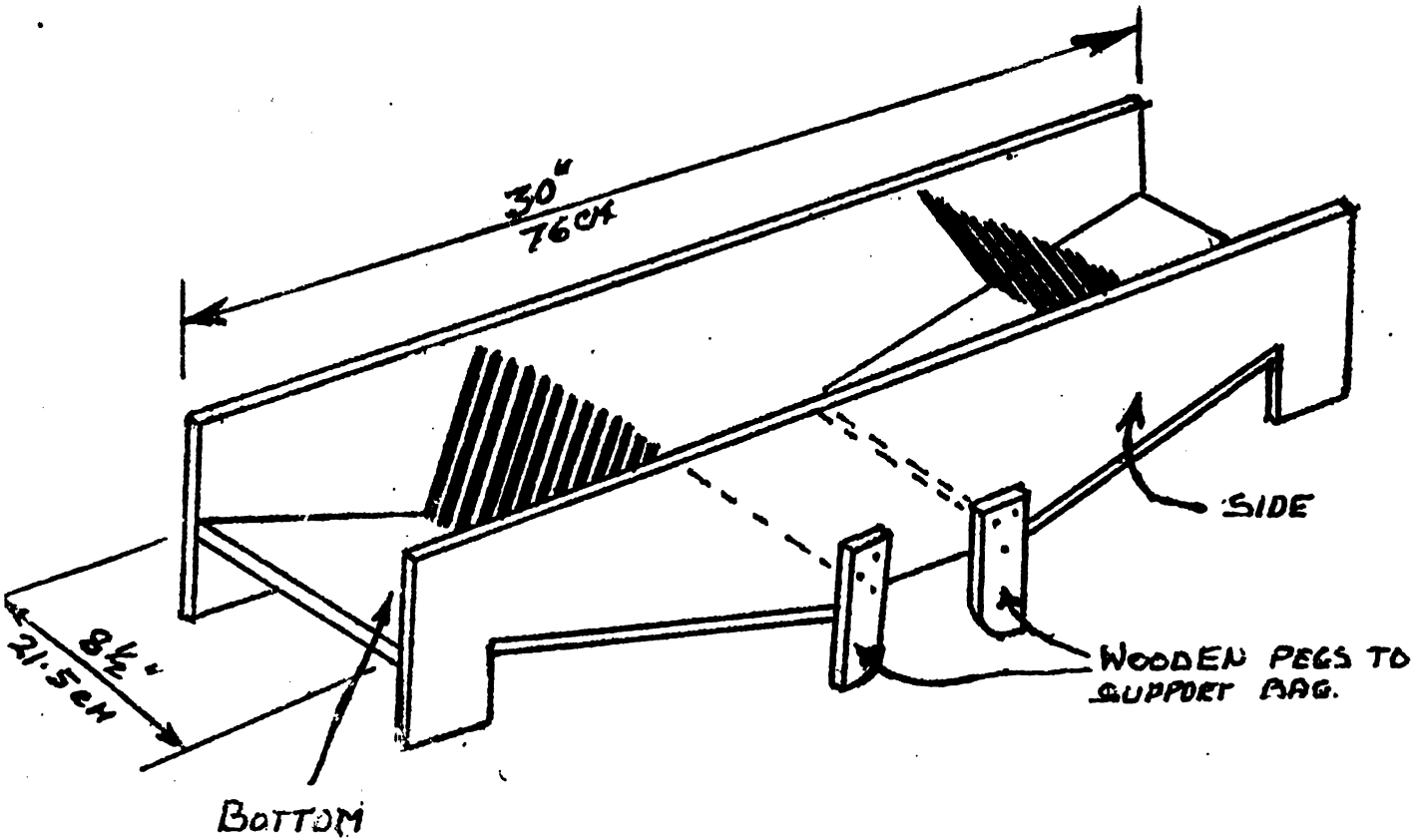


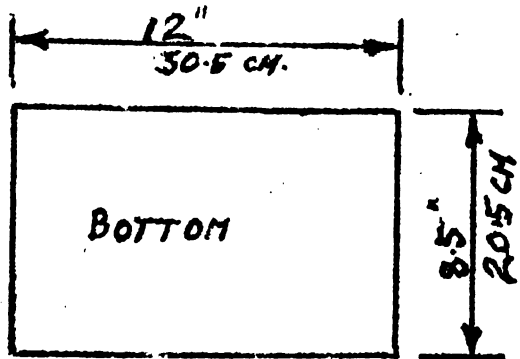
FIG 4 VIEW OF POD STRIPPER (A)  
MOUNTED ON WOODEN FRAME (B)  
WITH BAG (C)



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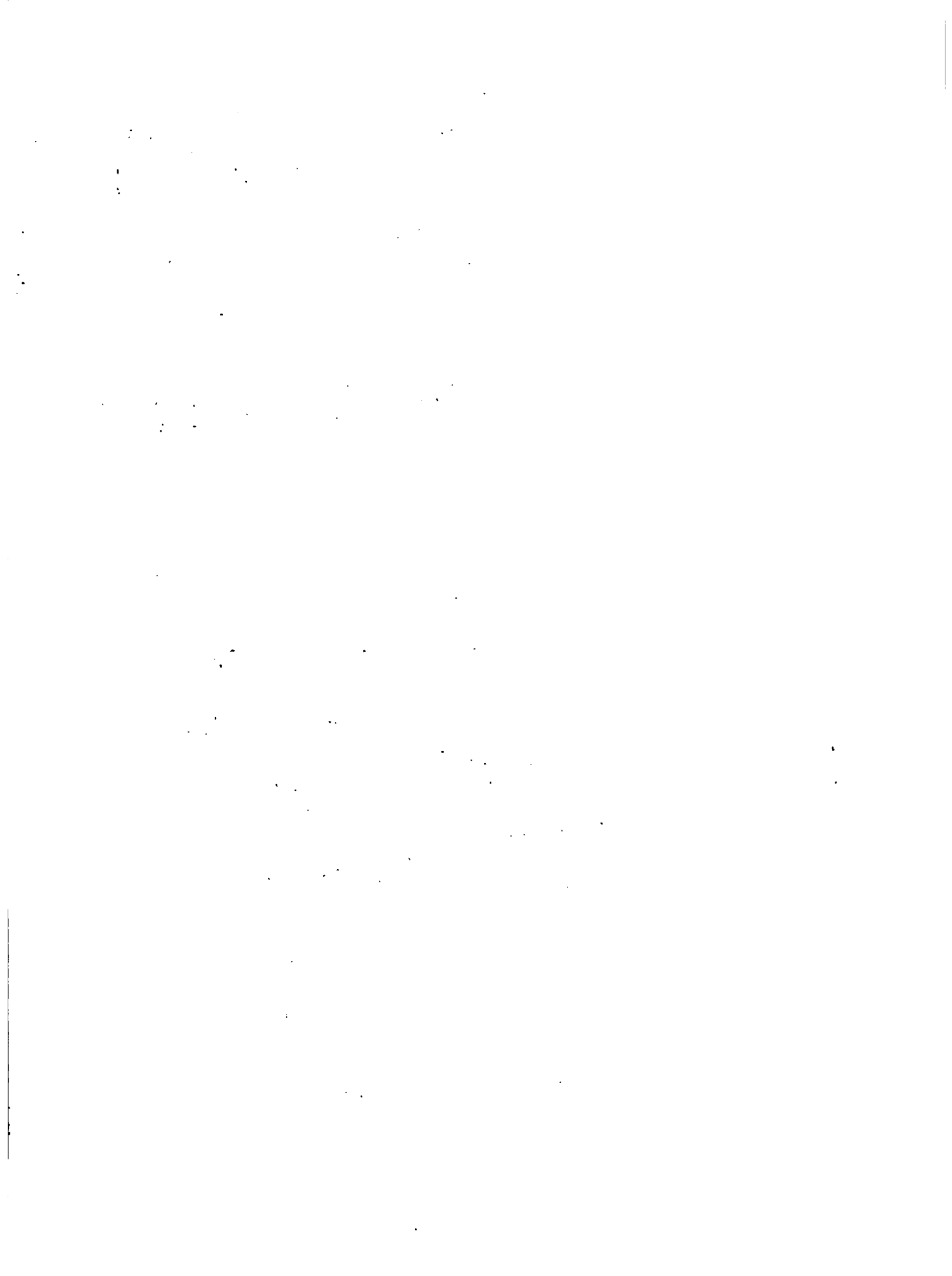


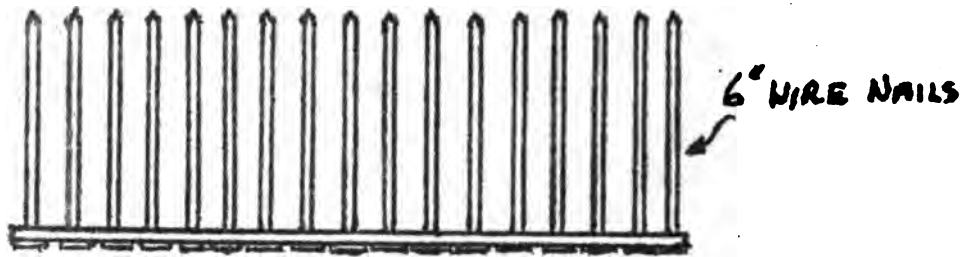
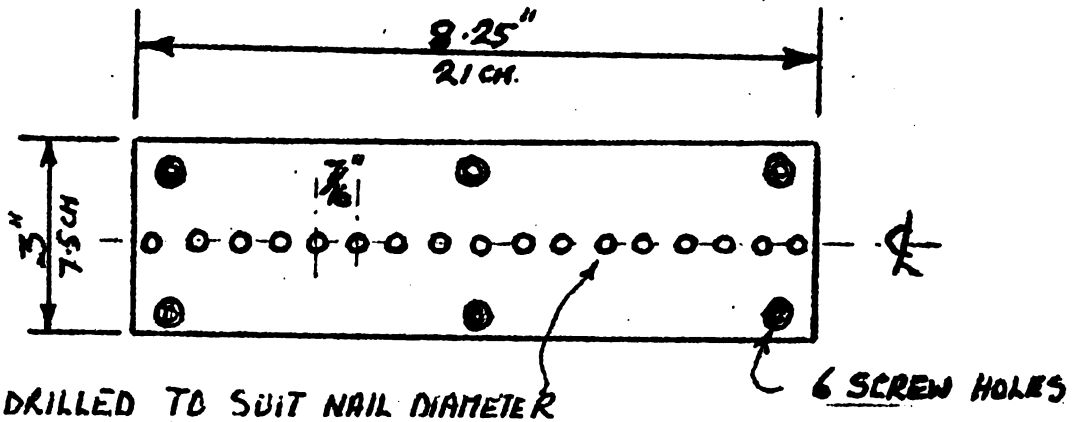
TWO SIDES MADE FROM HARDWOOD  $\frac{3}{4}$ " (2cm) THICK



BOTTOM IN TWO PIECES MADE FROM HARDWOOD  $\frac{3}{4}$ " (2cm) THICK

FIG. 2 ASSEMBLY DETAILS FOR POD STRIPPER





METAL COMB MADE FROM M.S. PLATE 3/8" THICK.

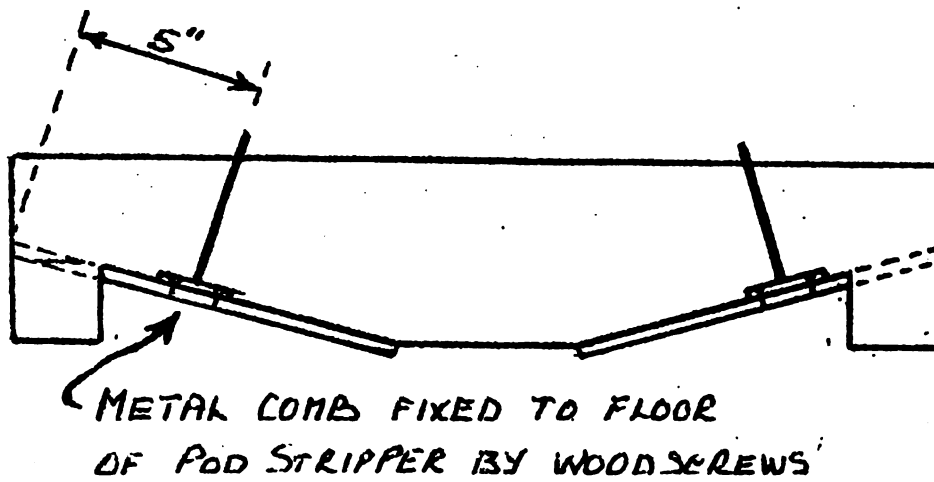


FIG. 3. ASSEMBLY DETAILS OF METAL COMB





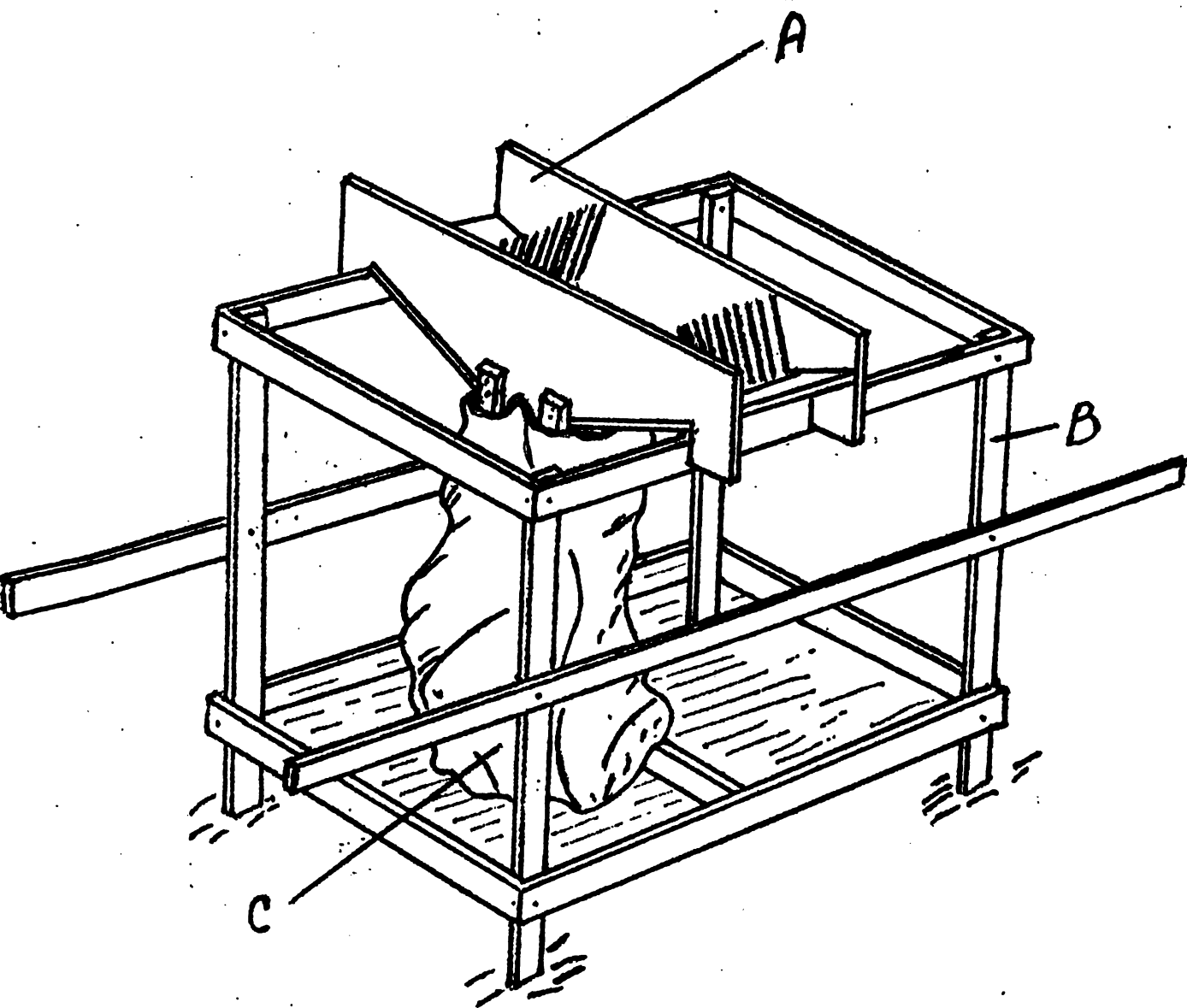


FIG 4 VIEW OF POD STRIPPER (A)  
MOUNTED ON WOODEN FRAME (B)  
WITH BAG (C)

