

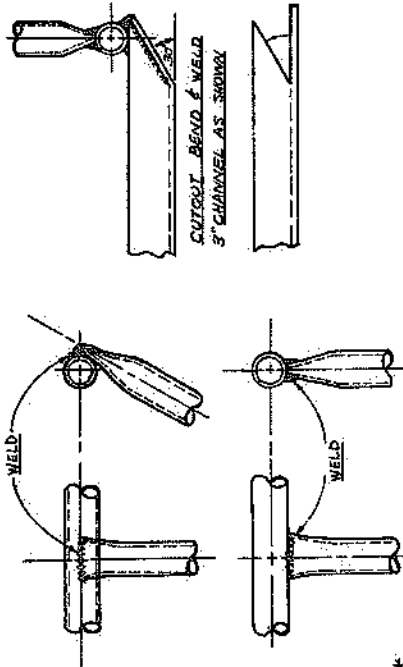
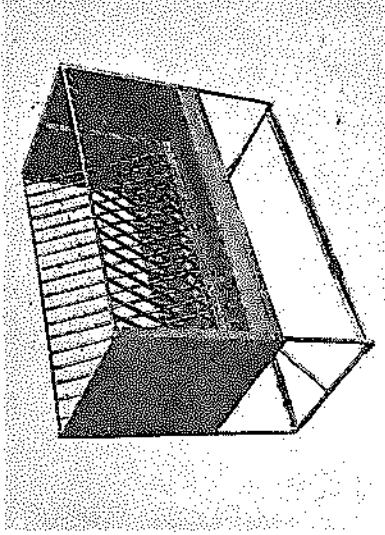
INSTRUCTIONAL MATERIALS
for use in
AGRICULTURAL EDUCATION



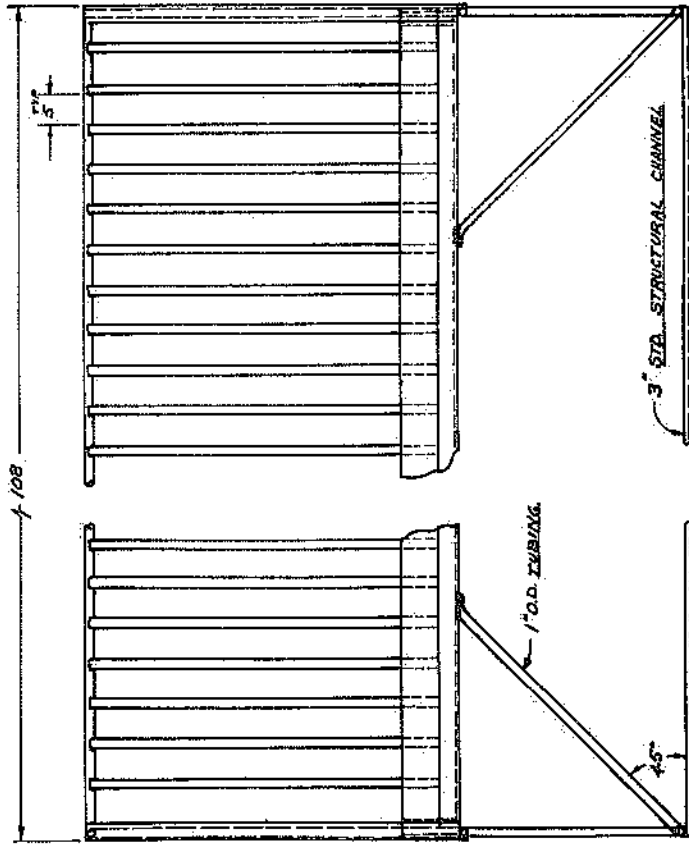
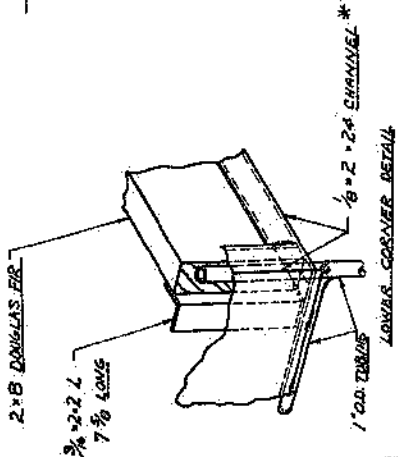
AGRICULTURAL MECHANICS

CALIFORNIA
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POLYTECHNIC
COLLEGE

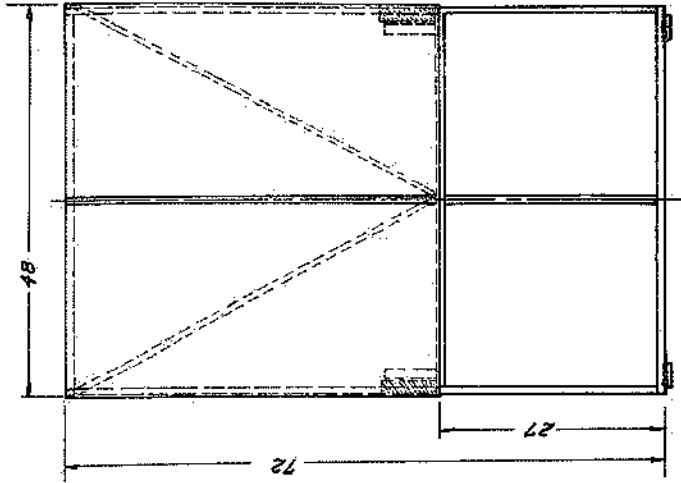
PLANS

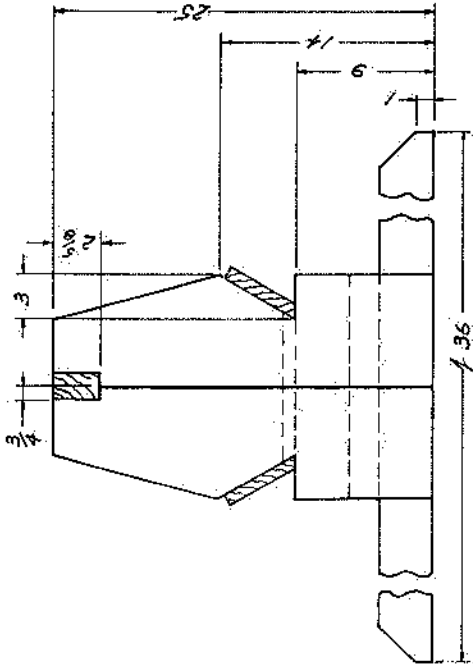
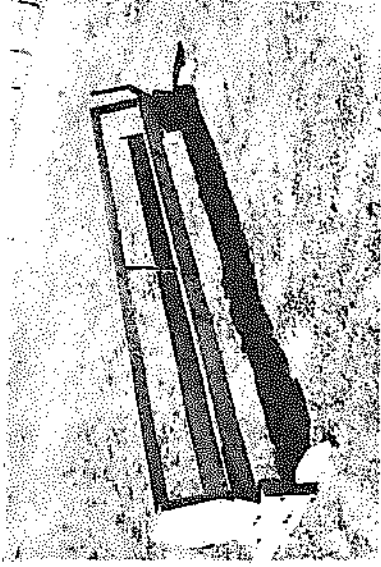


TYPICAL JOINTS

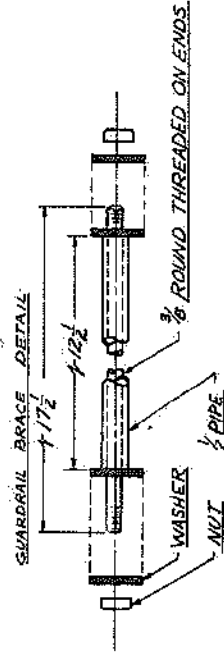
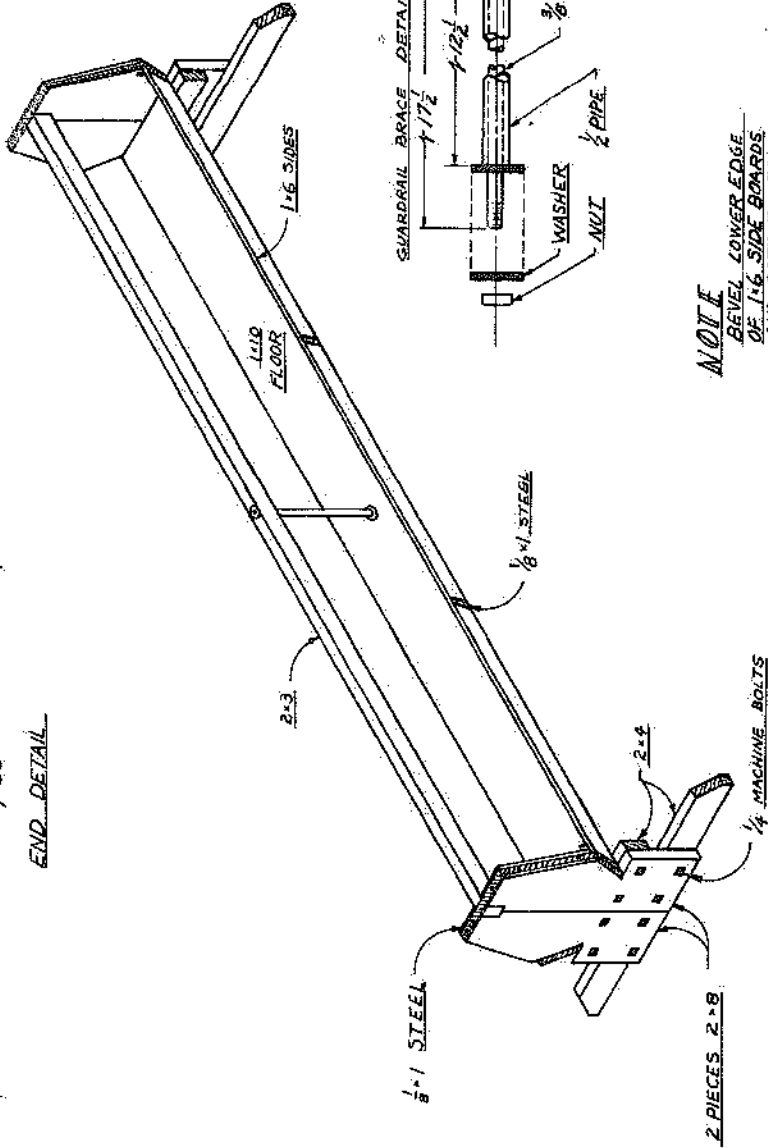


* ORIGINAL DESIGN CONSTRUCTED FROM MATERIAL AVAILABLE TO SERRALES THROUGH STATE SURPLUS OFFICES

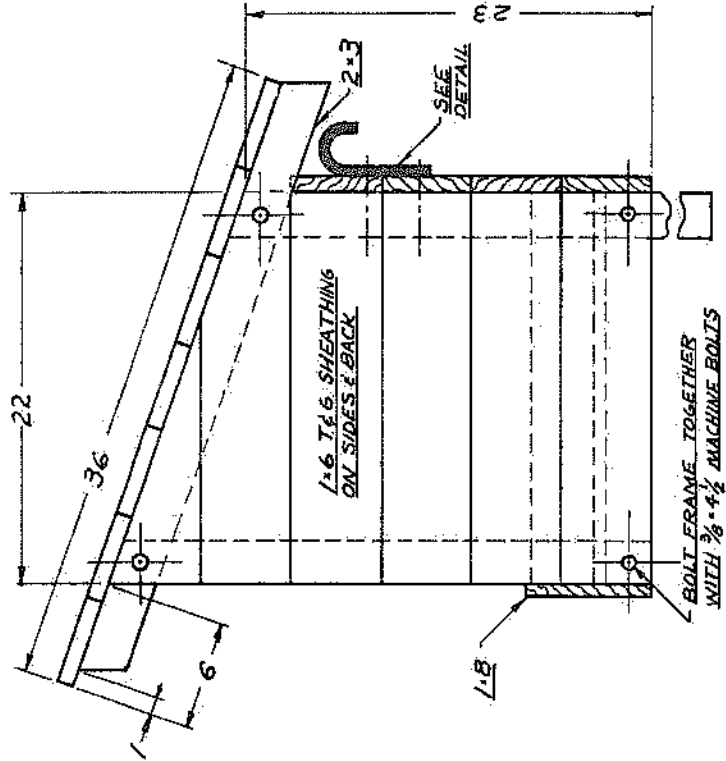
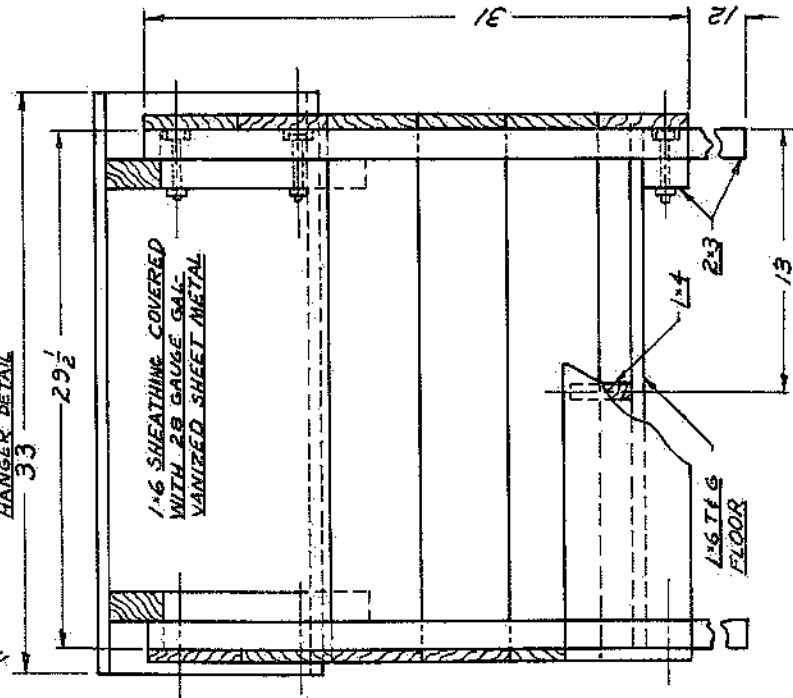
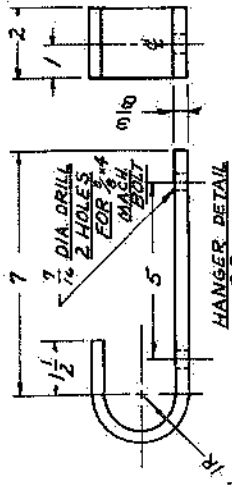
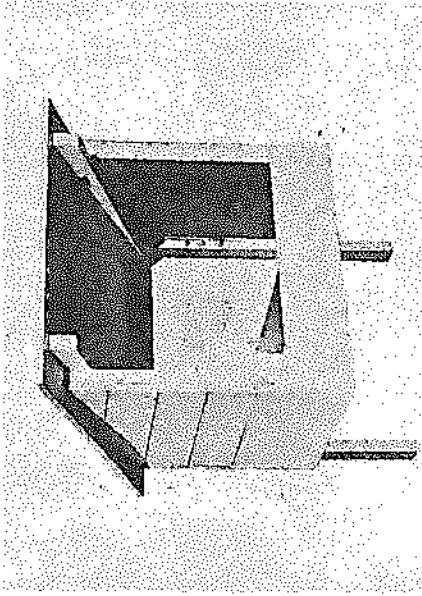


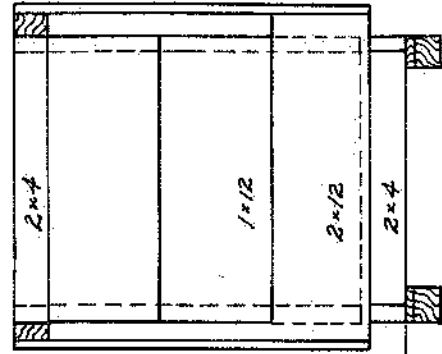
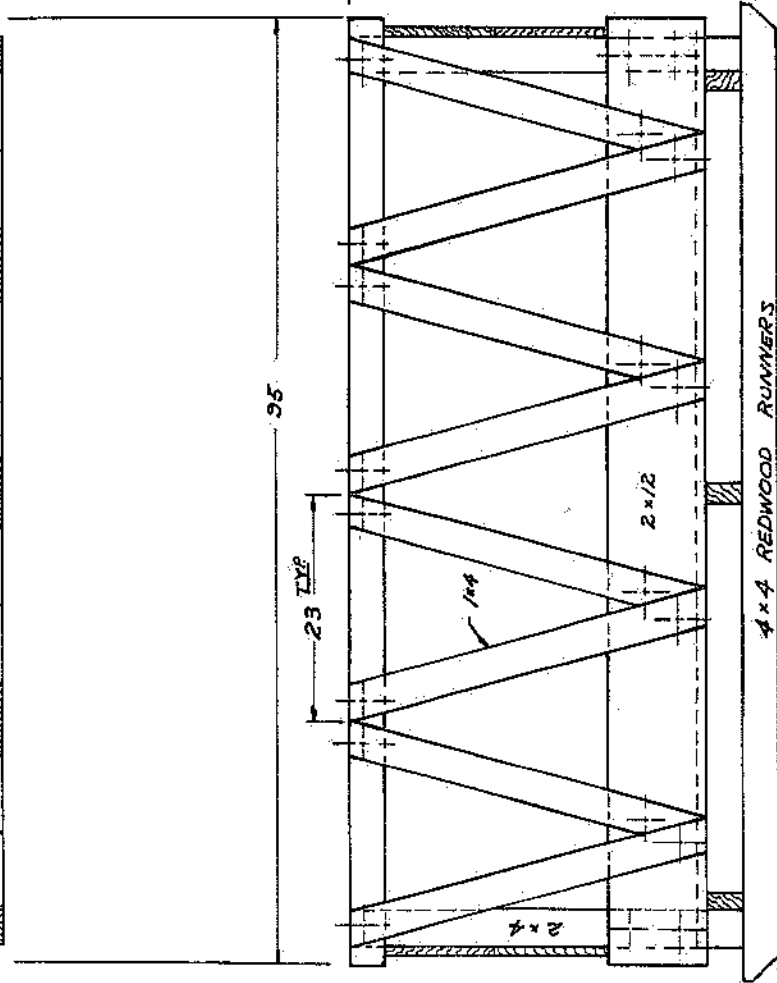
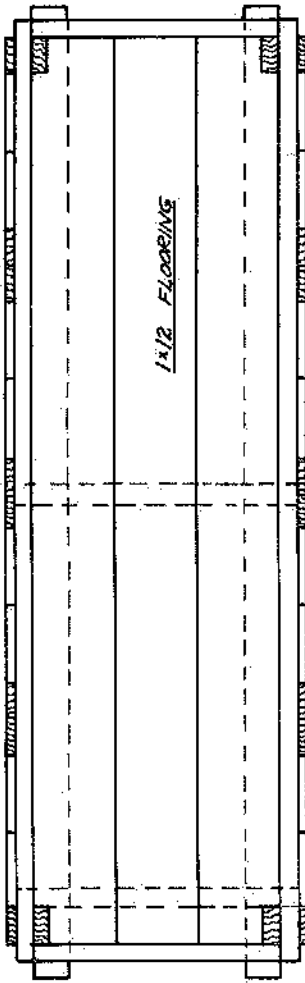
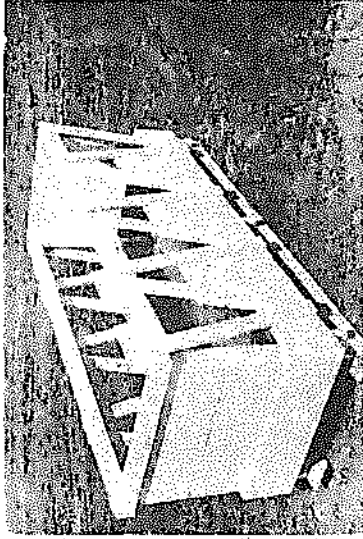


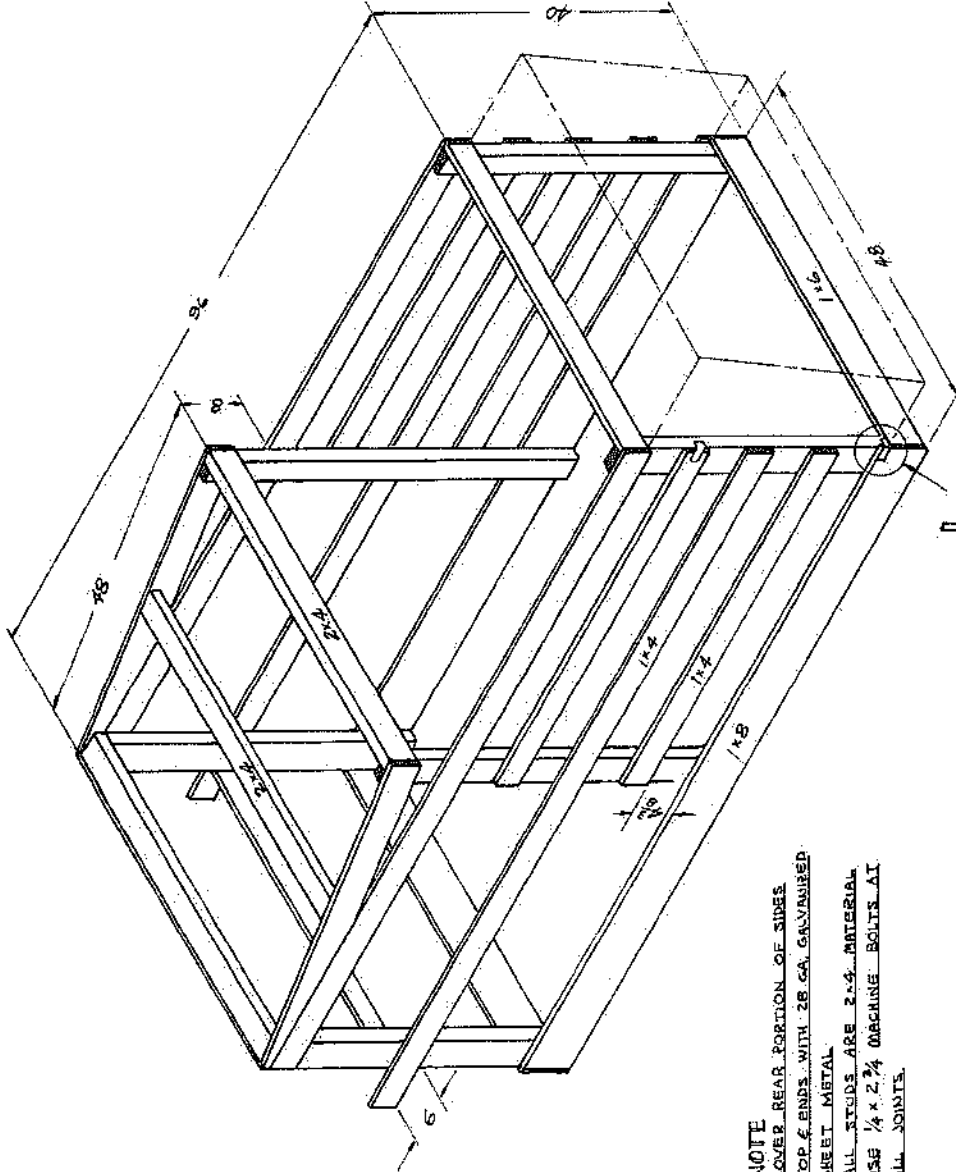
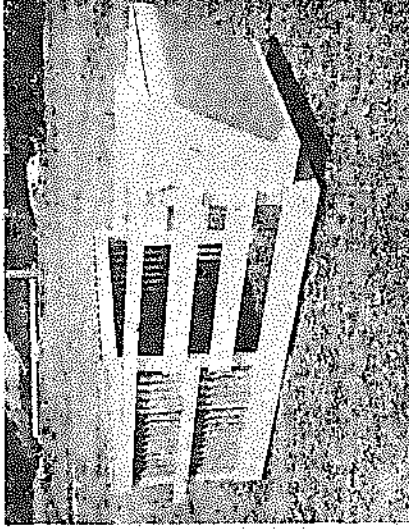
END DETAIL



NOTE
BEVEL LOWER EDGE
OF 1-6 SIDE BOARDS
AND BOTH EDGES OF
FLOOR BOARD 30°

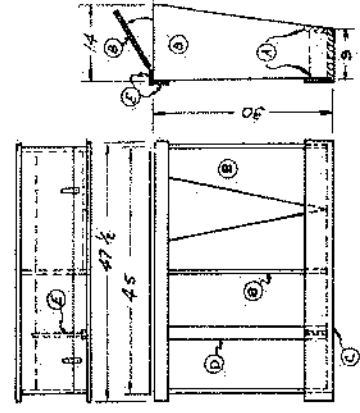






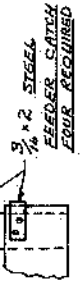
NOTE
 COVER REAR PORTION OF SIDES,
 TOP & ENDS WITH 28 GA. GALVANIZED
 SHEET METAL
 ALL STUDS ARE 2"x4" MATERIAL
 USE 1/4" x 2 1/4" MACHINE BOLTS AT
 ALL JOINTS.

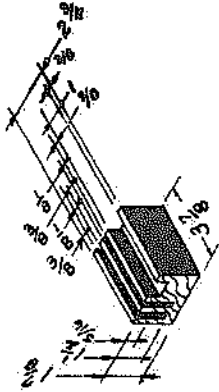
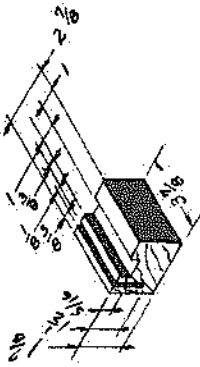
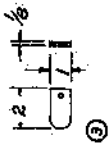
FEEDER DETAIL



- A. 1"x6"
- B. 1/2"x4"x2"
PLYWOOD
- C. 1"x8"
- D. 1"x2"
- E. 1"x4"

INDICATES APPROXIMATE LOCATION
 OF FEEDER

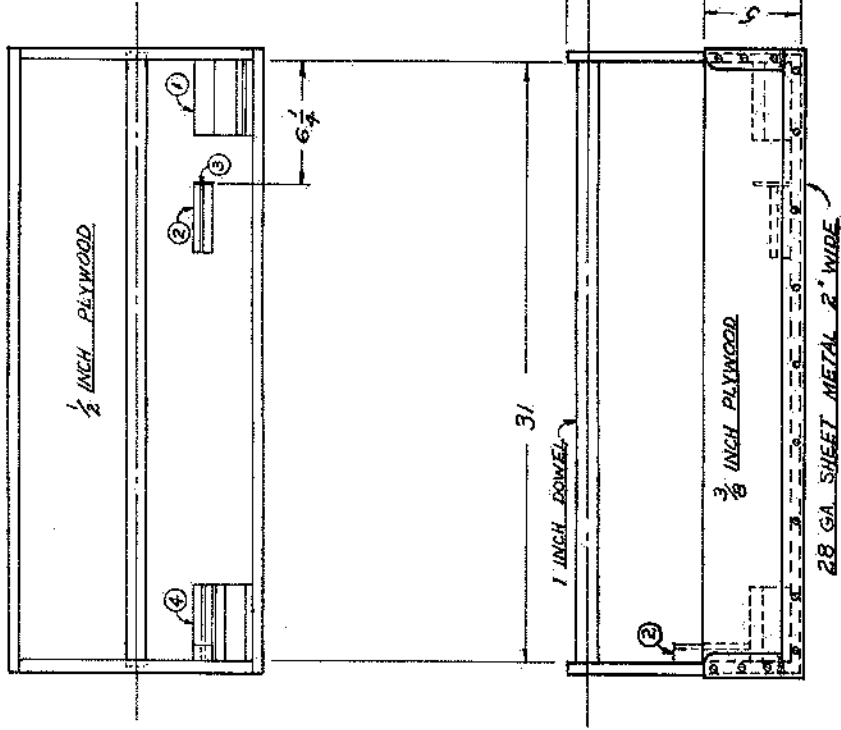
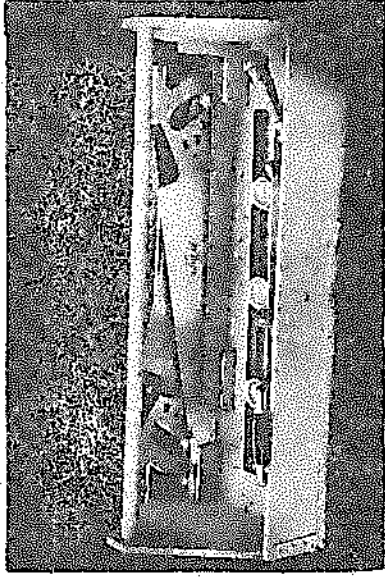


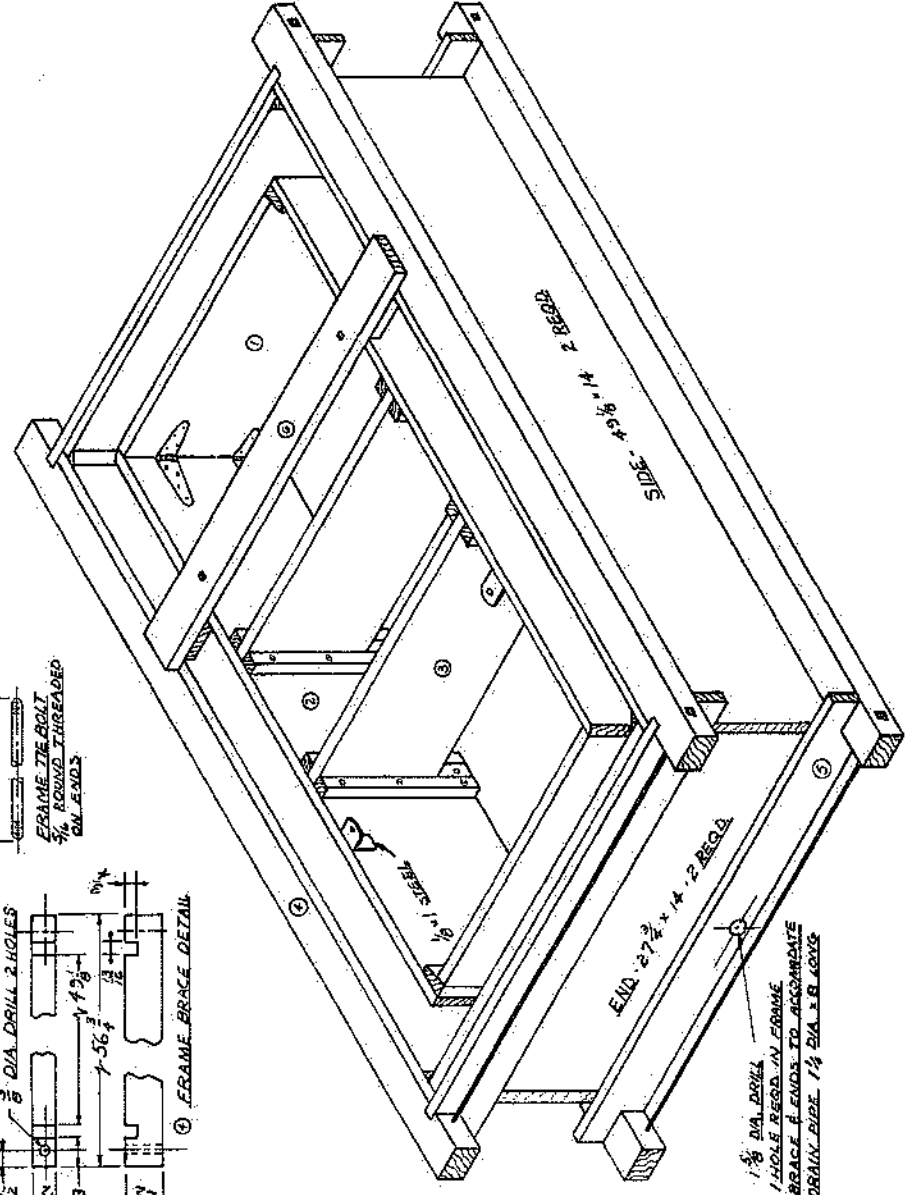
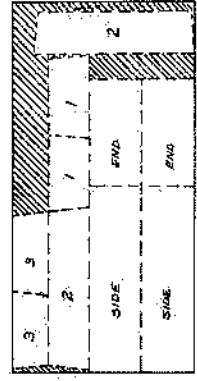
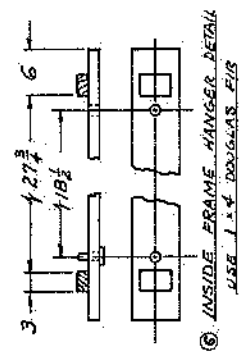
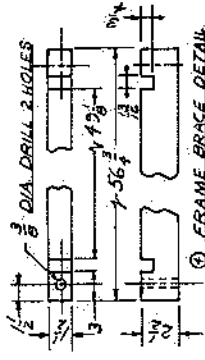
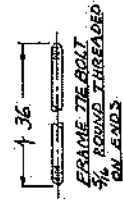
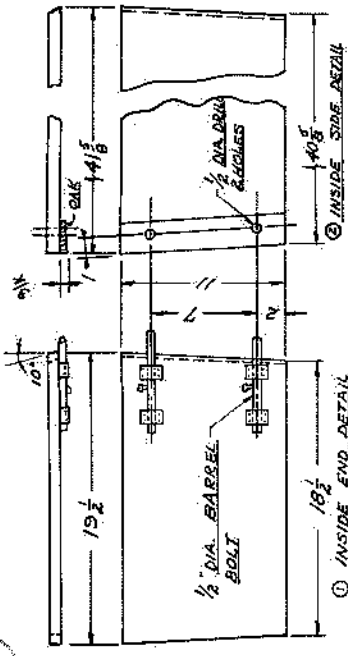
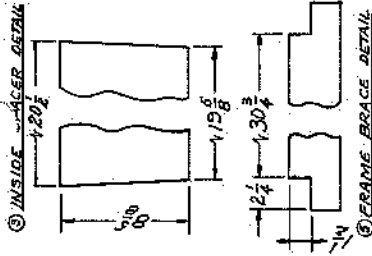
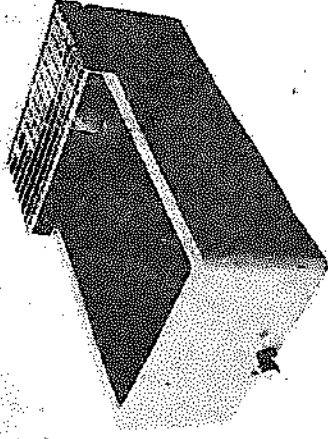


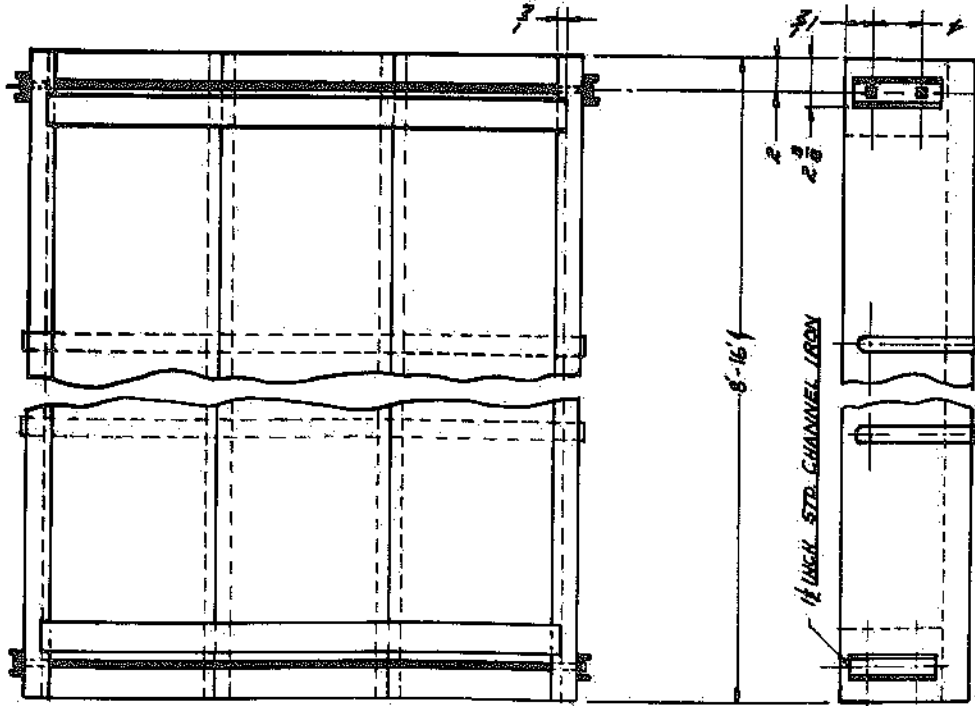
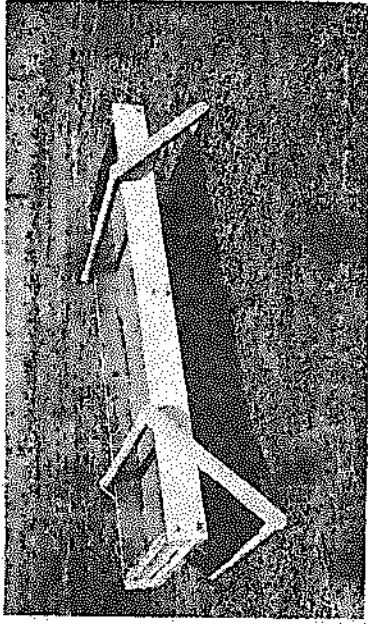
① HARDWOOD

② DOUGLAS FIR

③ HARDWOOD



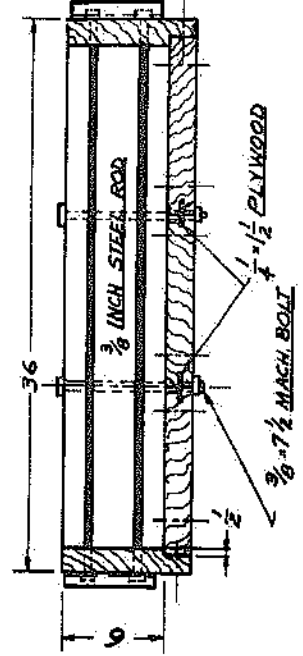
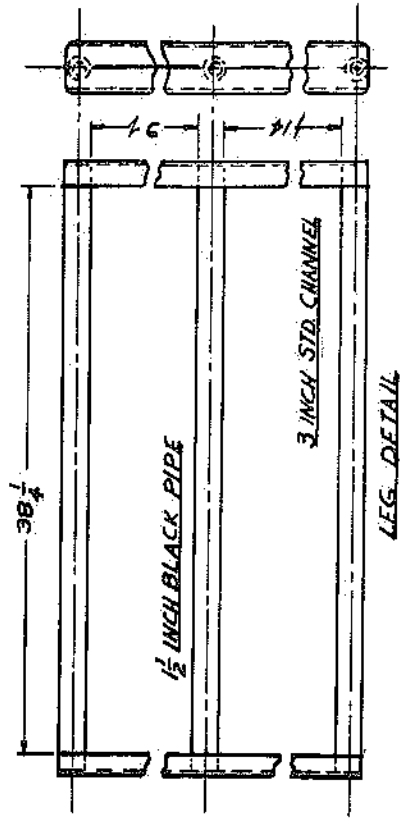


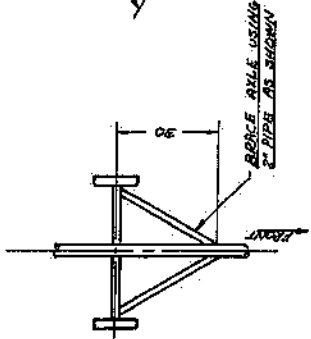
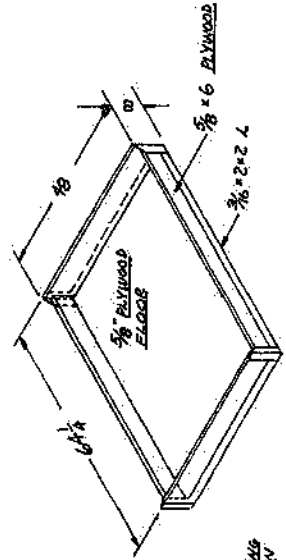
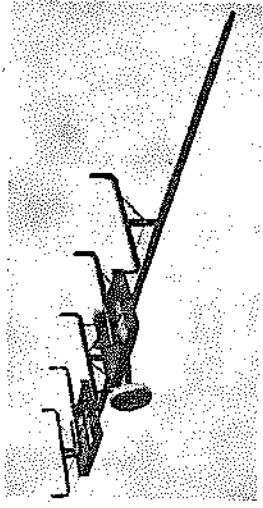


NOTE

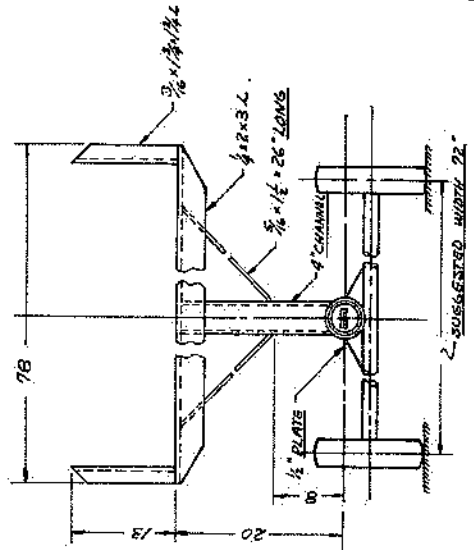
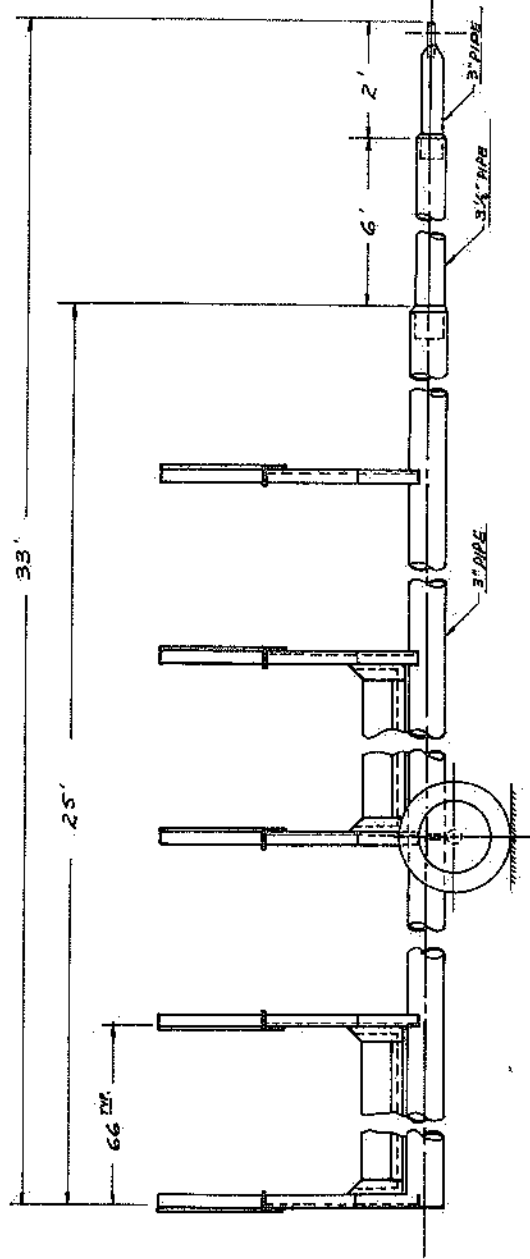
* ATTACH SIDING & ENDS TO BOTTOM USING 2" x 4" WOOD SCABES.

* ATTACH 1/2" x 6" PLANK BRACE ALONG BOTTOM AT 1/2 THIS LENGTH.





ACCESSORIES BOX





AGRICULTURAL MECHANICS

CALIFORNIA STATE POLYTECHNIC COLLEGE

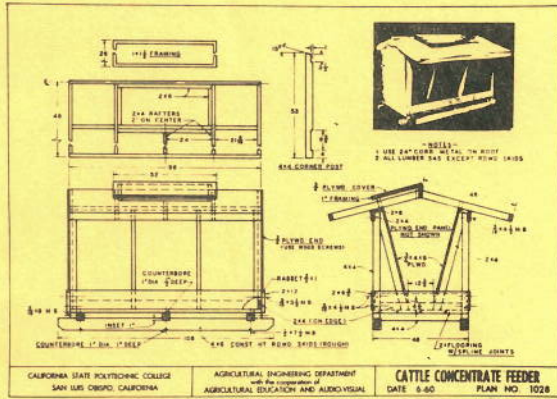
PLANS Set No:2

AGRICULTURAL MECHANICS PLANS

SET NUMBER 2

including:

- 1021 - Redwood Table
- 1022 - Portable Step-stool
- 1023 - Open Saw Horse
- 1024 - Hog & Sheep Panels
- 1025 - Hog Watering Trough
- 1026 - Portable Hog Shade
- 1027 - Tool Trailer
- 1028 - Cattle Concentrate Feeder
- 1029 - Pig Creep Feeder
- 1030 - Bar-B-Q Trailer



The ten agricultural mechanics plans included in this set are based on ideas which have been proved successful by agriculture teachers in the field or at California State Polytechnic College.

If you have plans or ideas for drawings which you believe suitable for this series, please submit them to the Professional Improvement Department of the C. A. T. A. or bring them to the Idea Show at summer conference time.

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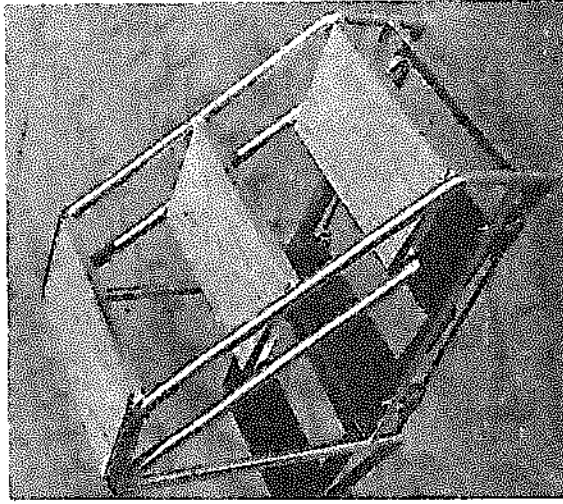
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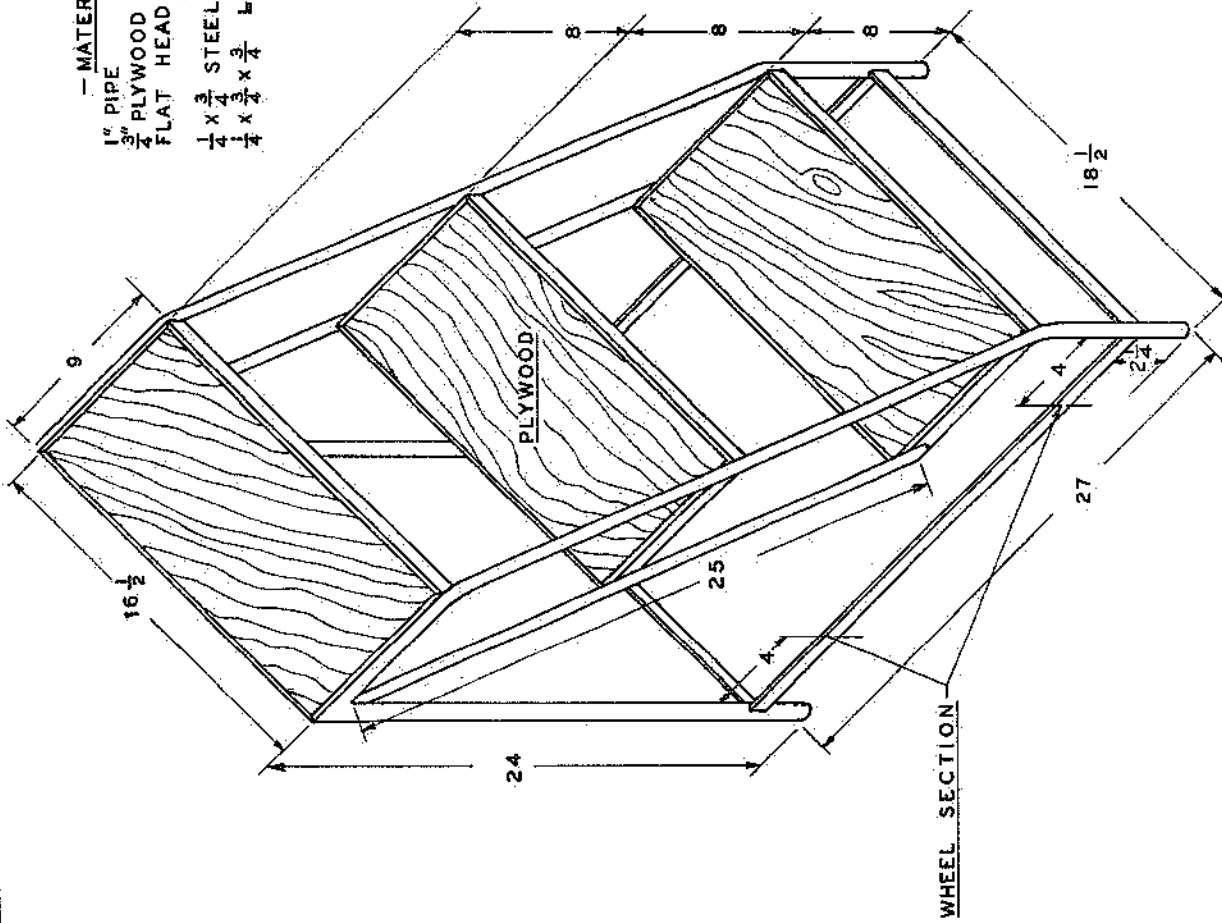
f. o. b. S. L. O.

(Single plans are not available)

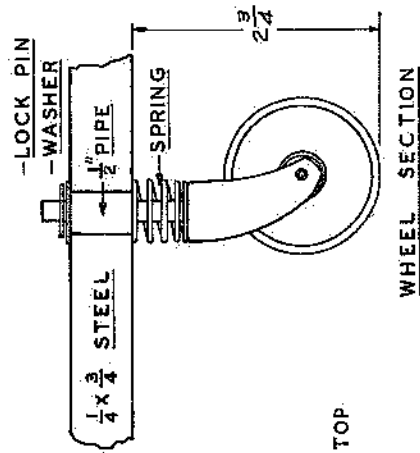


MATERIALS—

- 1" PIPE
- 3/4" PLYWOOD
- FLAT HEAD MACHINE SCREWS
(COUNTER SINK)
- 1/4 x 3/4" STEEL
- 1/4 x 3/4 x 3/4" IRON



STEPS—FRAME 9"x16 1/2"
8" HIGH TOP TO TOP.



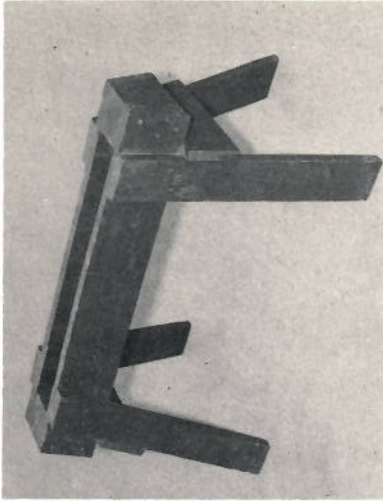
CALIFORNIA STATE POLYTECHNIC COLLEGE
SAN LUIS OBISPO, CALIFORNIA

AGRICULTURAL ENGINEERING DEPARTMENT
with the cooperation of
AGRICULTURAL EDUCATION AND AUDIO-VISUAL

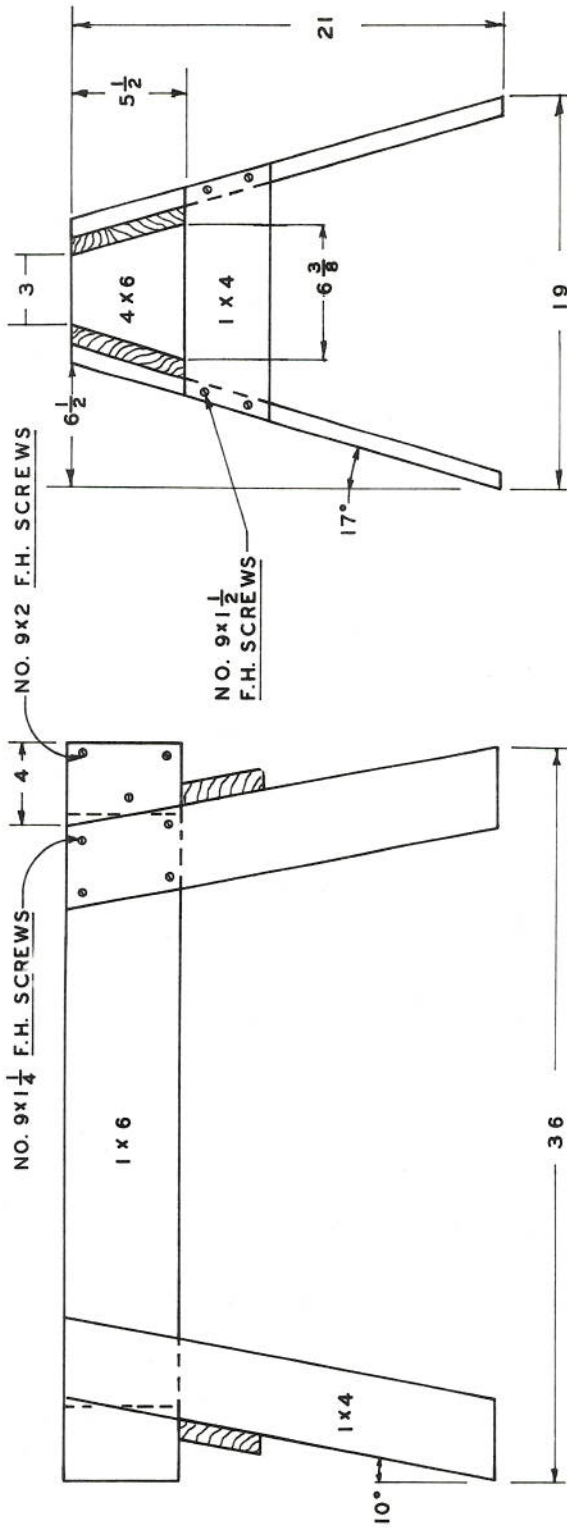
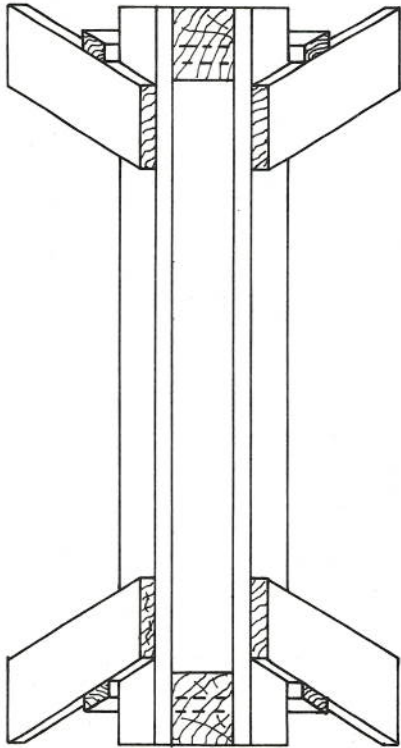
PORTABLE STEP STOOL

DATE 6-60

PLAN NO. 1022



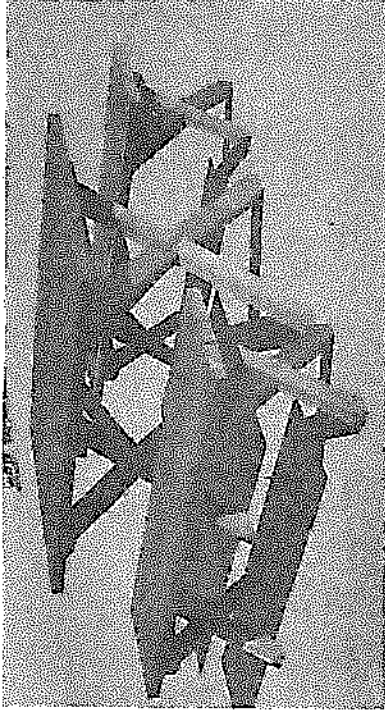
—NOTE—
 CONSTRUCT FROM PINE OR REDWOOD
 USE WOOD GLUE ON JOINTS



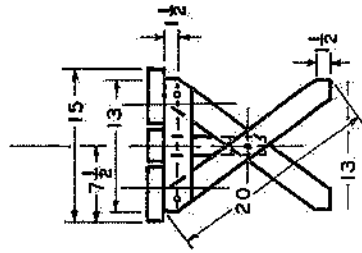
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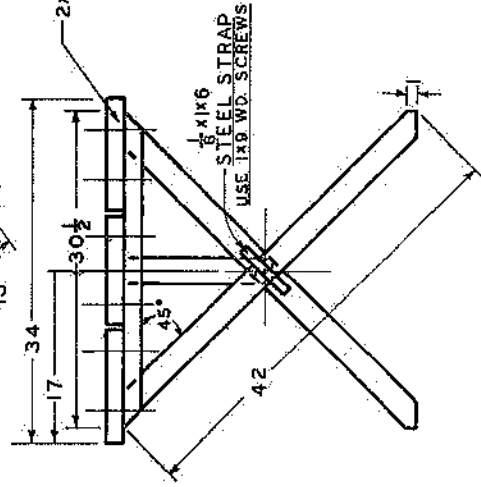
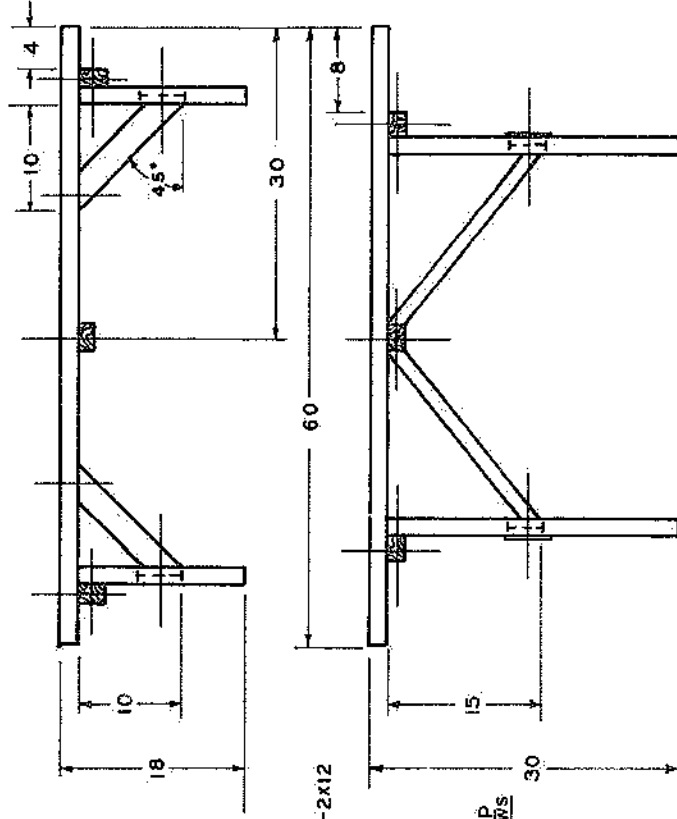
OPEN SAW HORSE
 DATE 6-60 PLAN NO. 1023



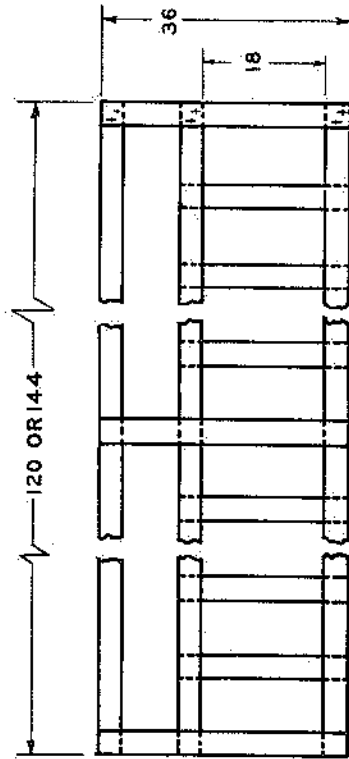
NOTES:
 ALL LUMBER IS SELECT HEART REDWOOD
 ALL STOCK IS 2x3 S4S UNLESS OTHERWISE NOTED
 USE 1/2x3 1/2 OR 4 1/2 CARRIAGE BOLTS AS REQ'D.



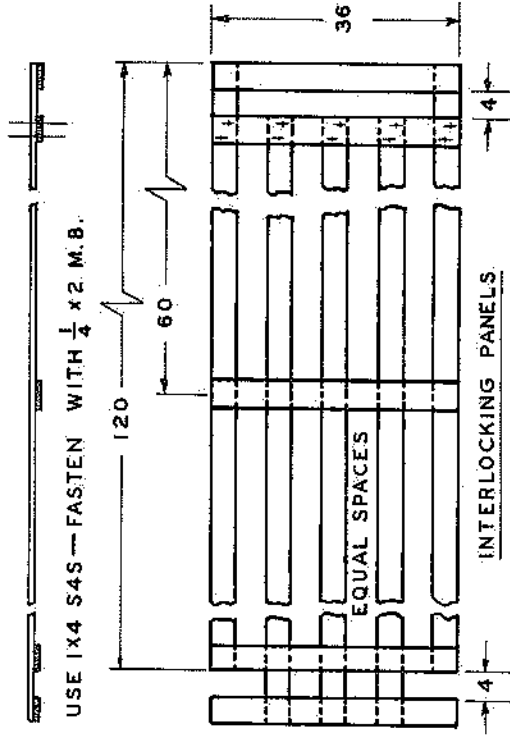
BENCH



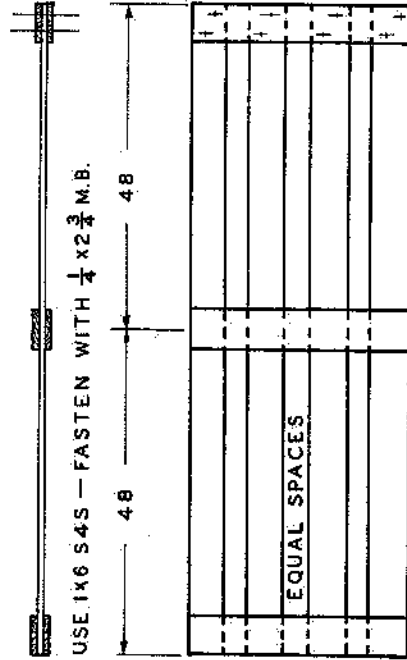
TABLE



SHEEP CREEP.
 SMALL BREEDS 8" MEDIUM BREEDS 9"
 LARGE BREEDS 10"



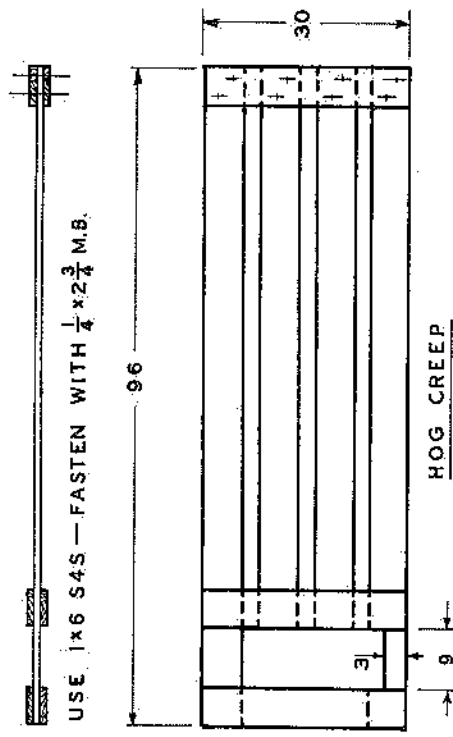
USE 1x4 S4S — FASTEN WITH $\frac{1}{4}$ x 2 M.B.



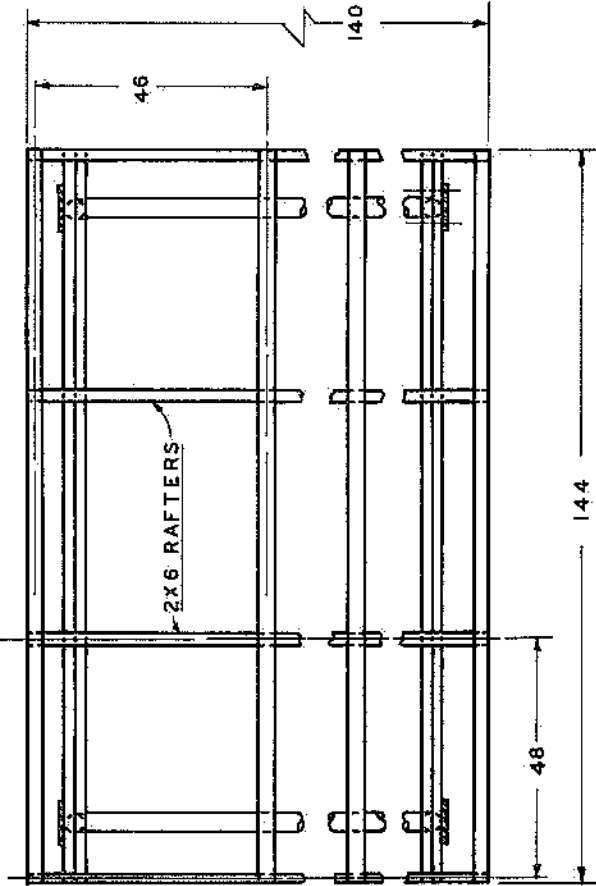
USE 1x6 S4S — FASTEN WITH $\frac{1}{4}$ x 2 $\frac{3}{4}$ M.B.

HOG PANEL.

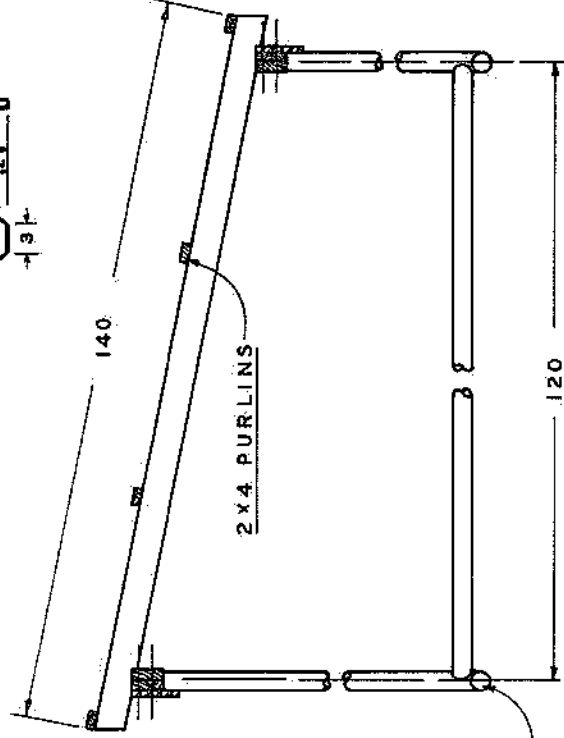
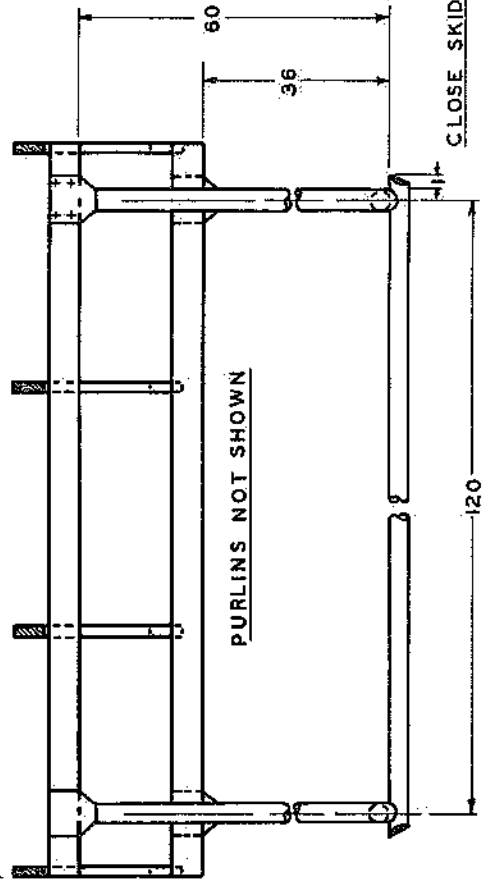
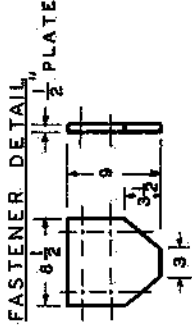
NOTE — MAY ALSO BE CONSTRUCTED 10'—12' LONG



USE 1x6 S4S — FASTEN WITH $\frac{1}{4}$ x 2 $\frac{3}{4}$ M.B.



- NOTE—
 1. ALL PIPE 3"
 2. USE 24 GA. GALV. ROOFING



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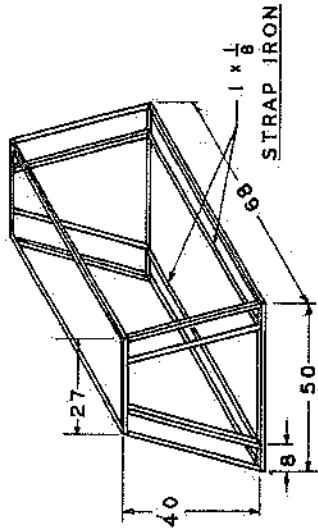
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PORTABLE HOG SHADE

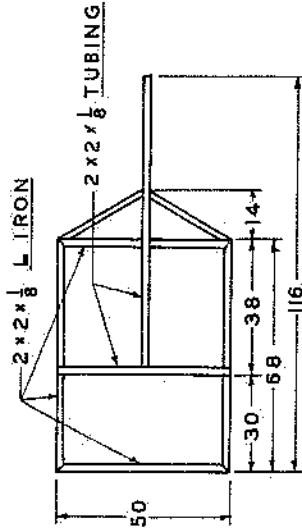
DATE 6-60

PLAN NO. 102.6

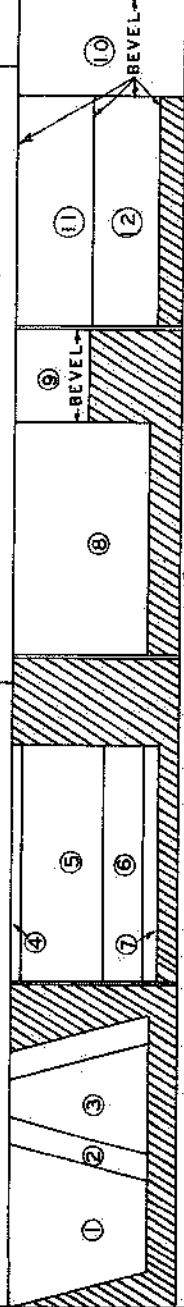
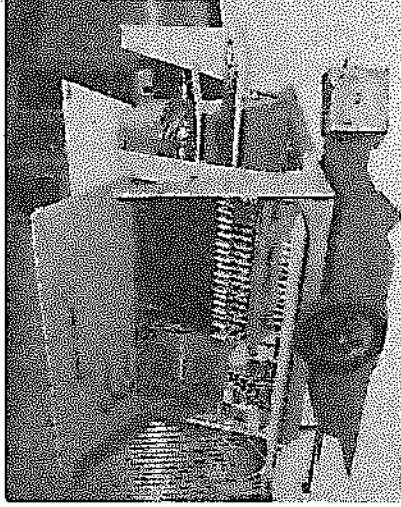
USE $1 \times \frac{3}{4} \times \frac{1}{8}$ L IRON



COMPARTMENT FRAMING



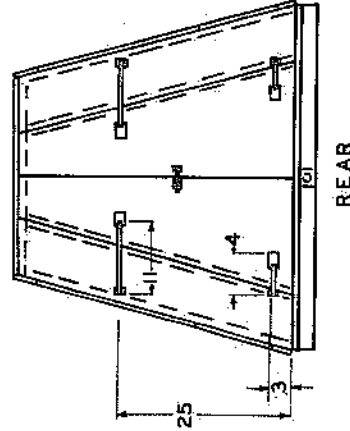
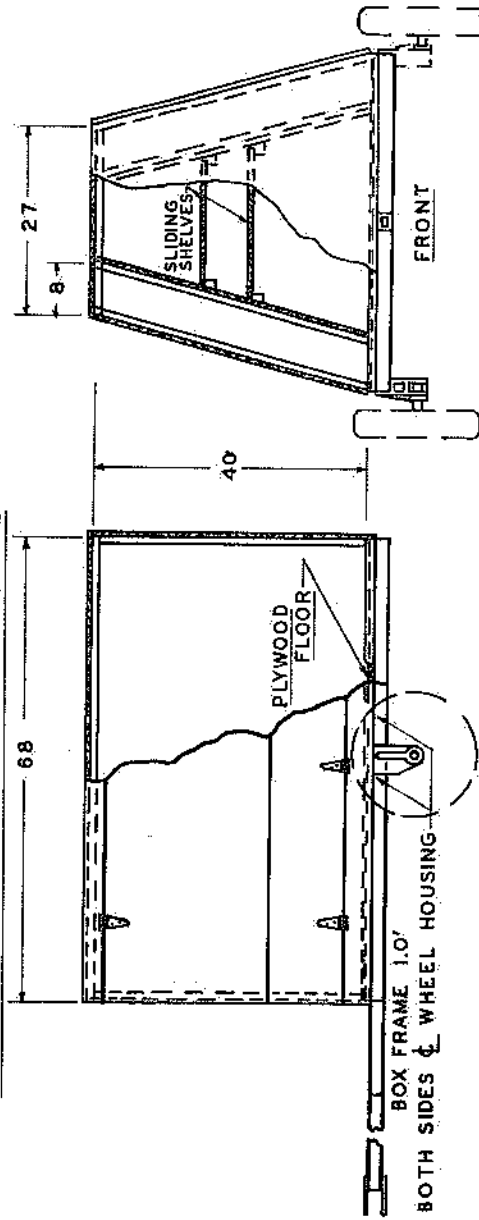
FRAME PLAN



PLYWOOD LAYOUT- $4 \times 8 \times \frac{1}{2}$ A/C PANELS

- ① FRONT PANEL $50 \times 27 \times 40$
 - ② SIDE PANEL 8×40
 - ③ REAR DOOR PANEL $10 \times 32 \times 40$
 - ④ TOP PANEL-SIDE $3 \times 69 \frac{1}{2}$
 - ⑤ UPPER DOOR-SIDE $24 \times 69 \frac{1}{2}$
 - ⑥ LOWER DOOR-SIDE $11 \times 69 \frac{1}{2}$
 - ⑦ BOTTOM PANEL-SIDE $4 \times 69 \frac{1}{2}$
 - ⑧ DIVIDE PANEL 40×68
 - ⑨ ROOF PANEL - PART 2 $27 \times 21 \frac{1}{2}$
 - ⑩ ROOF PANEL - PART 1 27×48
 - ⑪ LOWER SHELF 22×68
 - ⑫ UPPER SHELF $19 \frac{1}{2} \times 68$
- 2 EACH REQ'D.

NOTE: COVER FLOOR & ROOF WITH SHEET METAL



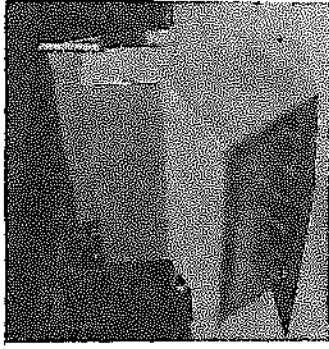
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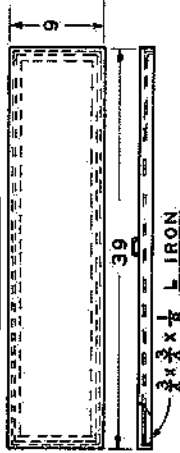
TOOL TRAILER

DATE 6-60

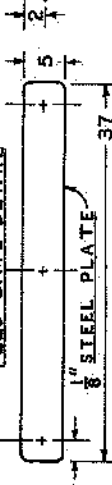
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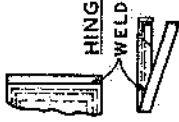
LID DETAIL



FEED GATE DETAIL



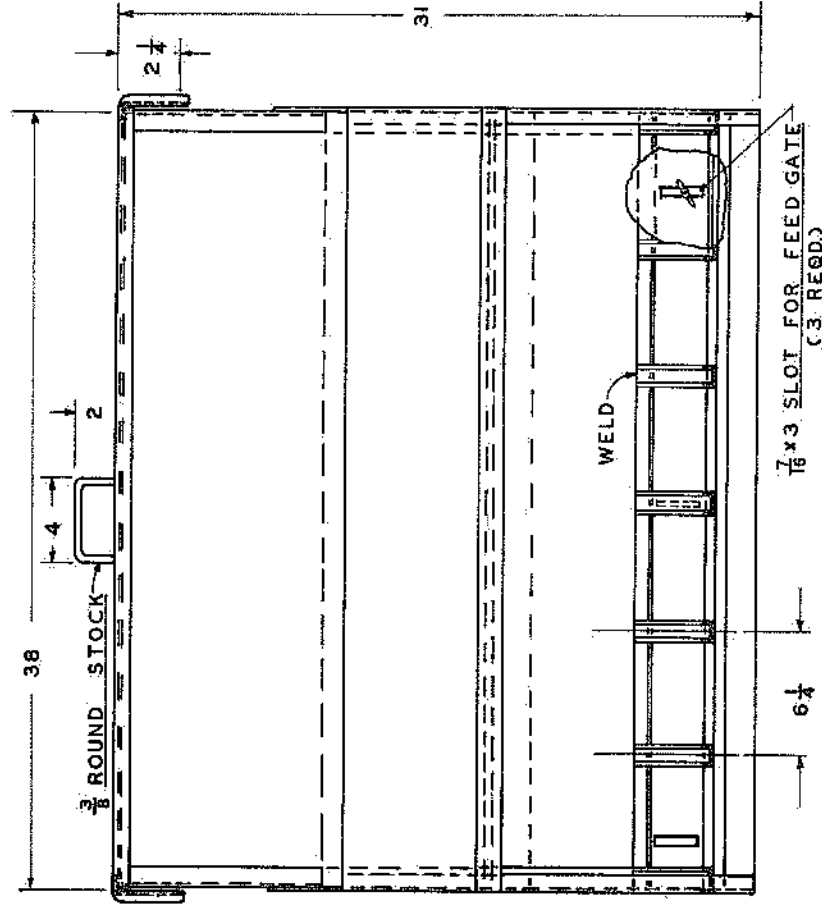
HINGE BRACKET



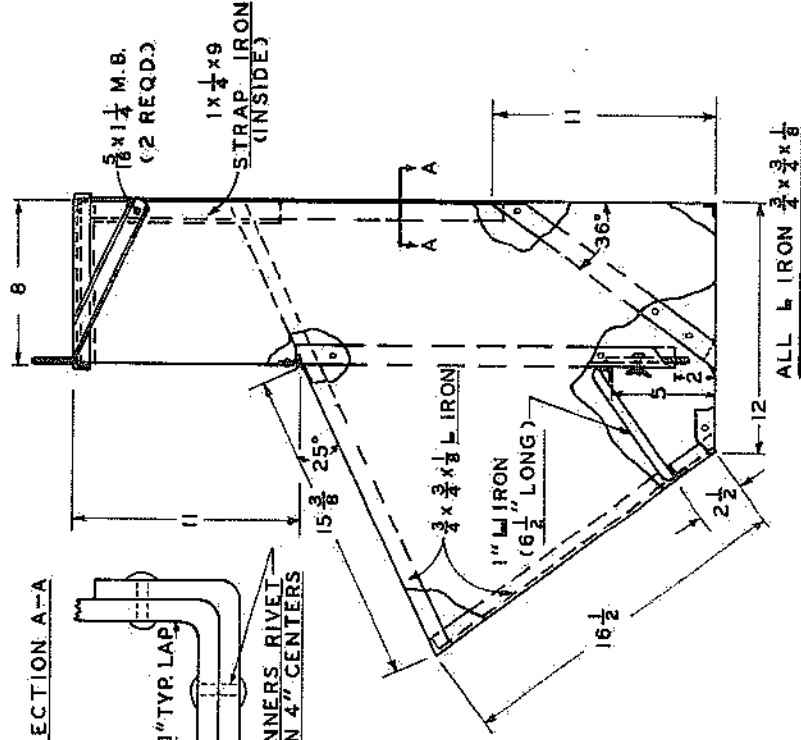
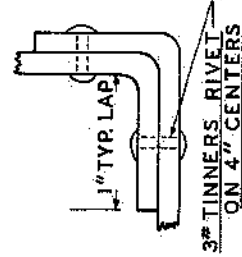
— NOTE —

USE 20 GA. GALVANIZED SHEET METAL

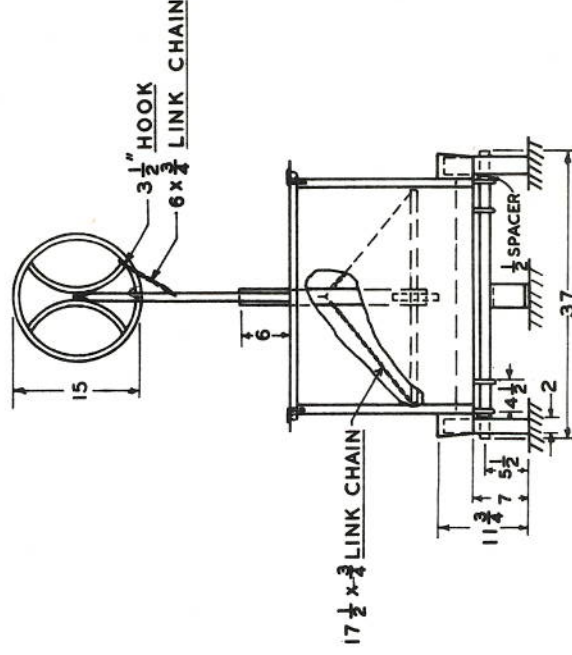
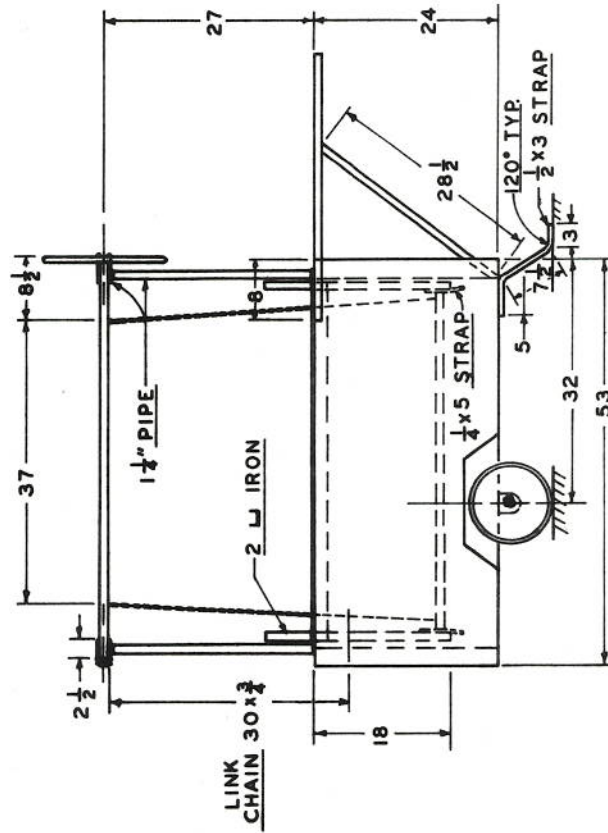
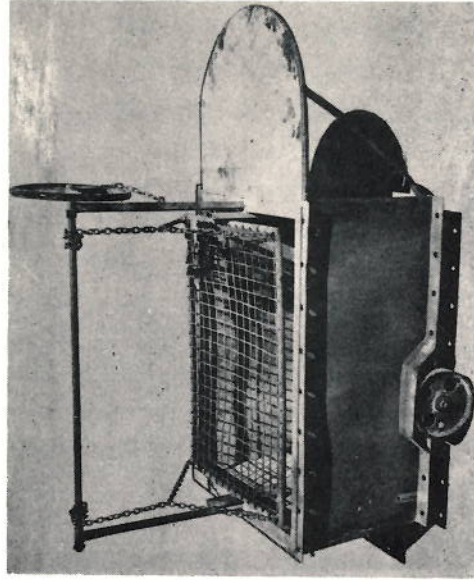
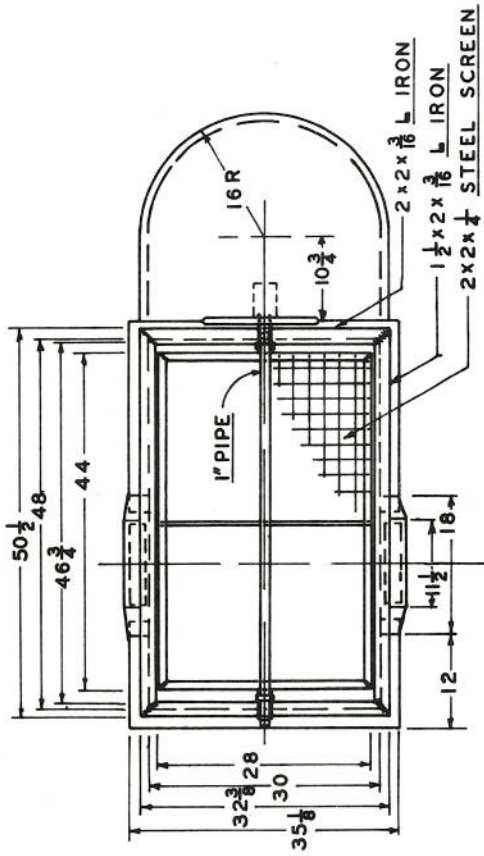
3/8 X 1/8 MACH. SCREW (3 REQD.)



SECTION A-A



ALL L IRON 3/4 X 3/8 X 1/8



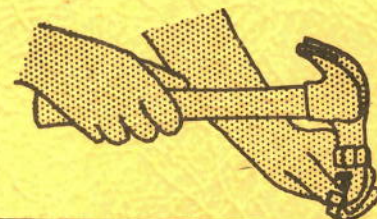
CALIFORNIA STATE POLYTECHNIC COLLEGE
 SAN LUIS OBISPO, CALIFORNIA

AGRICULTURAL ENGINEERING DEPARTMENT
 with the cooperation of
 AGRICULTURAL EDUCATION AND AUDIO-VISUAL

BAR-B-Q TRAILER

DATE 6-60 PLAN NO. 1030

**INSTRUCTIONAL MATERIALS FOR
USE IN AGRICULTURAL EDUCATION**

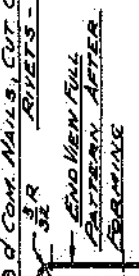
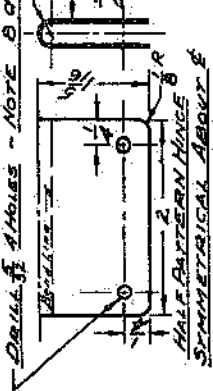


AGRICULTURAL MECHANICS

CALIFORNIA STATE POLYTECHNIC COLLEGE

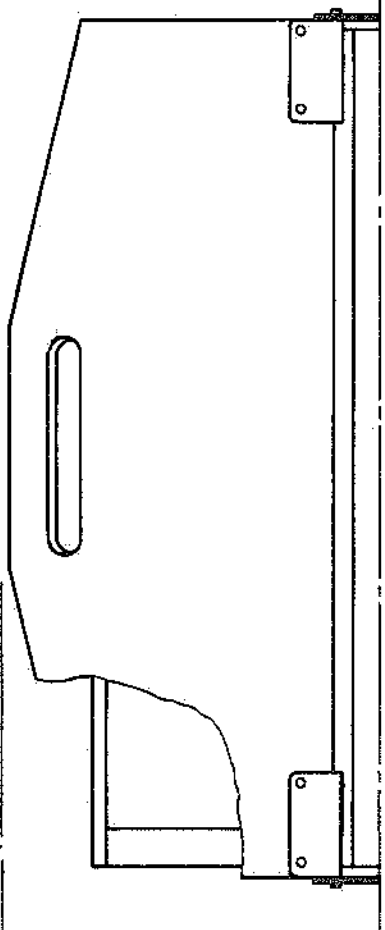
PLANS Set No. 3

DRILL 4 HOLES - NOTE 8 COM. NAILS, CUT OFF FOR RIVETS - 8 REG.



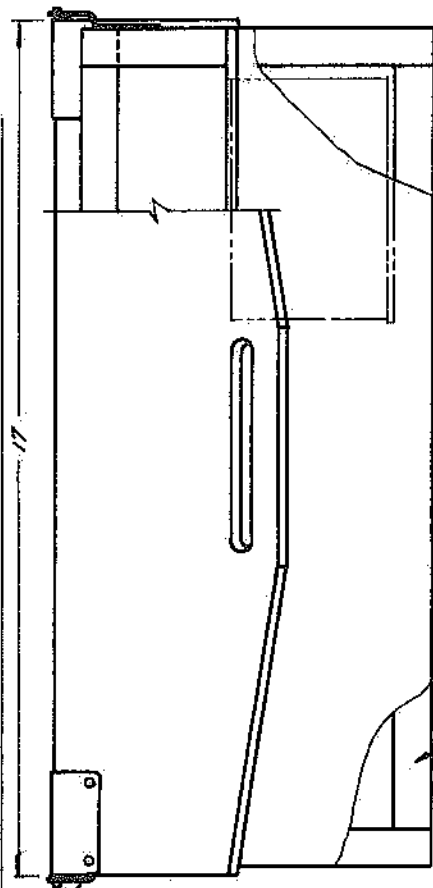
END DETAIL TOP RAIL

HINGE - 4 REG. NAT'L 24 GA. SNT 57L



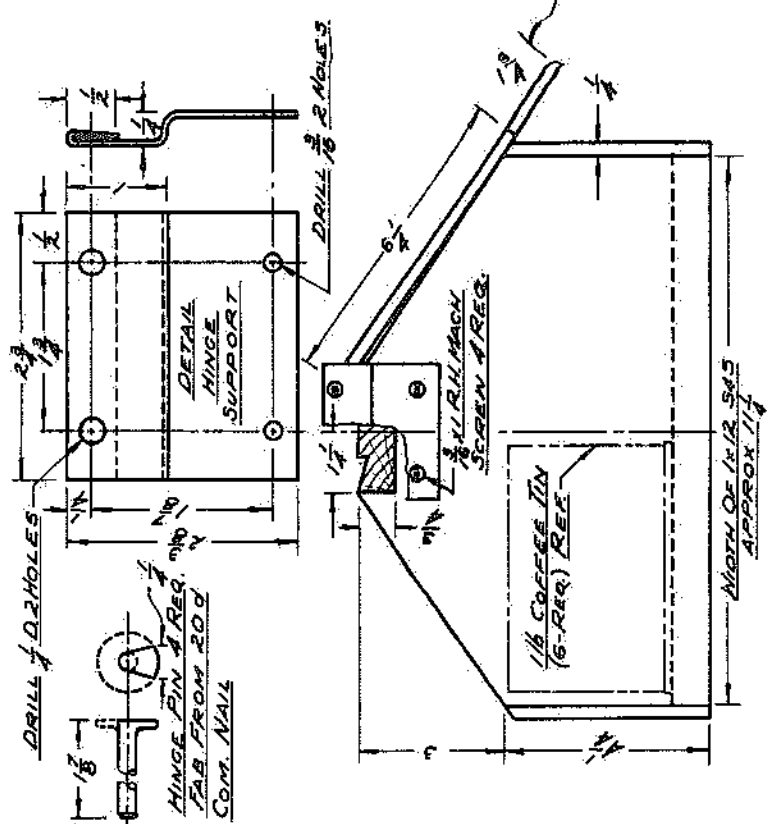
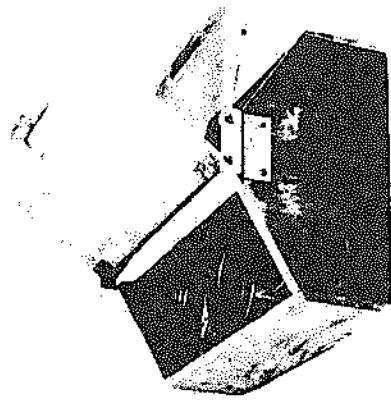
HALF VIEW - TOP - SYMMETRICAL ABOUT C

HINGE SUPPORT 2 REG. NAT'L 24 GA. SNT 57L - SEE DETAIL



2008 1X1/2 54S

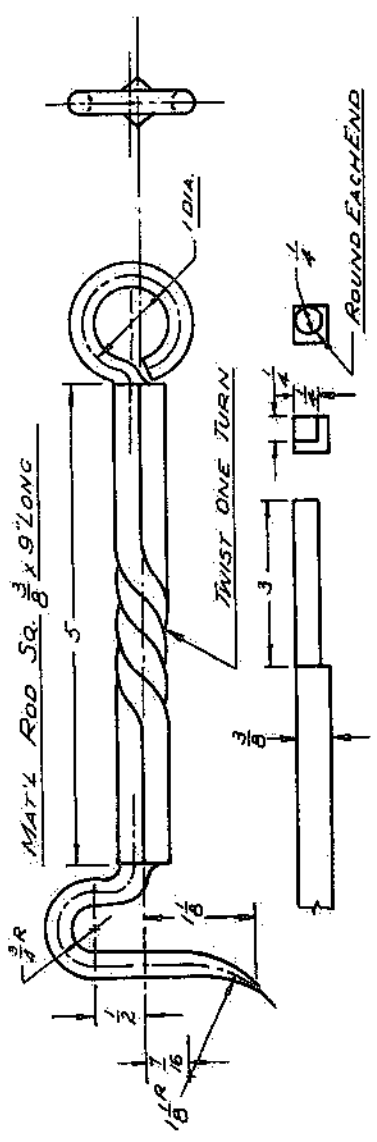
DETAIL HANDLE



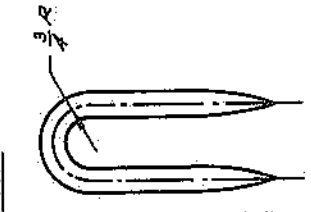
NOTE: SIDES & TOP 4 PLYWOOD

CALIFORNIA STATE POLYTECHNIC COLLEGE SAN LUIS OBISPO CALIF. AGRICULTURAL ENGINEERING DEPARTMENT IN COOPERATION WITH BUREAU OF AGRICULTURAL EDUCATION	
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DRAWING NUMBER	
100108	

MAT'L ROD SQ. $\frac{3}{8}$ X 9' LONG



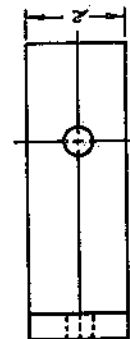
ROUND EACH END



DRAW BUNT EACH END

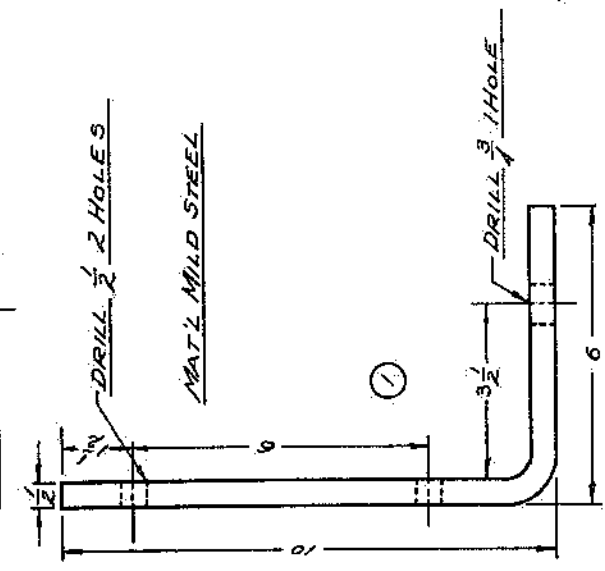


MAT'L $\frac{1}{4}$ ROD ROUND 2' REQ.



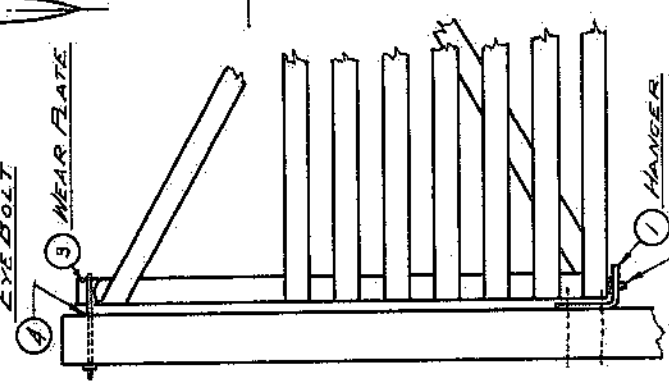
DRILL $\frac{1}{2}$ 2 HOLES

MAT'L MILD STEEL



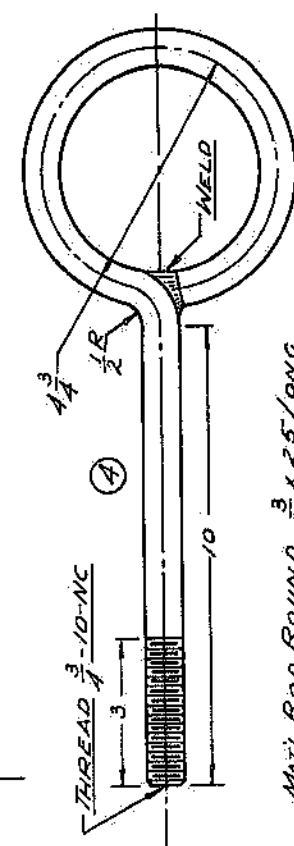
ASSEMBLY GATE HINGE

EYE BOLT

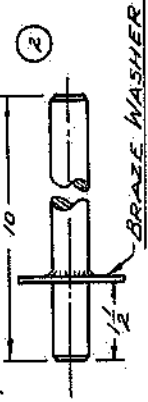


HANGER

PIN



MAT'L ROD ROUND $\frac{3}{4}$ 1.25' LONG



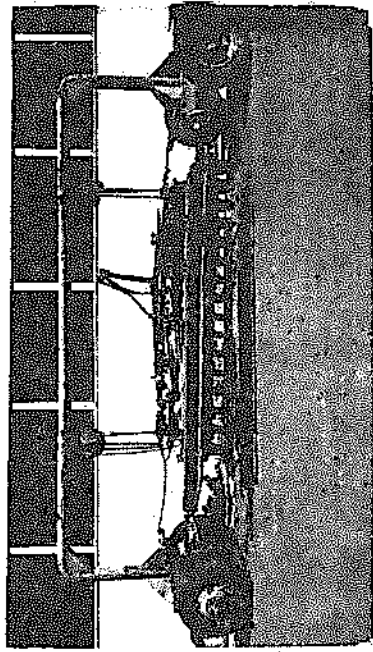
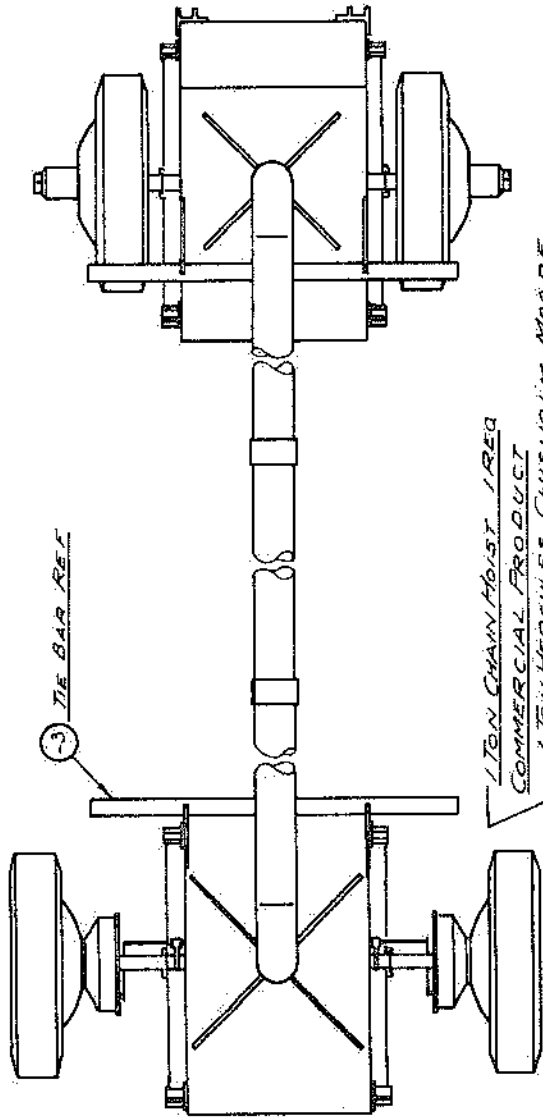
BRASS WASHER

MAT'L ROD ROUND $\frac{3}{4}$

DRILL $\frac{3}{8}$ SINK 82° FOR #9 X 1 WOOD SCREWS 2 HOLES



MAT'L STRAP IRON $\frac{3}{16}$ THICK



1 TON CHAIN HOIST 1 REG

COMMERCIAL PRODUCT

1 TON HERCULES CHISHOLM MOORE

HOIST CORP TONAWANDA NY OR EQUIVALENT

5 HANGER REF

6 ELL REF

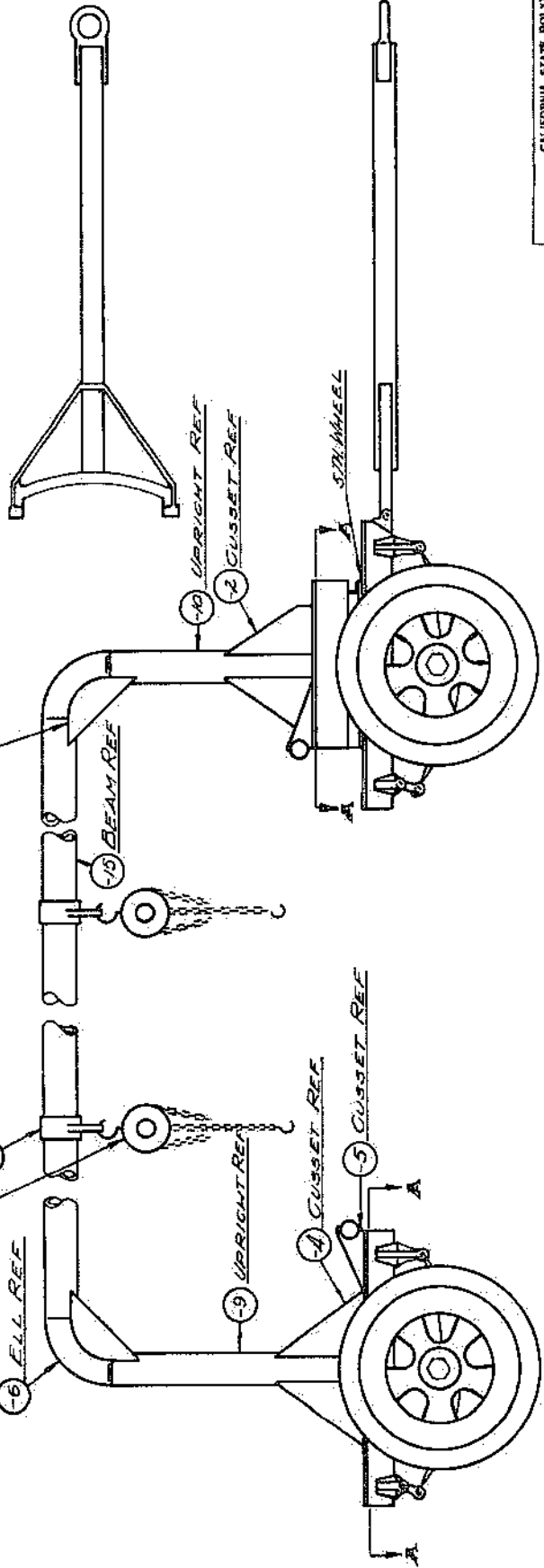
7 CUSSET REF

8 BEAM REF

9 UPRIGHT REF

4 CUSSET REF

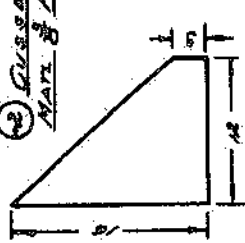
5 CUSSET REF



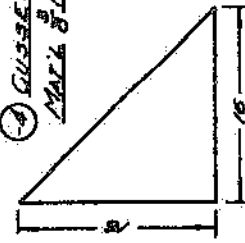
1. NOTE: ON ORIGINAL DESIGN ALL MATL BELOW LINE A WAS SALVAGED FROM A SURPLUS MACH. SHOP
TRAILER DIMENSIONS GIVEN MUST BE ADJUSTED TO FIT CARRIAGE EMATLS AVAILABLE

CALIFORNIA STATE POLYTECHNIC COLLEGE THE COLLEGE OF AGRICULTURE AGRICULTURAL ENGINEERING DEPARTMENT IN COOPERATION WITH BUREAU OF AGRICULTURAL EDUCATION	
IMPLEMENT CARRIER	DRAWING NUMBER
DATE	PAGE
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	100900

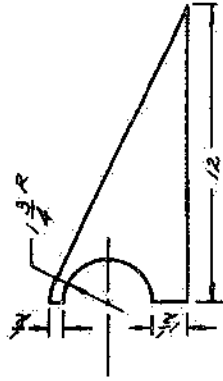
② GUSSET 1 REQ.
MATERIAL PLATE STL.



④ GUSSET 1 REQ.
MATERIAL PLATE STL.



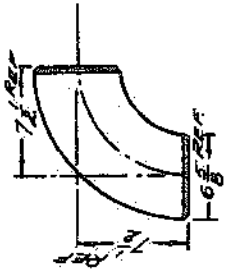
③ TIE BAR ASSEM. 2 REQ



⑤ GUSSET 4 REQ. MATERIAL PLATE STL.

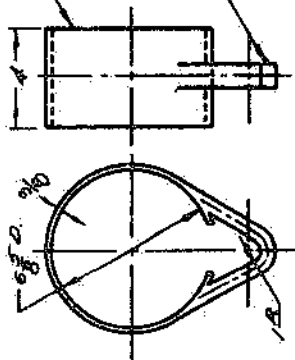


CHAIN ASSEM 1 REQ
ON-3 ASSEM
MATERIAL AS BOUT 1/2 IN
CRANE CHAIN WITH CAR-
ACITY CRANE HOOK 1 REQ.



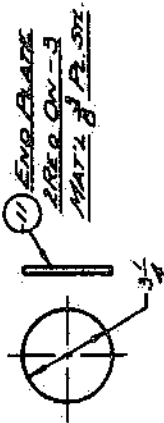
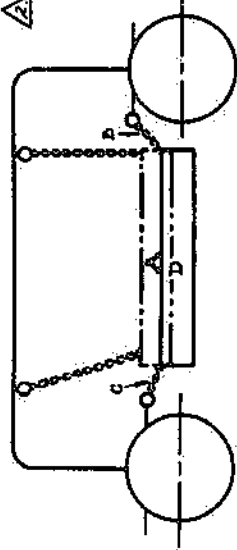
⑥ HOOK 2 REQ. MATERIAL AMER.
STD. 6" 90° WELDING ELBOW
DOUBLE EXTRA STRONG

⑦ RING 1 REQ ON-8
MATERIAL 8 X 8 X 1/2 PL. STL.

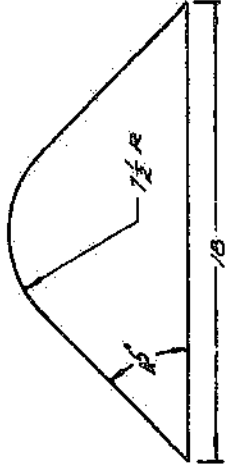


⑧ HANGER 1 REQ ON-8
MATERIAL 1/2 IN DIA BAR SQ.

⑩ HANGER ASSEM 2 REQ



⑪ END BLADE
2 REQ ON-3
MATERIAL PL. STL.



⑦ GUSSET 4 REQ. MATERIAL PL. STL.



⑨ UPRIGHT 1 REQ. DIM 1 1/2
MATERIAL SAME AS 15

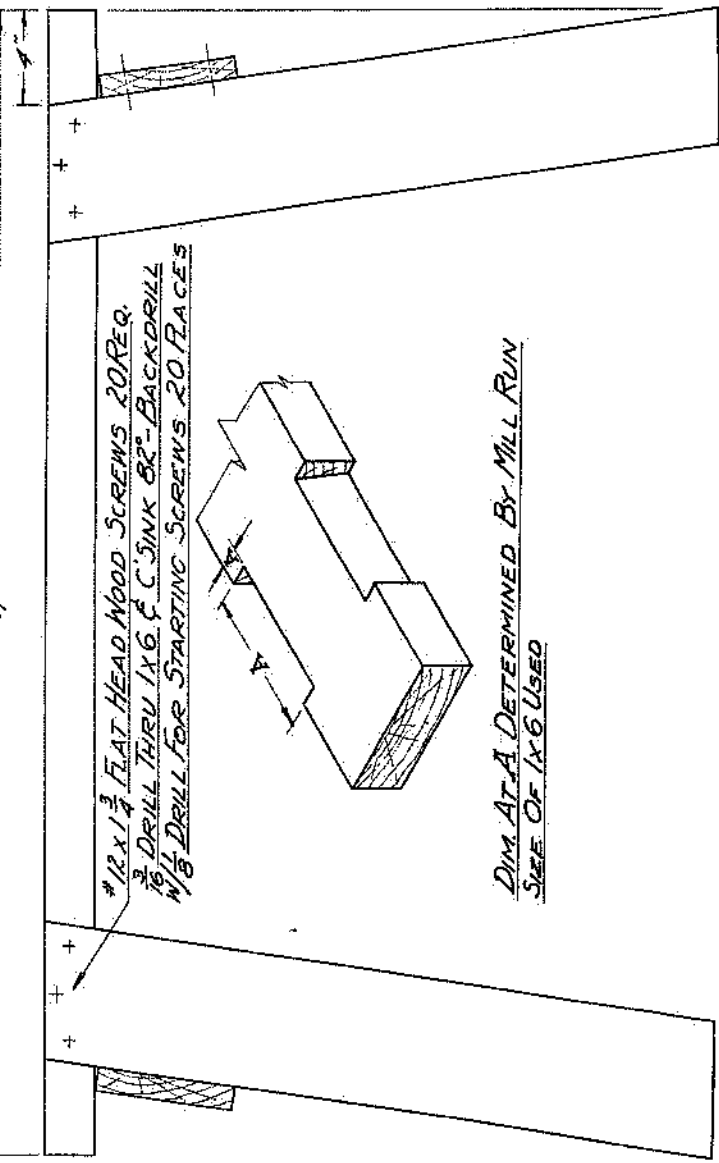
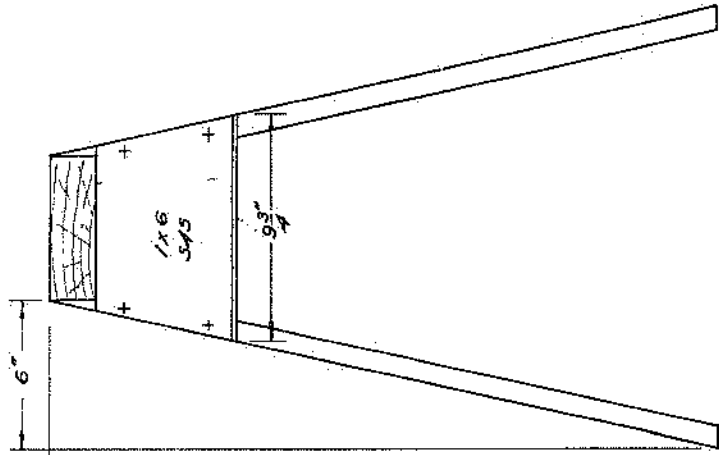
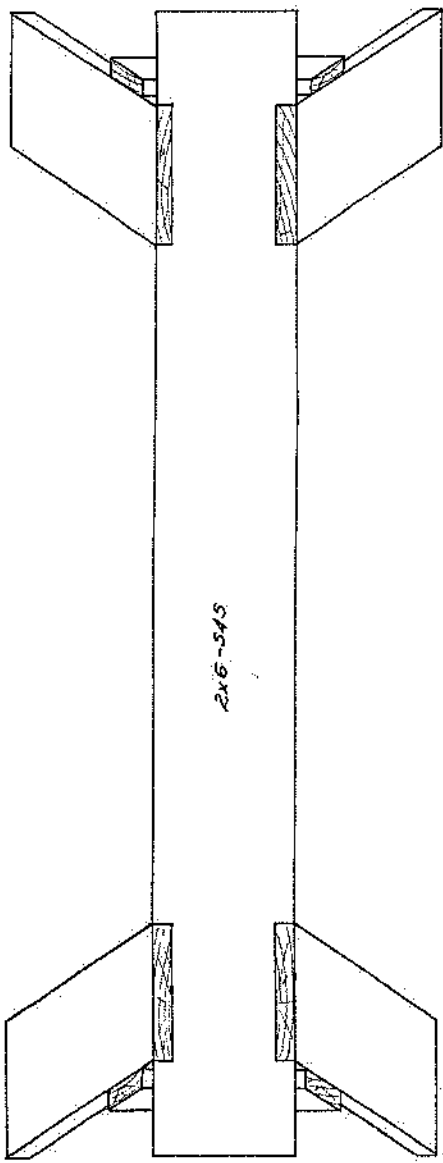
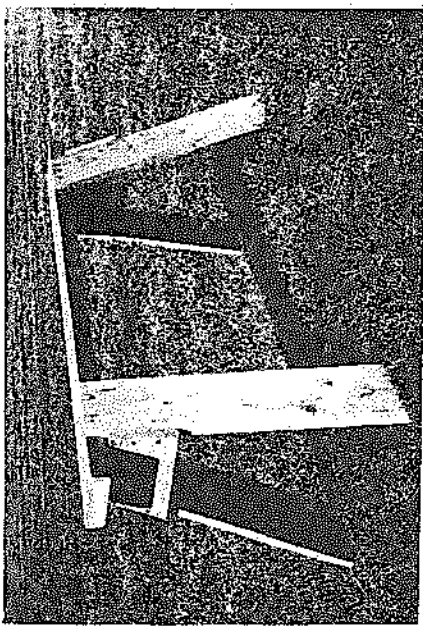
⑩ UPRIGHT 1 REQ. DIM 1 1/2
MATERIAL SAME AS 15

LOCATE BOLTS
AS SHOWN TO PRE-
VENT 8 HANGER
FROM BEING MOVED
INTO UNSAFE LOCA-
TION

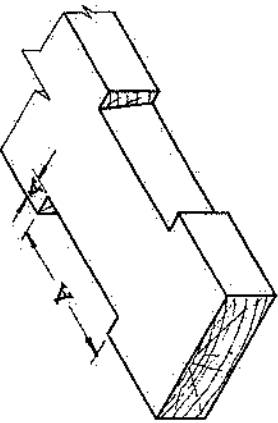


⑫ BEAM 1 REQ. MATERIAL 6" A.S. PIPE DOUBLE EXTRA STRONG PREFERRED
EXTRA STRONG MINIMUM

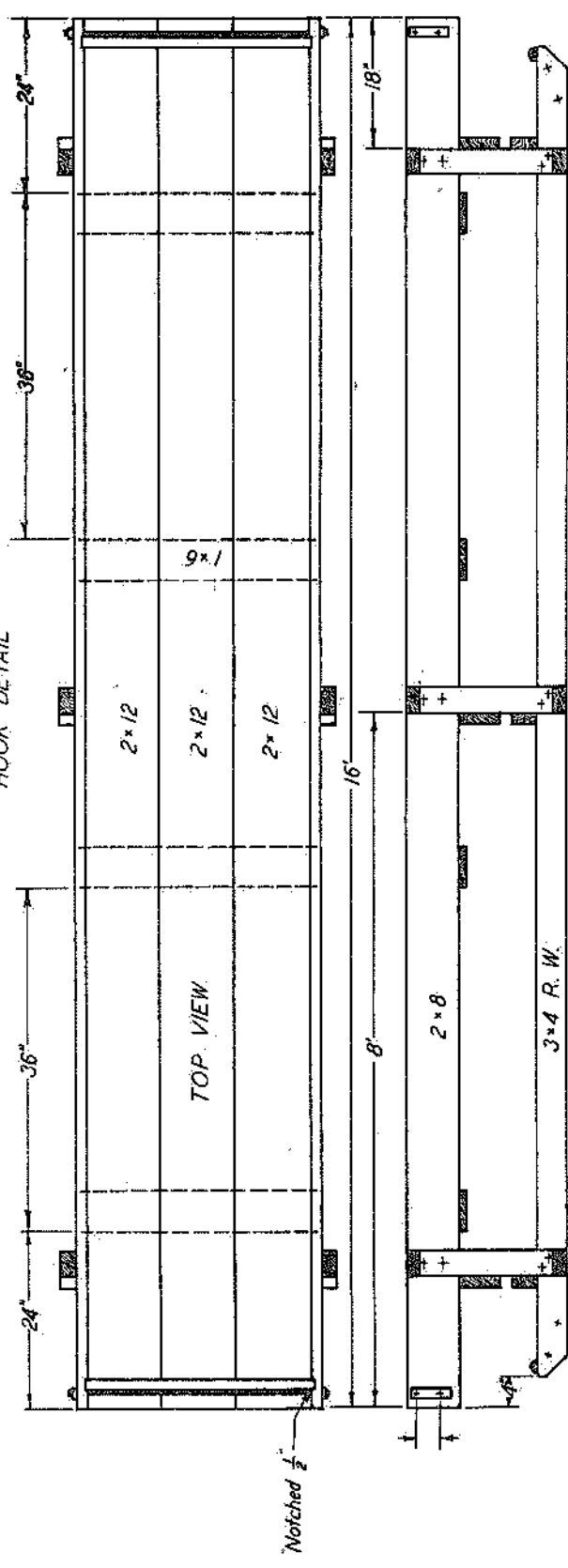
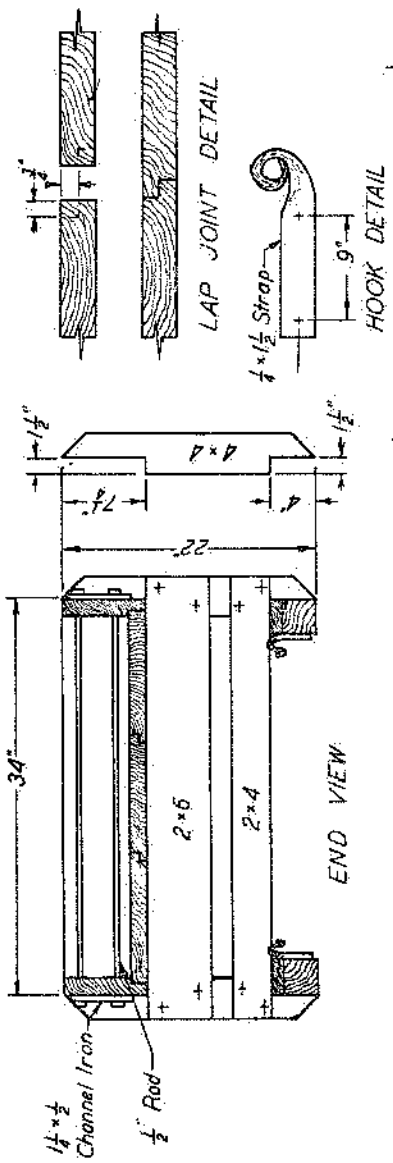
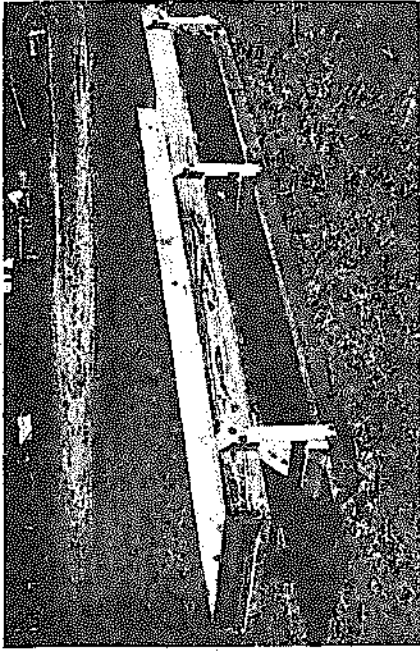
OPERATION NOTE: Load lifted to
position A then chains B & C are
connected. Load is lowered to
position D. Load then series B &
C reach between 3 bar assem
front floor.



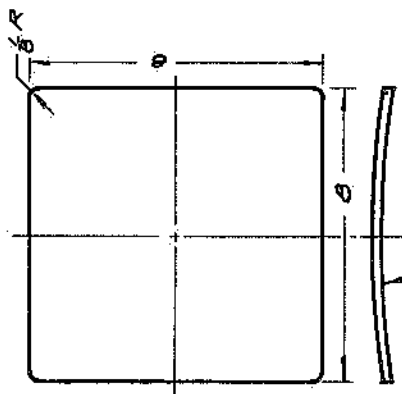
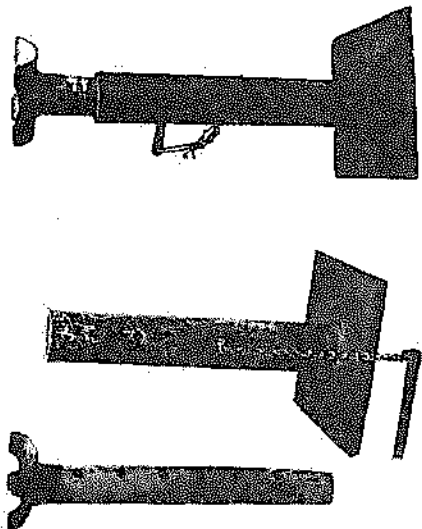
#12 x 1 3/4" FLAT HEAD WOOD SCREWS 20 REQ.
 3/8" DRILL THRU 1x6 & C SINK 82° BACKDRILL
 1/8" DRILL FOR STARTING SCREWS 20 PLACES



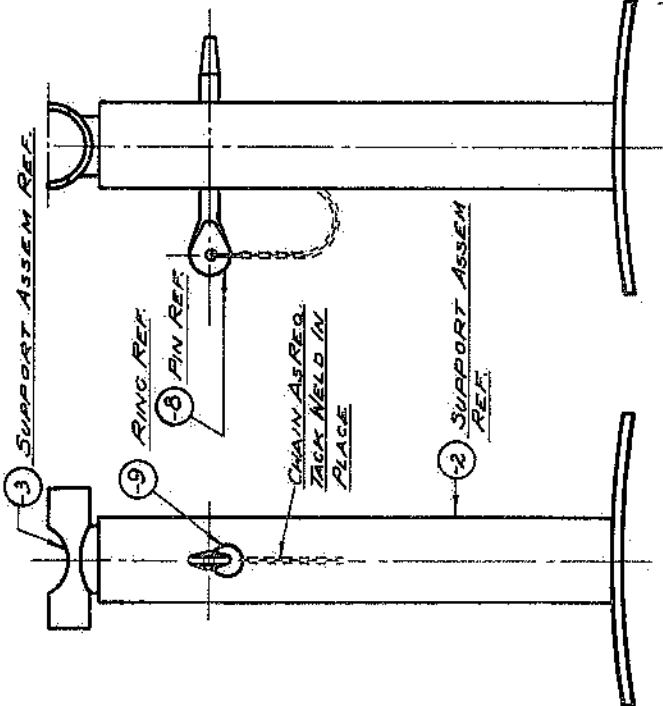
DIM. AT A DETERMINED BY MILL RUN
SIZE OF 1x6 USED



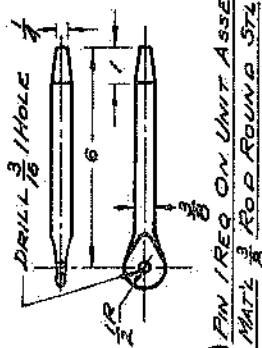
2x12 S4S D.F. Planks with a $\frac{3}{4}$ " lap joint between each plank form the bottom of the bunk and should be clamped together and held there by 1x6 cleats. Construct bunk box first and then build the framework to fit the box. By using 2x12 planks for the sides and ends this bunk can be made suitable for use with Dairy Cattle.



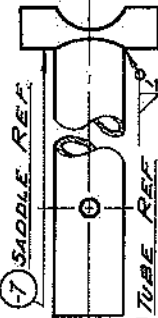
1 BASE PLATE / REQ ON 2
MAY 1/8" PLATE STL



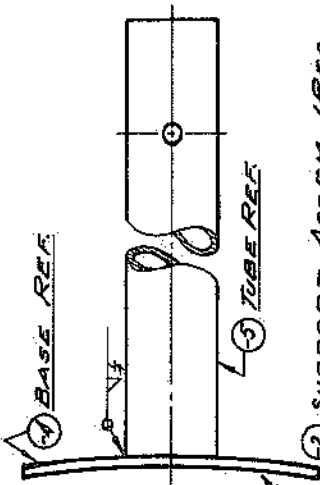
UNIT ASSEMBLY



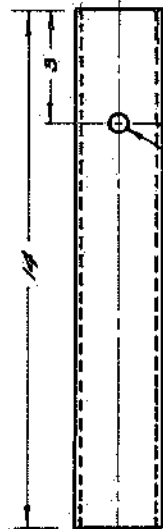
8 PIN / REQ ON UNIT ASSEM
MAY 3/8" ROD ROUND STL



3 TUBE ASSEM / REQ ON UNIT ASSEM
MAY 1/8" WELD ON ASSEM



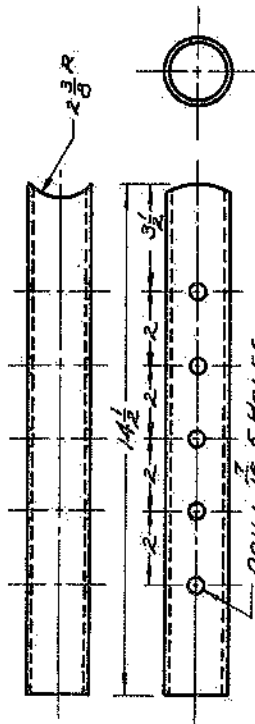
2 SUPPORT ASSEM / REQ
ON UNIT ASSEM



5 TUBE / REQ ON 2 SUPPORT ASSEM
MAY 2" PIPE

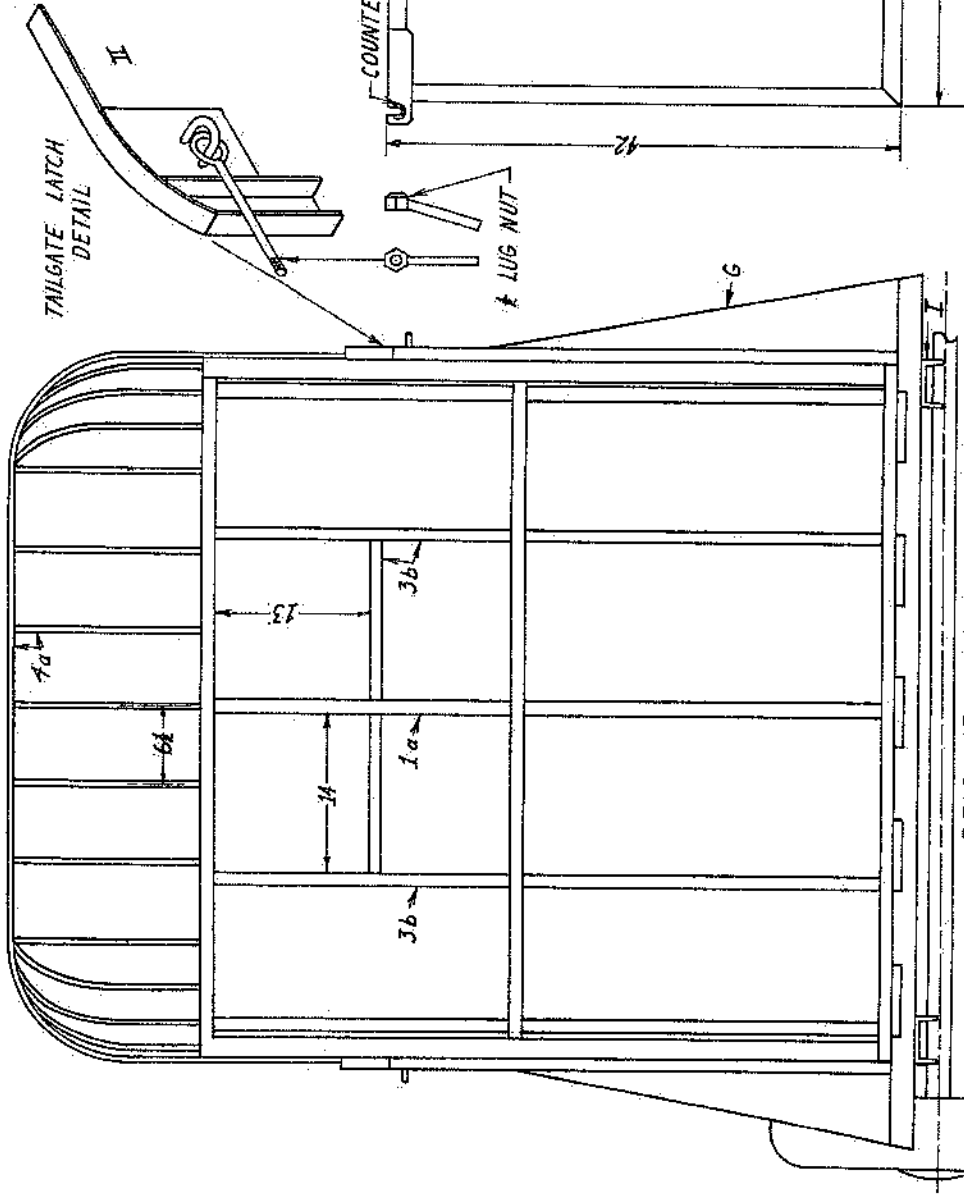
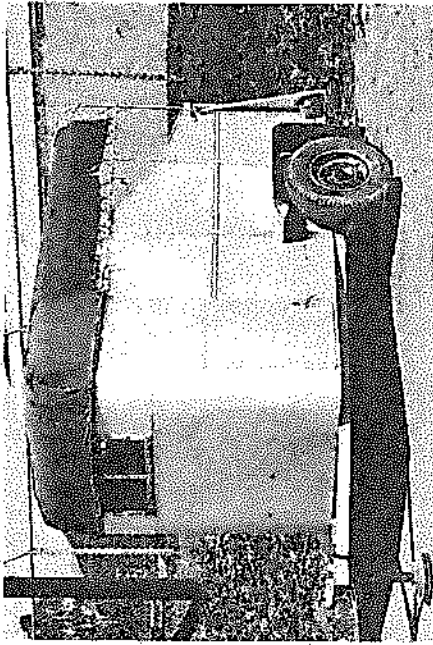


7 SADDLE / REQ ON 3 TUBE ASSEM
MAY 2" PIPE

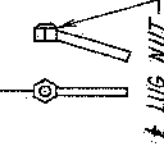
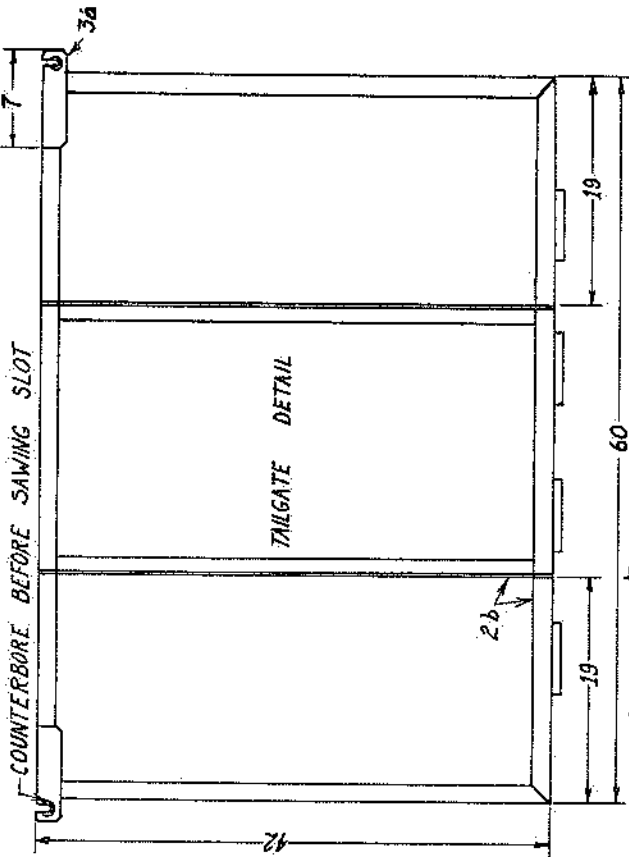
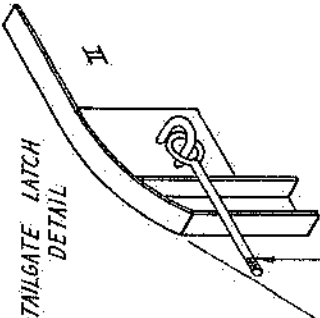


6 TUBE / REQ ON 3 ASSEM
MAY 1 1/2" PIPE

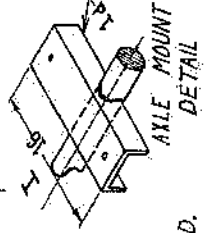
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AGRICULTURAL ENGINEERING DEPARTMENT BUREAU OF AGRICULTURAL EDUCATION	
ADJUSTABLE JACK - STAND	
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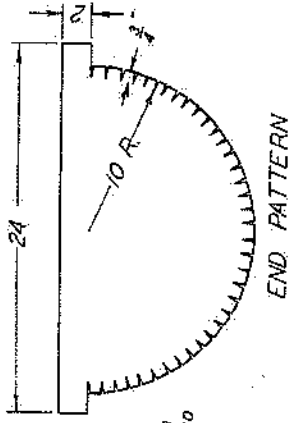
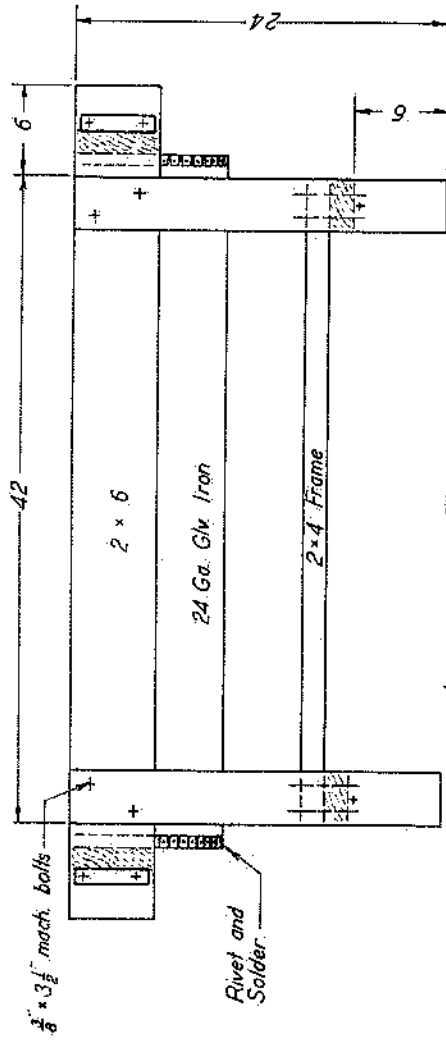
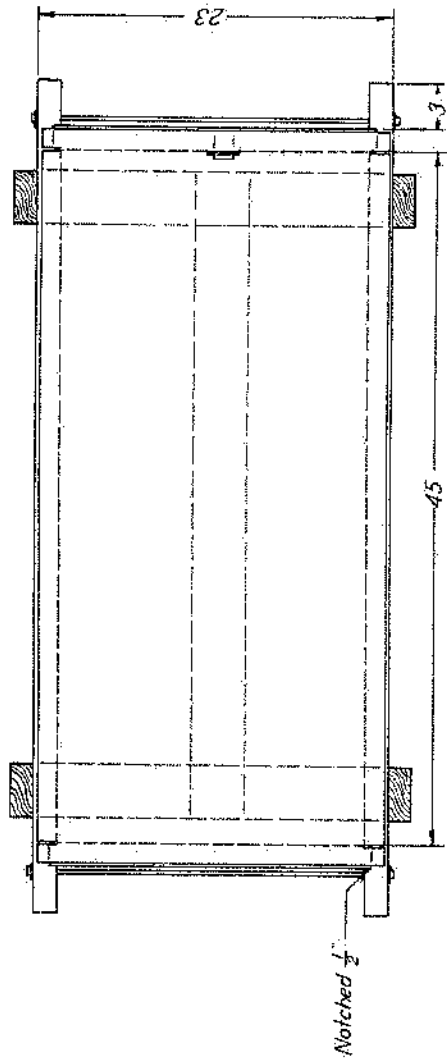
REAR VIEW WITHOUT TAILGATE



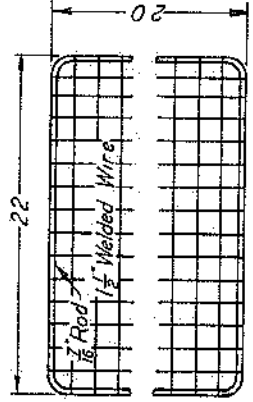
HINGE DETAIL



G WEB MADE OF 1/2" PLATE WITH 1x3 STRAP IRON WELDED AT RIGHT ANGLES TO IT ON THE OUTER EDGE.
 H TAILGATE IS CONSTRUCTED OF 1x8 DOUGLAS FIR BOLTED INTO THE TAILGATE FRAME PARALLEL TO THE HINGE. FOR NEATER APPEARANCE 1/2" PLYWOOD BEHIND 1x8 ROUGH LUMBER CAN BE USED.



All edges of glv iron turned under $\frac{1}{4}$ "
 One 4' x 8' sheet of glv iron is sufficient material for two complete troughs.



FLOAT GUARD

