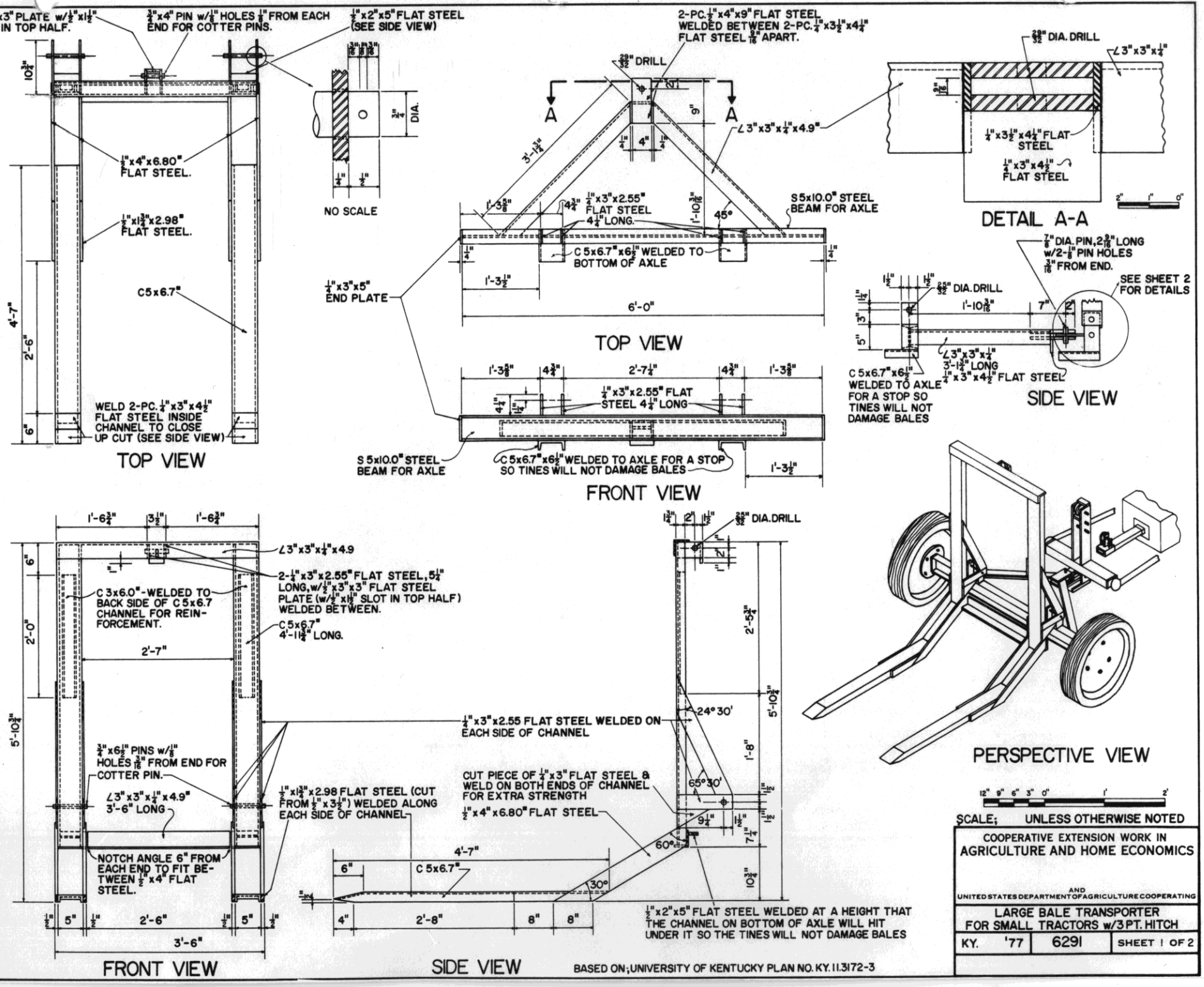
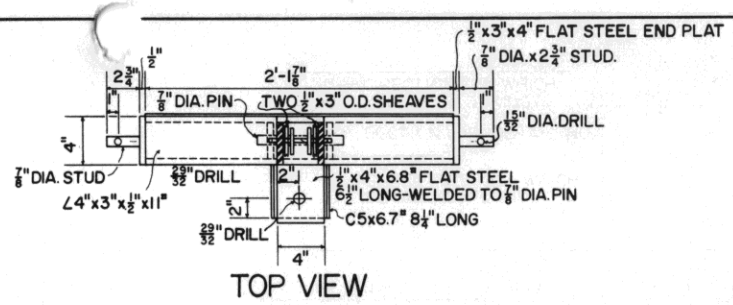
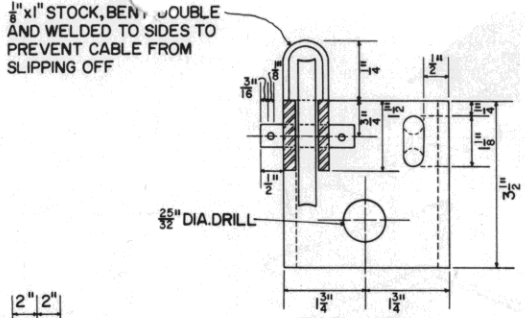
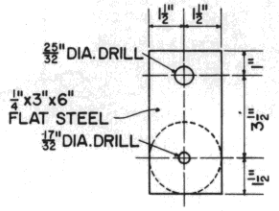
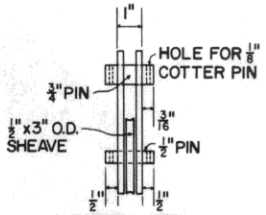

½"x3"x3" PLATE w/½"x1½" SLOT IN TOP HALF.
¾"x4" PIN w/⅛" HOLES ¾" FROM EACH END FOR COTTER PINS.
½"x2"x5" FLAT STEEL (SEE SIDE VIEW)
2-PC.¼"x4"x9" FLAT STEEL WELDED BETWEEN 2-PC.¼"x3½"x4¼" FLAT STEEL 3/16" APART.
29/32" DRILL
∠3"x3"x¼"x4.9"
29/32" DIA. DRILL
∠3"x3"x¼"
¼"x3½"x4¼" FLAT STEEL
¼"x3"x4½" FLAT STEEL
DETAIL A-A
NO SCALE
½"x4"x6.80" FLAT STEEL.
½"x1¾"x2.98" FLAT STEEL.
C5x6.7"
WELD 2-PC.¼"x3"x4½" FLAT STEEL INSIDE CHANNEL TO CLOSE UP CUT (SEE SIDE VIEW)
TOP VIEW
¼"x3"x5" END PLATE
¼"x3"x2.55" FLAT STEEL 4¼" LONG.
C 5x6.7"x6½" WELDED TO BOTTOM OF AXLE
S5x10.0" STEEL BEAM FOR AXLE
45°
6'-0"
TOP VIEW
⅞" DIA. PIN, 2 9/16" LONG w/2-⅛" PIN HOLES 3/16" FROM END.
SEE SHEET 2 FOR DETAILS
25/32" DIA. DRILL
C 5x6.7"x6½" WELDED TO AXLE FOR A STOP SO TINES WILL NOT DAMAGE BALES
∠3"x3"x¼" 3'-1½" LONG
¼"x3"x4½" FLAT STEEL
SIDE VIEW
¼"x3"x2.55" FLAT STEEL 4¼" LONG
S 5x10.0" STEEL BEAM FOR AXLE
C 5x6.7"x6½" WELDED TO AXLE FOR A STOP SO TINES WILL NOT DAMAGE BALES
FRONT VIEW
∠3"x3"x¼"x4.9
2-¼"x3"x2.55" FLAT STEEL, 5¼" LONG, w/½"x3"x3" FLAT STEEL PLATE (w/½"x1½" SLOT IN TOP HALF) WELDED BETWEEN.
C 3x6.0"-WELDED TO BACK SIDE OF C 5x6.7 CHANNEL FOR REINFORCEMENT.
C 5x6.7" 4'-11¾" LONG.
¾"x6½" PINS w/⅛" HOLES 3/16" FROM END FOR COTTER PIN.
∠3"x3"x¼"x4.9" 3'-6" LONG
NOTCH ANGLE 6" FROM EACH END TO FIT BETWEEN ½"x4" FLAT STEEL.
FRONT VIEW
¼"x3"x2.55 FLAT STEEL WELDED ON EACH SIDE OF CHANNEL
½"x1¾"x2.98 FLAT STEEL (CUT FROM ½"x3½") WELDED ALONG EACH SIDE OF CHANNEL
CUT PIECE OF ¼"x3" FLAT STEEL & WELD ON BOTH ENDS OF CHANNEL FOR EXTRA STRENGTH
½"x4"x6.80" FLAT STEEL
25/32" DIA. DRILL
24° 30'
65° 30'
60°
30°
C 5x6.7"
SIDE VIEW
½"x2"x5" FLAT STEEL WELDED AT A HEIGHT THAT THE CHANNEL ON BOTTOM OF AXLE WILL HIT UNDER IT SO THE TINES WILL NOT DAMAGE BALES
PERSPECTIVE VIEW
SCALE; UNLESS OTHERWISE NOTED
COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS
AND UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING
LARGE BALE TRANSPORTER FOR SMALL TRACTORS w/3 PT. HITCH
KY. '77 6291 SHEET 1 OF 2
BASED ON; UNIVERSITY OF KENTUCKY PLAN NO. KY. 11.3172-3

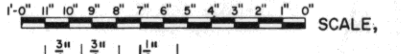


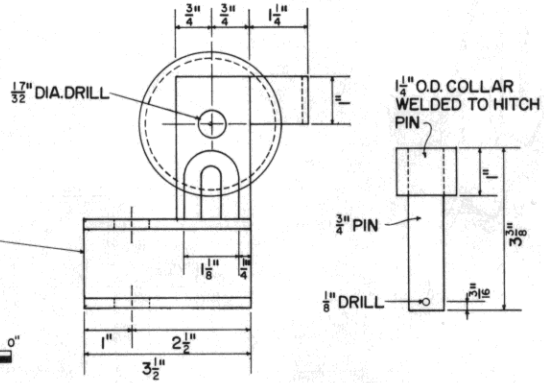


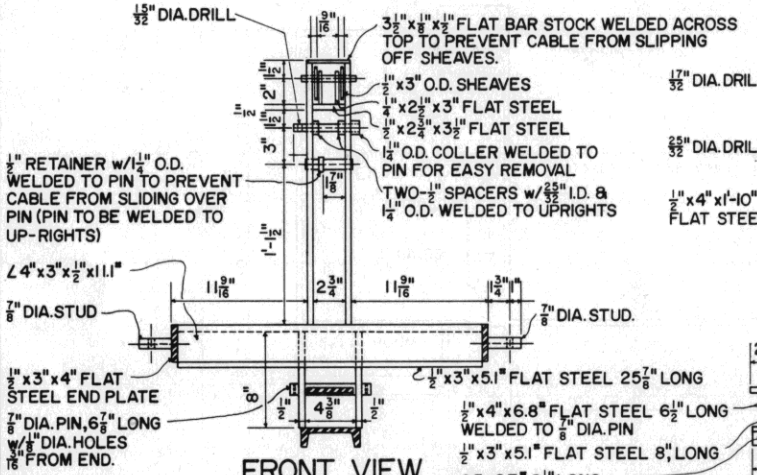


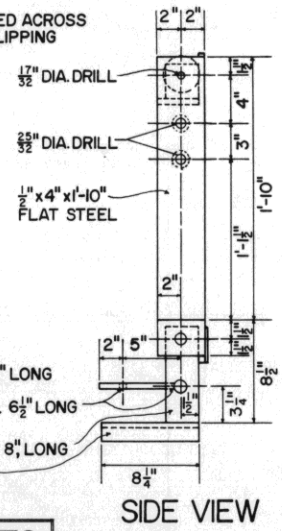


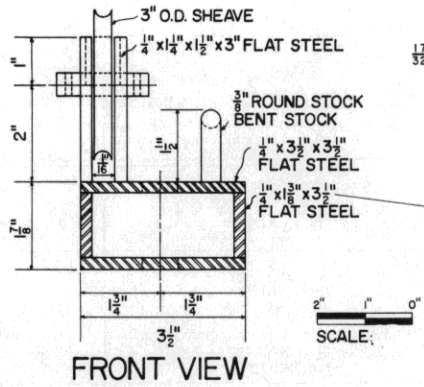
TURNBUCKLE DETAIL











STRUCTURAL MATERIAL REQUIREMENTS

MATERIAL	MIN. LENGTH REQ'D. (FT.)	WEIGHT
C3x6.0"/FT.	4.10	24.60
C5x6.7"/FT.	21.25	142.38
S5x10.0"/FT.	6.00	60.00
L4"x3"x1/2"x11.1"/FT.	2.16	23.98
L3"x3"x1/4"x4.9"/FT.	13.50	66.15
FLAT STEEL, 1/2"x4"x6.8"/FT.	18.00	122.40
FLAT STEEL, 1/4"x3"x2.55"/FT.	20.50	52.28
ROUND STEEL, 7/8"x2.0"/FT.	1.30	2.60
ROUND STEEL, 3/4"x1.5"/FT.	2.80	4.20
ROUND STEEL, 1/2"x0.67"/FT.	1.00	0.67
ROUND STEEL, 3/8"x0.36"/FT.	0.33	0.12
STEEL PIPE, 3/4" I.D.x1 1/4" O.D.x2.67"/FT.	0.33	0.89
FLAT STEEL, 1/2"x3"x5.1"/FT.	4.00	20.40
FLAT STEEL, 1/2"x3 1/2"x2.98"/FT.	1.66	4.95 *
TOTAL WEIGHT-525.62LBS. *		

* IMPORTANT NOTE: AFTER THE WINCHING CABLE HAS BEEN INSTALLED, THE LIFTING CAPACITY CAN BE INCREASED BY LENGTHING CHAIN BETWEEN THE RETAINING SLOT (c) AND THE TURNBUCKLE. HOWEVER, THIS ADJUSTMENT DECREASES THE CLEARANCE OF THE TINES DURING TRANSPORT.

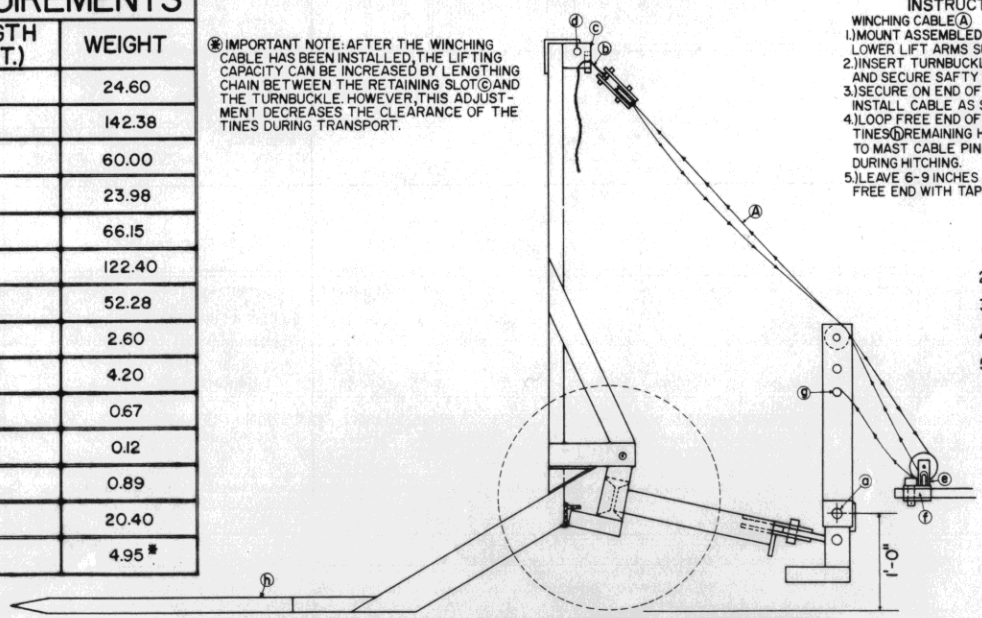


DIAGRAM FOR CABLE INSTALLATION & TRACTOR HOOK-UP

N.T.S.

INSTRUCTIONS FOR CABLE INSTALLATION (SEE DIAGRAM)

WINCHING CABLE (A)

1.) MOUNT ASSEMBLED LIFTER APPARATUS TO 3-POINT TRACTOR HITCH AND POSITION LOWER LIFT ARMS SUCH THAT HITCH POINT (g) IS 12" ABOVE GROUND.

2.) INSERT TURNBUCKLE CHAIN (b) IN SLOT (c) AS NEAR TO THE TURNBUCKLE AS POSSIBLE AND SECURE SAFTY PIN (d) (SEE NOTE *).

3.) SECURE ON END OF CABLE TO EYE (e) ON DRAWBAR ASSEMBLY (f) AND PROCEED TO INSTALL CABLE AS SHOWN.

4.) LOOP FREE END OF CABLE AROUND MAST CABLE PIN (g) AND PULL CABLE TANT WITH TINES (h) REMAINING HORIZONTAL. ALLOW 4-6 INCHES OF SLACK IN CABLE AND SECURE TO MAST CABLE PIN. THIS IS TO ALLOW EASY ATTACHMENT OF DRAWBAR ASSEMBLY DURING HITCHING.

5.) LEAVE 6-9 INCHES OF EXCESS CABLE FOR POSSIBLE ADJUSTMENTS SECURING THE FREE END WITH TAPE.

OTHER MATERIALS NEEDED

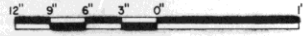
1.) 2-15" WHEELS CENTERED ON AXLE.

2.) 1/4" STEEL CHAIN, 24" LONG.

3.) 1/4" DIA. STEEL CABLE, 14' LONG.

4.) 4-1/2"x3" O.D. CABLE SHEAVES w/1/2" BORE.

5.) 2-CABLE CLAMPS.



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