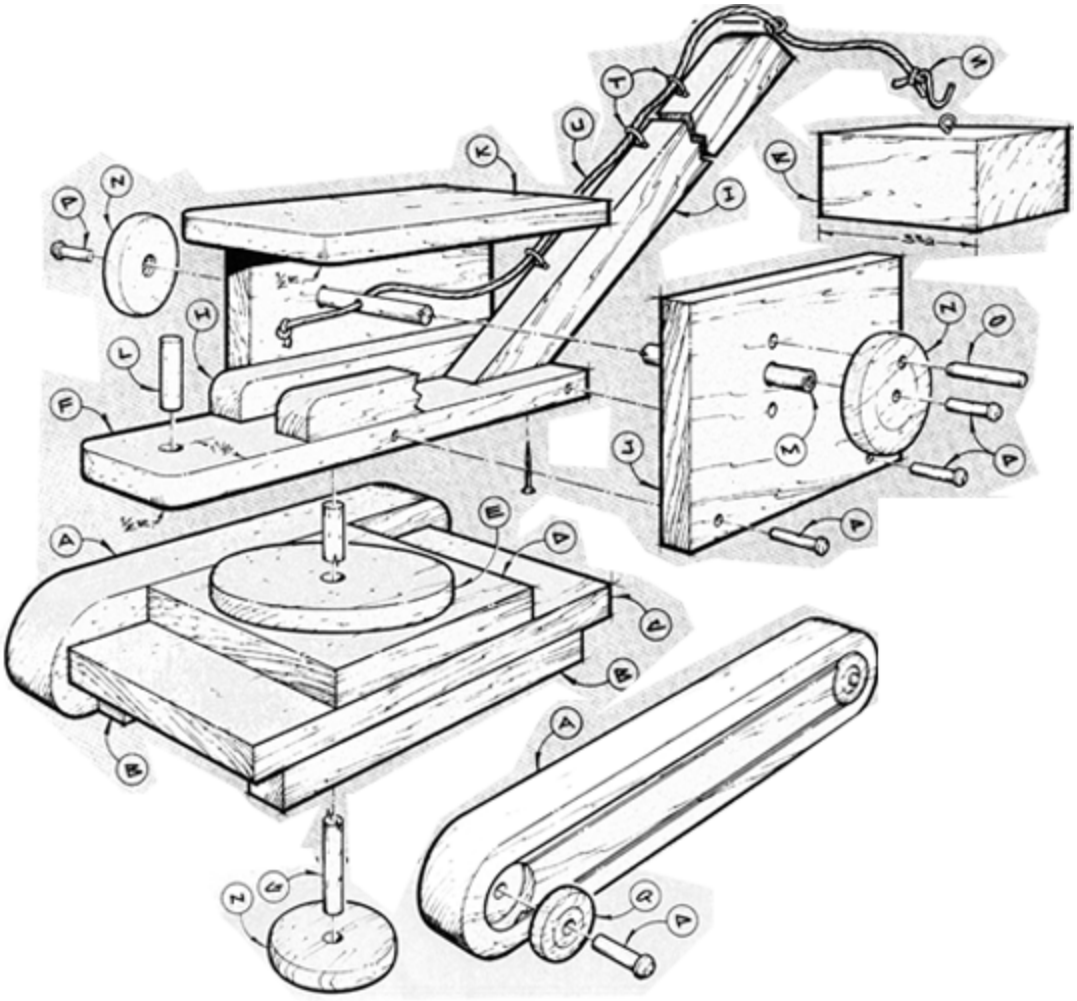
Project 18758:
Toy Crane

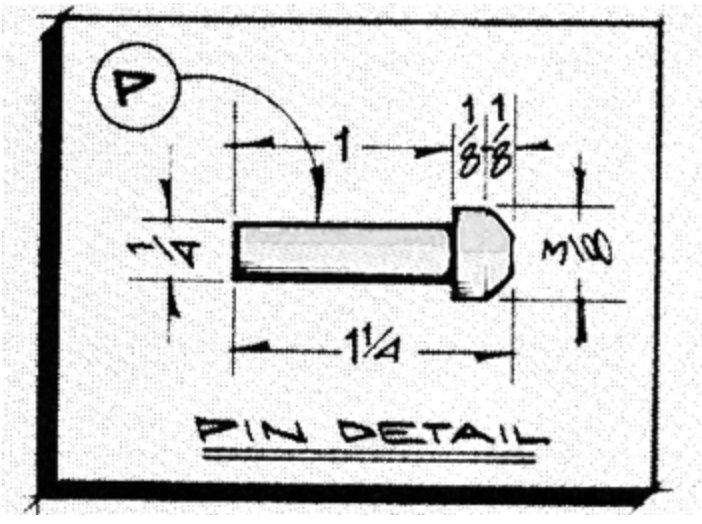
With a cab that swivels 360 degrees and a crank that raises and lowers the "cable," this sturdy wooden toy should prove to be lots of fun for backyard contractors. Maple, a hard and durable wood, is a good choice of stock.

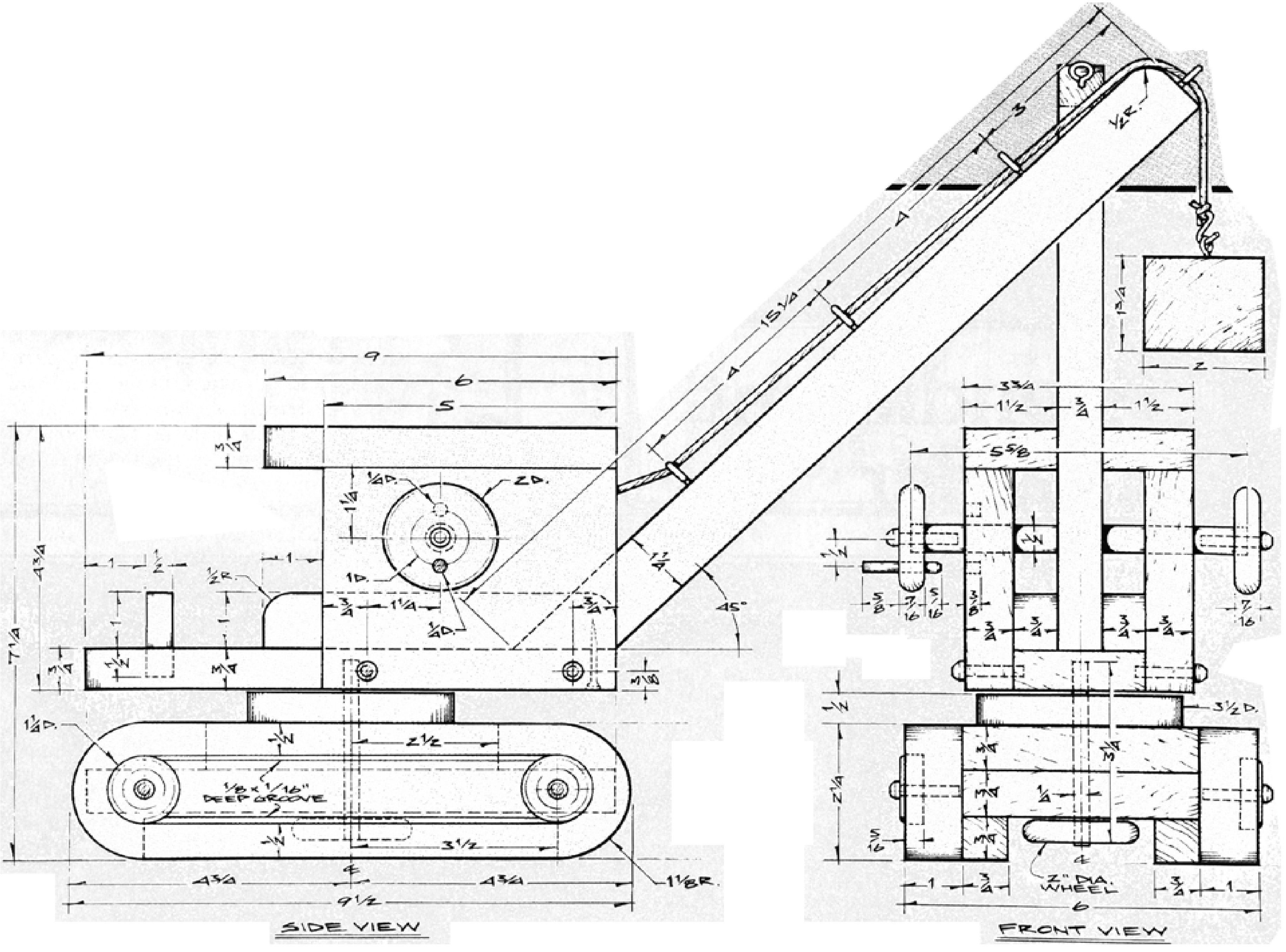
Toy Crane Materials List

Part	Description	Size	No. Req'd	
A	Track	1" x 2-1/4" x 9-1/2"	2	
B	Cleat	3/4" x 3/4" x 7"	2	
C	Undercarriage	3/4" x 4" x 9"	1	
D	Plate	3/4" x 4" x 5"	1	
E	Disc	3-1/2" dia. x 1/2" thick	1	
F	Base	3/4" x 2-1/4" x 9"	1	
G	Pivot Rod	1/4" dia. x 1/2" thick	1	
H	Supports	3/4" x 1 x 6"	2	
I	Boom	3/4" x 1-1/4" x 15-1/4"	1	
J	Side	3/4" x 4" x 5"	2	
K	Roof	3/4" x 3-3/4" x 6"	1	
L	Handle	1/2" dia. x 1-1/2" long		
M	Shaft	1/2" dia. x 5-5/8" long		
N	Pivot Rod/Shaft Wheel	2" dia. x 7/16" thick	3	
O	Crank	1/4" dia. x 1-3/8" long		1
P	Pin	See detail.	10	
Q	Track Wheel	1-1/4" dia. x 5/16" thick		4
R	Block	1-3/4" x 2" x 3-3/4"	1	
S	"S" Hook	1" long		1
T	Screw Eye	5/8"	5	
U	Cable	1/8" dia. x 40" long	1	

Toy Crane Complete Schematic






SIDE VIEW
FRONT VIEW
1/8 x 1/16" DEEP GROOVE
2" DIA. WHEEL
11/8 R.
91/2
71/4
151/4

Toy Crane Step-by-Step Instructions

1. Cut the two tracks (A) to length and width.
2. Use a 1-1/4" diameter drill bit to bore a 5/16" deep by 1-1/4" hole on each end.
3. Use the router equipped with an edge-guide and a 1/8" diameter straight bit to cut the 1/16" groove.
4. Use a compass to scribe the 1-1/8" radius on each end.
5. Use a band or saber saw to cut out the circles.
6. Select 3/4" thick stock to make the two cleats (B), the undercarriage (C), and the plate (D).
7. Cut parts B, C, and D to length and width.
8. Hand plane stock to 1/2" thick to make the disc (E).
9. Use a circle cutter on the drill press to cut the 3-1/2" diameter disc.
10. Use glue and clamps to join parts C, D, and E.
11. Allow to dry.
12. Use glue and clamps add parts A and B to the rest of the assembly.
13. Allow to dry.
14. Cut the base (F), supports (H), sides (J), roof (K), and boom (I) from 3/4" stock.
15. Add a 1/2" radius to the upper front and back corners of parts H and to the back corners of parts F and K.
16. Bore the 1/2" diameter by 1/2" deep hole in part F to accept part L as shown.
17. Bore a 5/8" diameter hole in parts J to accept part M.
18. Bore two 1/4" “stop” holes above and below the 5/8" hole to allow the crank (O) to lock in place.
19. Use glue and clamps to assemble parts F, H, and I.
20. Allow to dry.
21. Add parts J and K to the assembly.
22. Lathe-turn the 2" diameter shaft wheel (N), the 1-1/4" diameter track wheel (Q), and the pins (P).
23. Glue the track wheels to parts A.
24. Secure the track wheels further with pins (P) glued into each.
25. Glue part G into part F.
26. Allow to dry.
27. Insert part F through parts E, D, and C.
28. Glue part N to the end to secure the cab in place, being sure to keep glue squeeze-out to a minimum so the cab is free to pivot.
29. Final sand to smooth all surfaces and remove any sharp edges.
30. Leave unfinished.

These plans were originally published in Volume 10, Issue 3 of *The Woodworker’s Journal* (May/June 1986, pages 44-45).