

Four Horse Hot Walker

Author: Donald Shaw
 Instructor: James Tripp
 School: Central Florida Community College
 City & State: Ocala, FL

The four horse hot walker is a mechanical means of exercising and cooling out horses after vigorous exercise, and provides a means of exercising horses with limited man-power.

Frame Construction

There are two primary sections in this component. Construction is of 2" pipe 30" long, screwed into "T" joints and welded. Two vertical 2" x 59" members are screwed into the "T" joints on the base members. Four 2" x 35" support members are welded into place 6" from the ends of the horizontal members, angled in to the vertical frame support. The vertical members are joined by a 2' x 47" horizontal section on the upper terminal end. Vertical and horizontal members are joined by two 90°, 2" couplings and welded. 45" down and parallel to the upper horizontal cross member, a 2" x 48" pipe was welded into place.

Drive Train

A differential and axle assembly was welded into place on the upper and lower horizontal cross members, with the axle housing and brake drums assuming vertical positions.

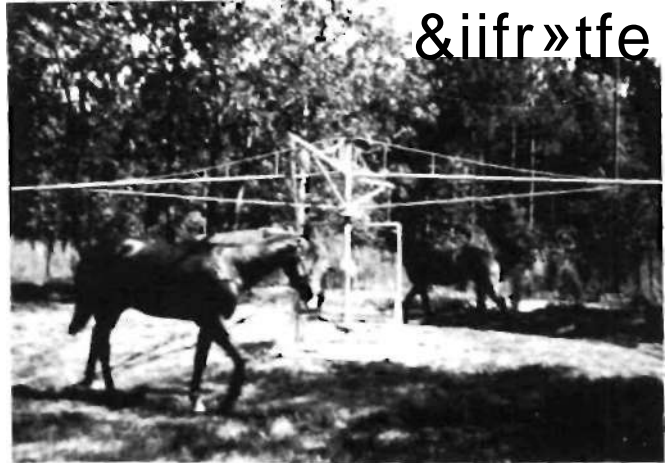
The differential and axle assembly serve as the drive train for the rotating section of the hot walker. By setting the brake at the lower drum head, the upper drum head is caused to rotate. This arrangement also provides a safety factor for balky horses. A proper friction setting will allow the lower drum to rotate, preventing electric drive motor burn out.

The electric motor and drive assembly is attached to a plate welded to the lower horizontal frame assembly. The differential input shaft is chain and sprocket driven from the electric motor.

Upper Unit

The basic part of the rotating upper unit is a 2" x 34" long pipe with a 4Vi" square plate at the bottom. At the top, is welded a Vi" x 4Vi" round plate. The lower plate is attached to the differential and axle assembly with lug bolts.

The arms for the walker are constructed of 16' pipe. Twelve feet out, on the bottom of each pipe, is welded a plate to connect the bottom support arm, which is braced to the 4Vi" plate on the bottom of the upper unit. A Vi" rod, 14' long is welded to the top of each arm, and runs from the arm to the 4Vi" round plate and is braced with short sections of Vi" rod.



To assemble the arms to the stanchion, the 2" pipe is slid into the 2V2" pipe in the center. At the top, the Vi" rod is inserted through a hole in the round, top plate. A bolt is placed through the Vi" rod to prevent it from slipping out. The bottom support is a 10' square tubing attached to the plate on the arm and to the plate at the base of the stanchion with 'A' bolts. The arms are further supported horizontally by a Vi" cable run through a plate, 7' out on each arm, and secured by a 10" turn buckle. In the end of each arm is welded a "U" shaped rod to attach the lead ropes.

Base

The base of the walker is bolted to a 6' x 6' concrete slab.

Materials	Quantity
20' x V2" rods	4
20' x 2" black pipes	5
2" 90° couplings	2
2" "T" joints	2
20' x 4Vi" square tubing	2
34" x 3/2" black pipe	1
8' x 2Vi" black pipe	1
4Vi" square plate	1
4V2" round plate	1
1/2" nylon rope	16'
Heavy snaps	4
Dayton Vi horse motor	1
Ford rear end - used	1
Vi" cable	60'
10" turn buckle	
1" "U" clamps	
V* x 2" x 2/2" plates	
DeRusto Paint	qt.

