

## ALLEN HYDRAULIC HAY AND BEAN RAKE

David Allen  
Allen Manufacturing  
Fresno, California

The Allen hydraulic powered hay and bean rake was an idea born out of necessity by David Allen as a custom hay operator in Blythe, California in the early 70's. Using conventional ground drive rakes, Allen was constantly faced with problems of downtime due to numerous moving parts in his ground drive rakes, repair costs and maintenance, plus a total dependence on tractor speed for his rake speed which limited his ability to handle certain material and field conditions in delivering quality hay. So, he converted his ground drive rakes to hydraulic power with an orbit motor replacing the whole drive chain of parts and additional changes in the star, hubs, bar head bearings, lift crank and others. Some 46 grease inserts were eliminated in a set of rakes. These changes greatly reduced the rake problems and gave him infinite control of his rake speed regardless of tractor speed. For the last two years that he remained in the hay business his rake problems were ended and the response to the hydraulic powered rake concept was such that a rake manufacturing business was generated and is now located at 180 North Fruit in Fresno, California.

Allen Manufacturing Company of Fresno, California is glad to have the opportunity to introduce their latest concept in hydraulic powered hay rakes as part of the California Alfalfa Symposium.

The "rake with power instead of pull" concept has generated a tremendous response in the hay and bean industry due to rake speed versatility, lack of downtime, parts and maintenance while preserving the quality of the material in the handling process.

Previously, the ALLEN HYDRAULIC RAKES are right and left-hand rakes which have been used as singles or hooked up to the Allen tool bar as doubles, allowing the operator to control the speed of the rakes totally independent of tractor speed.

Due to the strong need for, and continuous request from, the hay and bean industry to help eliminate the time, trouble and problems in hooking up and unhooking two separate rakes for double rake use and to provide the operator with quick, easy hydraulic control of important phases of rake adjustments, Allen Manufacturing Company now has the new ALLEN 789 HYDRAULIC RAKE.

The 789 now incorporates the same unique hydraulic rake power (forward or reverse) with the added advantages of being able to spread one or both baskets out to desired widths and angles as well as hydraulically raise and lower the rakes for crossing borders, etc., and to close the baskets in for transport. All of this is now done from the tractor seat and ten (10) seconds from the closed in, transport position (4' high, 8½' wide) to desired raking position of baskets is all the time required. The 789 eliminates the physical time and labor in positioning the baskets for raking or for transport. Note these features:

- Turn or rake single rows of hay.
- Turn or rake double rows of hay (in one pass).
- Rake up to 6 to 8 rows of beans into one row with hydraulic adjustments of basket widths and angles, to adapt to bean rows.
- Hydraulic raising and lowering of baskets for crossing borders, etc.
- Flotation tires for added cushion effect.
- Offset wheel positions provides "walking" action over borders and for double windrowing techniques.
- Well balanced tongue weight for easy one man hook up.
- Safe, easy transport from field to field or down the highway at any desired speed.
- Choice of single or double hitch.
- Choice of electric solenoid or lever action to initiate all phases of hydraulic movement of baskets and rake speed.
- Virtually maintenance free with only four (4) grease inserts (one at each height adjustment point).
- Each basket width and angle adjustment independent of the other.
- Elimination of unnecessary moving parts to reduce downtime, parts and repair costs.
- Easy use portable jack at hitch area.
- Convenient top link adjustment for desired basket tilt (tight or fluffy windrows).

- Unique bar head and bar head bolt assembly to eliminate maintenance and provide quick, easy bearing change.
- Sealed dual ball bearings in bar heads for long life and no maintenance.
- Open center star for quick access to star hub bearing.
- Reinforced stars at high stress points.
- Heavy-duty wheel spindles to withstand rough field conditions.
- Quick, easy basket angle adjustment to suit individual windrow needs.
- Easy backing up of rake regardless of position of both baskets.
- Raking action can be forward or reverse for raking or turning of hay.
- Dual rakes provide single rake maneuverability for cleaning out corners, etc.

All of these features make the new ALLEN 789 HYDRAULIC RAKE the ultimate in providing the rake operator with the ease, convenience and versatility of total hydraulic rake operation from the tractor seat. There is nothing comparable on the market.



Figure 1. Compact transport position.

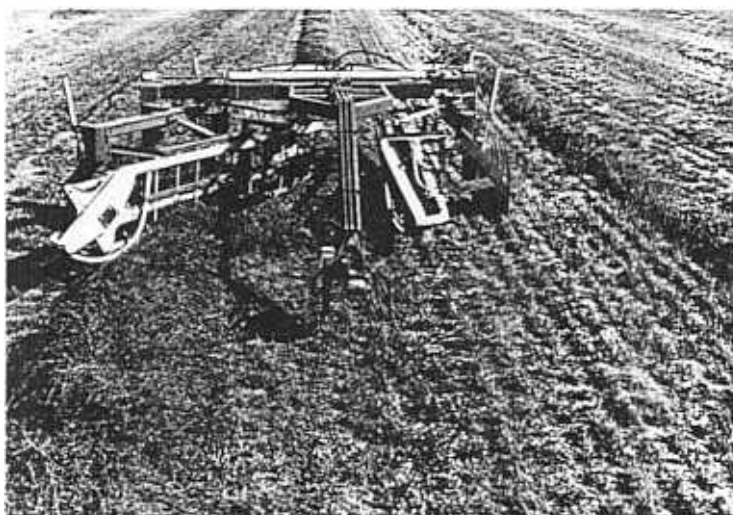


Figure 2. Single rake application or turning single windrow.

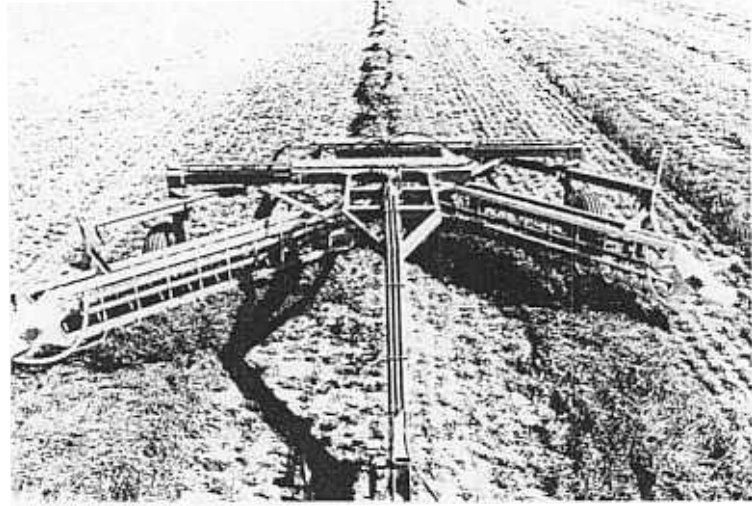


Figure 3. Raking two single windrows into one single windrow.

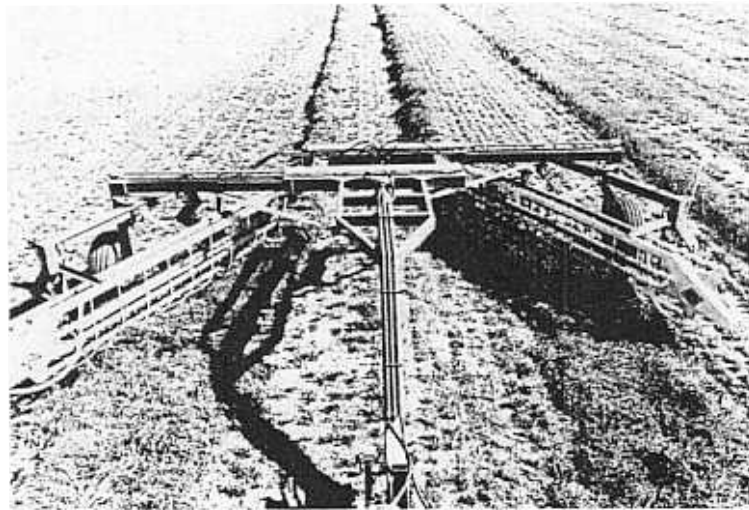


Figure 4. Turning two single windrows.