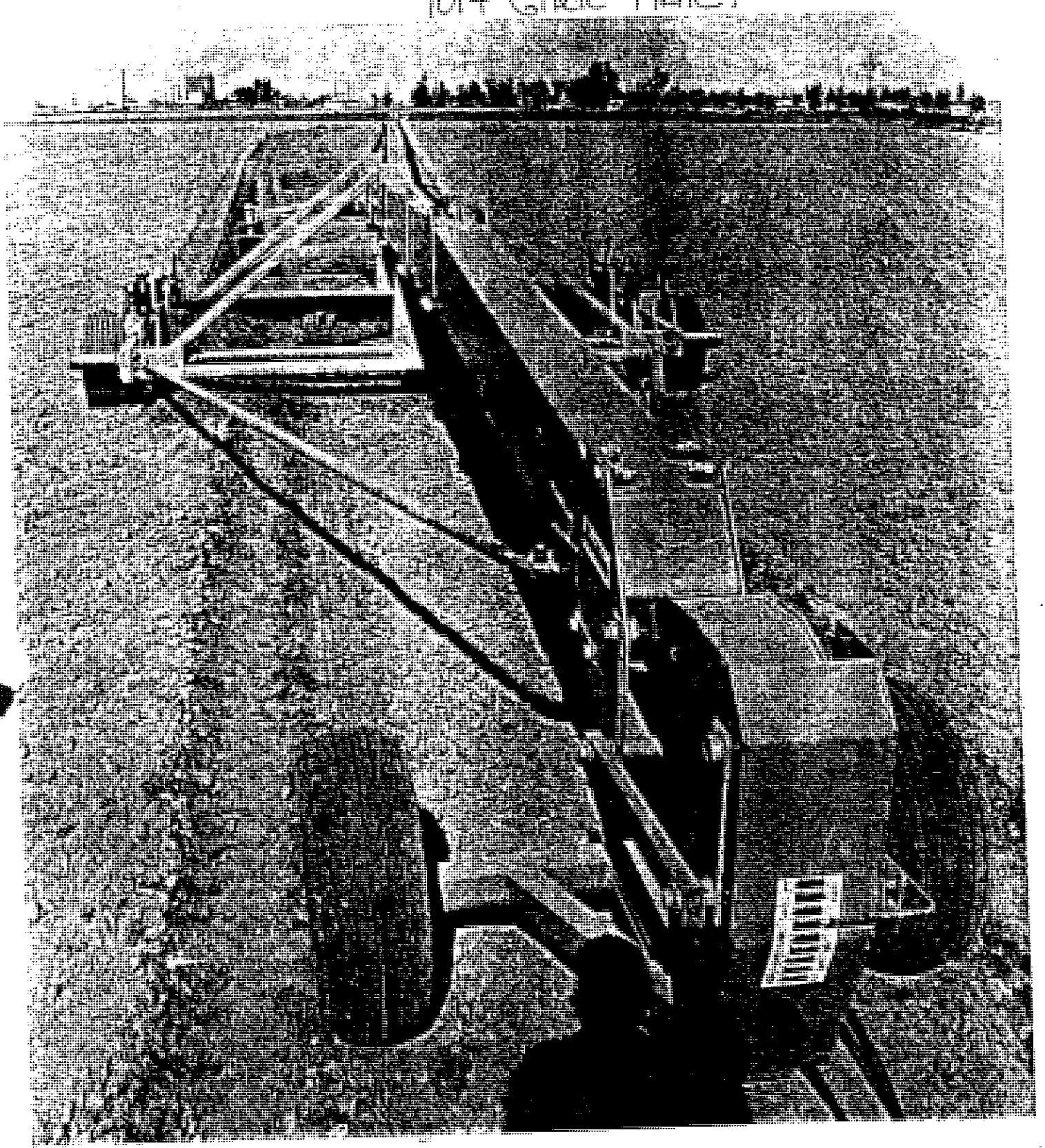
7014 Circle Plane.



Eversman

QUALITY FARM MACHINERY
SINCE 1928

AUTOMATIC GRADE PLANE
ASSEMBLY INSTRUCTIONS AND PARTS LIST

JULY 1976

EVERSMAN AUTOMATIC GRADE PLANE - PRELIMINARY ASSEMBLY INSTRUCTIONS

Prior to starting assembly, select a level, firm place to work, and also have overhead power, a front end loader or fork lift available. The individual sections of this machine are extremely heavy and difficult to handle during assembly.

These instructions apply to the basic 46' model and the 12' moldboard. Where specific additions are necessary for the 14' moldboard and the 55' or 70' models, they will be so indicated. Lockwashers and nuts are required at all connections unless specifically mentioned.

Refer frequently to the photographs while following instructions.

Figure A - Bucket Section (Snug-up all bolts but do not thoroughly tighten until later in the assembly procedure.)

(a) First attach the sideboard (1) to the moldboard assembly (2) with blade pivot pin (3), a 1-3/8 X 2" O.D. bushing, a flat washer, 1-1/2" slotted nut and 5/16 X 2-1/2 cotter. (Refer also to Fig. V.) Attach bumper angles (4) to sideboards with 1/2 X 1-1/4 carriage bolts.

Note: The cross pipe behind the moldboard and the springs are part of the optional trip blade mechanism. Refer to section on this assembly under Figures T and U.

Figure B and C - Bucket Section and A-Frames

To facilitate assembly, the linkage mechanism should be preassembled as follows:

(a) Slide the blade to bell crank link (1) onto the blade pivot pin.

(b) Attach L.H. and R.H. (R.H. shown) bell cranks (2) to L.H. and R.H. siderails (3) with 1/4 X 2 roll pins, and 18 gauge machine bushings.

(c) The adjustable link assembly (4) is attached to the bell crank with a clevis pin assembly (5) and hairpins. Hole centers should measure 14-1/2".

(d) Now block under four corners of siderail to A-frame attachment so that the center bolt holes of the siderails are 21" above the ground (refer to Fig. C). This is an important step, and the four corners must be exactly level and square, since this dimension involves "leveling up" the plane so that the moldboard can be carried at the correct level and also so that the front and rear tires are established on the same level as the main wheel tires.

Then place siderails against sideboards and connect bell crank to blade link with a clevis pin assembly (5) and 1/4 X 2 cotter. (Also refer to Fig. H for detail view of linkage assembly.)

(e) Connect sideboards to A-frames (1 and 2, Fig. C) with clevis pins (6, Fig. B), 1" standard flat washers and 1/4 X 1-1/2 cotters.

(f) Connect siderails to A-frames with 3/4 X 4-1/2 hex machine bolts. Three bolts are used in rear holes and one bolt in center front hole, on each side, for front truss. (1 Fig. C).

Figure D - Main Axle to Siderails

(a) Slide L.H. and R.H. axles (1) through siderails and connect to main axle inner pipe (2) with 3/4 X 5-1/2 hex machine bolts.

Figures E and F - Main Wheels

(a) The main wheel tire (1), wheel (2), hub (3), spindle (4), and spindle support (5) are all factory assembled. Slide the spindle support arms into the main axle weldment arms (1, Fig. D) and attach with 5/8 X 1-1/2 hex machine bolts on the outboard side.

(b) Then rotate the main axle weldment up as shown in Figure E to permit easier installation of the 4 - inside, 5/8 X 1-1/2 bolts.

(c) Assemble axle brace (Fig. F, 1) to main axle weldment and attach to siderails with 2- 3/4 X 5 hex bolts. Note that center bolt does not attach to axle brace. Center bolt is 3/4 X 4-1/2.

Figures G and H - Blade Linkage

(a) First install the anchor bar weldment (1) to the main axle arms with 3 - 5/8 X 3" bolts, and the two pipe spacers (2) between the arms with 5/8 X 7" hex machine bolts.

(b) Then mount the ratchet jack (3) as shown in Figures G and F. This will facilitate assembly of the side springs and adjustable links.

(c) Hook tension springs (1, Fig. H) in the front (2) and rear spring plates (2, Fig. F) and insert the stud of the rear plate through the swivel at the rear of the siderail bracket (2, Fig. F); securing with a 3/4" flat washer. Use 2 - 3/4 hex nuts so that the spring setting can be locked once it is set.

(d) Fasten the front side spring plate (2, Fig. H) to axle arms with 3/4 X 2 drilled pin and 1/8 X 1-1/2 cotters.

Use of the ratchet jack to rotate the axle arms into place will make this assembly easier.

Important - The side springs assist the main wheels to automatically position the moldboard while cutting and filling. More spring tension will be required in loose, lighter soils than in heavier soil conditions. Adjust the spring tension to best suit the field being leveled. Start with low spring tension. If the blade action is slow and sluggish, increase tension in springs, by tightening nuts on side spring rear plate stud (refer 2, Fig. F), until blade responds promptly when wheels encounter a ridge or a low place.

(e) Attach adjustable links (refer 3, Fig. H) to inner axle arms with a clevis pin assembly (4) and hairpins. Then install the adjustable links in the top holes of the axle arms since this will give a faster, more active relationship between the main wheels and the cutting blade whenever the wheels encounter a field irregularity.

Now - before proceeding with assembly - install ratchet jacks in storage fittings on siderails as shown in Figures C and D. This is the place to carry them for field operations, and the only time you will attach them again to the axle arm fitting is for transporting.

Figure J

The overhead truss members involve three different lengths, 46', 55' and 70'. The center section truss (1), as shown in Figure J, is identical on all three models.

(a) Overhead equipment or a tow motor is needed to hoist the center truss (1) into place between the A-frames. The truss is attached at the top to the A-frame with 5/8 X 1-1/2 hex machine bolts.

(b) Attach the A-frame cross tube weldments (2) to the A-frames with 5/8 X 4-1/2 hex bolts; and to the bottom of the center truss with 5/8 X 1-1/2 hex bolts.

Figures K and L - Overhead Trusses - 46' Model

Forgetting the front and rear end assemblies, which will be covered later, Figures K and L show the front and rear truss installation on the Model 46 Grade Plane, and the pull pipes which connect the front and rear trusses to the bucket section. Note that the front and rear trusses are identical parts and are the same for 46, 55 and 70' planes.

The general procedure is to loosely bolt the front and rear trusses to the center truss and also attach the pull pipes. For 46' planes the front pull pipes are 176-3/4" and the rear pipes are 140-3/4". Use 1 X 2-1/2 bolts at all joints. The truss must then be aligned by progressive tightening of the pull pipes. Final alignment, and thorough tightening of all bucket and truss bolts

should be done after the front and rear ends are installed. (See instructions under Figures P, Q and R.)

Figures M and M-1 - Overhead Trusses - 55' Model

(a) By adding intermediate trusses - 54" - on the front and rear of the center truss and then attaching the front and rear truss sections to the intermediate trusses, the 55' model is assembled. The intermediate trusses (1, Fig. M) are attached with 1 X 2-1/2 hex machine bolts.

(b) The front pull pipes (2, Fig. M) for the 55' model are 227-3/4" long and are also attached with 1 X 2-1/2" bolts.

(c) The rear pull pipes (1, Fig. M-1) are 188-3/4" long.

(d) In order to give added support to the center section, overhead pull pipes are used on the 55' models. Support weldment (2, Fig. M-1) is placed on top the center section truss, next to the front A-frame, and 2 - 105-3/4" pull pipes (3, Fig. M-1) are attached with 1 X 4 bolts.

Figures N and N-1 - Overhead Trusses - 70' Model

(a) The 70' model assembly is identical to the 55' model covered above, except for the length of the corresponding parts.

(b) The intermediate trusses (1, Fig. N) on the 70' model are each 144". The front pull pipes (2, Fig. N) are each 314-3/4" and the rear pull pipes (1, Fig. N-1) are each 274-3/4". The top pull pipes (3, Fig. N-1) are each 188-3/4". The support weldment (2, Fig. N-1) is the same as the 55' model.

Follow the same alignment instructions as detailed above on the 46' machine and even greater care must be taken with the 70' model in being certain the trusses are straight and that there is no hump or sag in the trusses.

Figure O - Rear End Assembly

(a) Attach the rear axle beam (1) to the rear truss (refer Fig. L) with 1 X 2-1/2 hex machine bolts.

(b) The caster frame (2) is assembled to the rear axle beam with the caster tube assembly (3); 6 - 5/8 X 1-3/4 bolts and secured with a 1/2 X 5 rollpin (4). 2 - 3" I.D. machine bushings should be placed on spindle before inserting rollpin.

(c) The rear tires, wheels, hubs, spindles and support brackets are identical to the main wheel assemblies, and are factory assembled. The spindle weldments (5) are attached to the caster frame with 6 - 5/8 X 1-1/2 machine bolts. The rear axle beam has two holes near the center for the mounting of a "slow-moving-vehicle" emblem socket.

Figures P, Q and R - Front End Assembly

For ease of handling, it is best to assemble the complete front end prior to attaching to the front truss.

(a) Referring to Fig. R, mount hubs (3), wheels (2) and 11 X 16 tires (1) to dolly tongue assembly (4) with 9/16 X 1-3/4 wheel bolts.

(b) Install hitch clevis (5) to tongue with spacer (6), a 1 X 7-1/2 clevis pin (7) and 1/4 X 2 cotter.

(c) The hose support (8) is attached to the dolly tongue with 1/2 X 1-1/4 machine bolts.

(d) Referring now to Figure P, the front truss adaptor (1),cylinder housing (2), lift arm weldment (3) and lift control arms (4) are all factory assembled and shipped as a unit.

(e) Attach the cylinder housing (2, Fig. P) to the hitch ball on the dolly tongue with keeper plate (5, Fig. Q) and 4 - 3/4 X 1-3/4 hex machine bolts.

(f) The 13" stroke cylinder (8) is assembled to the housing and lift arm weldment with 1 X 3 clevis pins and 1/4 X 2 cotters. Note - The piston rod end of the cylinder is at the top and attached to the lift arm weldment.

(g) Referring to Figure Q; attach the gauge arm (1) to the lift control arm on the right hand side with a 3/8 X 4 bolt.

(h) The check valve (2) is mounted on the cylinder housing with 1 - 5/16 X 1-1/2 and 1 - 5/16 X 2-1/2 machine bolts.

(i) Attach the two 19" hoses (3) to the cylinder and check valve rear ports using the 1/2" swivels provided. Then connect the 88" hoses (4) to the check valve front ports and string the hoses through the hose support (8).

Now refer to Figure S. With the front end mounted on the dolly tongue, the transport jacks (1) can be installed as shown with drilled pins (2) and hairpins. It is then easier to wheel this assembly into place under the front truss and bolt the front adaptor to the truss with 1 X 2-1/2 machine bolts.

Note - Before proceeding further, put the transport jacks into the storage position for field operations on the dolly tongue as shown in Figure Y.

At this time, all siderail, A-frame and overhead truss bolts should be thoroughly tightened. This should be done progressively around the plane.

Two primary points to be considered are the alignment of the overhead trusses, and the humping or bowing, or sagging of the front and rear trusses. Use a string or wire to keep the three center trusses straight. Tighten top truss on 55' and 70' levelers first, then alternately tighten the front and the rear pull pipes until all vertical deflection is taken out of the overhead trusses. It is possible to "hump' the trusses so that the blade section will actually be carried too high to cut correctly, so give this alignment careful inspection and adjustment.

Figures T and U - Optional Trip Blade Assembly

If rocks, stumps or large roots are present in the field, it is recommended that the optional trip blade design be installed. Figure A shows the overall installation behind the moldboard, while Figures T and U provide the assembly details.

(a) Attach trip blade cam weldments (7) to sideboards with 1/2 X 1 carriage bolts and lockwashers at the top, and 1/2 X 1-1/2 plow bolts, flat washers and lockwashers in the slotted holes of the sideboards.

(b) The bearing weldment (2) is attached to the moldboard with 1/2 X 1-1/2 machine bolts and both flat washers and lockwashers.

(c) Then install trip blade pipe (1) to the bearing weldment with bearing caps (3) and 5/8 X 1-3/4 bolts. Both before and after tightening bolts, be certain the pipe rotates freely. Grease bearings thoroughly and adjust the cam weldments so that the trip roller fits into the cam notches.

(d) The trip springs (5) are mounted at the bottom with the lower pin (4) and 1/4 X 1-1/2 cotters.

(e) Hook the springs over the spring anchor (6), secure in place with 1/4 X 1-1/2 cotters and attach anchor to moldboard fittings with 5/8 stud, hex nut, and 5/8 standard flat washer. Tighten this stud at top of moldboard fitting until the springs are stretched to 23" between centerline of pins and set lock nut. Pry out the spacers in the springs. During field operation, if the blade trips too easily, stretch these springs by 1/2" increments up to 1 additional inch.

(f) The return spring (8, Fig. T) is attached to the spring anchor arm of the sideboard with a 1 X 3 clevis pin and 1/4 X 2 cotter.

(g) Hook the return spring in U-bolt (1, Fig. U) and fasten U-bolt to sideboard housing with 3/4 hex nuts and flat washers. Note the U-bolt is double-nutted to prevent loosening.

Then tighten nuts on U-bolts until spring is stretched 3". During field operations this tension may have to be adjusted to be certain that the blade returns to normal working position after tripping.

When operating with the trip blade be certain that the sideboards are not bolted to the end plates of the moldboard, refer Fig. V.

Lubricate all grease fittings!

Figures W, X and Y - Transporting

There are a few simple instructions for transporting the grade plane which, if followed, will enable you to trail and turn the machine without difficulty. Please note these details carefully:

(a) Extend the hydraulic cylinder to its full stroke.

(b) Change the two ratchet jacks on the siderails from their "storage" position during field operation (Fig. W) to the "transport" position (Fig. W-1). Retract the jacks as short as possible.

(c) Insert 3/4 X 5" bolts in rear spindles (Fig. X) to lock out the swivel of rear wheels, if required.

(d) Collapse the hydraulic cylinder to fully closed position.

(e) Change the two transport jacks on the dolly tongue from their "storage" position during field operation (Fig. Y) to the "transport" position (Fig. Y-1).

(f) Then shorten the transport jacks to raise the dolly tires off the ground, and guide the ears at center of dolly axle to nest between the channels welded on bottom of front adaptor (refer Fig. S). This will lock the dolly, and the entire weight of the plane will be carried on center wheels for transporting. Do not change length of hydraulic cylinder when transport jacks are in this position.

Be sure you reverse the above procedure before operating in the field.

Figure Z - Turning

Turning, like transporting, can be done without difficulty if a few simple instructions are carefully followed:

(a) First and foremost, do not lock the tractor drawbar, but let it swing freely, as shown in Figure Z.

(b) Prior to working any field, make several passes around the edge to firm and pack down the ends. This will provide better support for the main wheels during a 180° turn, and will also improve the initial turning process for the dolly wheels as the turn is started.

(c) When making a turn, it is necessary to make a quick, sharp initial turn by braking the inside wheel of the tractor until the tractor and dolly are turned to about 90°. Then, "lead" the plane around the inside center wheel to complete the turn. The rear caster wheels should follow the tractor front wheel tracks in a proper turn.

Operation and Adjustment

The grade plane must be adjusted and operated properly to get best results. The following items help to get best results.

1. Have sufficient tractor power to run 4-6 M.P.H. Dual rear wheels on the tractor help in softer field conditions.

2. Carry an average of half a bucket of dirt. Too little will not fill holes completely; too much will waste tractor power and not level high spots properly.

3. Find a nominal setting for hydraulic cylinder and leave at that setting. The leveler can sense high and low spots better than most operators.

4. Plan to level field at a different direction with each successive coverage.

5. Front adjustable blade links (3, Fig. H) may be positioned in lower hole (5, Fig. H) for first pass in a rough field.

The following check-off list will be of assistance in solving field problems:

1. Is blade cutting level? If not, adjust links on either side of bucket to level up (Fig. H).

2. Is blade action active? That is, when main wheel tires go over a ridge, does bit cut?; and when tires enter a depression does the blade lift to dump the load? If not, increase tension on side springs (refer to discussion under Figures G and H).

3. Are you having difficulty getting blade to cut deep enough? If so, is there a "hump" in the overhead truss? If the blade is cutting too much, possibly the overhead truss is "sagging". (Refer to discussion under Figures P, Q and R.)

4. Are you not carrying enough soil in the bucket to fill low places? Check for "humping" of the overhead trusses.

5. In turns, are dolly tires striking front adaptor? This is another indication that you may have a hump in the overhead trusses which is forcing the front adaptor to too low a position.

6. If plane is "just not working right" - Are ratchet jacks in "storage" position on siderails, or in "transport only" position? Check Figures W and W-1.

7. Is blade not cutting properly on non-trip blade machine? Have you installed shear bolts as per instructions of Figure V?

8. In trip blade operation is blade tripping too easily, and without striking a stump or rock? Increase tension on springs mounted behind moldboard as per instructions under Figure T and U, Item (e).

9. In trip blade operation is blade returning to proper working position after it trips? If not, check items (c) and (g) under Figures T and U.

10. Are you having difficulty turning? See instructions under Figure Z.

11. Are you bending the side plates on the front adaptor every time you extend the hydraulic cylinder? Refer to Figure Y for the proper place to store the jack assemblies during field operation.

12. The check valve will sometimes chatter when the grade plane is used with high pressure, low volume hydraulic systems. When this occurs, the valve can be adjusted to balance the pressure on the two sides of the valve and eliminate the chatter.

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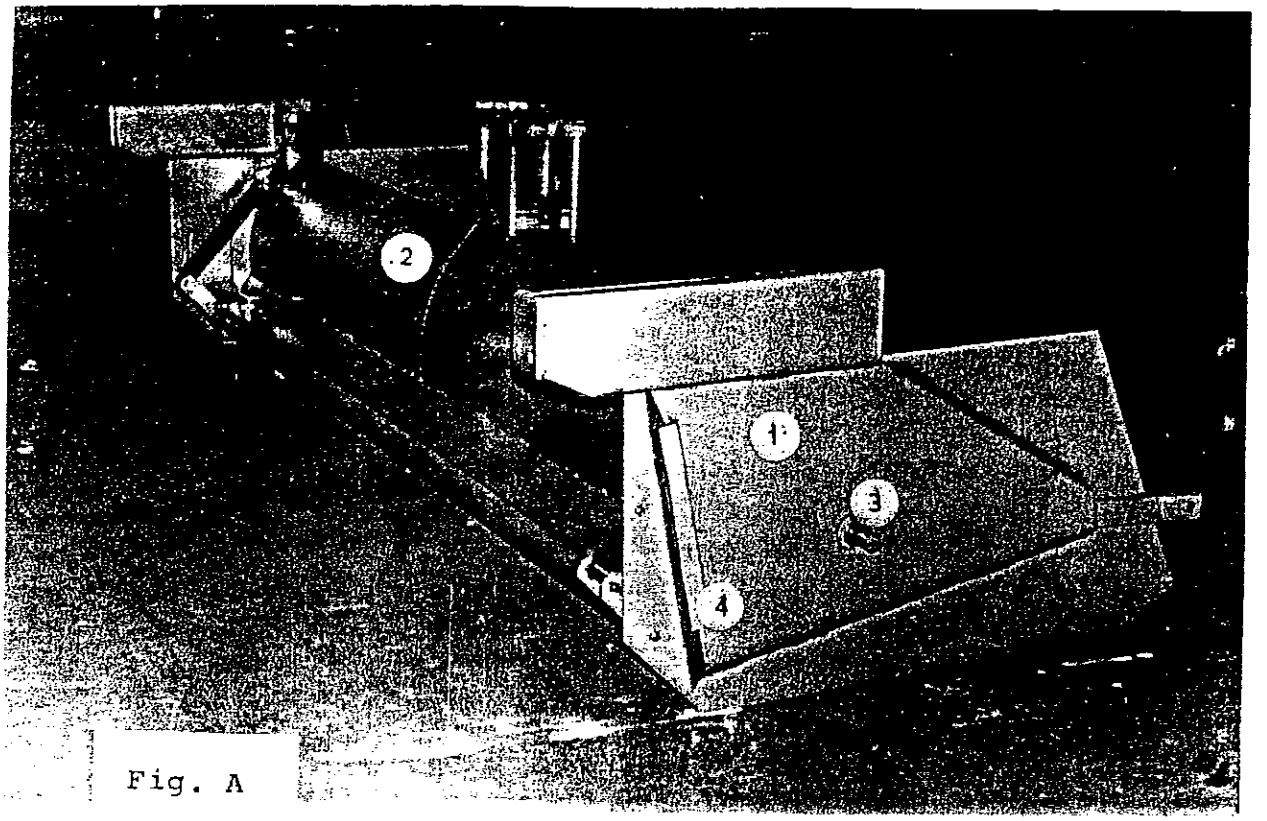


Fig. A

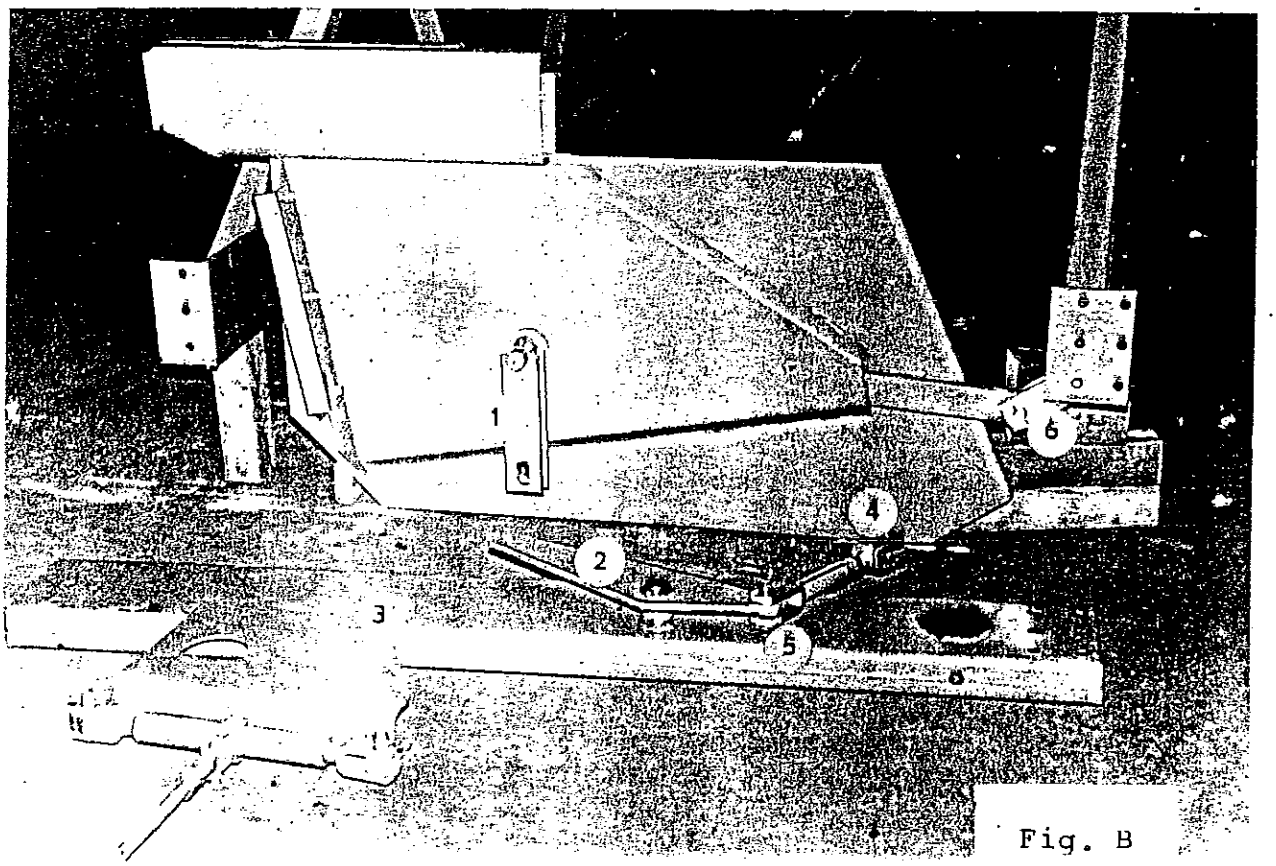


Fig. B

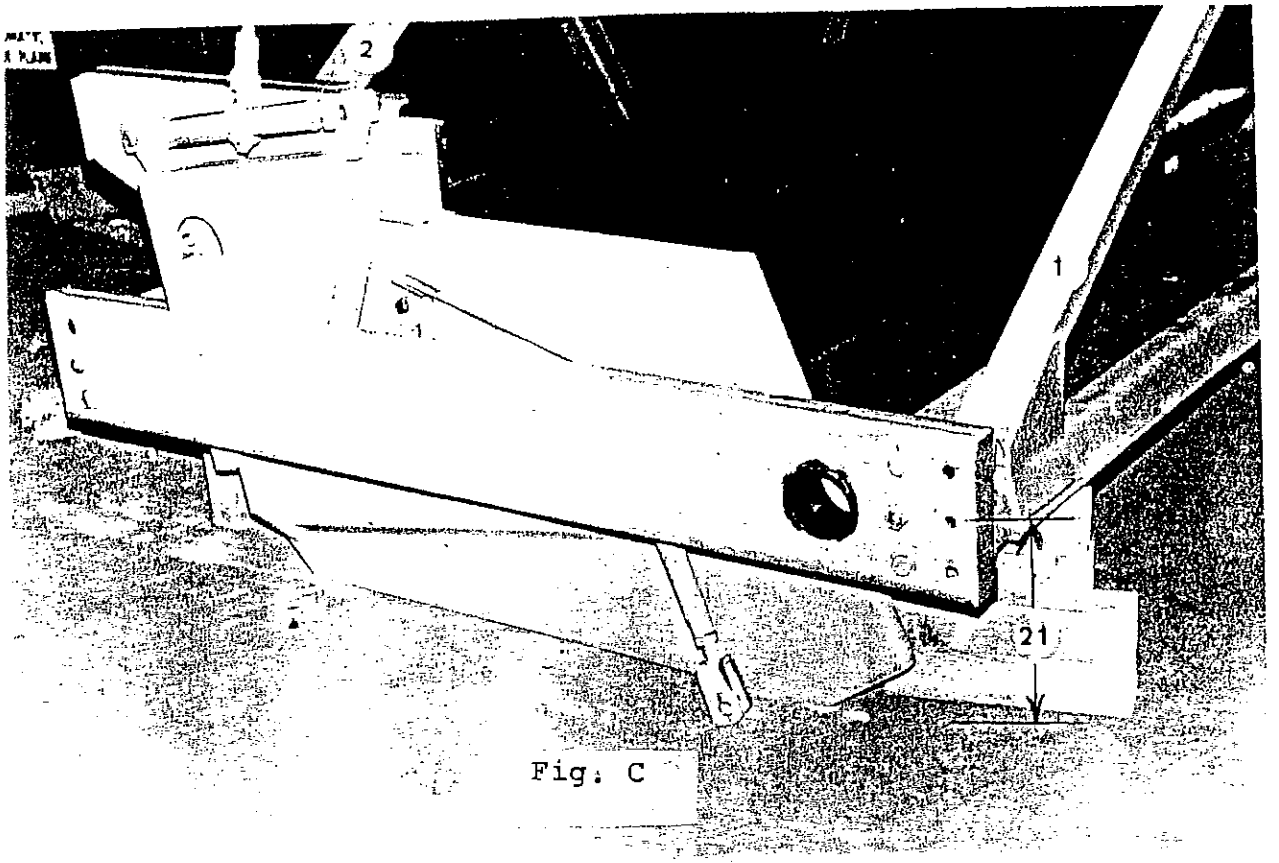


Fig. C

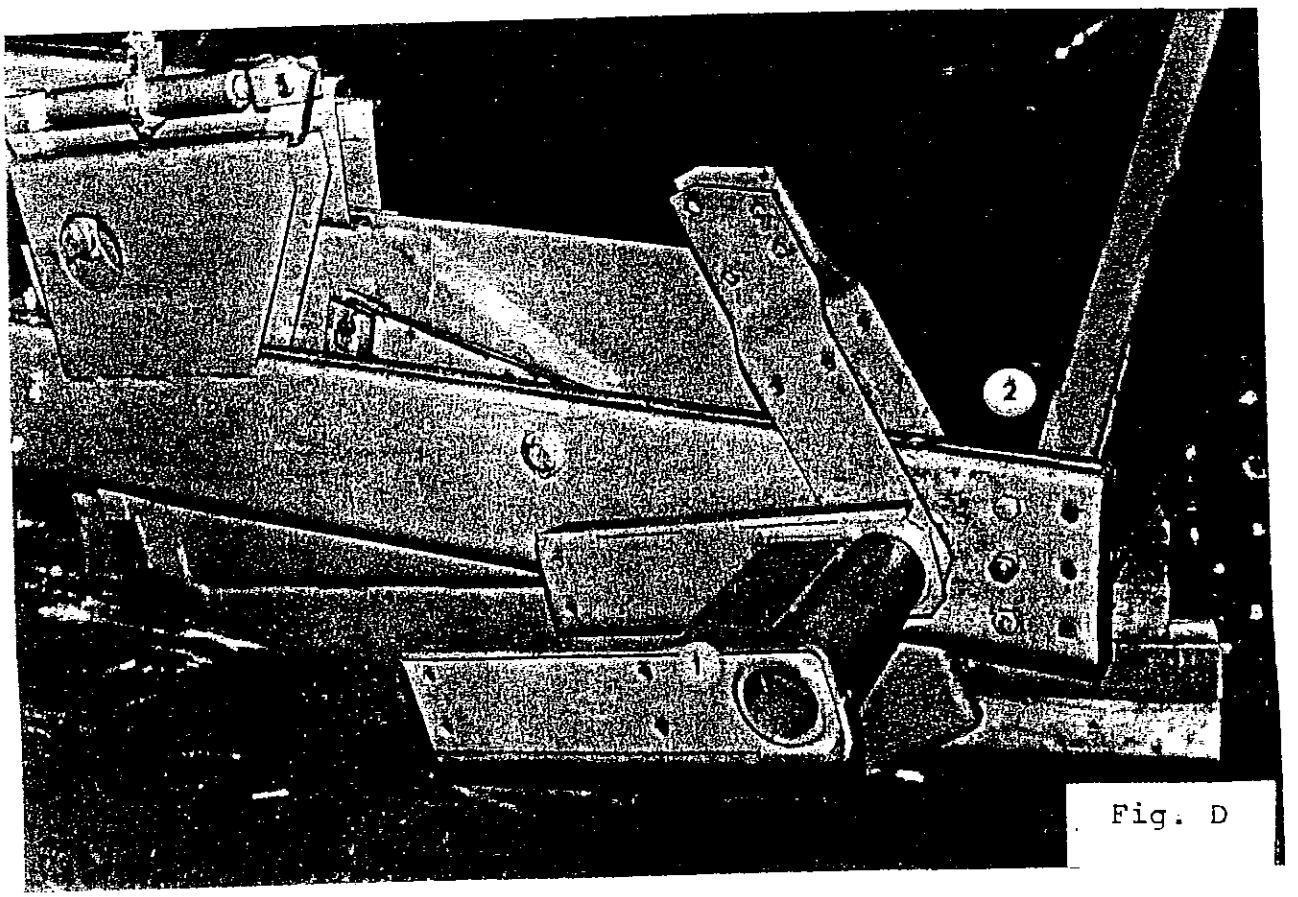


Fig. D

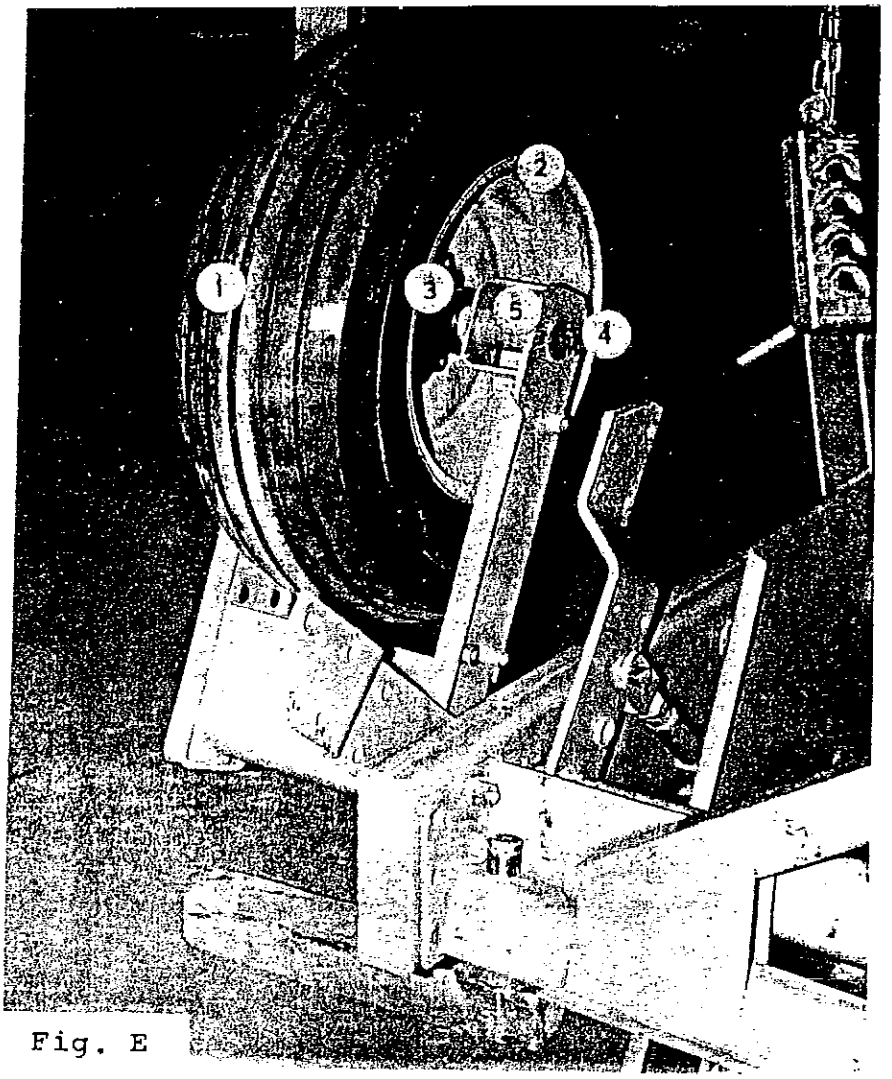


Fig. E

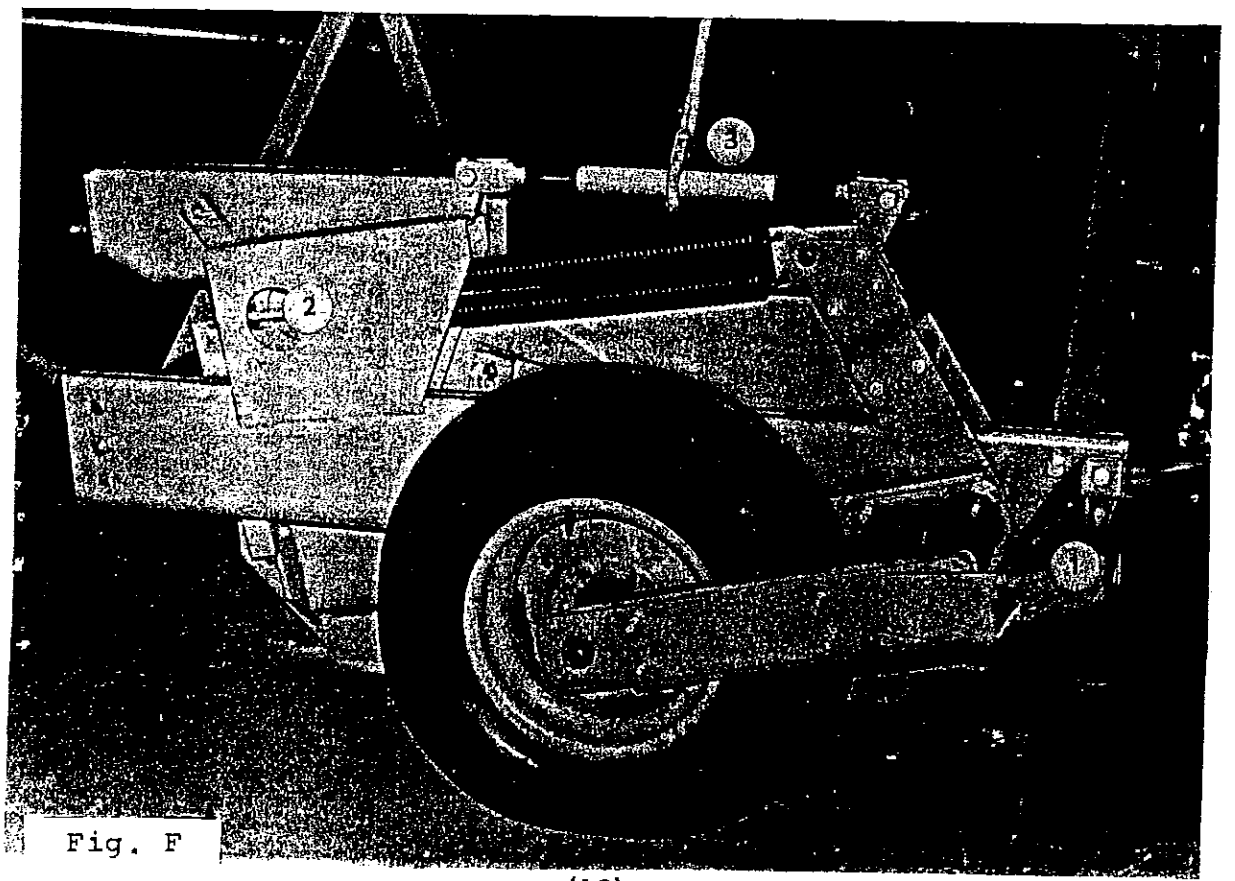


Fig. F

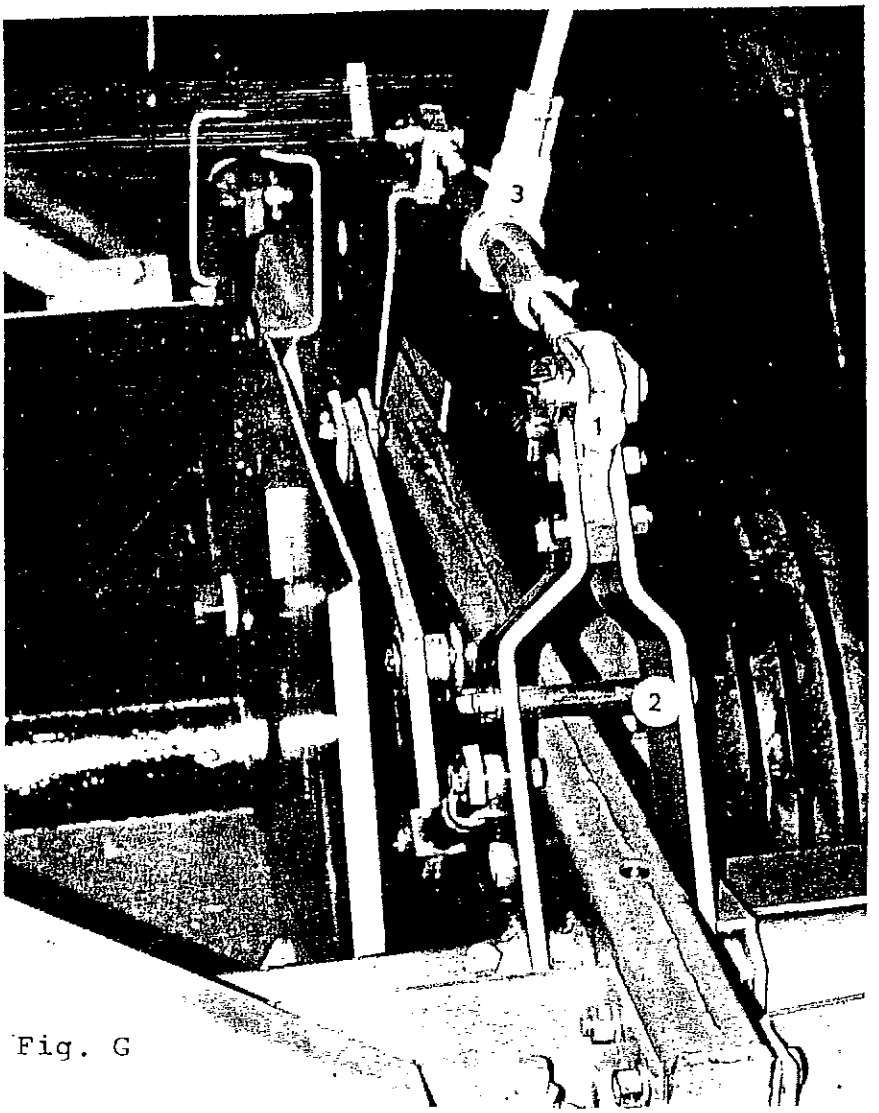


Fig. G

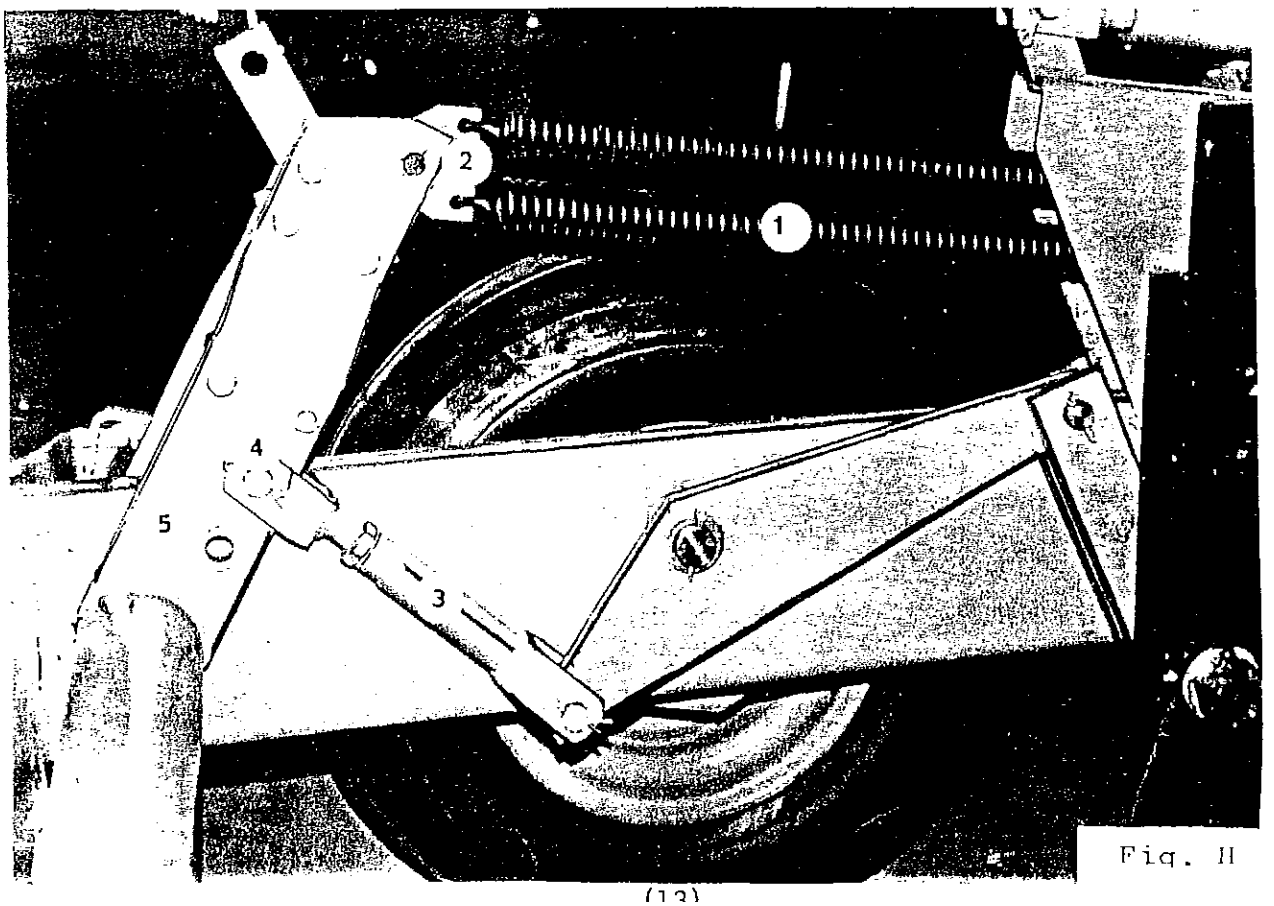


Fig. H

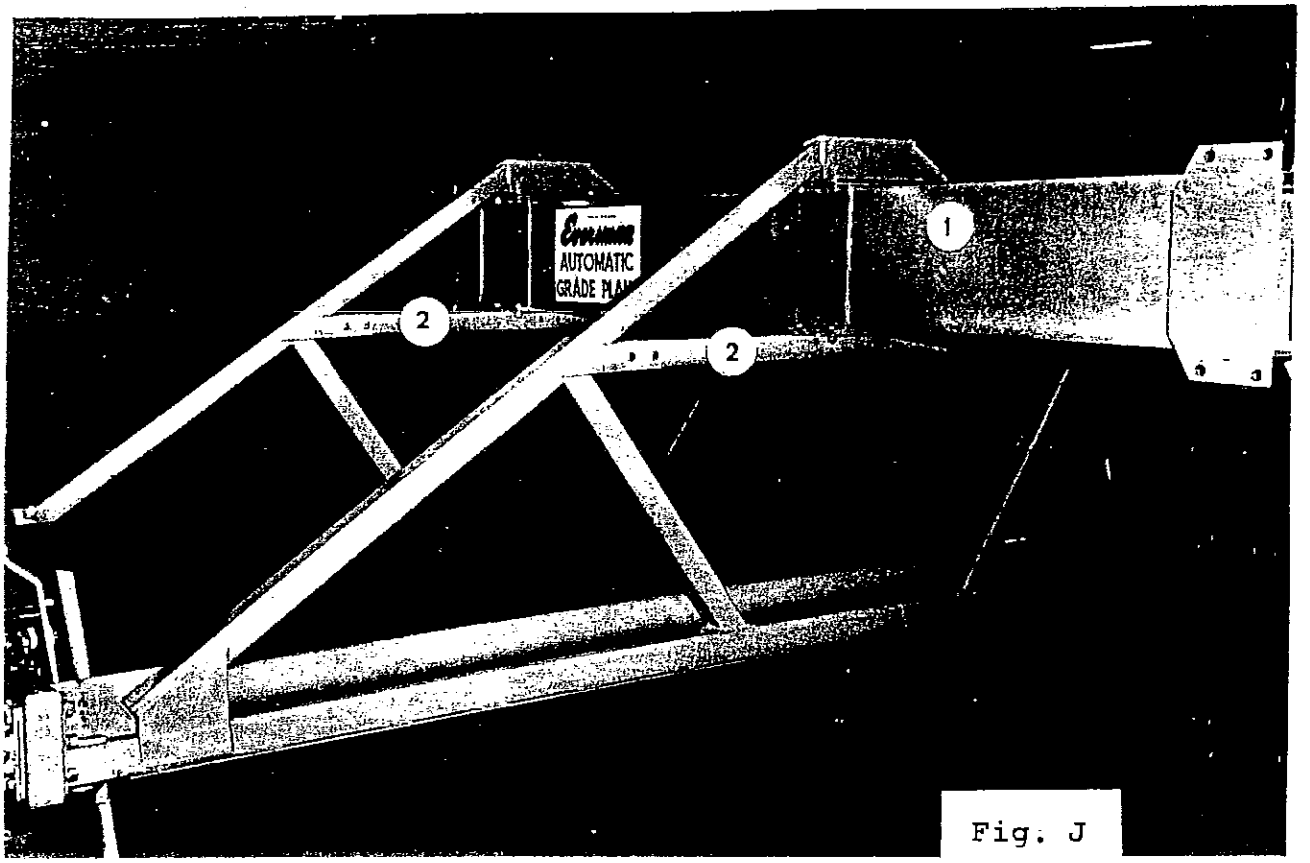


Fig. J

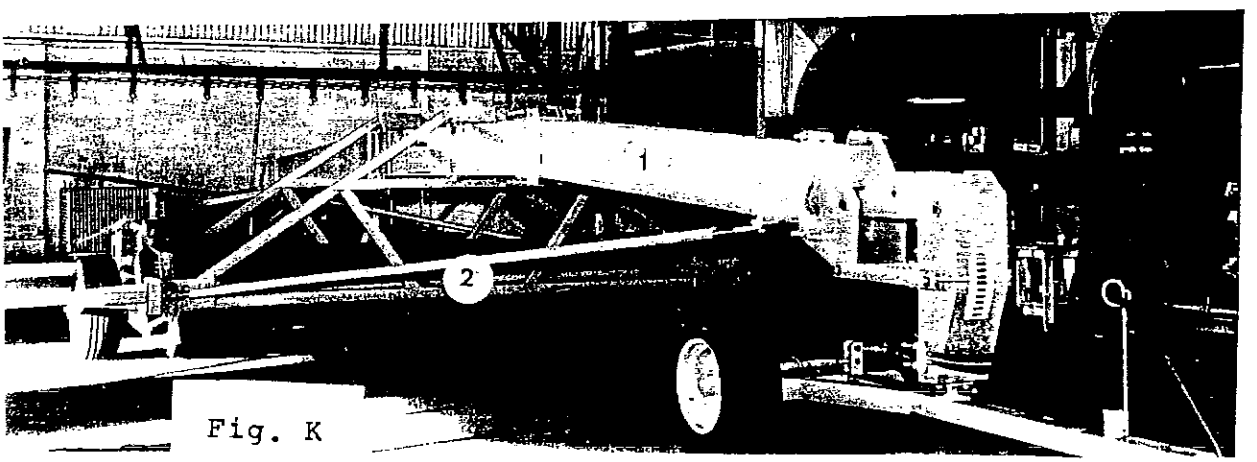
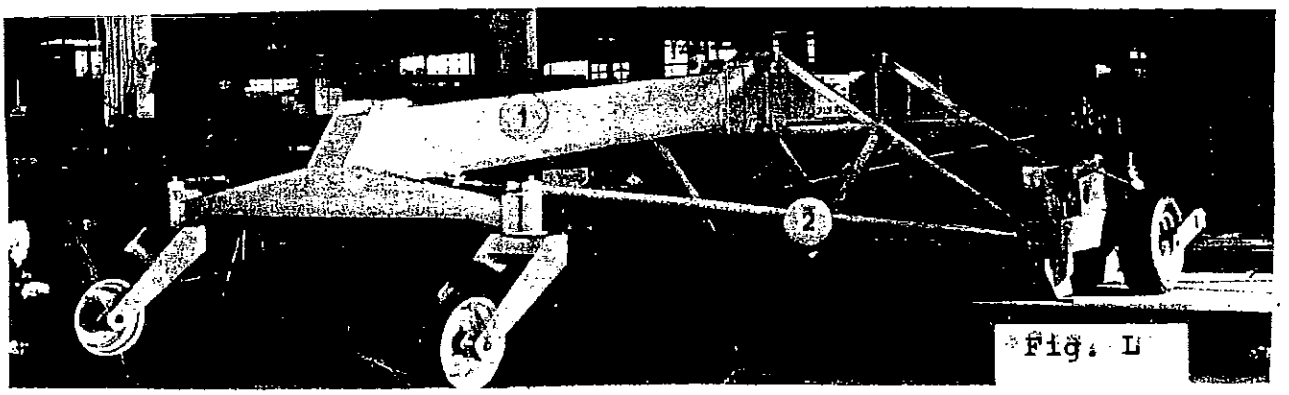


Fig. K



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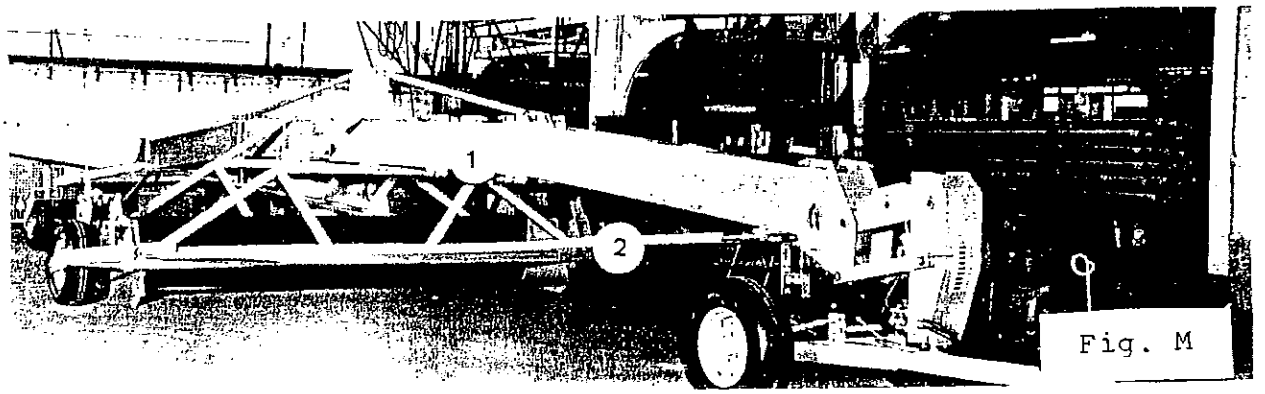


Fig. M

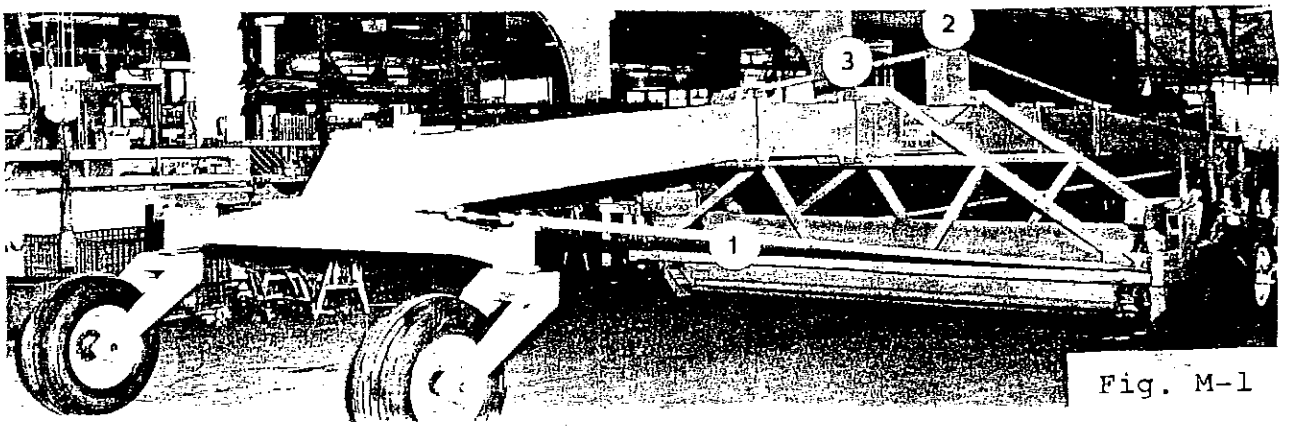


Fig. M-1

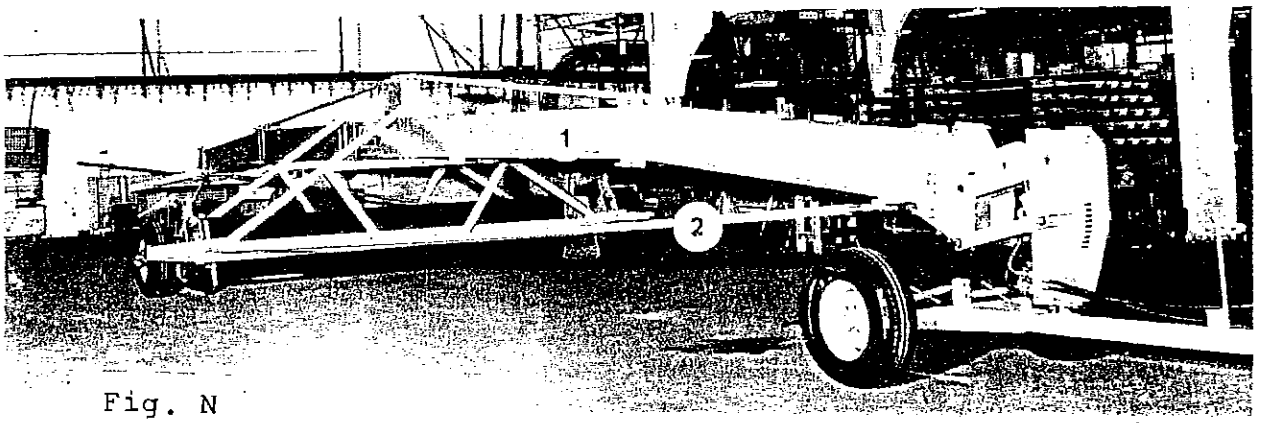


Fig. N

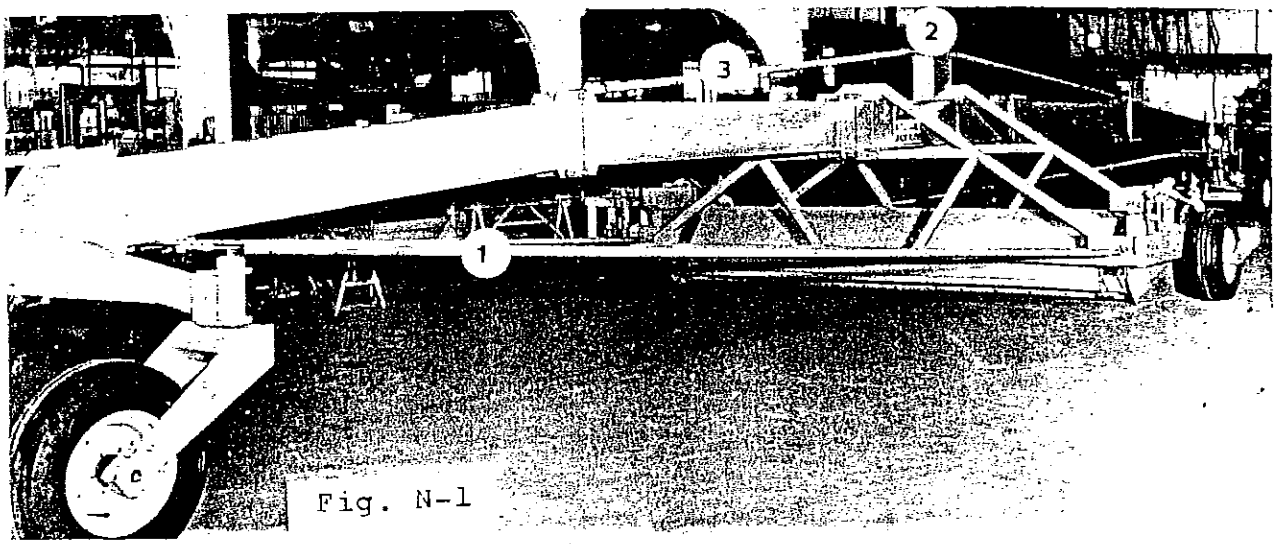


Fig. N-1

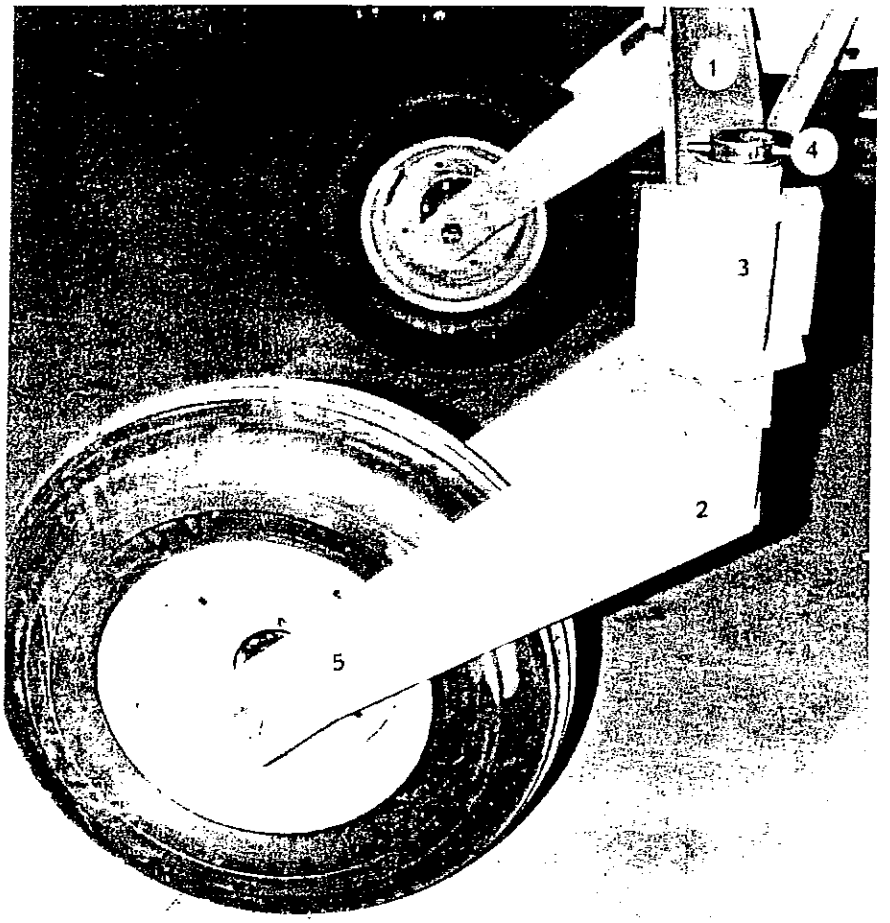


Fig. O

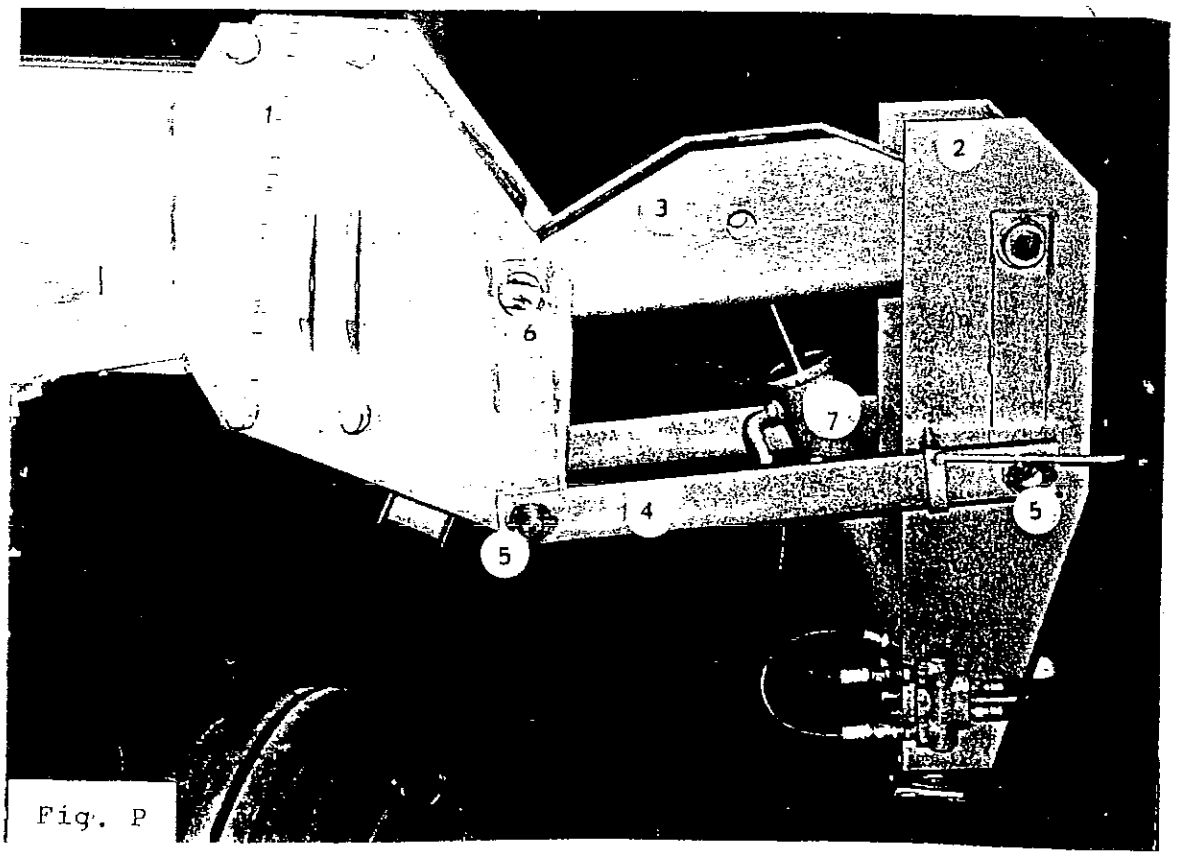


Fig. P

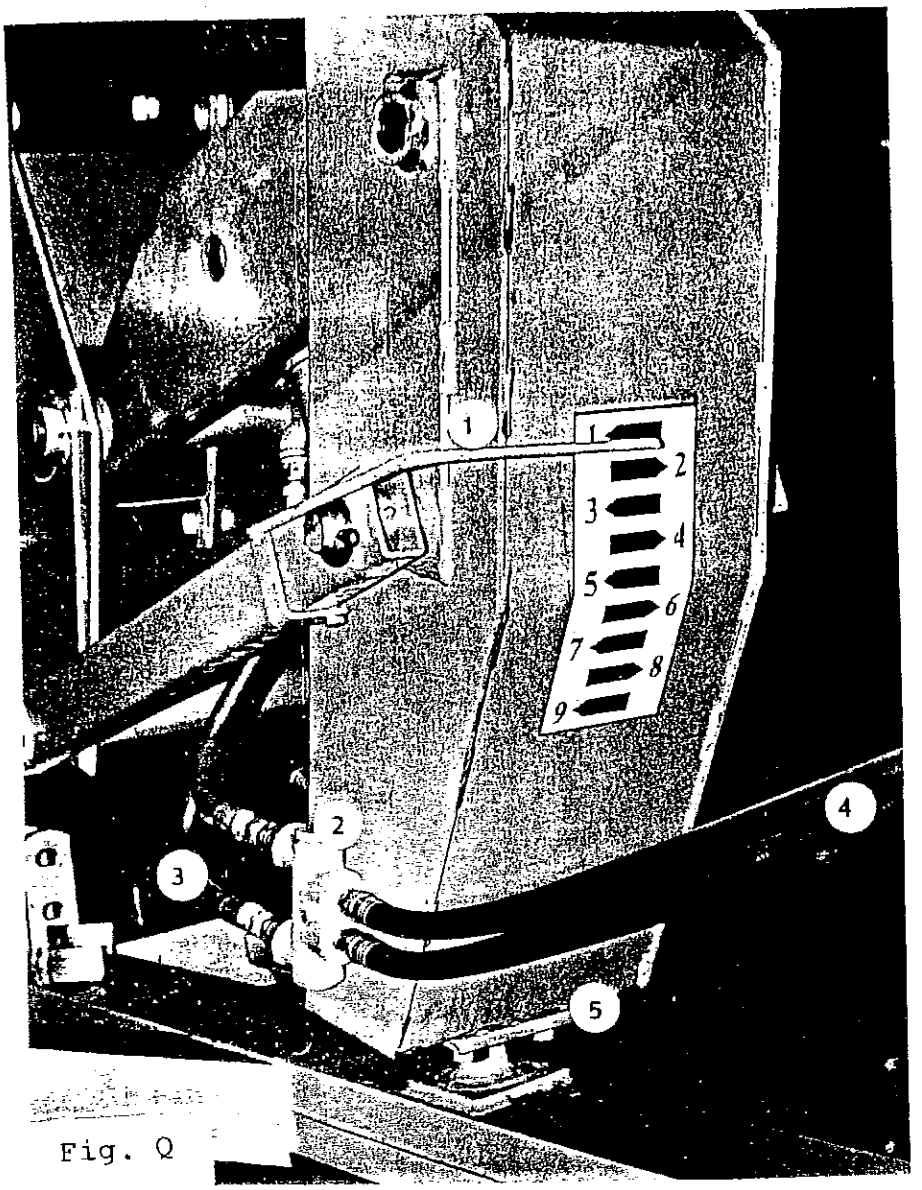


Fig. Q

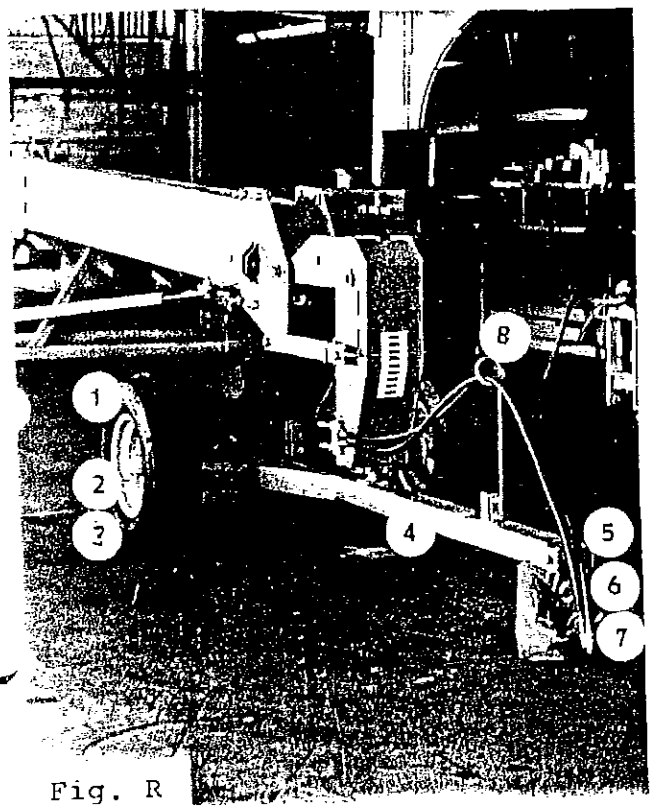


Fig. R

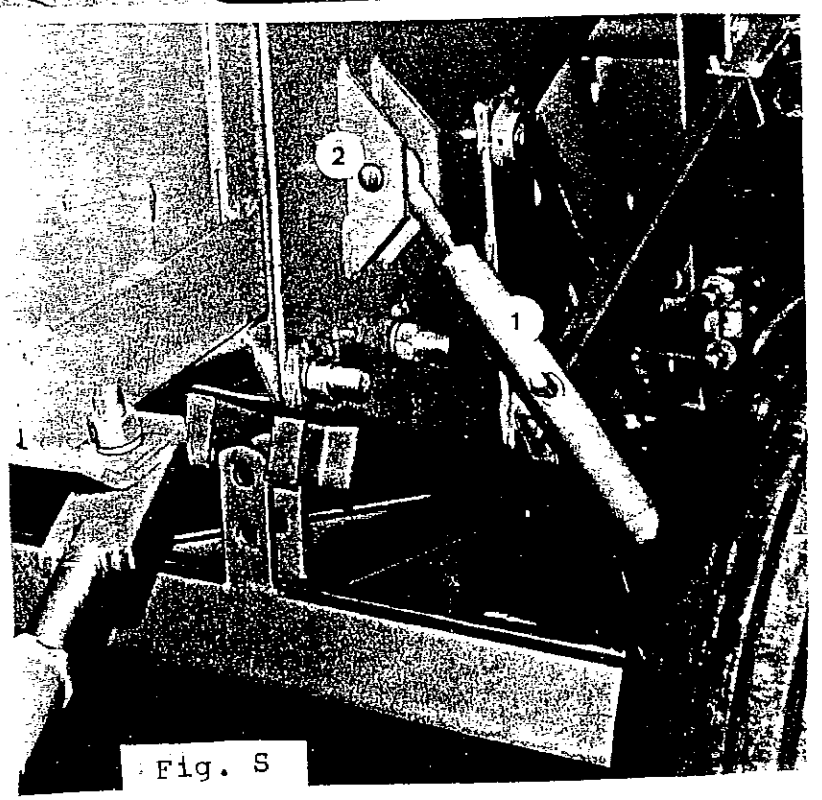


Fig. S

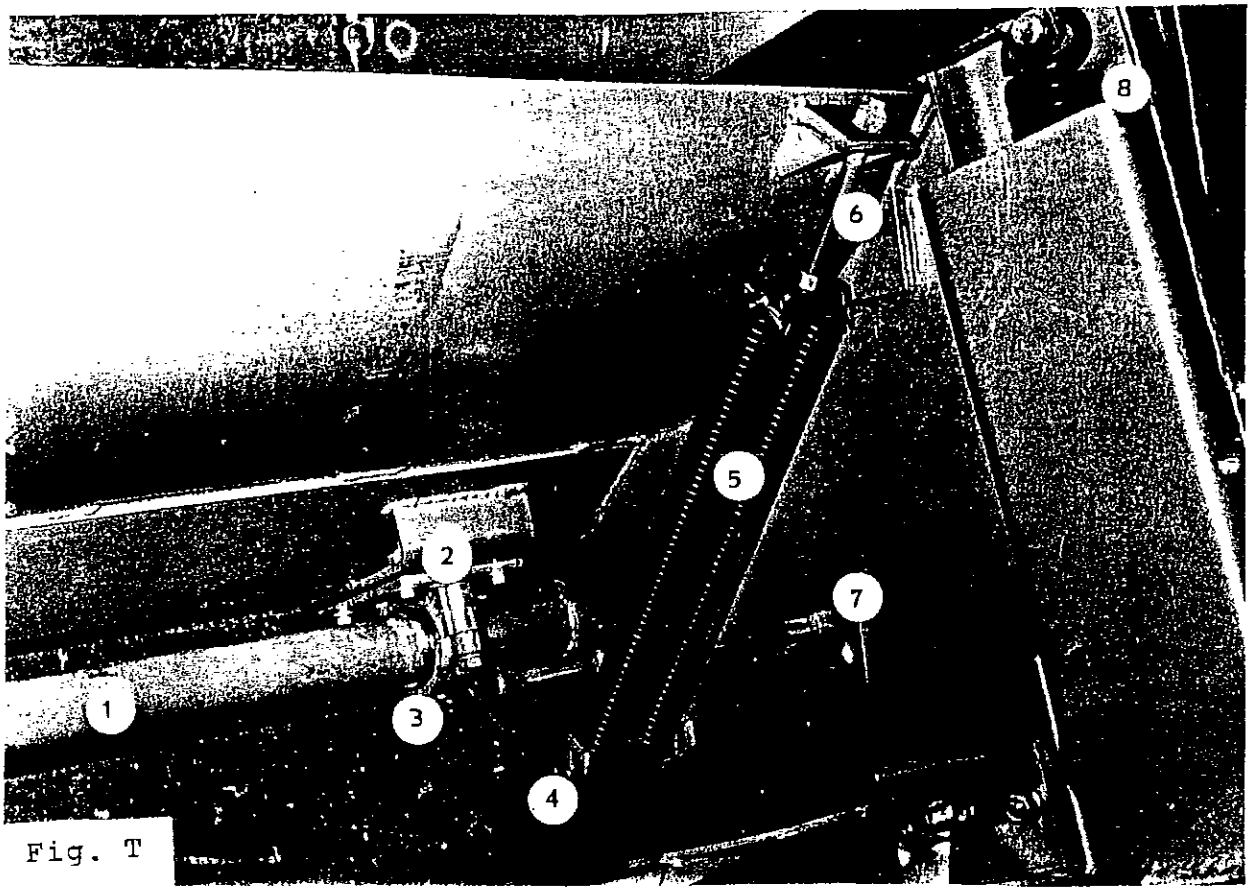


Fig. T

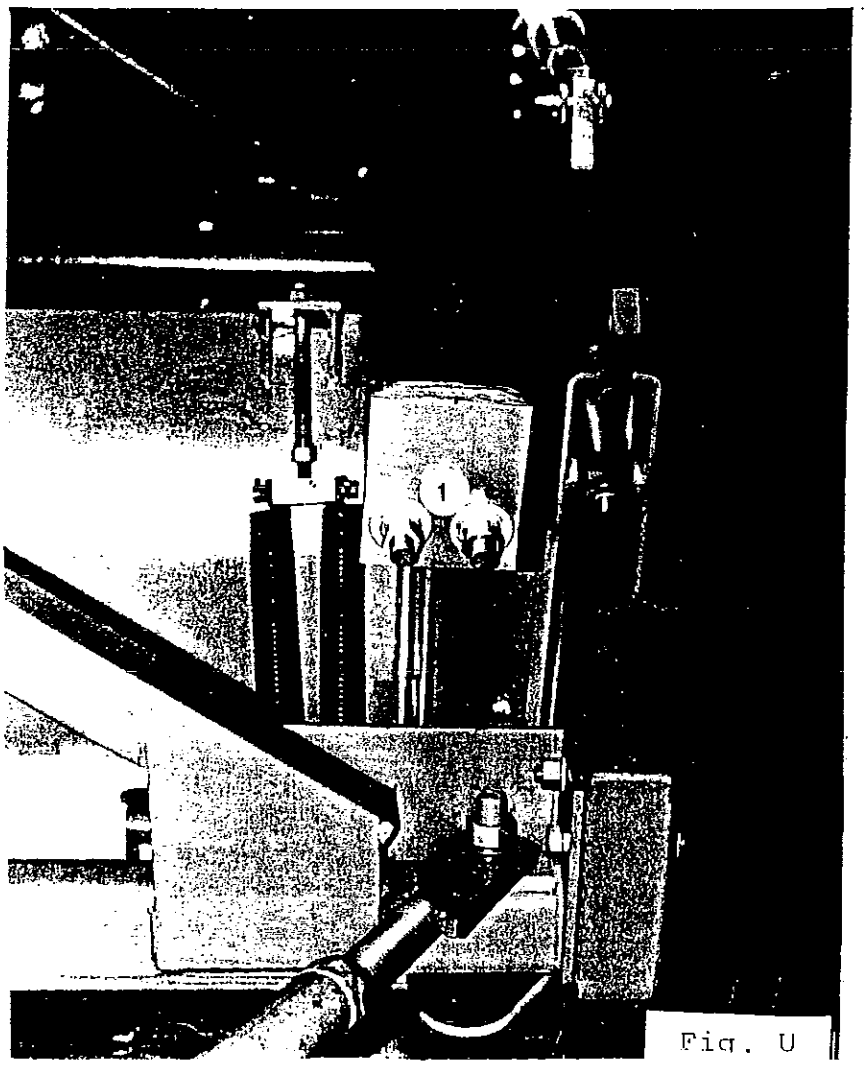


Fig. U

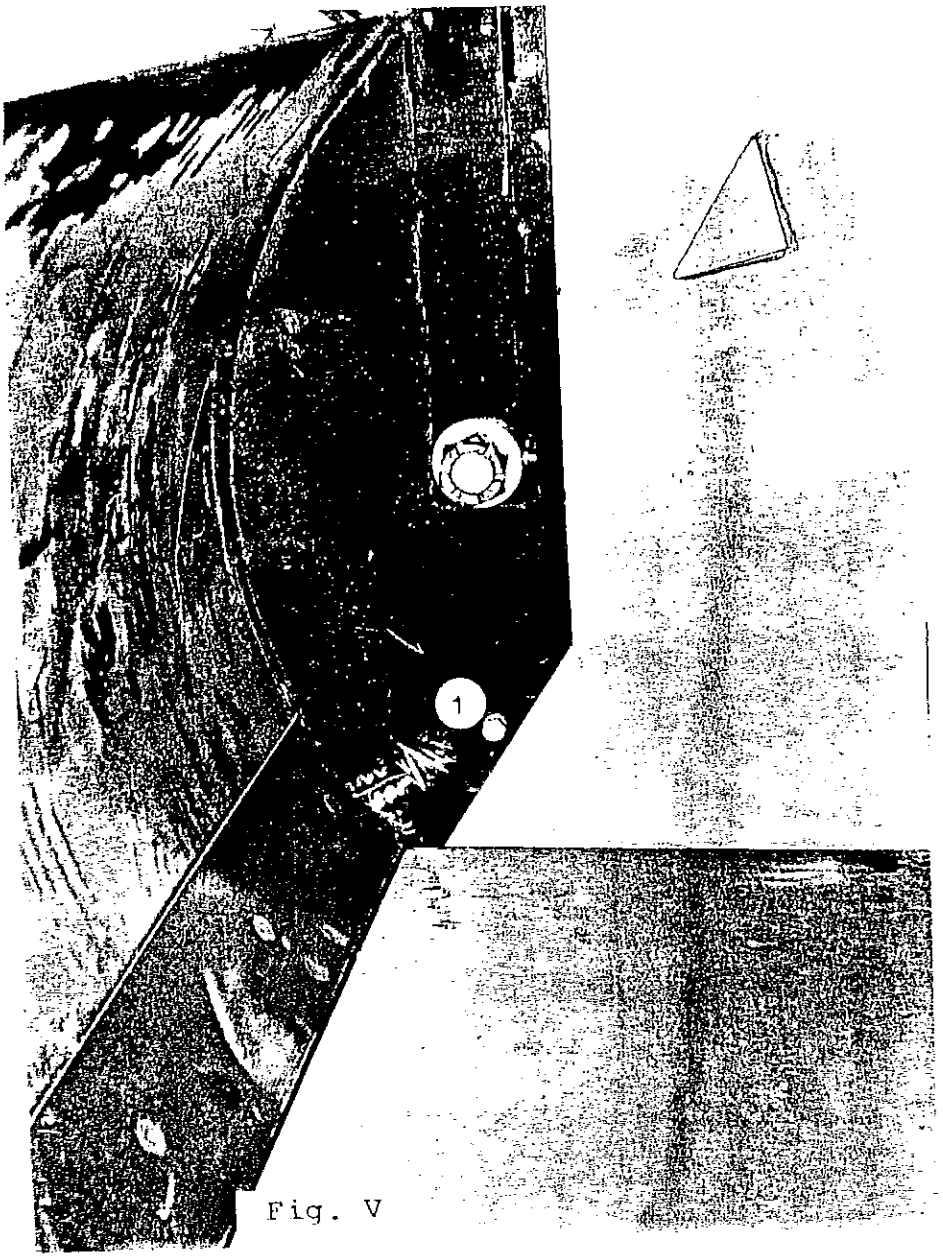


Fig. V

The 1/2 X 1-1/4 shear bolts (1) are installed only when operating without the optional trip blade. If they shear too easily, substitute 1/2" high strength bolts.

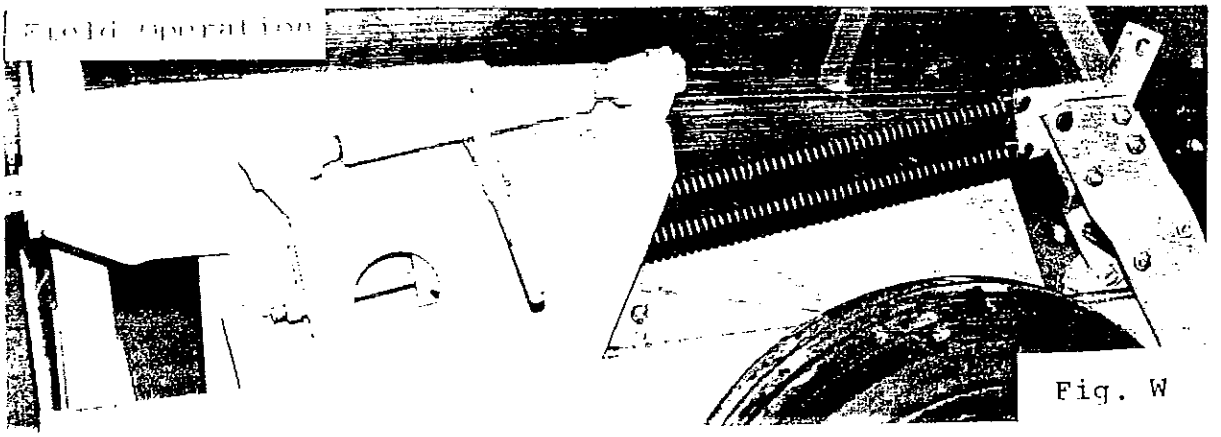


Fig. W

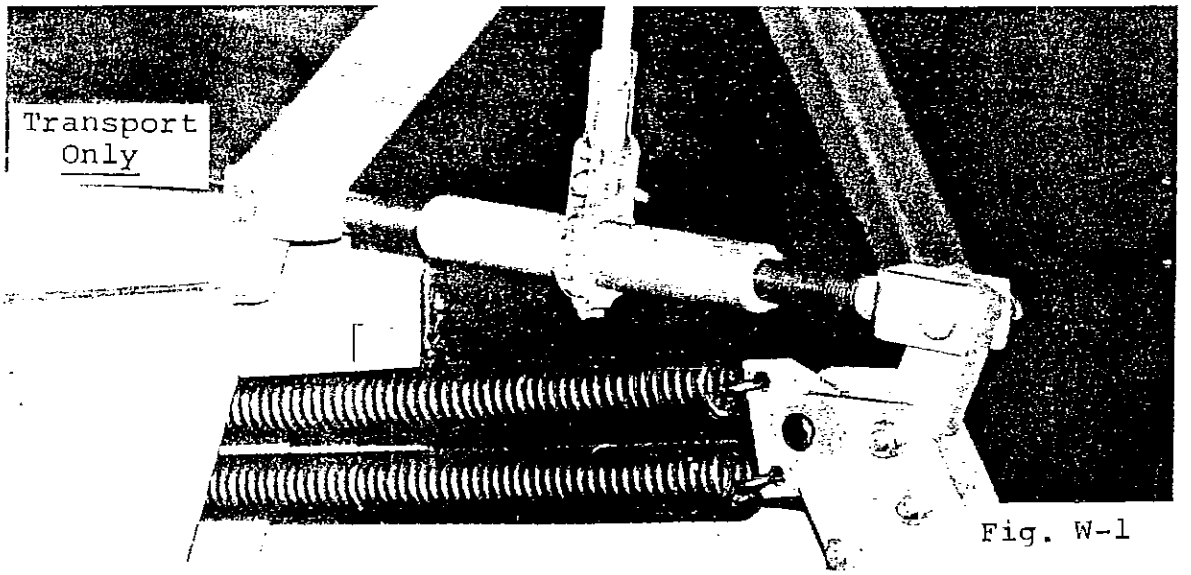


Fig. W-1

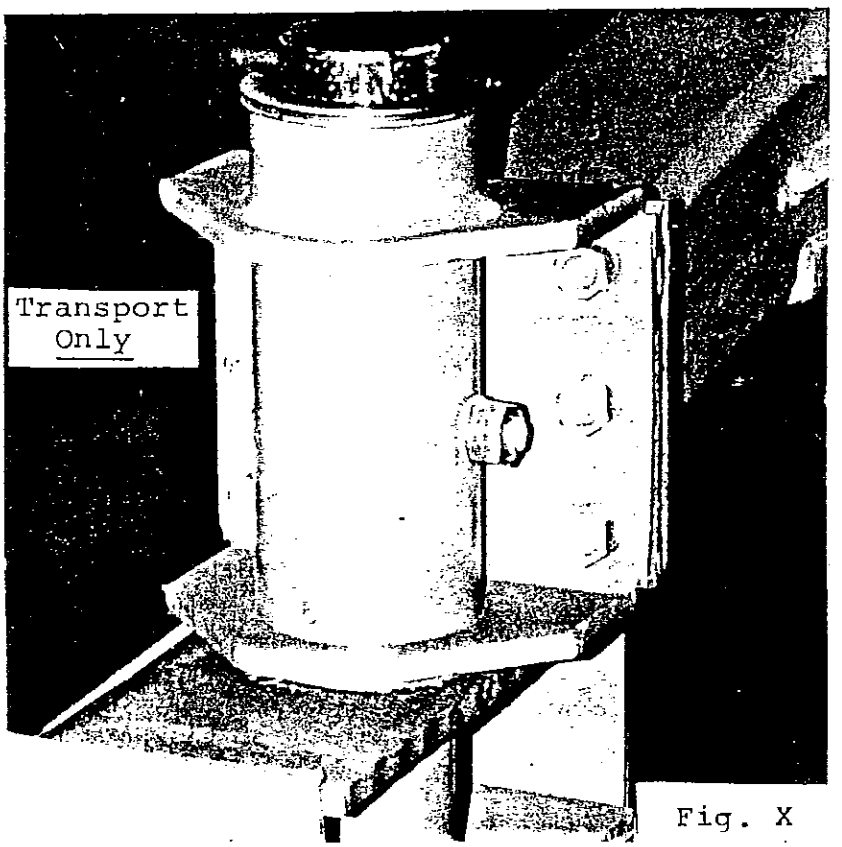


Fig. X

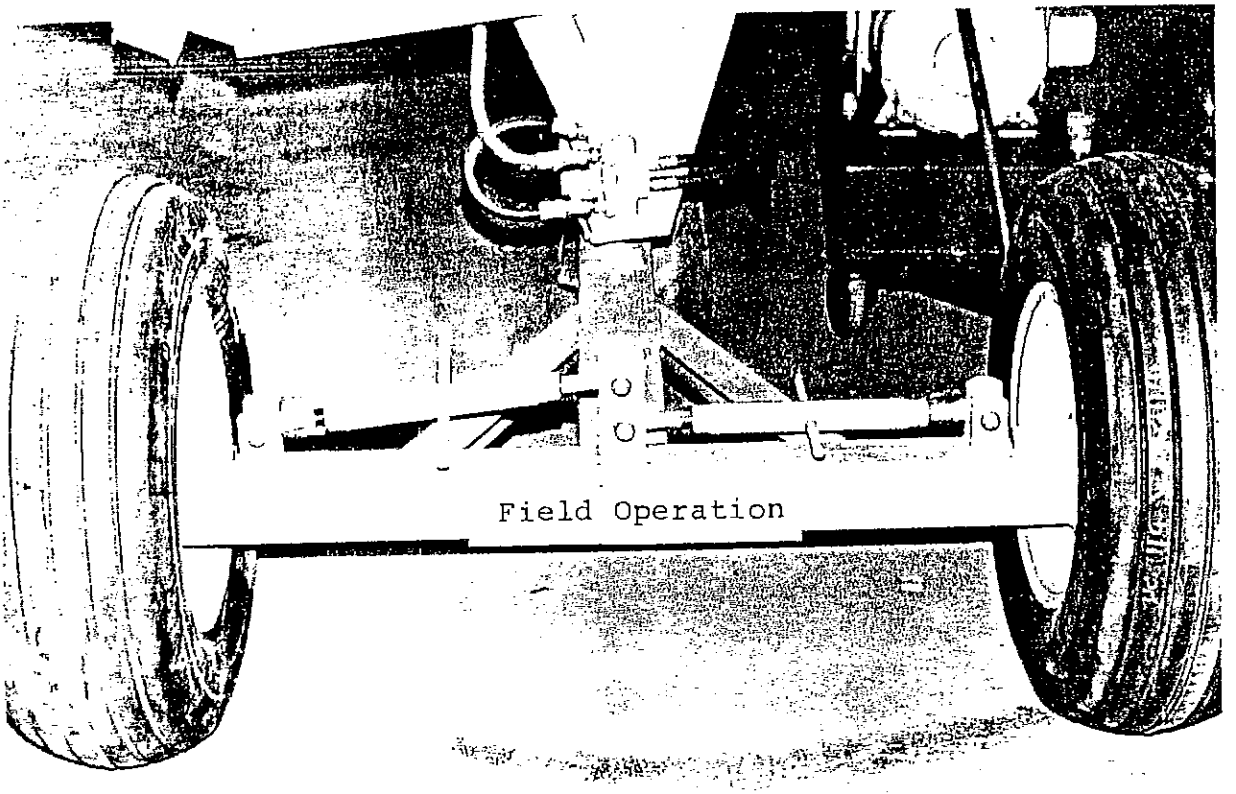


Fig. Y

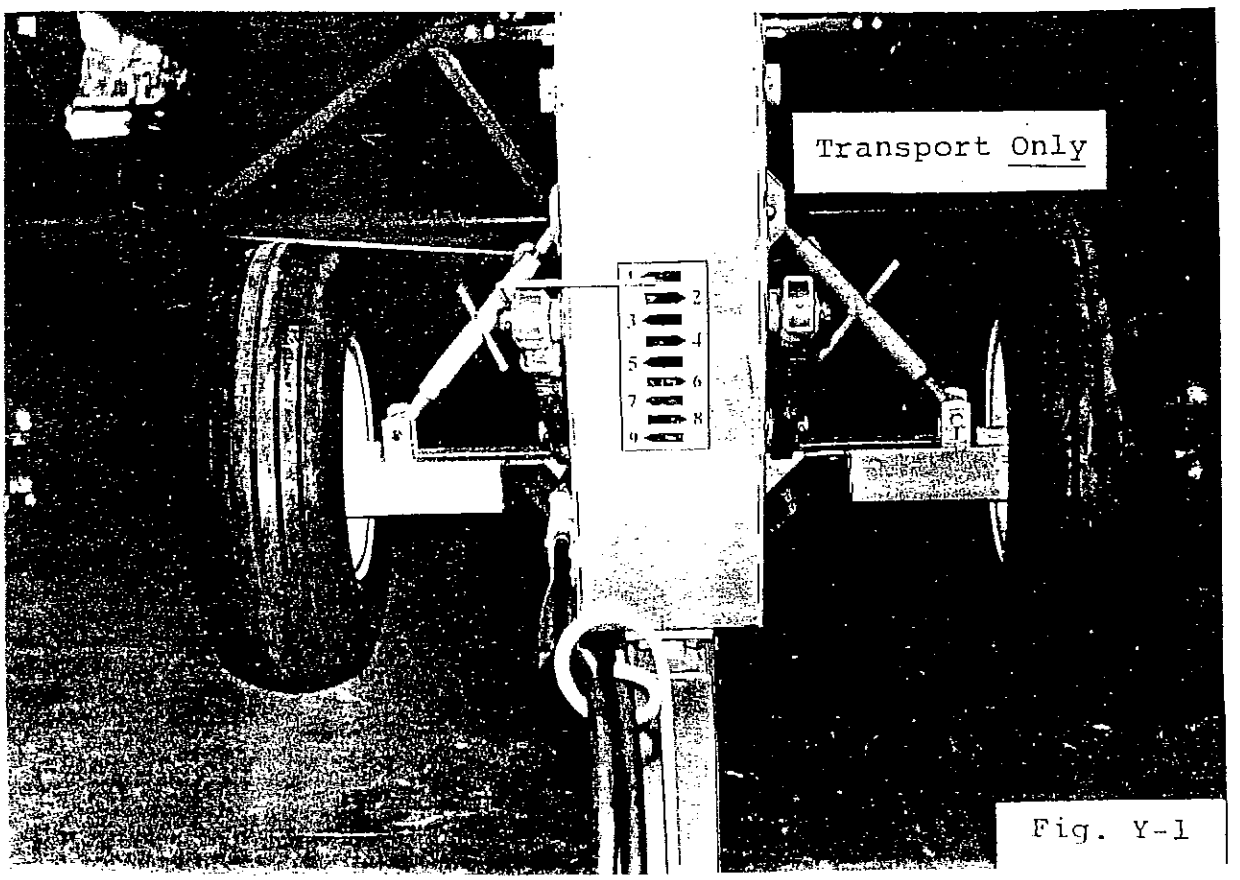


Fig. Y-1

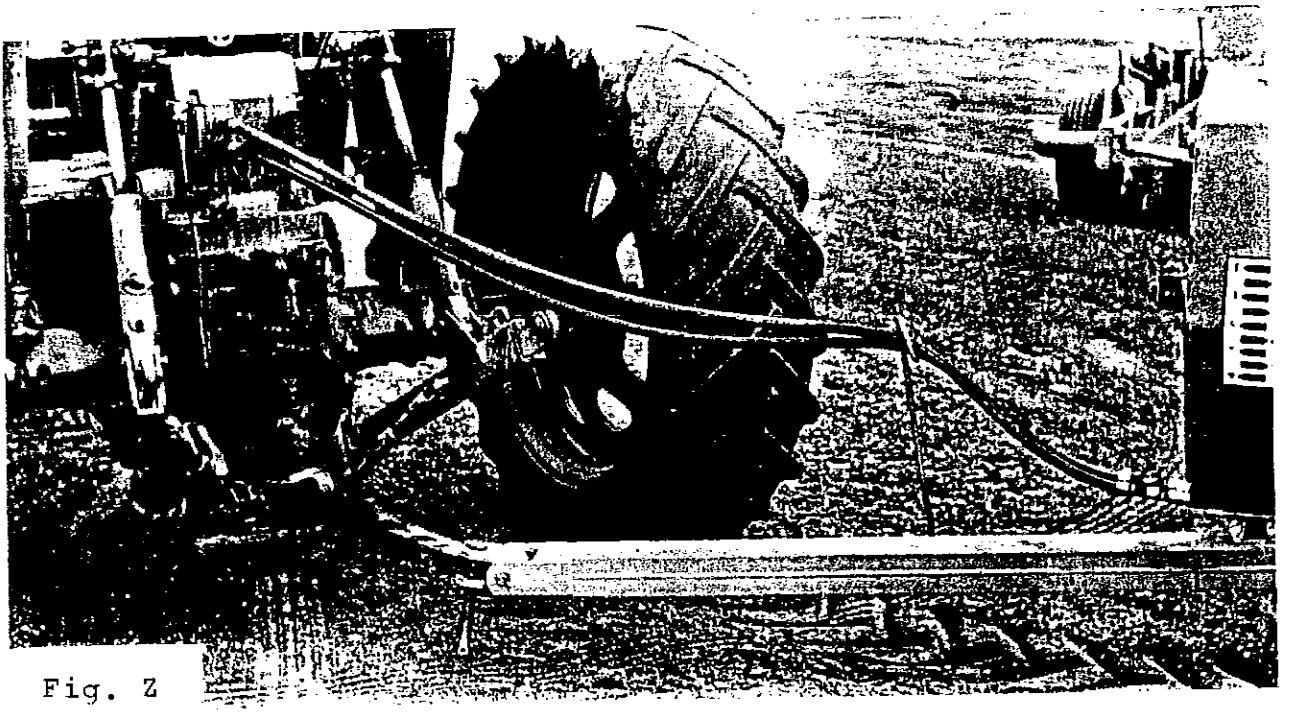
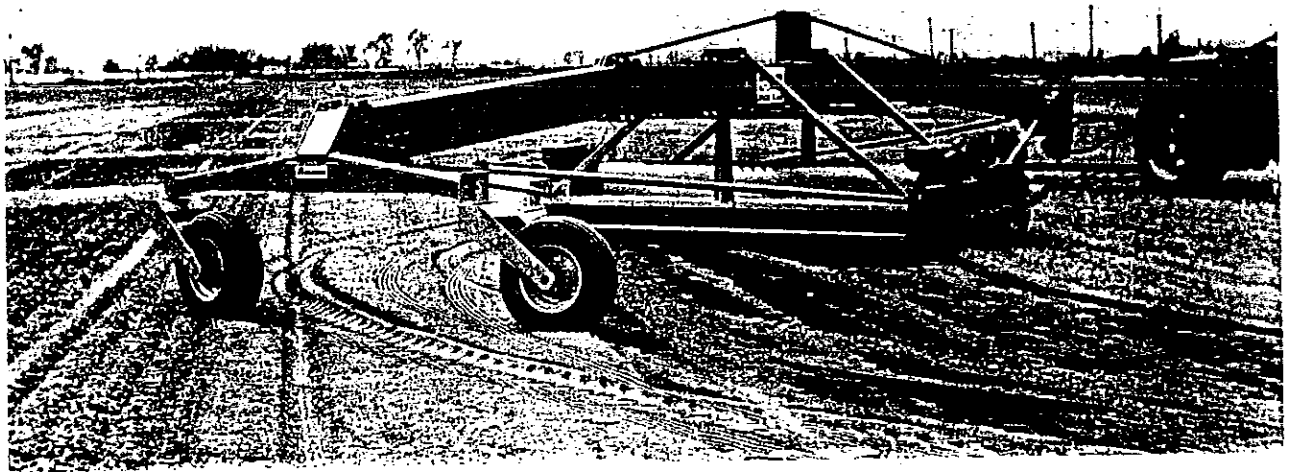
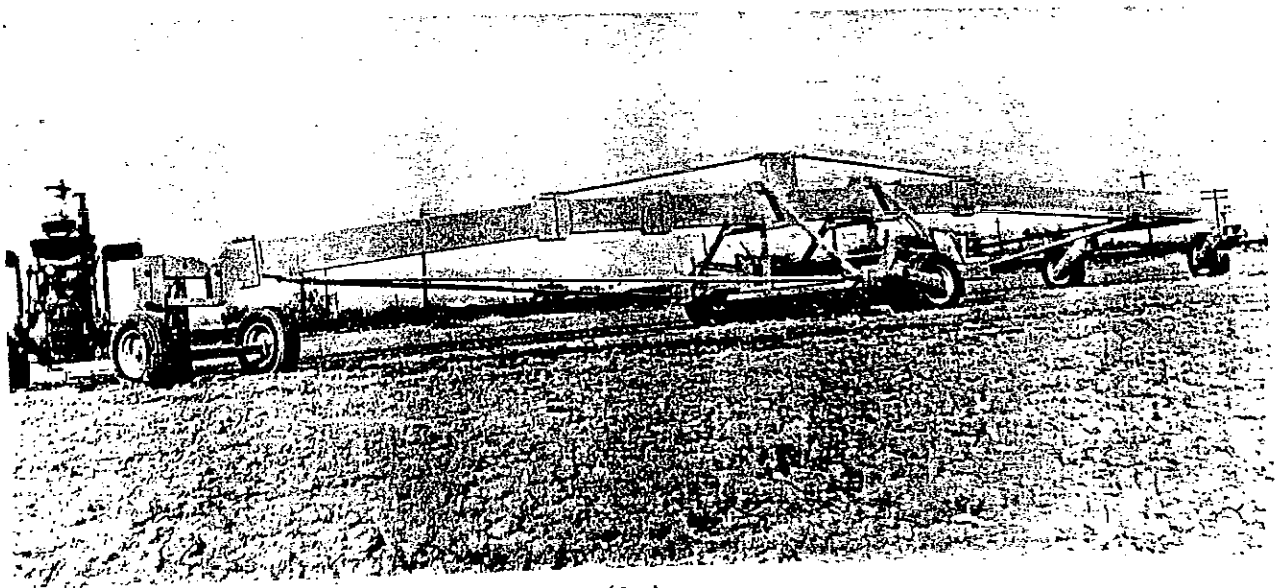


Fig. 2





2-11-76

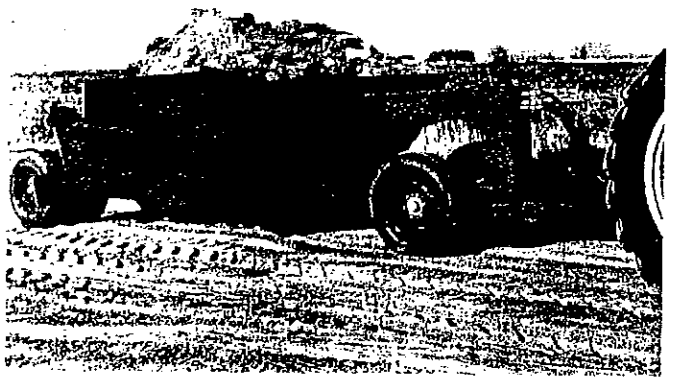
Fig. No.	Ref. No.	Part No.	Description	Model No.	No. Req.	Weight
A	1	450566	R.H. Sideboard	All	1	259
"	"	450565	L.H. Sideboard	"	1	259
"	2		Moldboard Assembly	12'	1	
-	-	451075	Moldboard Weldment	"	-	687
-	-	172040	12' Cutting Bit	"	-	85
-	2		Moldboard Assembly	14'	1	
-	-	451080	Moldboard Weldment	"	-	771
-	-	(174190)	14' Cutting Bit ~~450804~~ 174040 X	"	-	107
"	3	450575	Blade Pivot Pin	All	2	5
"	"	062571	1-1/2 Slotted Nut	"	2	1
"	"	063571	Flat Washer	"	2	
"	"	063778	5/16 X 2-1/2 Cotter	"	2	
"	4	451063	Bumper Angle	"	2	6
"	-	051212	1/2 X 1-1/4 Carriage Bolt	"	6	
"		451068	Bushing 2" O.D. X 1-1/2" I.D. X 1-3/8" Long	All	2	1
B	1	451262	Blade to Bell Crank Link	All	2	10
"	2	451226	R.H. Bell Crank Assembly	All	1	20
"	"	451225	L.H. Bell Crank Assembly	All	1	20
-	-	066225	18-Gauge Machine Bushing	"	8	
-	-	066476	14-Gauge Machine Bushing	"	4	
"	3	450418	R.H. Siderail	"	1	186
"	"	450417	L.H. Siderail	"	1	186
"	4	451250	Adjustable Link Assembly	"	2	9
"	5	451240	Clevis Pin Assembly	"	2	2
"	-	064391	1/4 X 2 Roll Pin	"	2	
"	6	701026	Clevis Pin	"	2	2
C	1	451780	Front A-frame - 12'	12'	1	368
"	2	451785	Rear A-frame - 12'	12'	1	359
"	1	451790	Front A-frame - 14'	14'	1	396
"	2	451795	Rear A-frame - 14'	14'	1	383
D	1	450808	R.H. Main Axle	All	1	97
"	"	450807	L.H. Main Axle	All	1	97
"	2	450865	Main Axle Inner Pipe - 12'	12'	1	157
"	"	450866	Main Axle Inner Pipe - 14'	14'	1	185
E	1	590860	Tire and Tube Assembly (Main & Rear)	All	4	38
"	-	590861	11:00 X 16 6-Ply Tire Only	All	-	
"	-	590862	Tube Only	All	-	
"	2	590321	16 X 8 Wheel	All	4	29
"	3	(450804)	Hub Assembly (Q-830) ~~450803~~	All	4	12
"	-	007000	Wheel Bolt	All	24	
"	364180	454100	Hub Repair Kit - Consisting of:	All	-	
"	-	450845	Cup (13621)	"	2	
"	-	450843	Seal (EWC. 0609687)	"	2	
"	-	450846	Cone (13686)	"	2	
"	4	450806	Spindle	All	4	8
"	-	030620	7/8 Flat Spindle Washer	"	4	
"	-	062567	7/8 Slotted Hex Nut	All	4	
"	-	063734	5/32 X 1-1/2 Cotter	"	4	
"	5	450831	Spindle Support Weldment	"	2	14

if hub is replaced use same spindle with

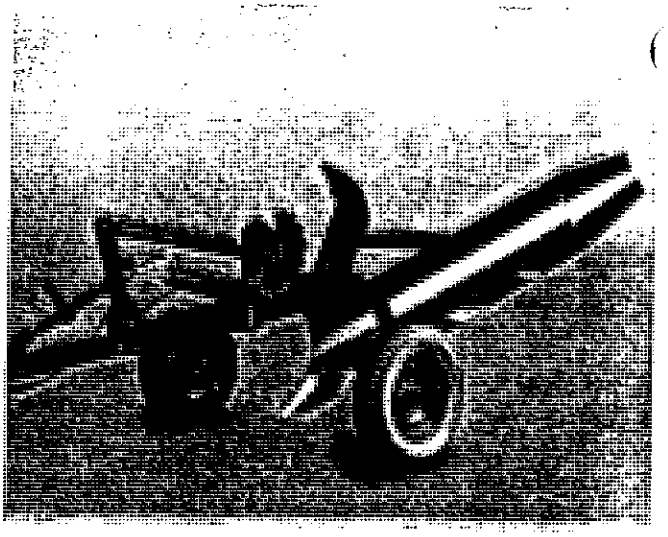
Fig.	Ref. No.	Part No.	Description	Model No.	No. Req.	Weight
"	1	450826	Axle Brace	All	2	29
"	2	451243	Side Spring Rear Plate	"	2	2
G	1	450871	Anchor Bar Weldment	All	2	6
"	2	450873	Pipe Spacer	"	4	1
"	3	172600	Ratchet Jack Assembly	"	2	14
H	1	408000	Tension Spring	All	4	
"	2	451242	Side Spring Front Plate	"	2	2
"	3	451250	Adjustable Link Assembly	"	2	9
"	4	451239	Clevis Pin (Bushing - 450861)	"	2	2
-	-	063722	1/8 X 1-1/2 Cotter Pin	"	4	
-	-	064391	1/4 X 2 Roll Pin	"	2	
-	-	451246	3/4 X 2 Drilled Pin	"	2	
J	1	450201	Center Truss	"	1	521
"	2	451742	Cross Tube - 12'	12'	2	40
"	2	451743	Cross Tube - 14'	14'	2	40
K	1	450301	Front Truss	All	1	512
"	2	451762	Front Pull Pipe - 176-3/4"	46	2	55
	-	451749	L.H. Pull Pipe Anchor	All	4or6	-
	-	451750	R.H. Pull Pipe Anchor	All	4or6	-
L	1	450301	Rear Truss	All	1	512
"	2	451761	Rear Pull Pipe - 140-3/4"	46	2	47
	-	451750	R.H. Pull Pipe Anchor	All	4or6	-
	-	600254	SMV Socket Mounting Assembly	All	1	-
M	1	450212	Intermediate Truss - 54"	55	2	244
"	2	451764	Front Pull Pipe - 227-3/4"	55	2	72
M-1	1	451763	Rear Pull Pipe - 188-3/4"	55	2	59
"	2	451776	Support Weldment	55	1	125
"	3	451767	Top Pull Pipe - 105-3/4"	55	2	35
N	1	450213	Intermediate Truss - 144"	70	2	459
"	2	451766	Front Pull Pipe - 314-3/4"	70	2	100
N-1	1	451765	Rear Pull Pipe - 274-3/4"	70	2	83
"	2	451776	Support Weldment	70	1	125
"	3	451763	Top Pull Pipe - 188-3/4"	70	2	59
O	1	450401	Rear Axle Beam	All	1	267
"	2	451625	Caster Frame	All	2	105
"	3	451615	Caster Tube Assembly	All	2	32
"	4	067002	1/2 X 4 Roll Pin	All	2	1
"	5	450831	Spindle Support Weldment (See Fig. E for Tire, Wheel, Hub & Bearing Parts)	All	2	14
P	1	450101	Front Truss Adaptor	All	1	123
"	2	451211	Cylinder Housing	"	1	114
"	3	451201	Lift Arm Weldment	"	1	75
"	4	451208	Lift Control Arm	"	2	15

Fig. No.	Ref. No.	Part No.	Description	Model No.	No. Req.	Weight
P	5	066225	18-Ga. Machine Bushing	All	4	-
"	6	450113	1-1/2 X 13 Pivot Pin	"	2	7
"	7	401060	Cylinder Assembly - 13" Stroke	All	1	33
"	-	701026	1 X 3 Clevis Pin	"	2	
-	-	401052	Cylinder Seal Repair Kit	"	1	
-	-	041040	Cyl. Seal Kit (#10142 and up)	"	1	
Q	1	451221	Gauge Arm 3/8 X 4	"	1	1
"	2	311041	Check Valve 5/16 X 2-1/2 Bolts	"	1	5
"	3	602900	19" Hose	"	2	1
"	-	710402	1/2" Swivel	"	2	
"	4	150340	120" Hose	"	2	3
"	5	~~025250~~	Keeper Plate	"	2	1
		025251 025400	Keeper Plate (Replaces 025250 Ball Stud Repair Set - 1972 & Up)	"	1	3
R	1	590860	11.00 X 6 Tire & Tube Assem. (Dolly)	All	2	38
"	2	590321	16 X 8 Wheel	"	2	29
"	3	044115	Hub Assembly (Q817)	"	2	20
"	-	007009	9/16 X 1-3/4 Wheel Bolt	"	12	
"	-	062567	7/8 Slotted Nut	"	-	
"	-	044116	Hub Repair Kit - Consisting of:	"	-	
-	-	040823	Inner Cup 25520	-	-	
-	-	040827	Inner Cone 25590	-	-	
-	-	040832	Seal 22507	-	-	
-	-	040825	Outer Cup 25821	-	-	
-	-	040829	Outer Cone 25877	-	-	
-	-	040831	Hub Cap EWC 0615216	-	-	
R	4	450630	Dolly Tongue	All	1	254
R	5	040627	Hitch Clevis	"	1	11
-	-	706800	Crawler Clevis (Optional)	"	1	7
-	6	450617	Spacer	"	1	2
"	7	450615	1 X 7-1/2 Clevis Pin	"	1	2
-	-	063764	1/4 X 2 Cotter	"	1	2
"	8	281010	Hose Support	"	1	3
S	1	450640	Transport Jack Assembly	All	2	10
"	2	065528	3/4 X 3-1/2 Drilled Pin	"	4	2
-	-	063839	Hairpin	"	4	
T	1	450590	Trip Pipe - 12'	12'	1	
"	"	450591	Trip Pipe - 14'	14'	1	
"	2	450585	Bearing Weldment	All	2	10
"	3	450588	Bearing Cap	All	2	2
"	4	450578	Lower Pin	"	2	
"	5	451084	Trip Spring	"	4	5
"	6	450579	Top Spring Anchor	"	2	1
"	7	450540	R.H. Cam Weldment	"	1	7
"	"	450539	L.H. Cam Weldment	"	1	7
"	8	450557	Return Spring 302710	"	2	22
"	-	701026	1 X 3 Clevis Pin	"	2	2
U	1	450584	U-Bolt	"	2	3

OTHER EVERSMAN PRODUCTS

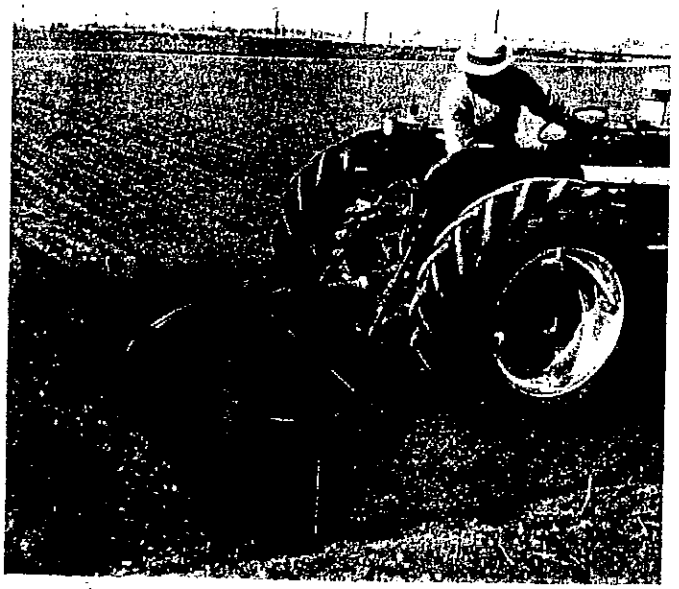


Eversman Scrapers are available in 2½ and 6 cubic yard capacity sizes. Both models can be used individually, with standard farm wheel tractors, or in tandem, to accomplish long-haul, high-yardage, dirt moving. Each scraper operated with single hydraulic control valve. Low initial investment and low operating cost for all types of soil moving jobs to prepare fields for irrigation or to eliminate drainage problems.

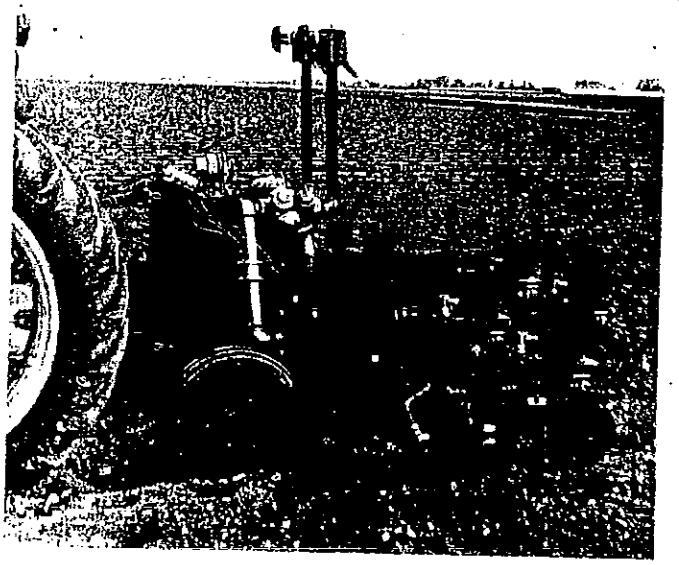


A modern Ditcher for building or cleaning ditches for either irrigation or drainage. Outstanding maneuverability and transportability features makes it possible for one man to do his ditching work fast and at low cost. Operated either mechanically or hydraulically with standard farm tractors.

Available in three models to fit all size ditches and farm tractors. A model is also available for tractors with standard 3-point hitch systems.



The new Model 130 Headland Furrow Opener. Saves work and time and you can eliminate hand digging the 10 to 12 feet required to run water from the siphon tubes to the rows. Hydraulic control. Cutting length 13'2", depth of furrow 3" to 5", rotor speed 250 RPM. Direction of rotation towards tractor. Swivel 37° both directions. Sealed, self-aligning ball bearings. P.T.O. drive. Mounts on standard 3 point hi



The Eversman Electronic Selective Row Crop Thinner looks, selects and thins – faster and more accurately than human hands. A complete machine available in 3, 4, 6 or 8-row models for either flat or bed plantings. The wide range of adjustments permits operation in sugar beets, cotton or vegetable crops. Capable of thinning up to 50 acres per 24 hours at savings up to $20.00

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