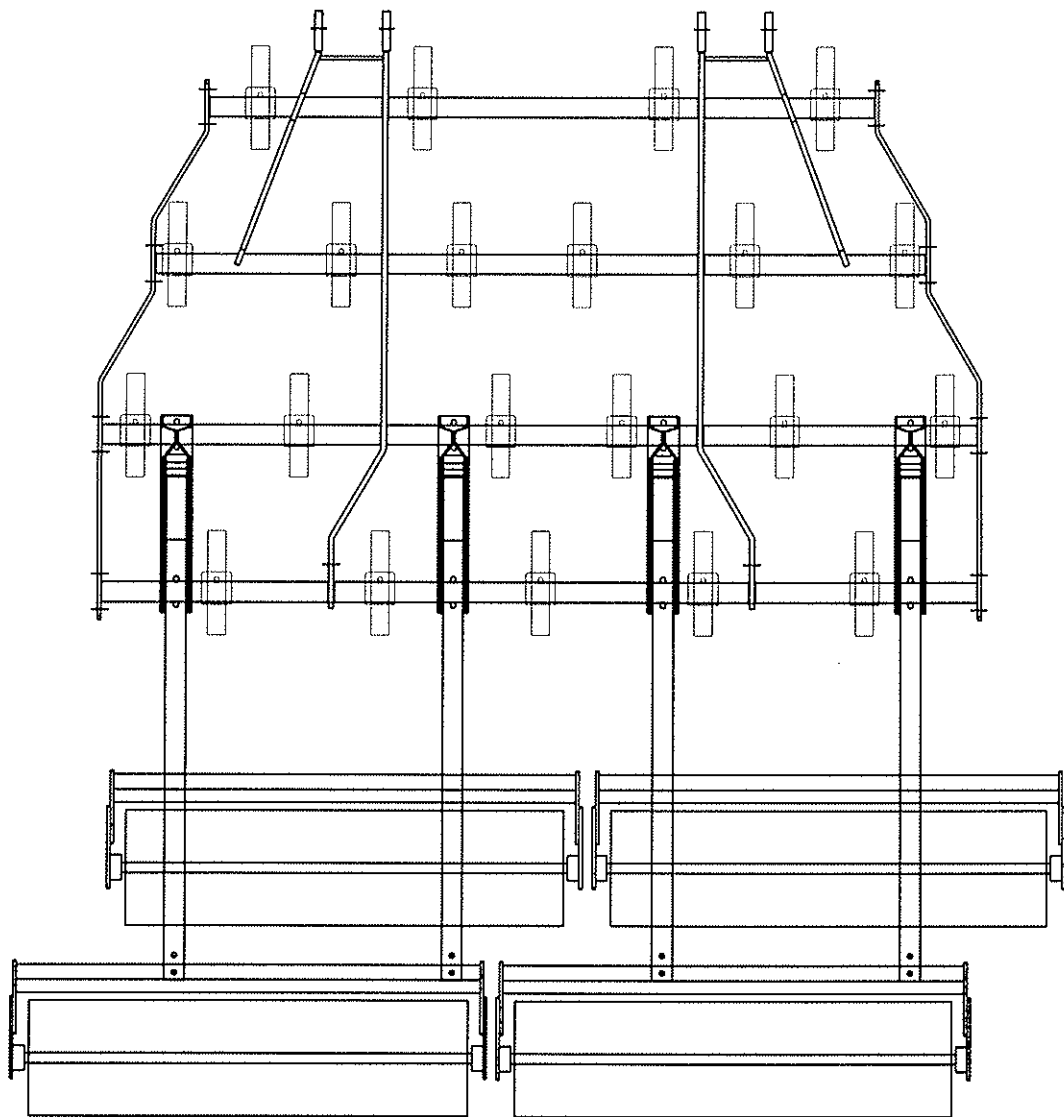


800 SERIES
CULTIVATOR ROTA HARROWS



**SINGLE & DOUBLE ROLLER
ASSEMBLY INSTRUCTIONS
& OPERATING GUIDE**

03 150 830
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02/98

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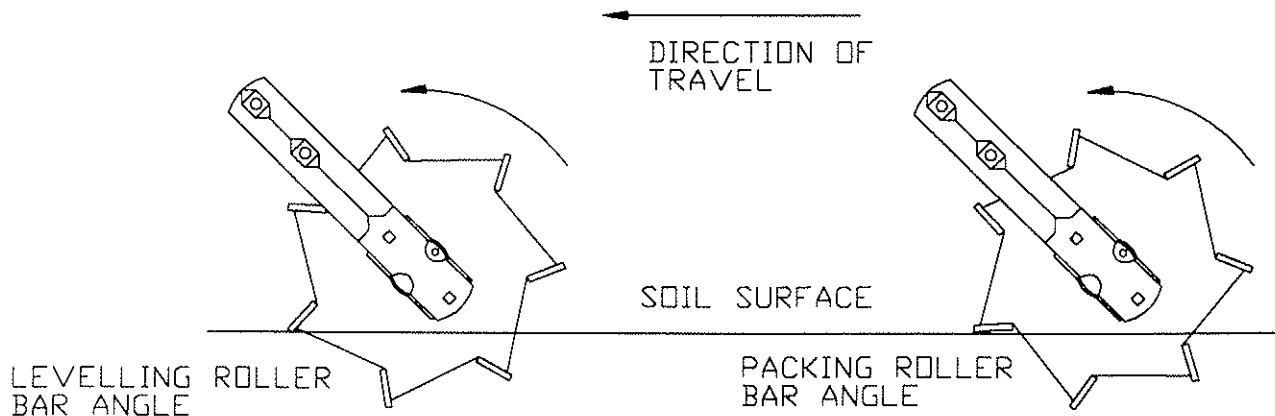
Harrow Assembly Instructions:

1. Assemble harrow sections according to the assembly diagrams on the following pages.
2. Place the mounting brackets on the cultivator at the positions shown on the harrow layouts in the back of this booklet. You will find that there is just enough room to fit the mounting brackets and hanger arms between the tines on the back two rows of the cultivator.
3. Attach the harrow mounting brackets to the two rear frame tubes with the U-bolts supplied. Make sure that the mounting bracket tabs are positioned on the front side of the tubes with the U-bolts placed in position from the rear.
4. Assemble the harrow arms to the mounting bracket according to the assembly diagram. Place a wear bushing inside the pivot bushings on the harrow arms before bolting to the mounting bracket. (An additional bolt and bushing is provided as a transport stop for the upper (long) hanger arm when the cultivator is lifted off the ground. NOTE: In the case of a single rota harrow, only the lower (short) hanger arm is used and the additional bolt and bushing is used to hook the tension spring onto in step 6).
5. Thread the cast spring insert into the tension spring until the stop tab is tight to the end of the last spring coil.
6. Hook the spring through the tab in the bottom of the long harrow arm, and attach to the end tab on the short harrow arm with the full threaded bolt, flat washer and jamnut. Slide the washer on the bolt. Insert through the tab in the short arm then thread on the jamnut. (NOTE: In the case of a single rota harrow, only the lower (short) hanger arm is used, therefore the spring must be hooked onto the transport bolt and bushing installed in step 4).
7. Thread the spring tension bolt into the insert and tighten until the spring just starts to stretch, then lock in place with the jamnut.
8. Attach the rollers to the roller frames with the bolts and locknuts provided.
9. Mount the spiral roller assemblies to the ends of the harrow arms with the mounting plates and bolts provided, according to the layouts in the back of the book. For double rollers, the front rollers should be offset 4" to the right of centre and the rear rollers should be offset 4" to the left of centre. Leave $\frac{3}{4}$ " between the ends of the roller bearing arms. The left spiral rollers are always mounted at the front, to the short hanger arms, and the right spiral rollers are always mounted to the rear or long hanger arms.
10. Check to make sure that the harrows are centred on the back of the cultivator so that there is the same amount of overlap on each side. If the harrows are not centred the cultivator will want to pull crooked in the field.
11. Check the assembly to make sure each section of harrows can move up and down freely.
12. Check all nuts and bolts and secure if loose.

Fig.	Part no.	Description
1	603 150 707	Mounting Bracket Weldment
2	603 150 700	Short Arm Weldment
3	603 150 701	Long Arm Weldment
4	600 366 005	1/2" Locknut
5	600 356 115	Bolt 3/8" x 1 1/2"
6	600 356 137	Bolt 1/2" x 3 1/2"
7	600 356 105	Bolt 1/2" x 4"
8	600 373 072	Bolt 5/8" x 5" Full Thread
9	600 381 020	Flatwasher 5/8"
10	600 366 004	Locknut 3/8"
11	600 365 014	Hex Nut 5/8" - 11 UNC, Plated
12	600 373 061	U-Bolt 1/2" x 2" x 3 1/4"
13	603 150 017	Roller Tension Spring
14	603 150 018	Spring Insert
15	603 150 712	Wear Bushing
16	603 150 191	Frame Mount Plate
17	603 150 195	32" Frame
	603 150 196	47" Frame (Shown)
	603 150 197	55" Frame
	603 150 198	63" Frame
	603 150 199	71" Frame
18	603 151 280	32" L. H. Roller Assembly- Shaftless
	603 151 278	47" L. H. Roller Assembly - Shaftless (Shown)
	603 151 282	55" L. H. Roller Assembly - Shaftless
	603 151 284	63" L. H. Roller Assembly - Shaftless
	603 151 286	71" L. H. Roller Assembly - Shaftless
19	603 151 281	32" R. H. Roller Assembly - Shaftless
	603 151 279	47" R. H. Roller Assembly - Shaftless (Shown)
	603 151 283	55" R. H. Roller Assembly - Shaftless
	603 151 285	63" R. H. Roller Assembly - Shaftless
	603 151 287	71" R. H. Roller Assembly - Shaftless
20	603 151 270	Right Roller Harrow Bearing Arm
21	603 151 262	Left Roller Harrow Bearing Arm
22	600 451 006	Harrow Bearing 1-1/8" Square (FD209)
23	603 151 241	Right Roller Bearing Arm Shield
24	603 151 240	Left Roller Bearing Arm Shield
25	600 383 013	Roll Pin 3/8" X 2-1/2"
26	600 361 034	Carriage Bolt 1/2" X 1-1/4"

FIELD SETTINGS / MAINTENANCE:

- A) The down pressure can be increased or decreased by turning the spring adjustment bolt with a 15/16" socket wrench. First loosen the jamnut then adjust the down pressure on the rollers as required to obtain a level soil surface. Secure the jamnut. **NOTE:** There are many factors that can affect the ability of the harrows to level the soil surface behind the cultivator; Cultivator tine spacing, type of shares (sweeps), cultivating depth, ground speed, direction of travel across the field (angle), soil type, and soil conditions like moisture content and crop residue levels, all have an affect on the quality and levelness of the seed bed. Therefore, do not expect the same settings to work in every case. Be prepared to adapt and adjust your equipment and operating practices to obtain the best results for each field condition.
- B) 300 SS - spiral bar rollers can be run as a levelling roller or as a packing roller. When assembled in the frames as described earlier in this manual the rollers are set up to run as a levelling roller. To set as a packing roller the rollers can be turned end for end in the frames. This will alter the angle at which the spiral bars enter the soil and hence act as a packing roller. If you change the rollers to operate in this way it is important to remember to change the bearing arms so that the grease fitting is pointing to the rear, away from the direction of travel. See diagram below.



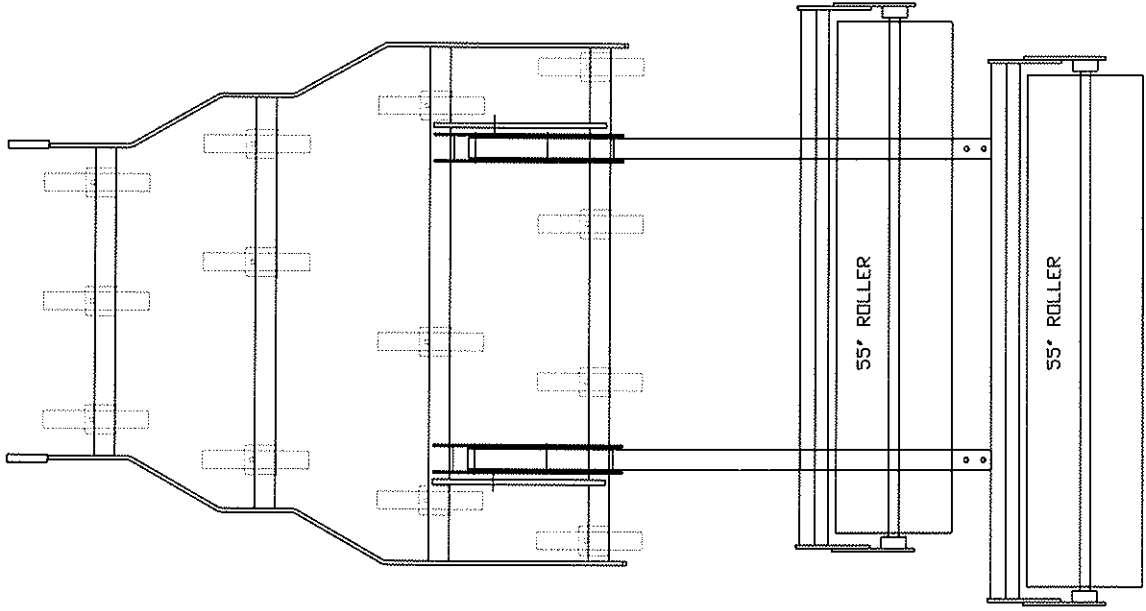
- C) Periodically check all nuts and bolts and secure if loose.
- D) Lubricate the G-bearings after every 12 hours of operation. **DO NOT OVER GREASE THE G-BEARING:** Over greasing may cause damage to the bearing seals.
- E) Periodically check and remove any foreign material that may become wound around the rollers or bearings and remove any objects (ie: stones) that have become trapped in the rollers.

Always check the condition of your field cultivator and levelling attachments at regular intervals and keep in good repair. Optimal performance cannot be expected of equipment in poor condition.

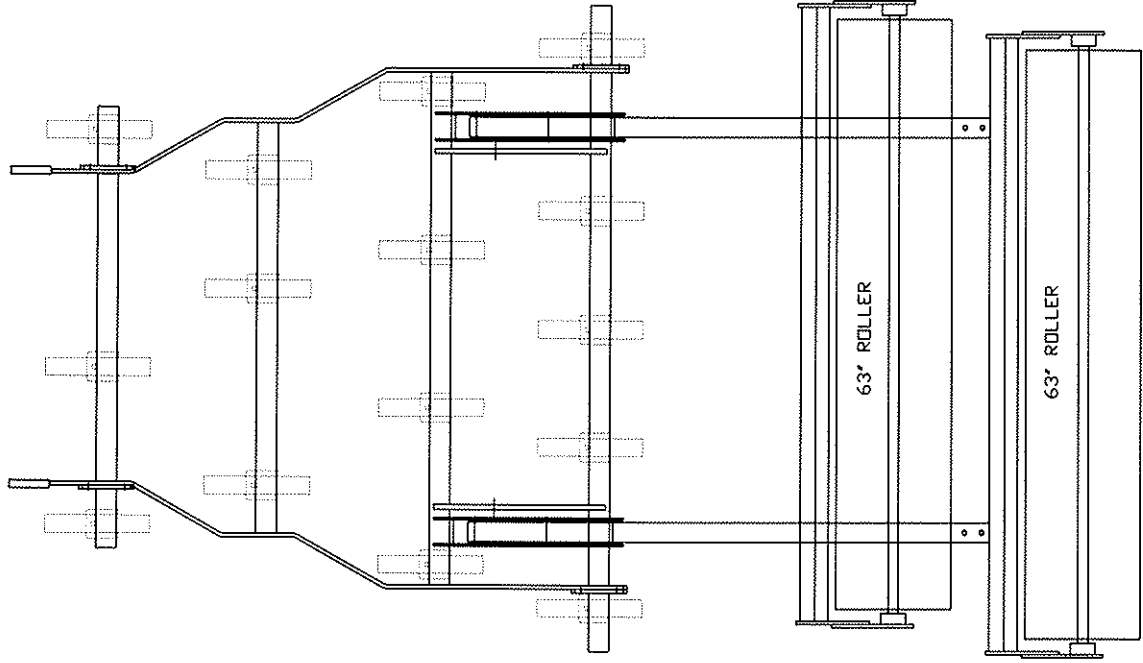
800 Series Cultivator Specifications

	4' Frame	7' Frame	15' Frame	Tine Extension Kit	8" Add On Frame	16" Add On Frame	No. Tines 4" Spacing	Working Width 4" Spacing	No. Tines 6" Spacing	Working Width 6" Spacing	32" R.H. Roller	47" R.H. Roller	55" R.H. Roller	63" R.H. Roller	71" R.H. Roller	32" L.H. Roller	47" L.H. Roller	55" L.H. Roller	63" L.H. Roller	71" L.H. Roller	Hanger Assembly	Harrow Working Width	
804-03 Cultivator	1						13	4'2"	9	4'2"			1									2	4'7"
804-11 Cultivator	1			4			15	4'10"	10	4'8"				1						1		2	5'3"
805 Cultivator	1				2		17	5'6"	11	5'2"					1						1	2	6'2"
806 Cultivator	1			4	2		19	6'2"	13	6'2"	1	1				1	1				4	6'7"	
807 Cultivator	1						21	6'10"	15	7'1"		2					2				4	8'2"	
808 Cultivator	1		2				23	7'6"	17	8'2"		1	1				1				4	8'7"	
810 Cultivator	1					2	29	9'6"	19	9'2"				2							4	10'10"	
811 Cultivator	1		2			2	31	10'2"	21	10'5"				1	1						4	11'2"	
812 Cultivator	1					4	37	12'2"	25	12'2"		1	2				1	1			6	13'6"	
813 Cultivator	1		2			4	39	12'10"	27	13'2"		1					1				6	14'8"	
815 Cultivator		1					45	14'10"	30	15'2"				2	1						6	16'9"	
816 Cultivator		1	2				47	15'6"	33	16'2"				1	2						6	17'6"	
818 Cultivator		1				2	53	17'6"	35	17'2"			4							4	8	18'8"	
819 Cultivator		1	2			2	55	18'2"	37	18'6"			2							2	8	19'3"	
820 Cultivator		1				4	61	20'2"	41	20'2"				3	1						8	22'3"	
821 Cultivator		1	2			4	63	20'10"	43	21'2"				2	2						8	22'9"	

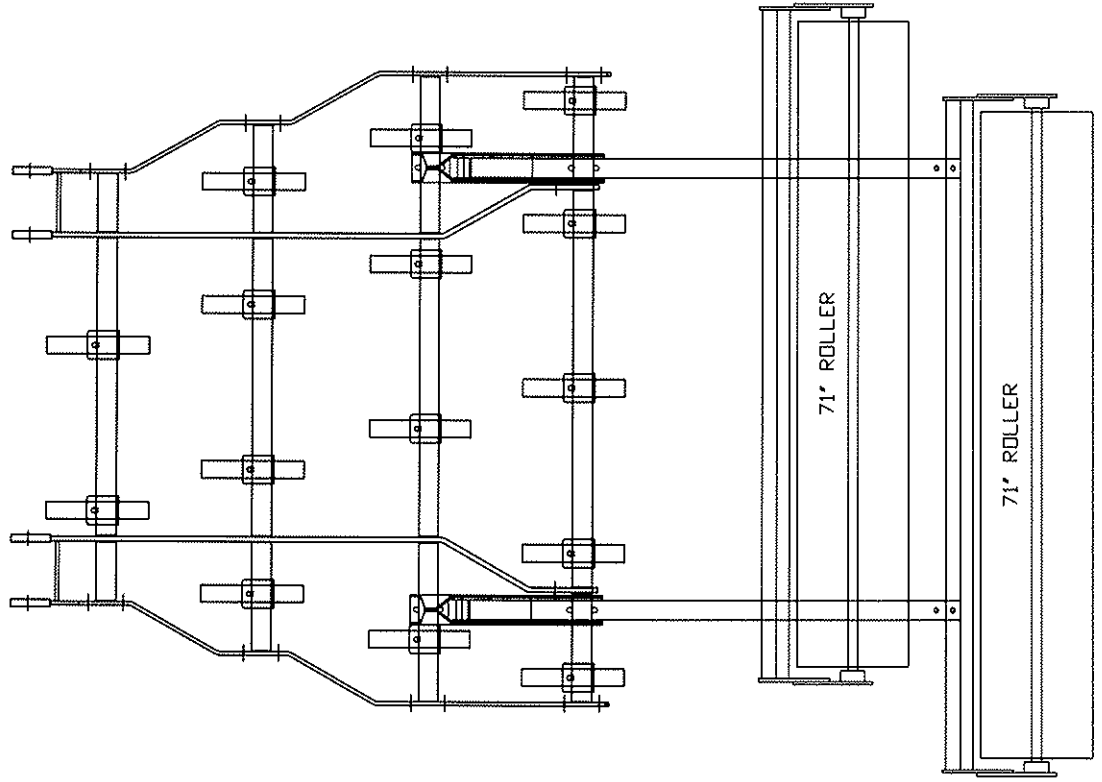
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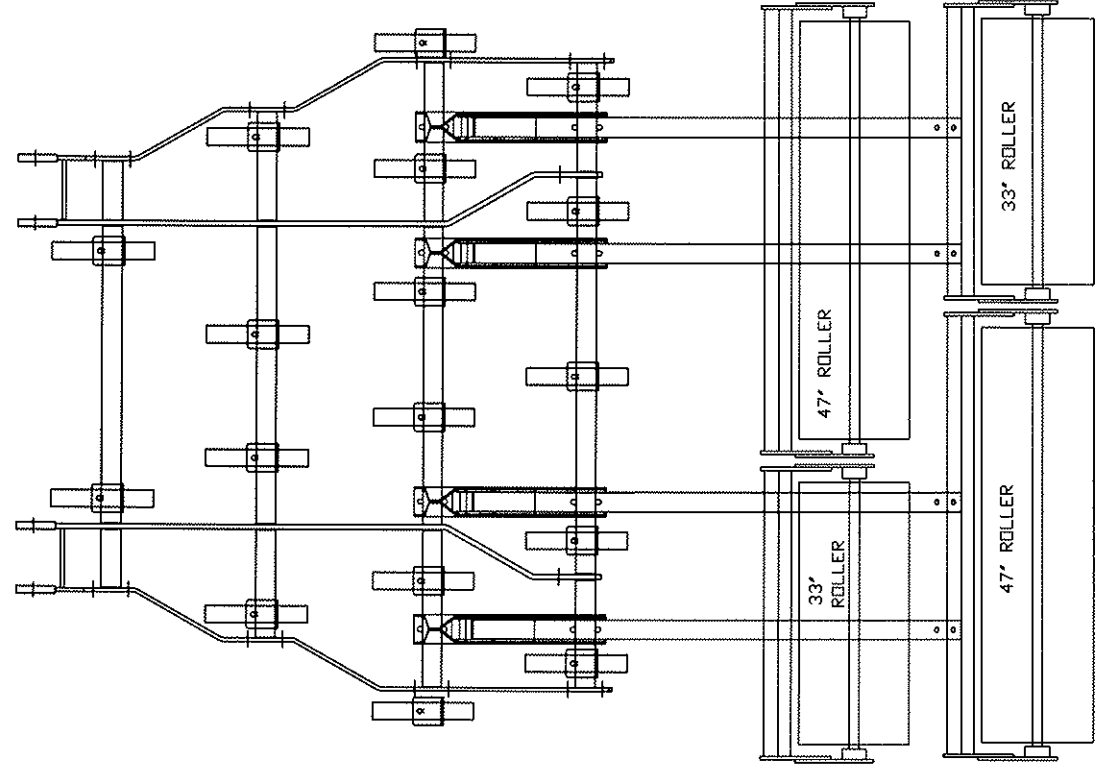
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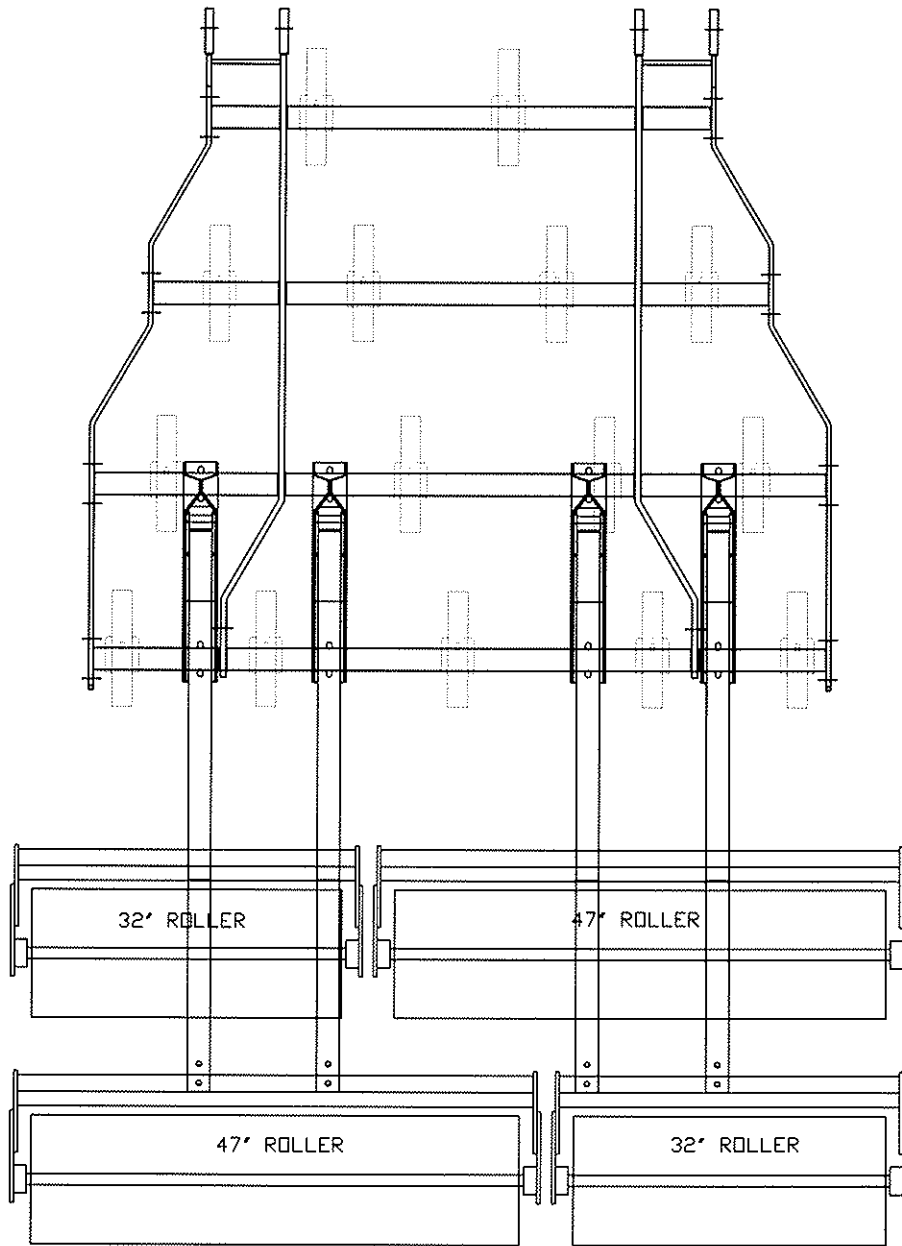
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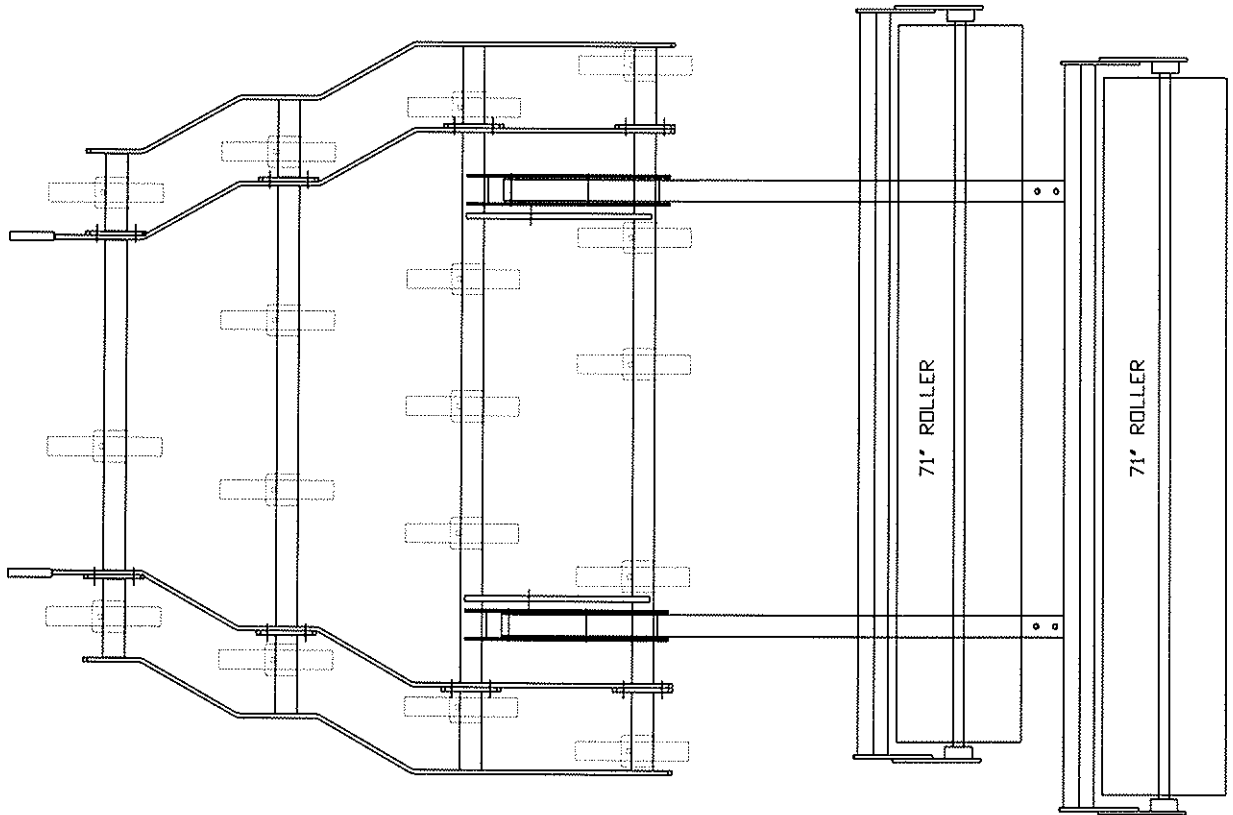
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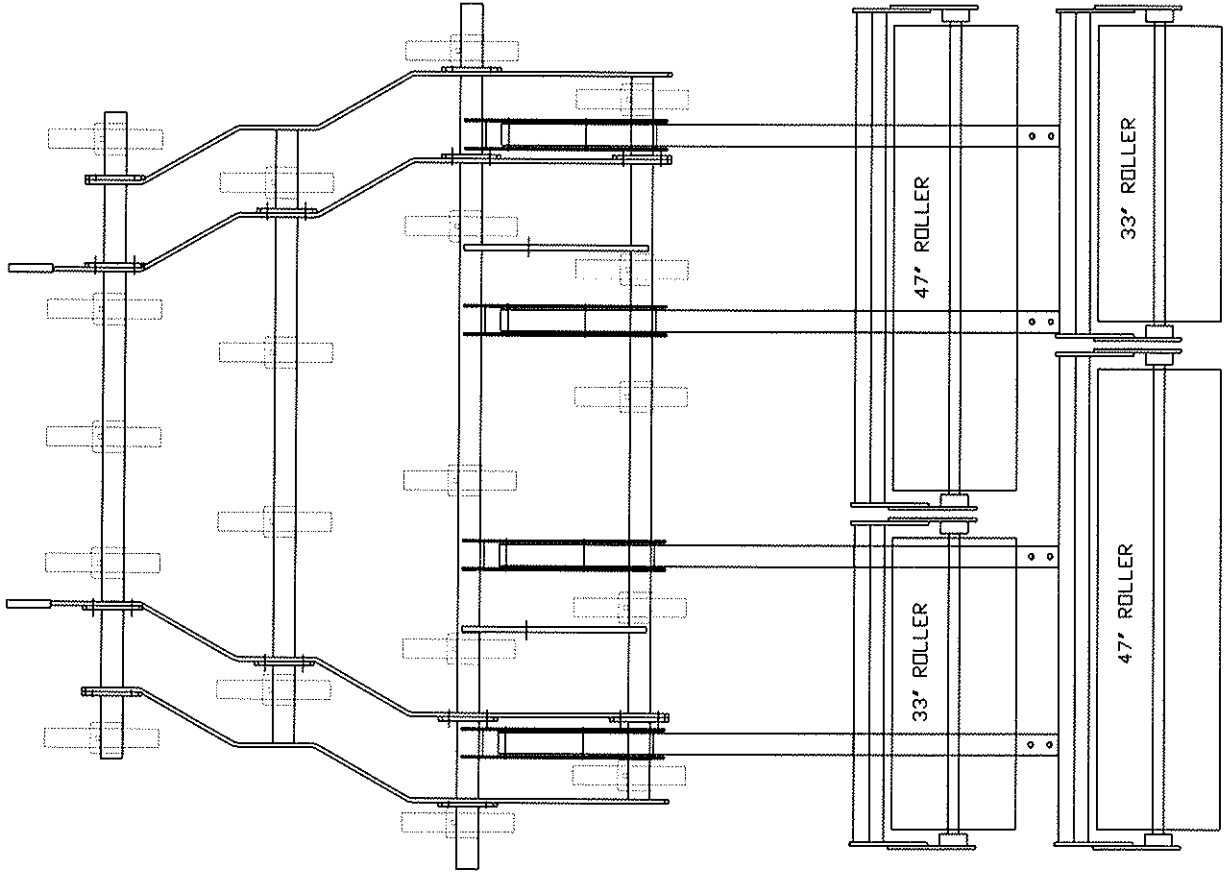
SPECIAL FOR
DOUBLE RR ROLLERS
CULTIVATOR MODEL 805



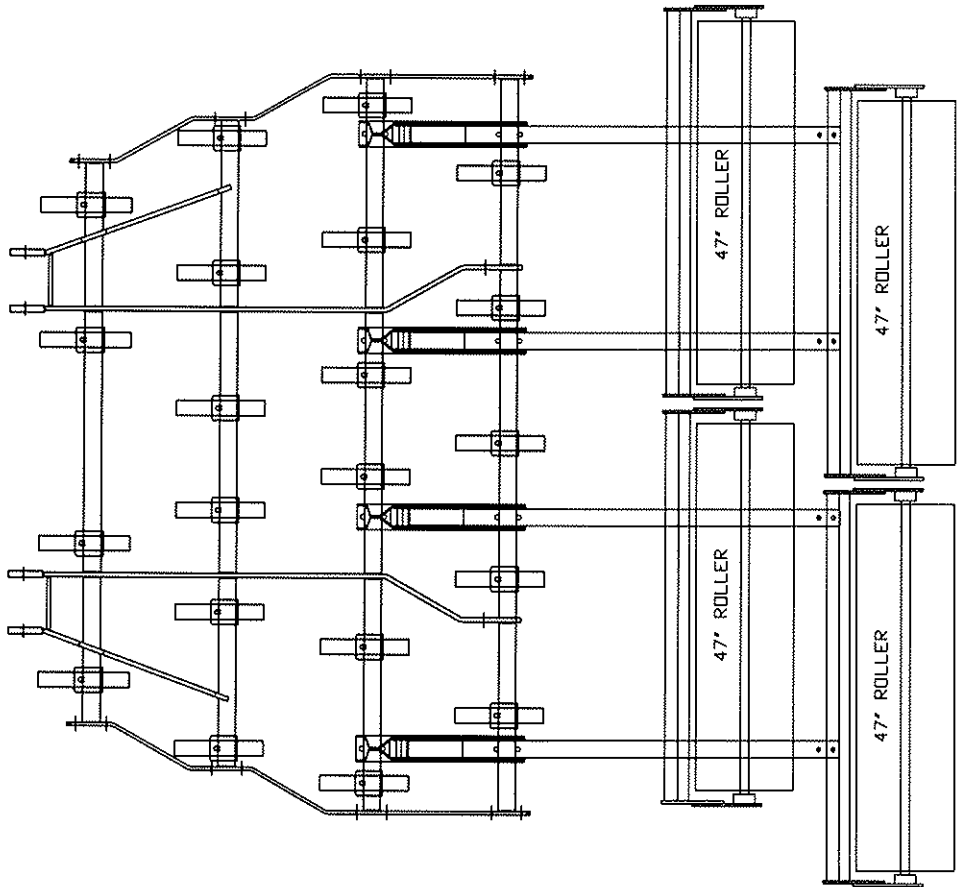
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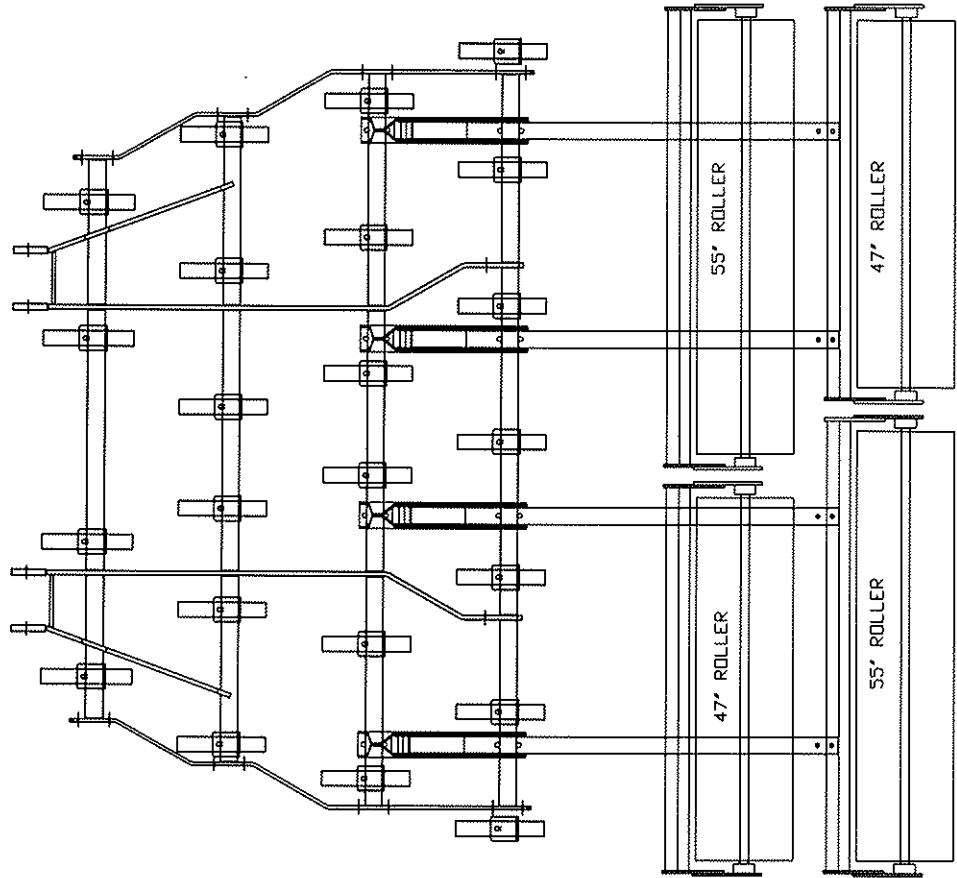
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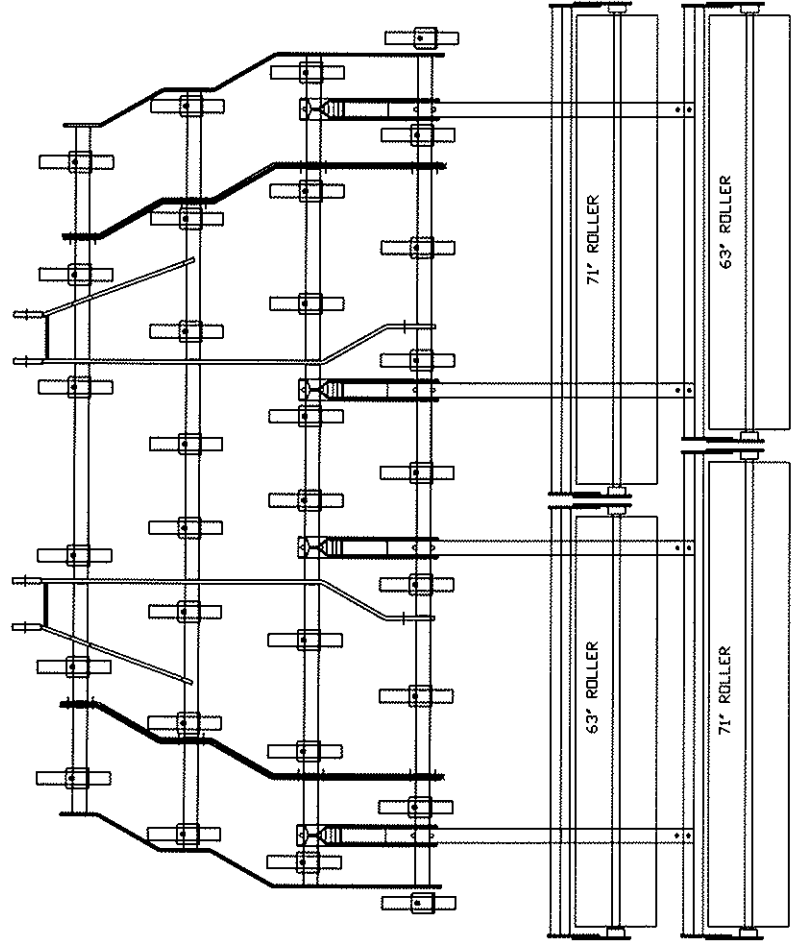
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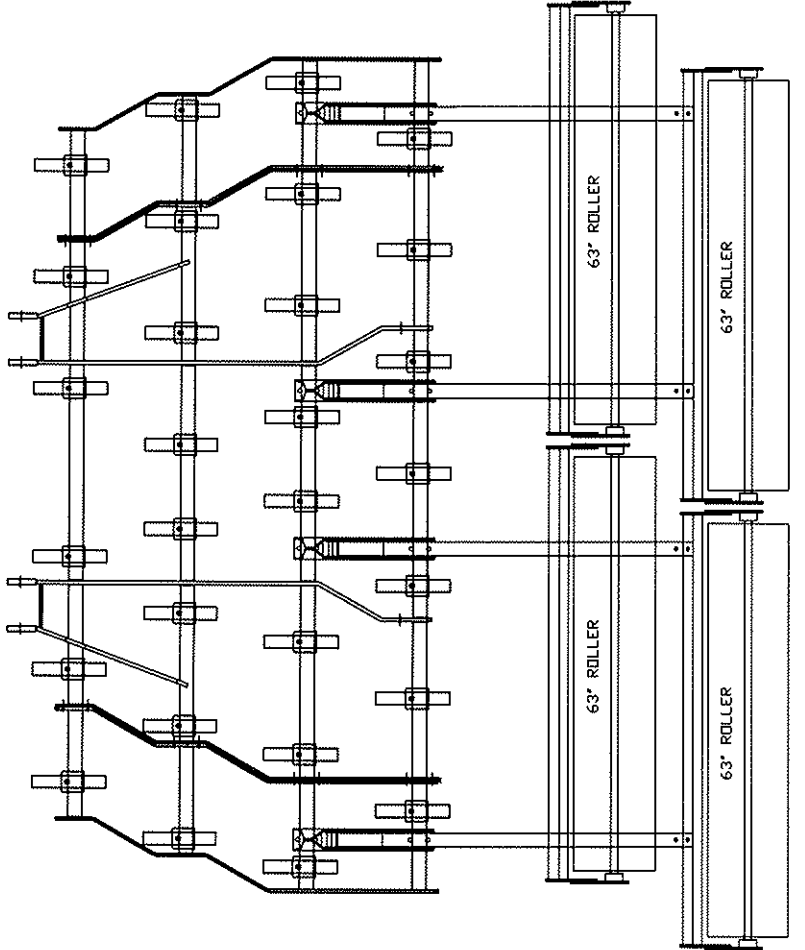
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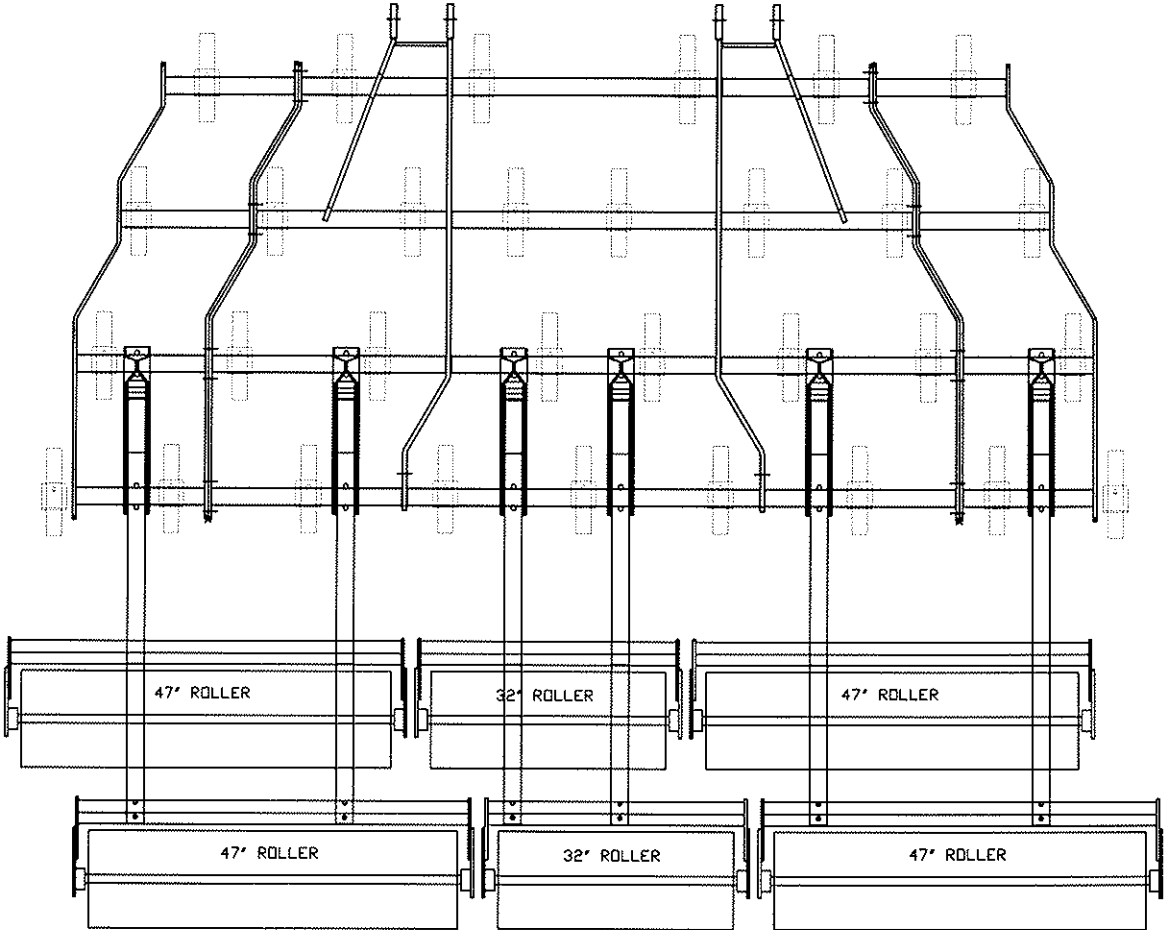
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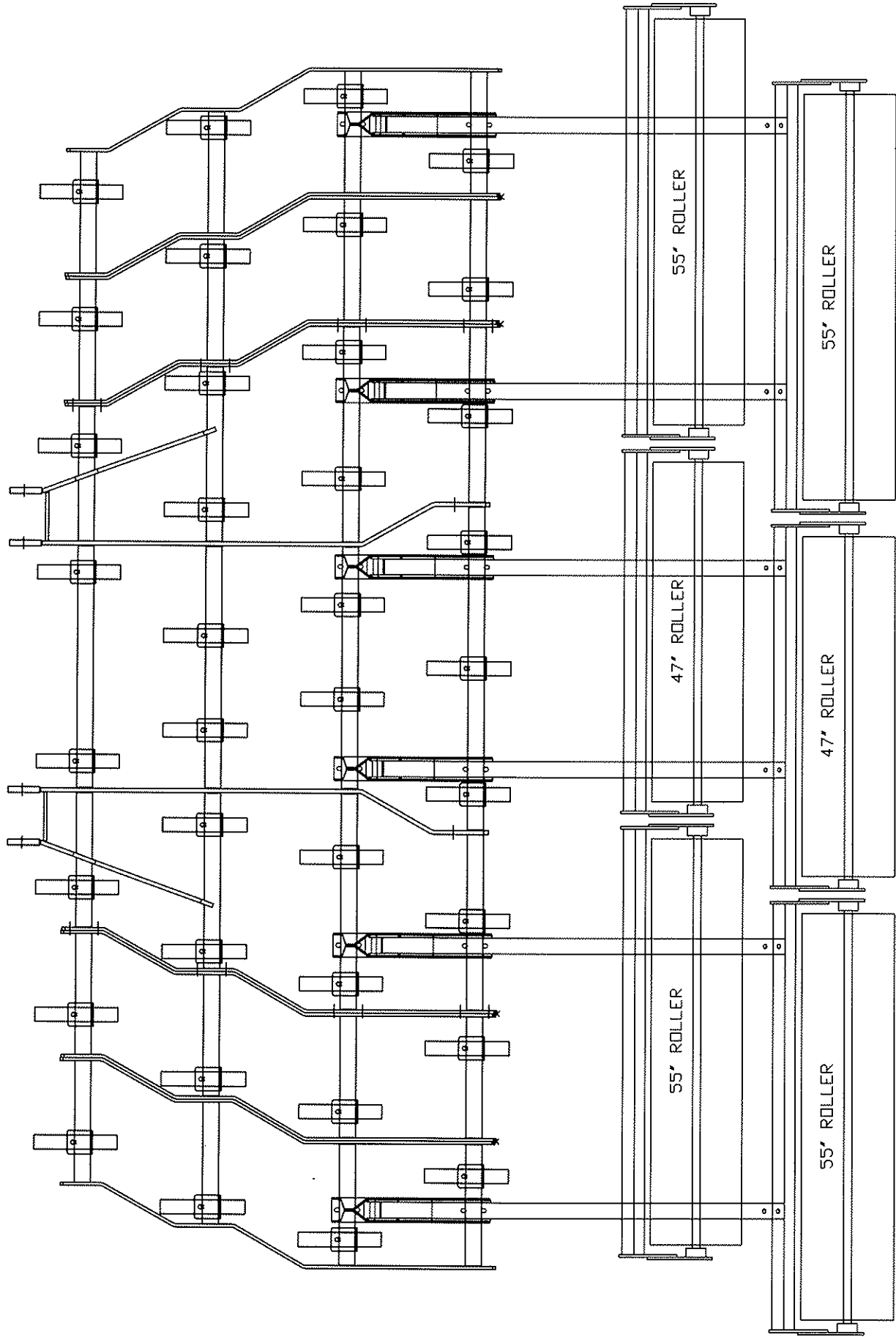
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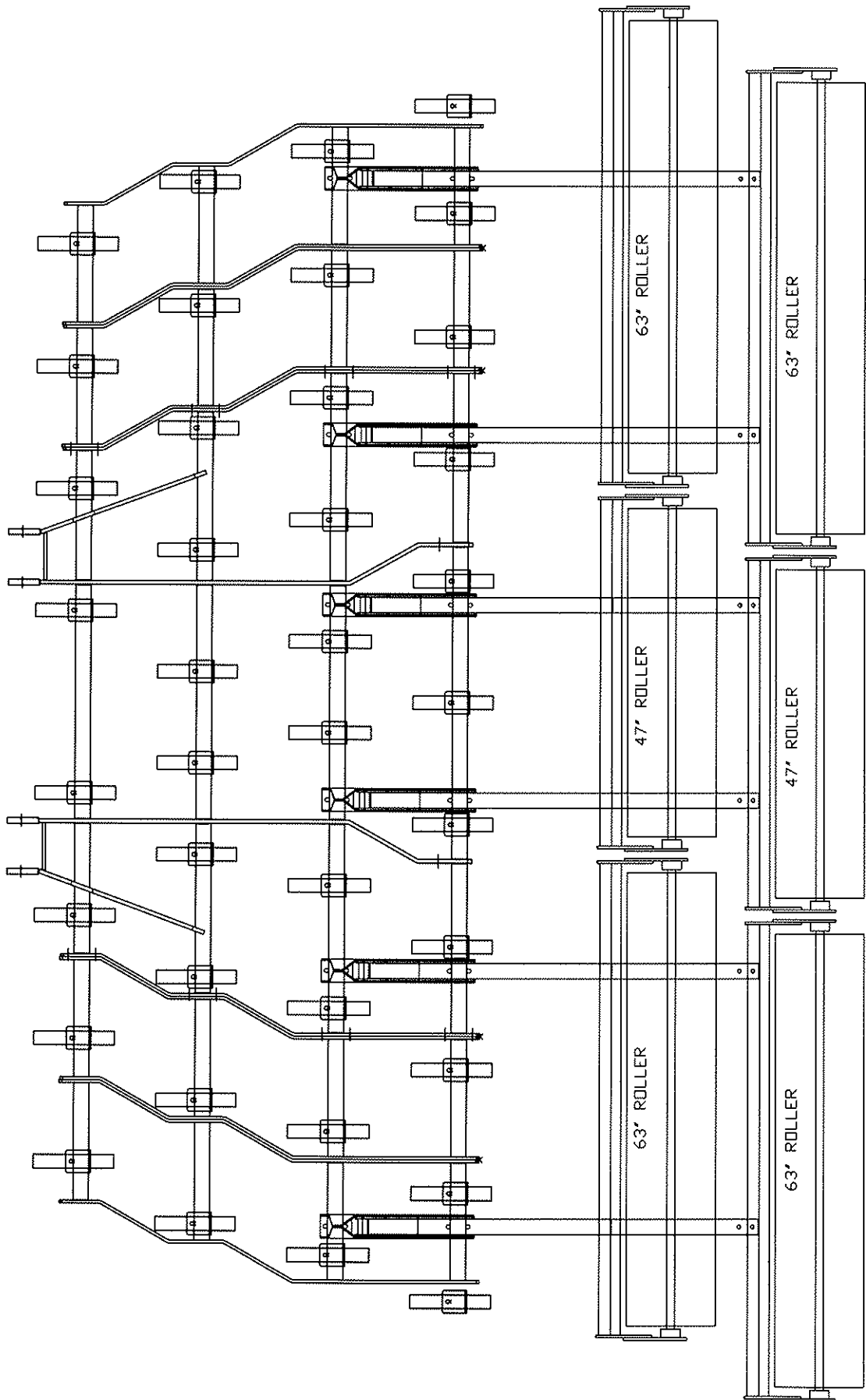
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CULTIVATOR MODEL 811



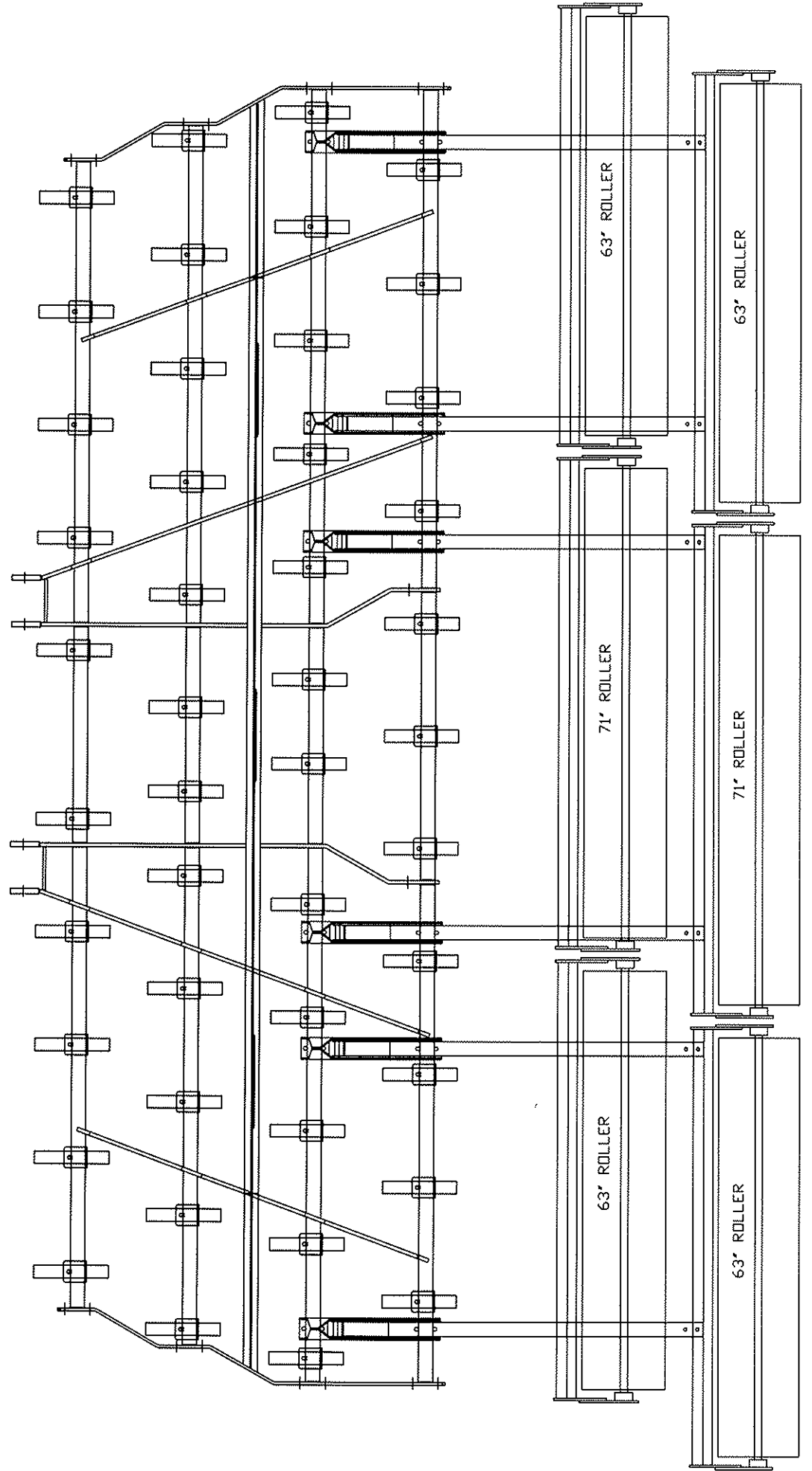
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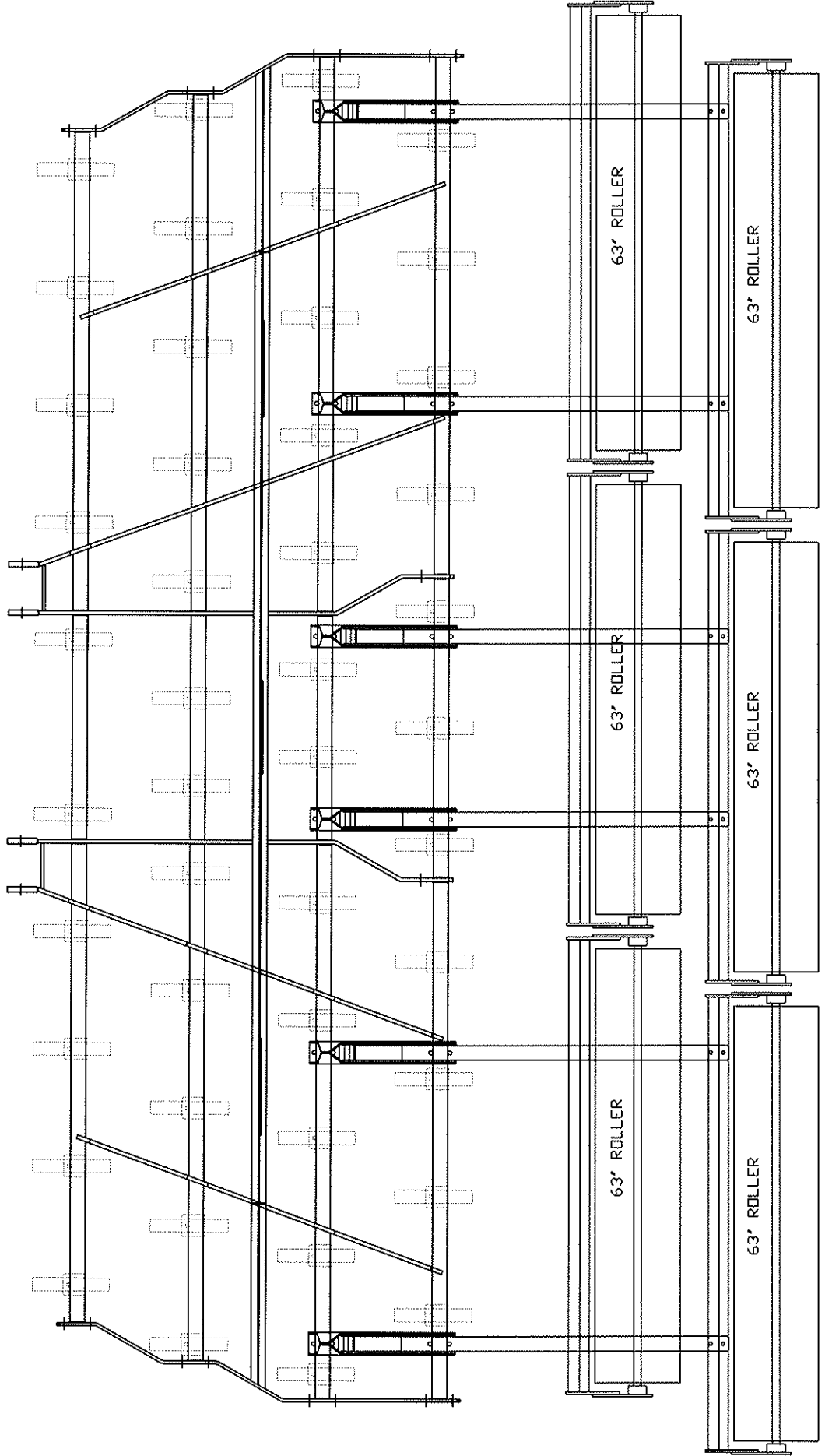
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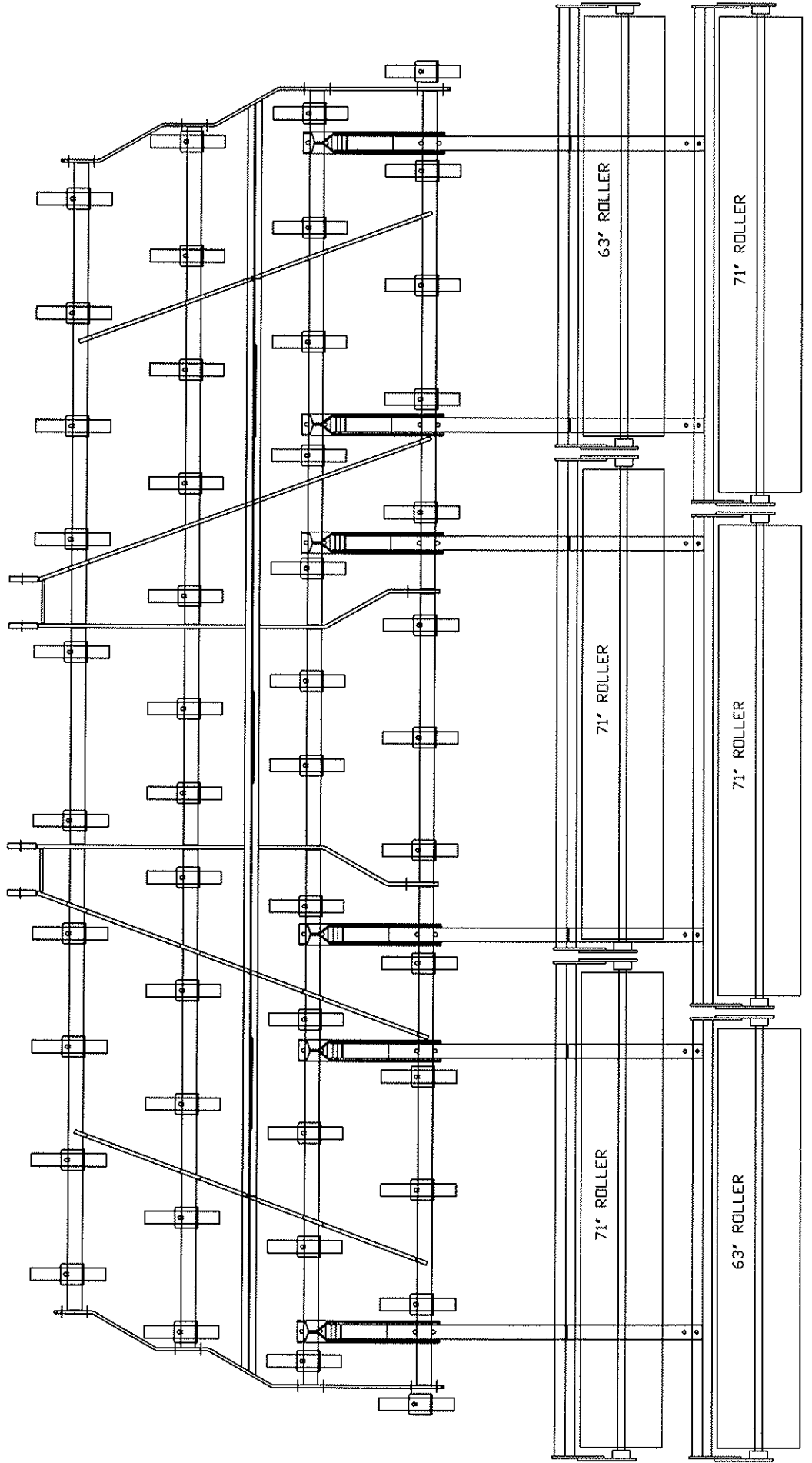
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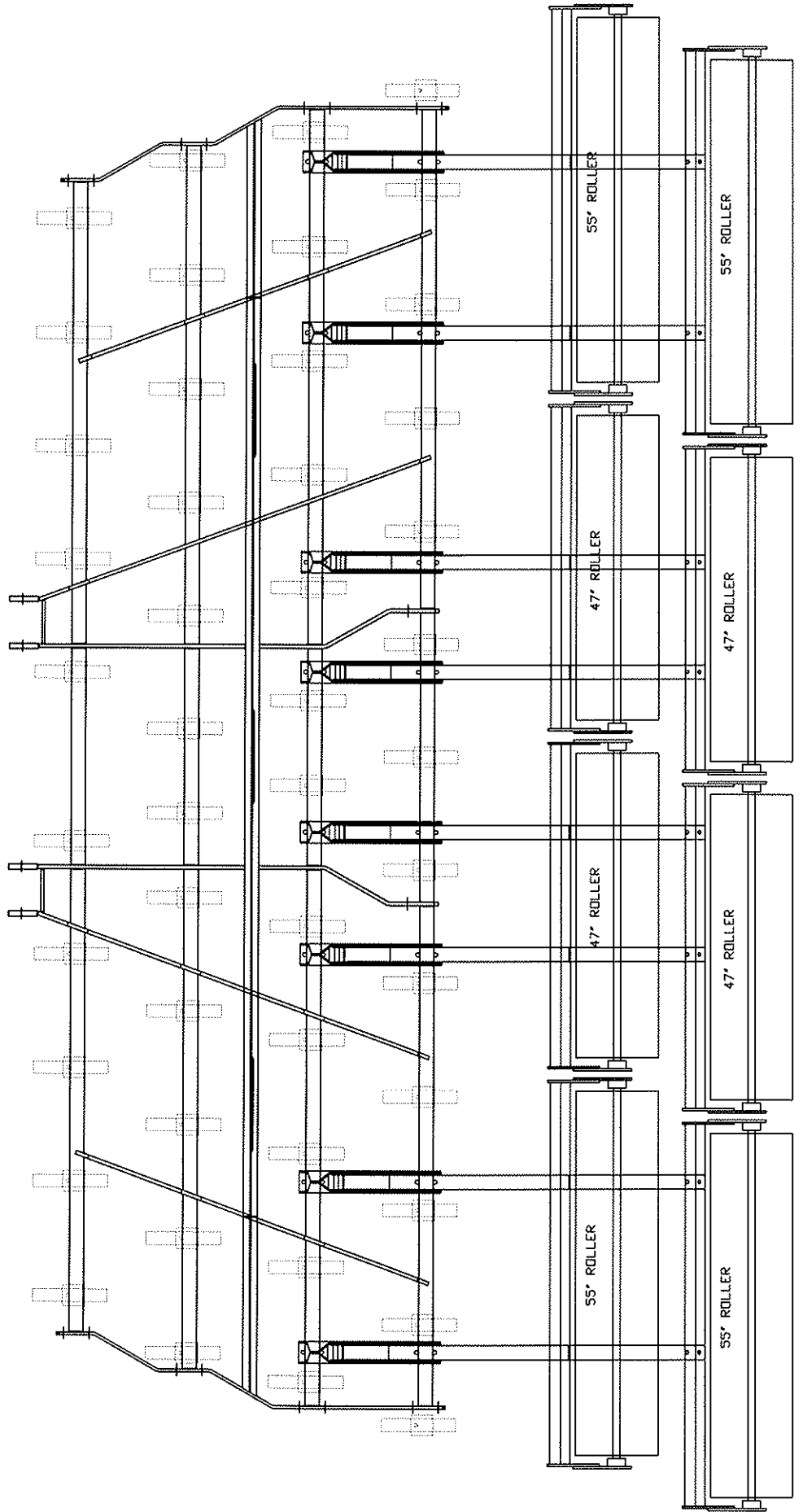
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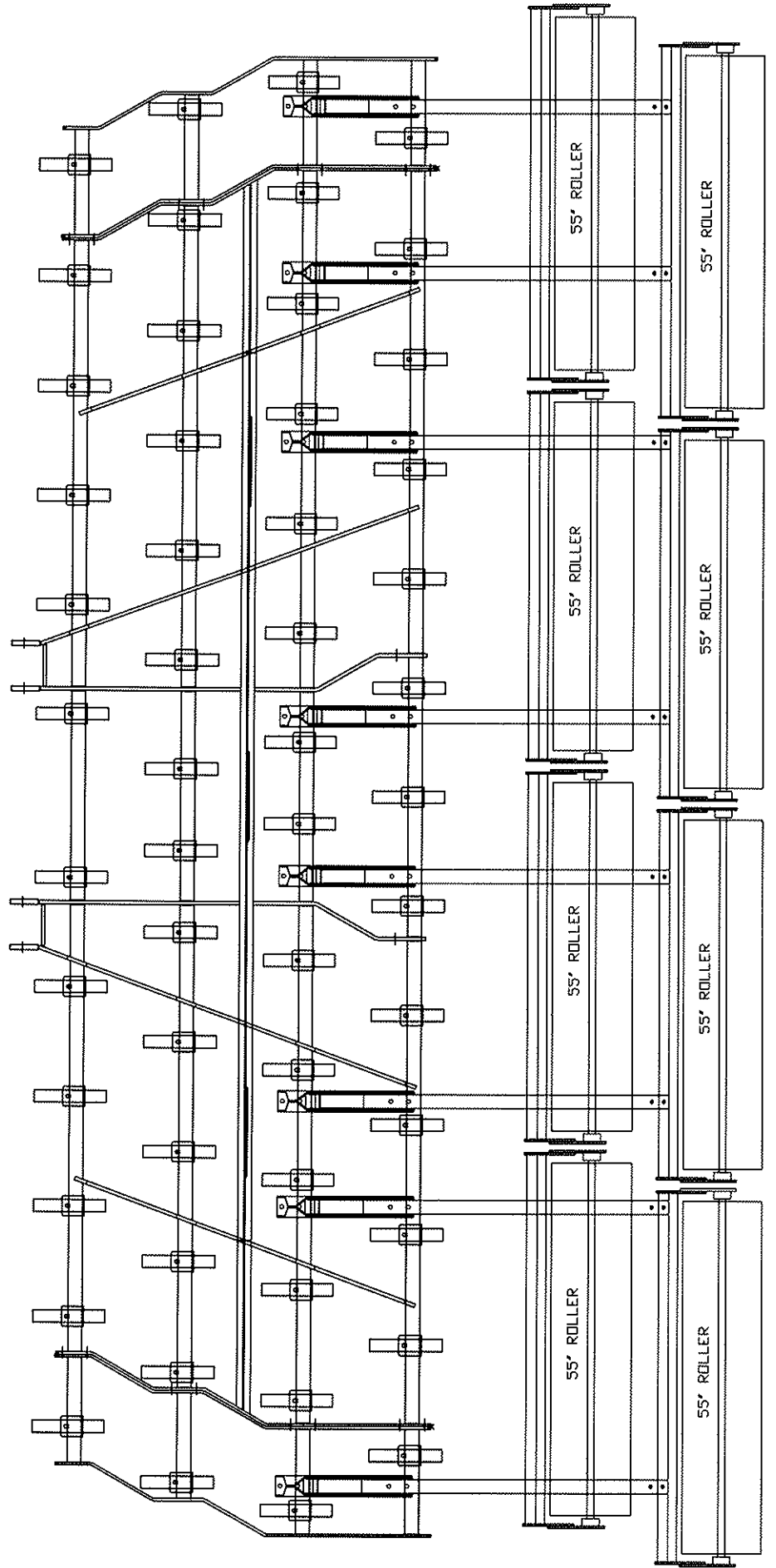
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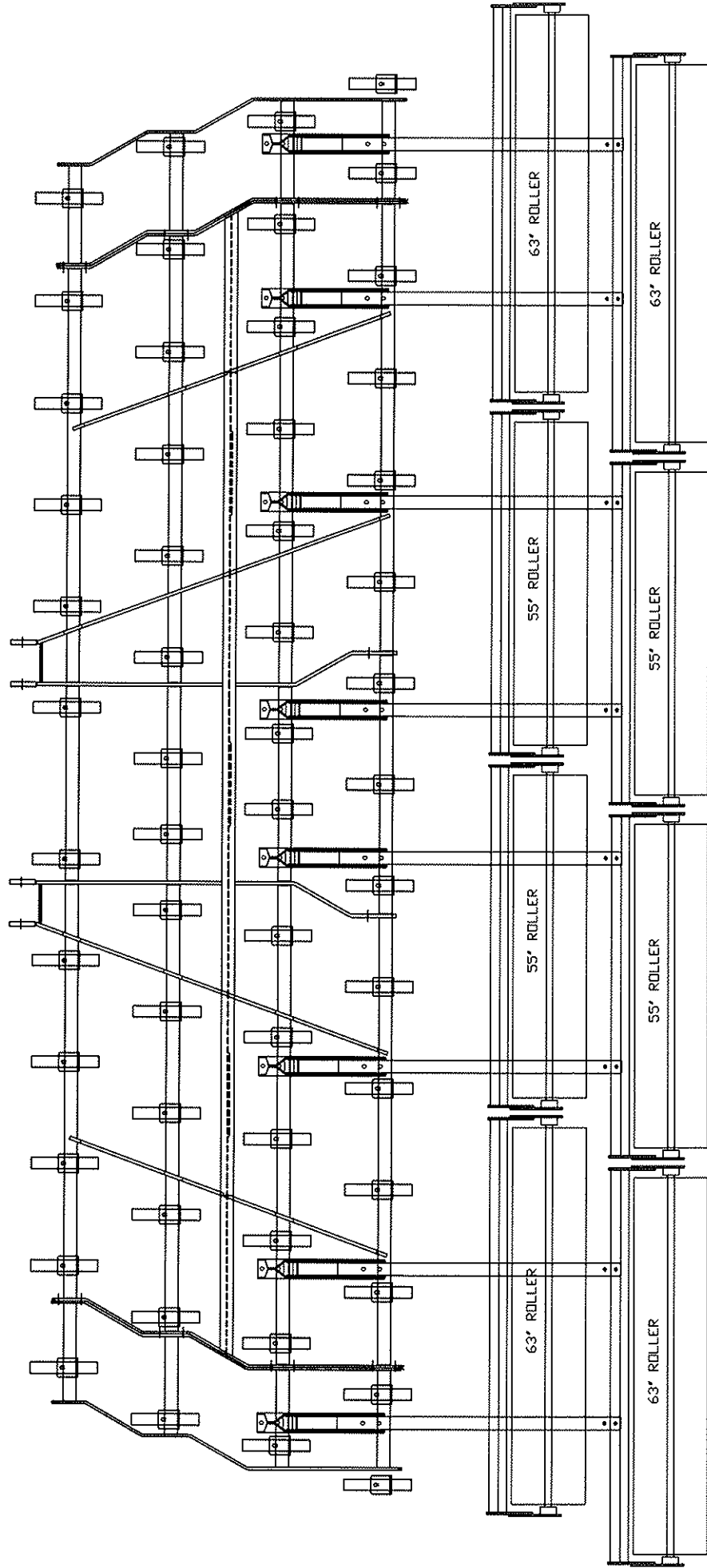
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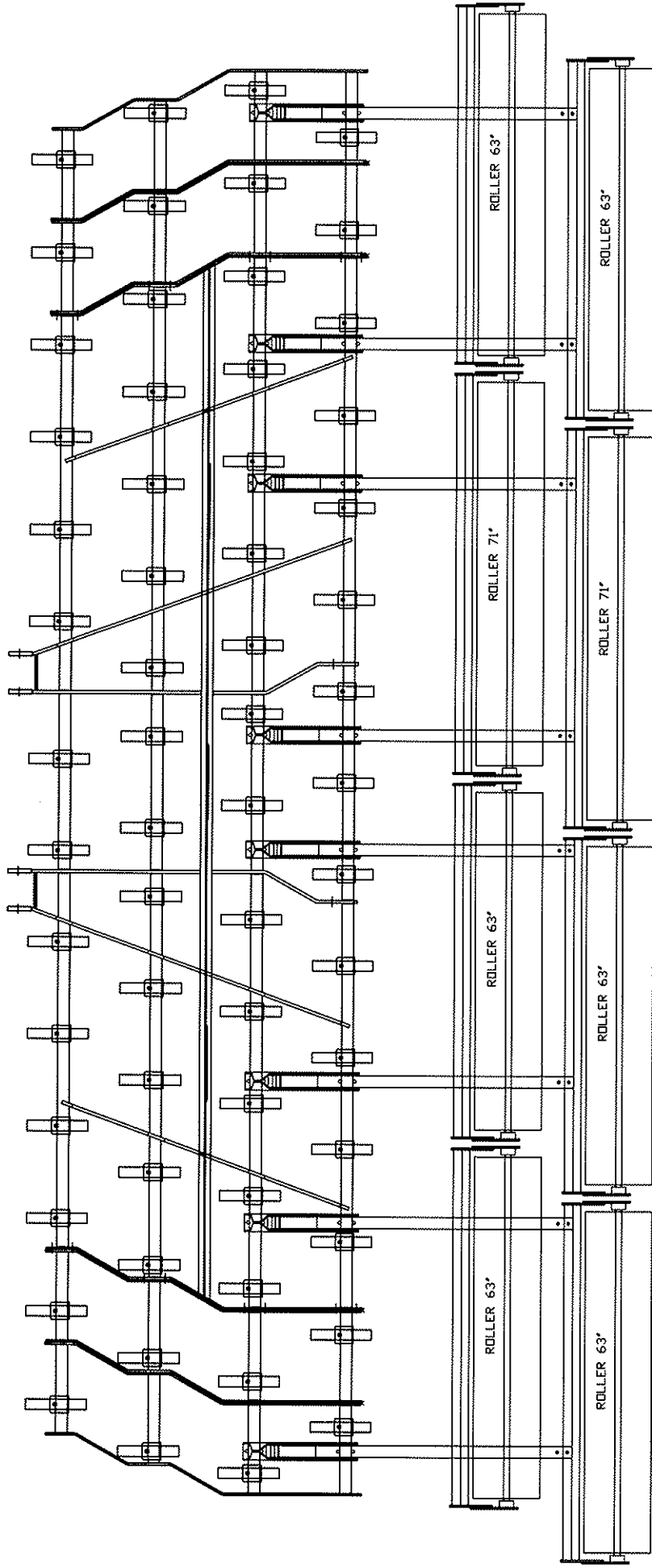
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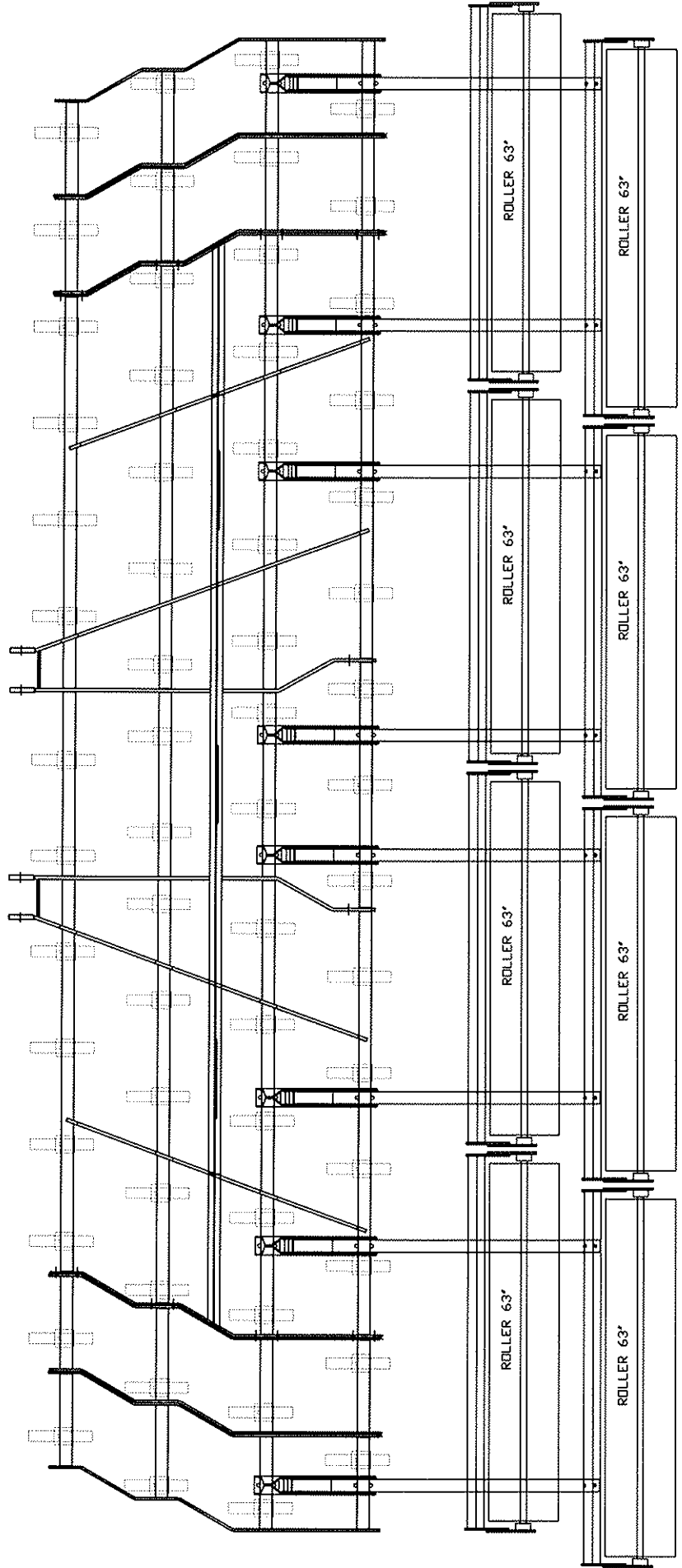
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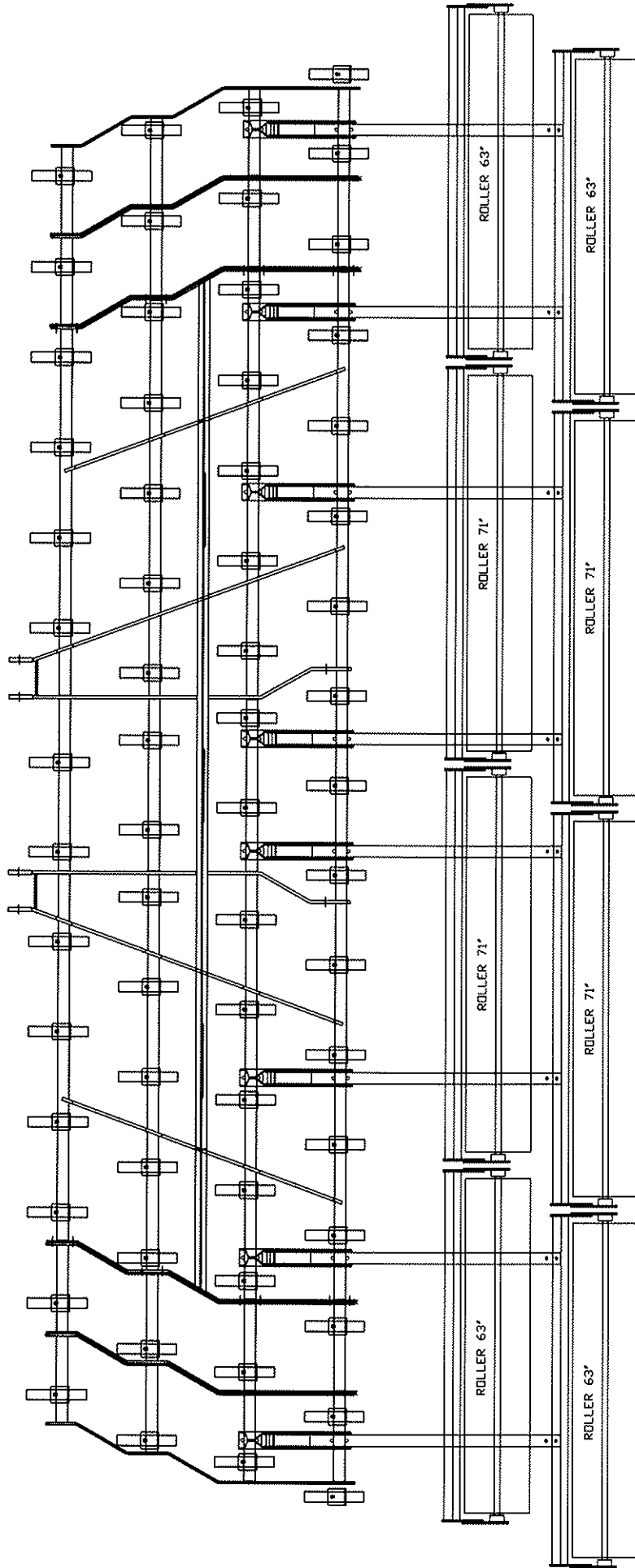
CULTIVATOR MODEL 820



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CULTIVATOR MODEL 820



CULTIVATOR MODEL 821



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DOUBLE RR ROLLERS
CULTIVATOR MODEL 821

