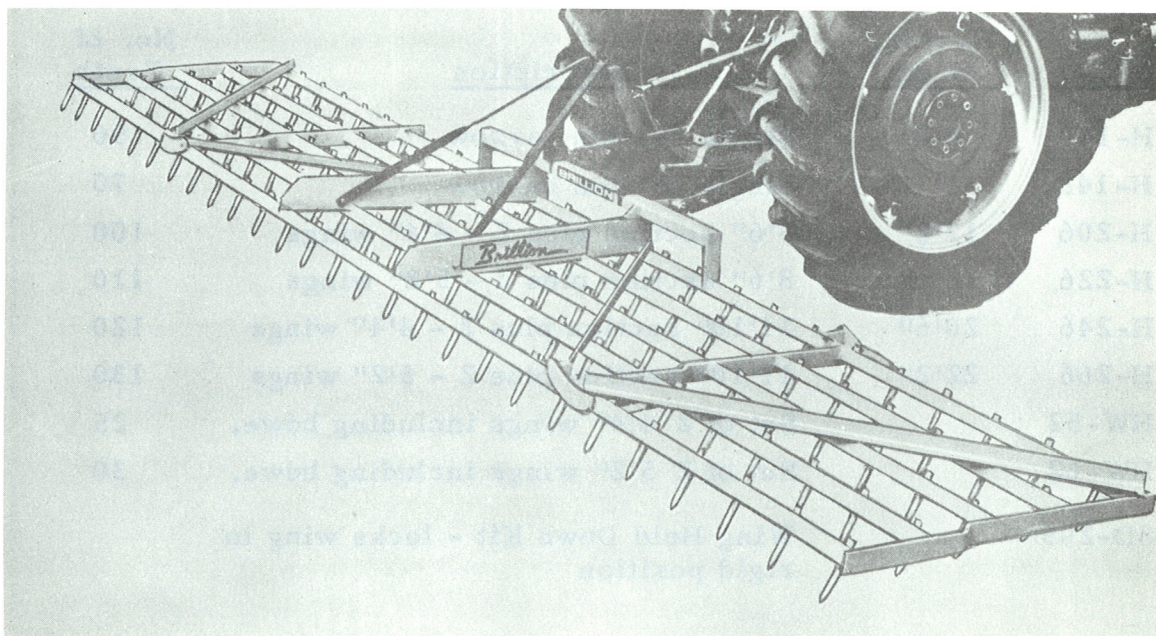


REPAIR PARTS CATALOG and OPERATOR'S MANUAL



SURE-TILL HARROW

MODELS H-102 THRU H-266



MODEL NO.
DATE PURCHASED



BRILLION IRON WORKS, INC.
BRILLION, WISCONSIN 54110

SETTING UP AND OPERATING INSTRUCTIONS

BRILLION 3 PT. HITCH SURE-TILL HARROW

MODELS

H-102	H-206	H-246
H-142	H-226	H-266

Your Brillion 3 pt. hitch Sure-Till Harrow is built with the best materials and workmanship available. It has been designed to give years of trouble-free operation, and proper care and operation will insure the service and long life built into it.

Study this manual carefully before attempting to assemble or operate the machine.

LOCATION REFERENCE

"Right" and "Left", "Front" and "Rear" refer to operators "Right" and "Left", "Front" and "Rear" when he faces in the same direction as the machine will travel.

3 PT. HITCH SURE-TILL HARROW SPECIFICATIONS

<u>Model</u>	<u>Working Width</u>	<u>Description</u>	<u>No. of Teeth</u>	<u>Weight</u>
H-102	8'6"	Single section harrow	50	390#
H-142	11'10"	Single section harrow	70	515#
H-206	17'2"	8'6" section plus 2 - 4'4" wings	100	740#
H-226	18'6"	8'6" section plus 2 - 5'2" wings	110	790#
H-246	20'6"	11'10" section plus 2 - 4'4" wings	120	865#
H-266	22'2"	11'10" section plus 2 - 5'2" wings	130	915#
HW-52		Set of 2 4'4" wings including hdwe.	25	175#
HW-62		Set of 2 5'2" wings including hdwe.	30	200#
8D-295		Wing Hold Down Kit - locks wing in rigid position		10#

SETTING UP INSTRUCTIONS

Your Brillion Sure-Till Harrow is shipped to you in separate assemblies. Before assembling the unit, separate the various bundles and open the box assembly, taking care not to lose any of the parts or hardware. Use nuts and lockwashers on all capscrews.

Number of Shipping Bundles
Used on Each Model

<u>Assembly Name</u>	<u>H-102</u>	<u>H-142</u>	<u>H-206</u>	<u>H-226</u>	<u>H-246</u>	<u>H-266</u>
1. 8 Ft. Main Frame	1	0	1	1	0	0
2. 12 Ft. Main Frame	0	1	0	0	1	1
3. 4 Ft. 4 In. Right Hand Wing	0	0	1	0	1	0
4. 4 Ft. 4 In. Left Hand Wing	0	0	1	0	1	0
5. 5 Ft. 2 In. Right Hand Wing	0	0	0	1	0	1
6. 5 Ft. 2 In. Left Hand Wing	0	0	0	1	0	1
7. Mast Assembly	1	1	1	1	1	1
8. Brace Bundle	1	1	1	1	1	1
9. Box Assembly	1	1	1	1	1	1

Note: Refer to the figures indicated in the repair parts section. These figures will show the relationship of the parts put together and also identify the fasteners to use for attaching these components.

ASSEMBLY OF MAIN FRAME

Study Figures 1, 2 and 3 carefully before assembling the hitch brackets and mast assembly to the upper frame tube. Begin by bolting the 1D-217 Category II hitch pins to the 8D-277 right hand and the 8D-276 left hand hitch brackets. The optional Category I hitch pins are listed in the repair parts section of this manual.

See Figure 1 and determine the hitch bracket spacings to be used with the corresponding Category I or Category II tractor available. Secure the hitch brackets to the upper frame tube with the two 1/2" x 4" long capscrews, lockwashers, and nuts. See Figures 2 and 3.

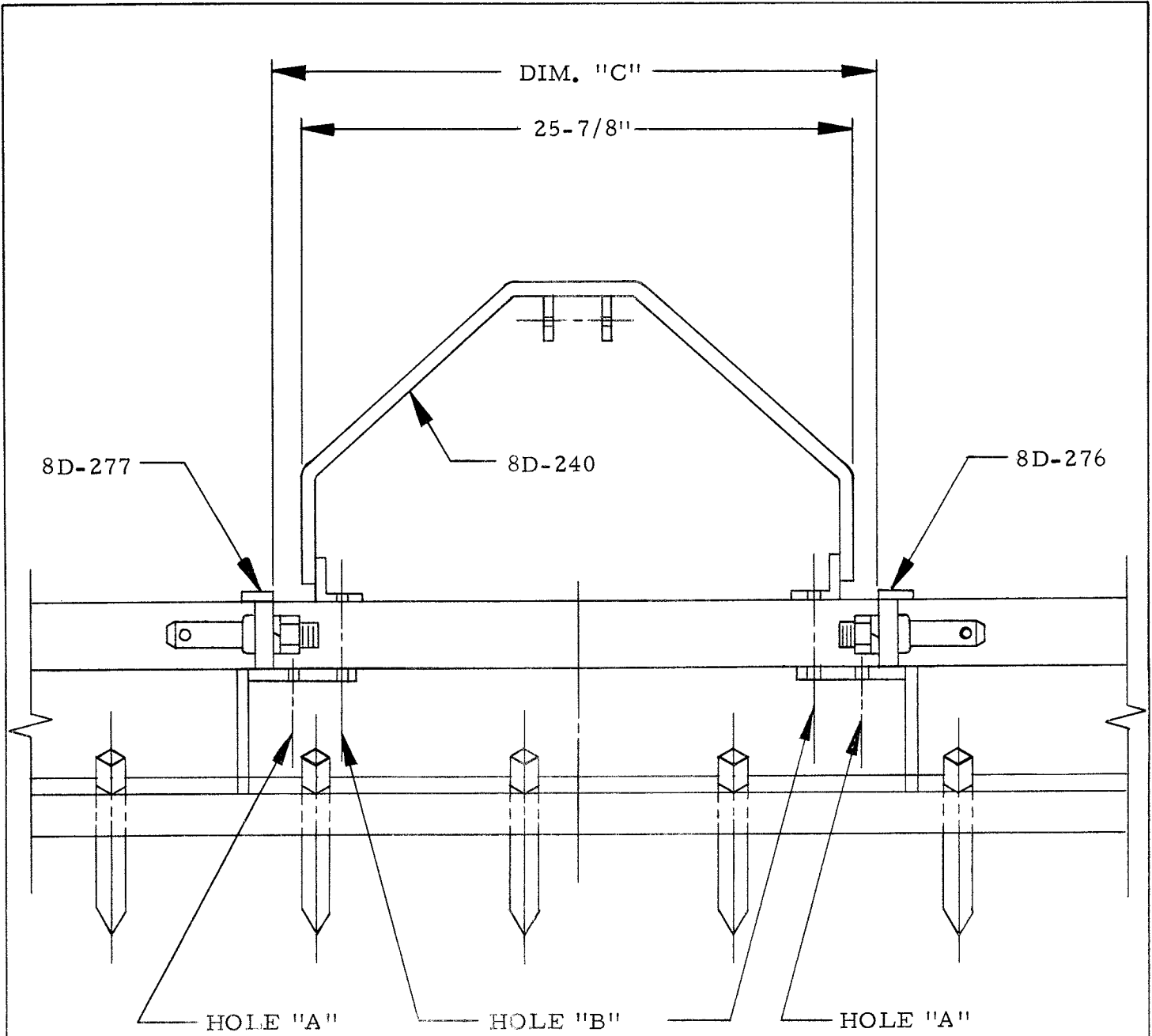
Next mount the 8D-240 mast assembly to the upper frame tube and to the hitch brackets with the four 1/2" x 4" long capscrews, lockwashers, and nuts. Position the mast assembly onto the upper frame tube with the holes for attaching the braces to the rear. Do not draw capscrews up tight at this time.

See Figure 4 before bolting the 8D-244 left hand and the 8D-245 right hand braces to the main frame support bars and to the mast assembly. Observe that the braces have a short and a long bend near the holes. Fasten the end with the longer bend onto the top side of the mast assembly. Attach the braces with the four 1/2" x 1-1/2" long capscrews, lockwashers, and nuts. Now tighten all the capscrews securely.

FLOAT LINK ASSEMBLY

The 8D-246 float link assembly is designed to operate in either a free floating position or in a locked position. The float link assembly is fastened to the welded lugs on the mast assembly with the 3/4" dia. x 3-1/4" long clevis pin and the hair pin cotter.

FRONT VIEW OF MAIN FRAME WITH
MAST AND HITCH BRACKET SPACINGS



FRAME ASSEMBLY	CATEGORY USED	HOLES USED TO FASTEN MAST	DIM. "C"
8 & 12 Ft.	I	"A"	24-7/8"
8 & 12 Ft.	II (Shown)	"B" (Shown)	30-1/8"

Figure 1

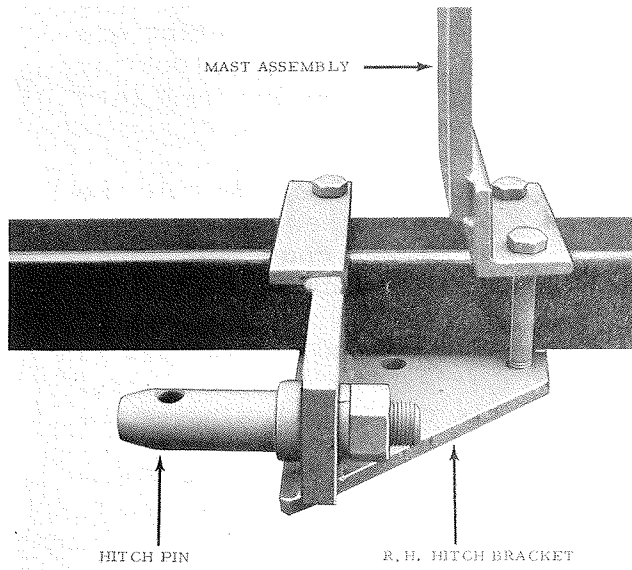


Figure 2

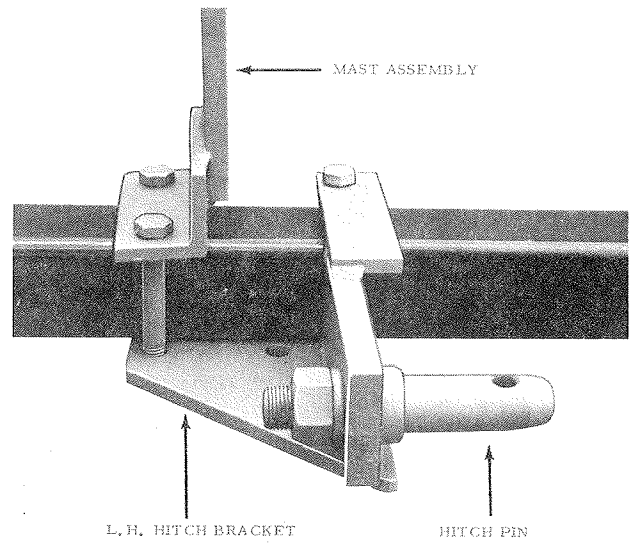


Figure 3

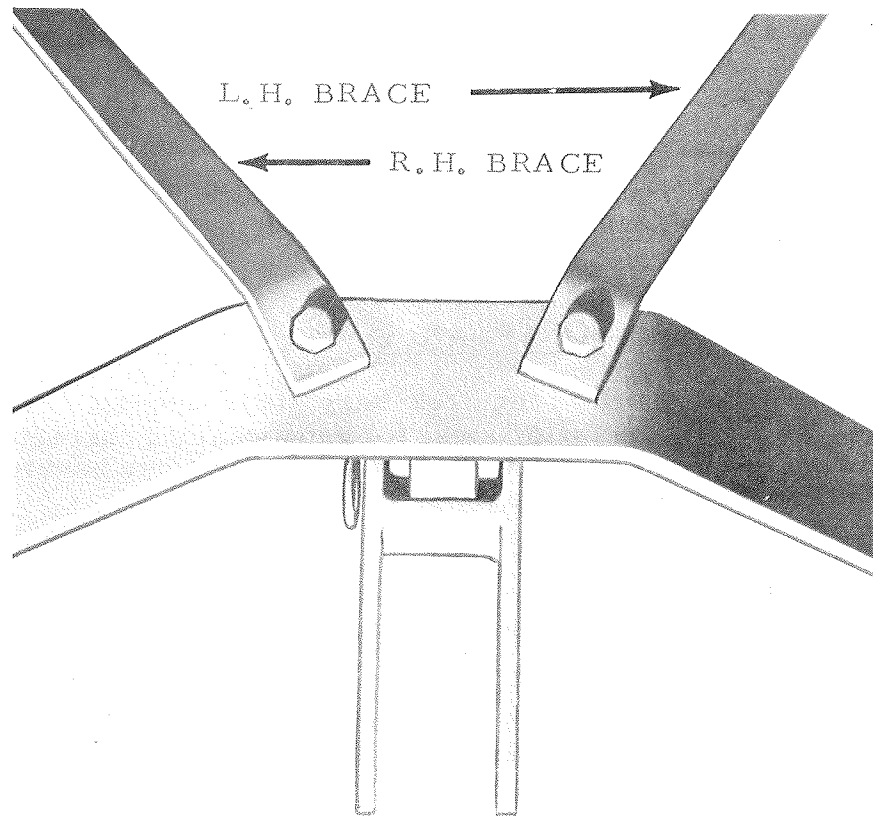


Figure 4

When the free floating position is desired, mount the float link assembly onto the mast with the two welded bars down. See Figure 5. Mounted in this position, the float link assembly and the upper link on the tractor are free to pivot around the connecting clevis pin. This gives the rear portion of the machine unrestricted freedom to float up or down over the field terrain.

When the locked position is desired, mount the float link assembly onto the mast with the two welded bars up. See Figure 6. Fastened in this manner, the float link assembly is now locked in place. The connected upper tractor link then becomes a rigid member with the float link assembly.

By lengthening the upper tractor link, a downward load is now applied to the rear portion of the machine. The rigid member acts as a depth control device to hold the machine into the ground. This method eliminates the need for additional weight on the machine.

WING ASSEMBLY

The folding wings are hinged to the mainframe with the 5/8" x 4" long capscrews and the self-locking nuts. Assemble by aligning the holes in the wing hinge straps with the holes in the blocks welded to the main frame. When joining the wings to the main frame, it is important that the heads of the capscrews be positioned to the outside, against the hinge strap. See Figure 7. Do not tighten the nuts completely as they are self-locking onto the threads of the capscrews. This will permit the wings to be folded up easily for transport.

The 8D-295 wing hold down kit is optional equipment. The clamps hold the wings down in working position. The individual components are listed in the repair parts section. Fasten the 8D-296 clamp to the main frame and wing side straps as shown in Figure 7. Insert the 8D-297 drilled bolt from the bottom side up and attach the 8D-298 ring pin. There are 2 clamps on each wing.

MAINTENANCE

The Brillion Sure-Till Harrow requires very little upkeep. The spike teeth are made of heat treated alloy steel for good wearing characteristics. It should be noted, however, that the harrow be raised when backing. This will avoid unnecessary tooth breakage.

The teeth themselves are pressed through the tubular mounting bars and welded into place. This unique method of fastening the spike teeth eliminates the need for special clamps, bolts, and nuts.

To replace or remove broken teeth, cut the weld free from the spikes on the underside of the tube mounting bars. Drive the old spikes out of the tubing and replace with new Brillion spike teeth. Then weld the teeth in place to one of the flared ears on the bottom side of the tubular mounting bars.

After the first five or six hours of operation, go over the machine and tighten all nuts which may be loose. Normal periodic checks should be made thereafter.

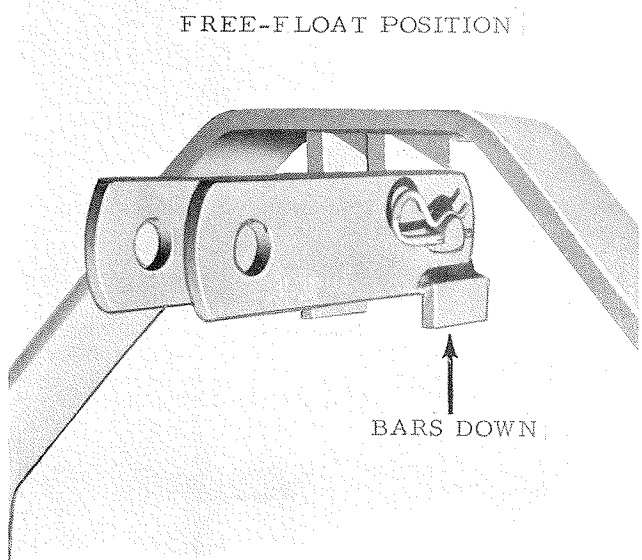


Figure 5

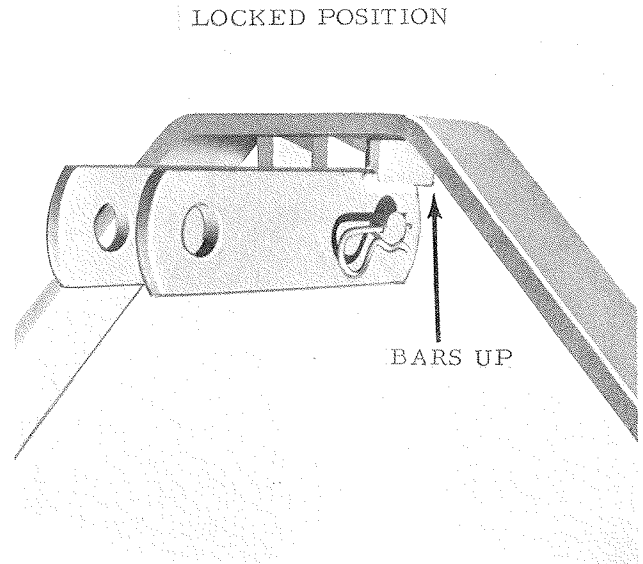


Figure 6

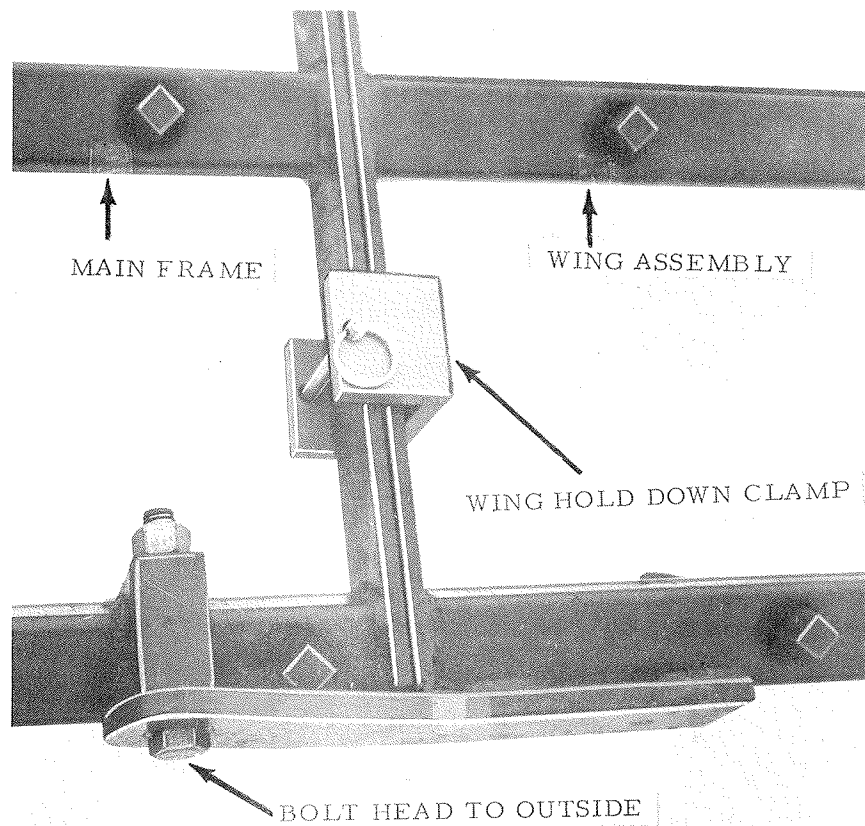
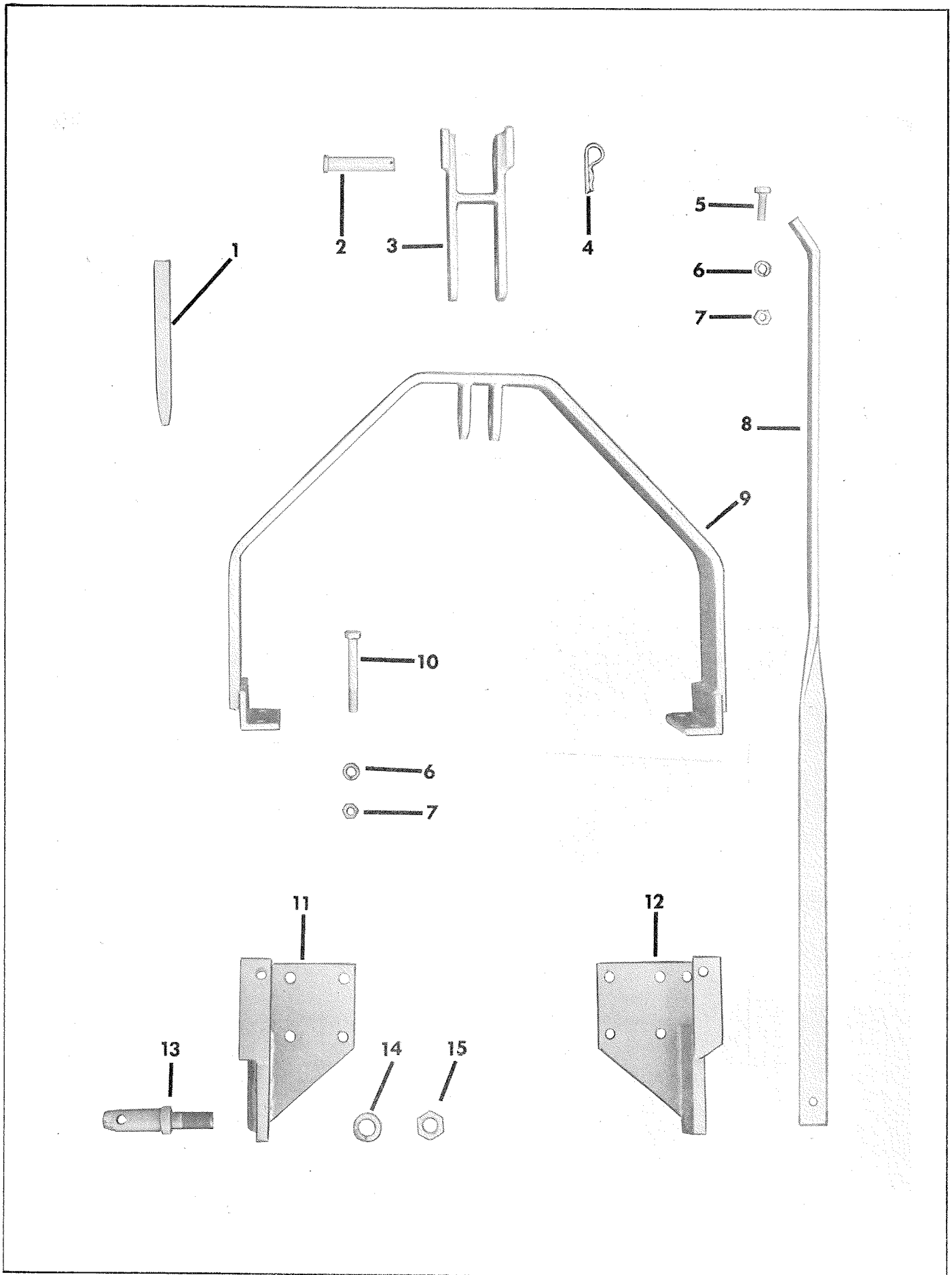


Figure 7



REPAIR PARTS SECTION

SURE-TILL HARROW		MODELS H-102 THRU H-266		
Index No.	Part No.	Description	No. Req'd.	Approx. Weight
*	8D-151	8 Ft. Main Frame	1	330.0
*	8D-152	12 Ft. Main Frame	1	455.0
*	8D-174	4 Ft. 4 In. Right Hand Wing	1	175.0
*	8D-175	4 Ft. 4 In. Left Hand Wing	1	175.0
*	8D-172	5 Ft. 2 In. Right Hand Wing	1	200.0
*	8D-173	5 Ft. 2 In. Left Hand Wing	1	200.0
*xx	8C-882	Capscrew, 5/8-11 NC x 4" Long, Grade 5	4	.40
*xx	5C-461	Locknut, 5/8-11 NC Reg. Hex	4	.30
1	8D-250	Spike Tooth		1.40
		For 8 Ft. Frame	50	
		For 12 Ft. Frame	70	
		For one 4 Ft. Wing	25	
		For one 5 Ft. Wing	30	
2	7D-642	Clevis Pin, 3/4" Dia. x 3-1/4" Long	1	.60
3	8D-246	Float Link Assembly	1	5.50
4	4C-856	Hairpin Cotter	1	.10
5	8C-527	Capscrew, 1/2-13 NC x 1-1/2" Long, Grade 5	4	.30
6		Lockwasher, 1/2 Std.	10	.20
7		Nut, 1/2-13 NC Reg. Hex	10	.20
8	8D-244	Left Hand Brace	1	7.50
*	8D-245	Right Hand Brace	1	7.50
9	8D-240	Mast Assembly	1	24.0
10	5D-335	Capscrew, 1/2-13 NC x 4" Long, Grade 5	6	.30
11	8D-277	R. H. Hitch Bracket	1	7.50
12	8D-276	L. H. Hitch Bracket	1	7.50
13	1D-217	Hitch Pin (Category II)	2	1.25
*	5D-186	Hitch Pin (Category I) Optional	2	1.00
14	9C-766	Lockwasher, 7/8 Std.	2	.20
15	1D-218	Nut, 7/8-14 NF Reg. Hex	2	.40
*++	8D-296	Clamp	4	2.00
*++	8D-297	Drilled Bolt	4	.30
*++	8D-298	Ring Pin	4	.10
*Parts not shown				
xxHardware for Wing Hinges				
++Parts for optional 8D-295 Wing Hold Down Kit				

