1st Review Date: 6/9/98
Authority: CNSC SNADD
Name: R Brianer
2nd Review Date: 6-17-98
Authority: ADD
Name: WC Layne
Classification Retained
Classification Changed to: UNCL
Contains No DOE Classified Information
Coordinate With:
Contains UCAI?
Comments:
DECLASSIFY

[redacted]

UNCLASSIFIED

JUN 21 1963

File No: XW-45, 3.2
T-19238
Test Completed: 3-4-63

RECEIVED
JUN 24 1963
CENTRAL RECORD FILE

MR. J. D. BENTON - 8124
Attn: H. Easton, 8124-1 (3 copies)

Re: Simulated Parachute Drop Tests of The XW-45 ADM and H-815 Container. (Uncl.)

Summary of Test

A series of drop tests was performed to investigate the feasibility of using a honeycomb sandwich construction subfloor or pallet as a shock mitigator to qualify the XW-45 ADM warhead and the H-815 shipping and storage container for parachute delivery. The complete drop package also includes the XM-9 decoder-receiver and XM-42 firing device.

Five vertical drop tests, with impact velocities of 34 fps onto a flat concrete target, were made to derive a suitable honeycomb pallet design. Using the pallet thus designed, five certification drop tests onto compacted earth and loose sand targets were made with impact velocity components of 25 fps vertical and 22 fps horizontal. Design specifications imposed an acceleration limit of 27g radially and 40g longitudinally on the warhead for the above impact conditions. Maximum warhead accelerations recorded during the certification drop tests were 23g vertical, 14g horizontal, and 10g longitudinal, indicating satisfactory performance of the honeycomb pallet. No visual damage was noted to any of the items in the drop package.

Object of Test

The object of this test was to investigate the feasibility of using a honeycomb sandwich construction subfloor or pallet, as a shock mitigator to qualify the XW-45 ADM warhead and the H-815 shipping and storage container for parachute delivery. Warhead accelerations were not to exceed 40g in the longitudinal direction or 27g in the radial direction. The complete drop package includes the XM9 decoder-receiver package and XM42 firing device package in addition to the H-815 and warhead.

Authorization for Test

This test was performed in accordance with Environmental Test Order No. T-19238 from Organization 8125 to Organization 7331-1, dated December 11, 1962. Mr. H. R. Easton, 8125-1, was test consultant.

Test Setup and Procedure

Accelerometers for the drop tests were installed on the inner surface of the XW-45 ADM warhead outer case at the aft end, on the H-790 warhead cover, and on the two H-815 legs. Complete information on the accelerometers and their locations, along with applicable figure references (Figures 1 through 6), is given in Table I.

SANDIA SYSTEMATIC DECLASSIFICATION REVIEW
DOWNGRADING OR DECLASSIFICATION STAMP
CLASSIFICATION CHANGED TO: U
AUTHORITY: W.C. Layne
Emelda Selph 6/24/98
PERSON CHANGING MARKING & DATE
RECORD ID: 98SN2501
WC Layne 6/24/98
PERSON VERIFYING MARKING & DATE
DATED: 6-17-98

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1978

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Accelerometers on the H-790 were located such that they would be adjacent to the accelerometers on the warhead after assembly of the H-790 to the warhead. Figure 7 shows the assembly.

A list of the components in the drop test package, with part or drawing numbers and serial numbers where available, is given in Table II. Information on the equipment used is on file in the Drop Tower Log Book. The honeycomb used to construct the shock mitigating pallet was type 80-0 paper, with a static crush strength of approximately 4750 pounds per square foot, and a dynamic crush strength of approximately 7900 pounds per square foot. The pallets were constructed and assembled by U. S. Army personnel.

Five vertical drops with impact velocities of 34 fps on to a flat concrete target were made to provide pallet design information. Figure 8 shows the drop package rigged for a typical vertical drop test.

The honeycomb pallet used in Vertical Drop No. 1 consisted of four stacks of honeycomb sandwiched between two sheets of plywood, as shown in Figure 9. The complete drop package consisted of the H-815 containing the XW-45 ADM warhead, the XM9 decoder-receiver package and the XM42 firing device package, mounted on the honeycomb pallet and wrapped in the XM127 canvas cover and slings. The package is shown in Figure 10 prior to being wrapped in the canvas cover. The H-815 and other components were not bolted or otherwise attached to the pallet, the entire package being held together by the canvas cover and slings.

Details of the honeycomb configuration used in Vertical Drop No. 2 are given in Figure 11, and the complete drop package is shown in Figure 12. For this and all following drop tests the main shock mitigating portion of the pallet was located under the H-815 only, with the XM9 and XM42 containers supported on one or two 3-inch thick sheets of honeycomb.

Details of the honeycomb pallet design used in Vertical Drop No. 3 are given in Figure 13, with the complete drop package shown in Figure 14. The same pallet design, with slight changes in honeycomb dimensions as noted in Figure 13, was used in Vertical Drop Nos. 4 and 5.

The vertical drops were followed by five certification drop tests, each with impact velocity components of 25 fps vertical and 22 fps horizontal. The honeycomb pallet and drop package configuration in all certification drops was identical to the configuration used in Vertical Drop Nos. 3 through 5, as shown in Figure 14, with the changes in honeycomb dimensions noted in Figure 13.

Certification Drop No. 1 was made into a compacted earth target (density of 110 pounds per cubic foot) with the drop package oriented to have the longitudinal axis of the H-815 and warhead normal to the direction of the horizontal velocity component. The H-815 was mounted on the leading side of the package in front of the XM9 and XM42 containers. Figure 15 shows the drop package rigged for this drop at the 300-foot tower.

Certification Drop No. 2 was made into a compacted earth target with the H-815 and warhead longitudinal axes parallel to the direction of the horizontal velocity component. Other conditions were the same as for Certification Drop No. 1.

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Certification Drop No. 3 was identical to No. 1 with the drop package rotated 180 degrees, placing the H-815 on the back side of the package, behind the XM9 and XM42 containers, with respect to the horizontal velocity direction. This setup is shown in Figure 16.

Certification Drop Nos. 4 and 5 were identical to Nos. 1 and 2, respectively, except that the target was loose beach sand approximately 8 inches deep.

The rubberized hair pads inside of the H-815 were replaced with a new set following Vertical Drop No. 4, and again following Certification Drop No. 2.

Results

Recorded accelerations for Vertical Drop Nos. 1 through 4 are given in Table III, and for Vertical Drop No. 5 in Table IV. These results indicate the honeycomb pallet design used for Vertical Drop Nos. 4 and 5 satisfactorily met the requirement of limiting the radial accelerations of the warhead and H-790 warhead cover to less than 27g.

Acceleration data and records for the certification drop tests are given in Tables V through IX. The maximum accelerations on the warhead and H-790 recorded during the certification drops were 23g vertical in Drop No. 4, 10g longitudinal in Drop No. 2, and 14g horizontal in Drop No. 1. Acceleration records were interpreted in accordance with SC-4452 B(M), paragraph 1.2.

All accelerations recorded during the certification drop tests were below the specified maximum values for the warhead, indicating satisfactory performance of the honeycomb pallet. In every certification drop the drop package rolled 90 to 270 degrees after impact, coming to rest on its side or upside down. Accelerations experienced during rolling were negligible compared to impact accelerations and are not included in the tables.

The condition of the honeycomb pallets following the vertical drops is shown in Figures 17 through 21, and following several of the certification drops in Figures 22 through 26. There was no visible damage to the warhead or any other item in the drop package resulting from any of the drop tests.

W. M. Sigmon

W. M. SIGMON - 7325-2

J. E. Bear

Test Project Engineer: J. E. BEAR - 7331-1

Bill Johnson

Approved By: B. JOHNSON - 7331-1

WMS:7325-2:bg

Encl: Figures 1-26
Tables I-IX

Copy to:

E. H. Copeland, 7331
Central Record Files, 3421-3
Central Files, 8293-2

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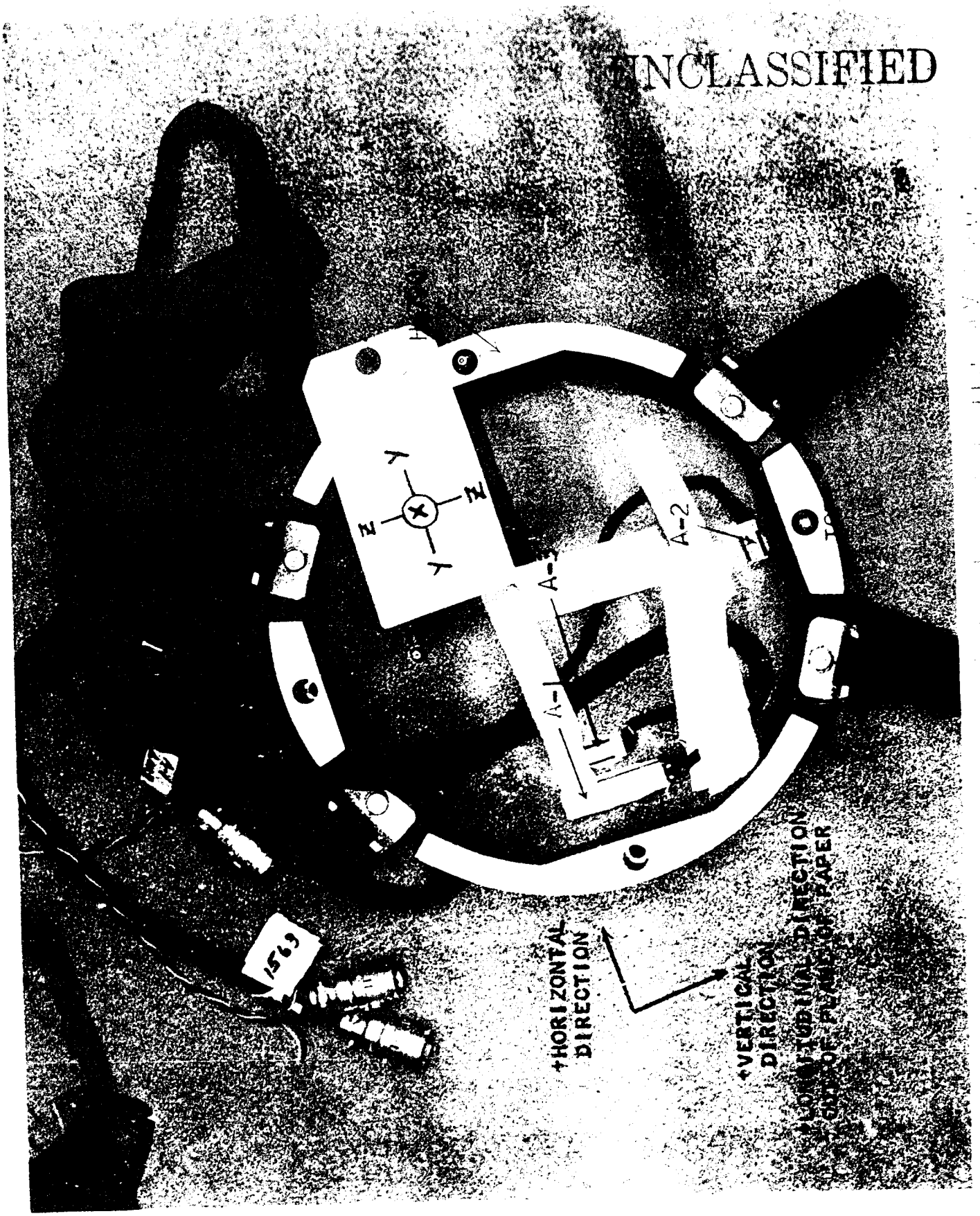
1980


A-1
A-2
A-3
Y
Z
X
+HORIZONTAL DIRECTION
+VERTICAL DIRECTION
+LONGITUDINAL DIRECTION OUT OF PLANE OF PAPER

[redacted]

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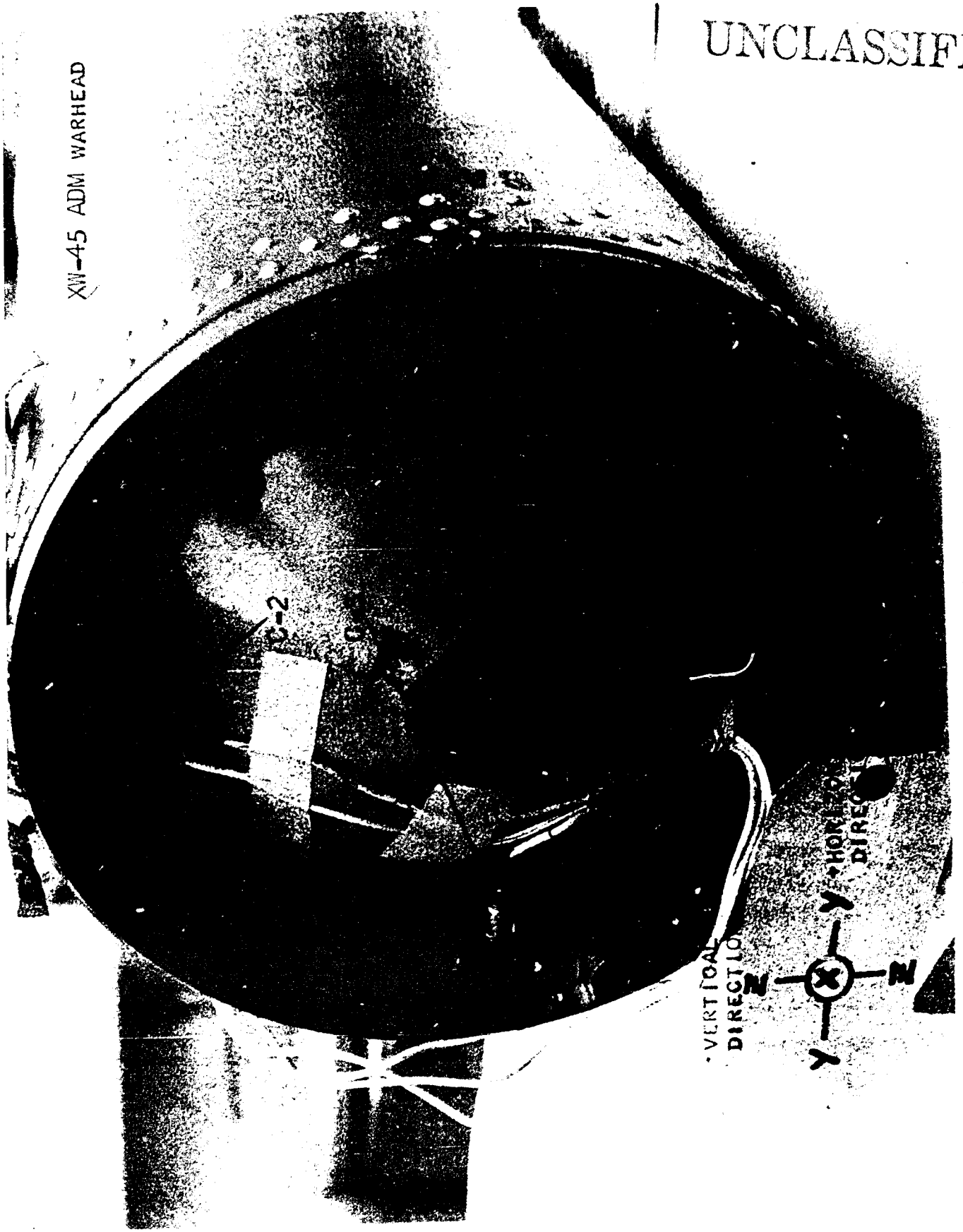
XW-45 ADM WARHEAD



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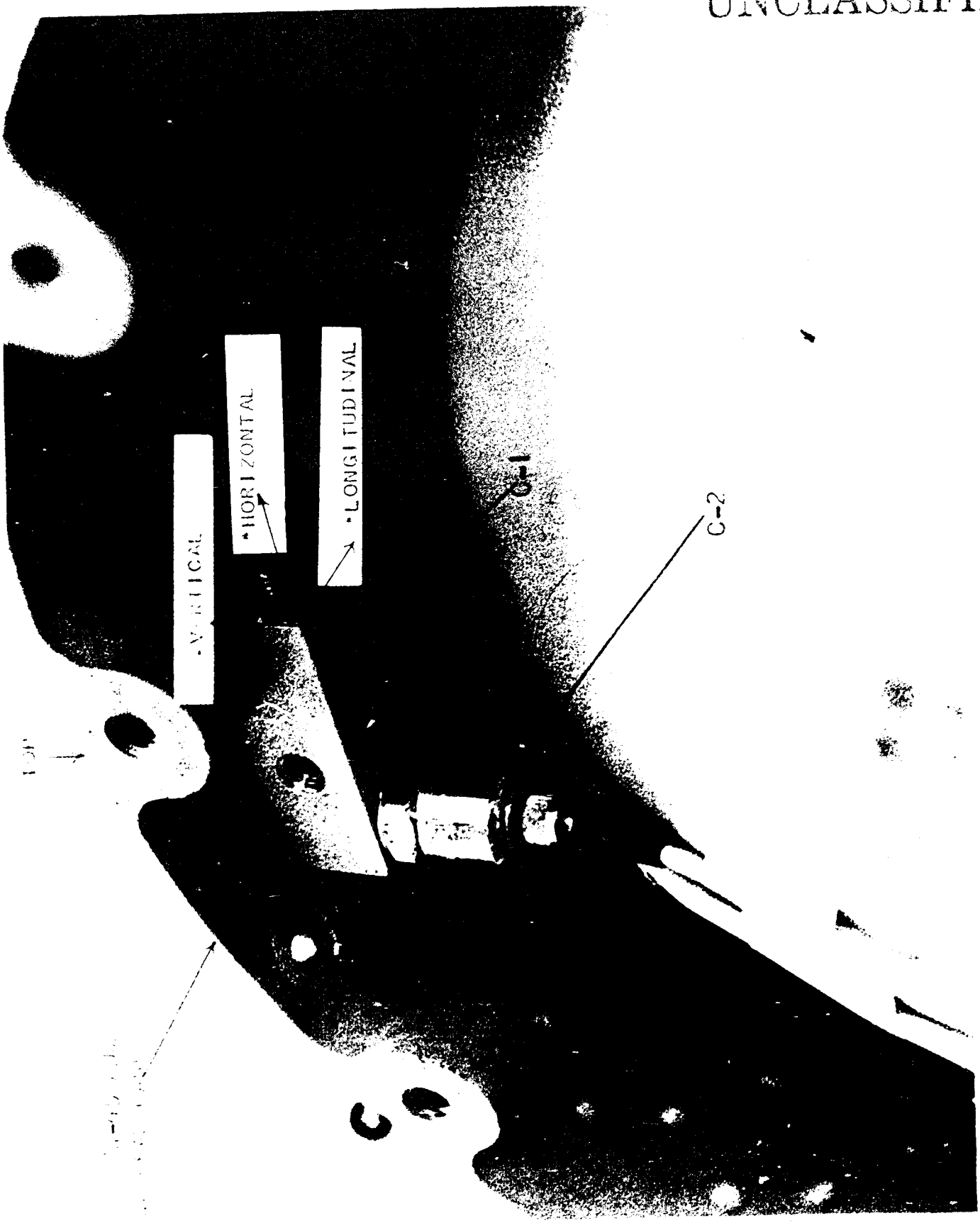
VERTICAL
HORIZONTAL
LONGITUDINAL
C-2

[redacted]

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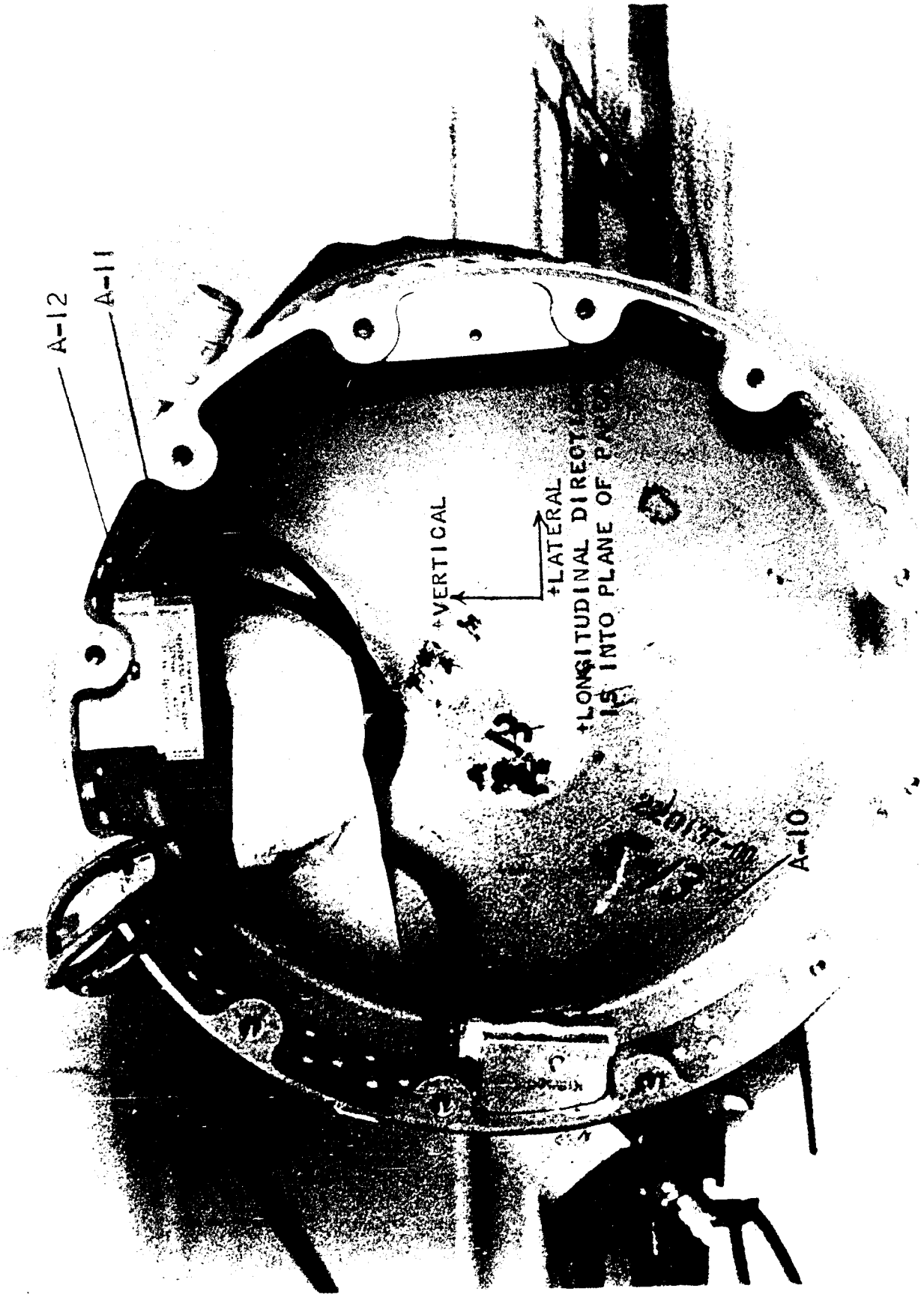

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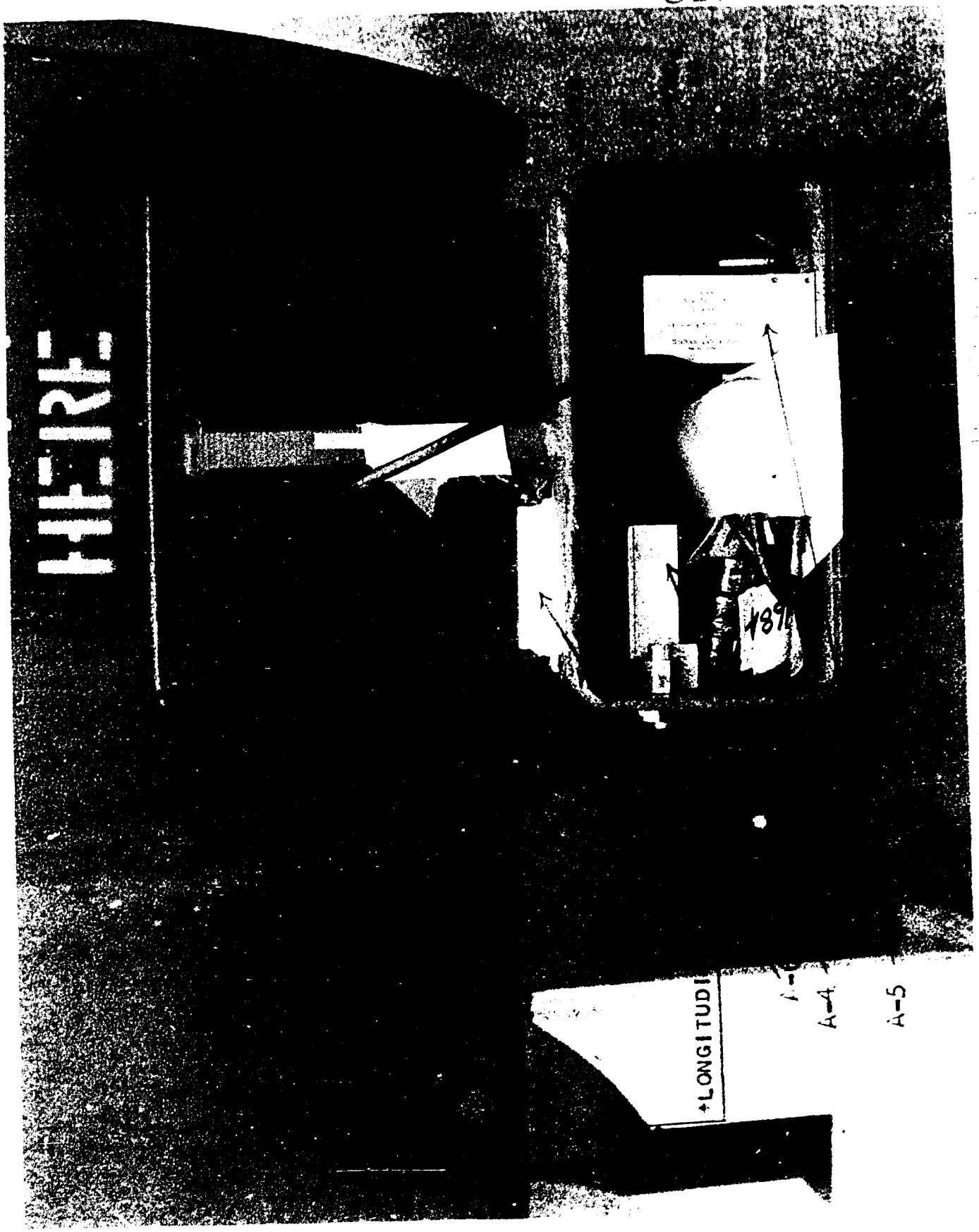

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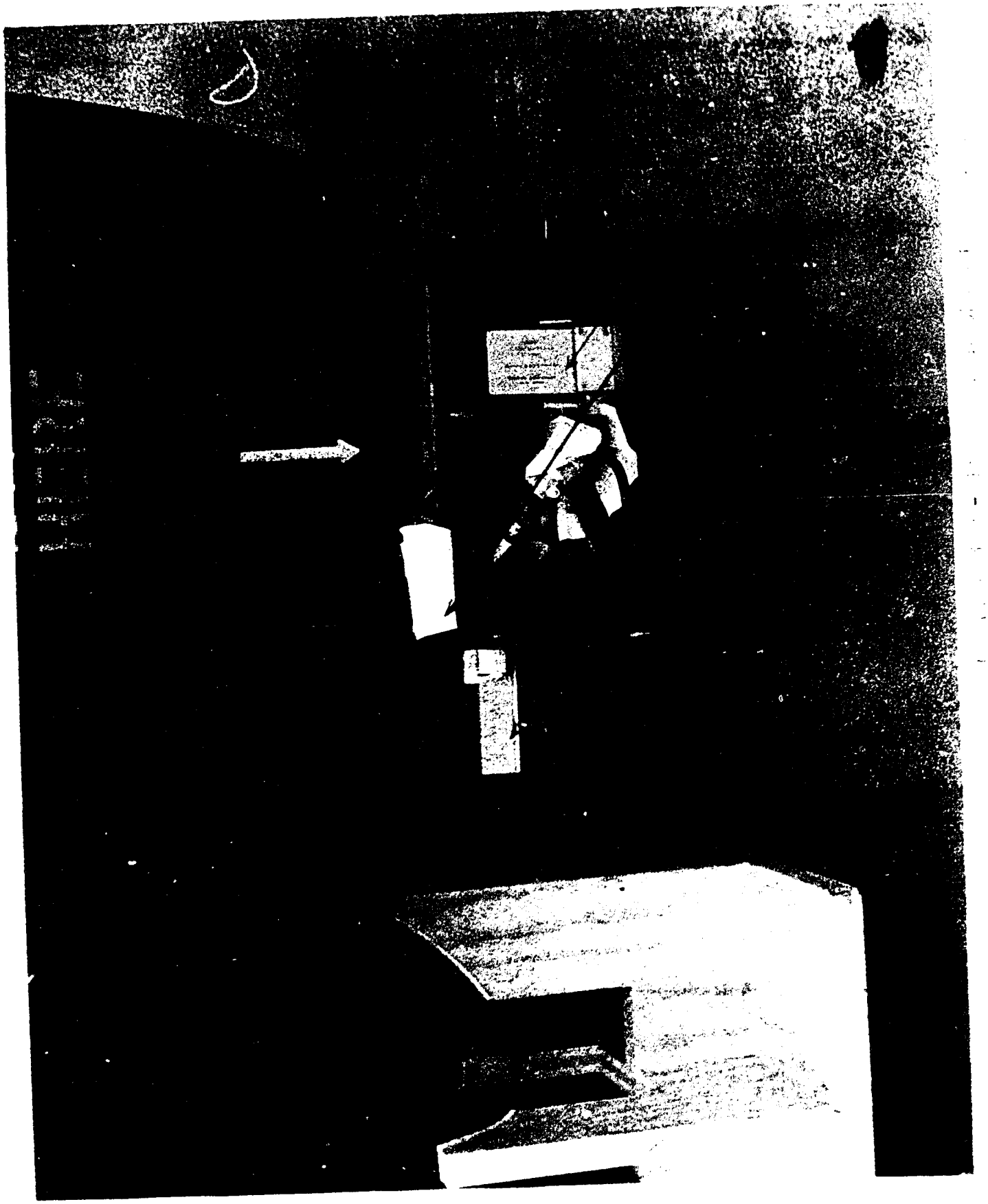

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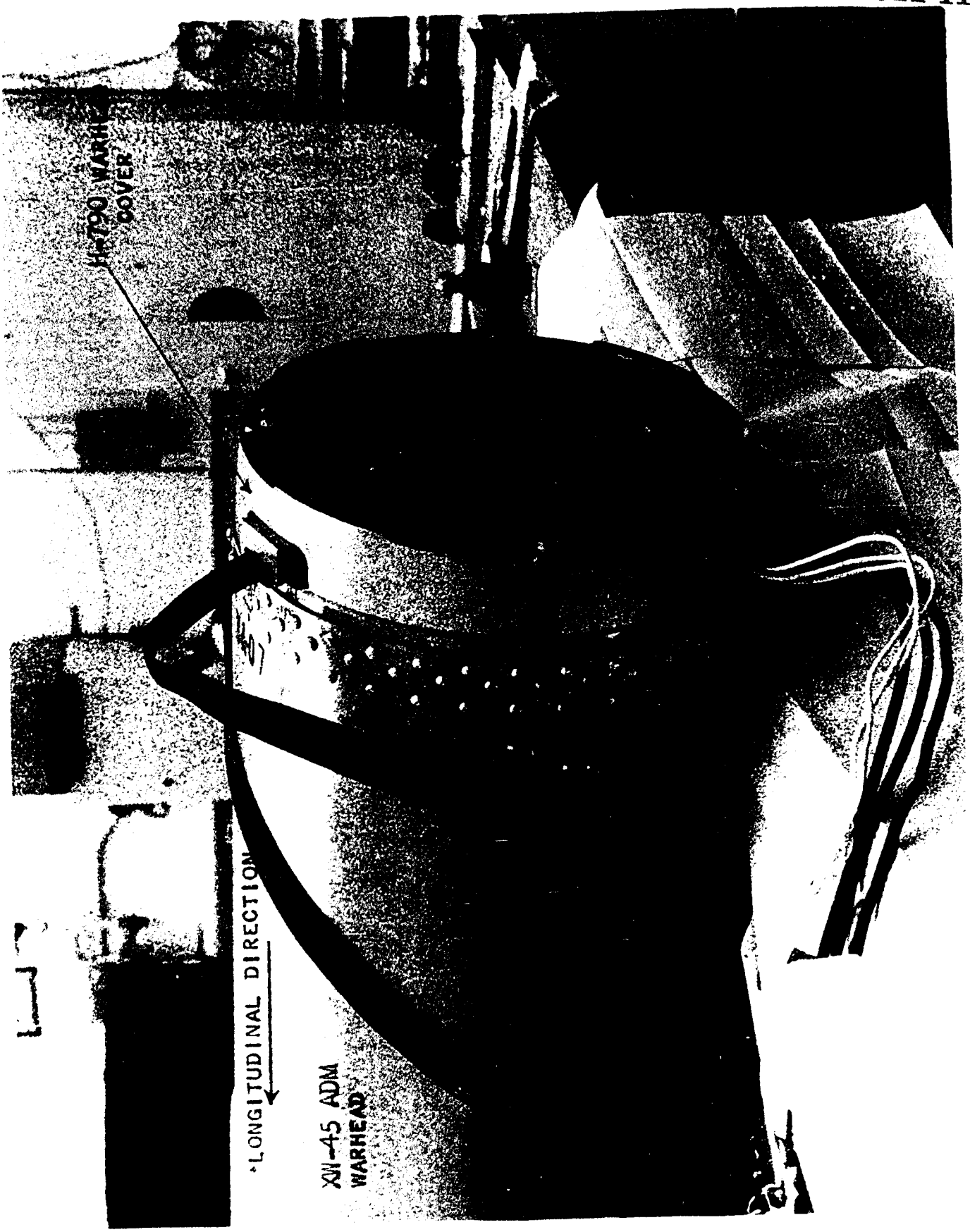

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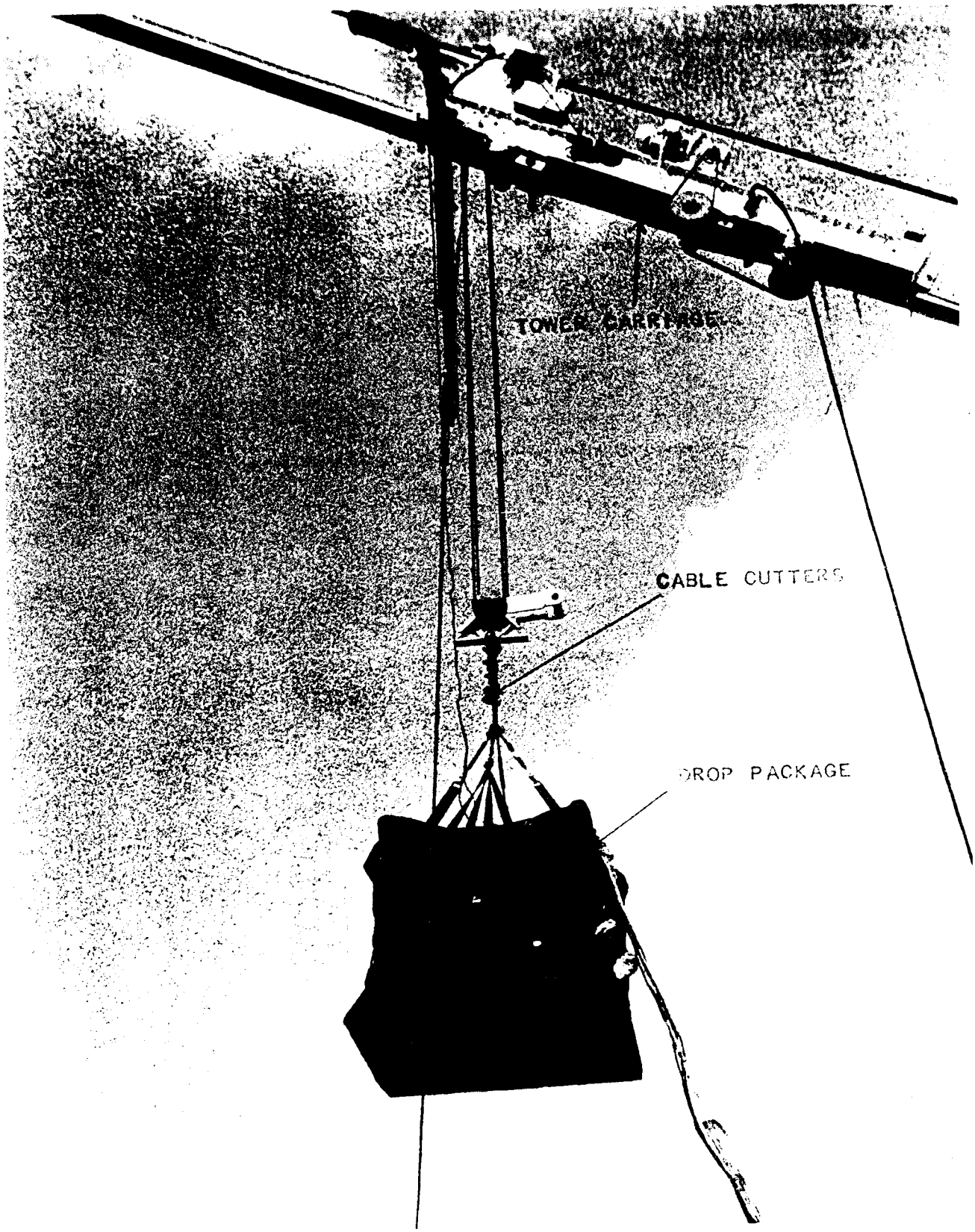

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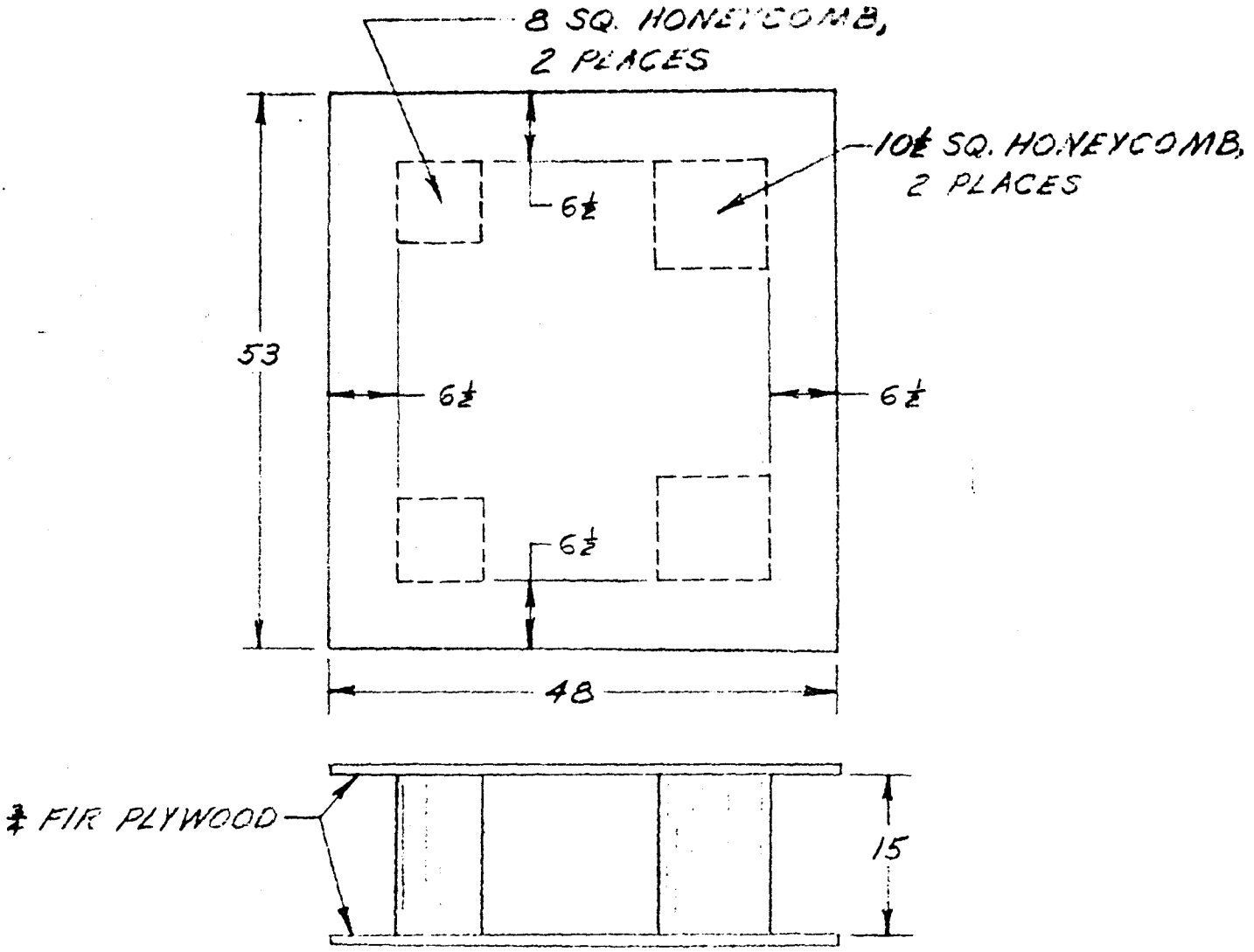
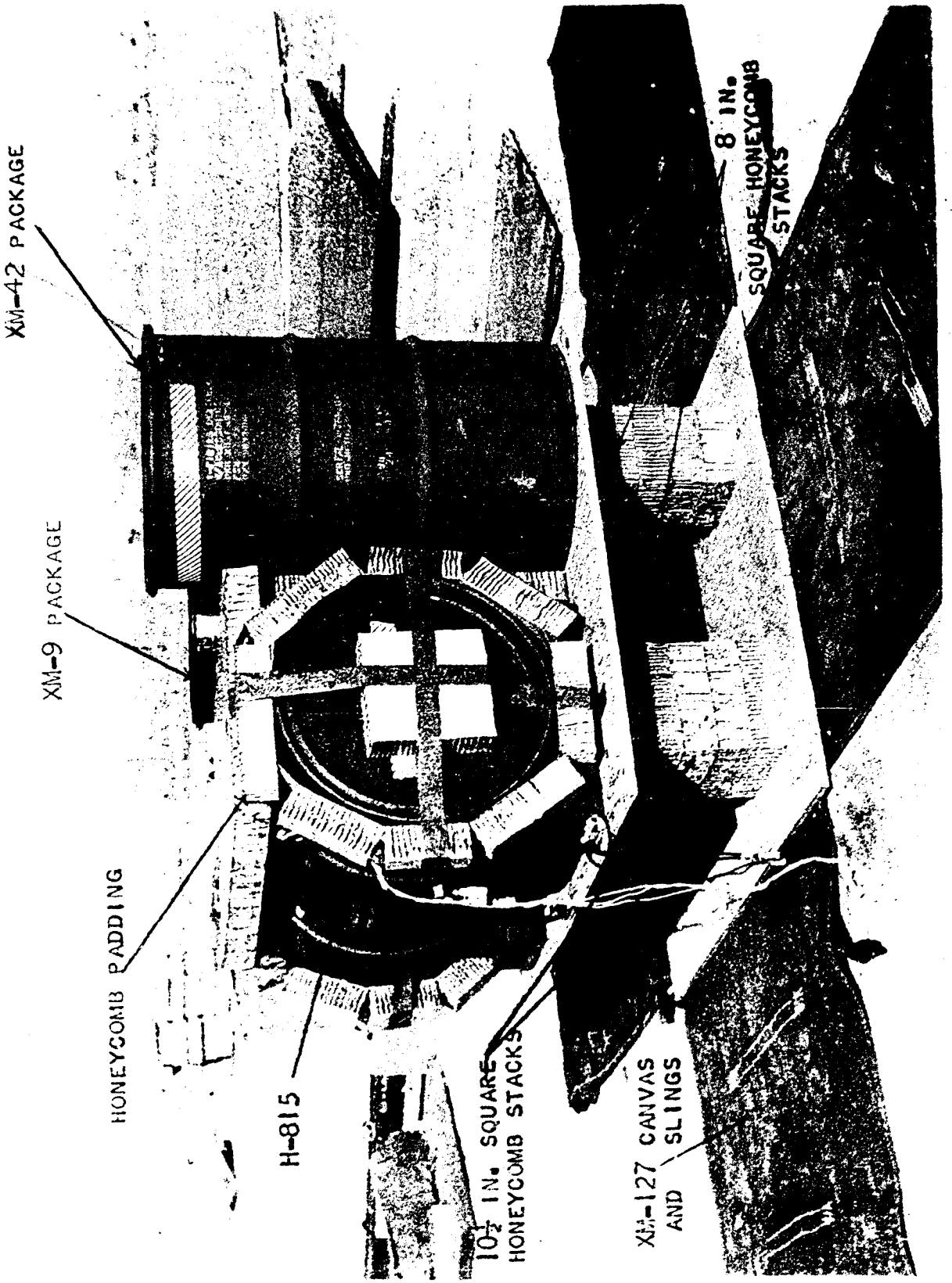


NOTE: HONEYCOMB ATTACHED TO PLYWOOD WITH ASPHALT TILE CEMENT.

FIG. 9 DETAILS OF HONEYCOMB PALLET USED IN VERTICAL DROP NO. 1 SIMULATED PARACHUTE DROP TEST OF H-815 AND XW-45 ADM

T-19238


XM-42 PACKAGE
XM-9 PACKAGE
HONEYCOMB PADDING
H-815
10½ IN. SQUARE HONEYCOMB STACKS
XM-127 CANVAS AND SLINGS
8 IN. SQUARE HONEYCOMB STACKS

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[redacted]

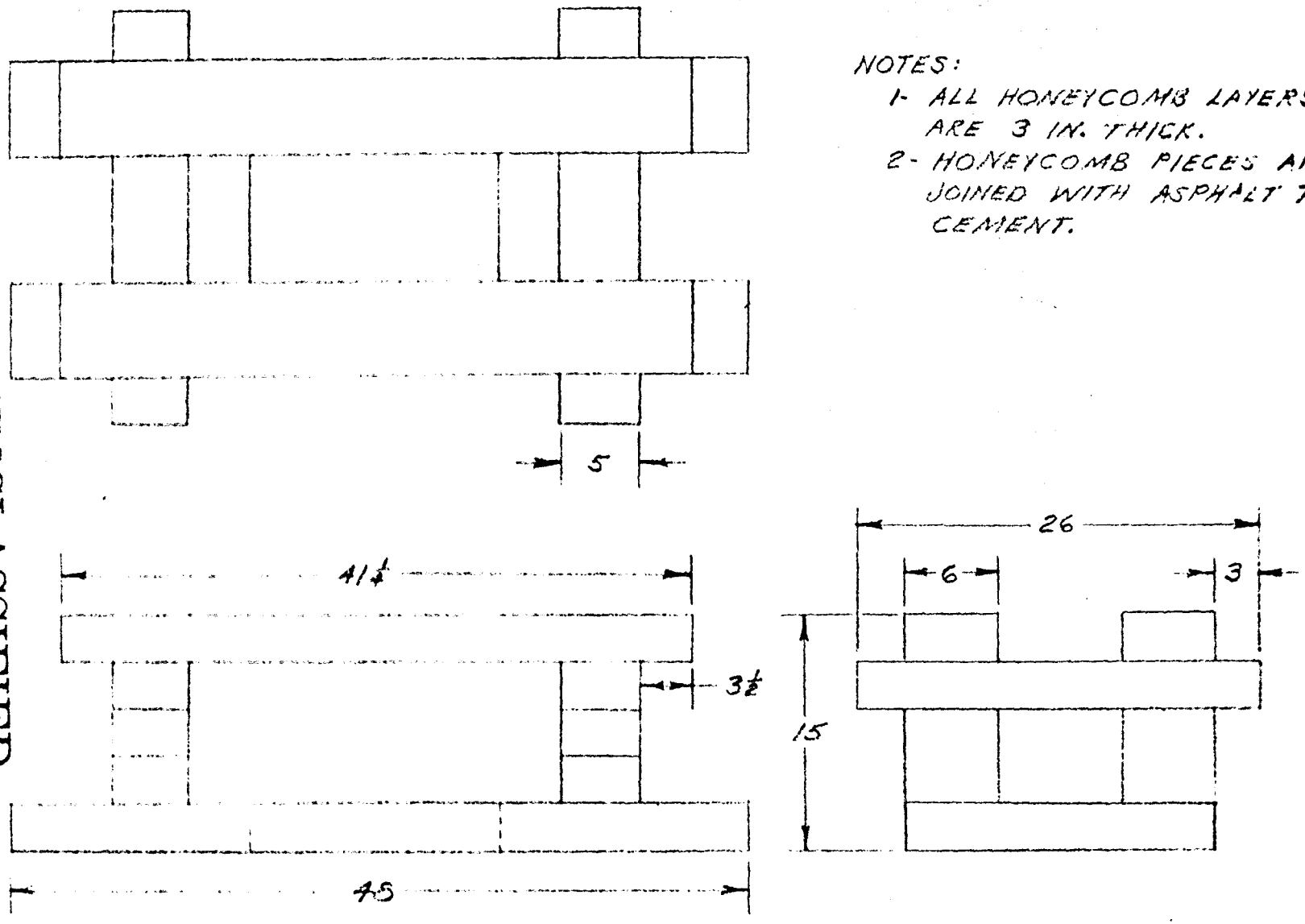

FIG. 11 DETAILS OF HONEYCOMB CONFIGURATION USED UNDER H-815 FOR VERTICAL DROP NO. 2 SIMULATED PARACHUTE DROP TEST OF H-815 AND XW-45 ADM

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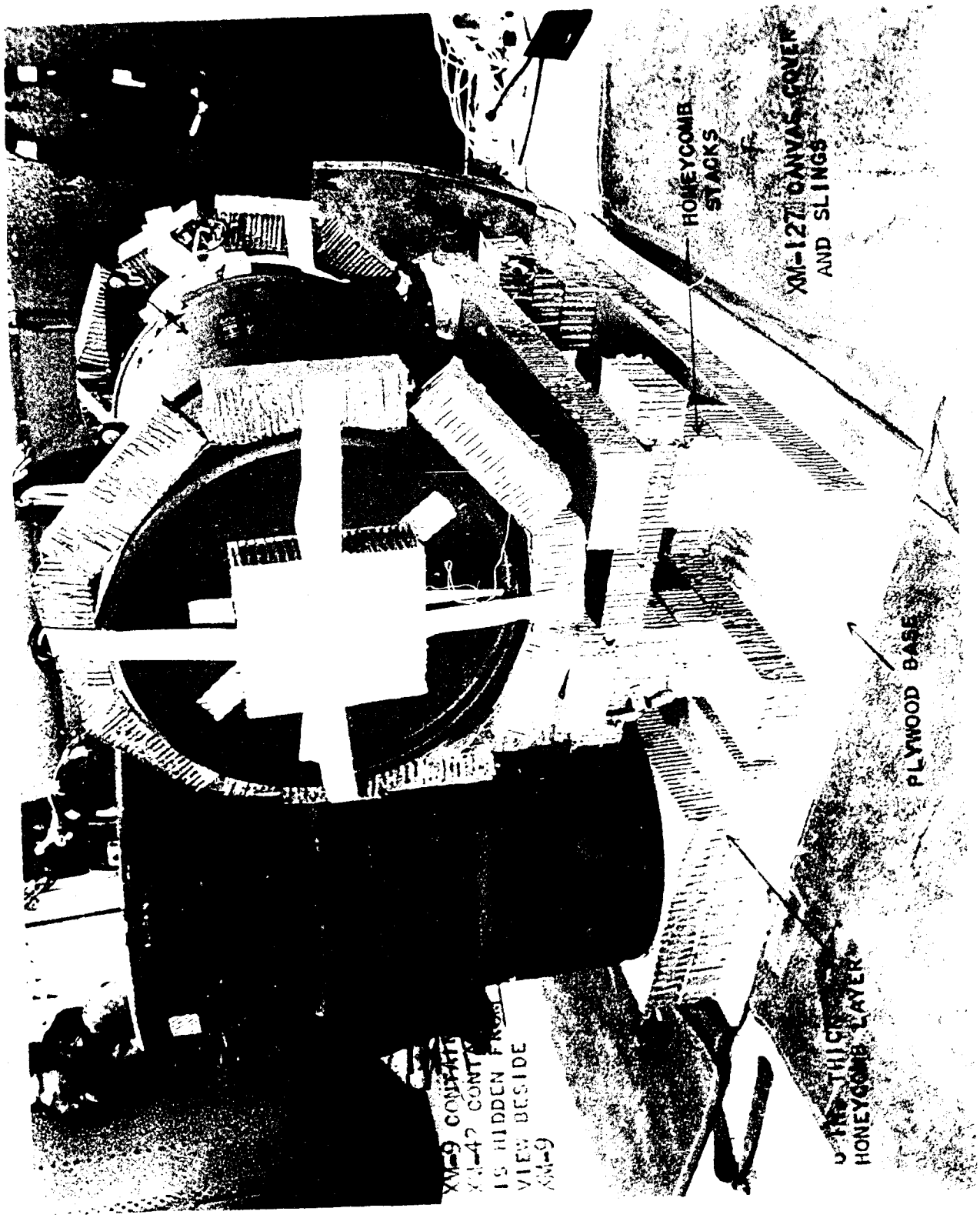

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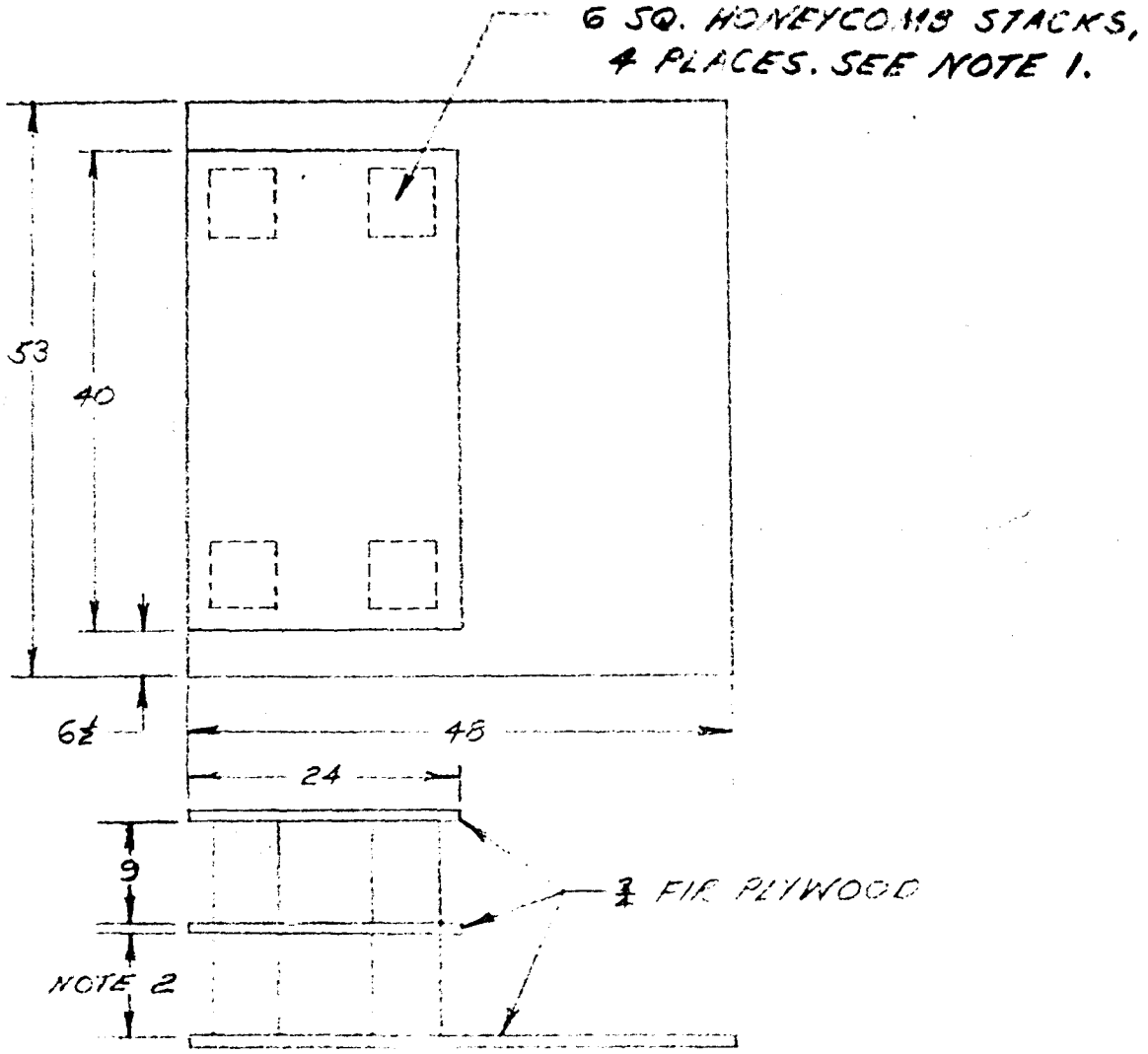


NOTES:

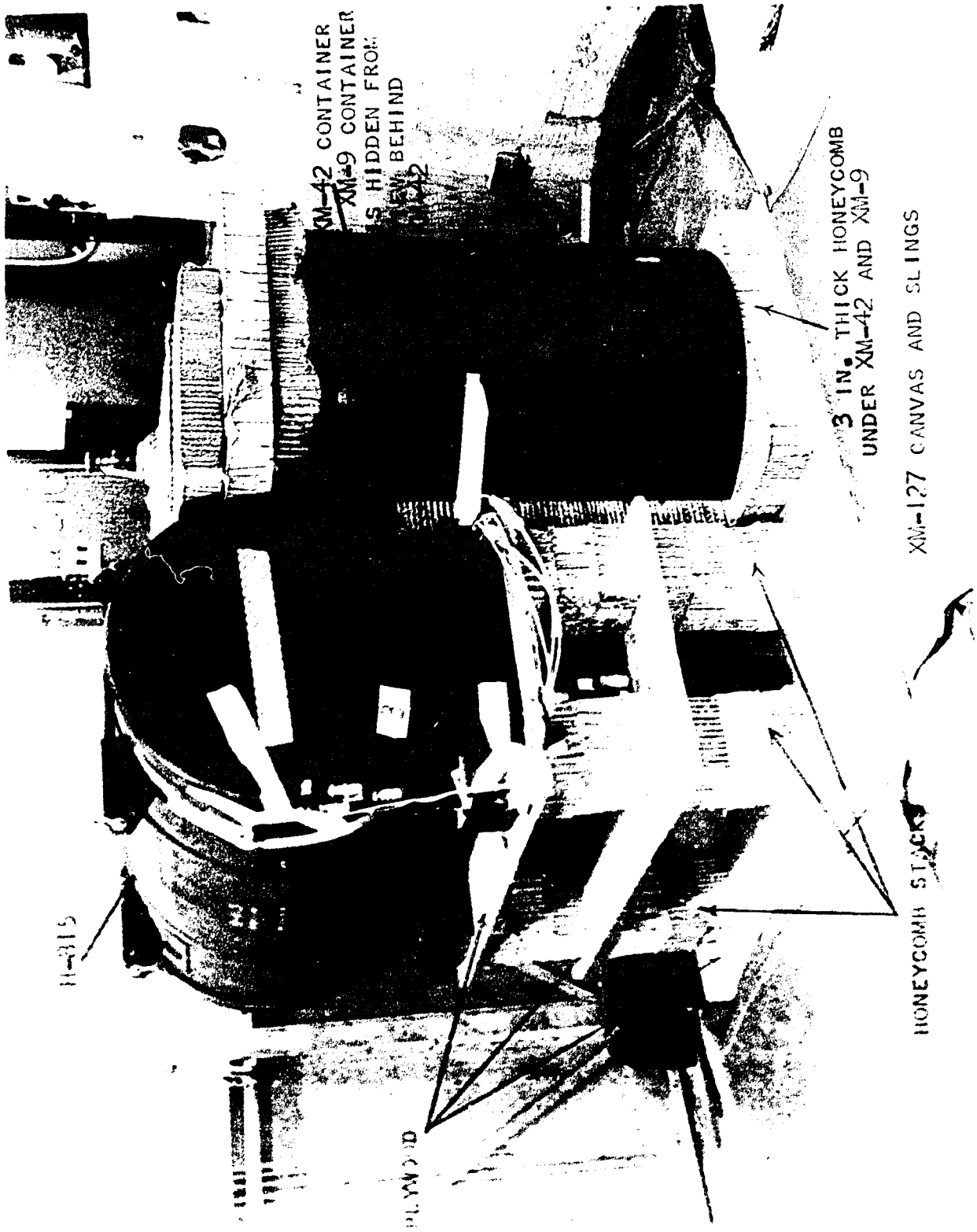
1- STACK DIMENSIONS WERE 5 IN. BY 6 IN. FOR VERTICAL DROP NO. 3 ONLY.

2- THIS DIMENSION WAS 12 IN. FOR VERTICAL DROP NOS. 4 AND 5, AND 9 IN. FOR OTHER DROPS.

3- ALL DIMENSIONS ARE IN INCHES.

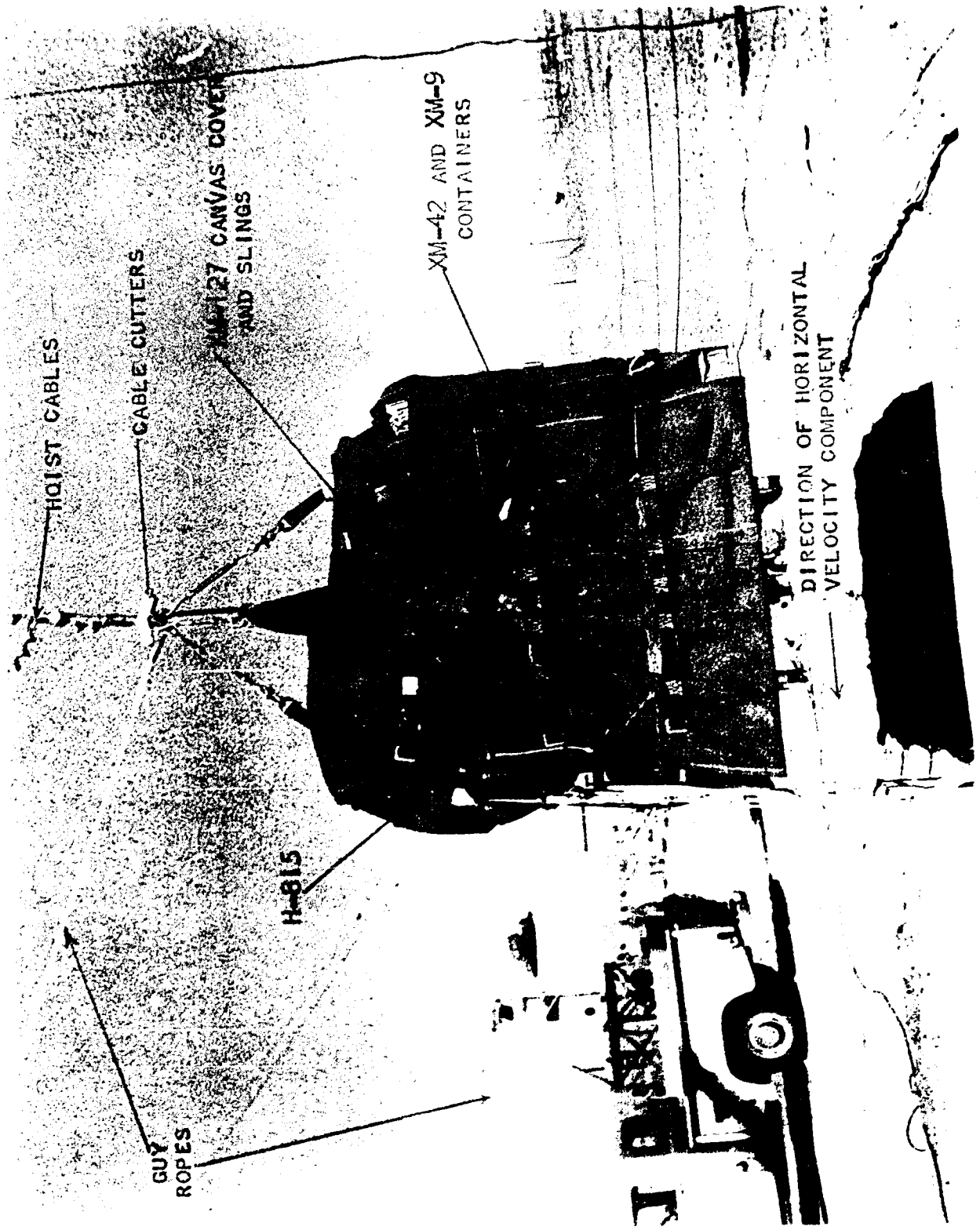
FIG. 13 DETAILS OF HONEYCOMB PALLET FINAL DESIGN AS USED IN VERTICAL DROP NOS. 3 THROUGH 5 AND ALL CERTIFICATION DROPS SIMULATED PARACHUTE DROP TEST OF H-315 AND XM-45 ADM

T-19238


XM-42 CONTAINER
XM-9 CONTAINER
IS HIDDEN FROM
BEHIND
3 IN. THICK HONEYCOMB
UNDER XM-42 AND XM-9
XM-127 CANVAS AND SLINGS
HONEYCOMB STACK
H-315

[redacted]

UNCLASSIFIED



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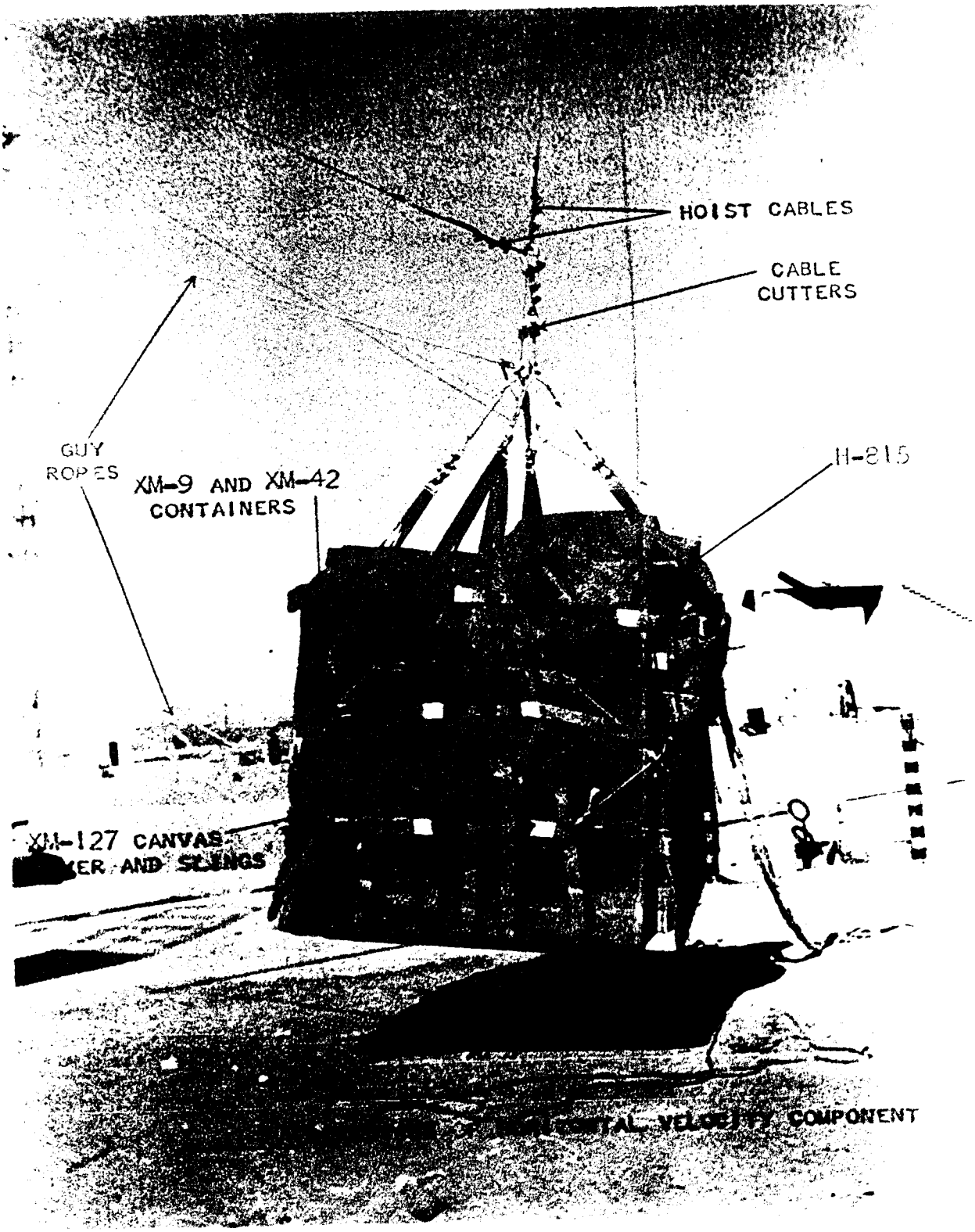
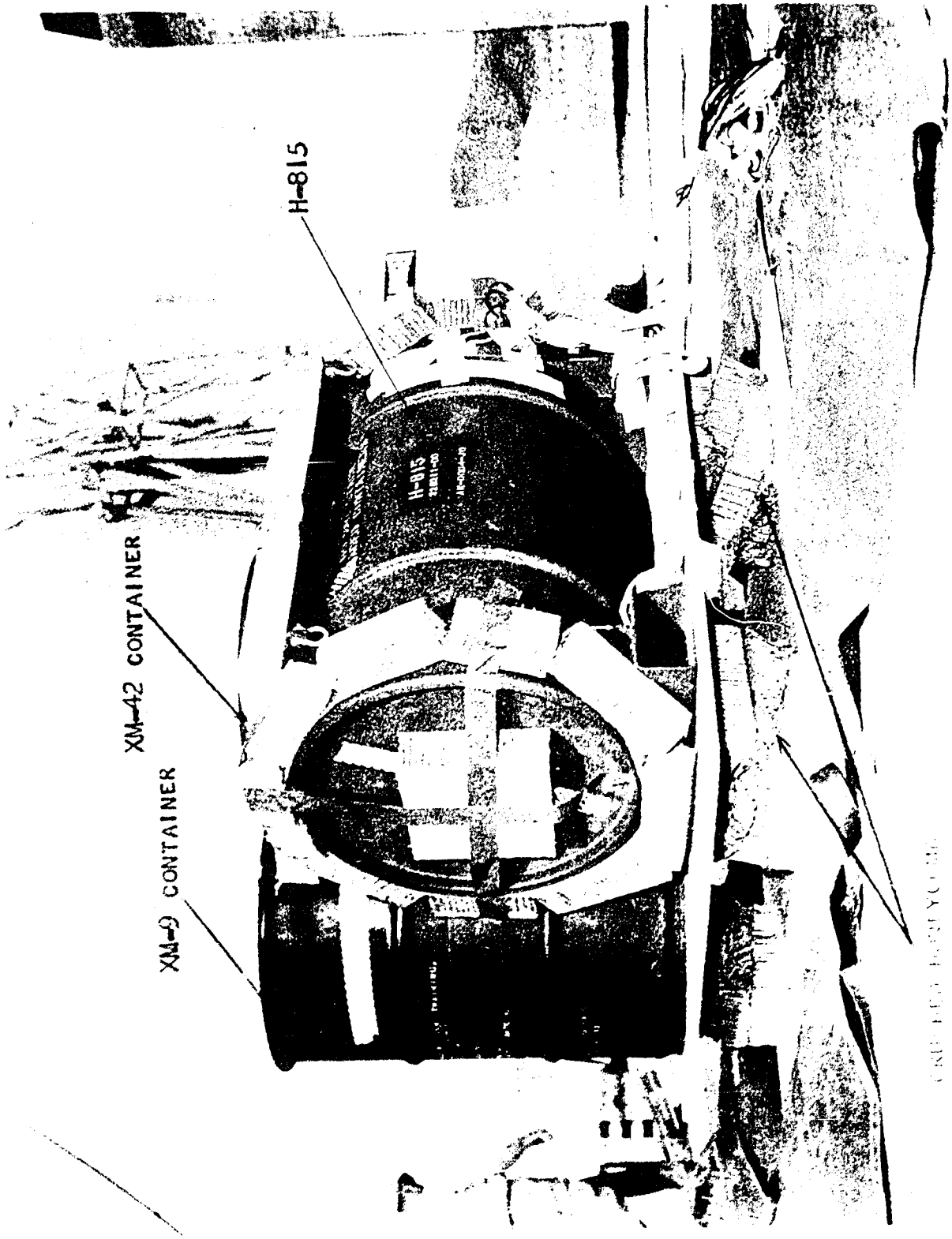

HOIST CABLES
CABLE CUTTERS
GUY ROPES
XM-9 AND XM-42 CONTAINERS
H-815
XM-127 CANVAS
ER AND SLINGS
TAL VELOCITY COMPONENT

[redacted] UNCLASSIFIED



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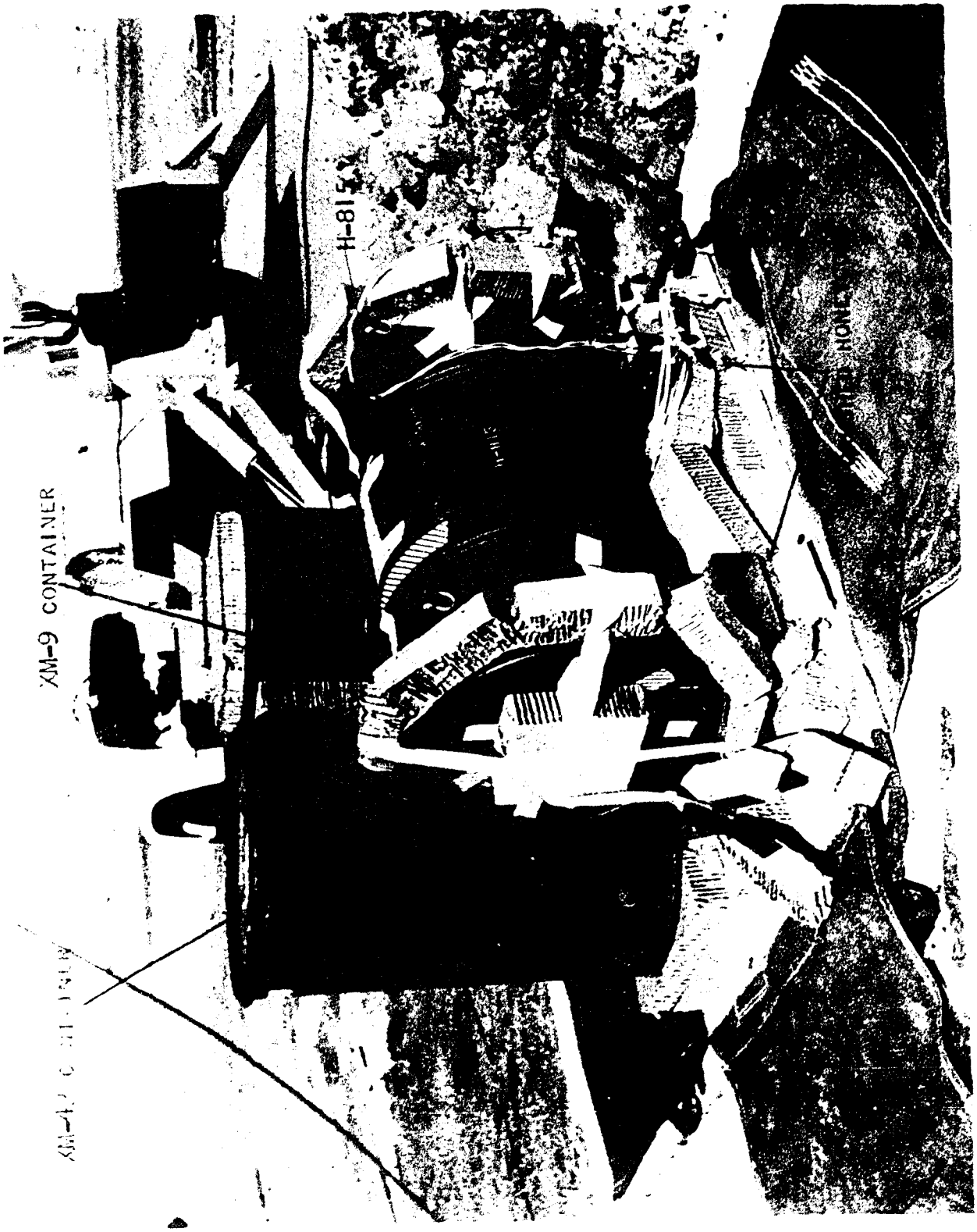

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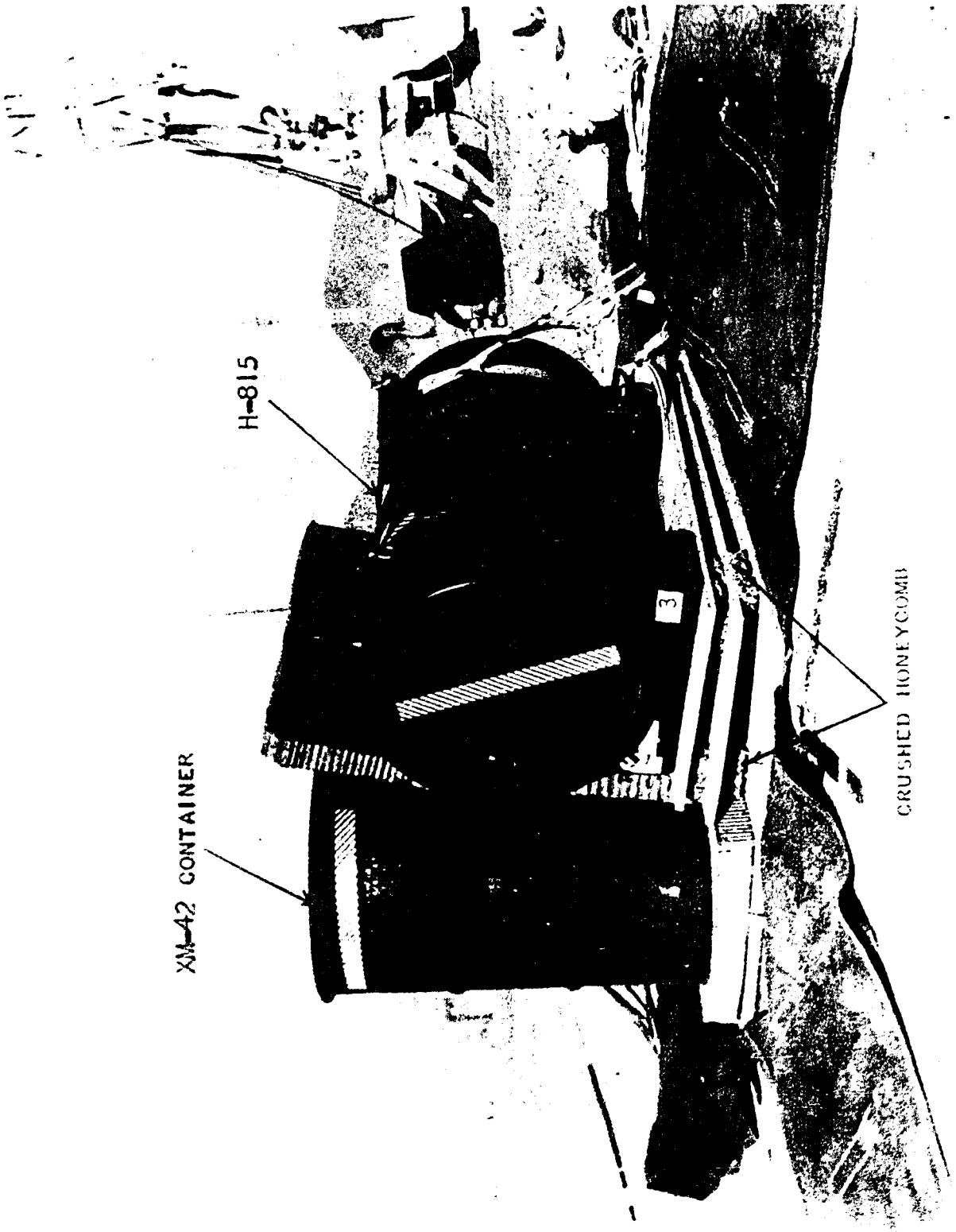

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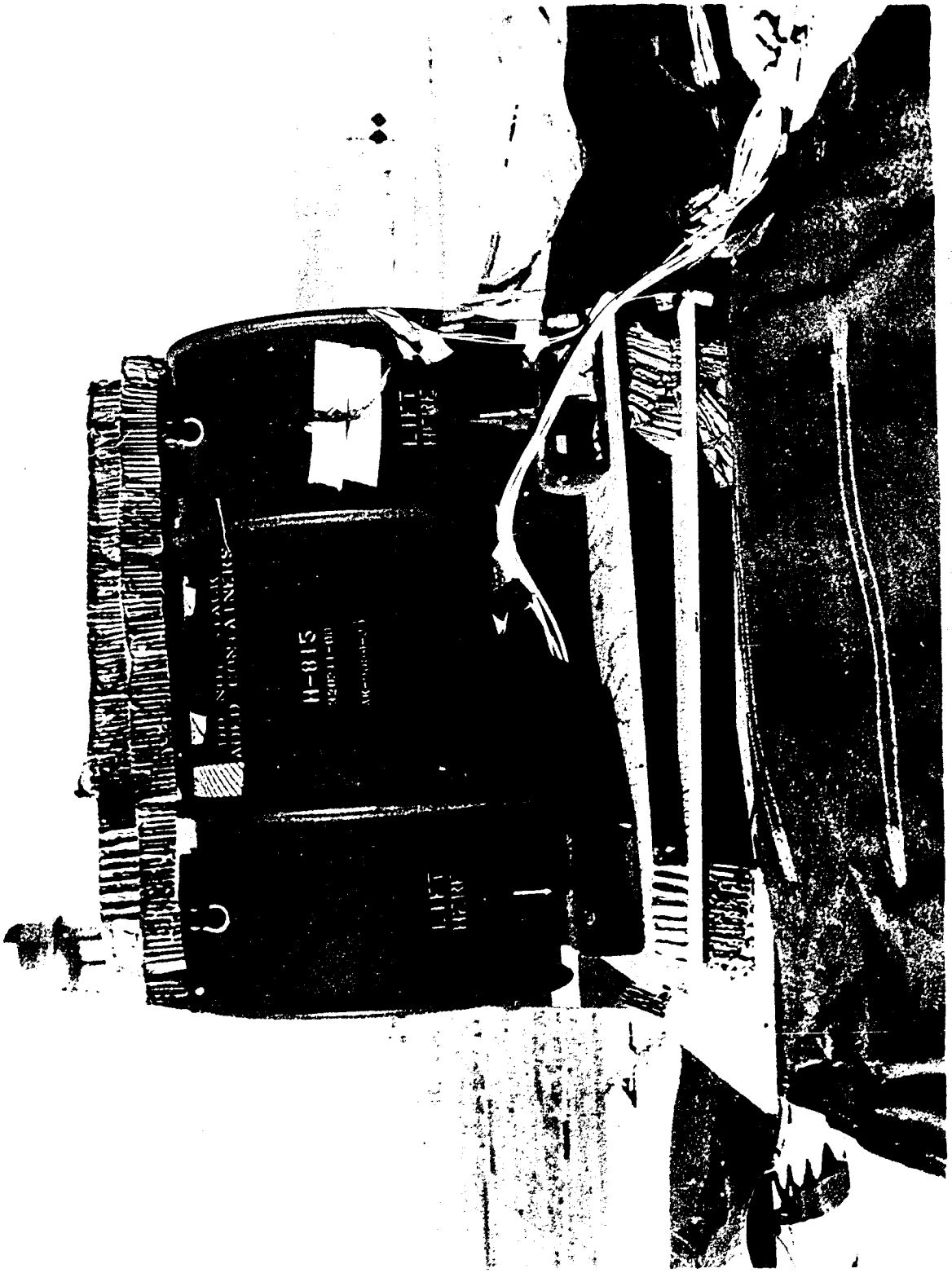
H-815
LIFT HERE
LIFT HERE

[redacted]

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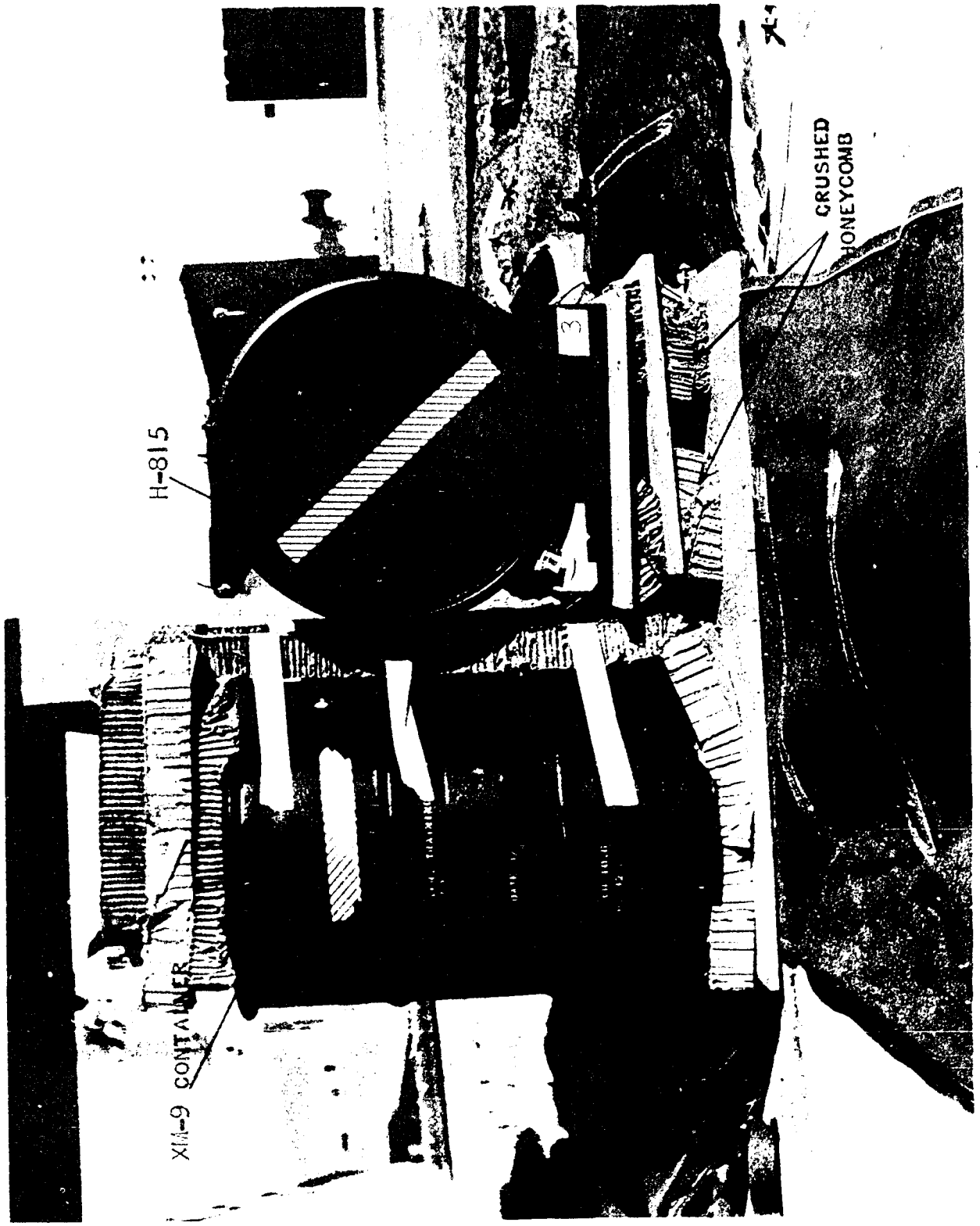

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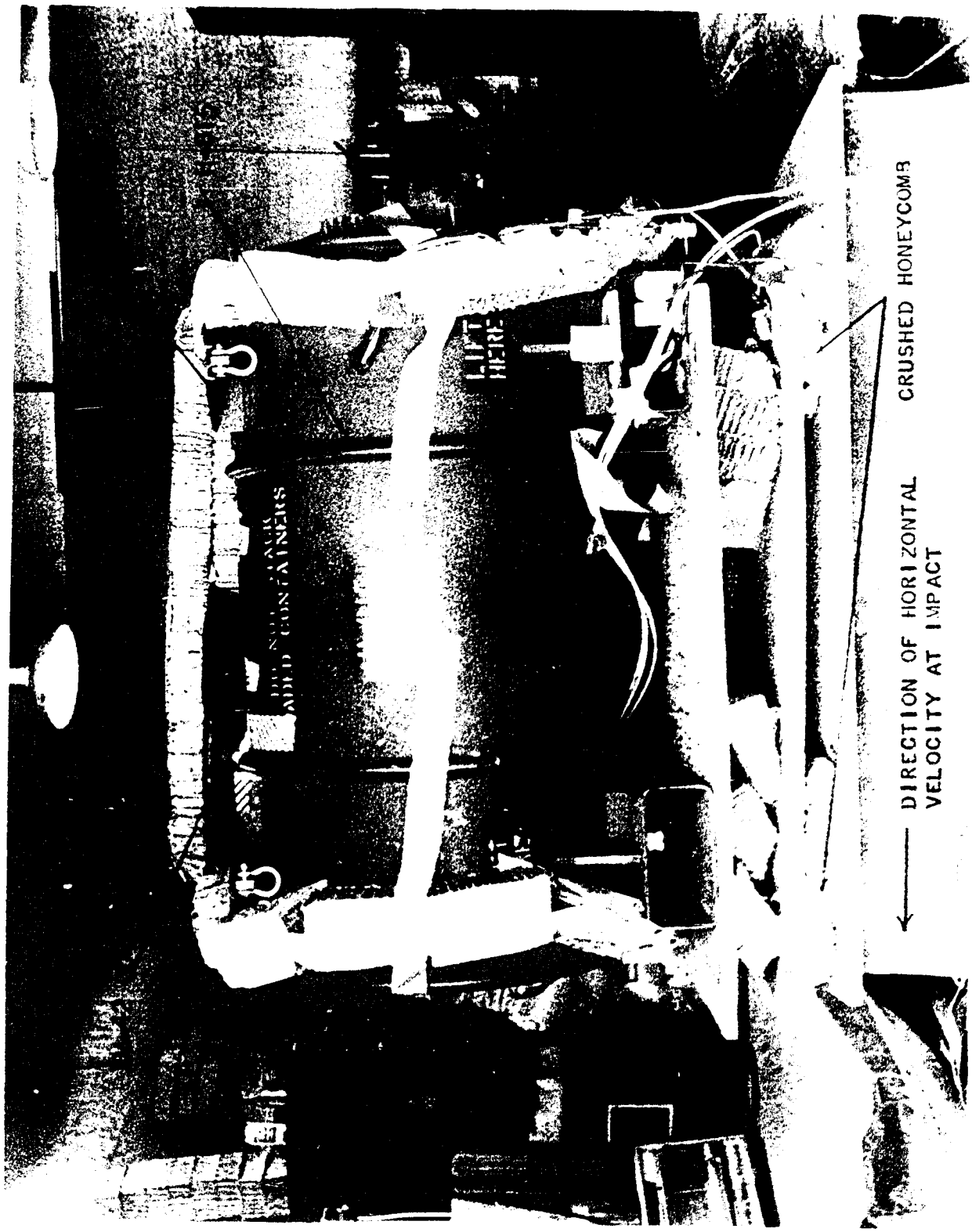

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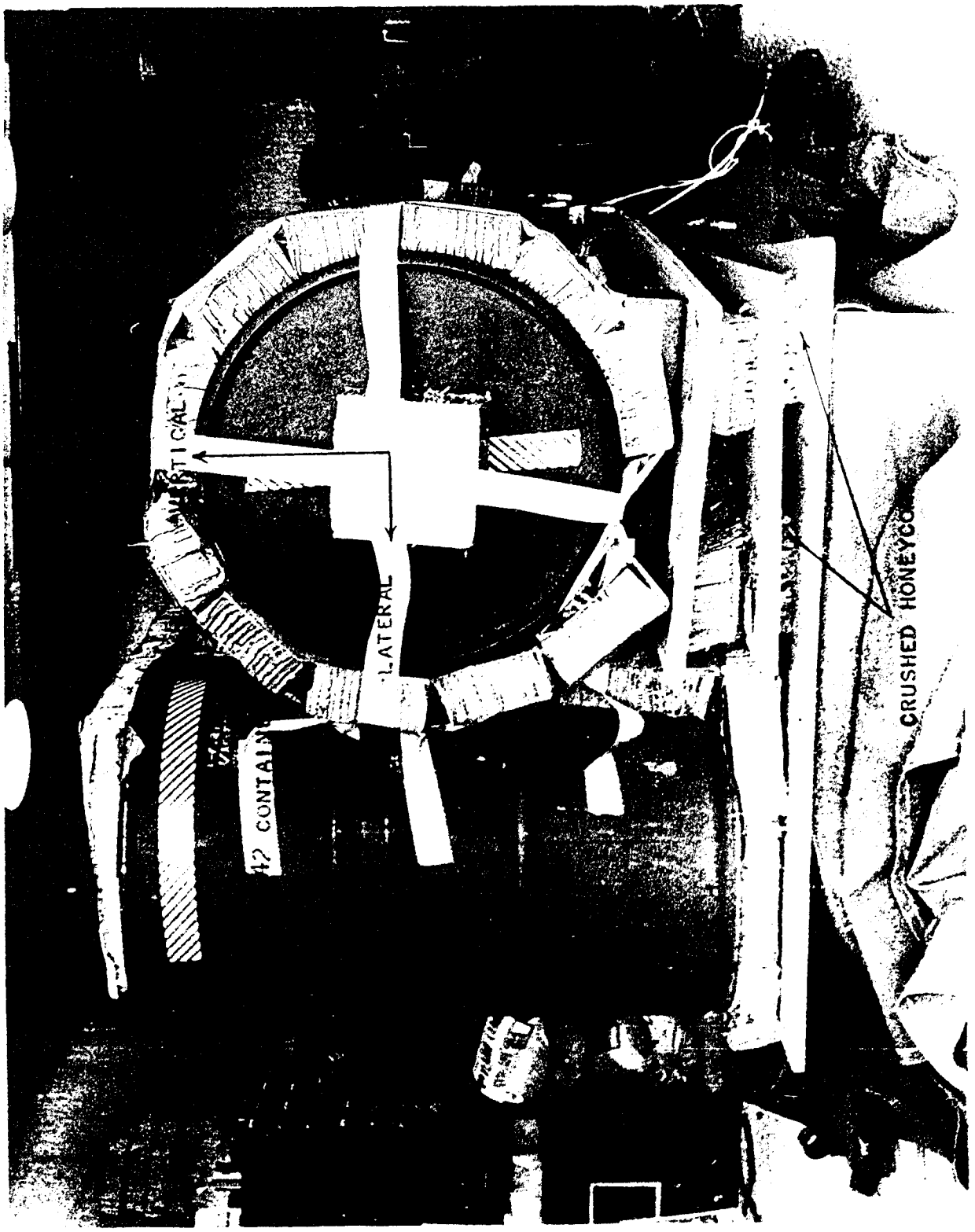

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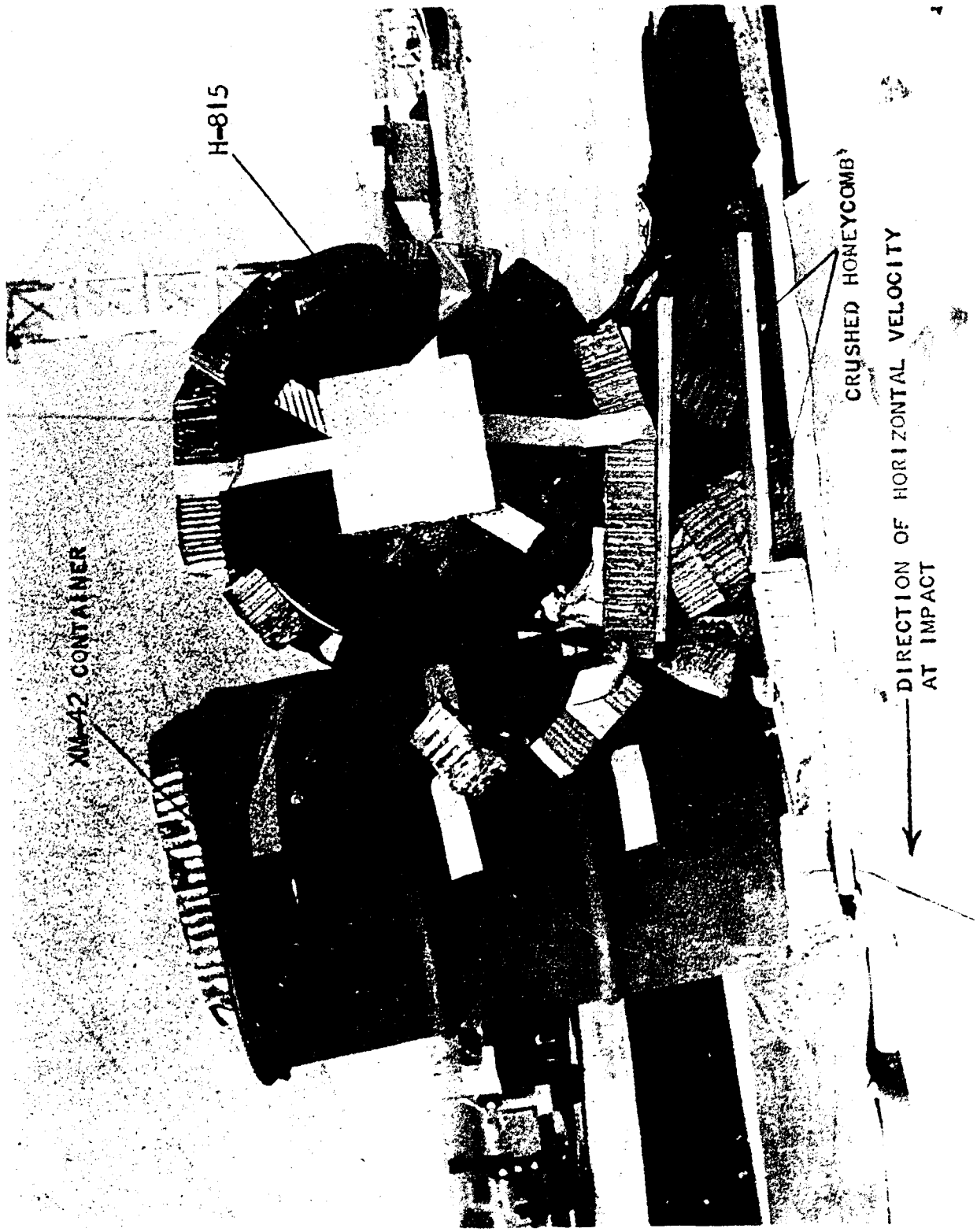
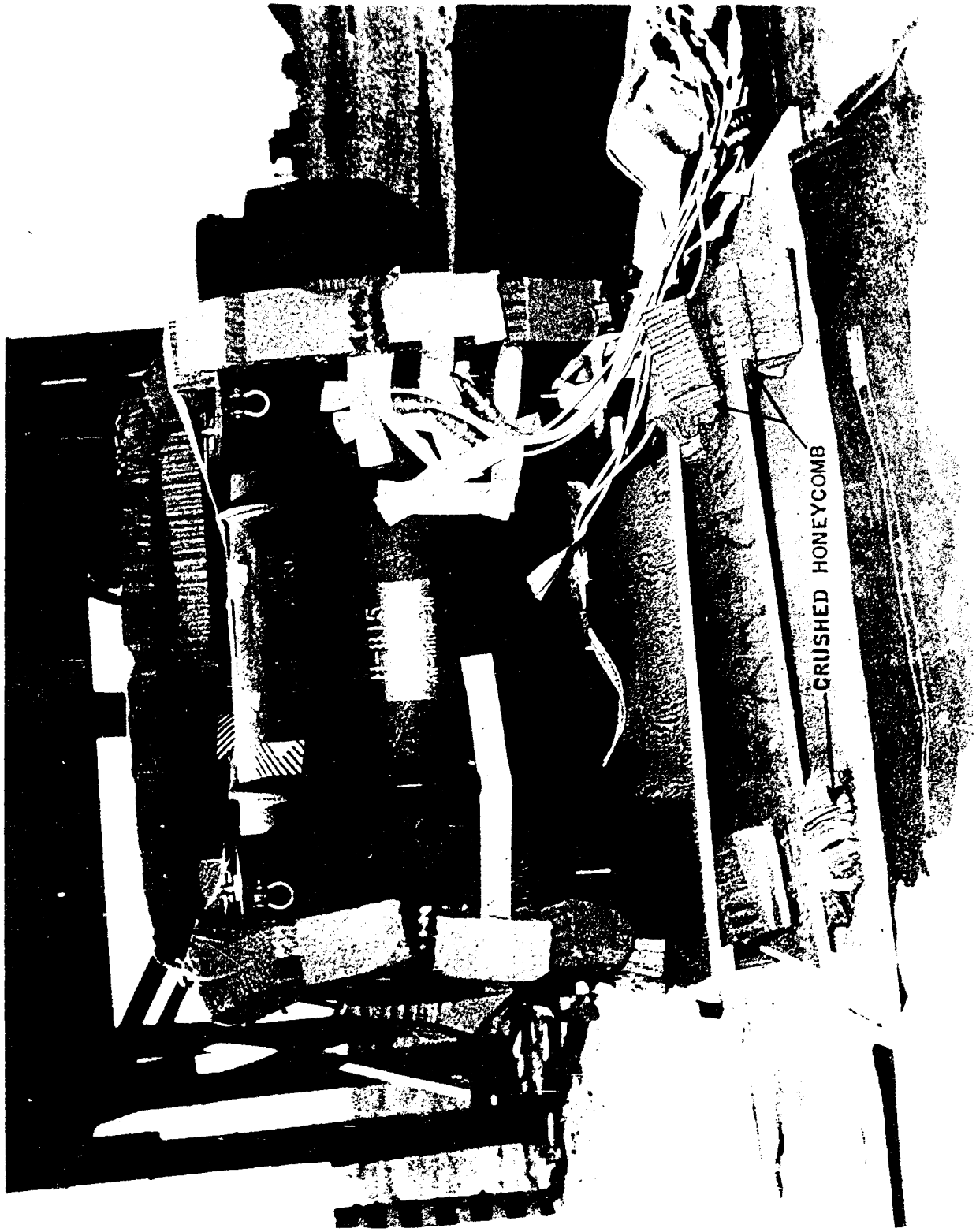
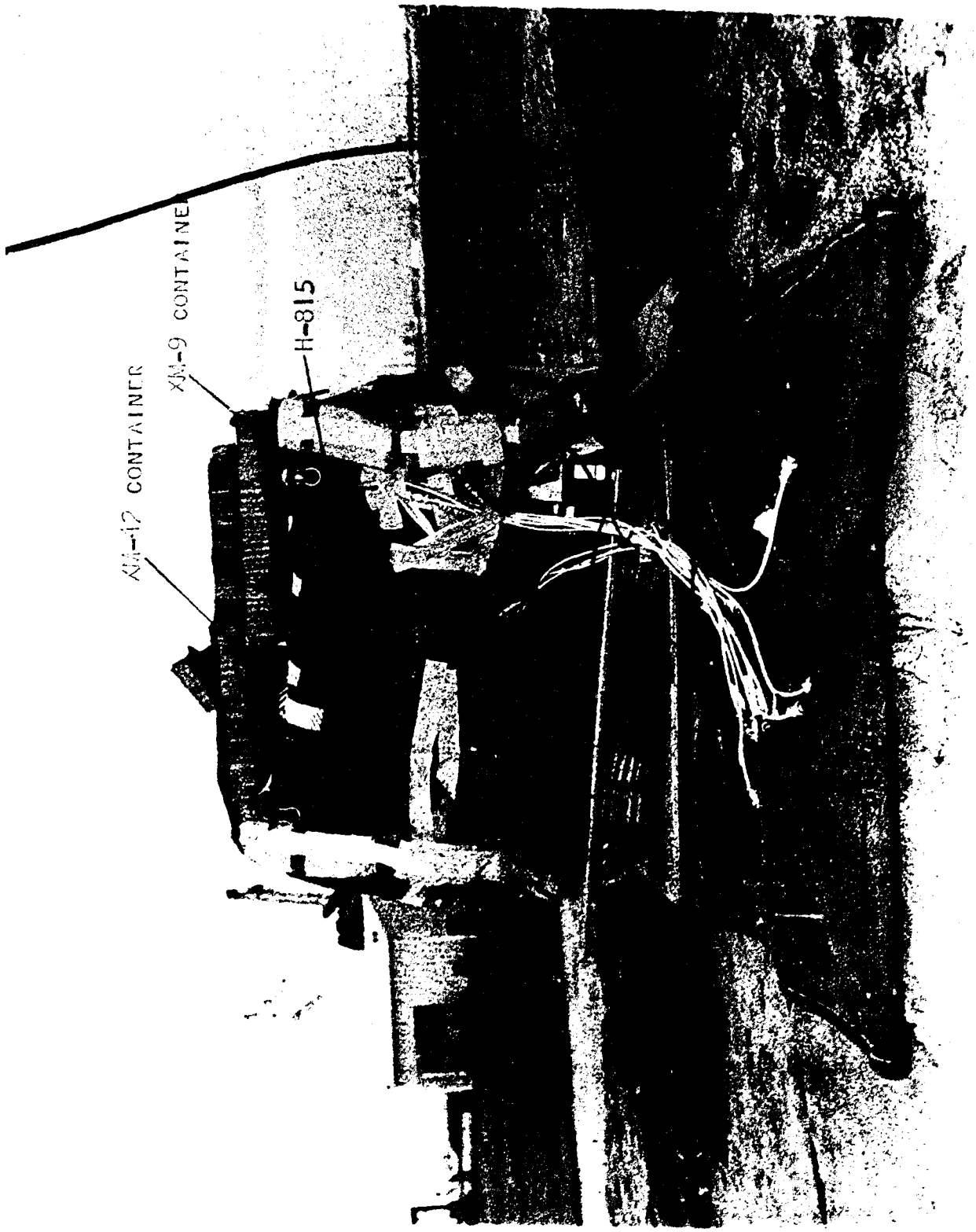

H-815
XM-42 CONTAINER
CRUSHED HONEYCOMB
DIRECTION OF HORIZONTAL VELOCITY AT IMPACT


CRUSHED HONEYCOMB

[redacted] UNCLASSIFIED



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Project No. T-19238

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TABLE 1

ACCELEROMETERS - USED
SIMULATED PARACHUTE DROP TESTS OF H-815 AND XW-45 ADM

Accel. No.	Location	Direction	Model No. (Statham)	Serial No.	Range (±g)	Nat. Freq. (cps)	Figure Reference
A-1	H-790 Warhead Cover	Longitudinal	A6-100-350	3548	100	450	1
A-2	" " "	Vertical	A52-100-300	1592	100	700	1
A-3	" " "	Horizontal	A52-50-300	1563	50	500	1
A-4	Fwd. Leg, H-815 Container	Longitudinal	A5a-50-335	1679	50	550	5
A-5	" " " "	Vertical	A5a-50-335	1684	50	550	5
A-6	" " " "	Horizontal	A6a-50-350	2870	50	300	5
A-7	Aft. " " "	Longitudinal	A5a-50-240	641	50	640	6
A-8	" " " "	Vertical	A5a-50-335	1680	50	550	6
A-9	" " " "	Horizontal	A52-100-300	524	100	700	6
A-10	Warhead, Aft	Longitudinal	A6a-50-350	2854	50	300	4
A-11	" "	Vertical	A6a-50-350	2860	50	300	4
A-12	" "	Horizontal	A6a-50-350	2866	50	300	4
C-1	" "	Longitudinal	*20CWI	209	100	17,000	3
C-2	" "	Vertical	*20CWI	193	100	17,000	2, 3
C-3	" "	Horizontal	*20CWI	221	100	17,000	2, 3

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TABLE II

COMPONENTS TESTED
SIMULATED PARACHUTE DROP TEST OF H-815 AND XW-45 ADM

Name of Component	Drawing or Part No.	Serial No.
Dummy XW-45 ADM Warhead		
H-790 Warhead Protective Cover	320186	1877
H-815 Warhead Shipping and Storage Case	320211	AK-0004-JO
XM-4 Decoder Receiver	8837882 (Picatinny)	635
XM-42 Firing Device	8833495 (Picatinny)	N004204
XM-127 Canvas Cover and Slings	-	-

TABLE III

ACCELERATIONS AND TIMES
FOR VERTICAL DROP NOS. 1 THRU 4
SIMULATED PARACHUTE DROP TESTS OF M-815 AND XW-45 ADM

			Vertical Drop No. 1					Vertical Drop No. 2					Vertical Drop No. 3					Vertical Drop No. 4				
	LOCATION	DIRECTION	ACCELERATION (g)			TIME (ms)		ACCELERATION (g)			TIME (ms)		ACCELERATION (g)			TIME (ms)		ACCELERATION (g)			TIME (ms)	
			Max +	Max -	Faired	Rise	Pulse	Max +	Max -	Faired	Rise	Pulse	Max +	Max -	Faired	Rise	Pulse	Max +	Max -	Faired	Rise	
A-1	M-790	Long.	3	2	-	-	-	-	Cable Break	-	-	-	8	4	-	-	-					
A-2	M-790	Vert.	49	3	47	18	50	29	22	29	21	69	44	16	44	51	78	*26	-	-	-	-
A-3	M-790	Lat.	5	2	-	-	-	6	7	-	-	-	9	6	-	-	-					
C-1	Aft, Warhead	Long.	8	10	-8	-	-	6	5	-	-	-	-	Cable Break	-	-	-					
C-2	Aft, Warhead	Vert.	-	Off Paper		-	-	34	27	34	21	66	45	23	45	52	67					
C-3	Aft, Warhead	Lat.	4	9	-3	-	-	7	8	-	-	-	10	7	-	-	-					

* No other accelerometers monitored on Drop No. 4

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TABLE IV

T-19238
REF. SYM.

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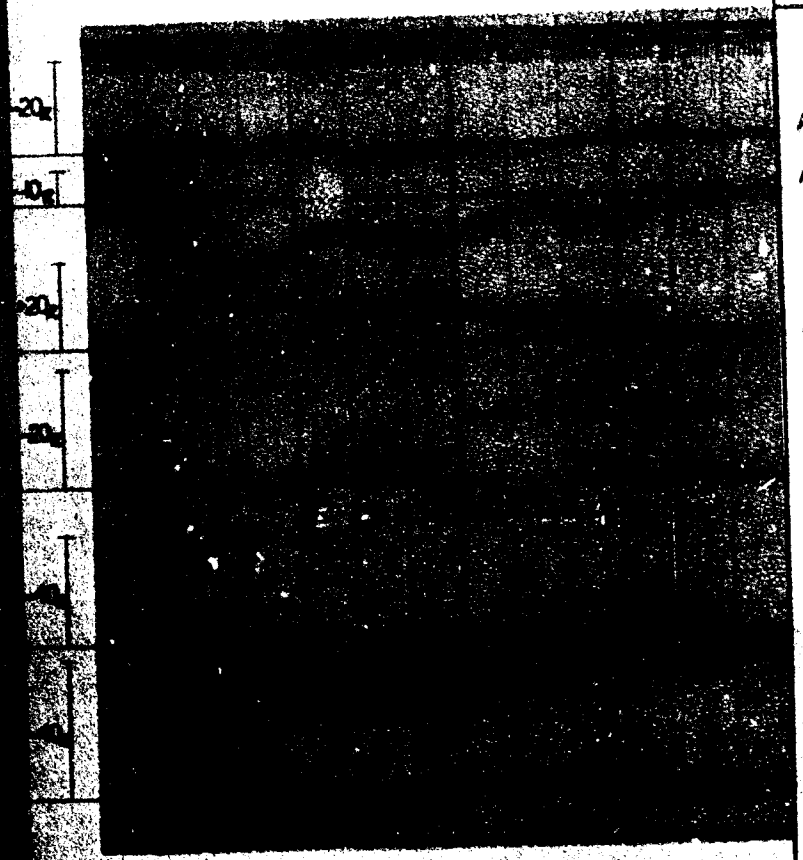
VERTICAL DROP NO. 5
SIMULATED PARACHUTE DROP TEST OF THE H-815 AND XW-45 ADM

CALIBRATES



IDENTIFICATION			ACCELERATION DATA					TEST CONDITIONS
GAGE NO.	SENSING DIRECTION	LOCATION	MFP g	MAX +g	MAX −g	RISE MSEC	DURATION MSEC	
A-1	LONG.	H-790	-	2	2	-	-	CONCRETE TARGET VERT. VELOCITY = [illegible] HORIZ. VELOCITY = 0
A-2	VERT.	"	20	20	0	12	104	
A-3	HORIZ.	"	14	14	0	10	101	
A-4	LONG.	FWD. CONTAINER LEG	-	9	11	-	-	
A-5	VERT.	"	20	42	13	2	93	
A-6	HORIZ.	"	-	9	4	-	-	

[redacted]

UNCLASSIFIED

[redacted]

TABLE IV

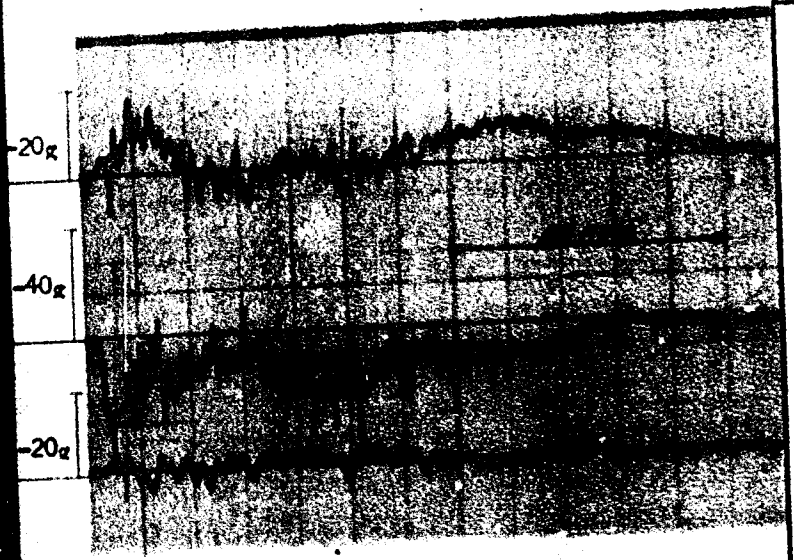
T-19238
REF. SYM.

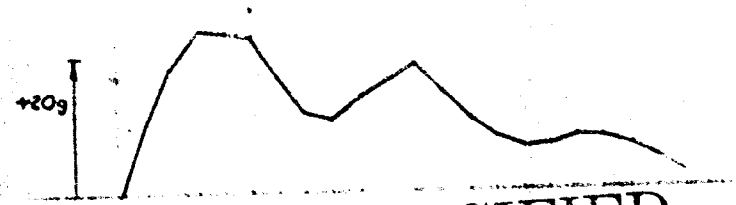
UNCLASSIFIED

VERTICAL DROP NO. 5
SIMULATED PARACHUTE DROP TEST OF THE H-815 AND XW-45 ADM

2014

CALIBRATES





IDENTIFICATION			ACCELERATION DATA					TEST CONDITIONS
GAGE NO.	SENSING DIRECTION	LOCATION	MFP g	MAX +g	MAX -g	RISE MSEC	DURATION MSEC	
A-7	LONG.	AFT. CONTAINER LEG	-9	9	16	-	-	CONCRETE TARGET VERT. VELOCITY = [illegible] HORIZ. VELOCITY = 0
A-8	VERT.	"	27	57	26	1	92	
A-9	HORIZ.	"	-	5	4	-	-	
A-2 & A-3	RADIAL (VECTOR SUM OF VERT. AND HORIZ. ACCELERATIONS)	H-790	24	24	10	8	65	

[redacted]

UNCLASSIFIED

2012

[redacted]

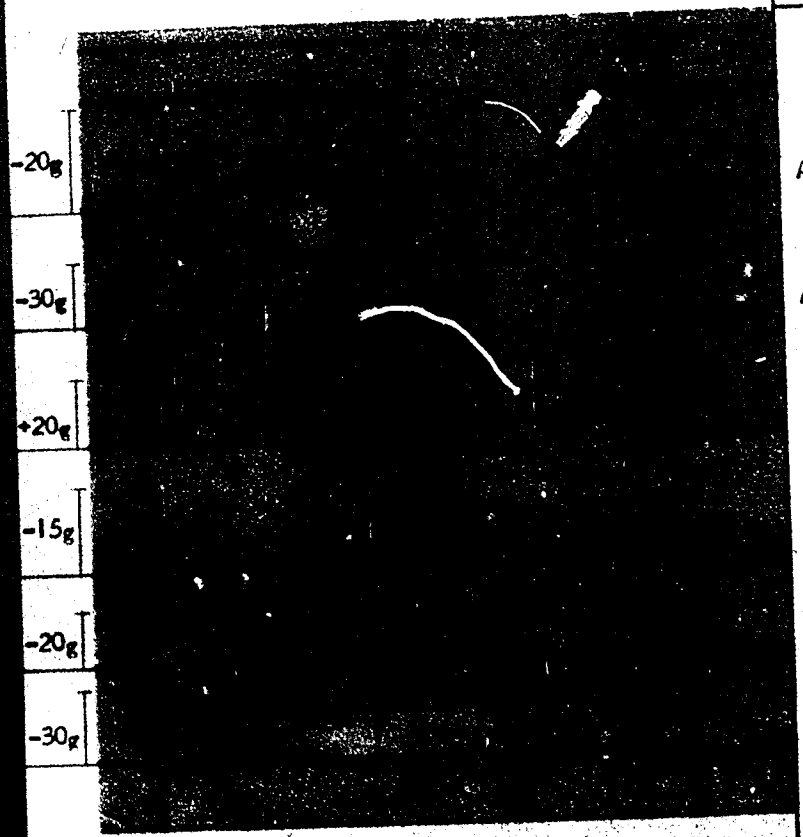
TABLE V

T-19[illegible]
REF. [illegible]

UNCLASSIFIED

CERTIFICATION DROP NO. 1
SIMULATED PARACHUTE DROP TEST OF THE H-815 AND XW-45 ADM

CALIBRATES



IDENTIFICATION			ACCELERATION DATA					TEST CONDITIONS
GAGE NO.	SENSING DIRECTION	LOCATION	MFP g	MAX +g	MAX -g	RISE MSEC	DURATION MSEC	
A-1	LONG.	H-790	-	3	2	-	-	HARD EARTH TARGET VERT. VELOCITY = [illegible] HORIZ. VELOCITY = [illegible] WARHEAD LONG. AXIS NORMAL TO HORIZ. VELOCITY DIRECTION
A-2	VERT.	"	17	17	2	11	54	
A-3	HORIZ.	"	14	14	0	11	92	
A-4	LONG.	FWD. CONTAINER LEG	-	12	14	-	-	
A-5	VERT.	"	30	45	10	2	60	
A-6	HORIZ.	"	-	10	10	-	-	

[redacted]

UNCLASSIFIED

[redacted]

TABLE V

T-19293
REF. SYM.

UNCLASSIFIED

CERTIFICATION DROP NO. 1
SIMULATED PARACHUTE DROP TEST OF THE N-815 AND XW-45 ADM

CALIBRATES

-5g

-20g

-20g

[redacted]

IDENTIFICATION			ACCELERATION DATA					TEST CONDITIONS
GAGE NO.	SENSING DIRECTION	LOCATION	MFP g	MAX +g	MAX -g	RISE MSEC	DURATION MSEC	
A-7	LONG.	AFT CONTAINER LEG	-	22	13	-	-	HARD EARTH TARGET VERT. VELOCITY = [illegible] HORIZ. VELOCITY = [illegible]
A-8	VERT.	"	18	43	38	4	57	WARHEAD LONG. AXIS NORMAL TO HORIZ. VELOCITY DIRECTION
A-9	HORIZ.	"	-	12	11	-	-	

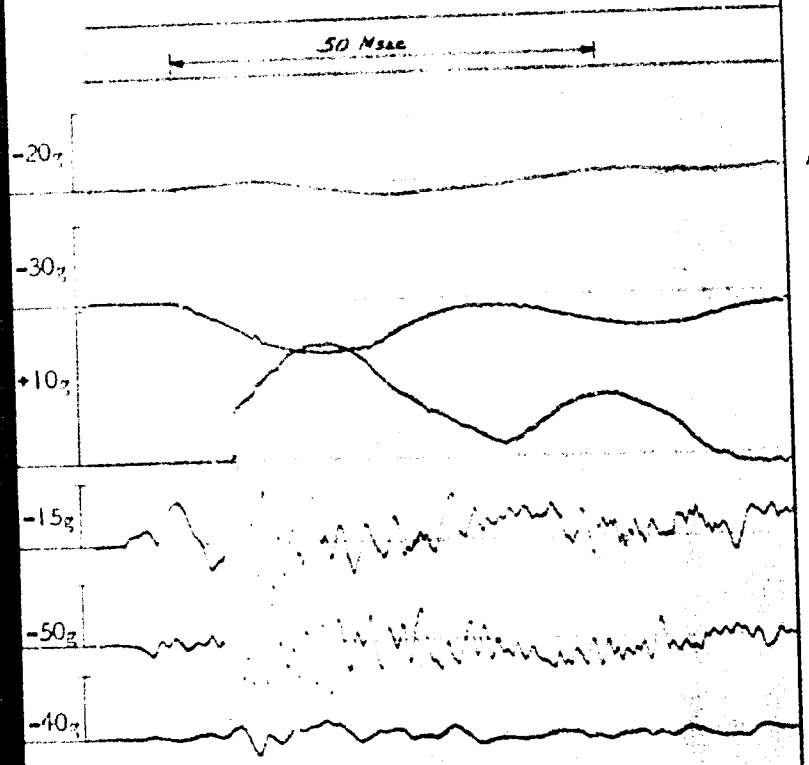
UNCLASSIFIED

[redacted]

2013

UNCLASSIFIED

2014



[redacted]

TABLE VI

T-19238
REF. SYM.

CERTIFICATION DROP NO. 2
SIMULATED PARACHUTE DROP TEST OF THE H-815 AND XW-45 ADM

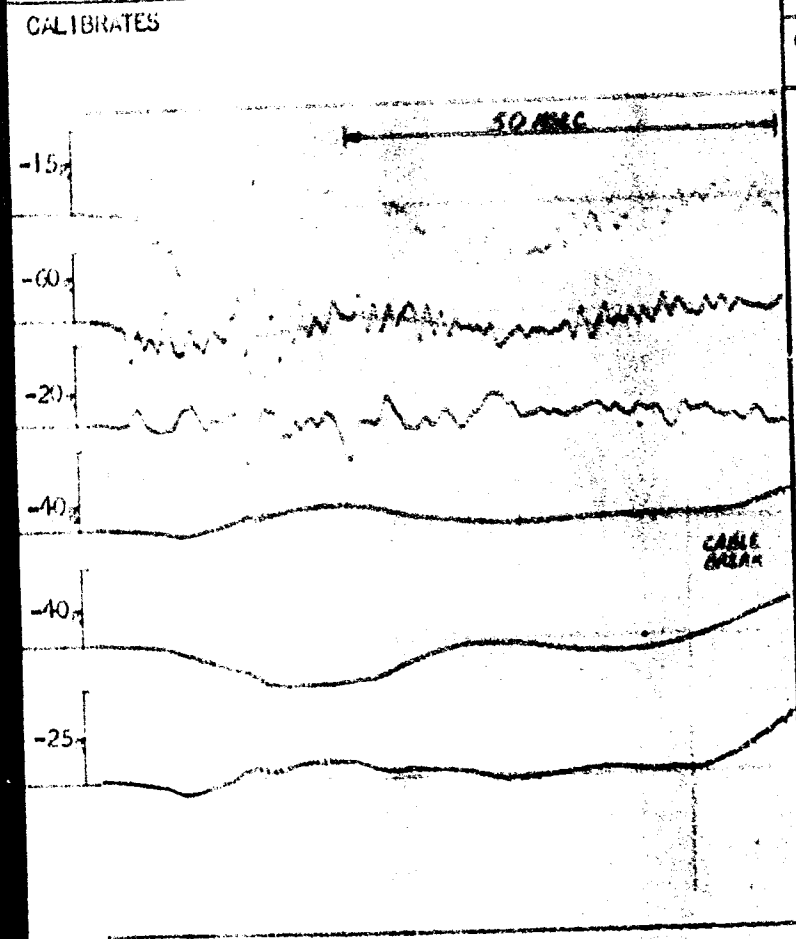
IDENTIFICATION			ACCELERATION DATA					TEST CONDITIONS
GAGE NO.	SENSING DIRECTION	LOCATION	MFP g	MAX +g	MAX -g	RISE MSEC	DURATION MSEC	
A-1	LONG.	H-790	-	4	2	-	-	HARD EARTH TARGET VERT. VELOCITY = [illegible] HORIZ. VELOCITY = [illegible]
A-2	VERT.	"	20	20	0	11	73	WARHEAD LONG. AXIS PARALLEL TO HORIZ. VELOCITY DIRECTION
A-3	HORIZ.	"	-	7	1	-	-	
A-4	LONG.	FWD. CONTAINER LEG	-	19	21	-	-	
A-5	VERT.	"	-	65	44	-	-	
A-6	HORIZ.	"	-	11	9	-	-	

[redacted]

UNCLASSIFIED

UNCLASSIFIED

2015



[redacted]

TABLE VI

T-19238
REF. SYM.

CERTIFICATION DROP NO. 2
SIMULATED PARACHUTE DROP TEST OF THE H-815 AND XW-45 ADM

IDENTIFICATION			ACCELERATION DATA					TEST CONDITIONS
GAGE NO.	SENSING DIRECTION	LOCATION	MFP g	MAX +g	MAX -g	RISE MSEC	DURATION MSEC	
A-7	LONG.	AFT CONTAINER LEG	-	14	11	-	-	HARD EARTH TARGET VERT. VELOCITY = 25 FPS HORIZ. VELOCITY = 22 FPS WARHEAD LONG. AXIS PARALLEL TO HORIZ. VELOCITY DIRECTION
A-8	VERT.	"	21	52	24	-	-	
A-9	HORIZ.	"	-	11	5	-	-	
C-1	LONG.	AFT WARHEAD	-9	3	10	8	30	
C-2	VERT.	"	21	21	0	12	36	
C-3	HORIZ.	"	-	4	4	-	-	

[redacted]

UNCLASSIFIED

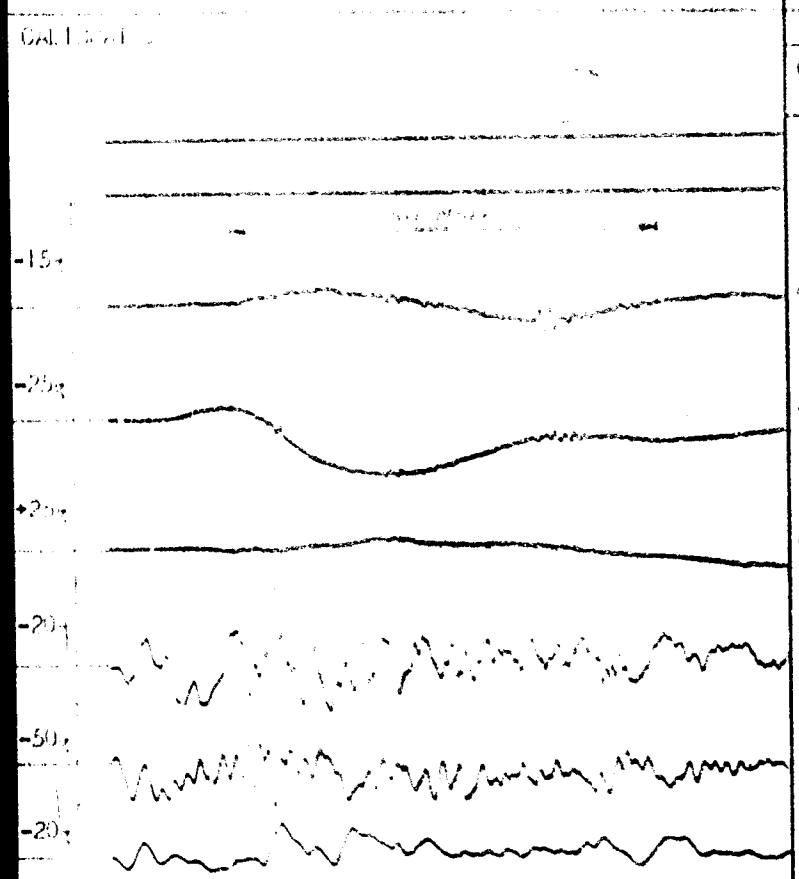
UNCLASSIFIED

[redacted]

TABLE VII

T-1[illegible]
REF. SYM.

CERTIFICATION DROP NO. 3
SIMULATED PARACHUTE DROP TEST OF THE W-815 AND XM-45 ADM



IDENTIFICATION			ACCELERATION DATA					TEST CONDITIONS
GAGE NO.	SENSING DIRECTION	LOCATION	MFP g	MAX +g	MAX -g	RISE MSEC	DURATION MSEC	
A-1	LONG.	W-700	-	4	2	-	-	HARD EARTH TARGET VERT. VELOCITY = [illegible] HORIZ. VELOCITY = [illegible]
A-2	VERT.	"	20	20	4	8	117	WARHEAD LONG. AXIS NORMAL TO HORIZ. VELOCITY DIRECTION
A-3	HORIZ.	"	-	4	8	-	-	
A-4	LONG.	FWD. CONTAINER LEG	-	10	17	-	-	
A-5	VERT.	"	-	34	17	-	-	
A-6	HORIZ.	"	-	5	12	-	-	

[redacted]

UNCLASSIFIED

UNCLASSIFIED

2017

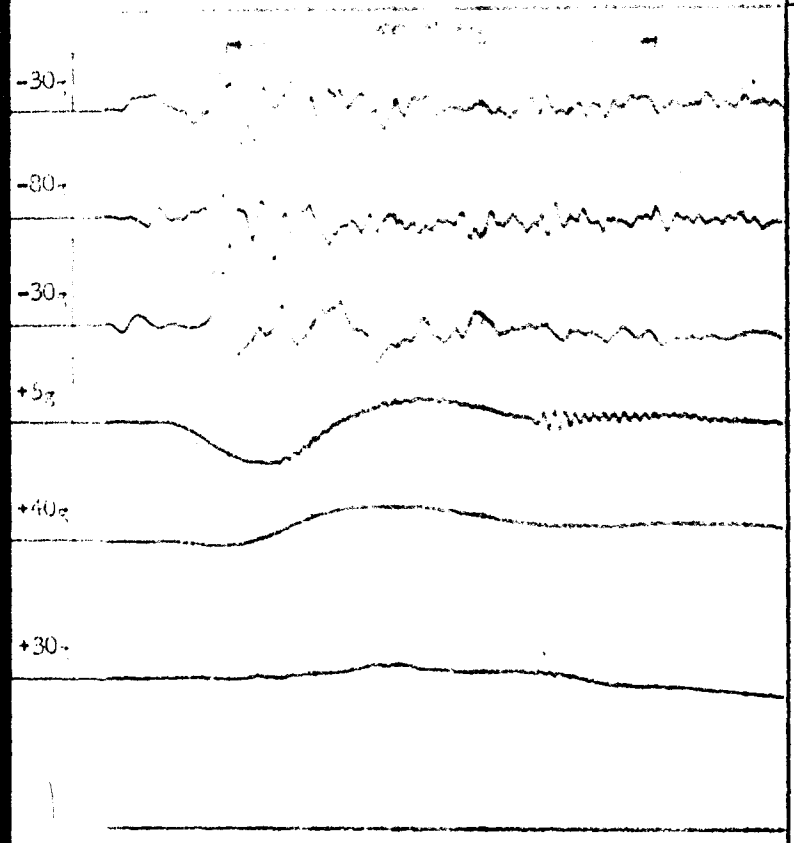
[redacted]

TABLE VII

T-19238
REF. SYM.

CERTIFICATION DROP NO. 3
SIMULATED PARACHUTE DROP TEST OF THE H-815 AND XM-45 ADM

CALIBRATION



IDENTIFICATION			ACCELERATION DATA					TEST CONDITIONS
GAGE NO.	SENSING DIRECTION	LOCATION	MFP g	MAX +g	MAX -g	RISE MSEC	DURATION MSEC	
A-7	LONG.	AFT CONTAINER LEG	-	17	19	-	-	HARD EARTH TARGET VERT. VELOCITY [illegible] HORIZ. VELOCITY [illegible] WARHEAD LONG. [illegible] NORMAL TO HORIZ. VELOCITY DIRECTION
A-8	VERT.	"	-	70	24	-	-	
A-9	HORIZ.	"	-	14	17	-	-	
A-10	LONG.	AFT WARHEAD	-	2	3	-	-	
A-11	VERT.	"	17	17	4	8	11[illegible]	
A-12	HORIZ.	"	5	5	7	10	39	

[redacted]

UNCLASSIFIED

UNCLASSIFIED

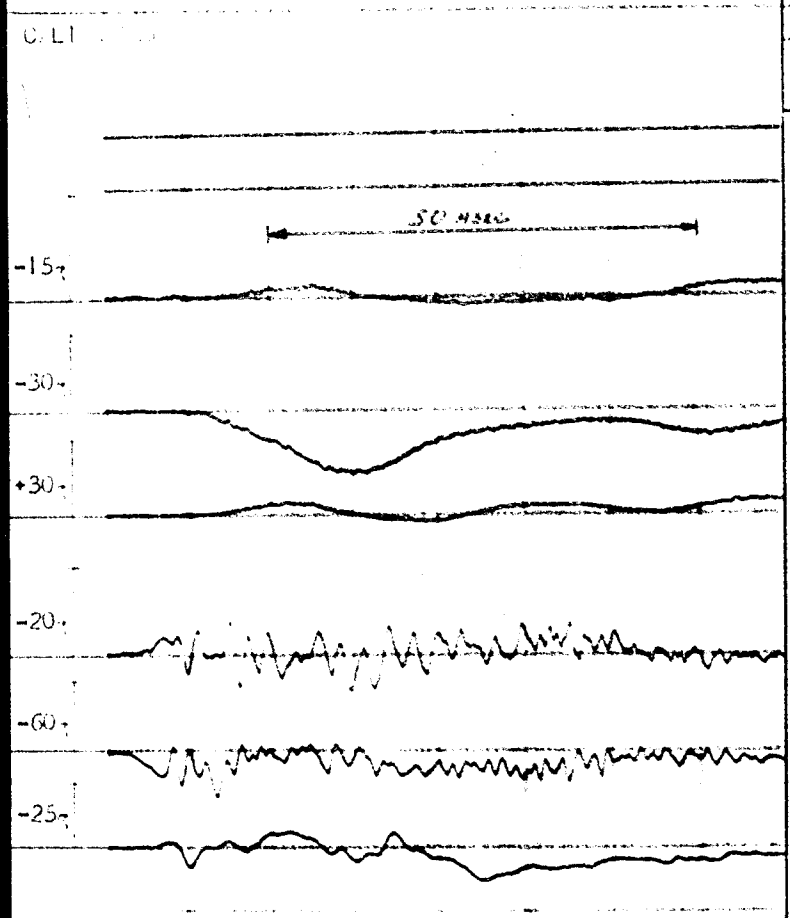
2018

[redacted]

TABLE VIII

T-19230
REF. SYM.

CERTIFICATION DROP NO. 4
SIMULATED PARACHUTE DROP TEST OF THE H-815 AND XW-45 ADM



IDENTIFICATION			ACCELERATION DATA					TEST CONDITIONS
GAGE NO.	SENSING DIRECTION	LOCATION	MFP g	MAX +g	MAX -g	RISE MSEC	DURATION MSEC	
A-1	LONG.	H-790	-	1	2	-	-	LOOSE SAND TARGET VERT. VELOCITY [illegible] HORIZ. VELOCITY [illegible] WARHEAD LONG. AXIS NORMAL TO HORIZ. VELOCITY DIRECTION
A-2	VERT.	"	23	23	0	13	72	
A-3	HORIZ.	"	-	5	2	-	-	
A-4	LONG.	FWD. CONTAINER LEG	-	8	7	-	-	
A-5	VERT.	"	-	38	5	-	-	
A-6	HORIZ.	"	-	13	5	-	-	

[redacted]

UNCLASSIFIED

UNCLASSIFIED

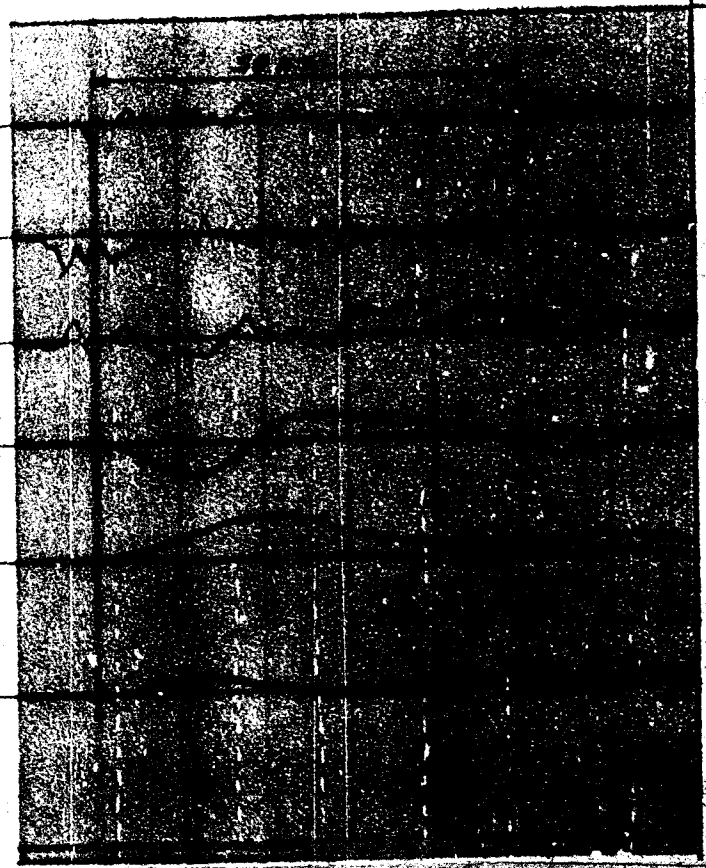
[redacted]

TABLE VIII

T-19238
REF. SYM.

CERTIFICATION DROP NO. 4
SIMULATED PARACHUTE DROP TEST OF THE H-815 AND XW-45 ADM

CALIBRATES



IDENTIFICATION			ACCELERATION DATA					TEST CONDITIONS
GAGE NO.	SENSING DIRECTION	LOCATION	MFP g	MAX +g	MAX -g	RISE MSEC	DURATION MSEC	
A-7	LONG.	AFT CONTAINER LEG	-	5	9	-	-	LOOSE SAND TARGET VERT. VELOCITY = [illegible] HORIZ. VELOCITY = [illegible] WARHEAD LONG. AXIS NORMAL TO HORIZ. VELOCITY DIRECTION
A-8	VERT.	"	-	38	17	-	-	
A-9	HORIZ.	"	-11	8	11	7	70	
A-10	LONG.	AFT WARHEAD	-	2	3	-	-	
A-11	VERT.	"	23	23	0	13	71	
A-12	HORIZ.	"	-	5	2	-	-	

[redacted]

UNCLASSIFIED

UNCLASSIFIED

2020

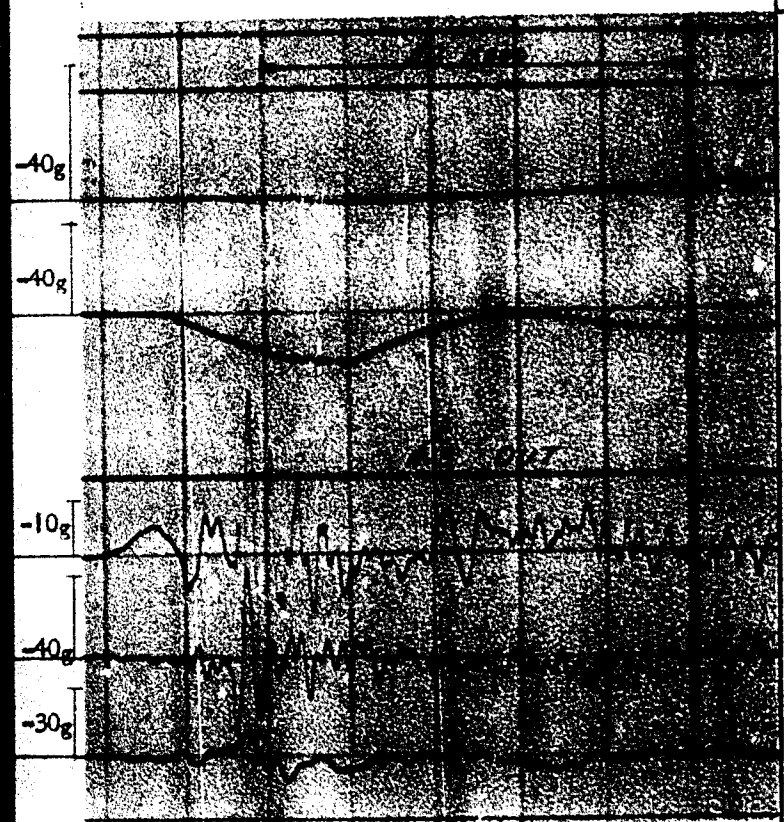
[redacted]

TABLE IX

T-19238
REF. SYM.

CERTIFICATION DROP NO. 5
SIMULATED PARACHUTE DROP TEST OF THE H-815 AND XW-45 ADM

CALIBRATES



IDENTIFICATION			ACCELERATION DATA					TEST CONDITIONS
GAGE NO.	SENSING DIRECTION	LOCATION	MFP g	MAX +g	MAX -g	RISE MSEC	DURATION MSEC	
A-1	LONG.	H-790	-	2	3	-	-	LOOSE SAND TARGET VERT. VELOCITY = 23 FPS HORIZ. VELOCITY = [illegible]
A-2	VERT.	"	21	21	0	13	79	WARHEAD LONG. AXIS PARALLEL TO HORIZ. VELOCITY DIRECTION
A-4	LONG.	FWD. CONTAINER LEG	-	25	29	-	-	
A-5	VERT.	"	-	74	84	-	-	
A-6	HORIZ.	"	-	10	10	-	-	

[redacted]

UNCLASSIFIED

UNCLASSIFIED [redacted]

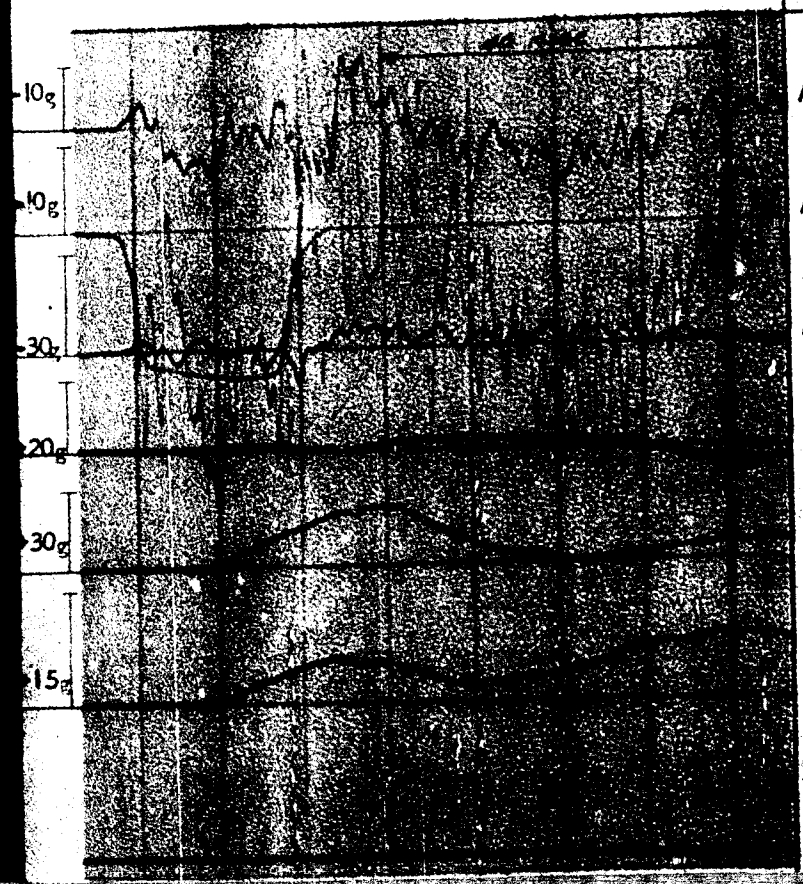
2021

TABLE IX

T-19238
REF.SYM.

CERTIFICATION DROP NO. 5
SIMULATED PARACHUTE DROP TEST OF THE H-815 AND XW-45 ADM

CALIBRATES



IDENTIFICATION			ACCELERATION DATA					TEST CONDITIONS
GAGE NO.	SENSING DIRECTION	LOCATION	MFP g	MAX +g	MAX -g	RISE MSEC	DURATION MSEC	
A-7	LONG.	AFT CONTAINER LEG	-	10	12	-	-	LOOSE SAND TARGET VERT. VELOCITY = [illegible] HORIZ. VELOCITY = [illegible]
A-8	VERT.	"	17	32	16	3	22	WARHEAD LONG. AXIS PARALLEL TO HORIZ. VELOCITY DIRECTION
A-9	HORIZ.	"	-	10	7	-	-	
A-10	LONG.	AFT WARHEAD	3	3	6	6	31	
A-11	VERT.	"	21	21	0	14	77	
A-12	HORIZ.	"	8	8	9	54	80	

[redacted] UNCLASSIFIED