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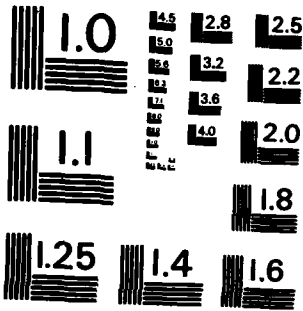
PROCESS PARAMETERS FOR BANDING 155-MM M483A1  
PROJECTILES IN HIGH-CAPACITY..(U) CHAMBERLAIN MFG CORP  
WATERLOO IA RESEARCH AND DEVELOPMENT DIV.. SEP 82  
CB184-PR-072-APP-B ARLCD-CR-82028-APP-B F/9 19/1

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UNCLASSIFIED

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MICROCOPY RESOLUTION TEST CHART  
NATIONAL BUREAU OF STANDARDS-1963-A

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APPENDIX B

ULTRASONIC SCANNING TAPES GENERATED BY CHAMBERLAIN AND AMMRC IN CONNECTION WITH QUASI-PRODUCTION RUN OF INERTIA WELDED ROTATING BANDS ONTO M483A1 PROJECTILES.

AD E400934

①



US ARMY ARMAMENT RESEARCH AND DEVELOPMENT COMMAND  
LARGE CALIBER  
WEAPON SYSTEMS LABORATORY  
DOVER, NEW JERSEY

This document is submitted as a supplement to Contractor Report ARLCD-CR-82028, the Final Technical Report for Contract DAAK10-79-C0083, "Process Parameters for Banding 155-mm, M483A1 Projectiles in High Capacity Inertia Welding Machine."

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September 1982

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PREFACE

The ultrasonic scanning tapes presented in this appendix were generated in connection with a quasi-production run of 261 each M483A1 Projectiles with inertia welded rotating bands. The bands were welded during the period 2 February through 13 March 1961 at Chamberlain's New Bedford Division.

Of the 261 projectiles involved in the quasi-production run, 120 were selected for test firing at Aberdeen Proving Ground. Ultrasonic scans of these 120 projectiles are presented in this appendix in the following quantities:

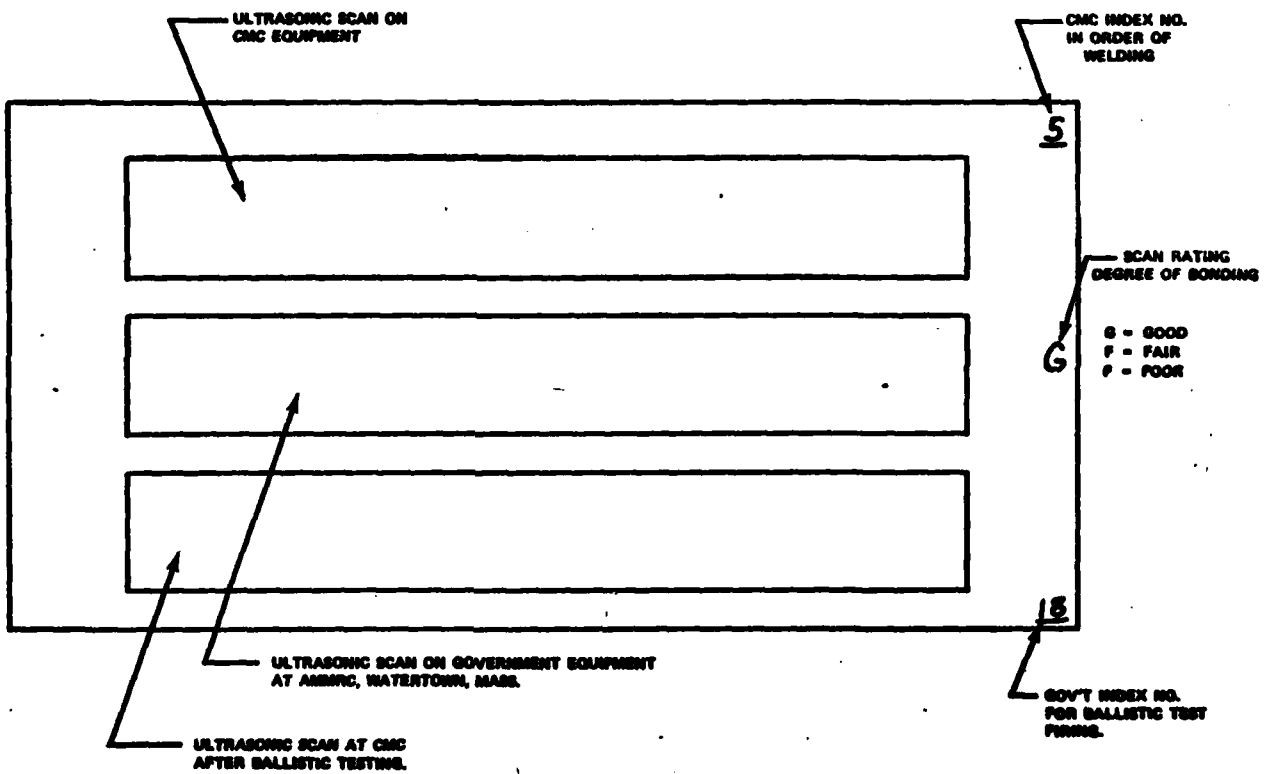
<u>SCANS GENERATED</u>	<u>QUANTITY</u>
On CNC equipment before ballistic testing	120
On ANMEC equipment before ballistic testing	90
On CNC equipment after ballistic testing	15

A legend explaining how the scanning tapes are to be identified appears on the next page.

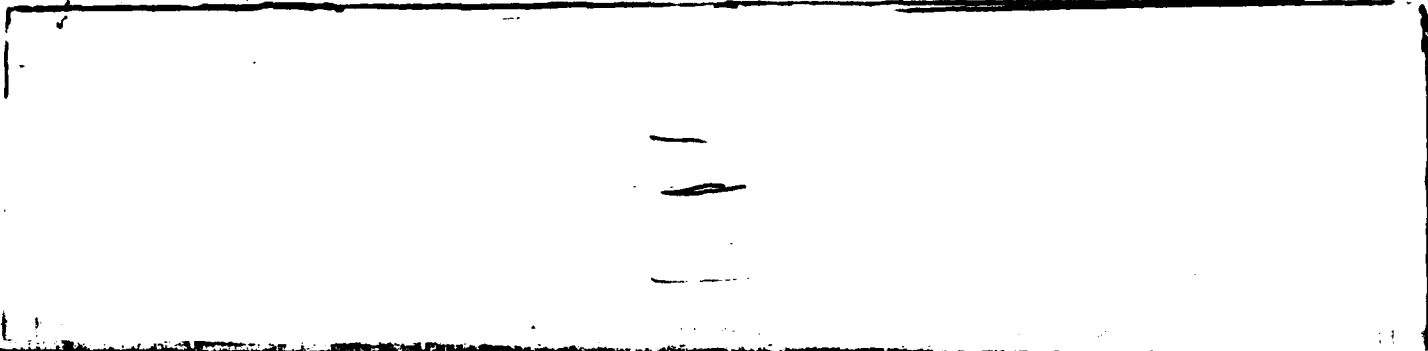
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**LEGEND.**



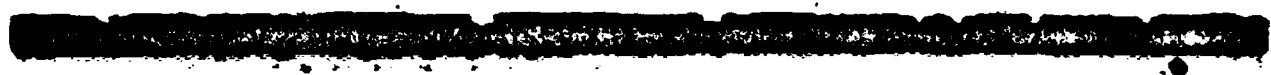




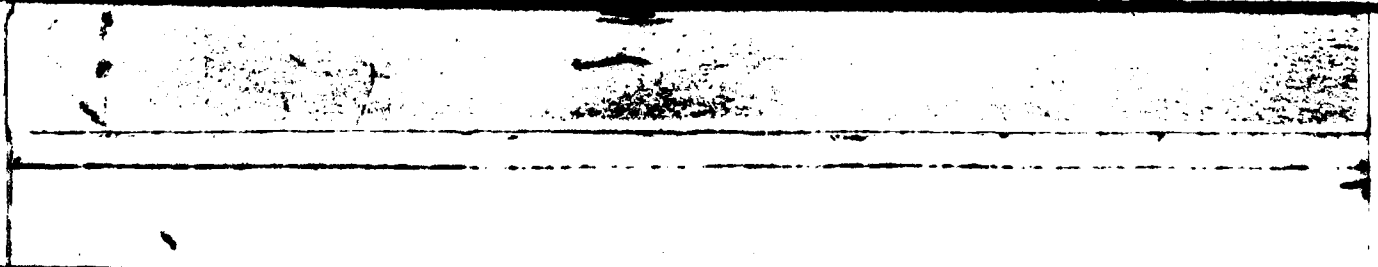
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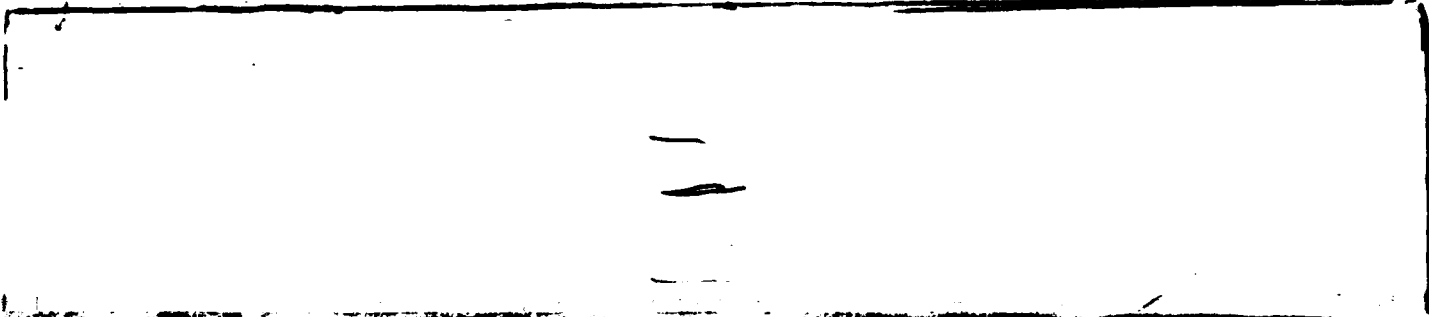
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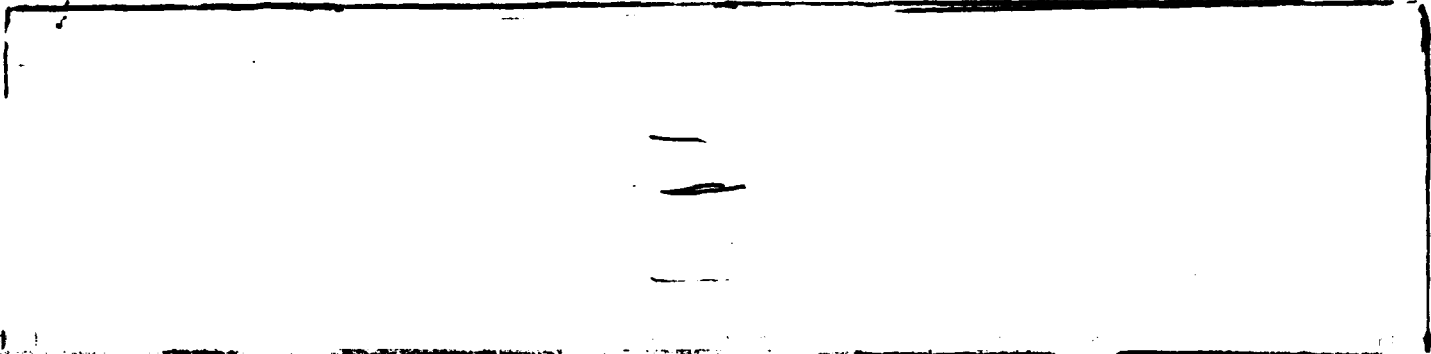
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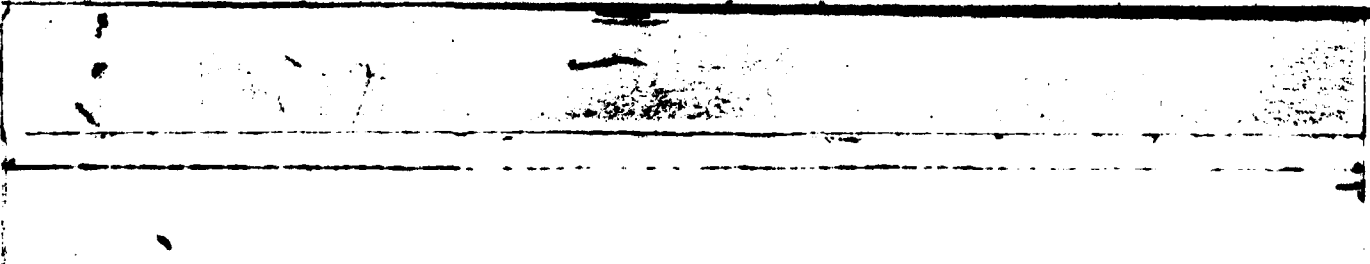
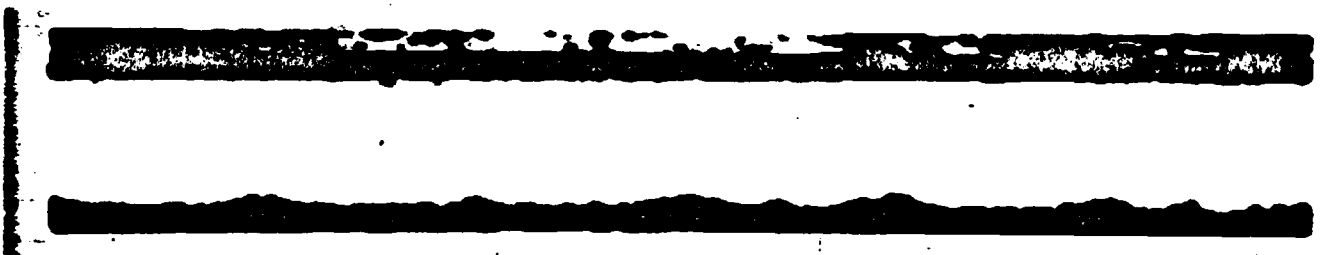
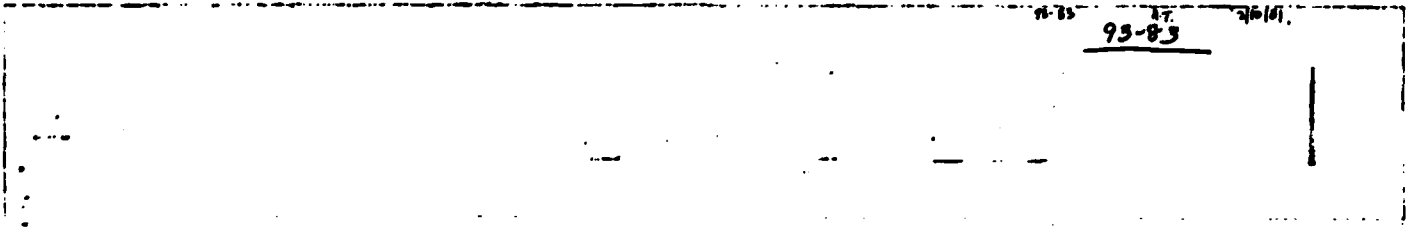


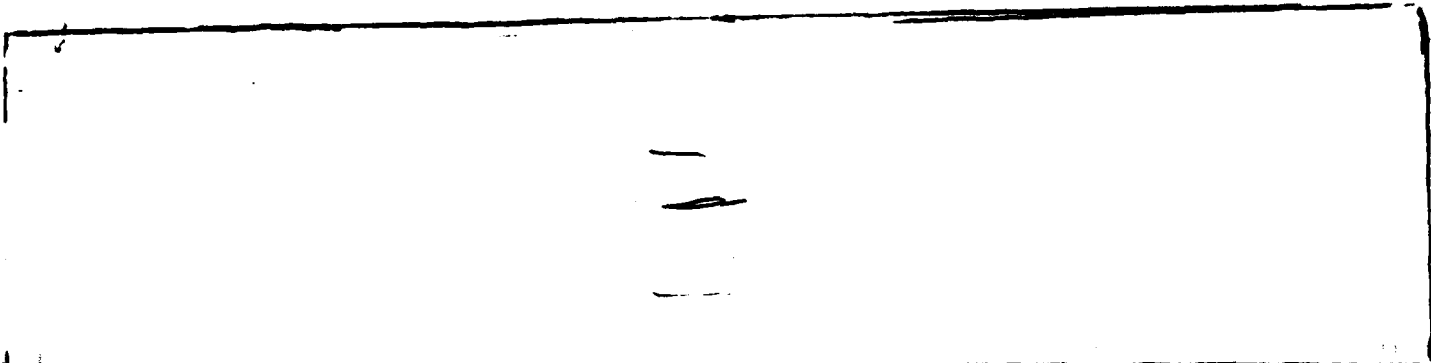
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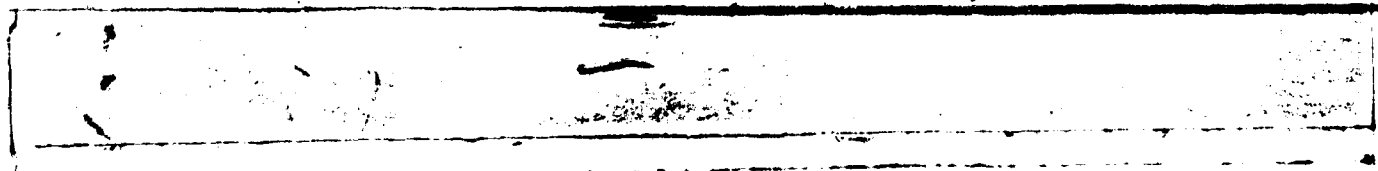


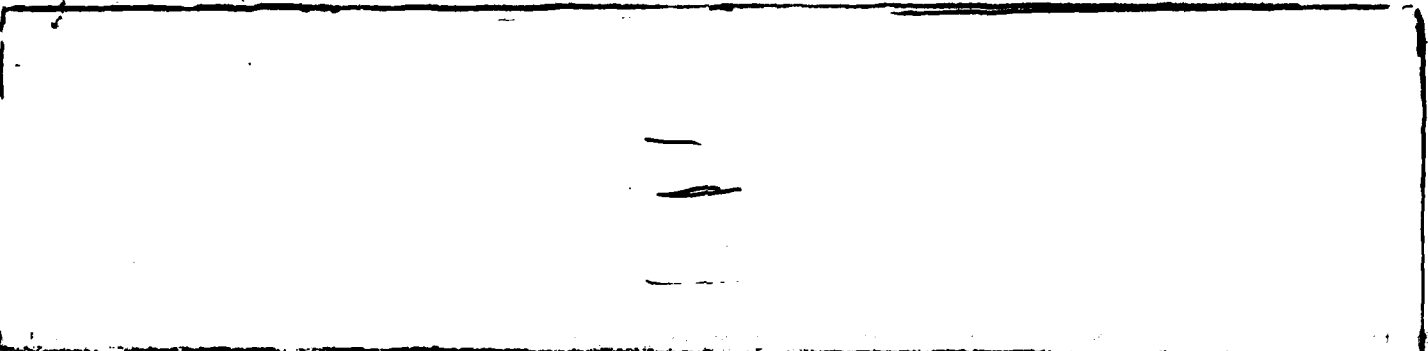
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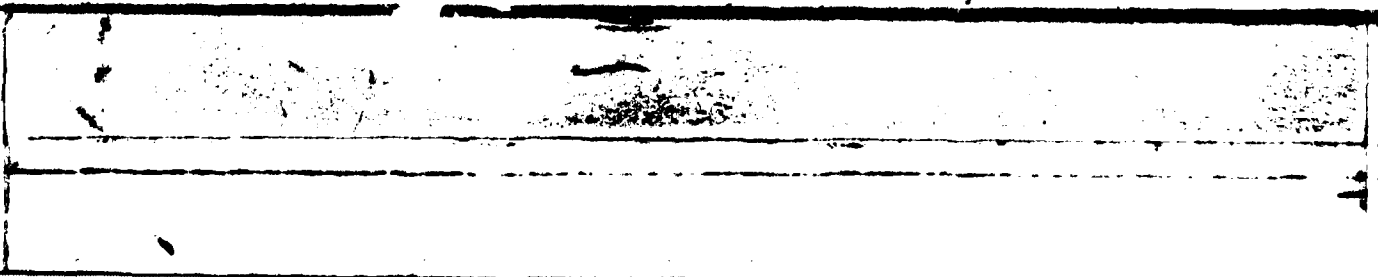
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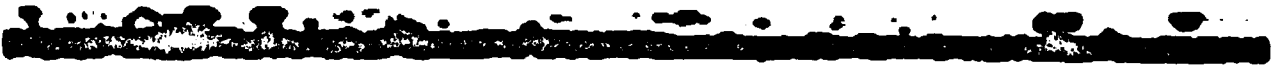






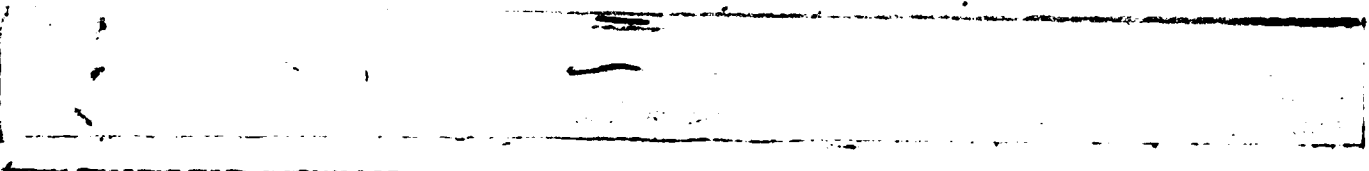
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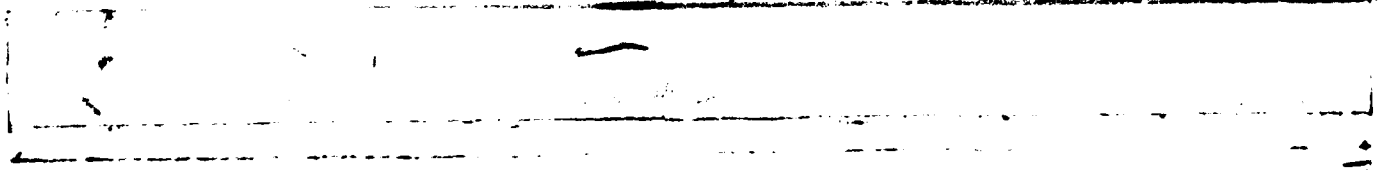
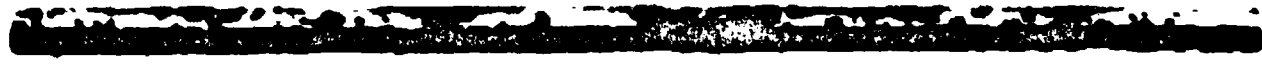
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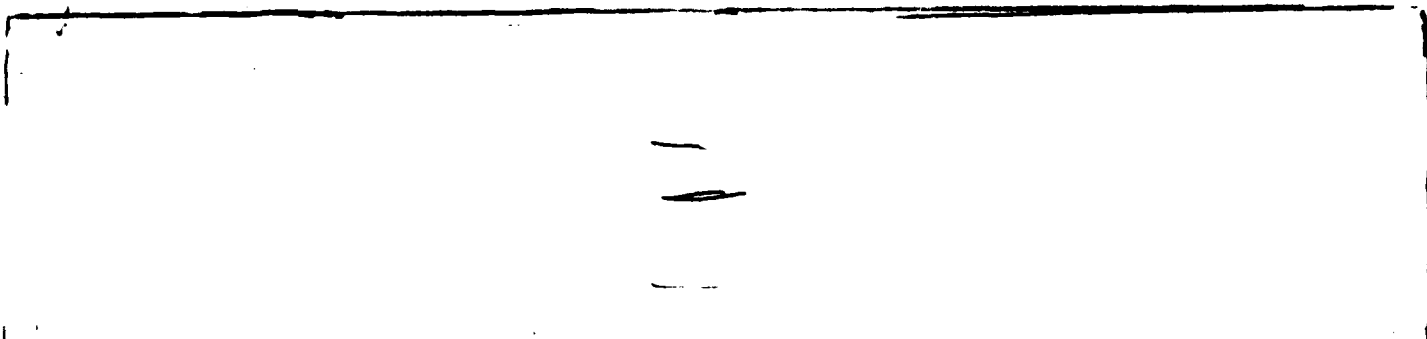




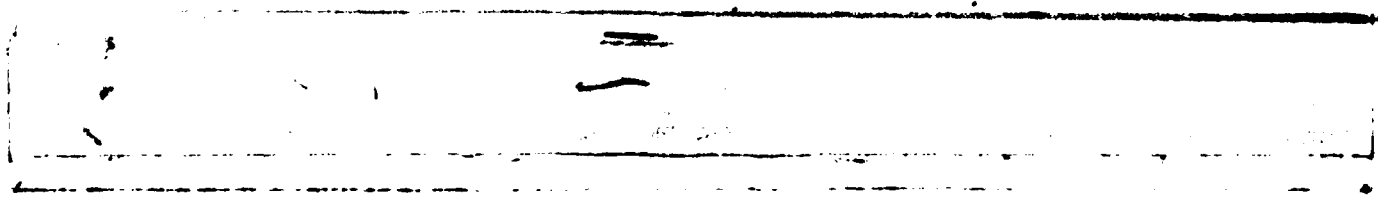
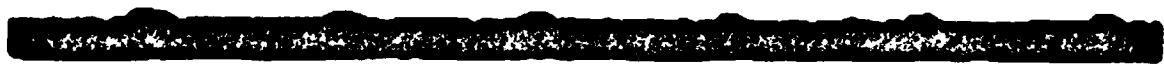
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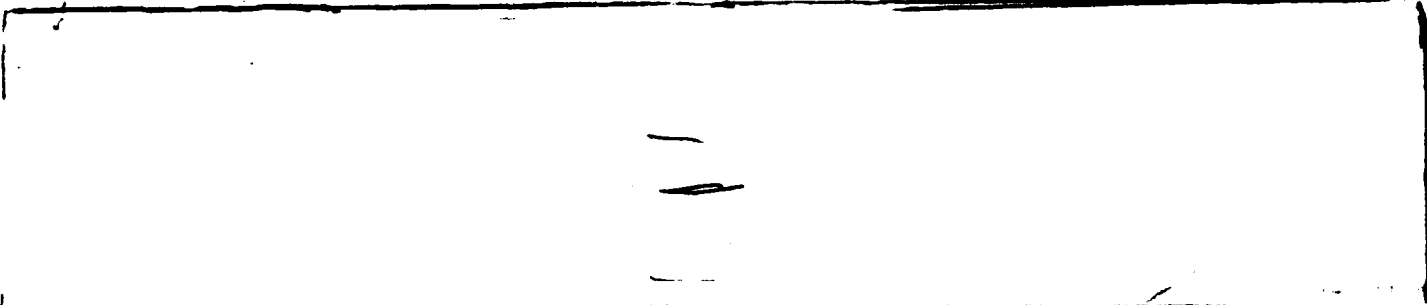
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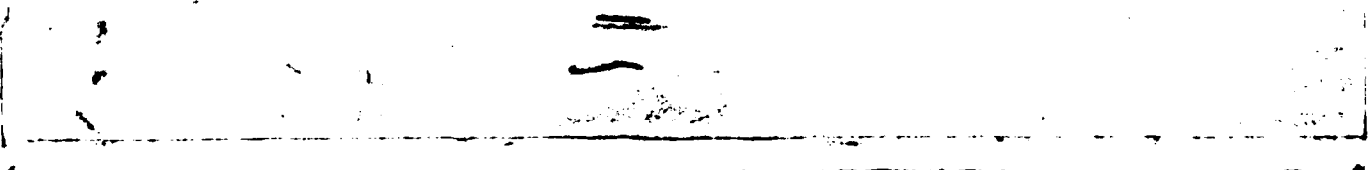


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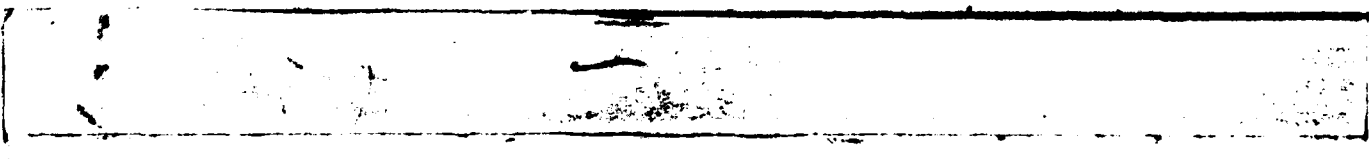
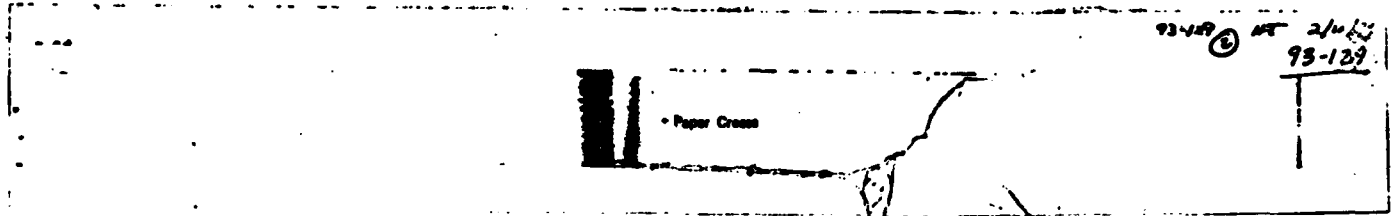


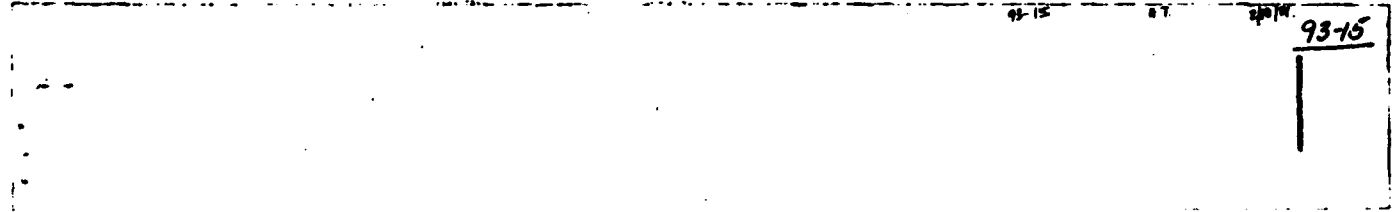
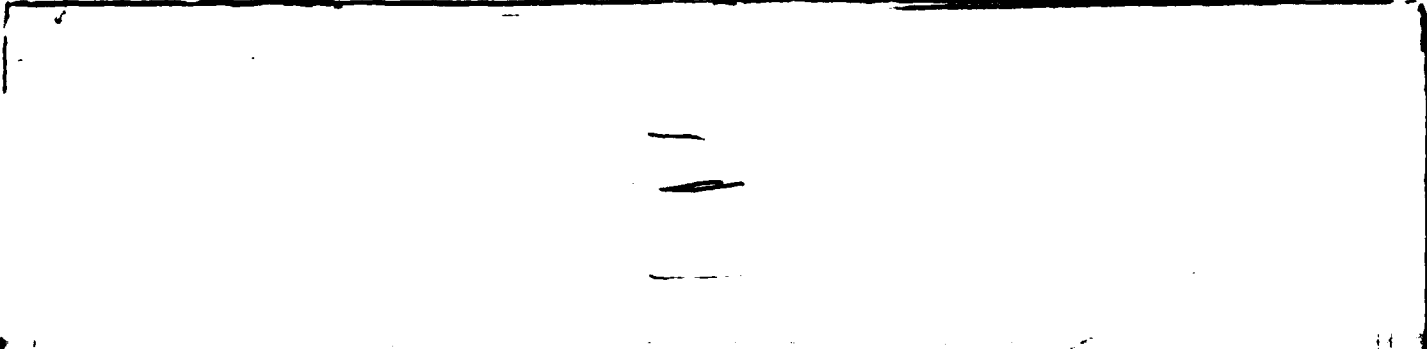


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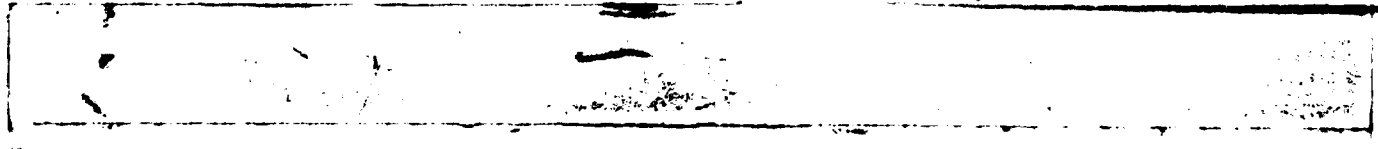


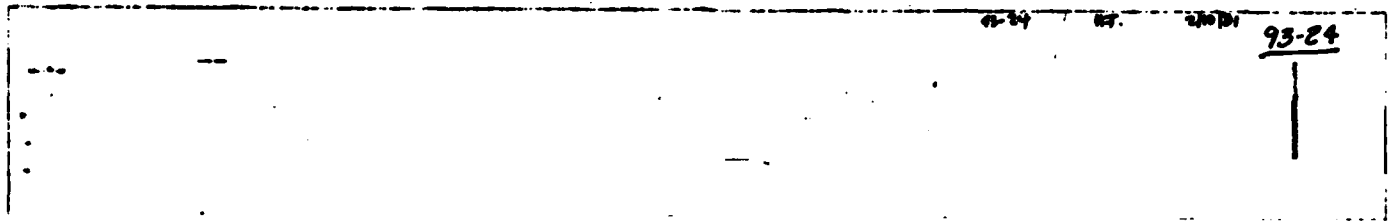
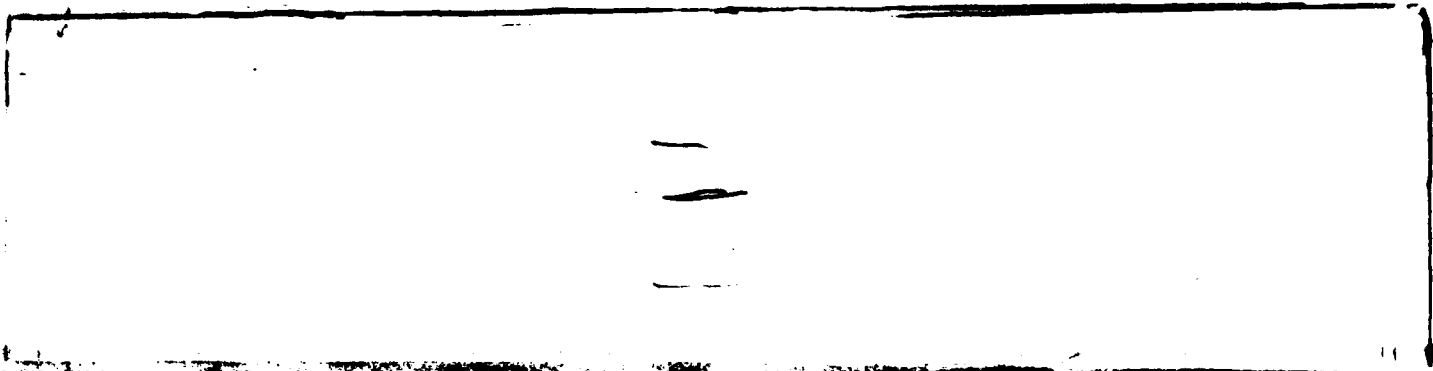




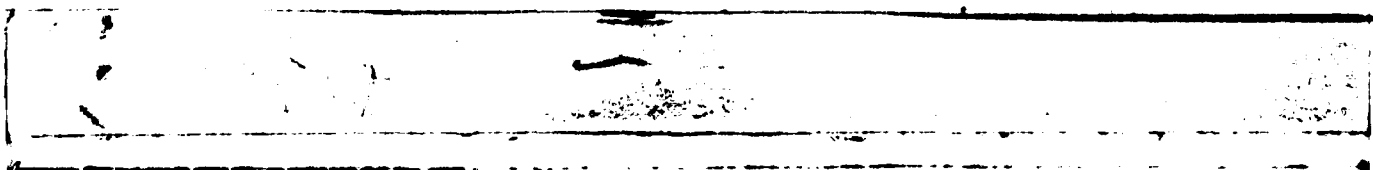


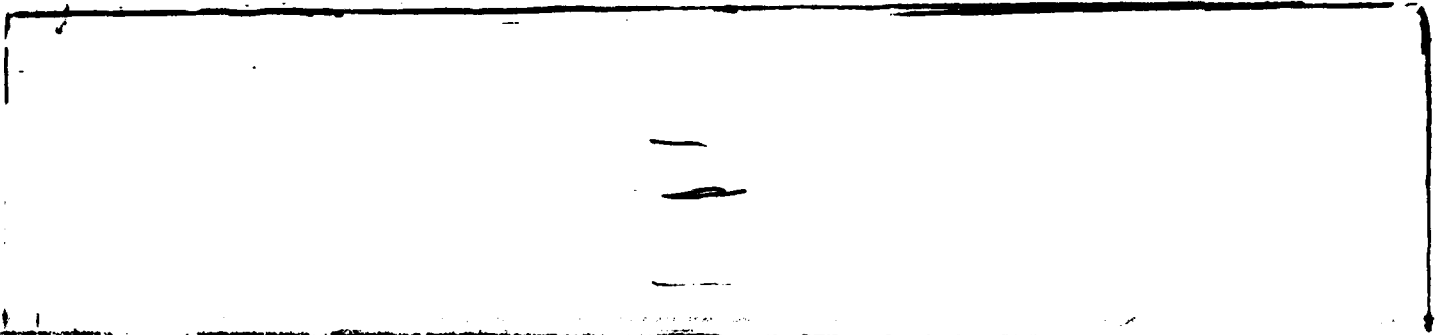
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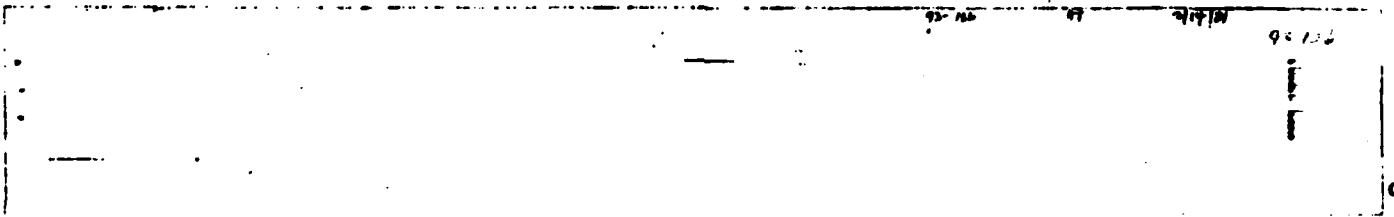


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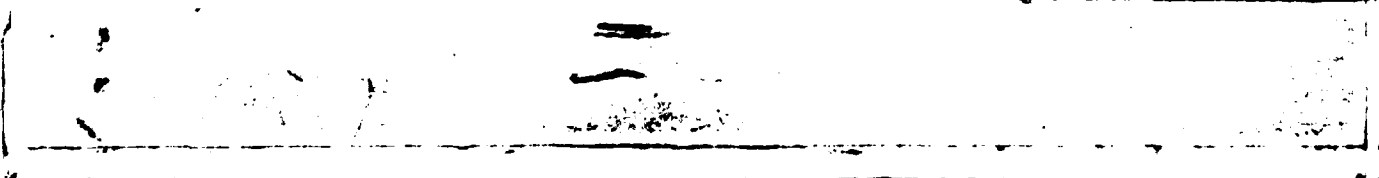


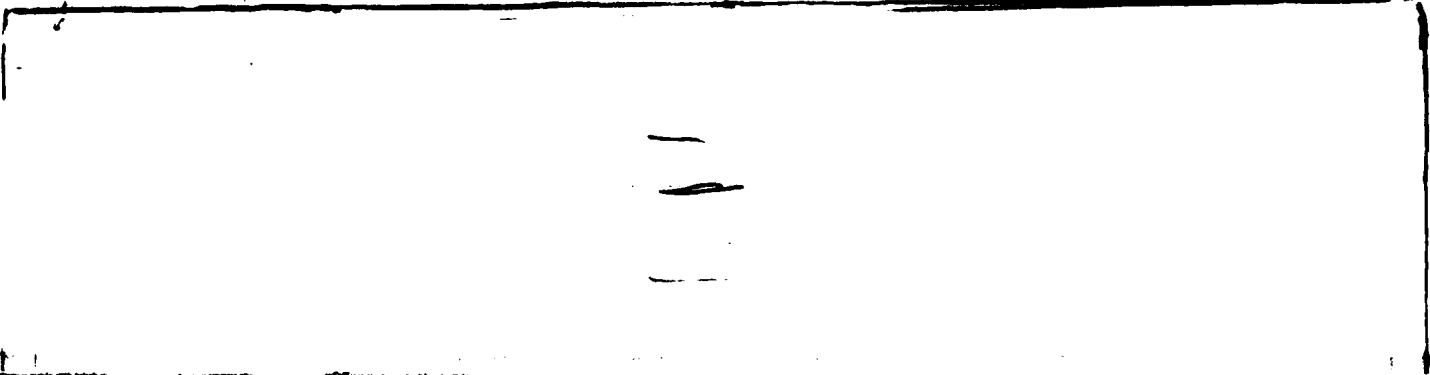


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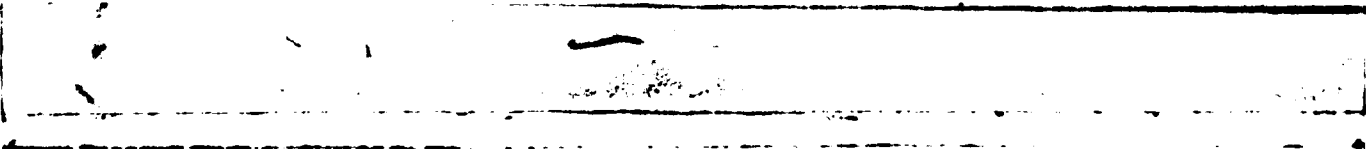


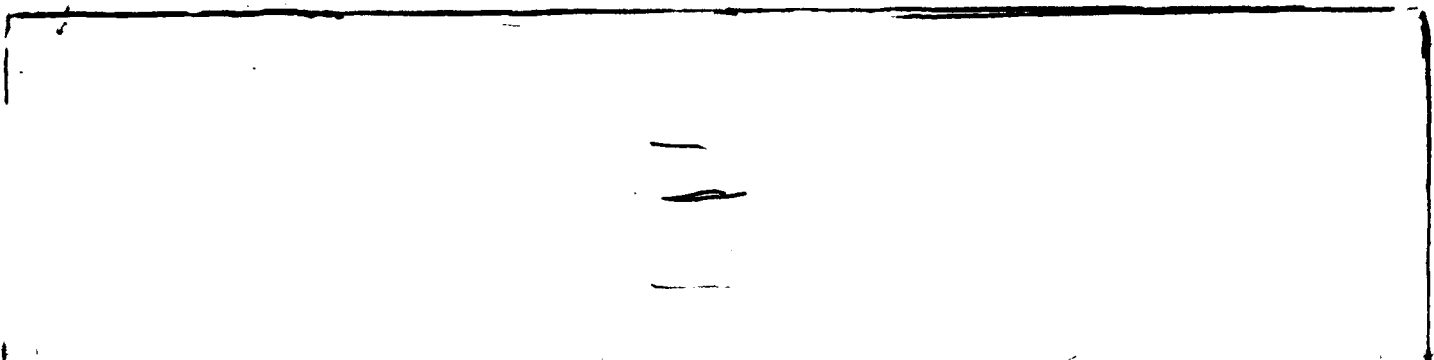
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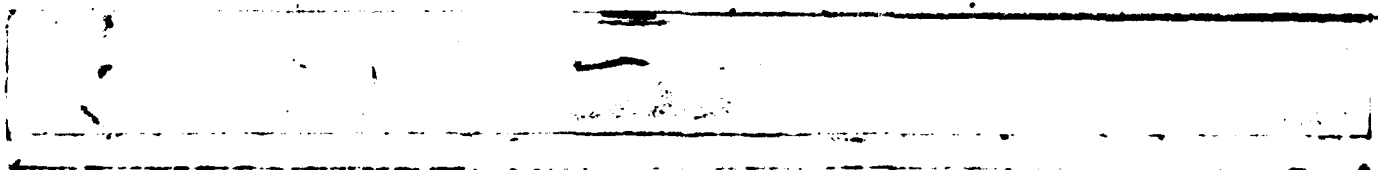
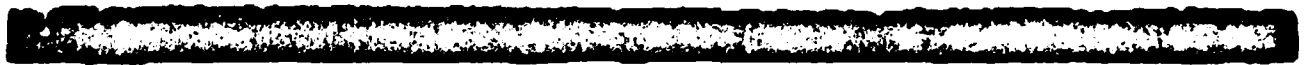


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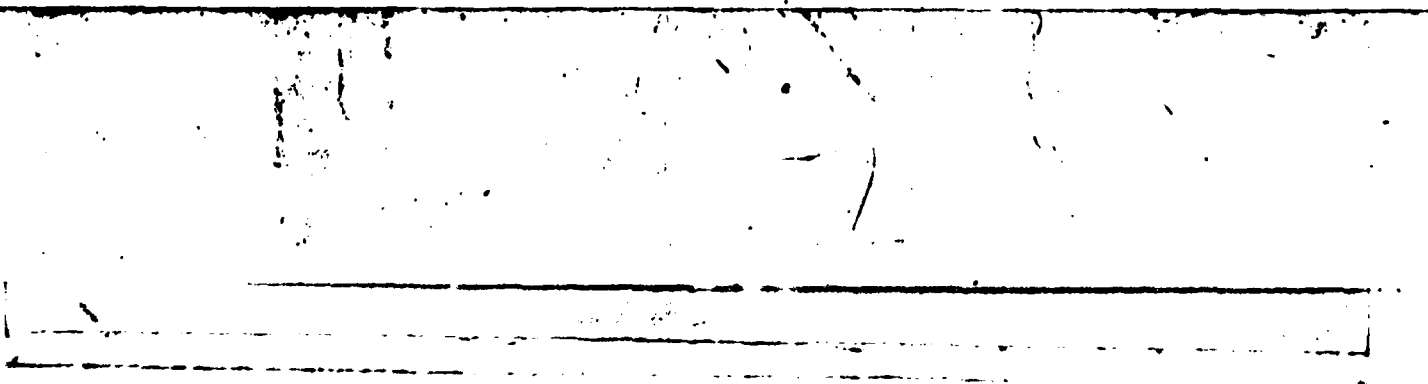
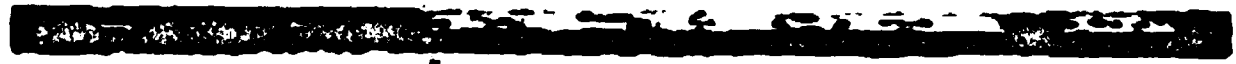
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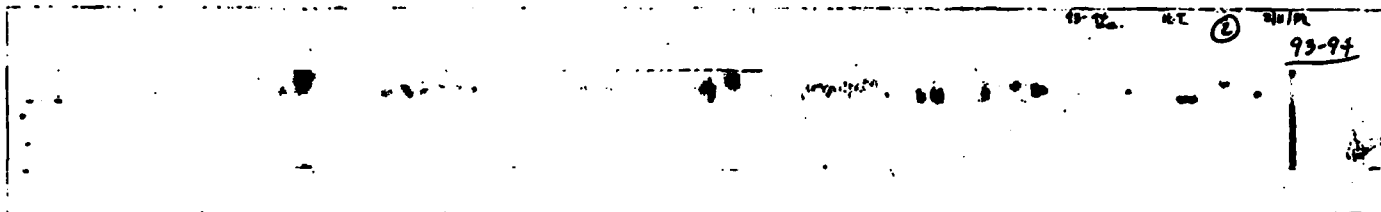
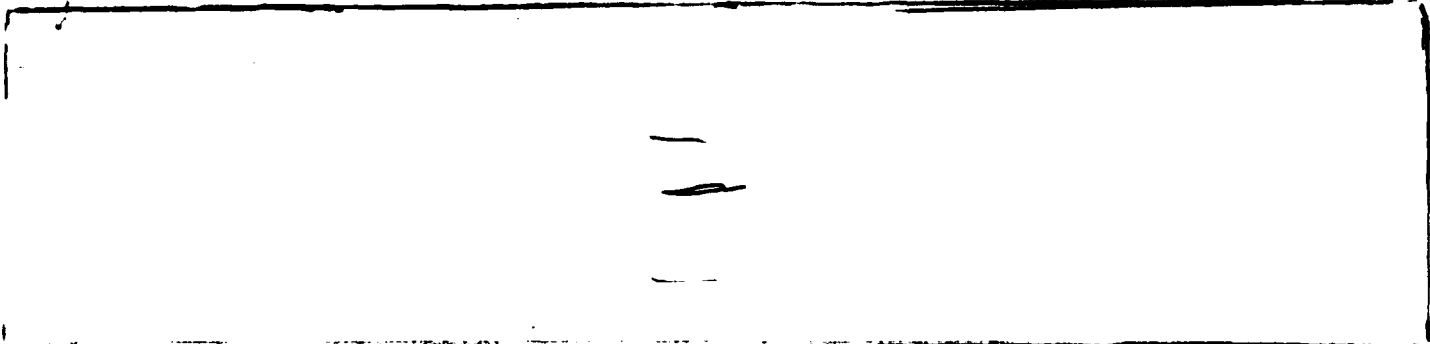




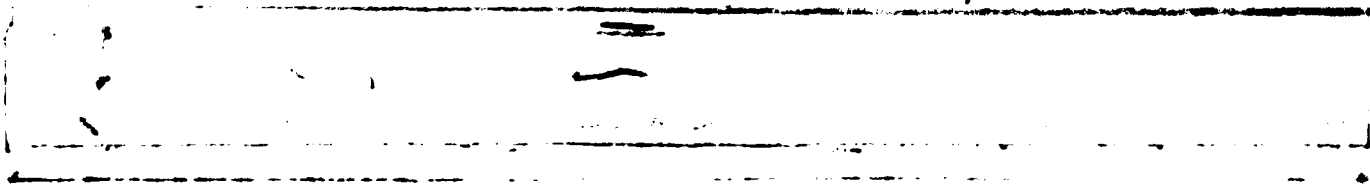
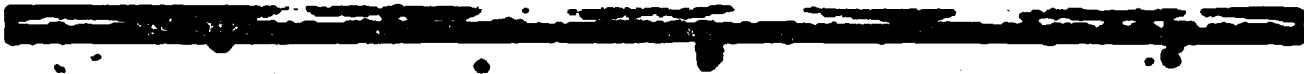
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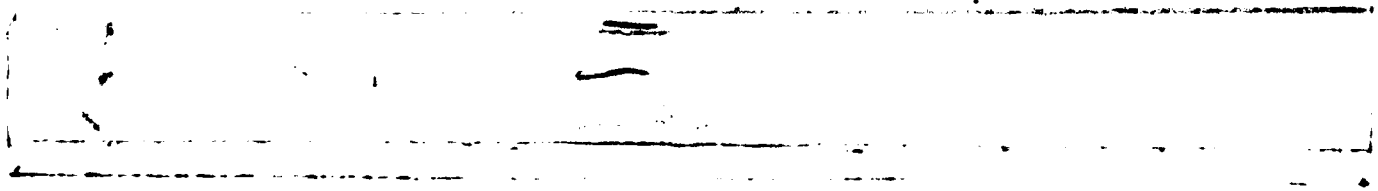


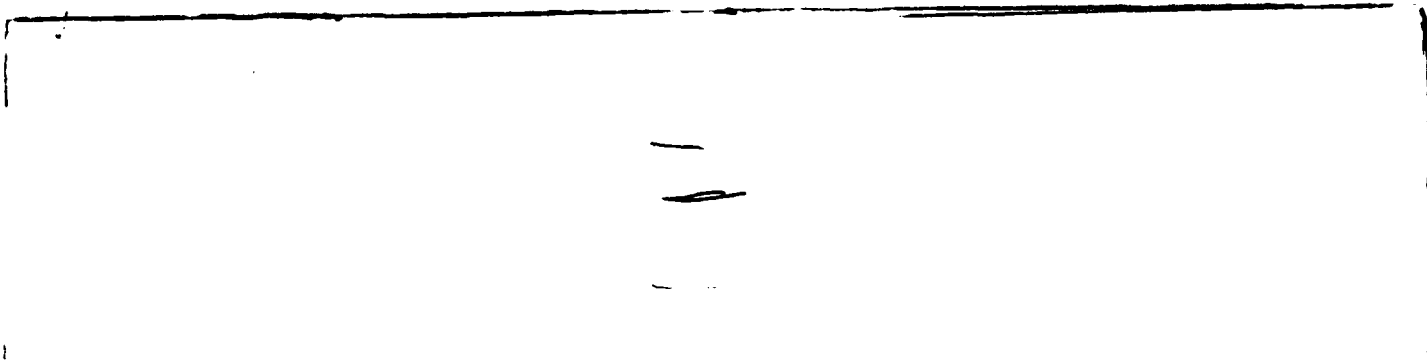
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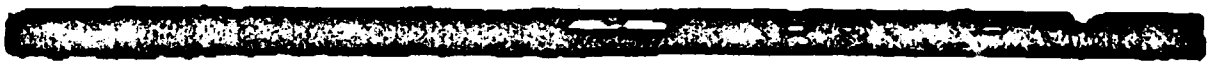
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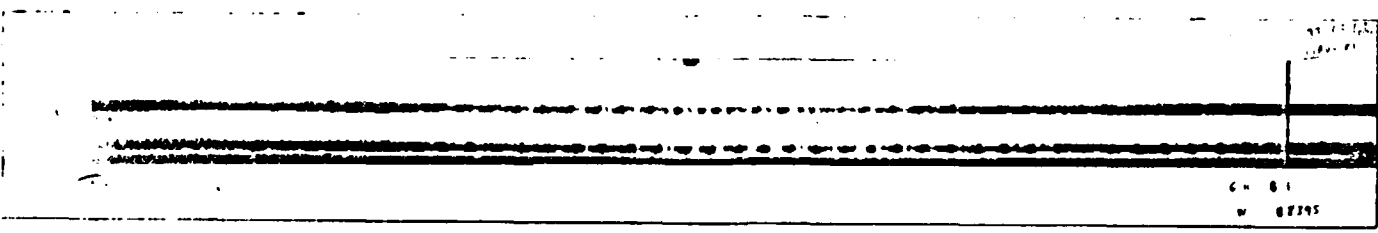


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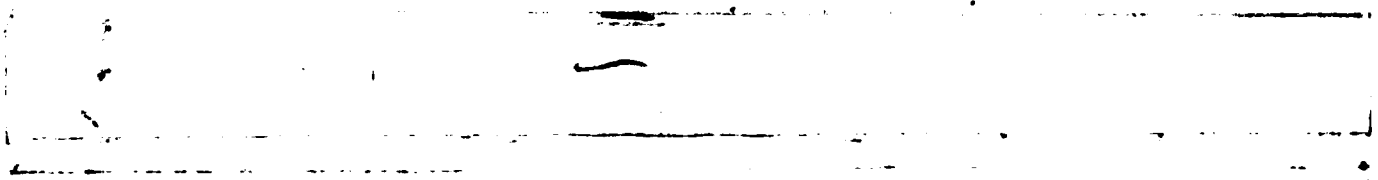


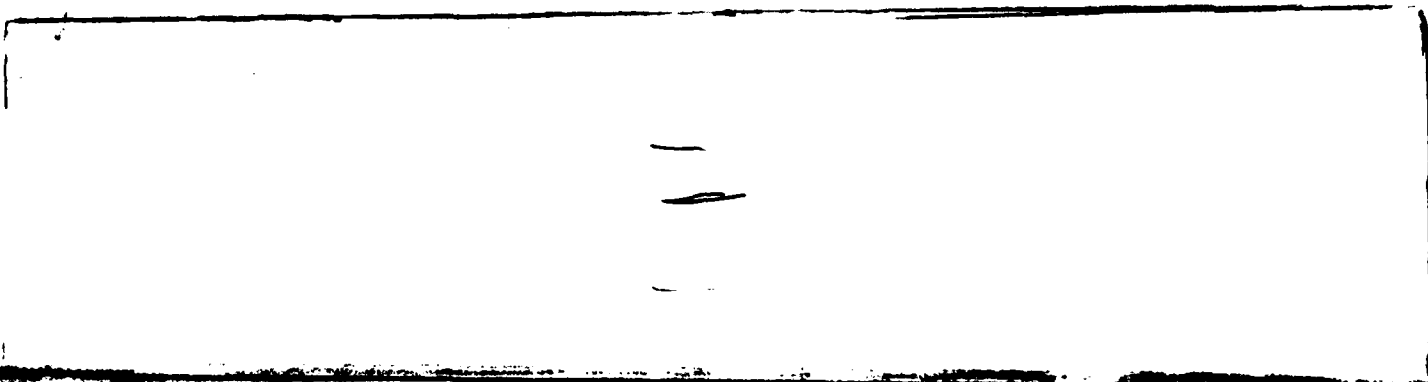
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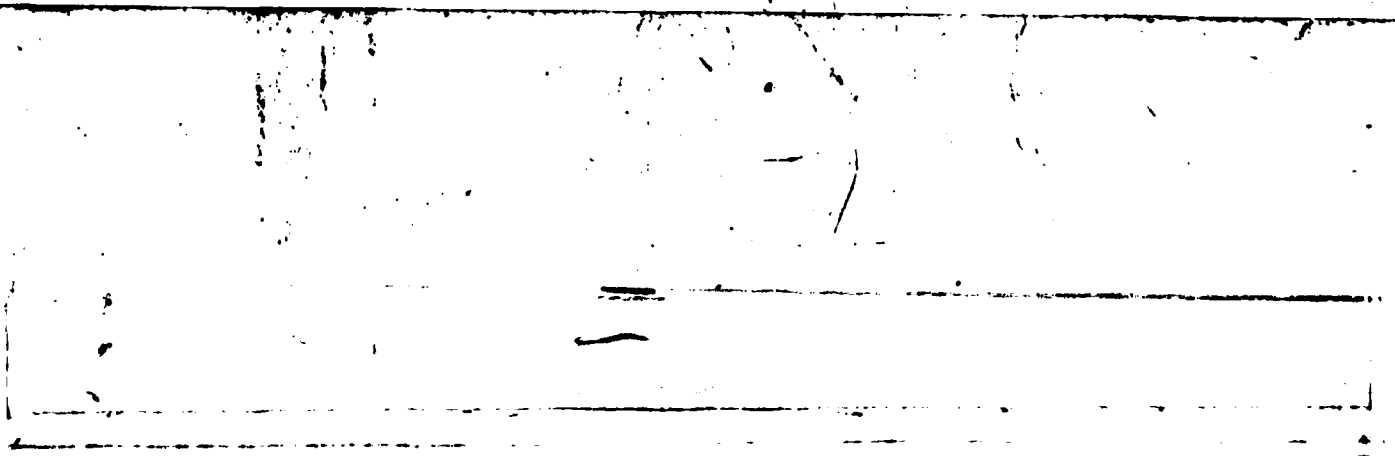
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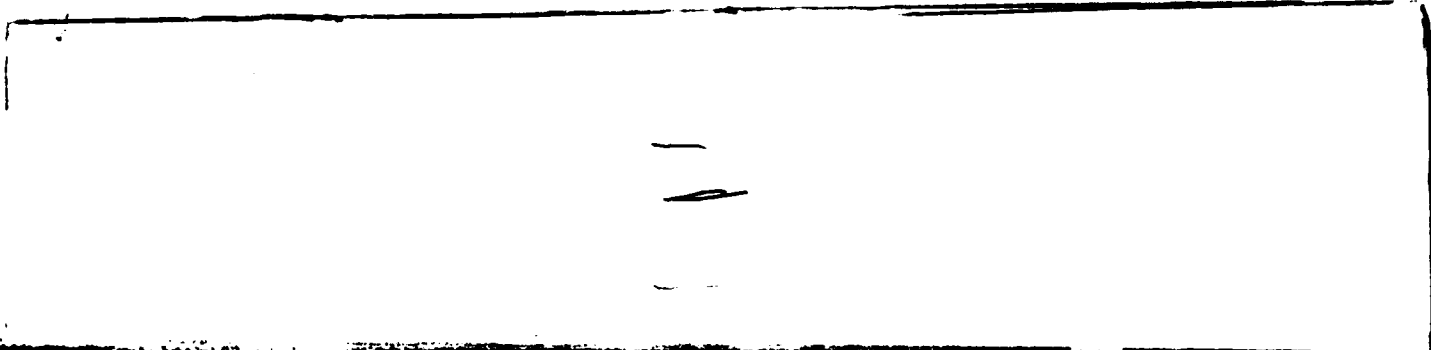
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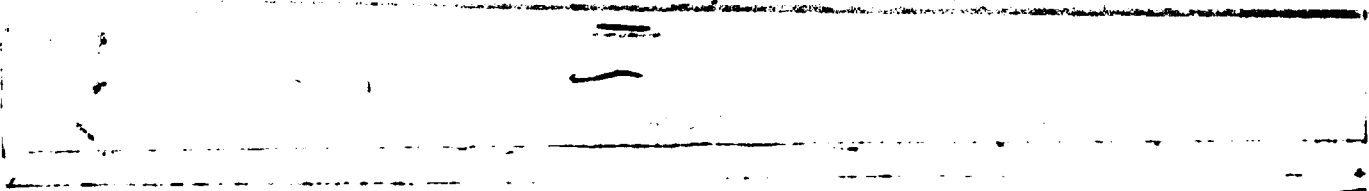
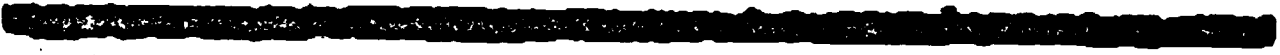
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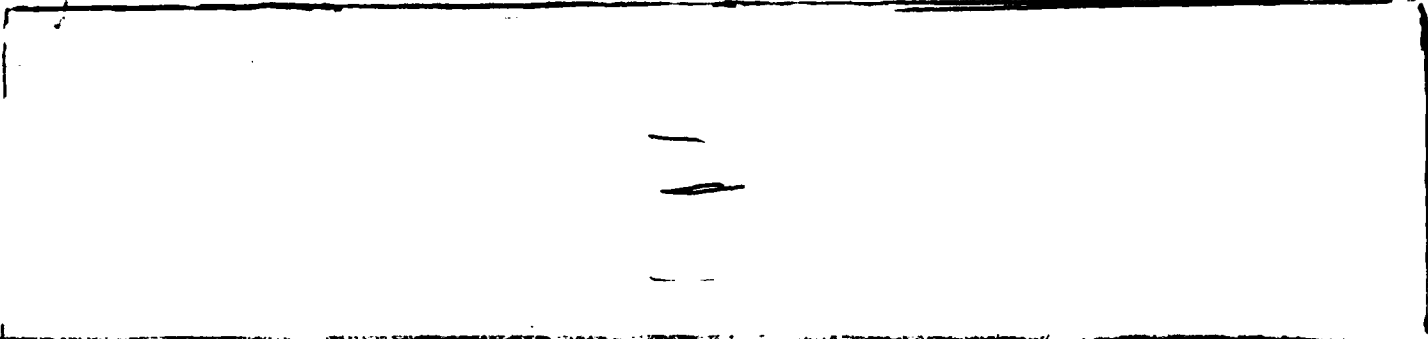
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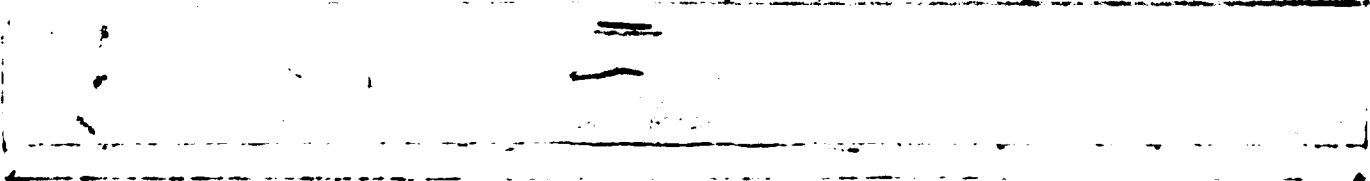




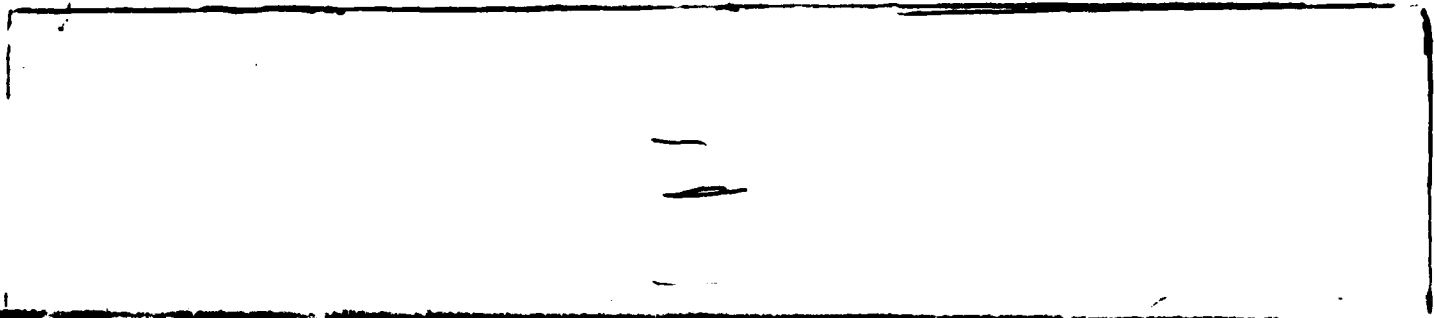


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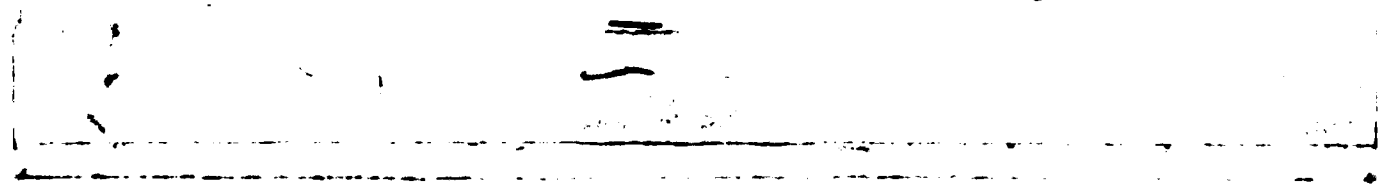
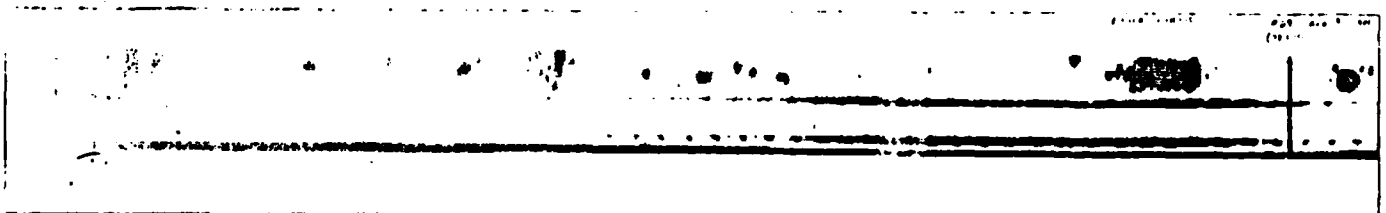
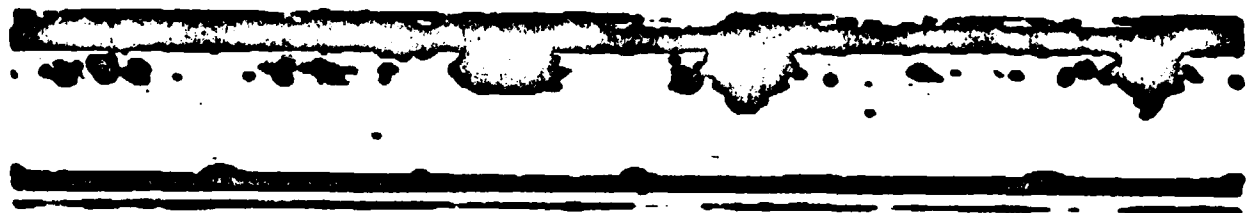
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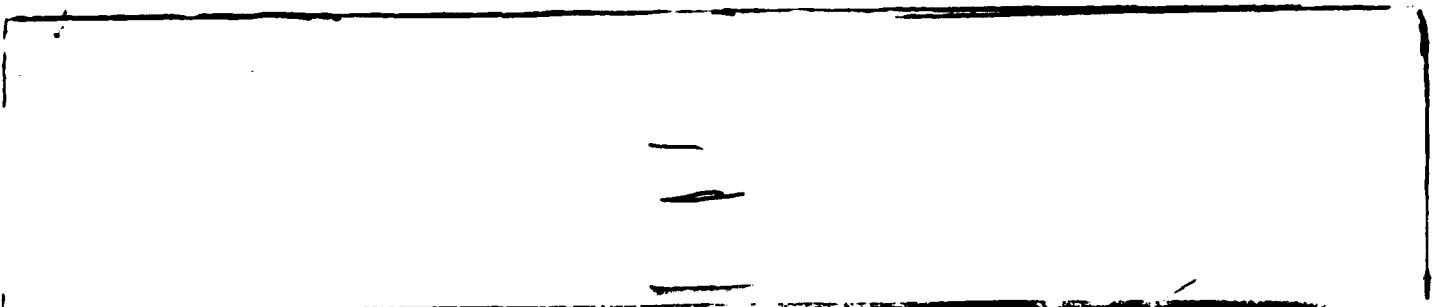






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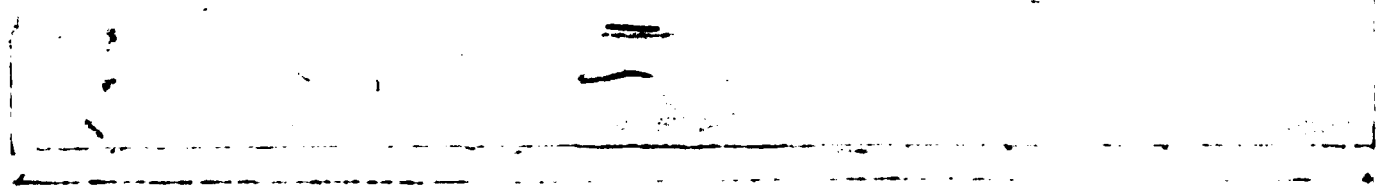


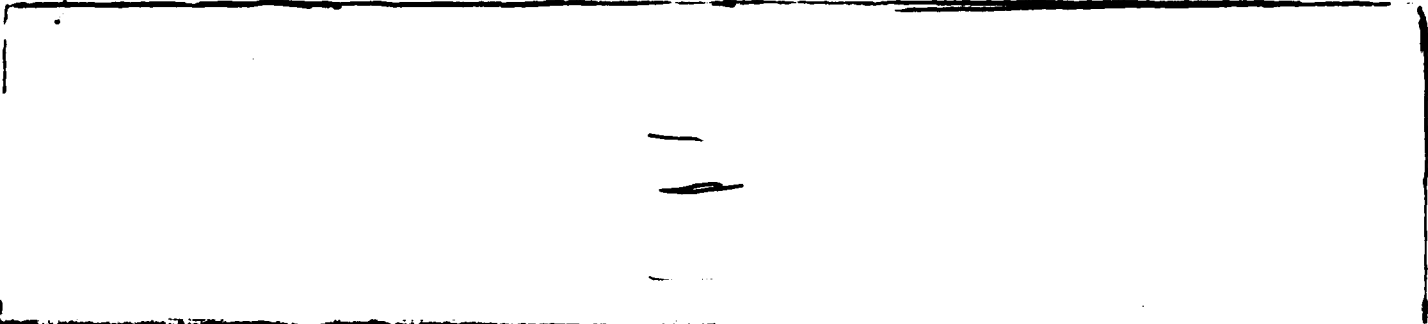


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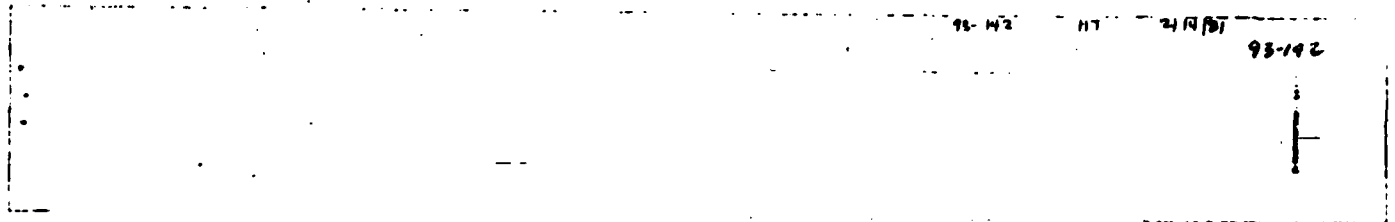
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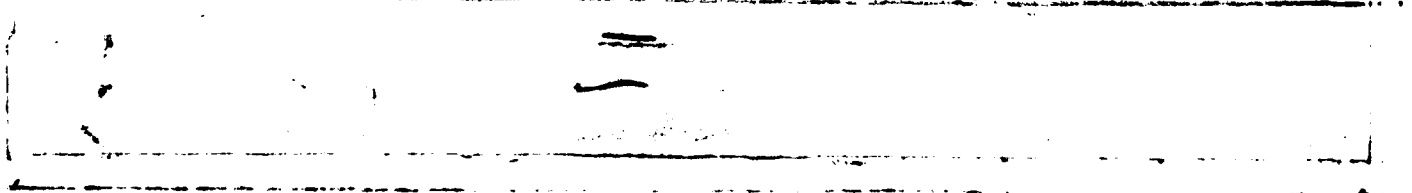
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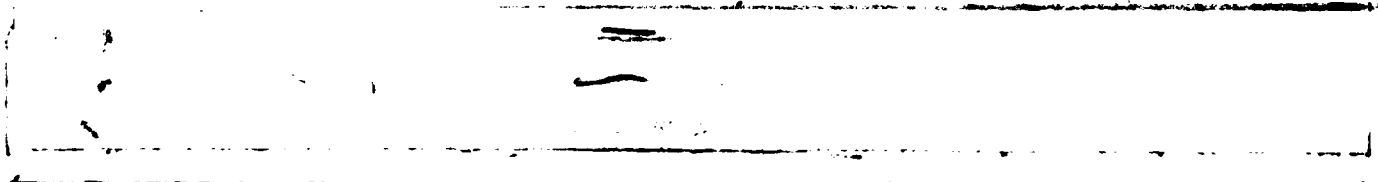


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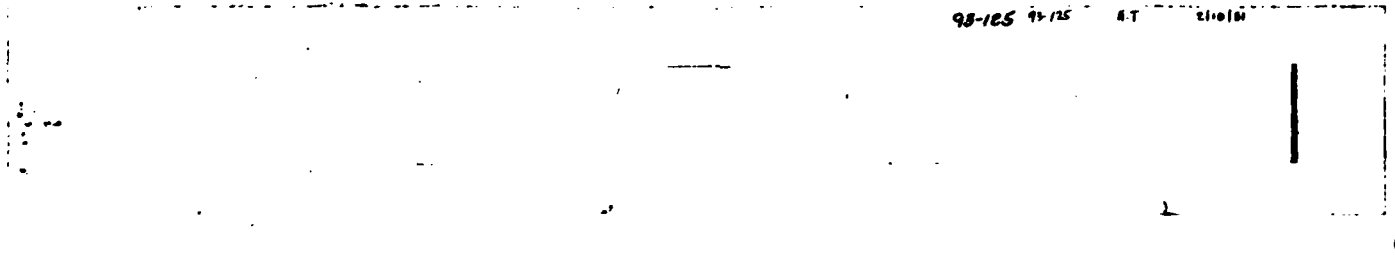
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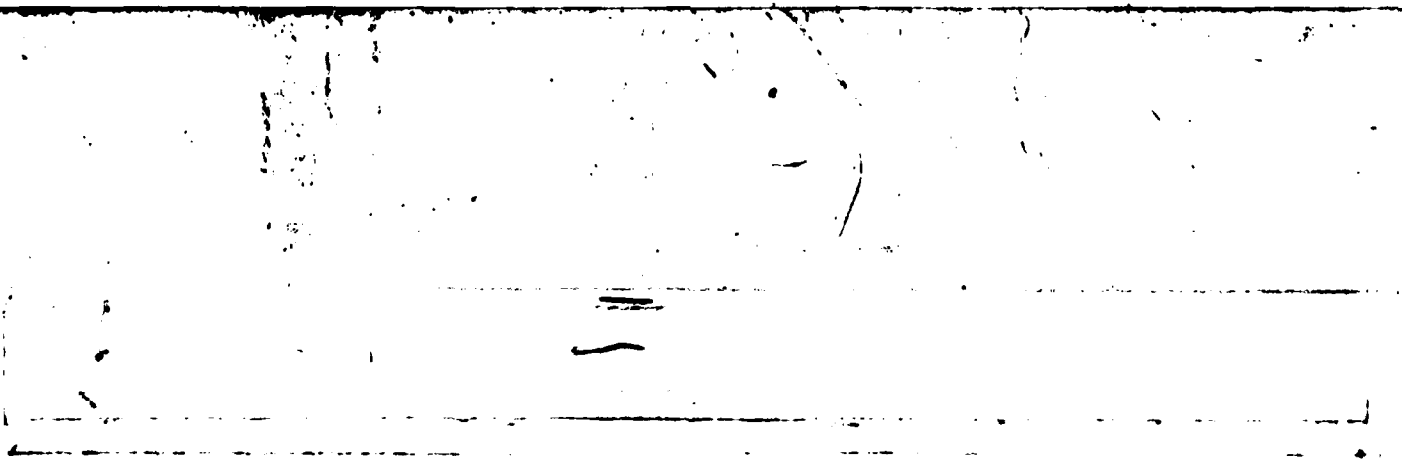


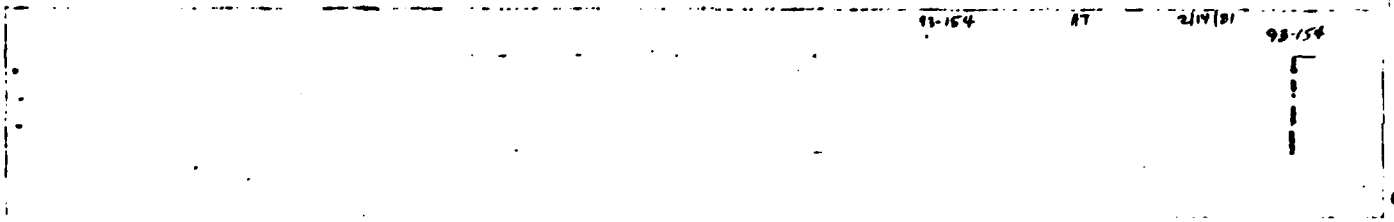
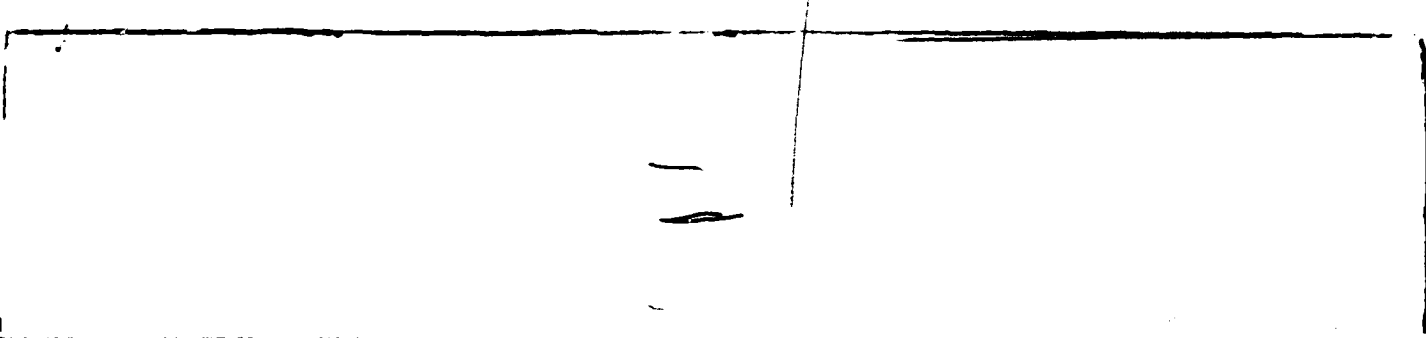


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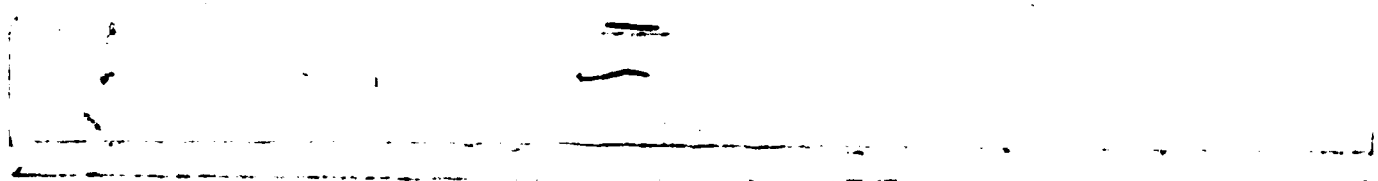
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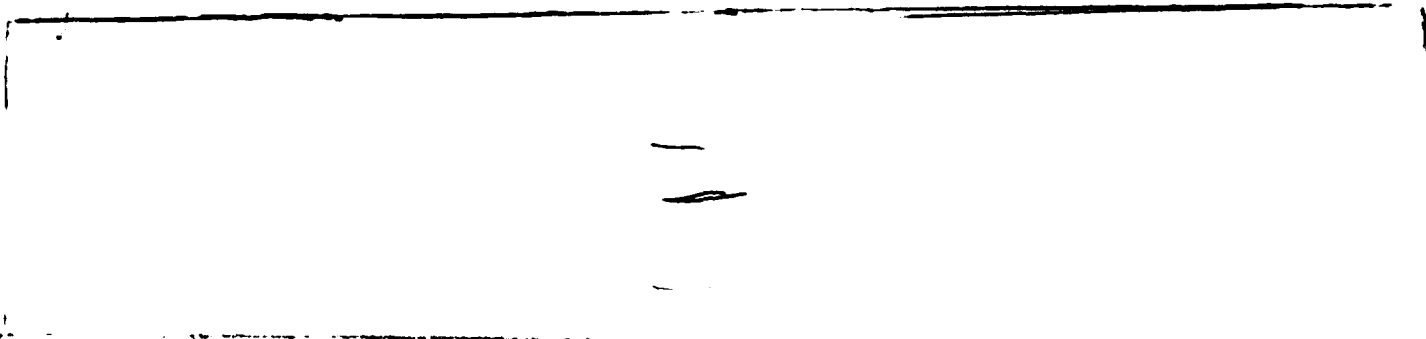
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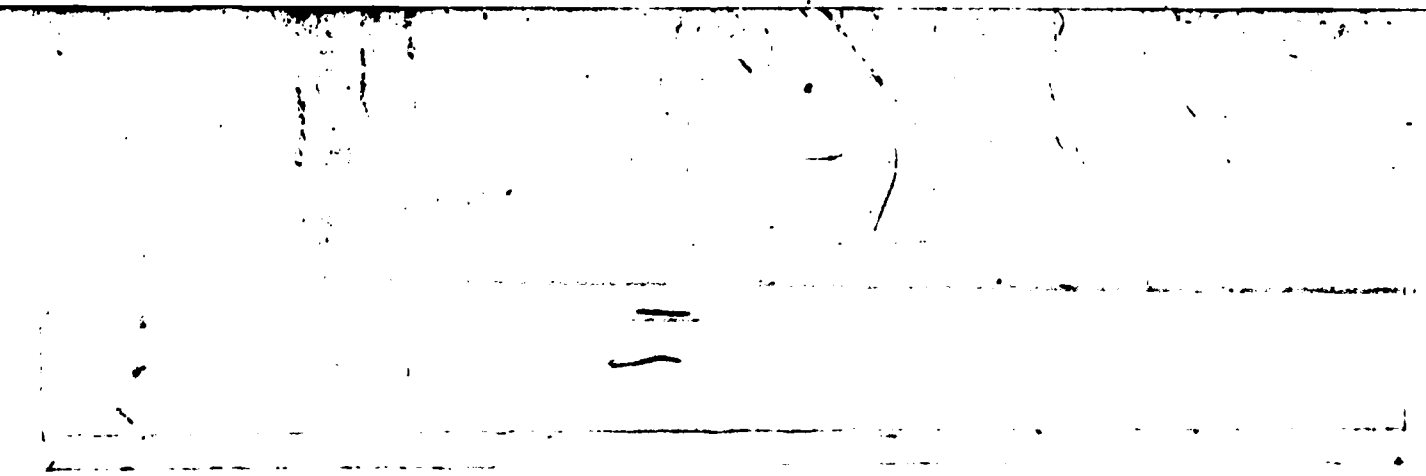




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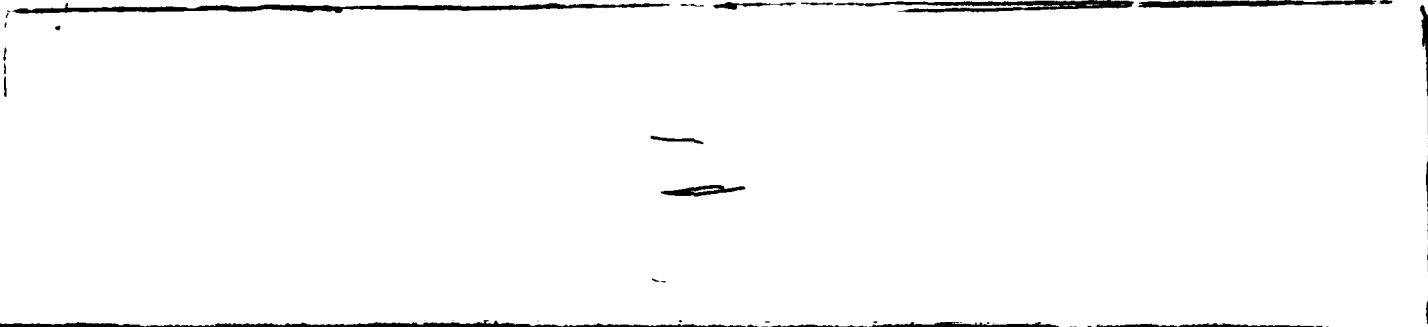
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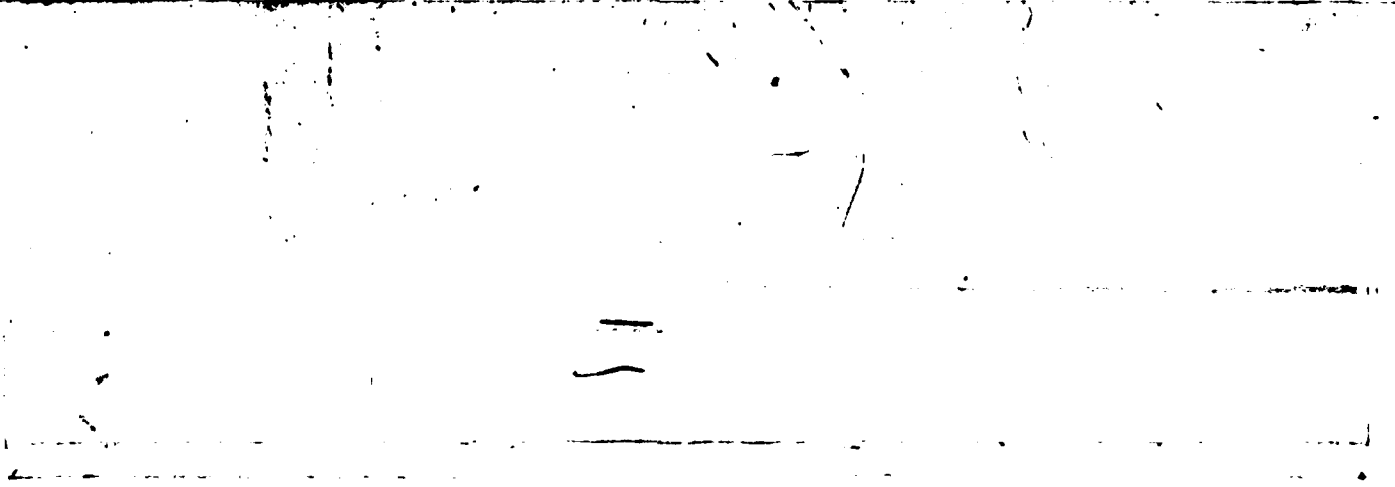
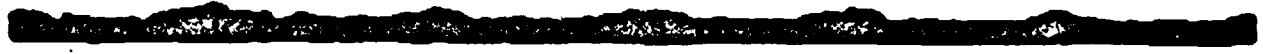


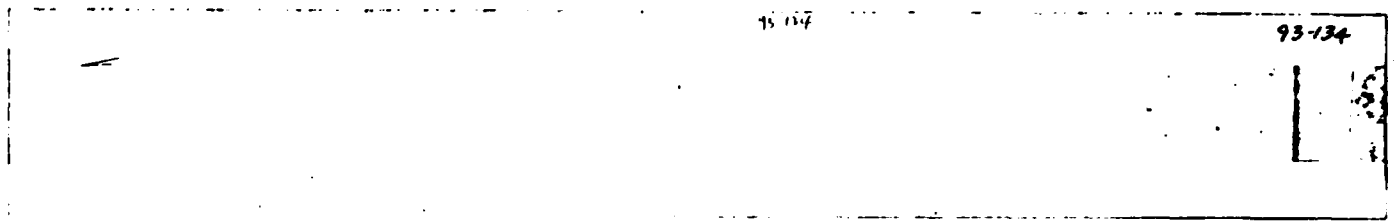
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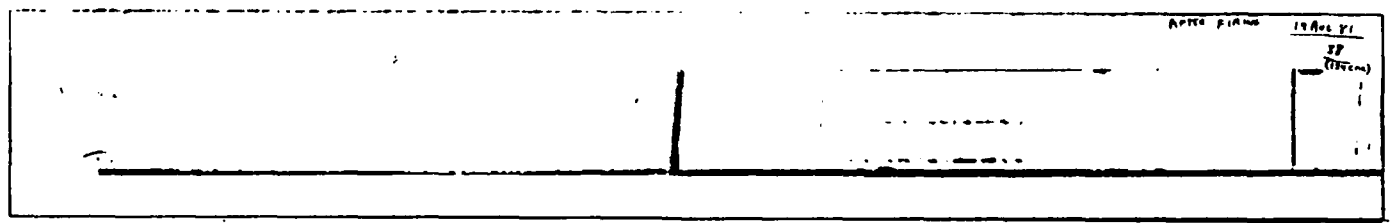
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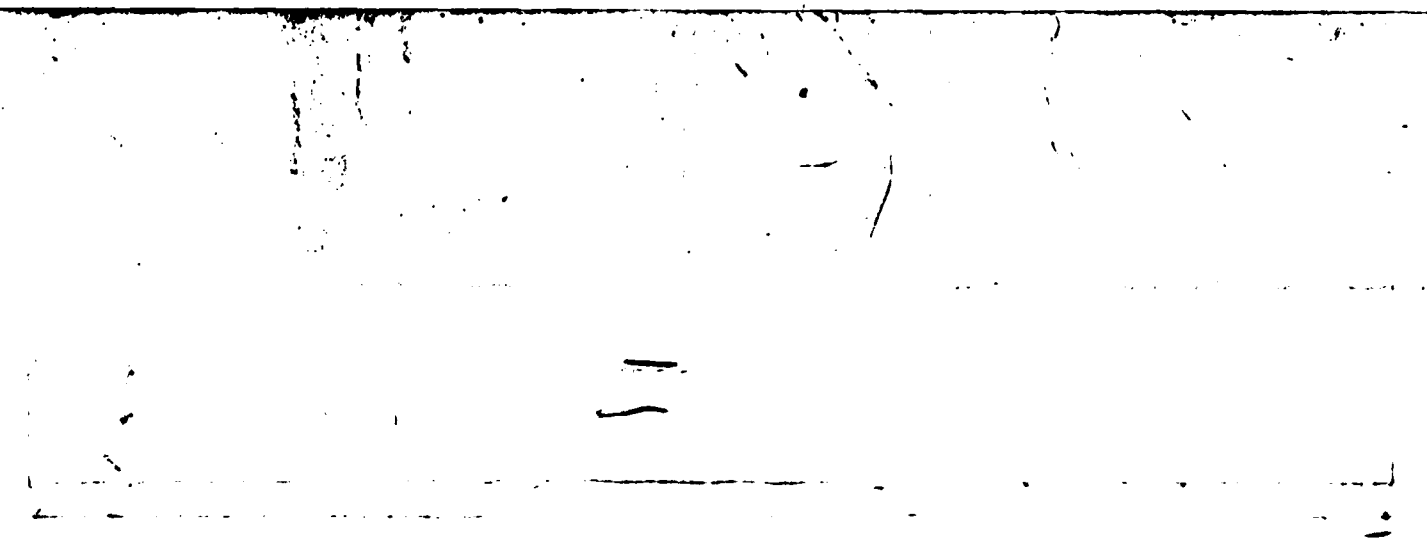
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APPROXIMATE

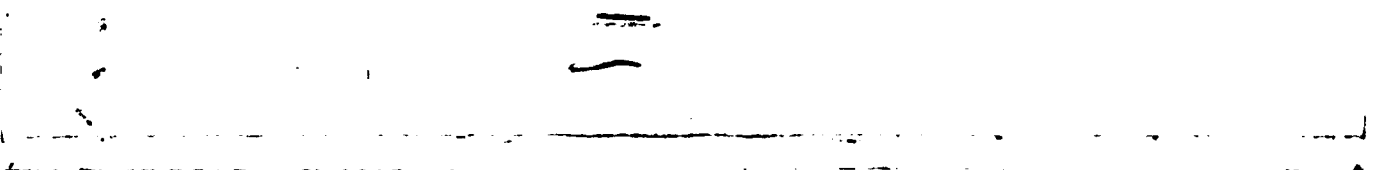
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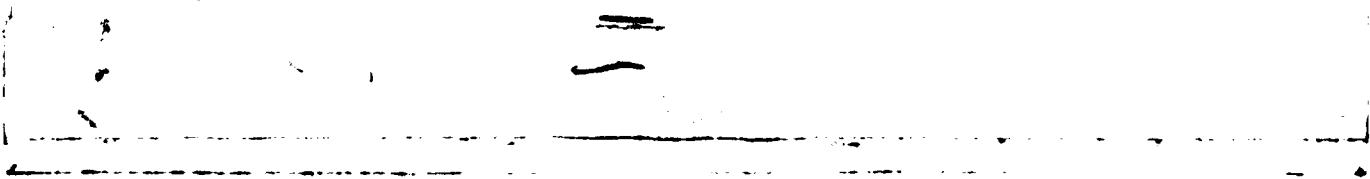
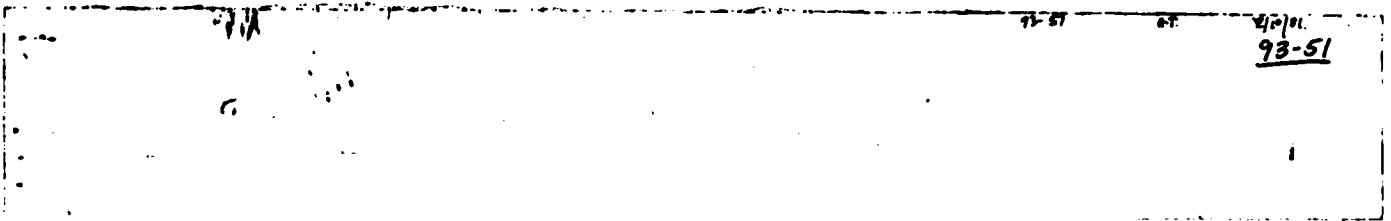
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Paper Cross		



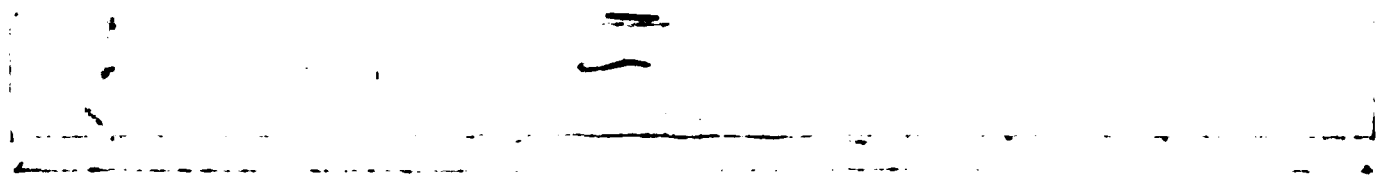
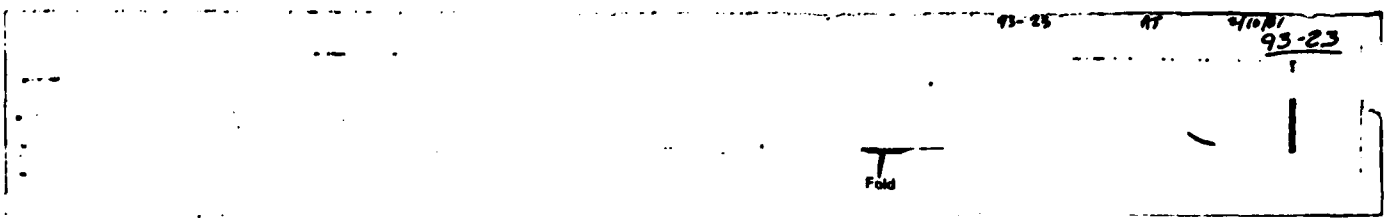
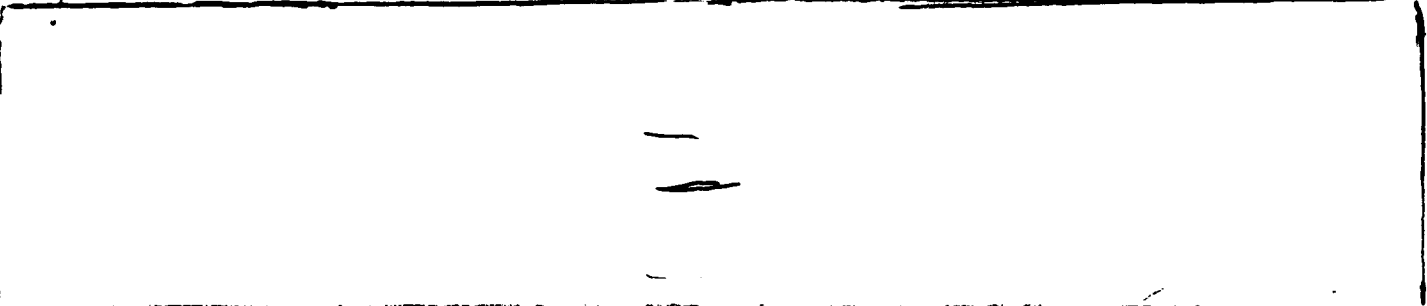
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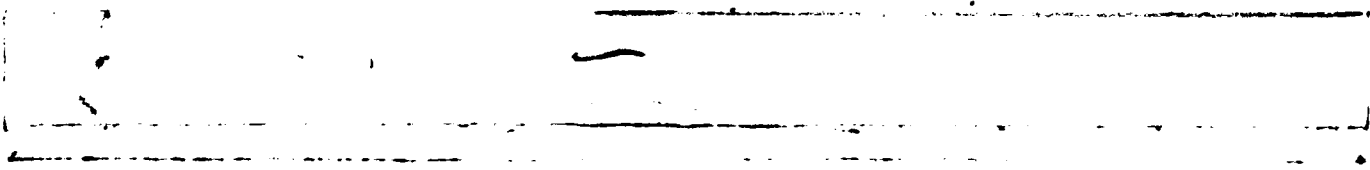


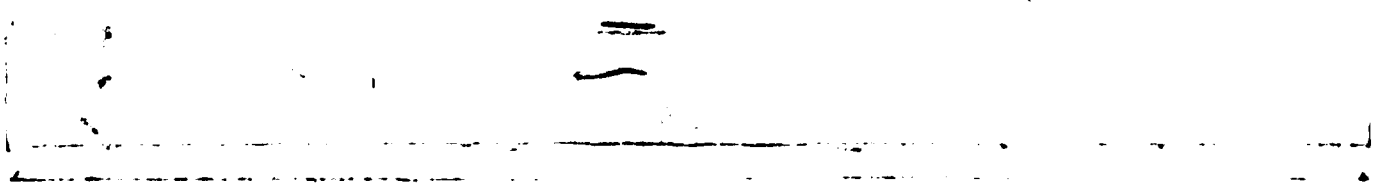
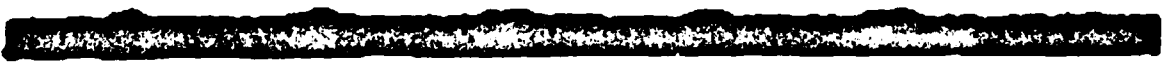
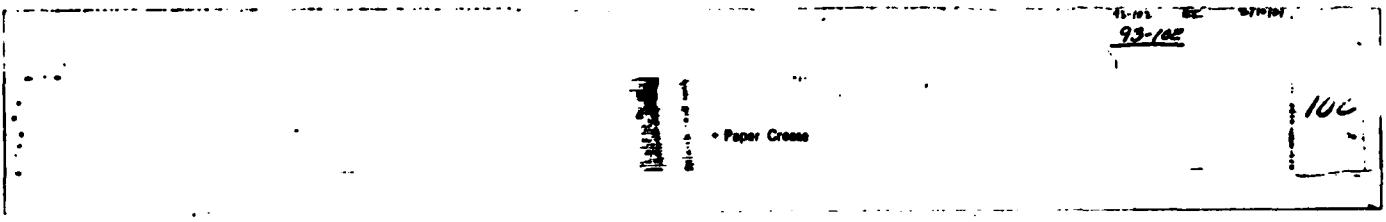
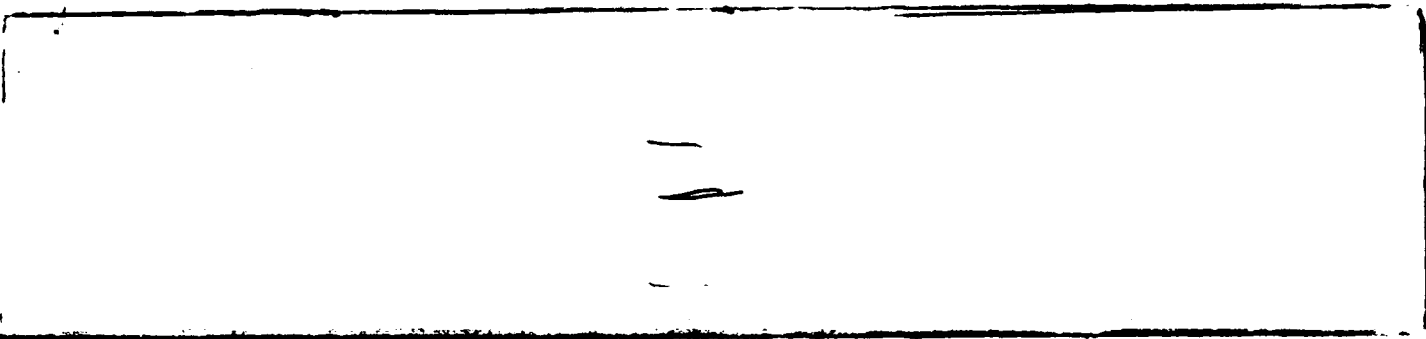
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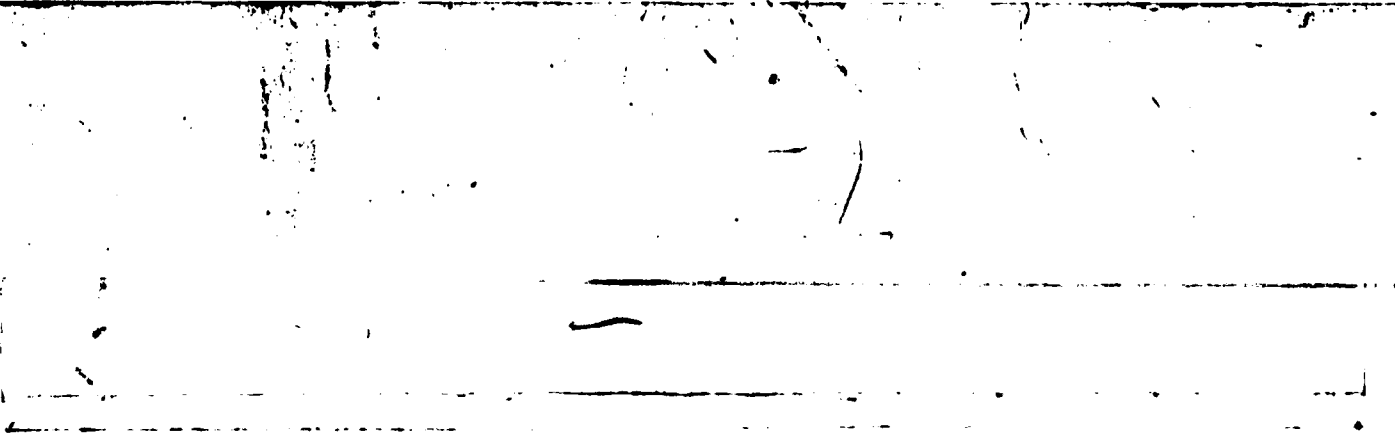
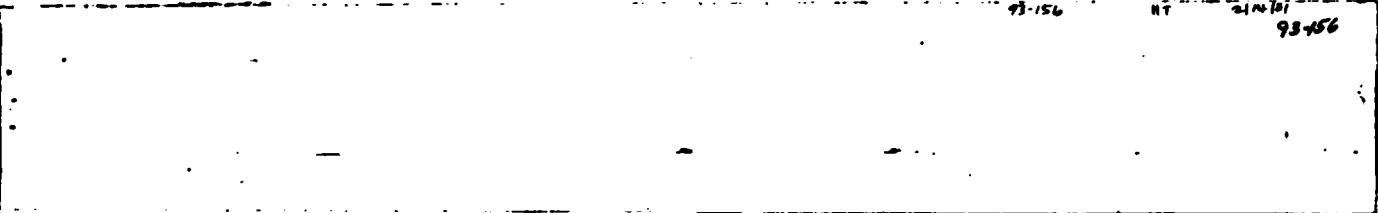






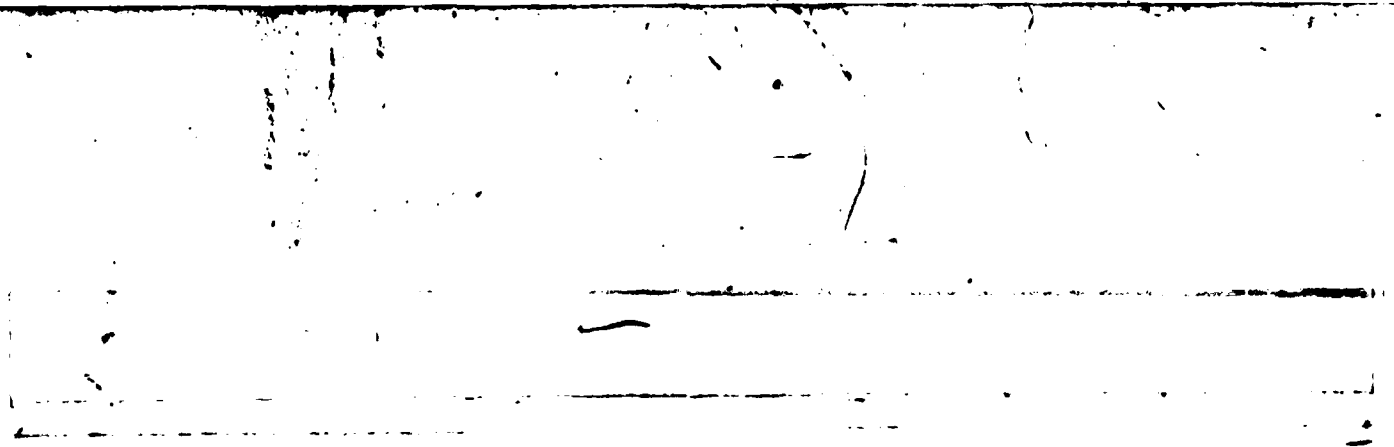


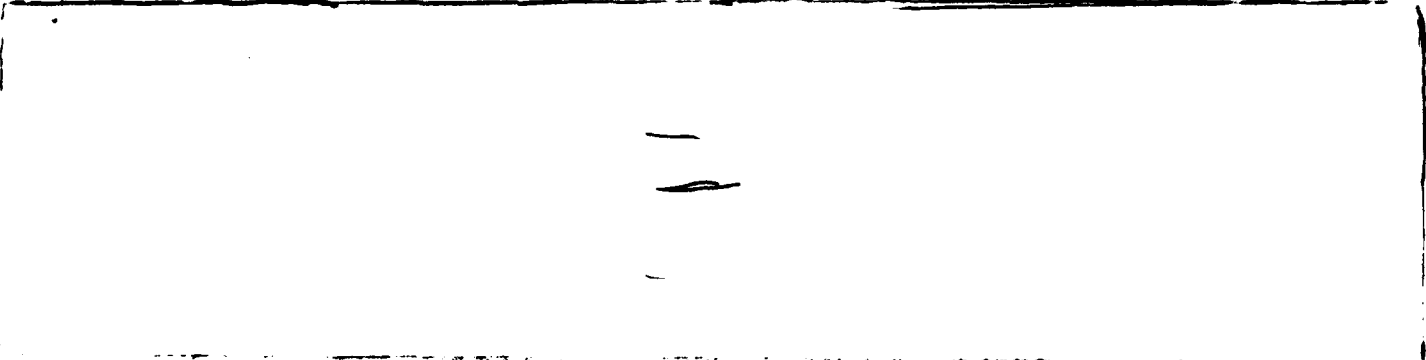




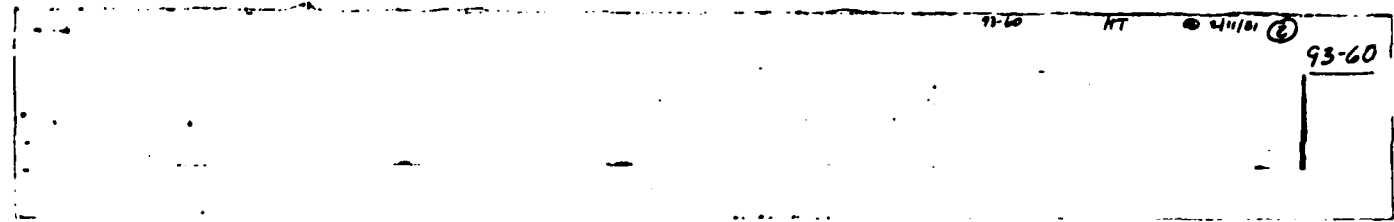


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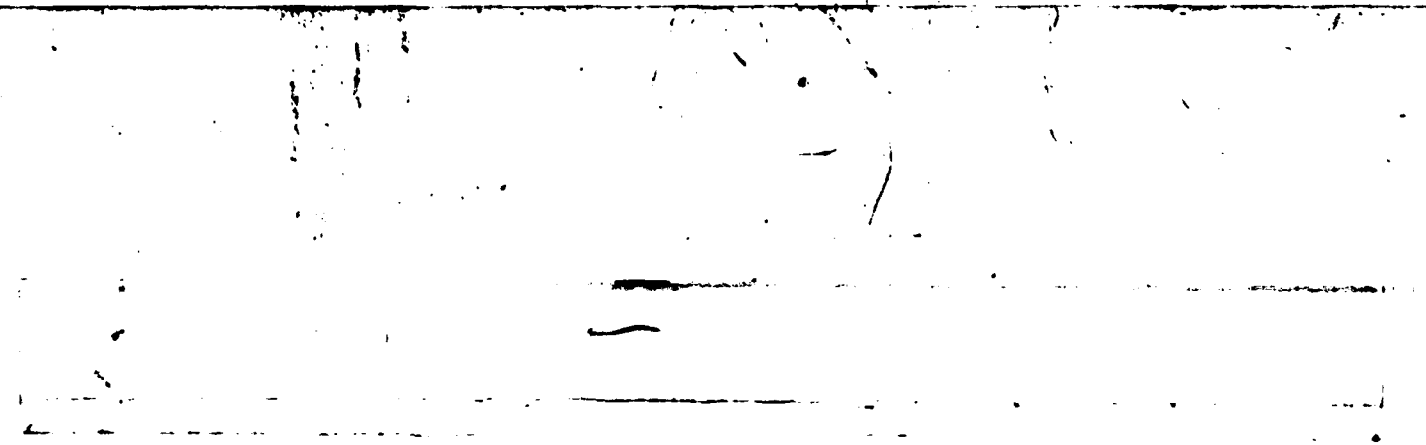


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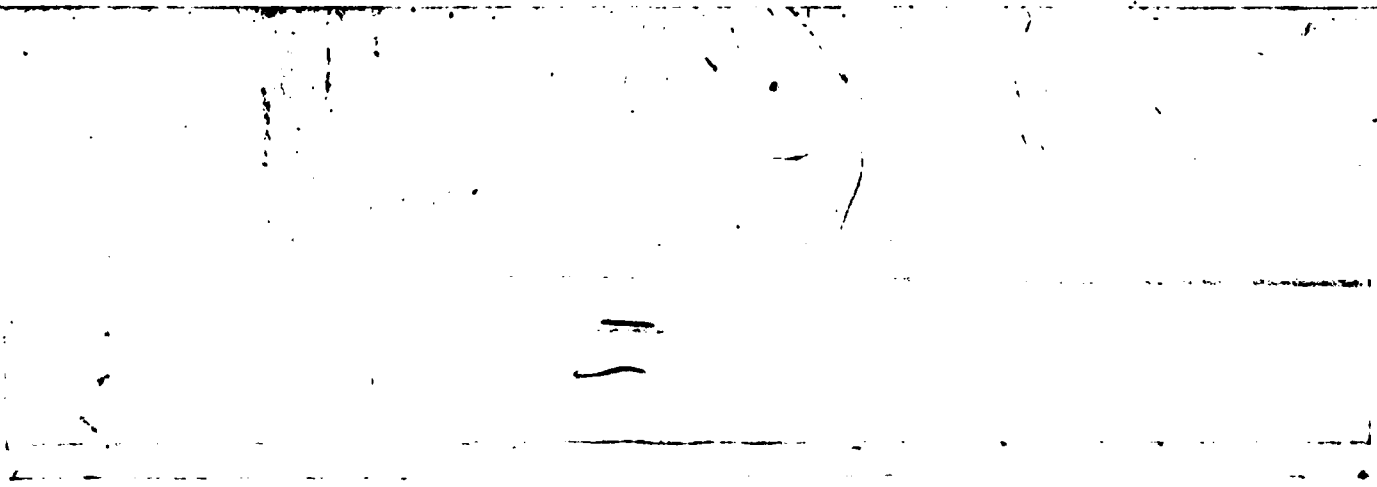
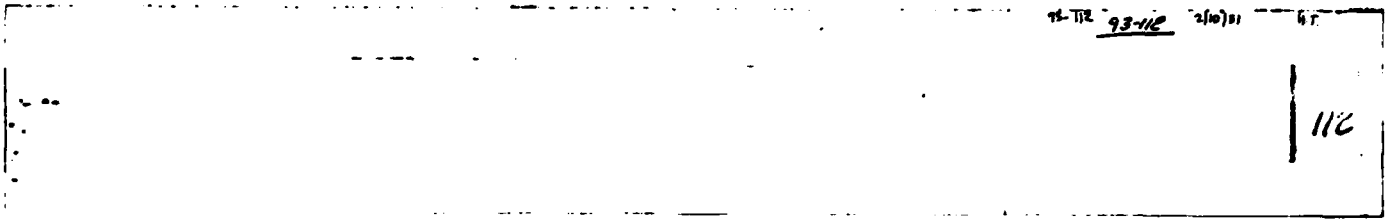
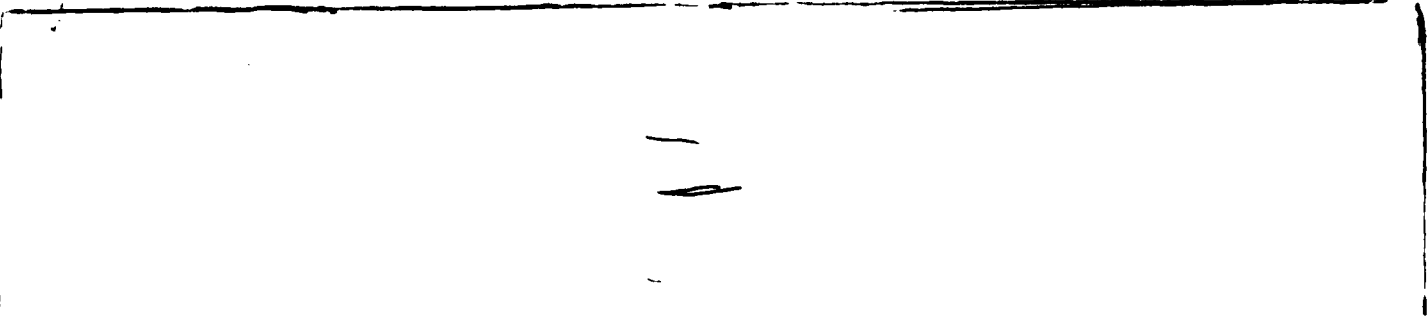
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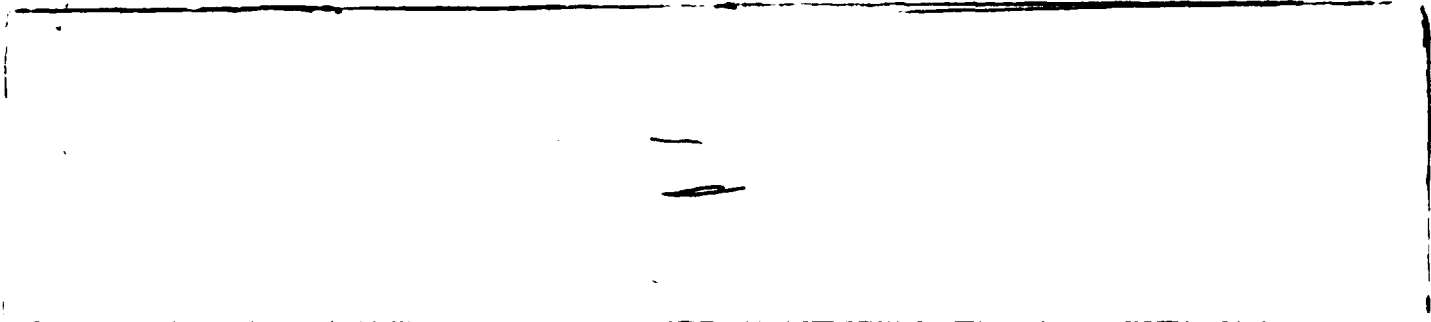
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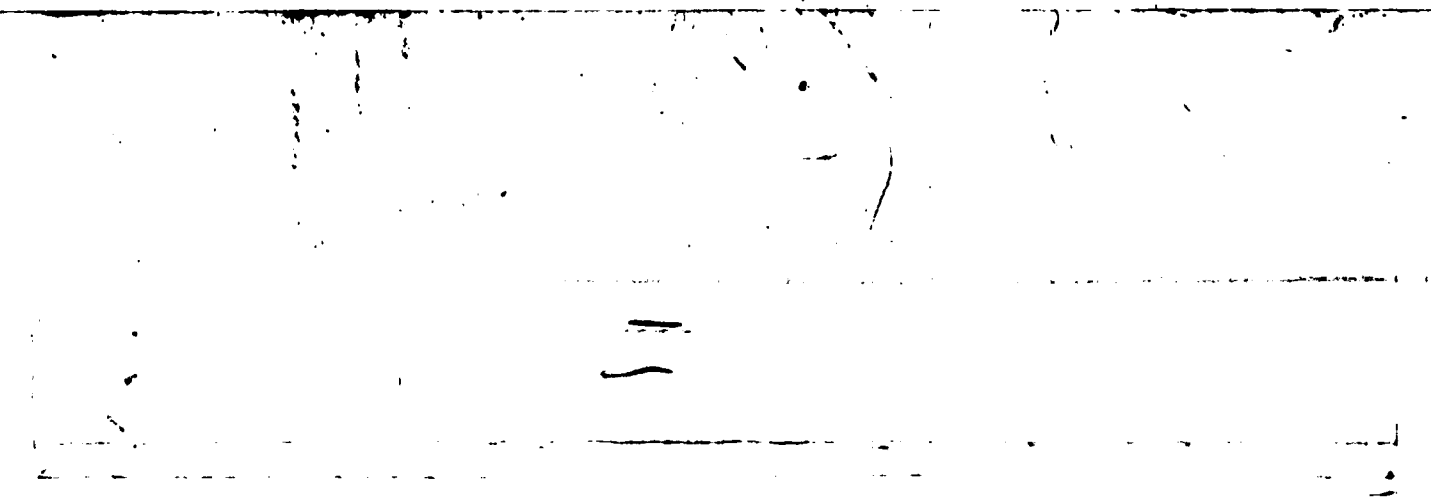
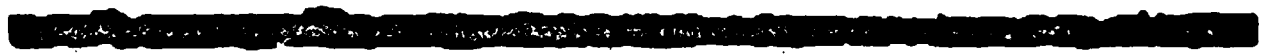






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• Paper Cross

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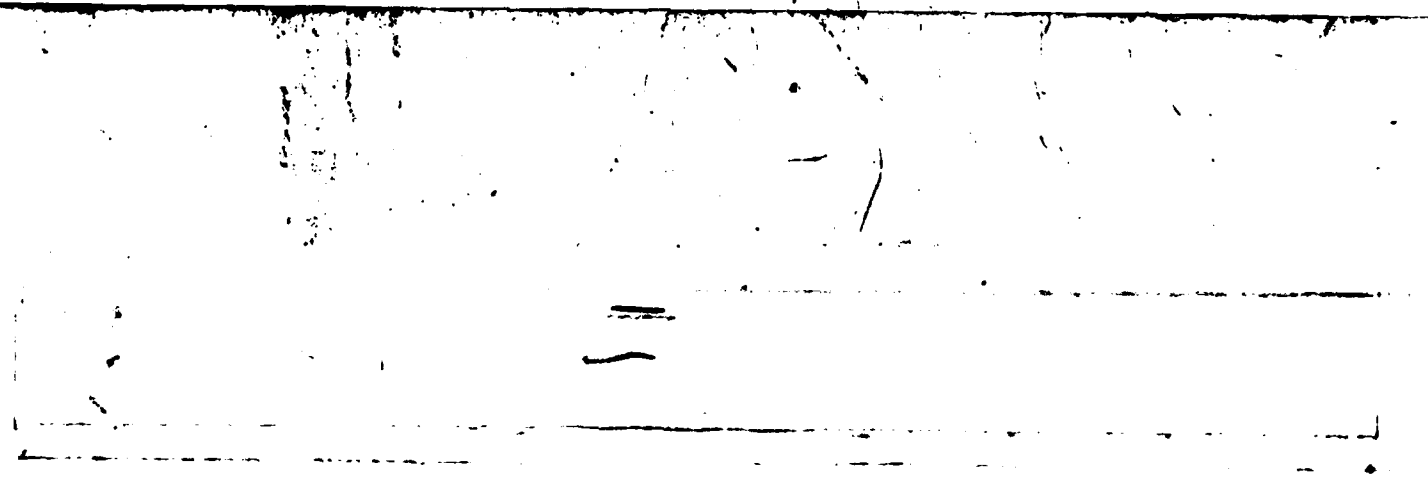
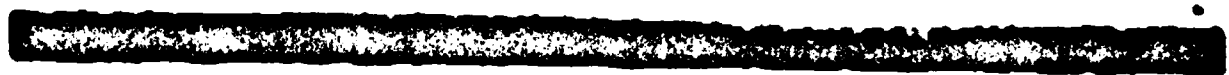
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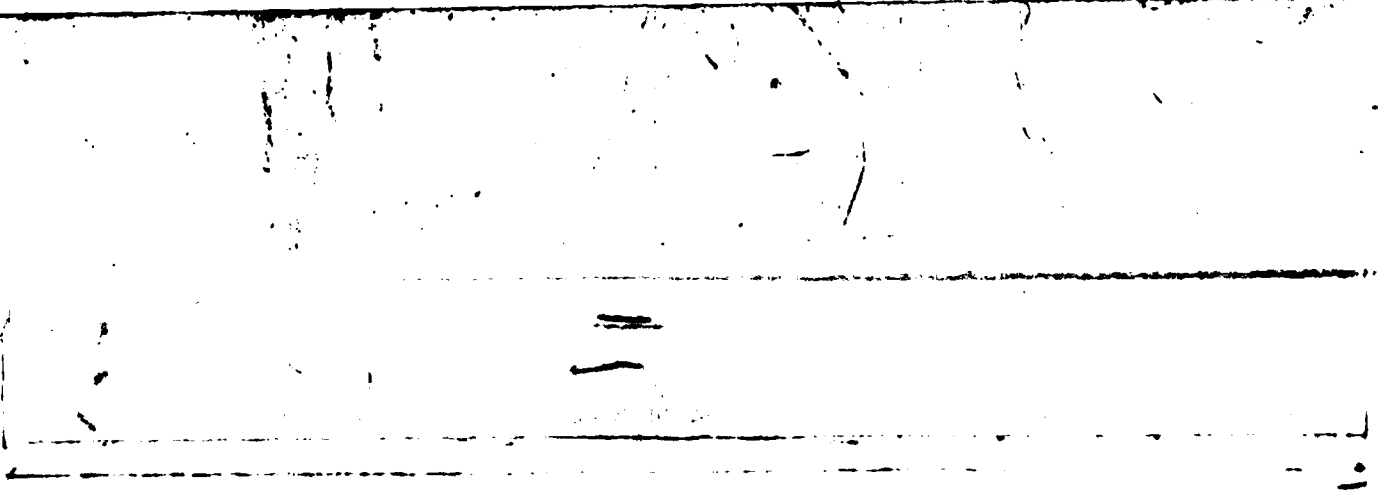
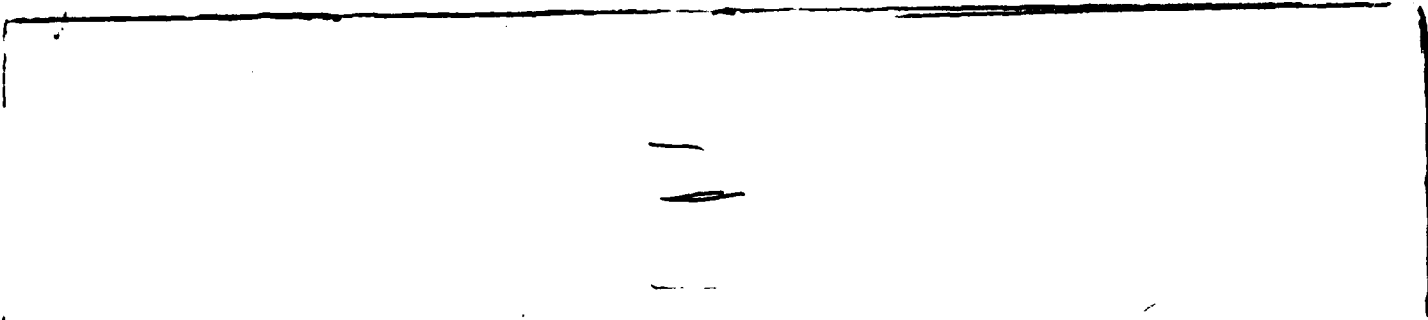
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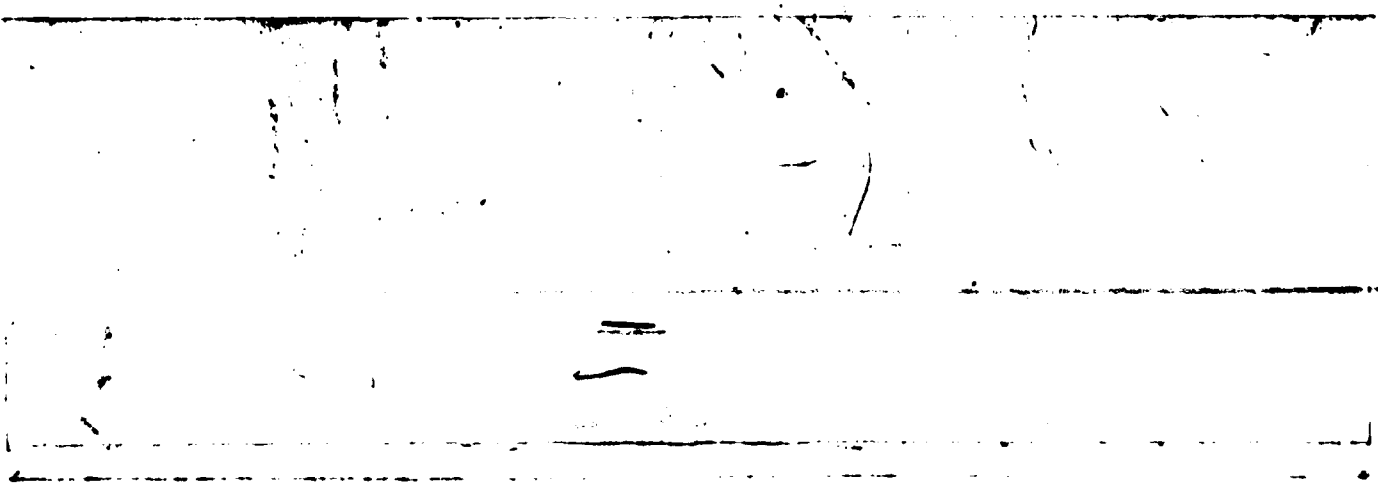
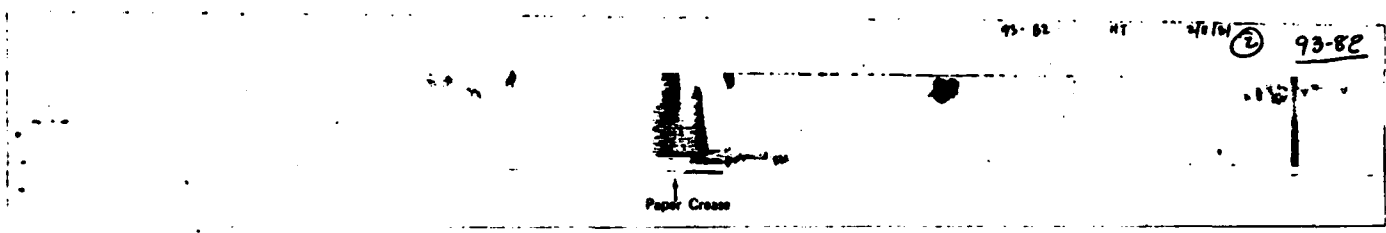
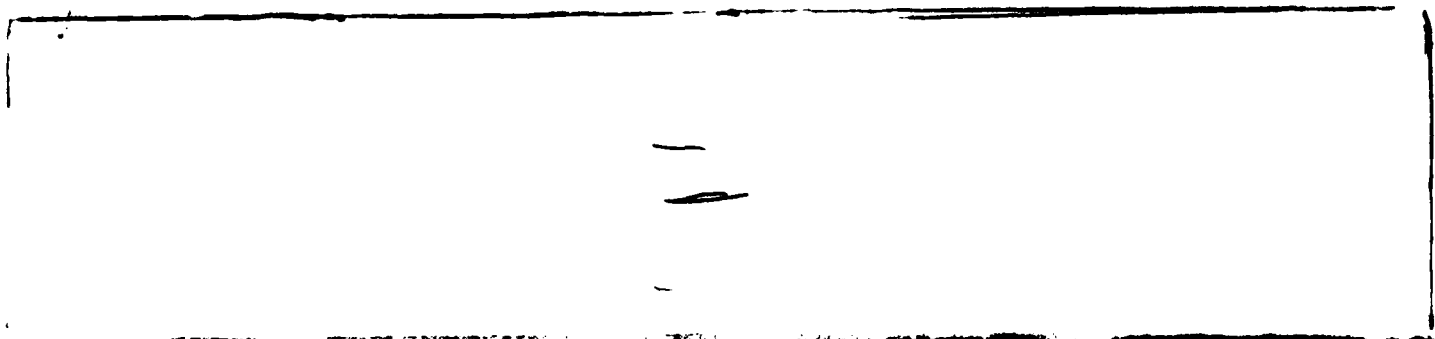


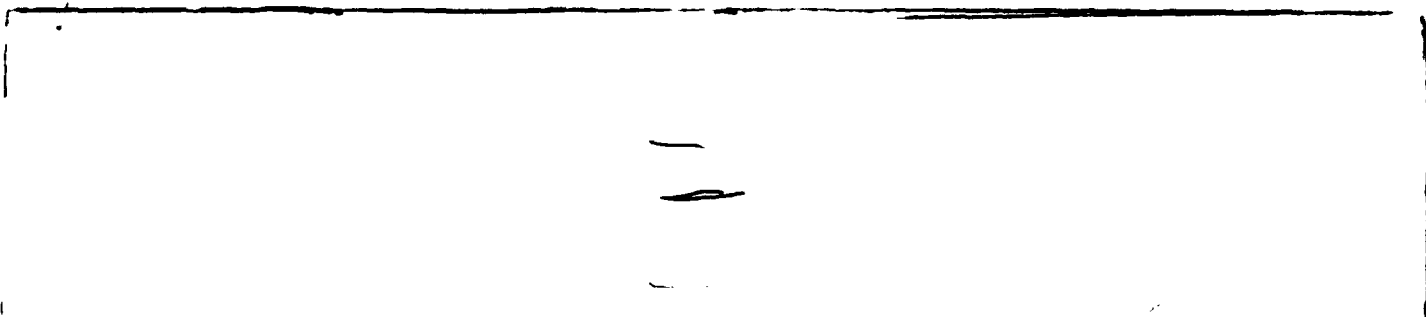
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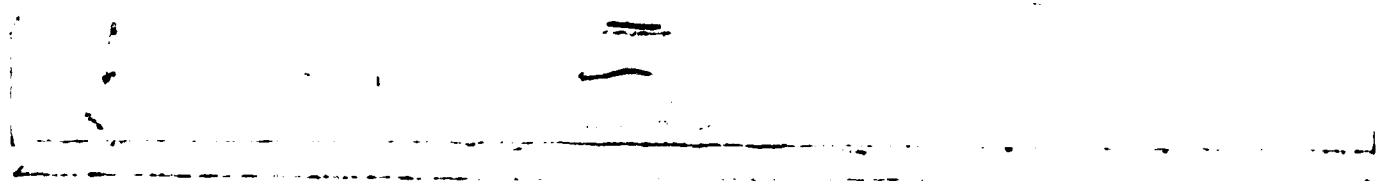


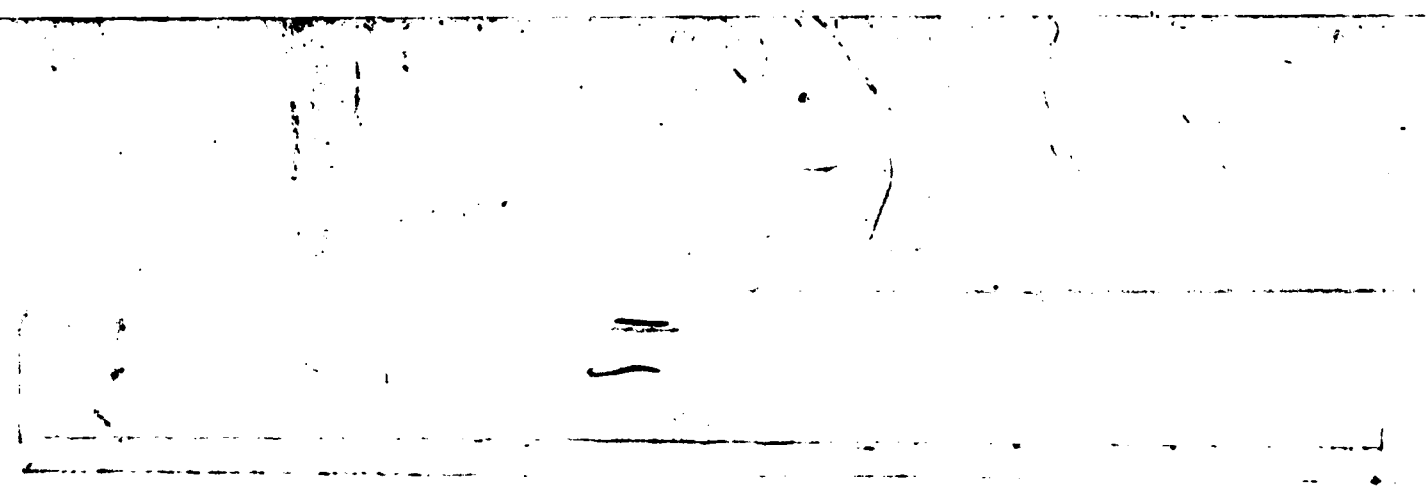
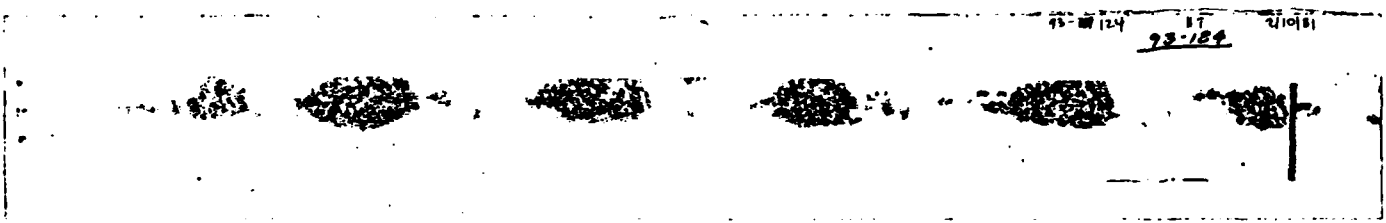
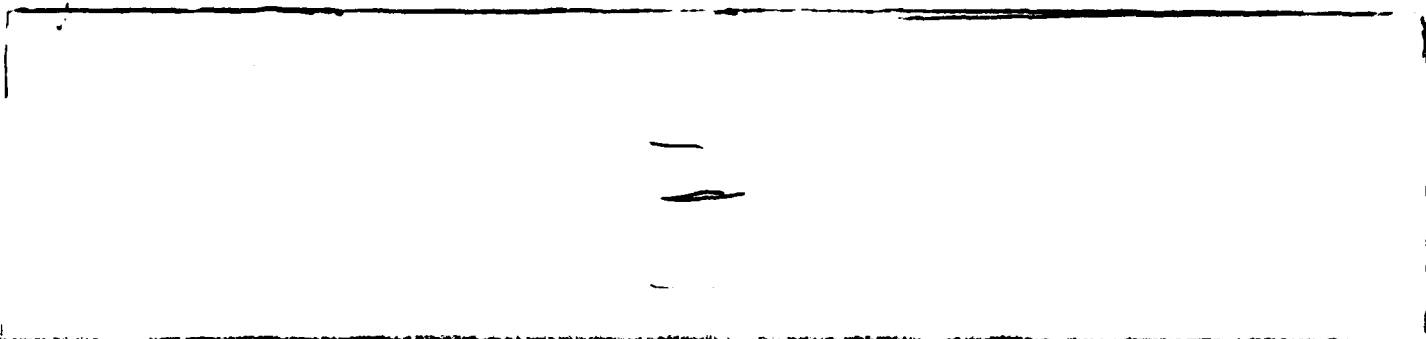


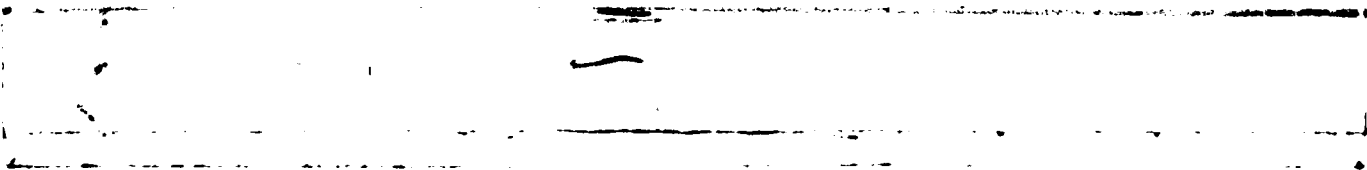
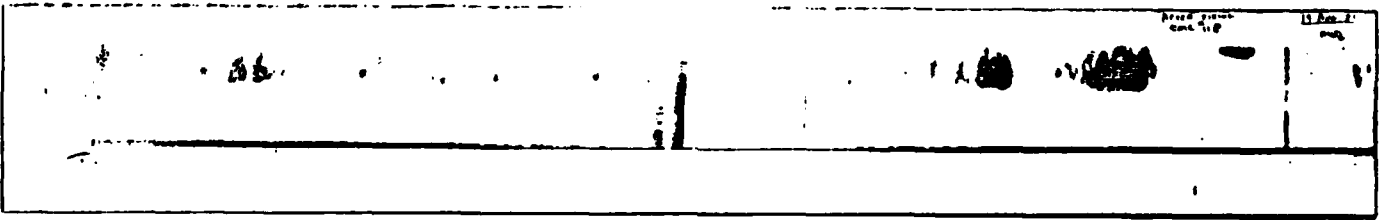
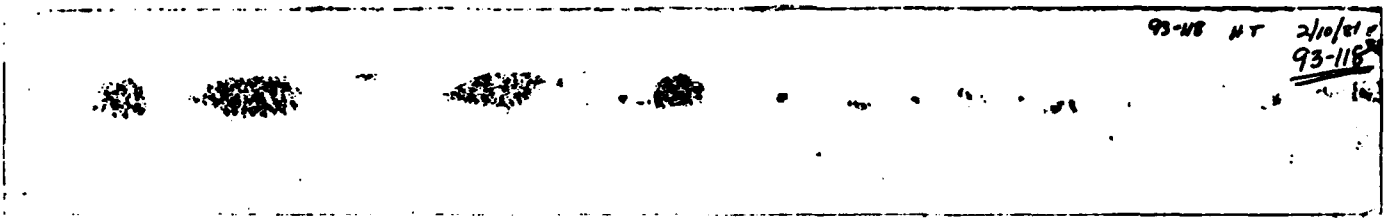


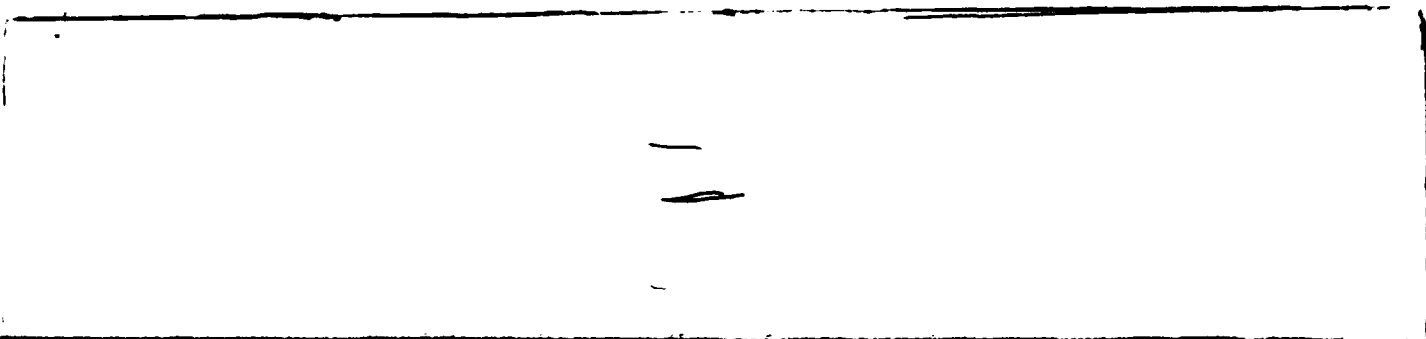
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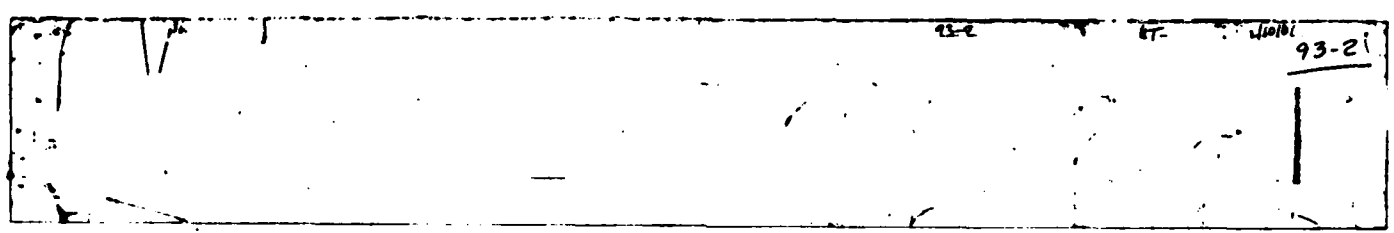








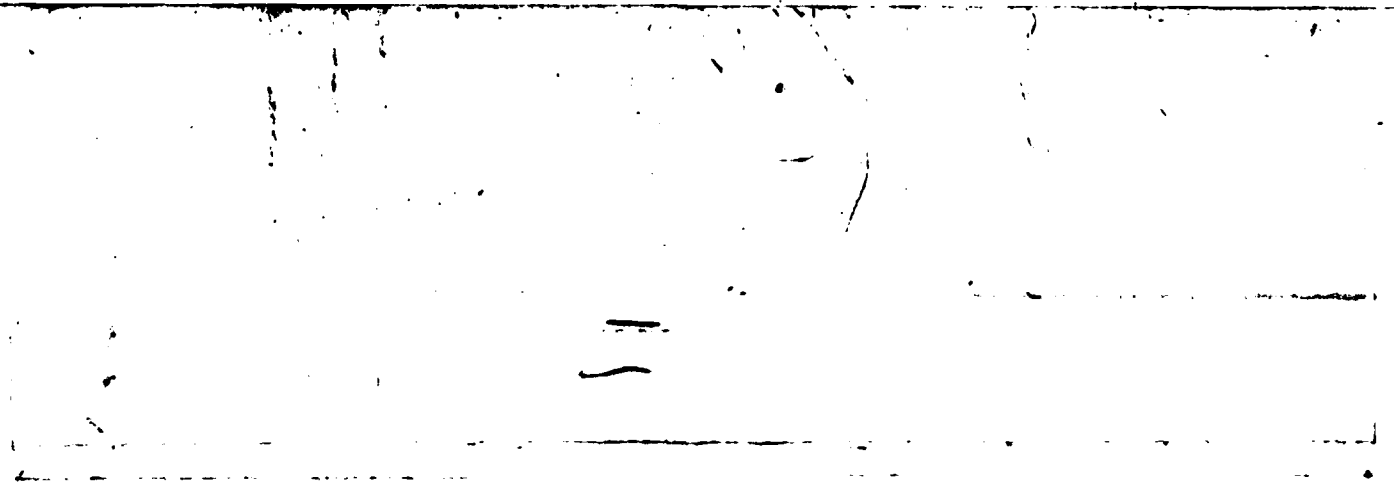
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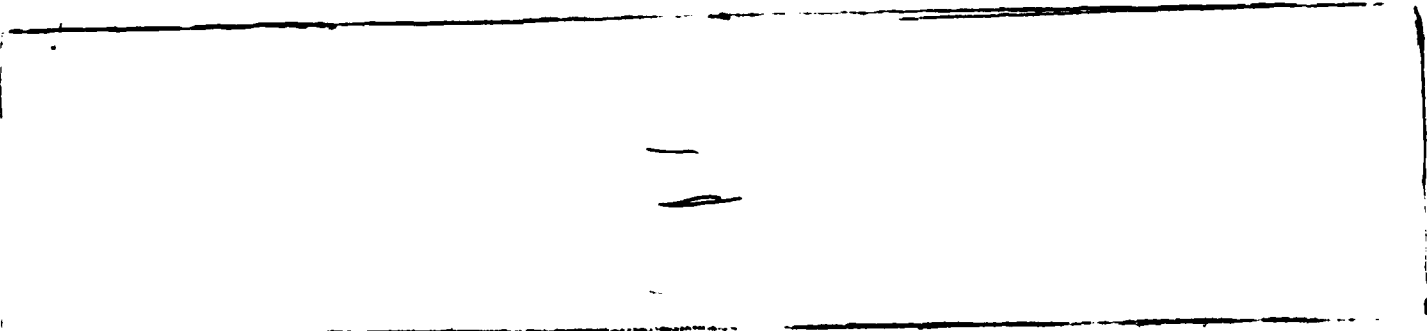


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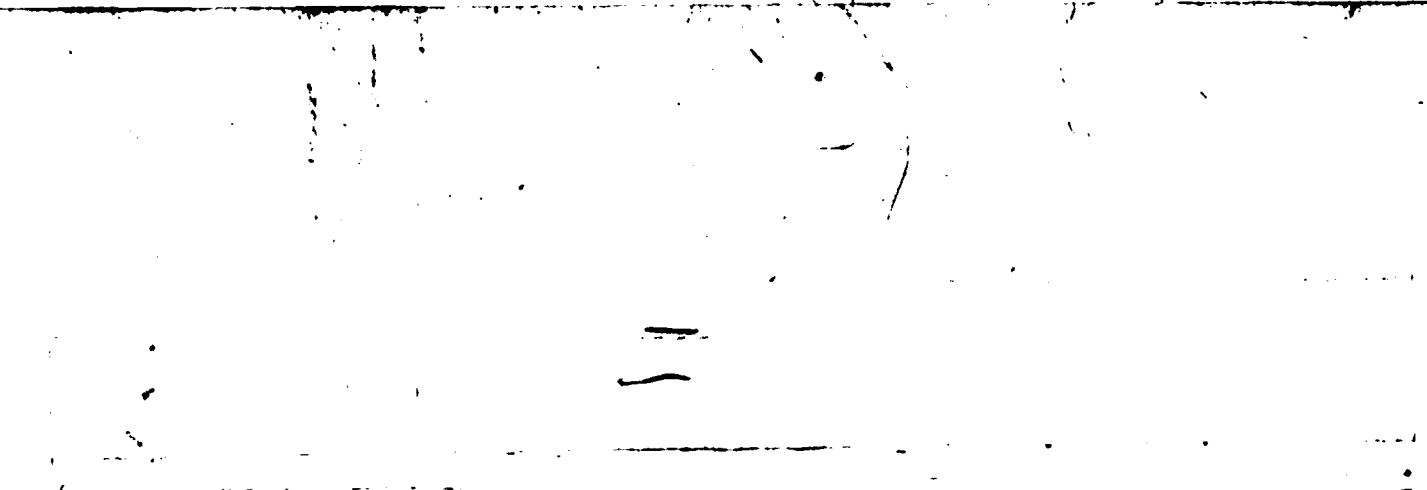
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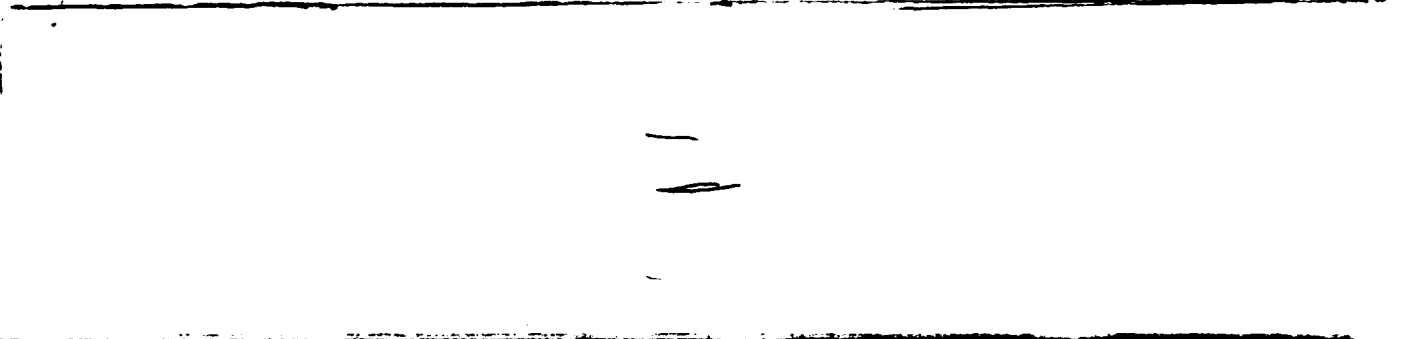
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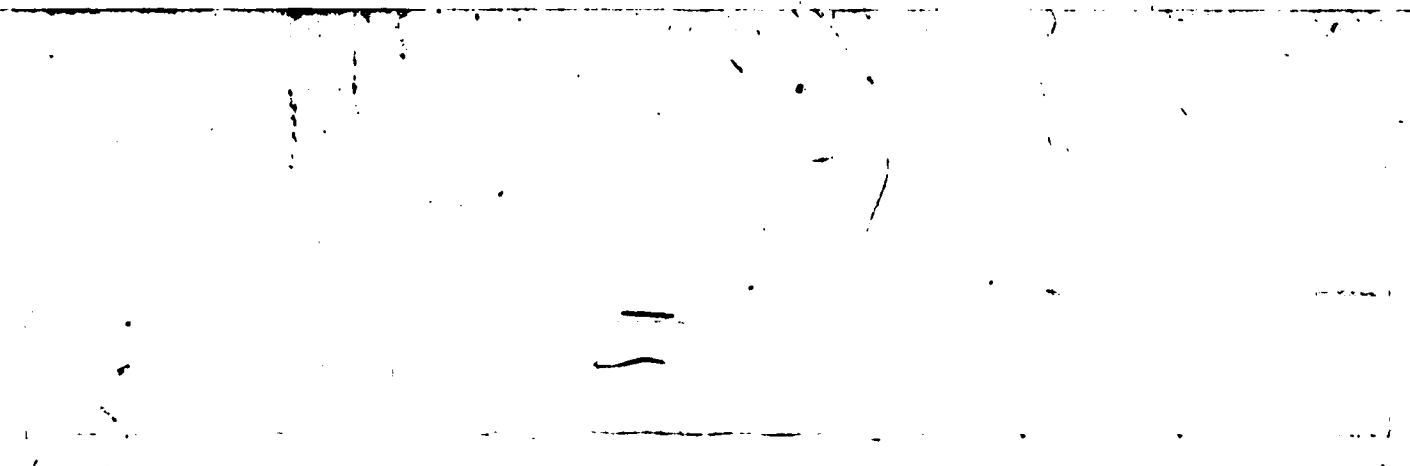


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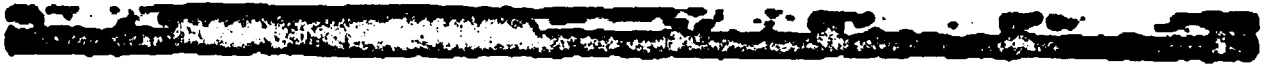


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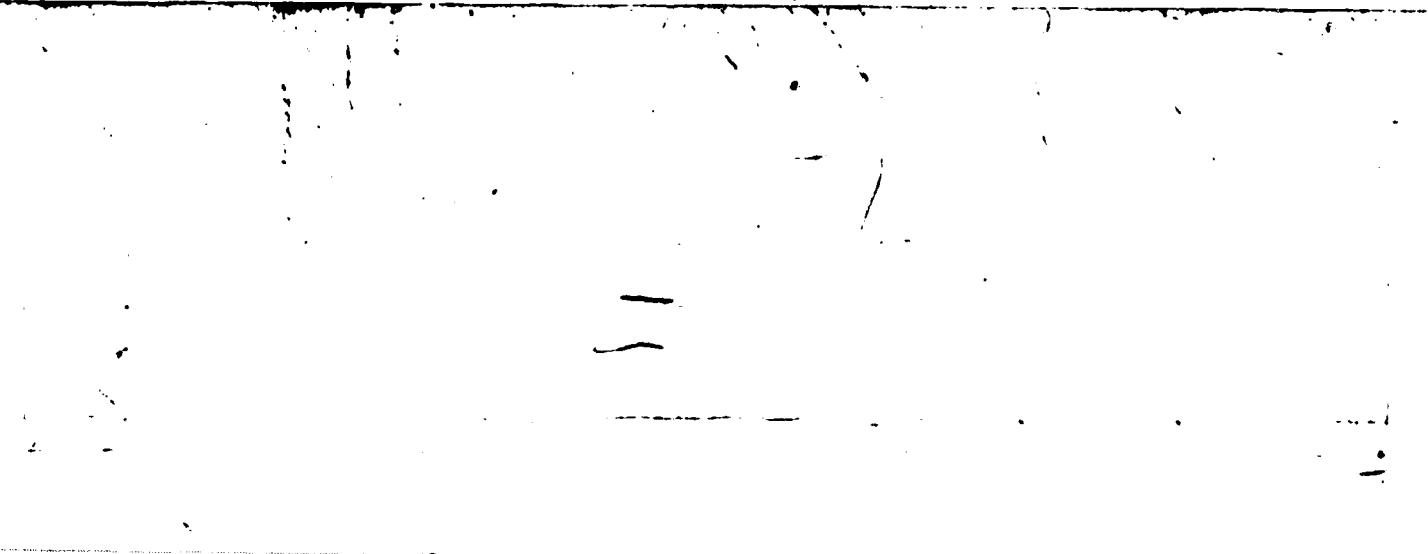


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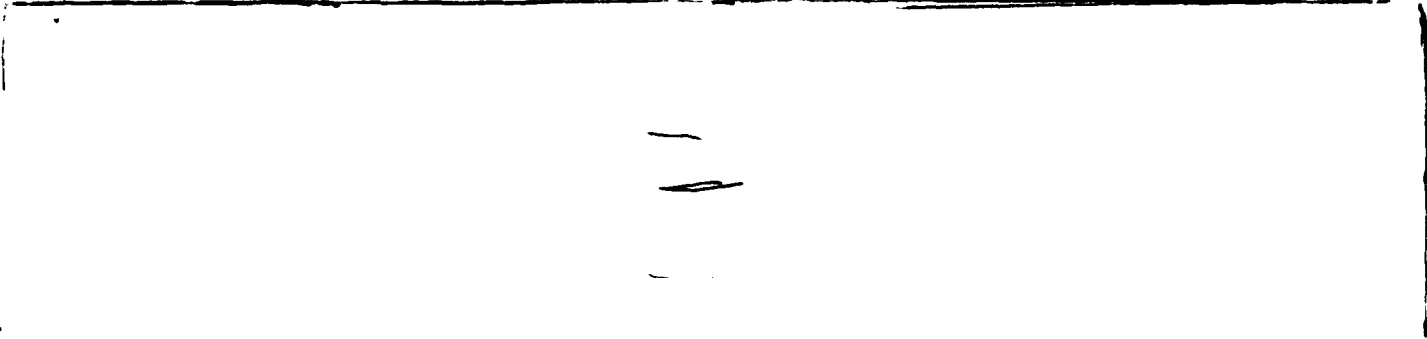
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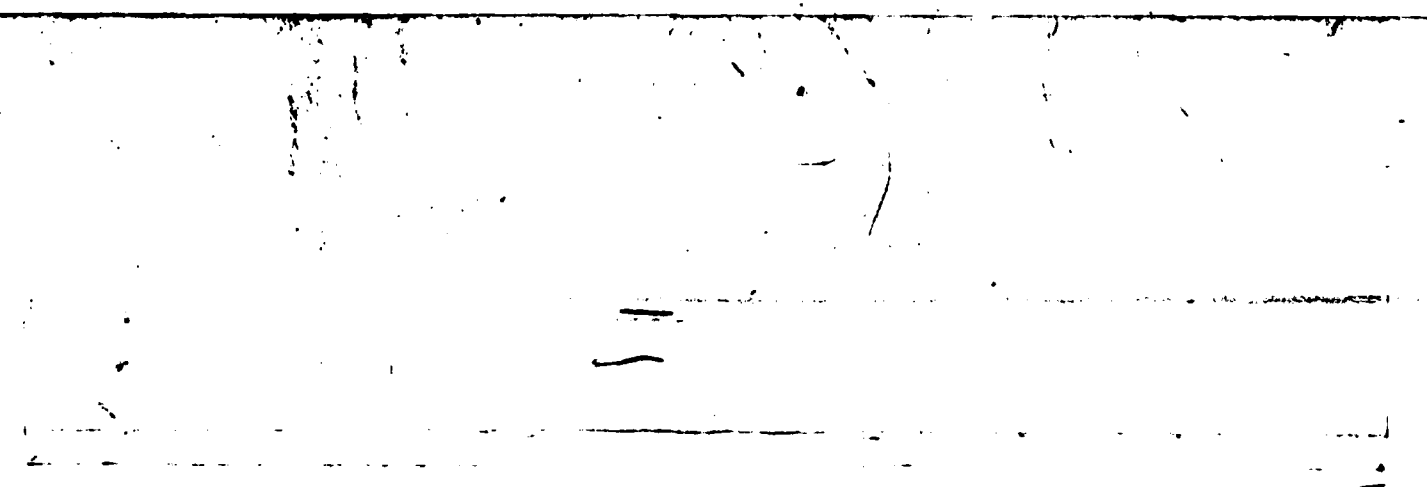
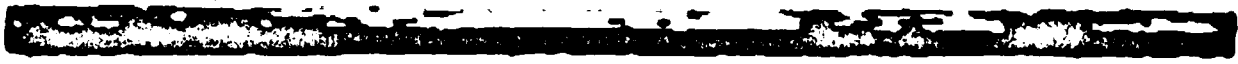


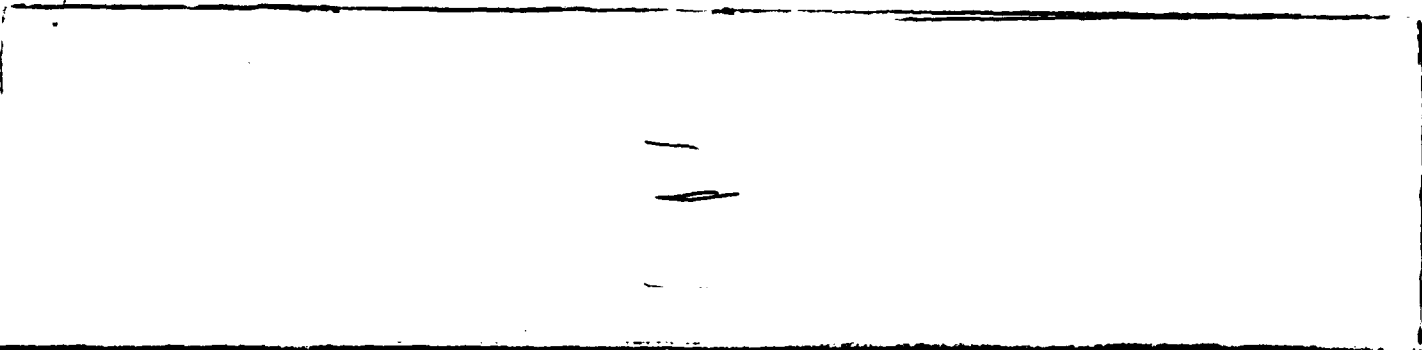
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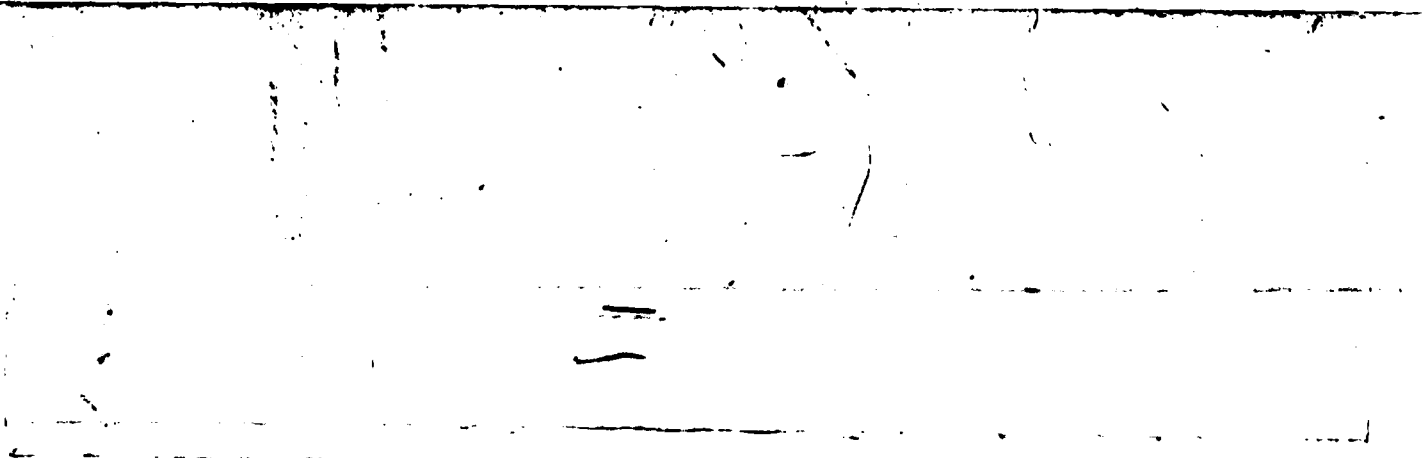
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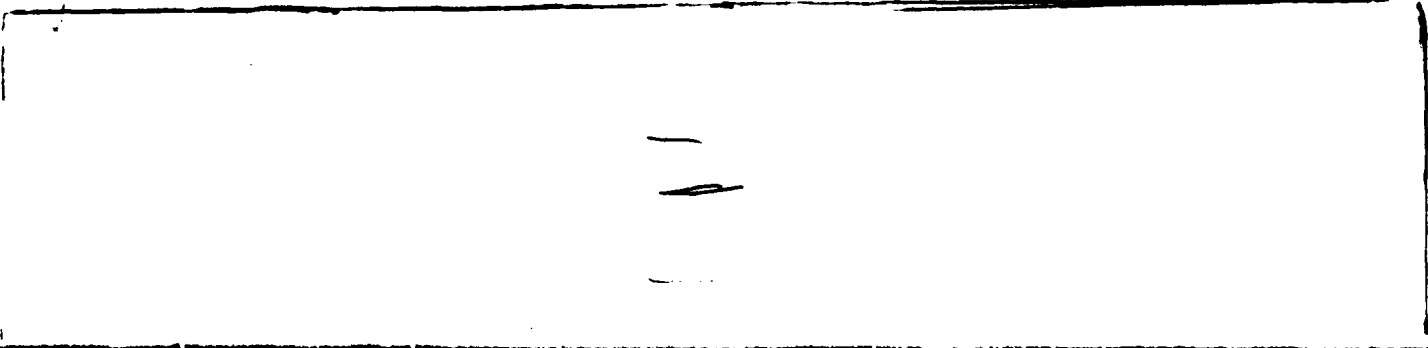




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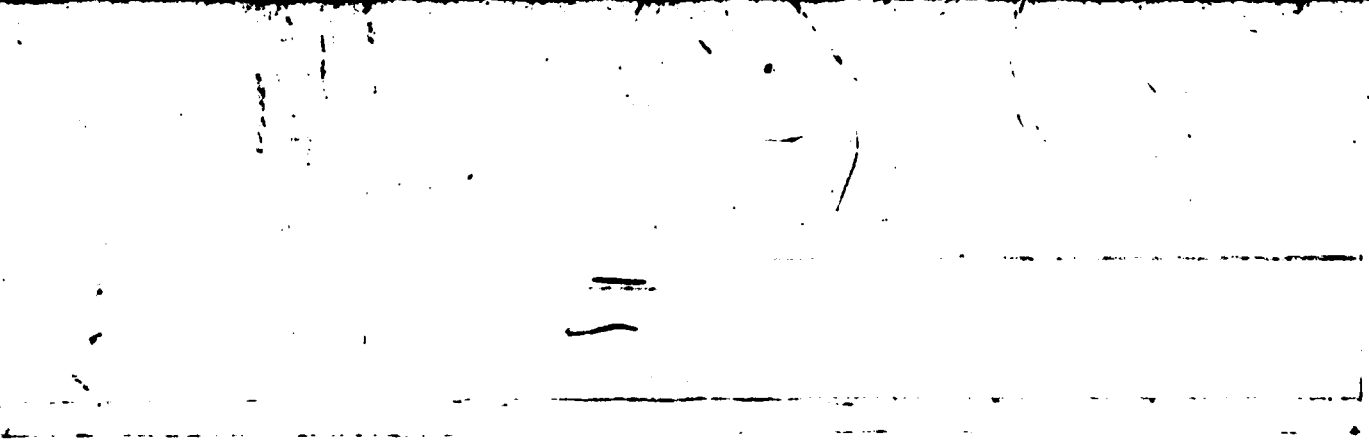
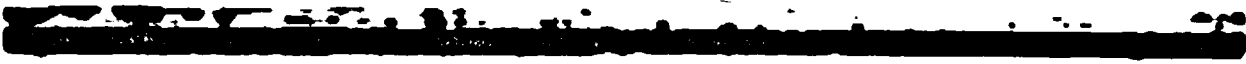
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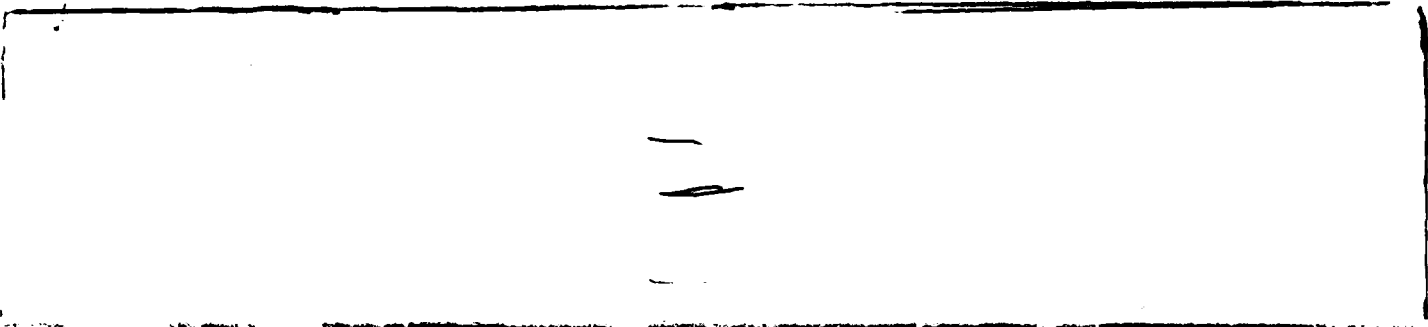




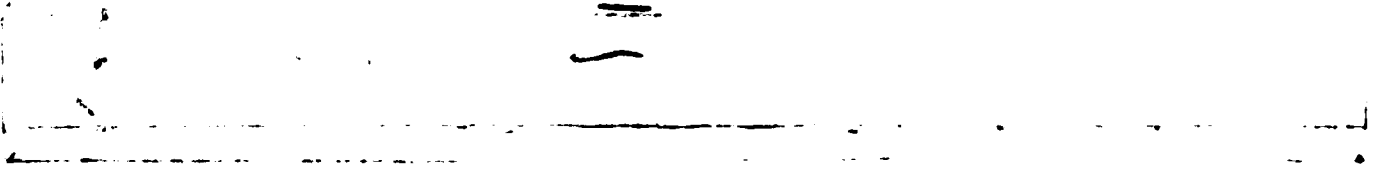
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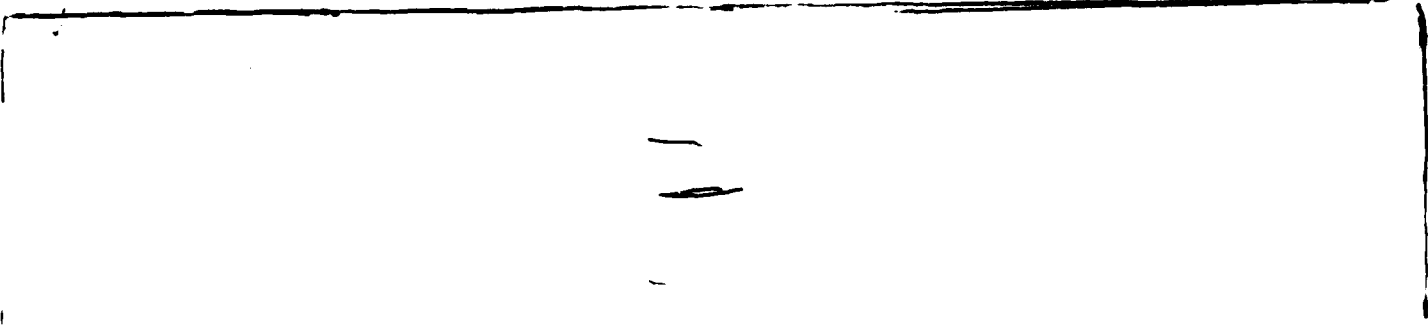
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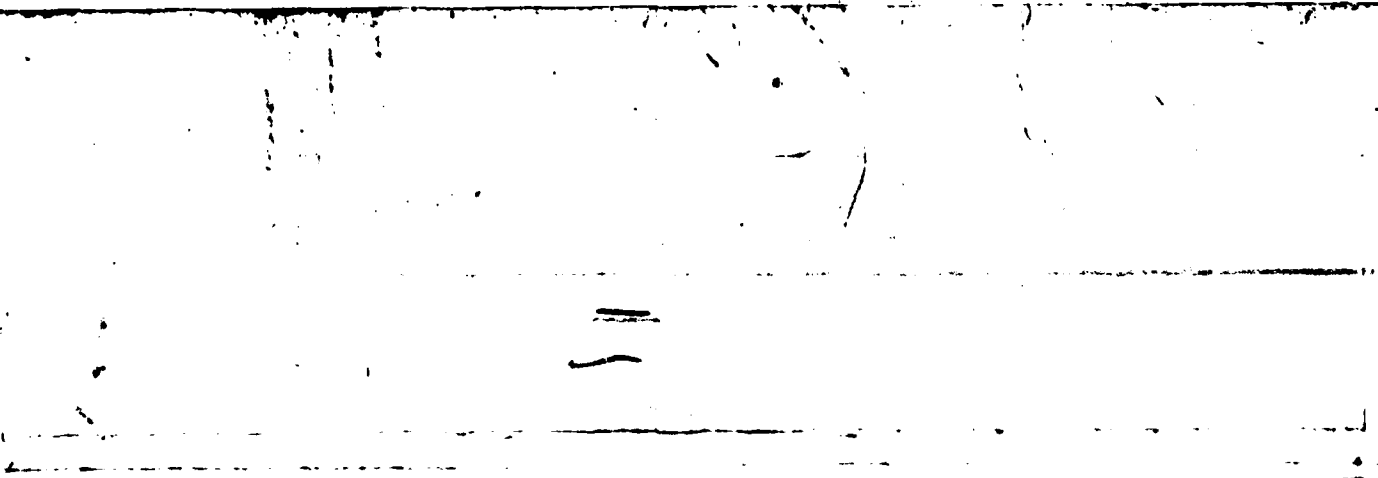
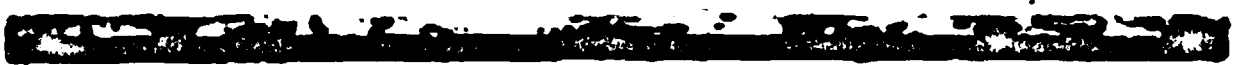
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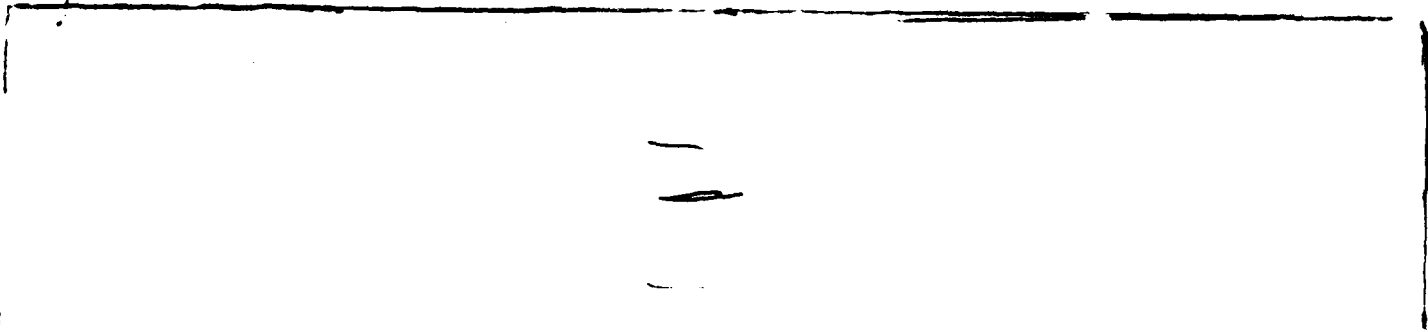




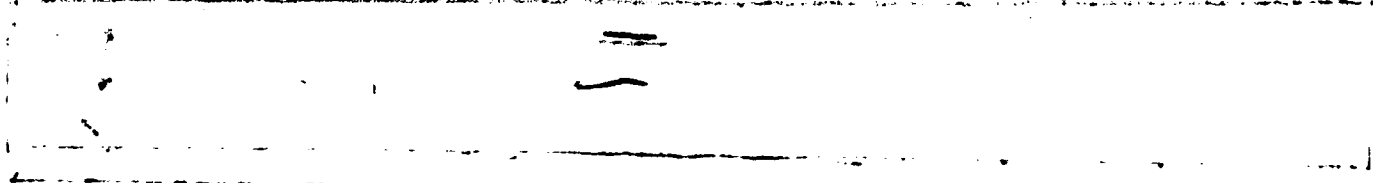
93-36

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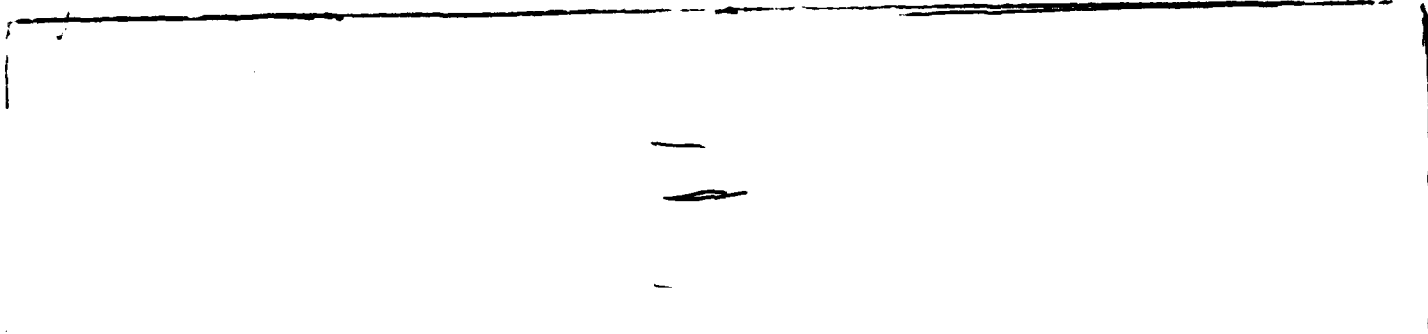
7-15 17. (C) 4/11/6  
95-88



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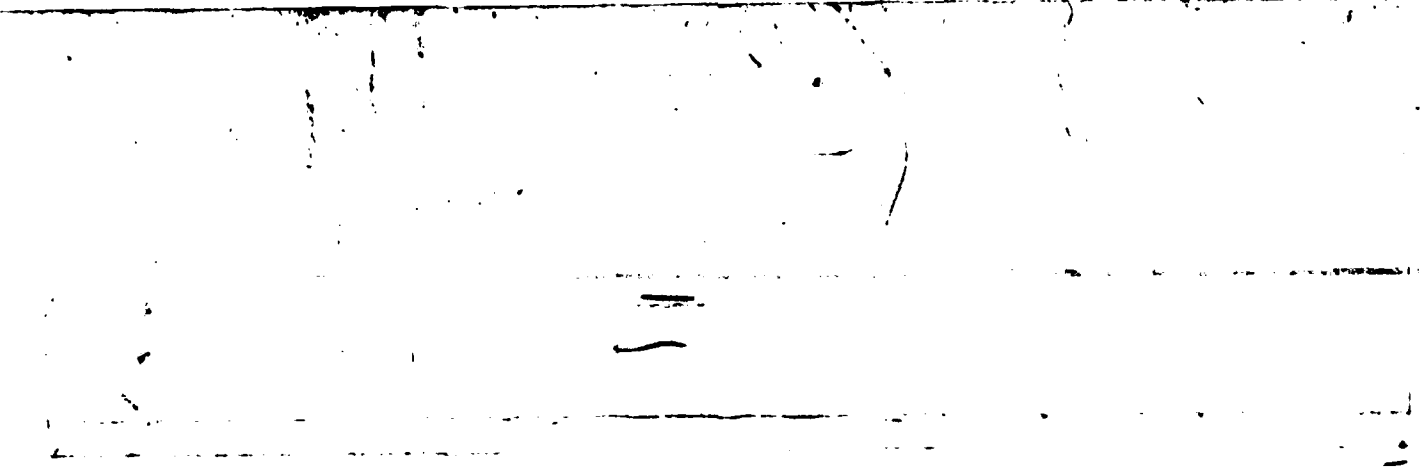
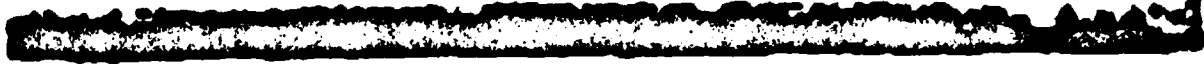
73



93-45 2/10/01

93-45

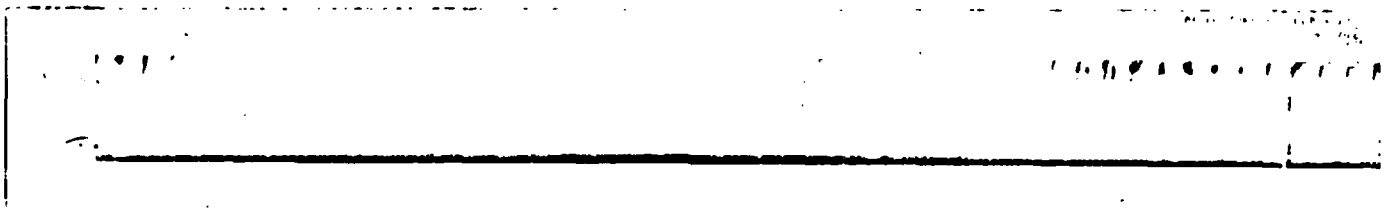
71



93-46

Paper Cross

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93-49

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75-61 A.T. 2/10/71  
93-61

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93-90 N.T. 2/10/81

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93-69 2/18/81 NY (C)  
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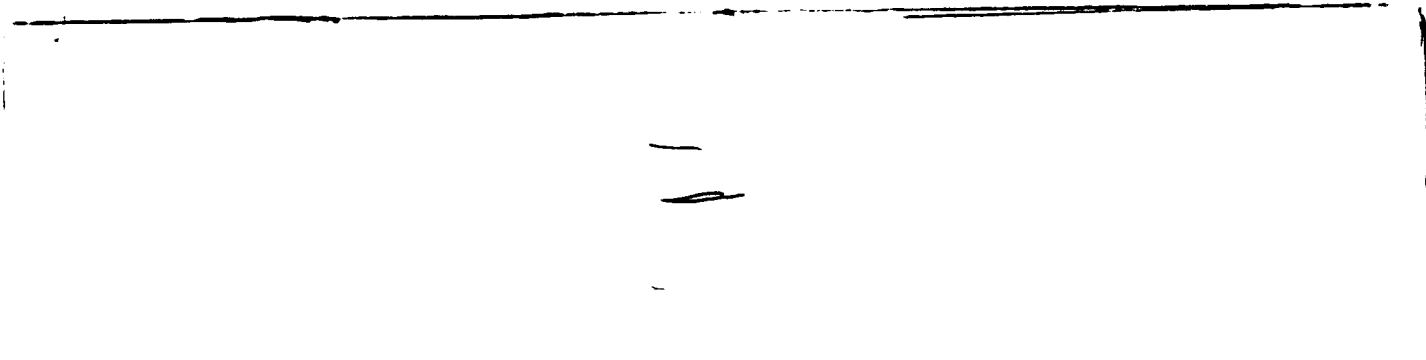
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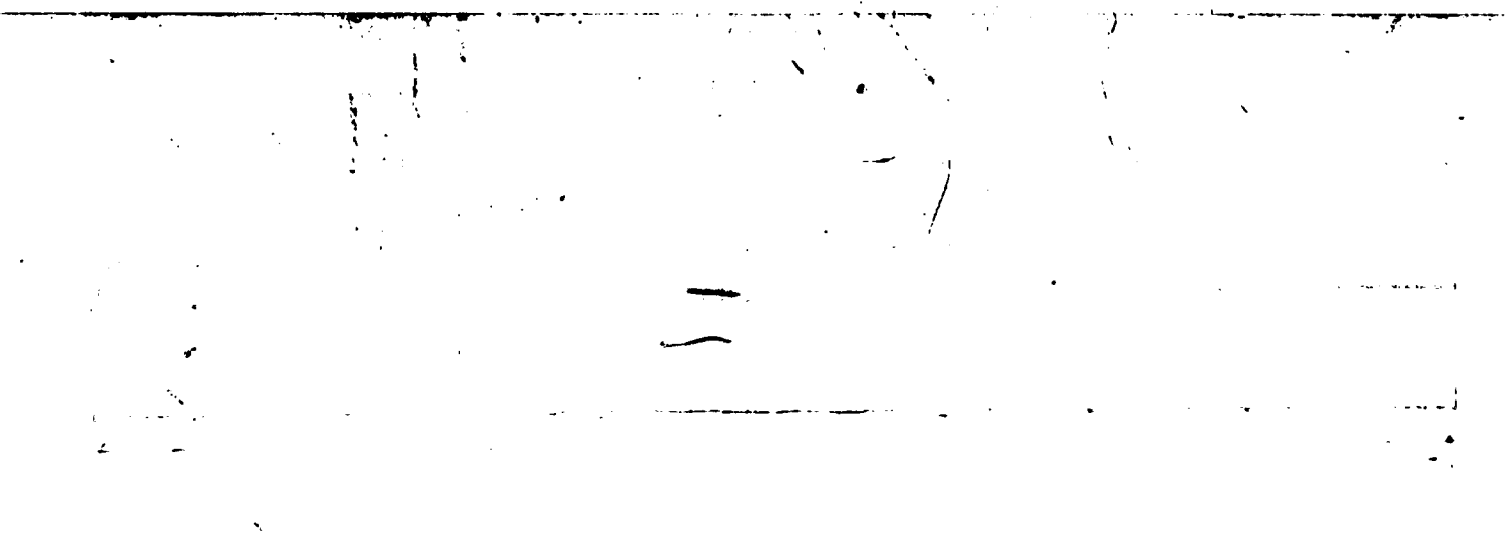
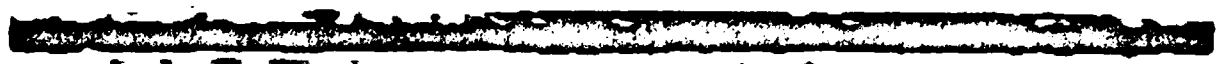
4/11/91 (2)

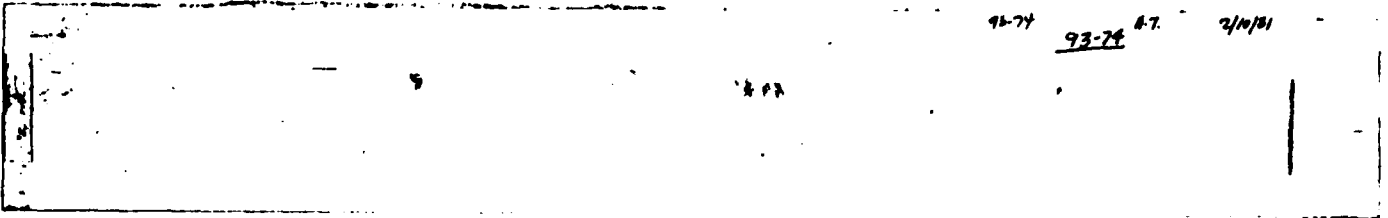
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• Paper Cross



374		93-72 ② 2/11/84 93-72
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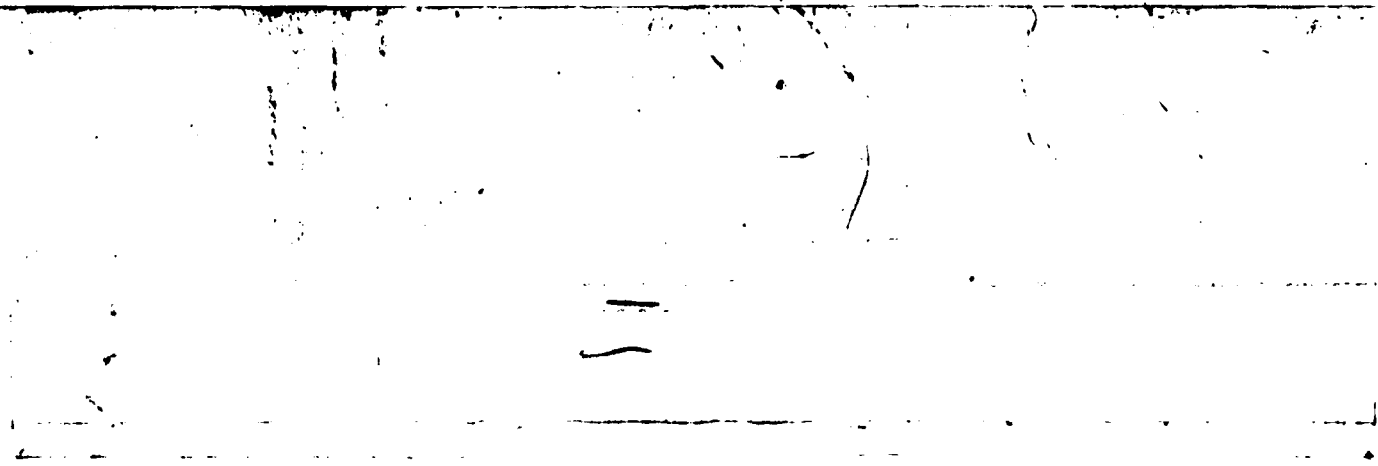
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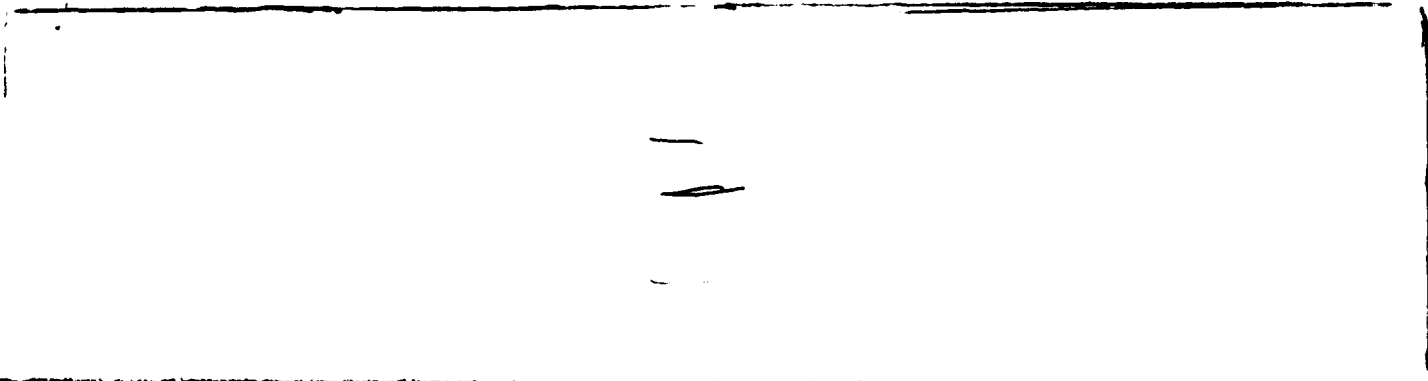
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2/10/81

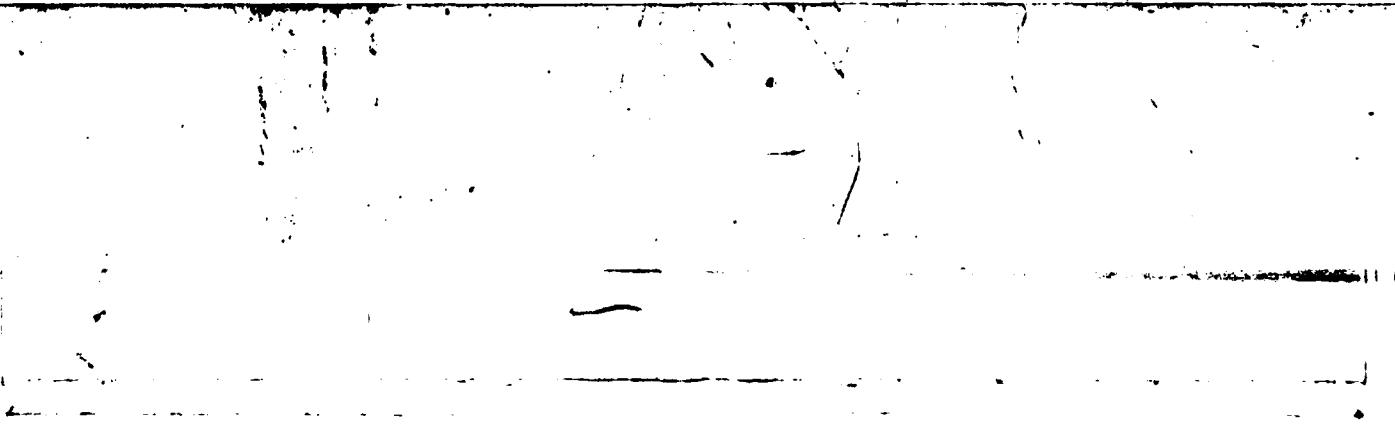


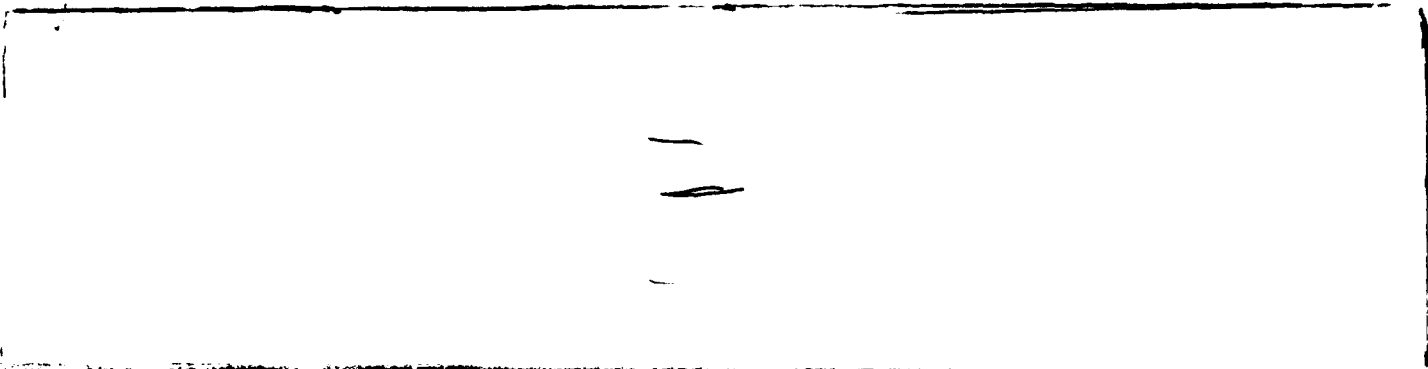
	93-71	A-7	2/11/01	② <u>93-71</u> 
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<p>93-77</p> <p>97</p> <p>युनि०</p> <p>93-77</p>	<p>93-77</p> <p>97</p> <p>युनि०</p> <p>93-77</p>
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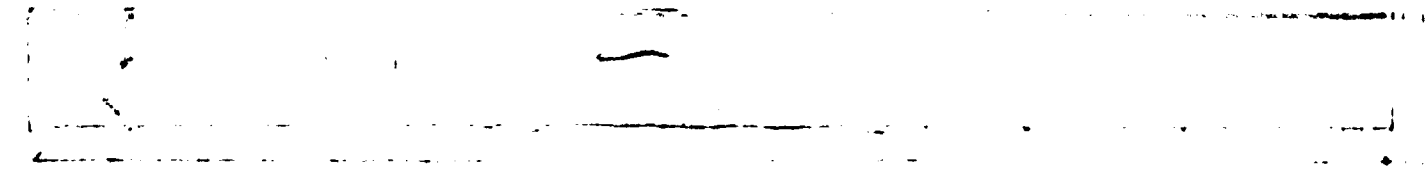
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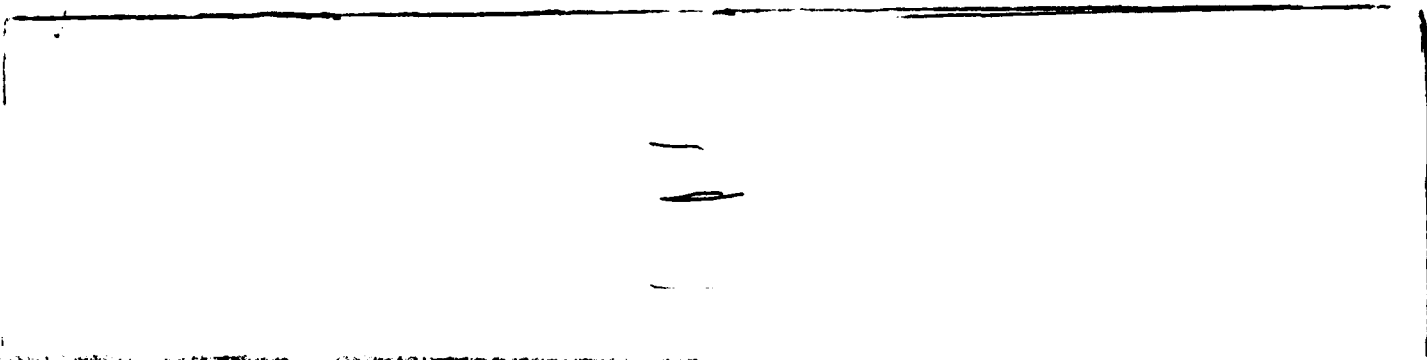
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93-93





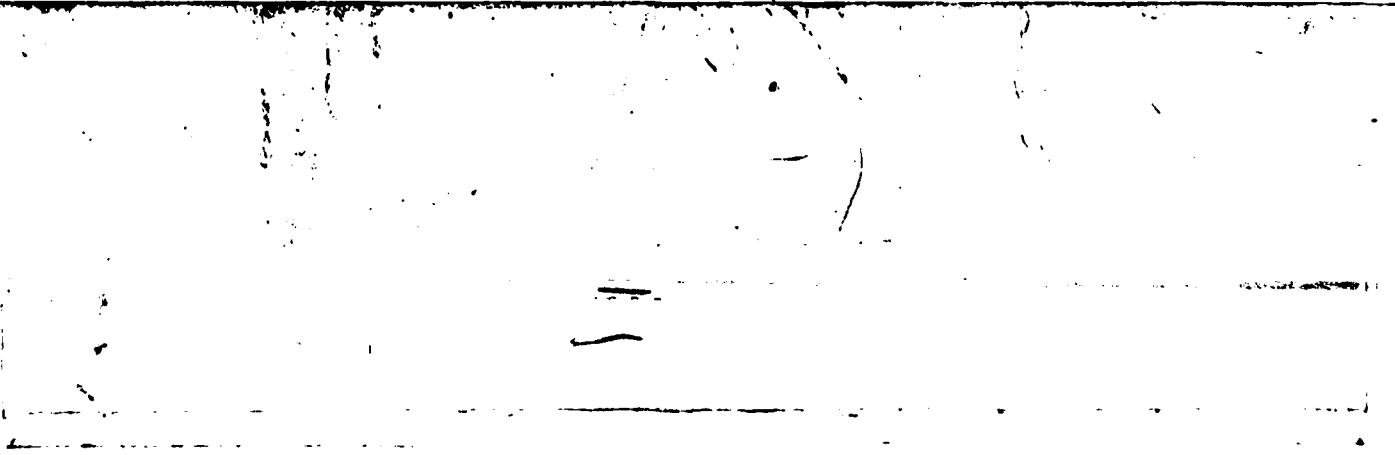
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Vertical text on the left margin: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100



91-100 HC 2/2/81  
93-100

• Paper Crease

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93-101  
93-101

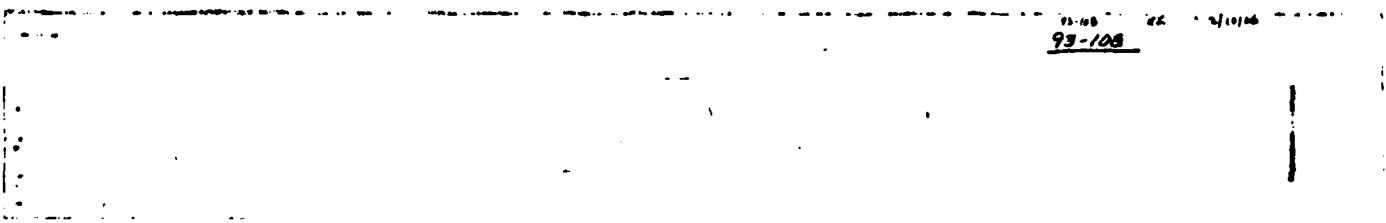
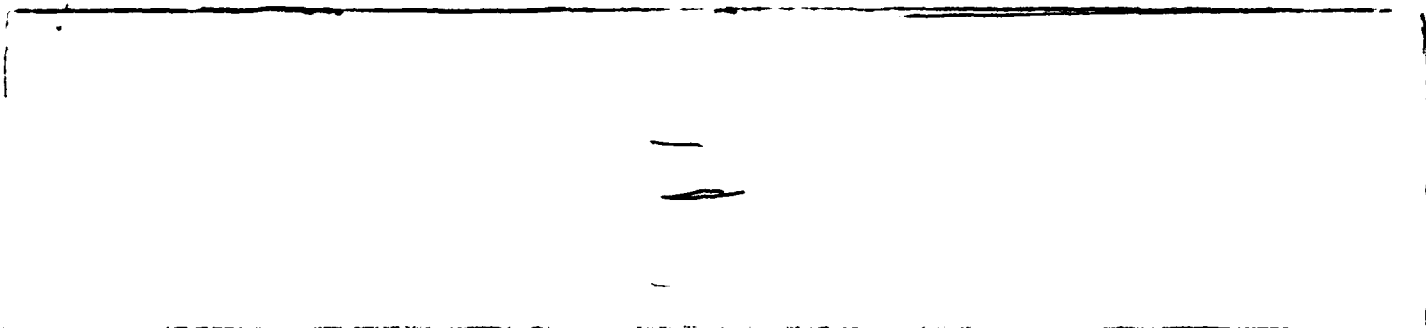
H.T. 4/10/81.

• Paper Cross

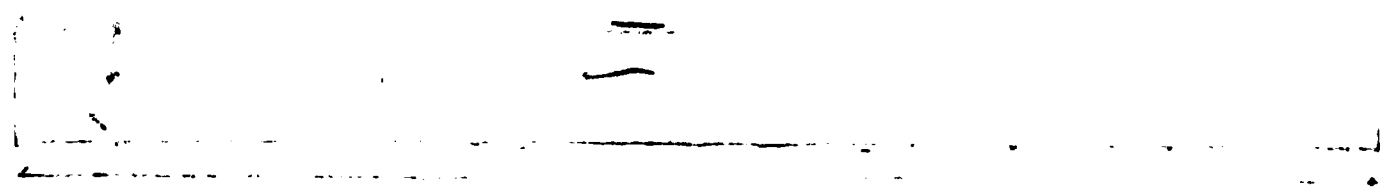
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93-173 87. 2/5/01. 93-113

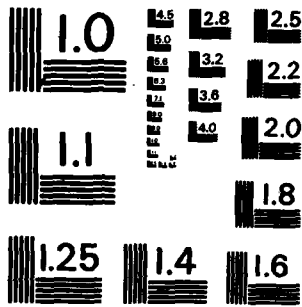


	93-120	47	2/10/91
	<u>93-120</u>		

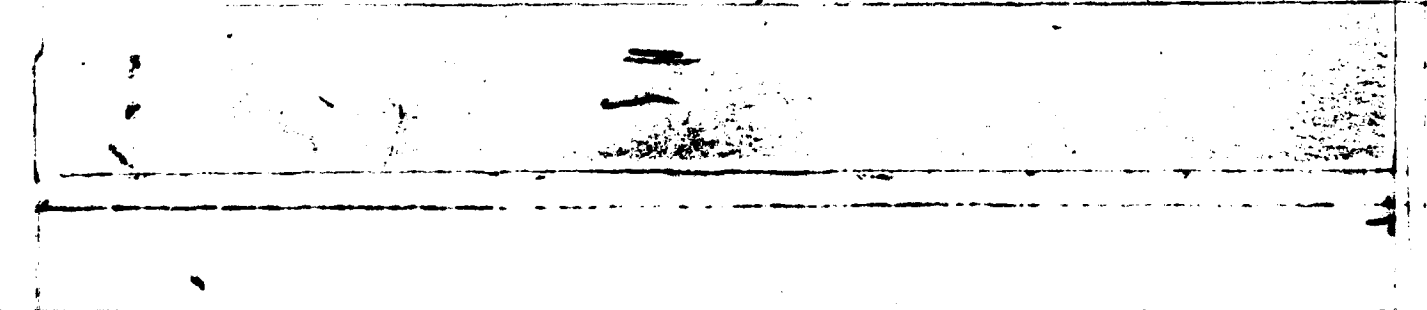
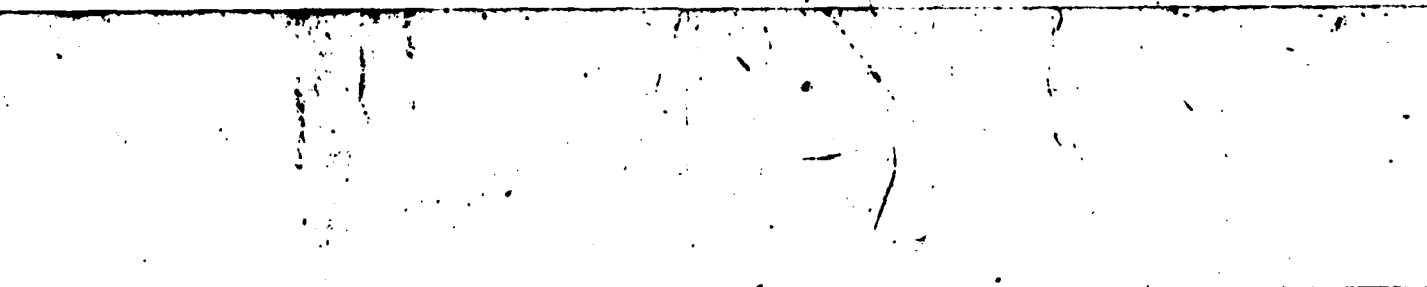
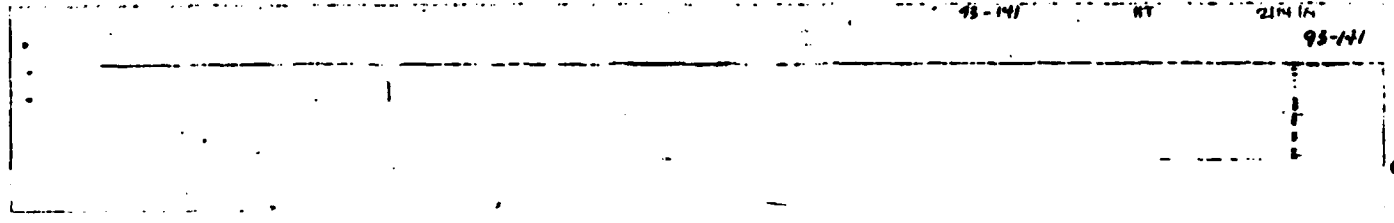
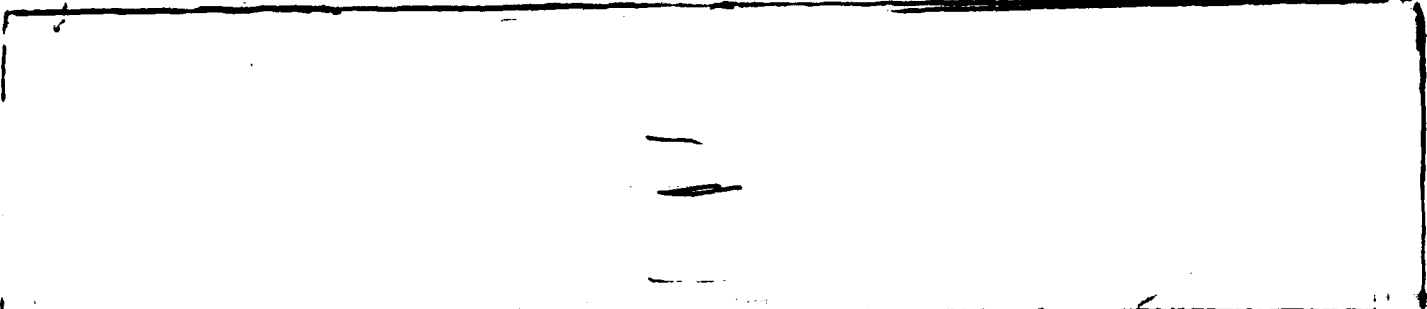








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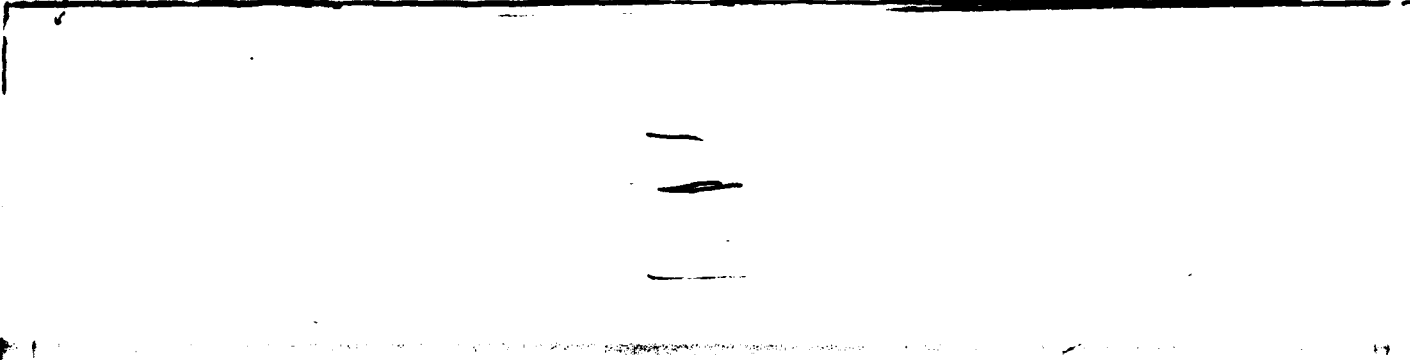
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95-104

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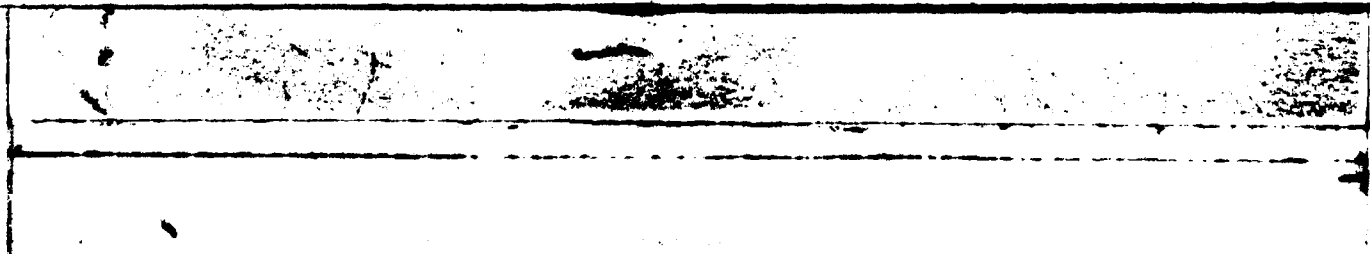
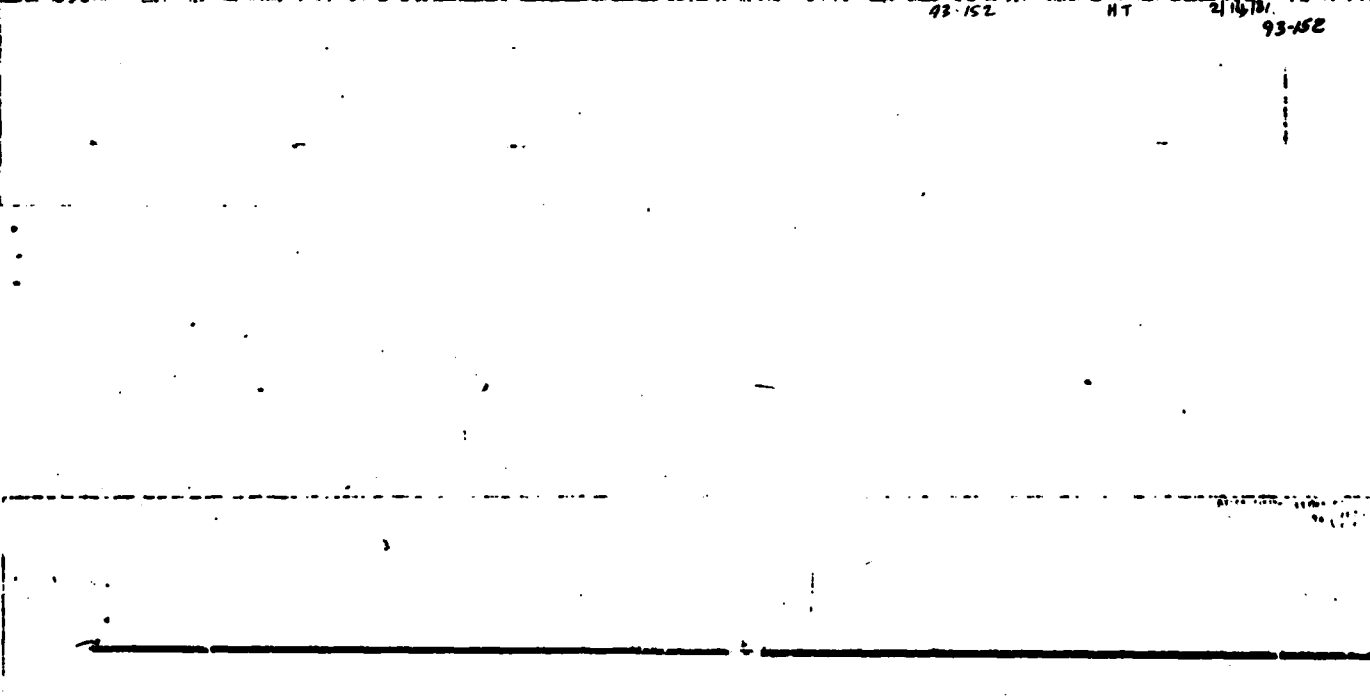


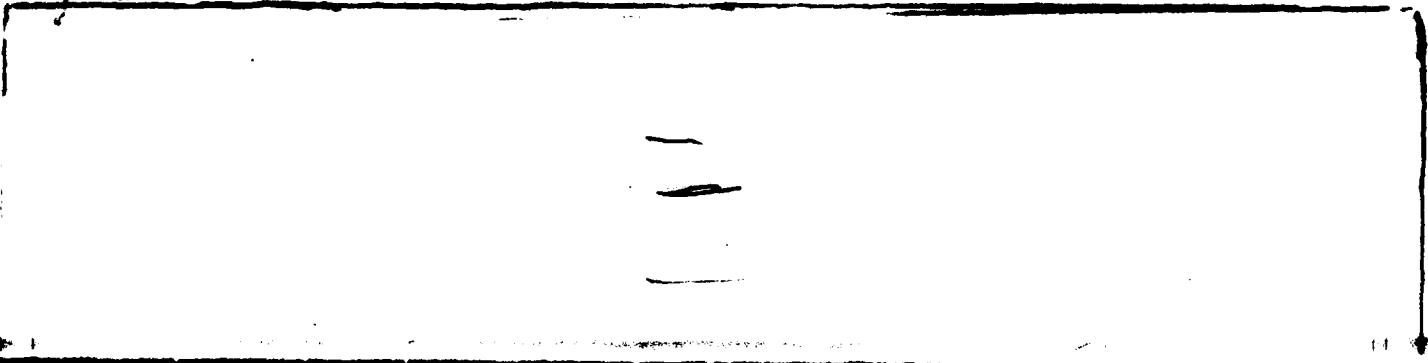
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93-152

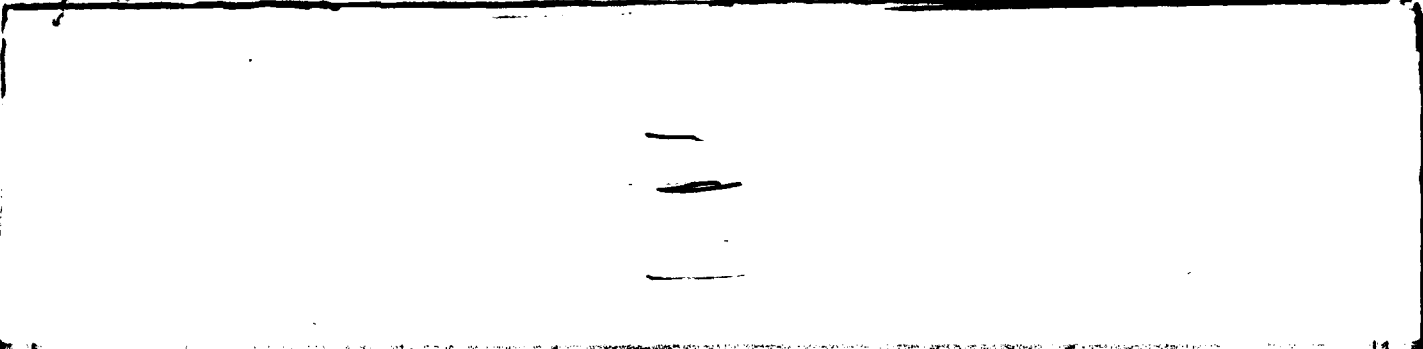




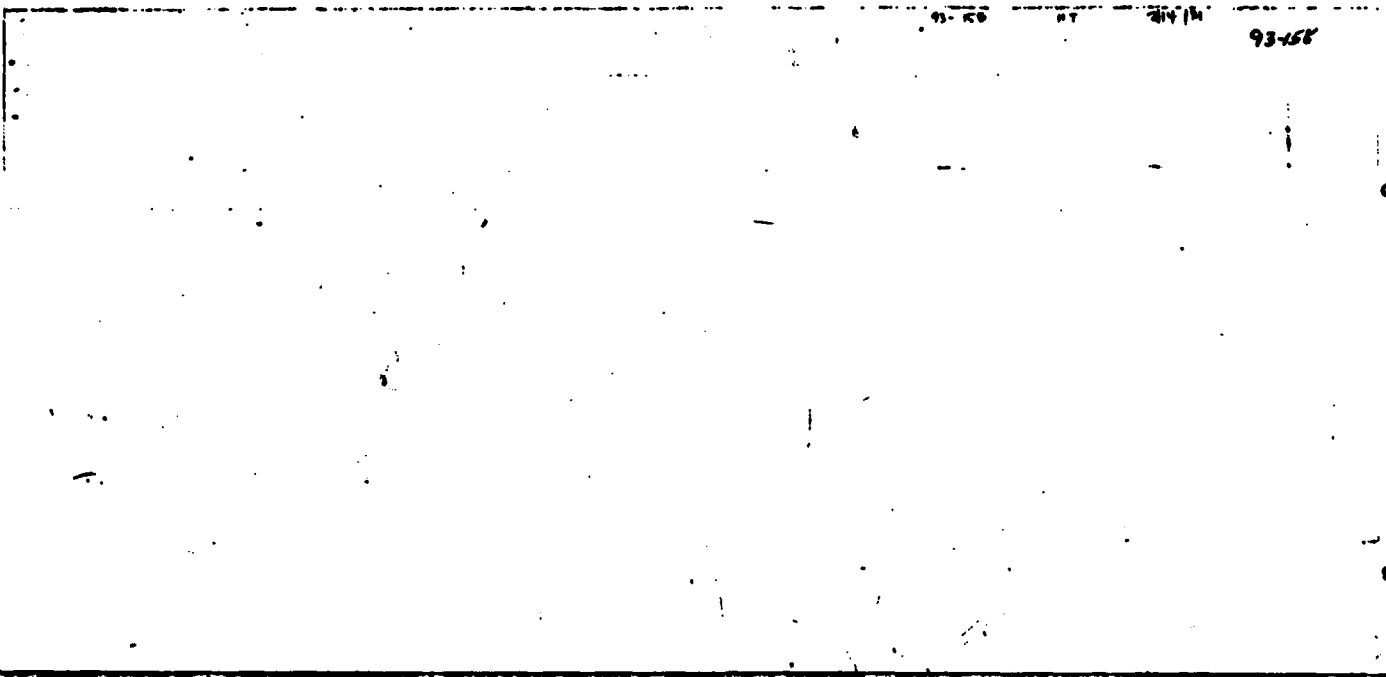
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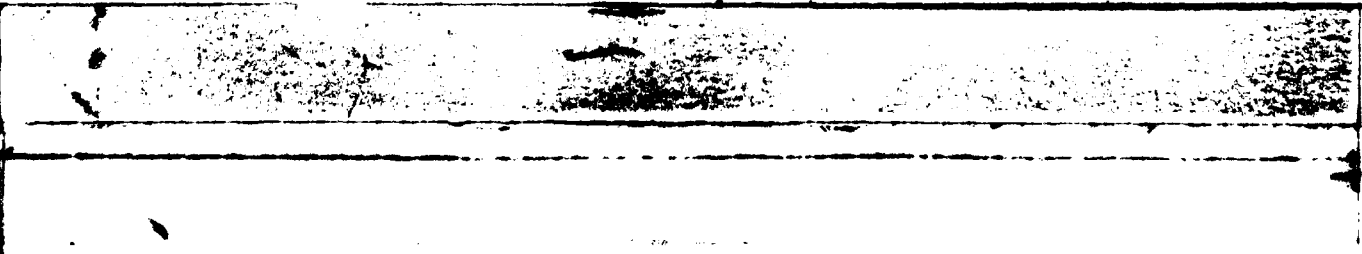
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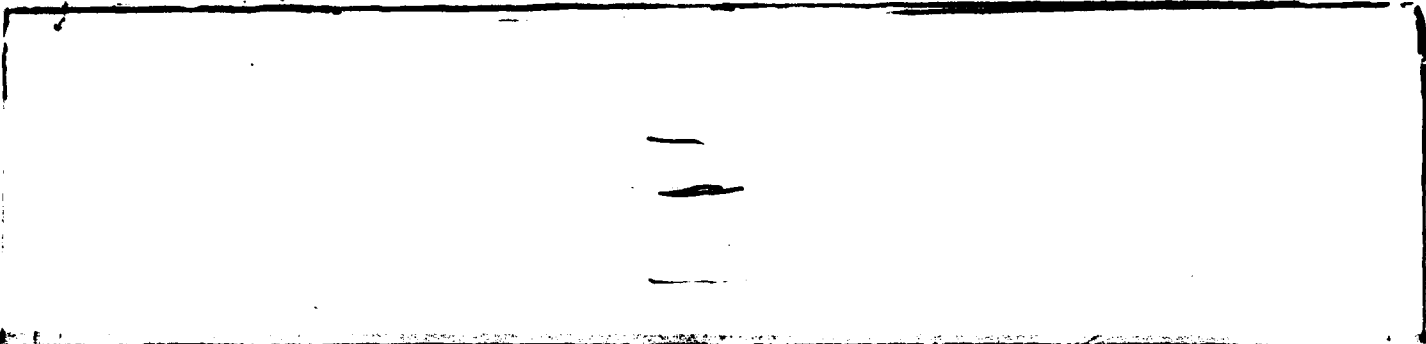


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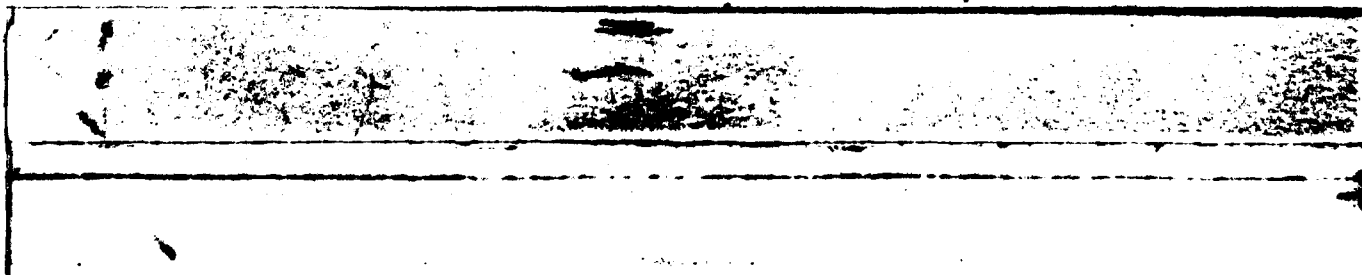
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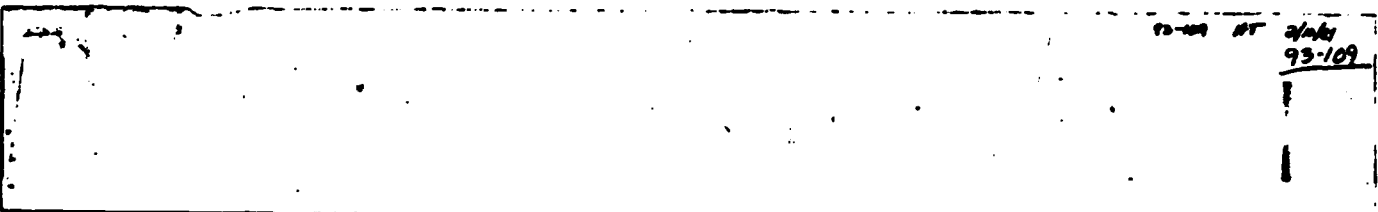
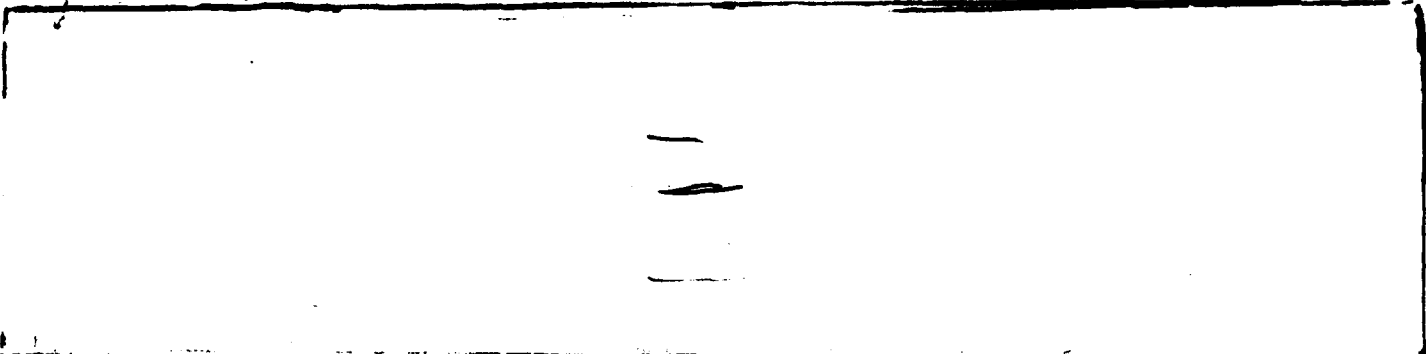




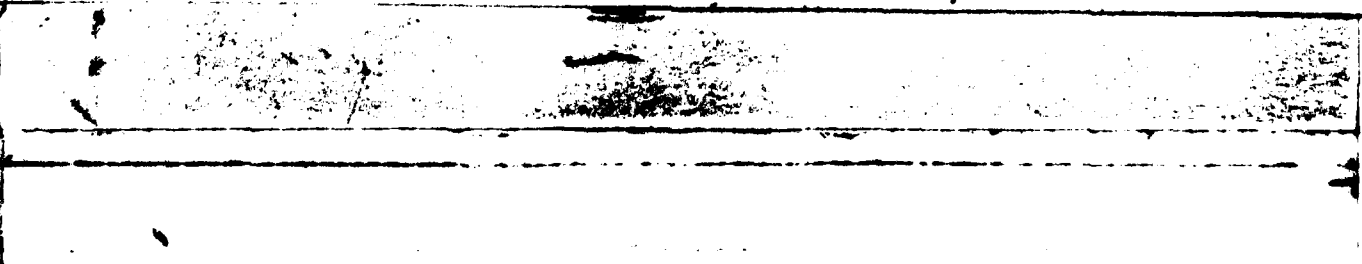
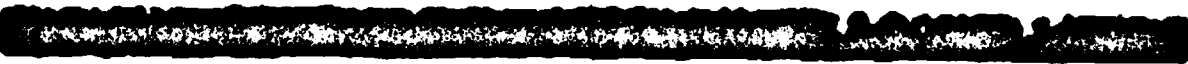
95-107 87 2/17/58  
93-139

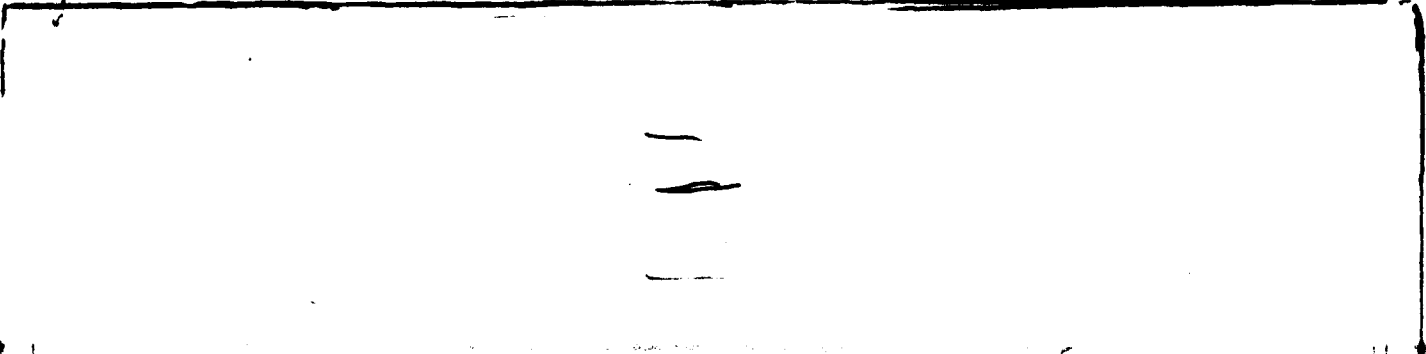
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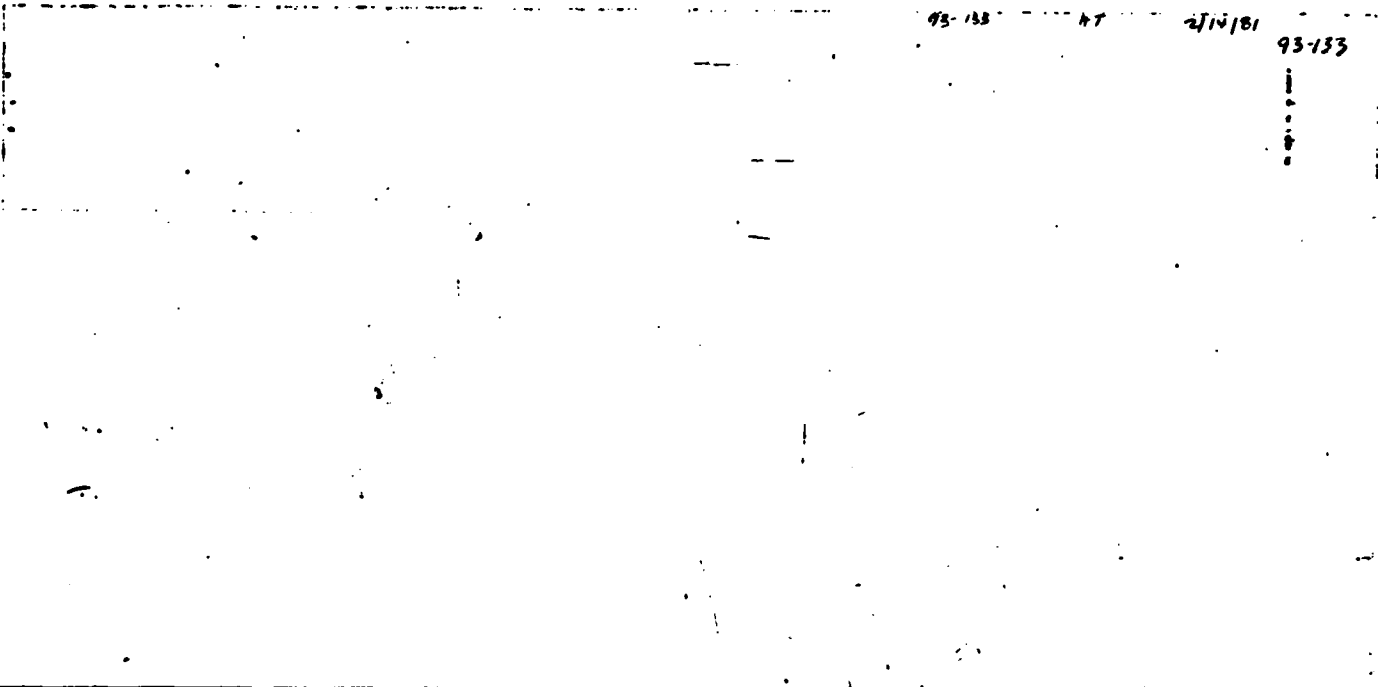


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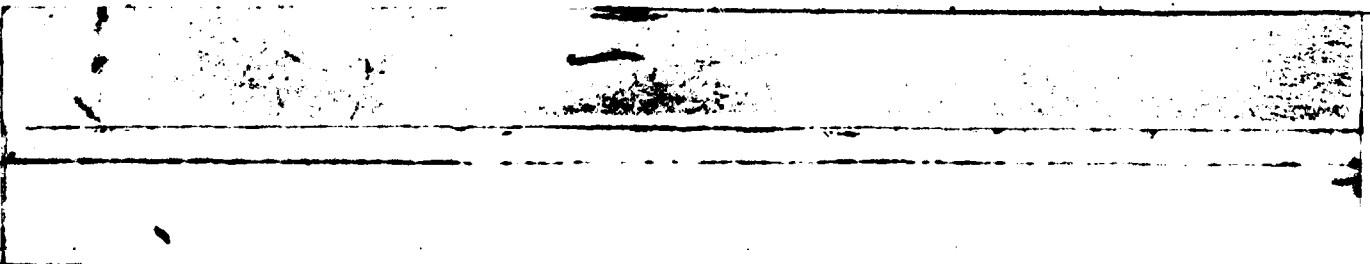


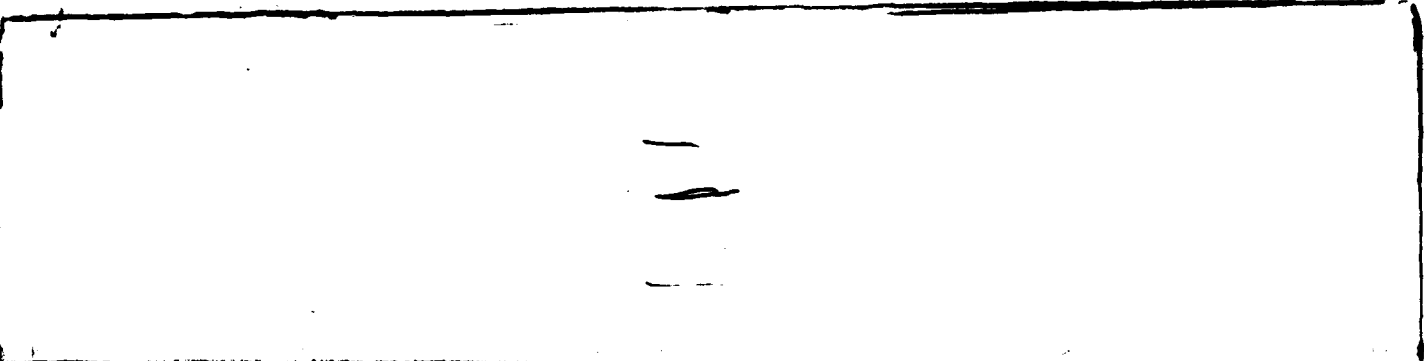
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93-133 RT 2/19/81 93-133

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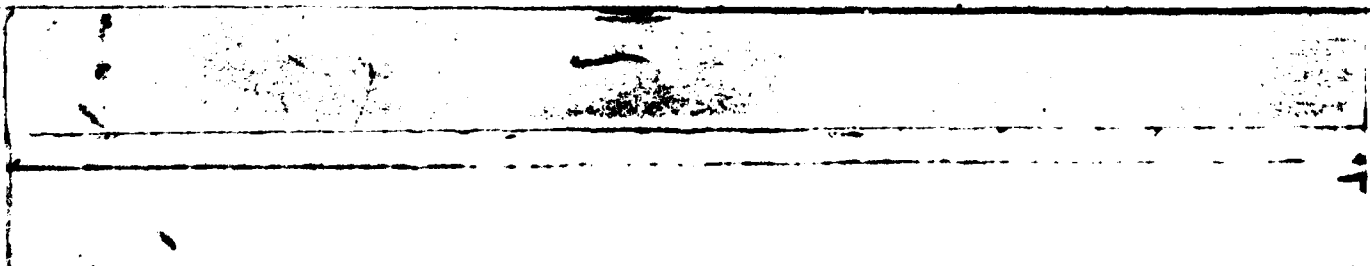


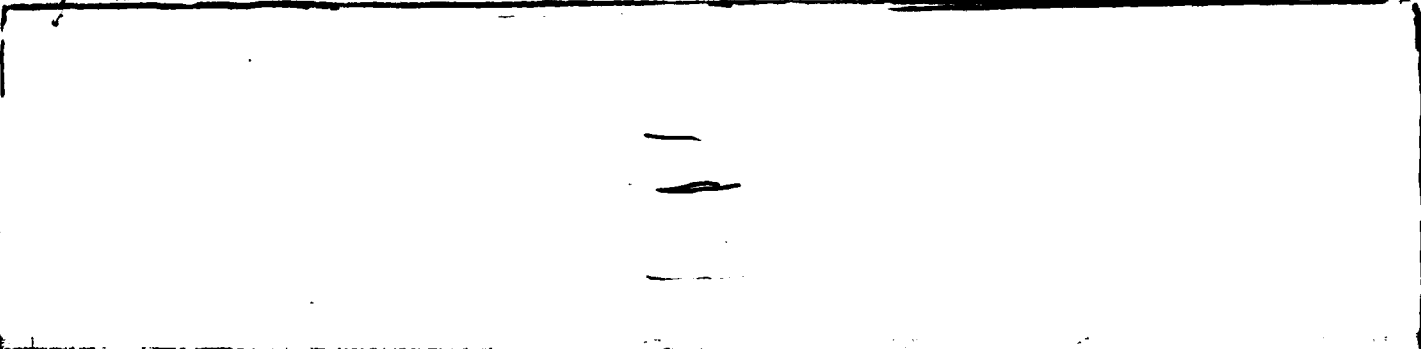
98-39

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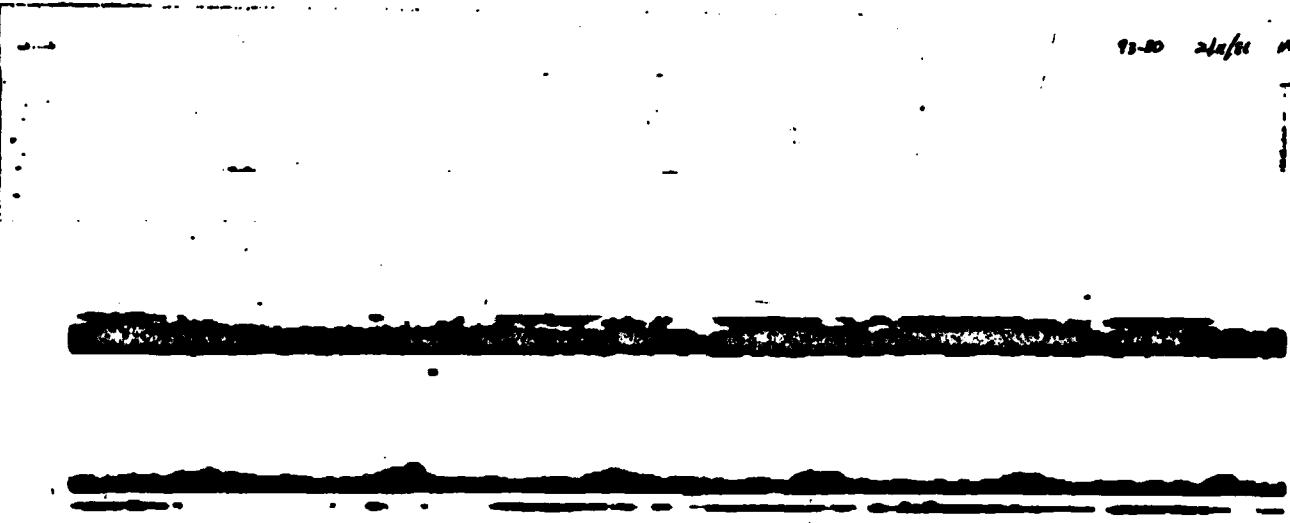


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93-80 2/1/81 # ②  
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93-122

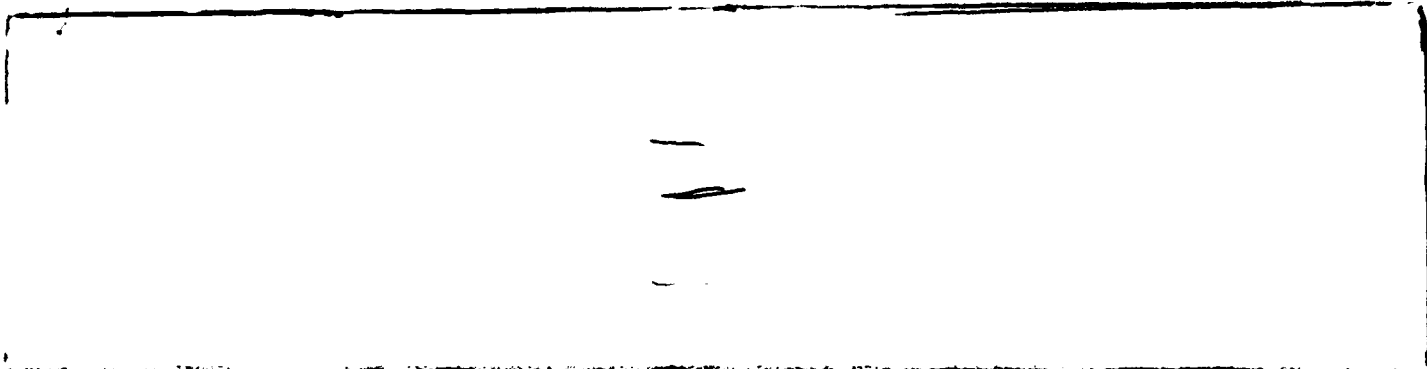
2/10/91

122

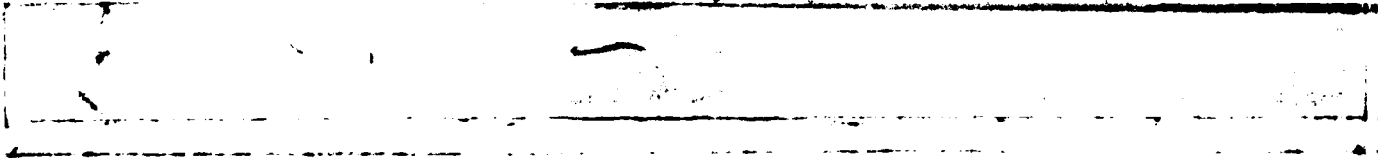
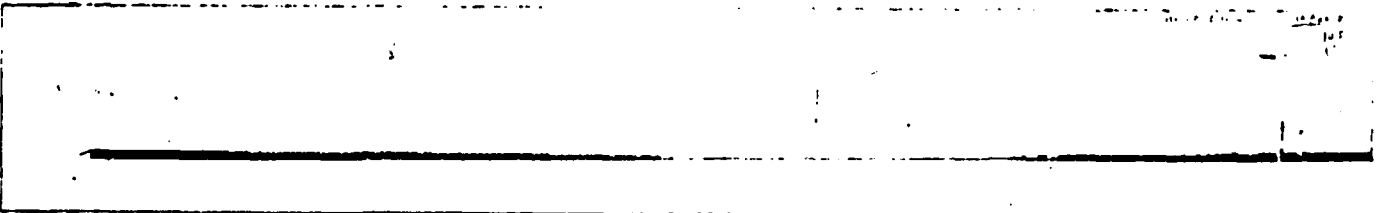


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[Faint, illegible text or markings]



93-128 #7  
10/10/87

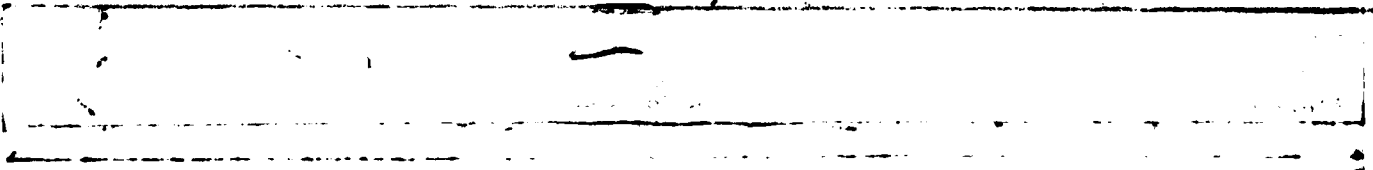


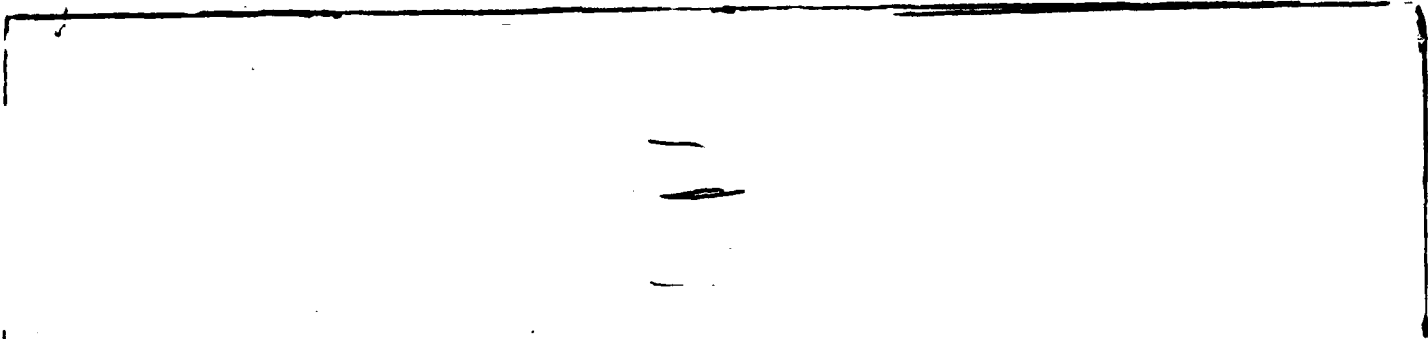


93-117 R.C. 2/10/81 93/17

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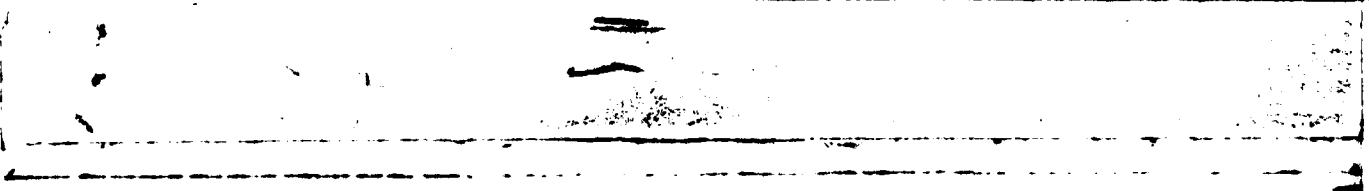
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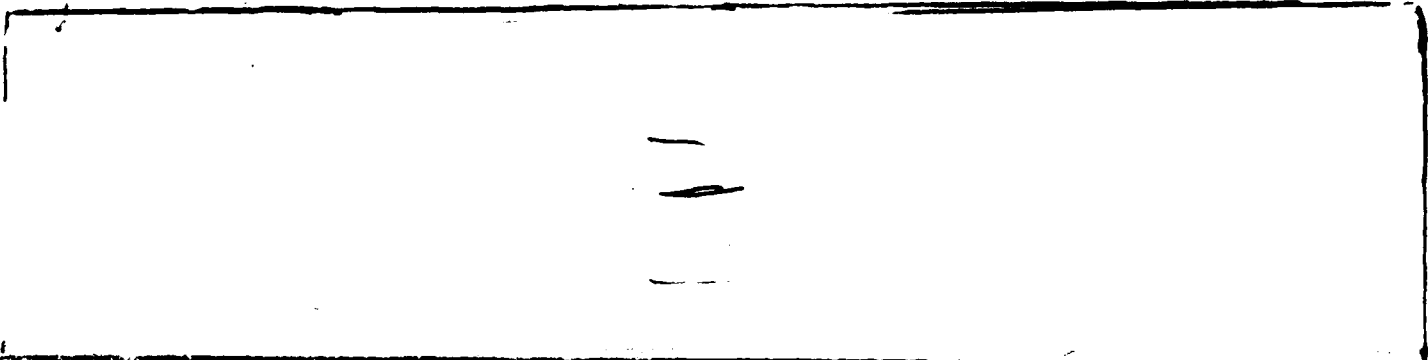
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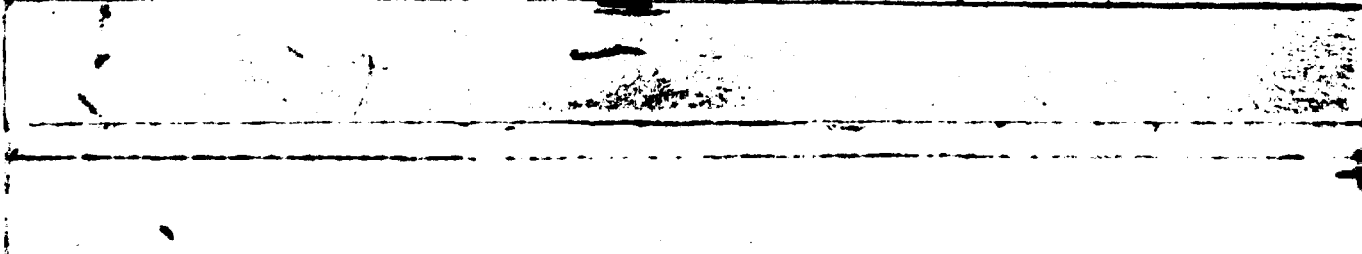
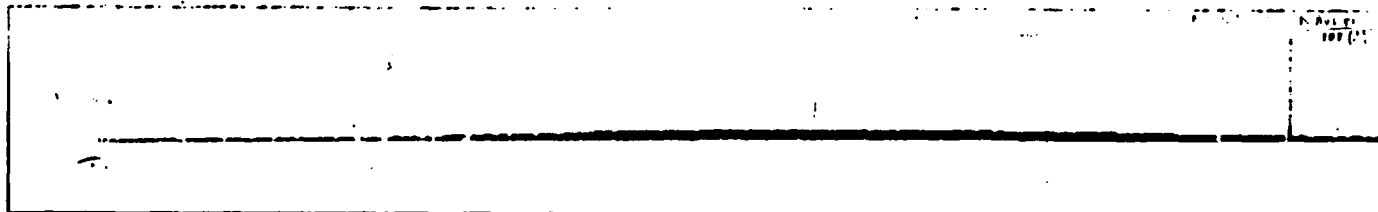
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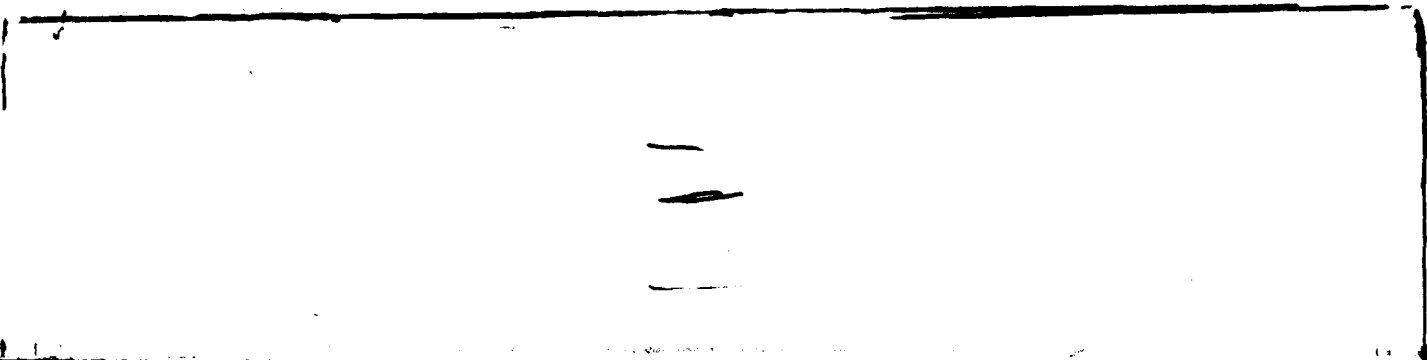




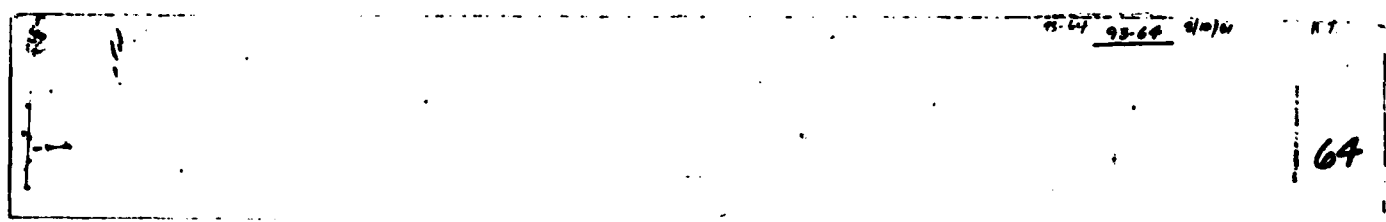
73-12 2/21/74 NY 100 93-12







64



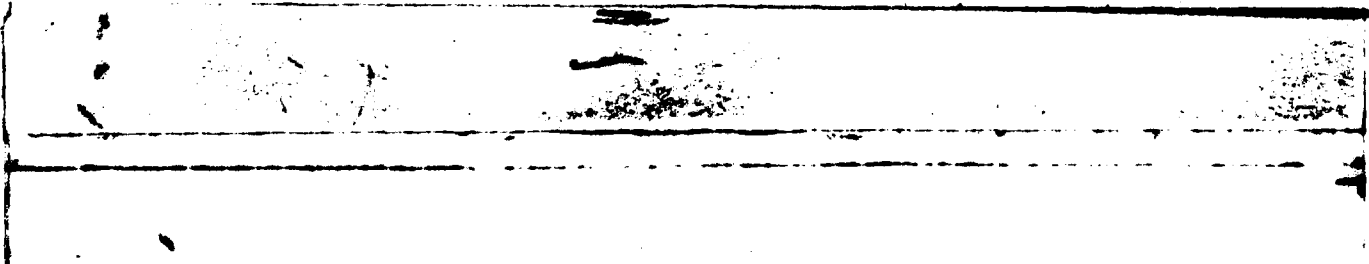
93-64 2/10/64

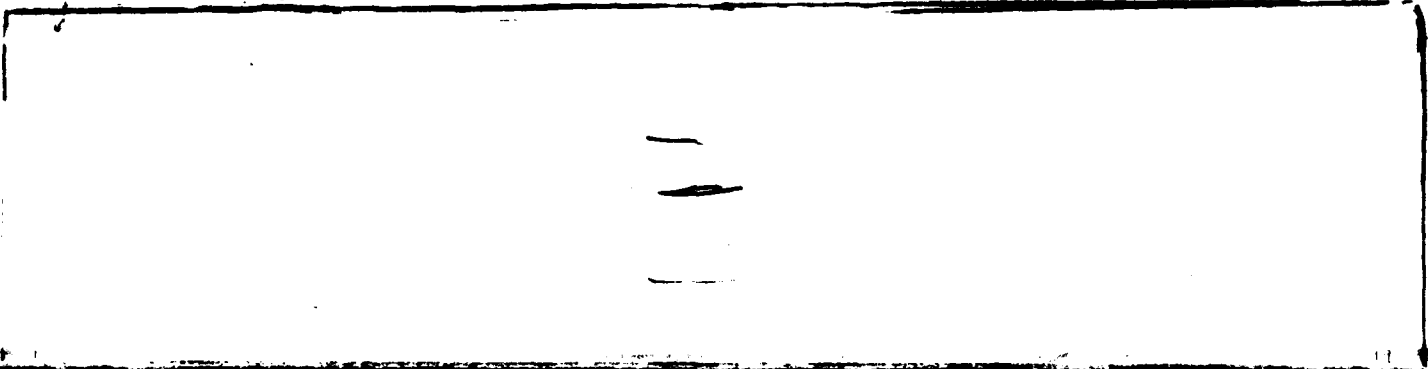
64

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Faint, illegible text or markings within a rectangular frame.

93-76

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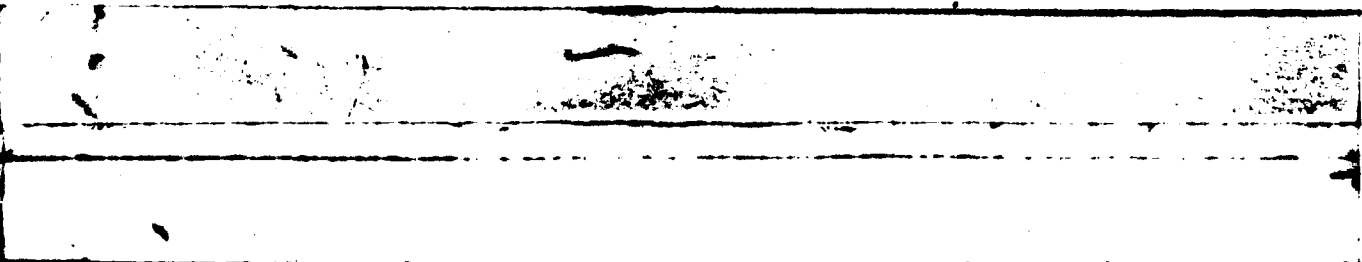
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93-76



Faint, illegible text or markings within a rectangular frame, located below the redaction bars.



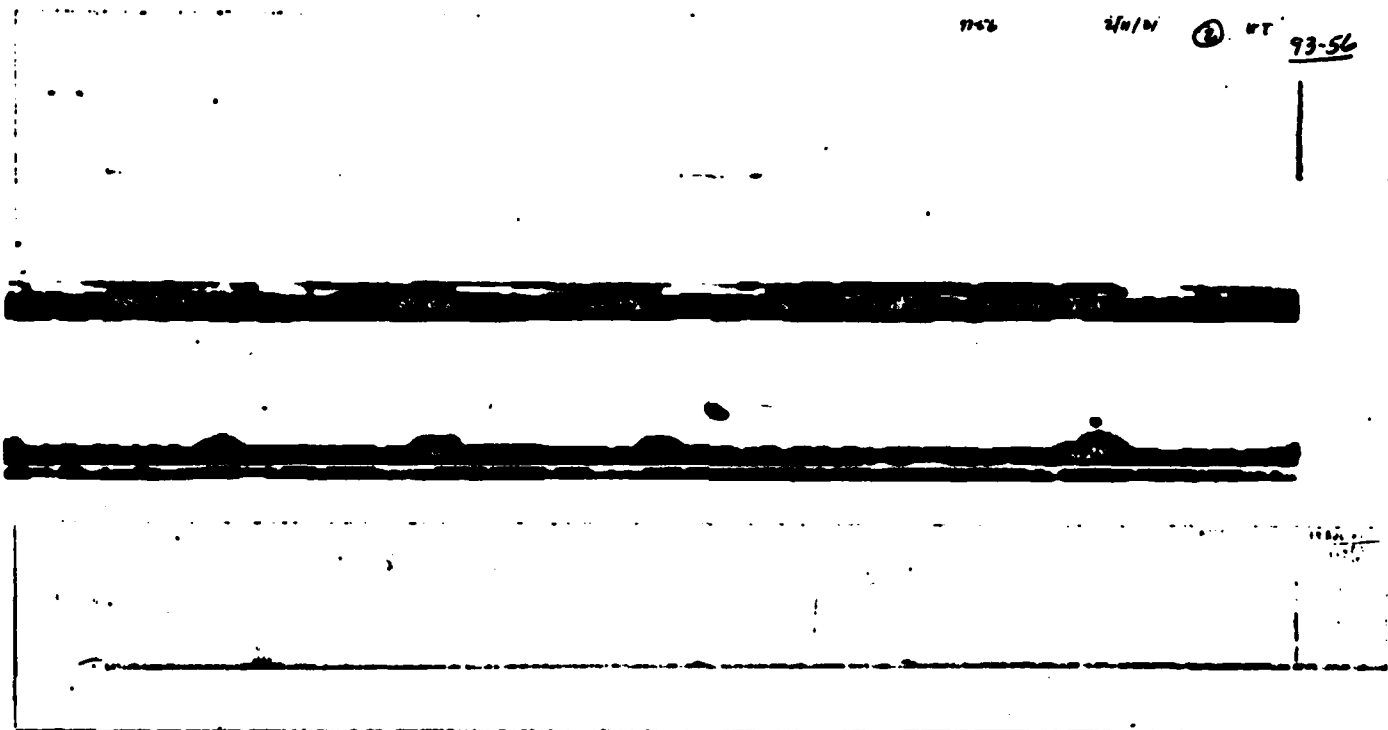
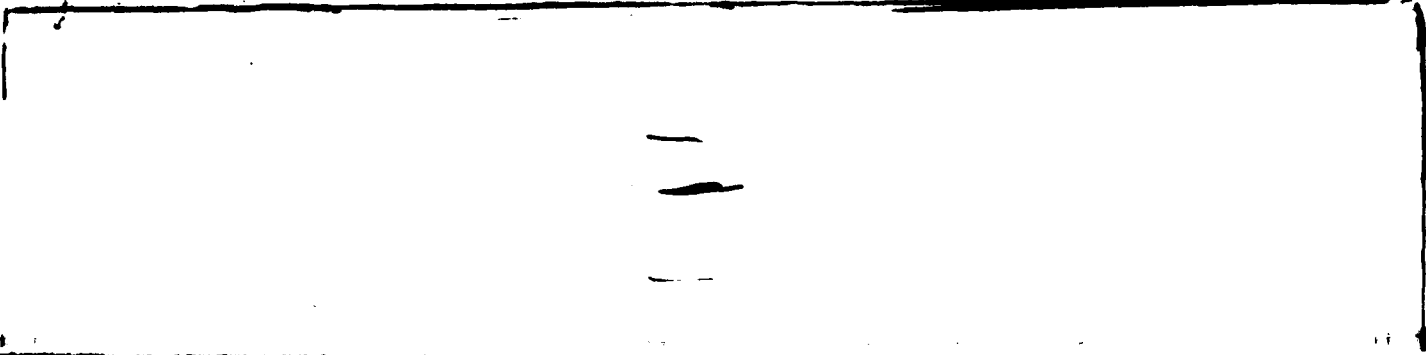
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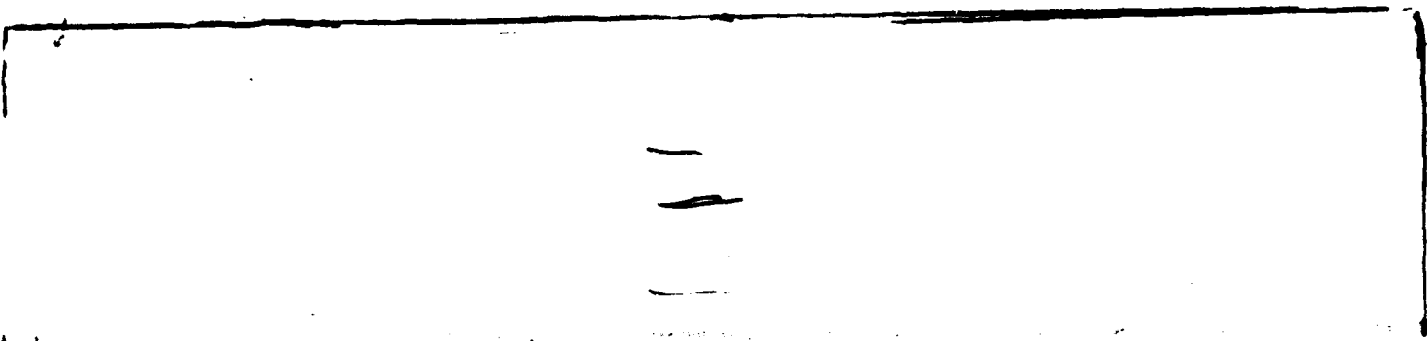
② RT

93-56

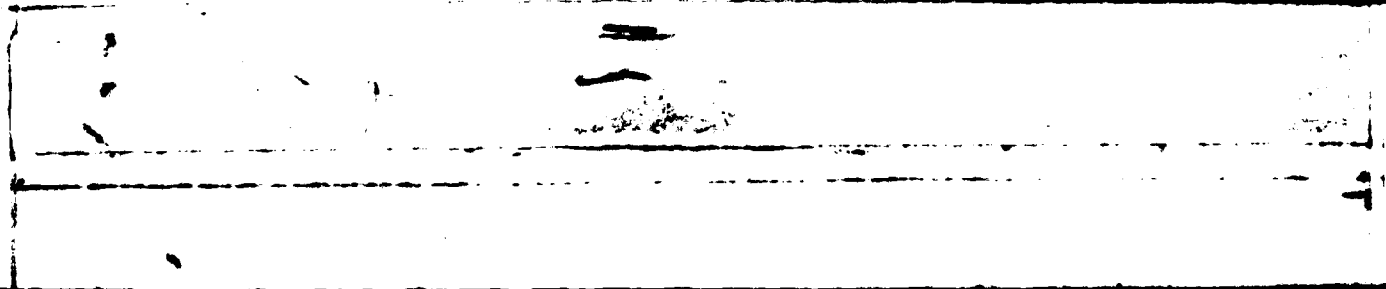
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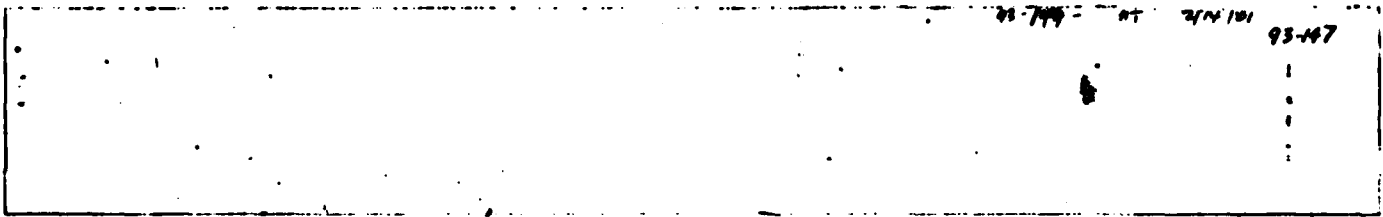
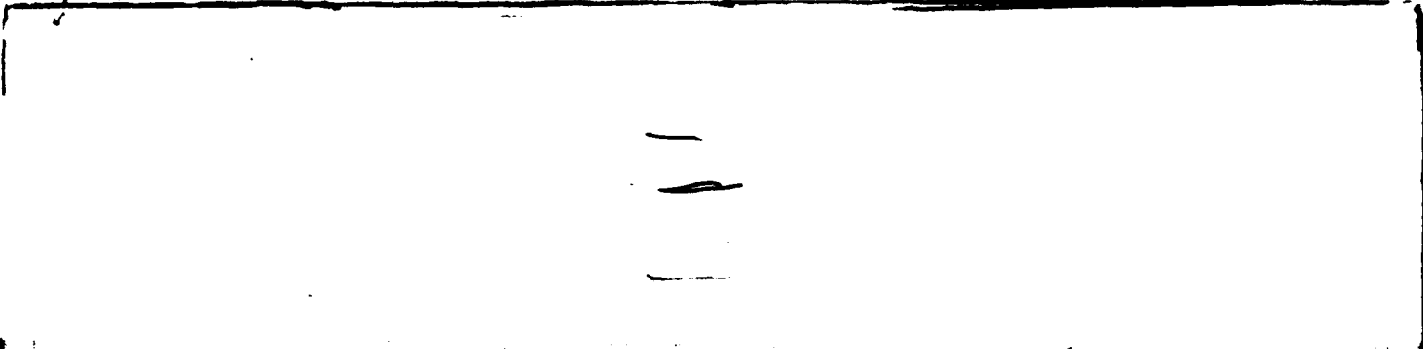
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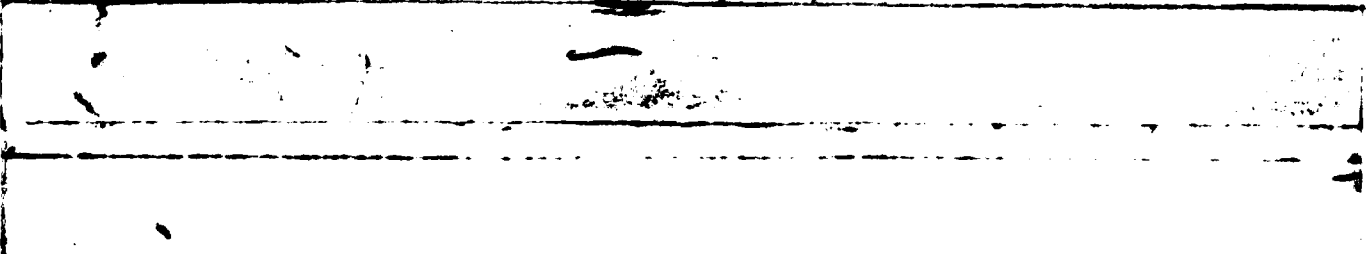


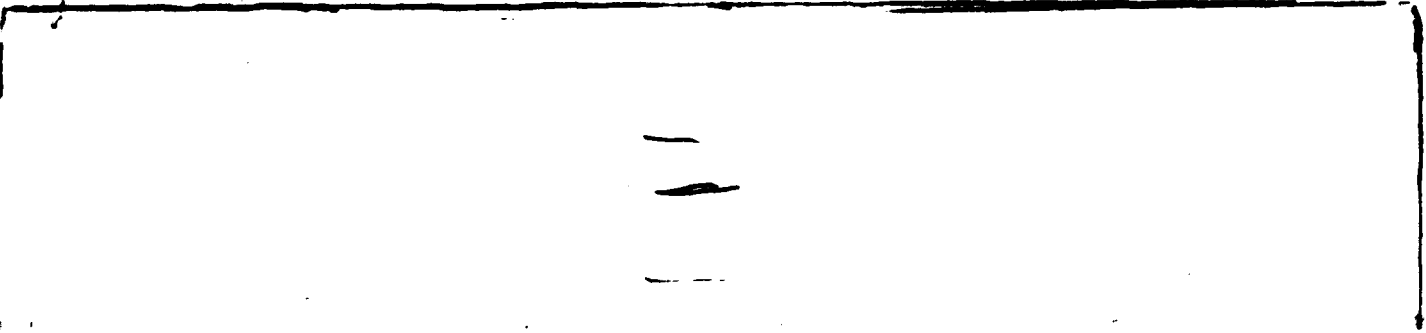
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98-44 71-22 27. 2/10/01

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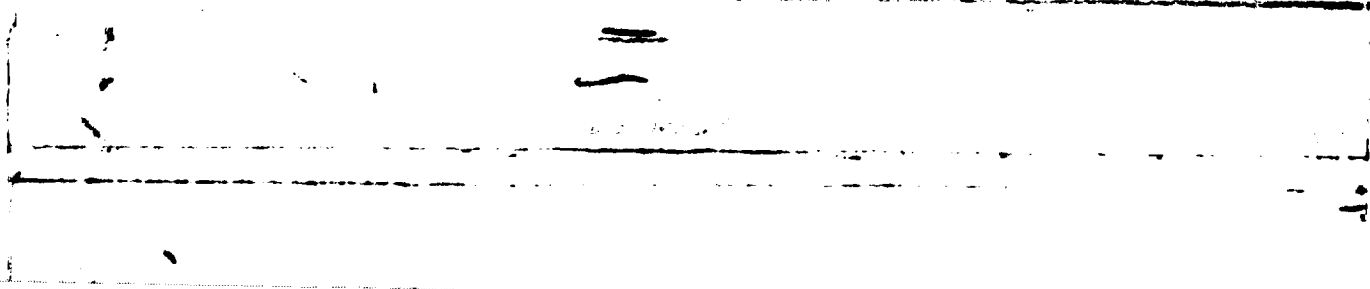
117 (2)

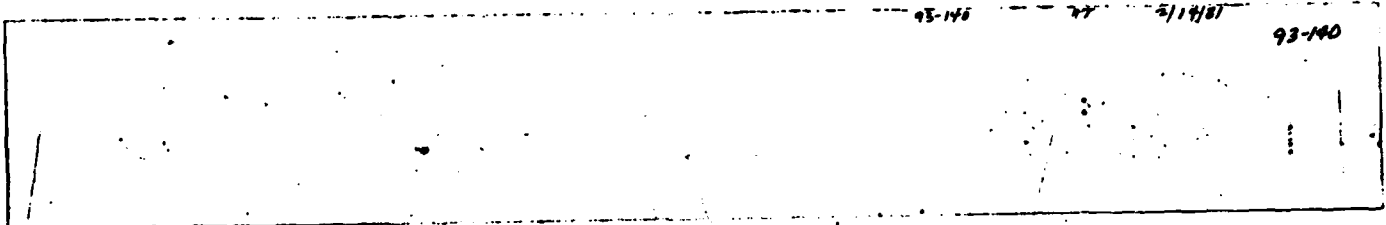
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93-53 17 2/14/01 93-53



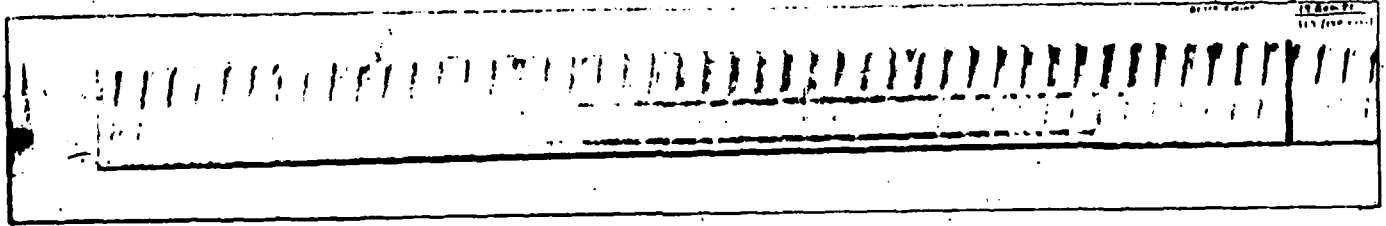


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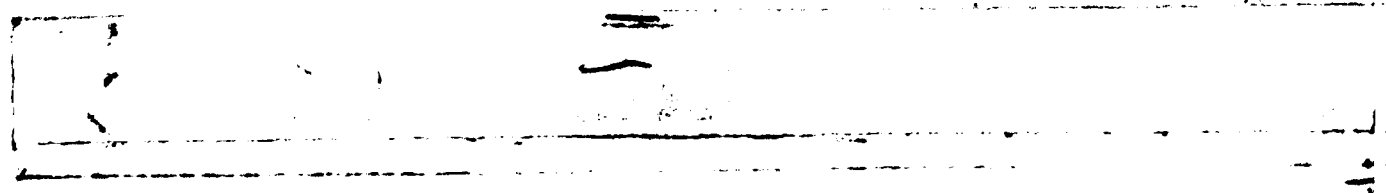
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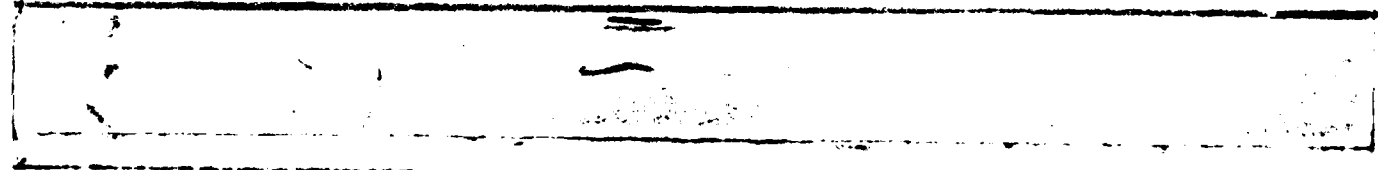
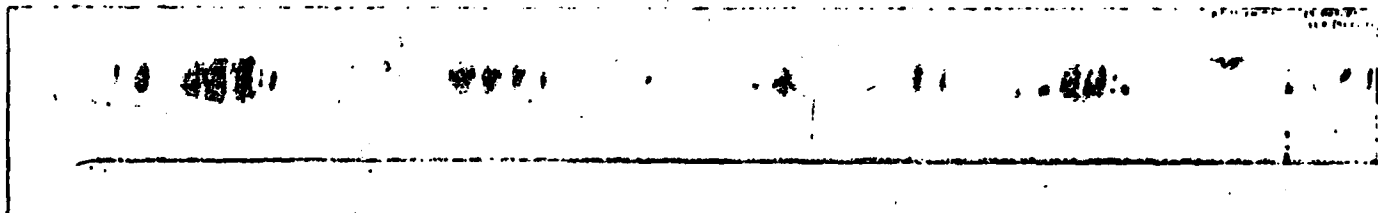
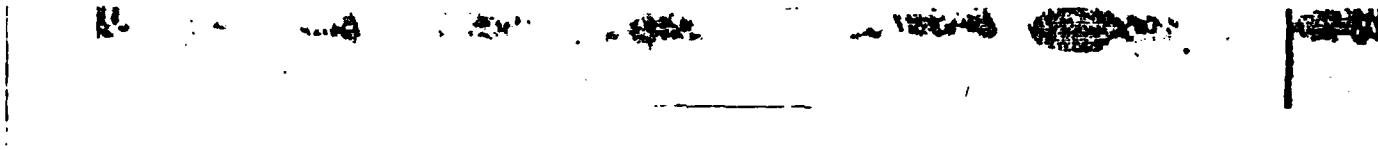
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