PLAINTIFF'S
EXHIBIT
FOS-805

FOSECO INC.

20200 SHELDON RD.
CLEVELAND, OHIO 44142
(216) 234-3551

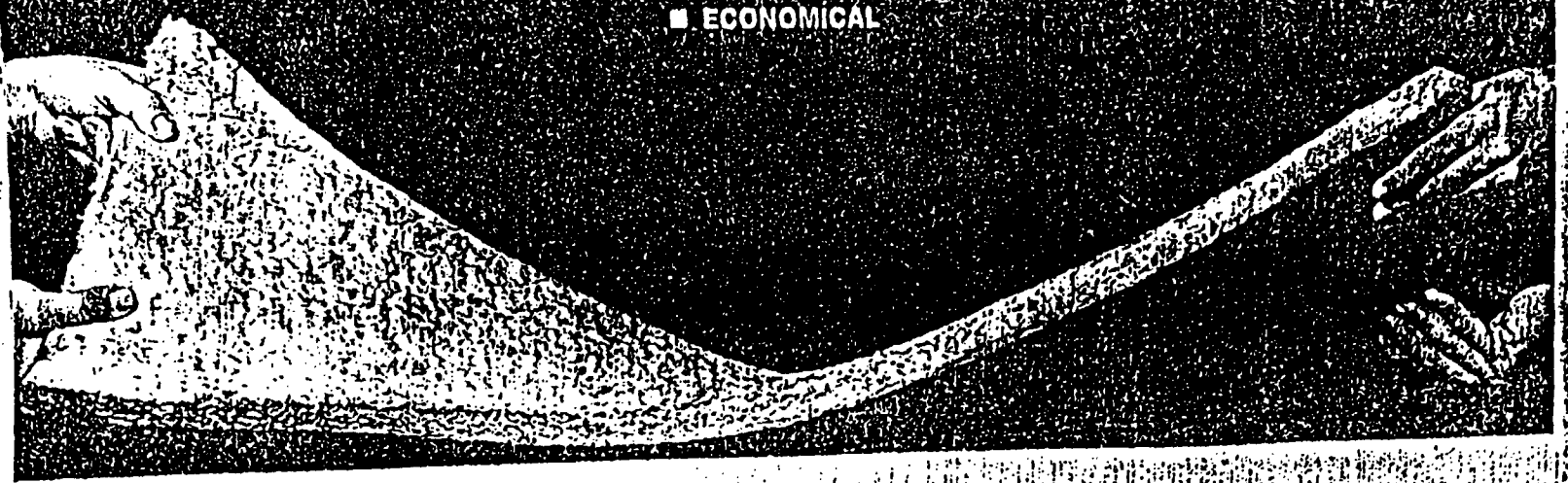
Proflex™

HOT TOP SYSTEMS

- EXPENDABLE
- LOW VOLUME
- FLEXIBLE
- COMPRESSIBLE
- LIGHTWEIGHT
- STRONG
- VERSATILE
- ECONOMICAL

ANOTHER "FIRST" FROM Foseco®

® INNOVATORS TO THE STEEL INDUSTRY



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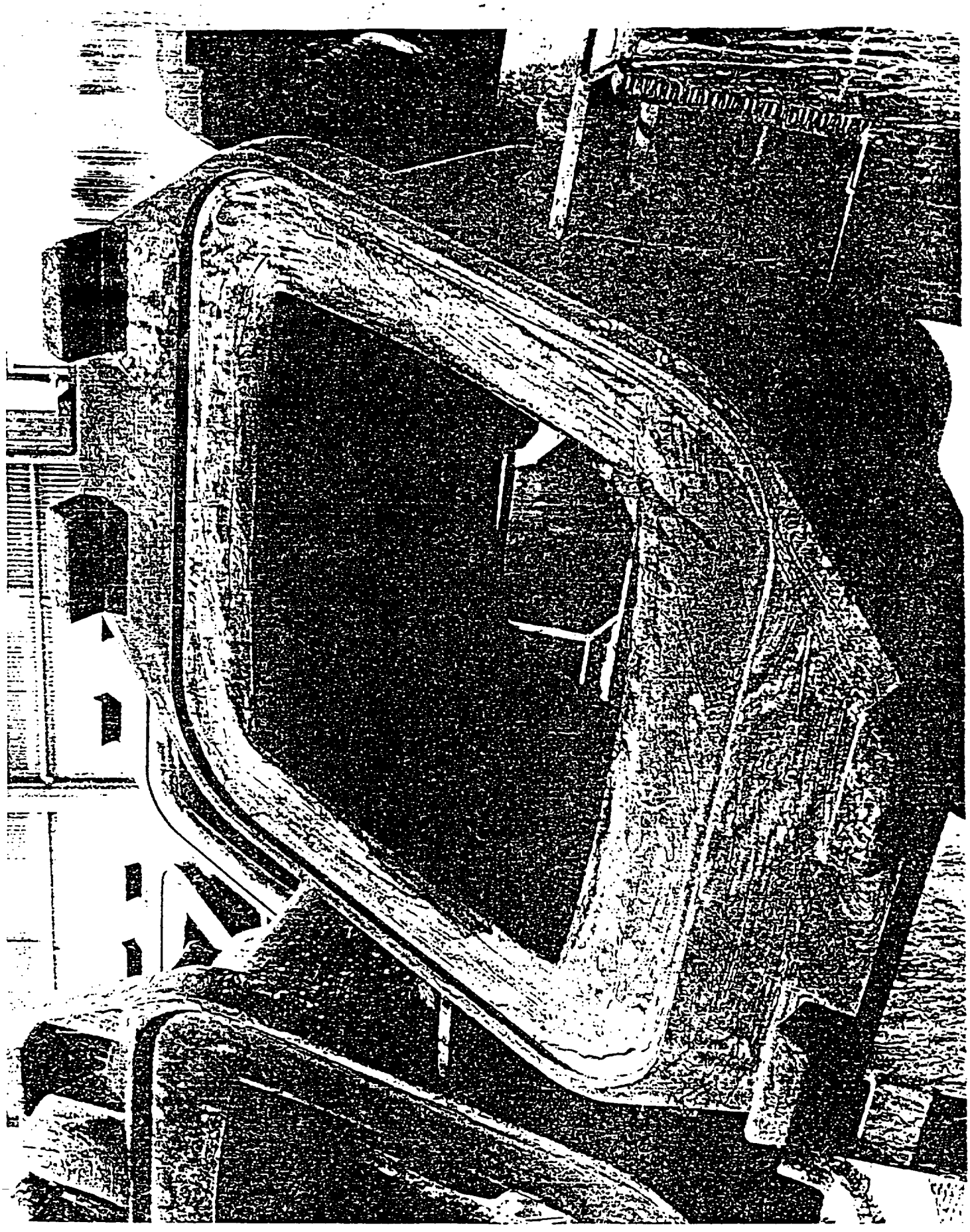

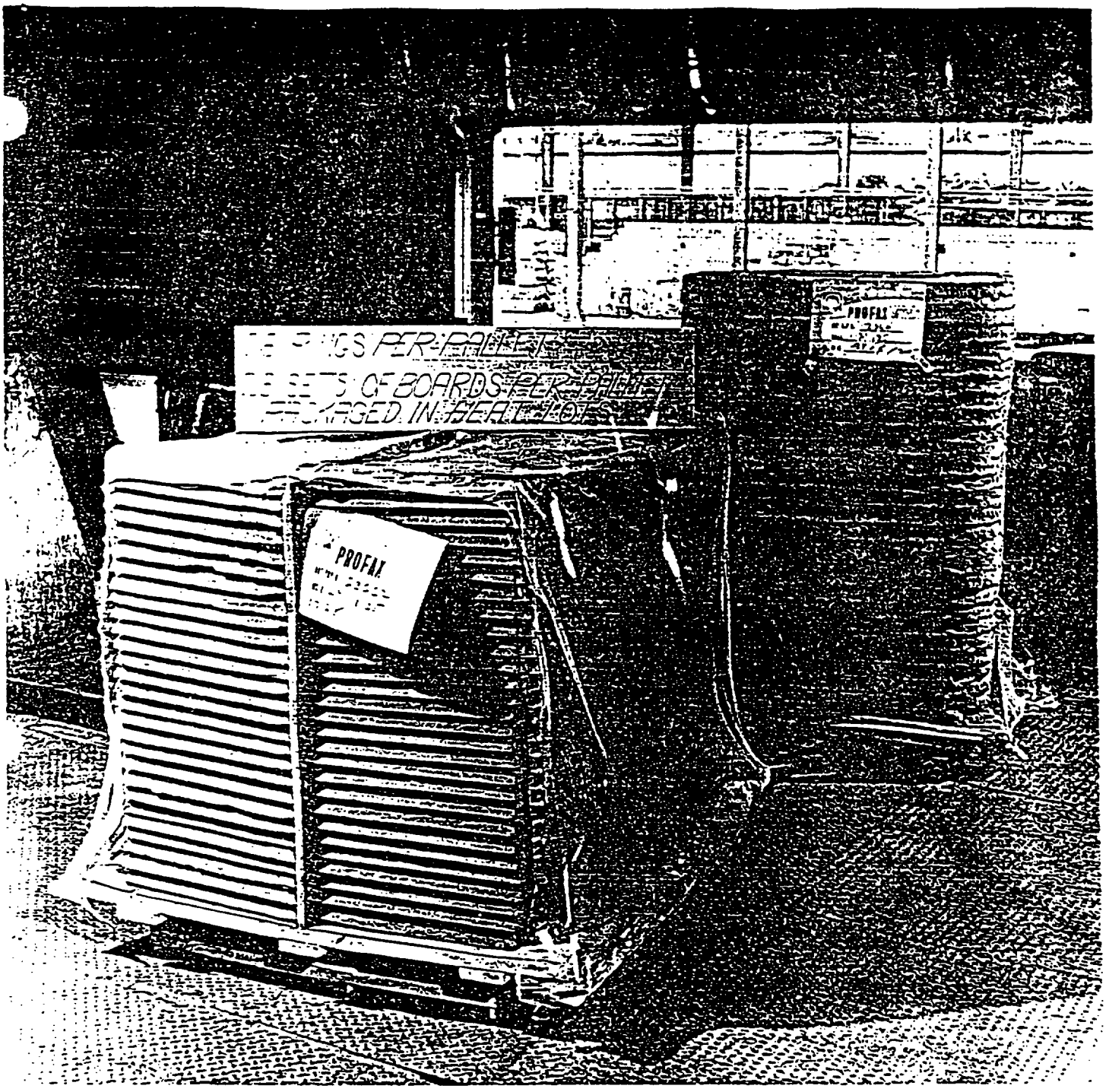
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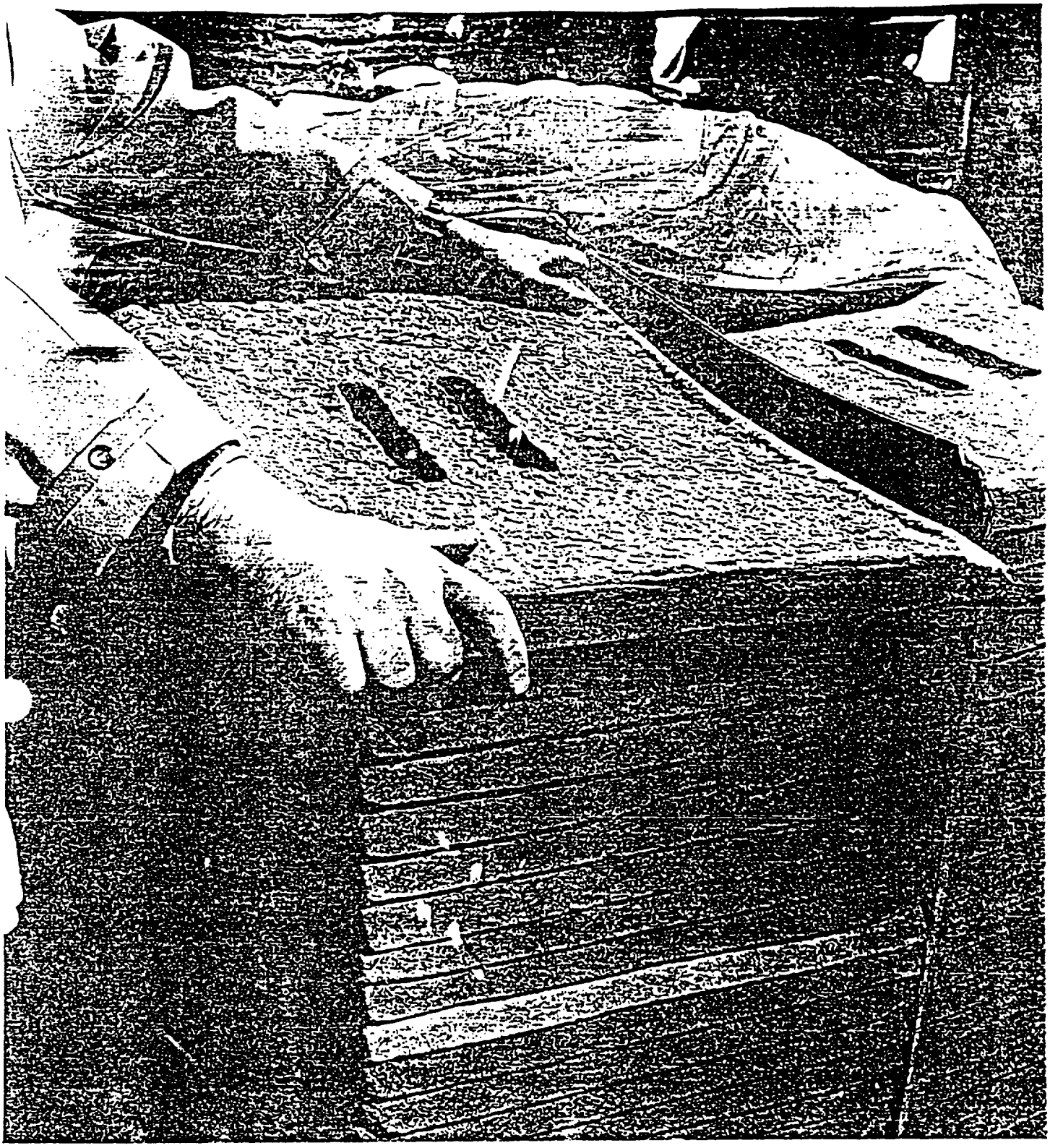

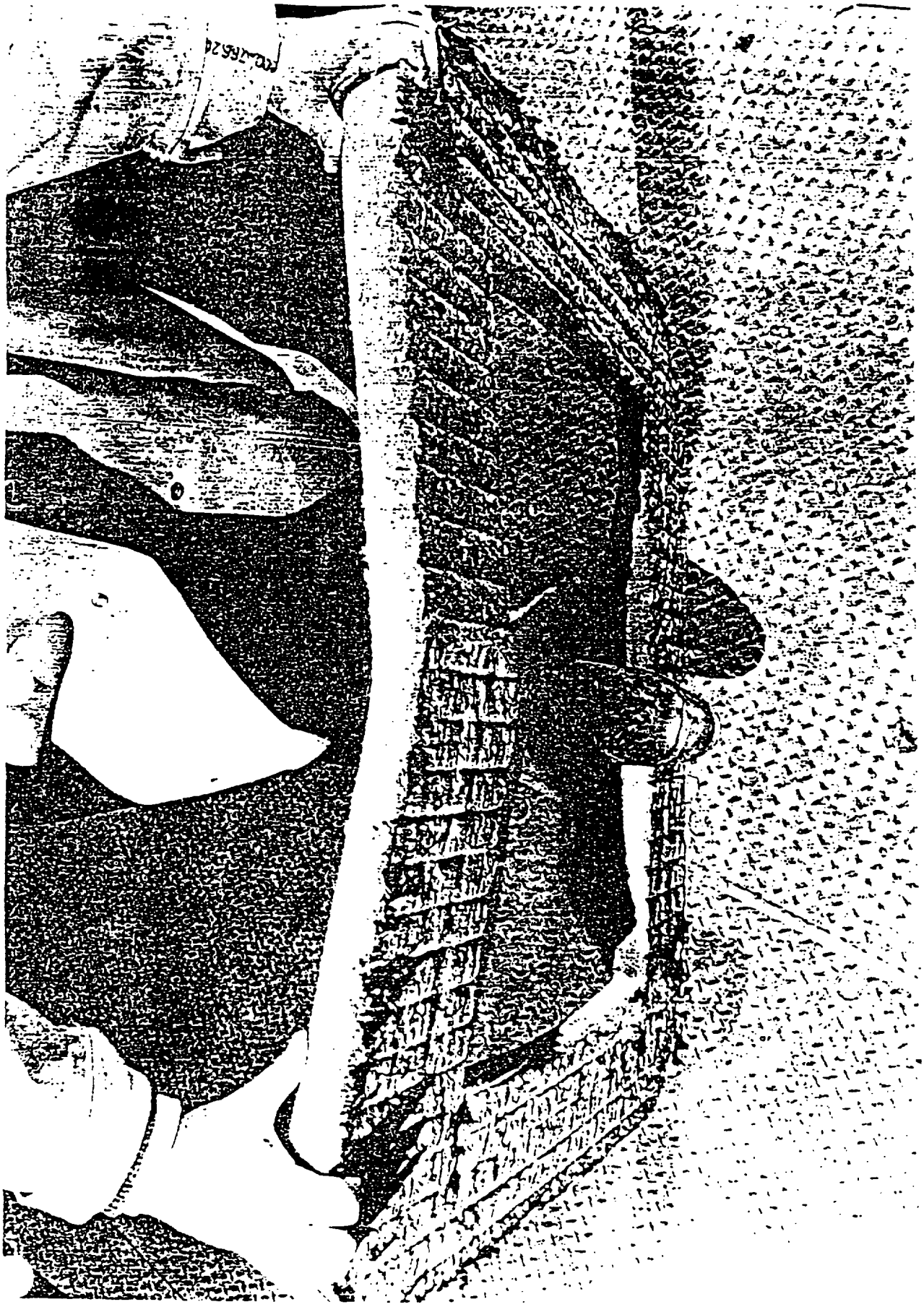



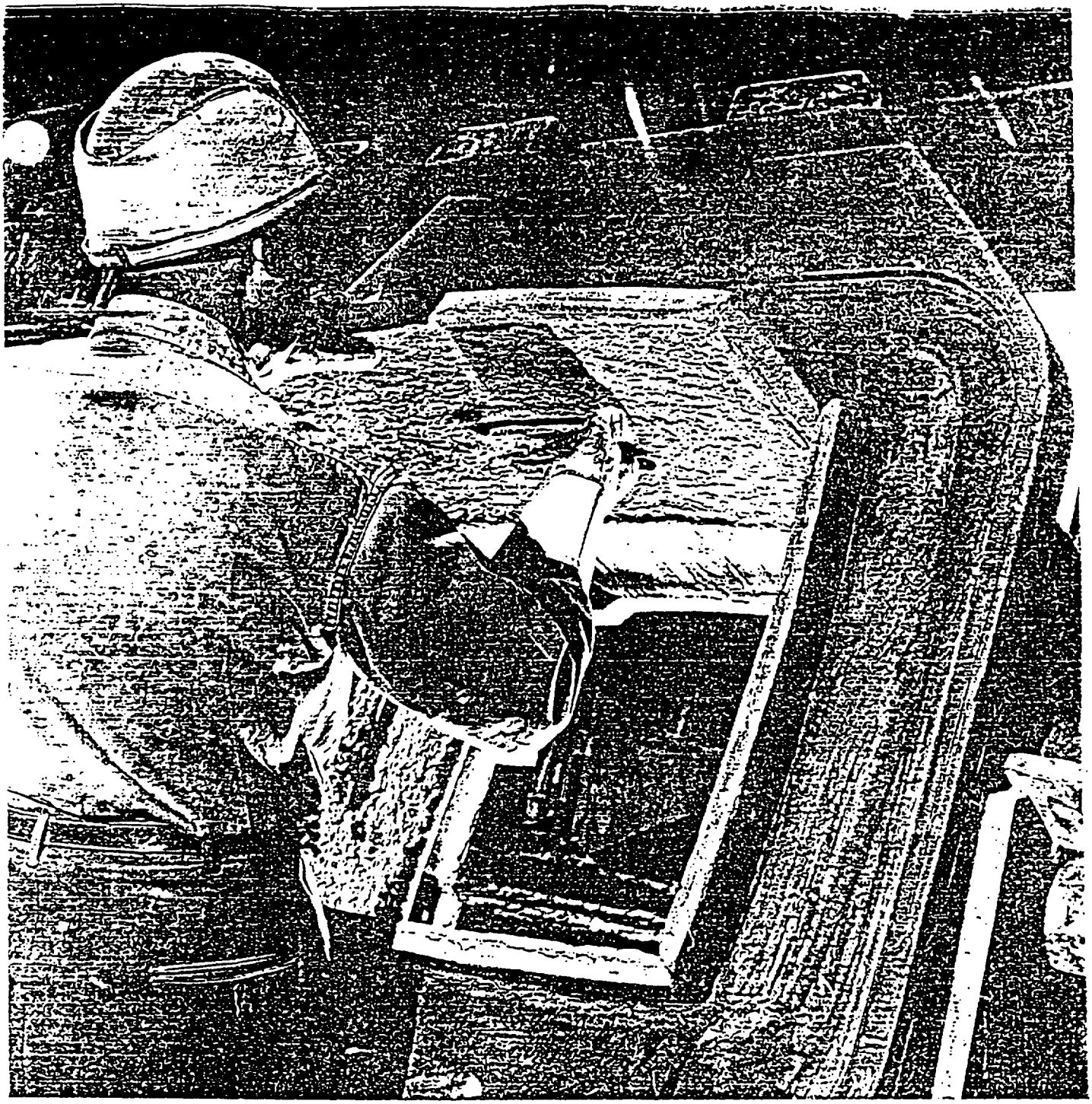

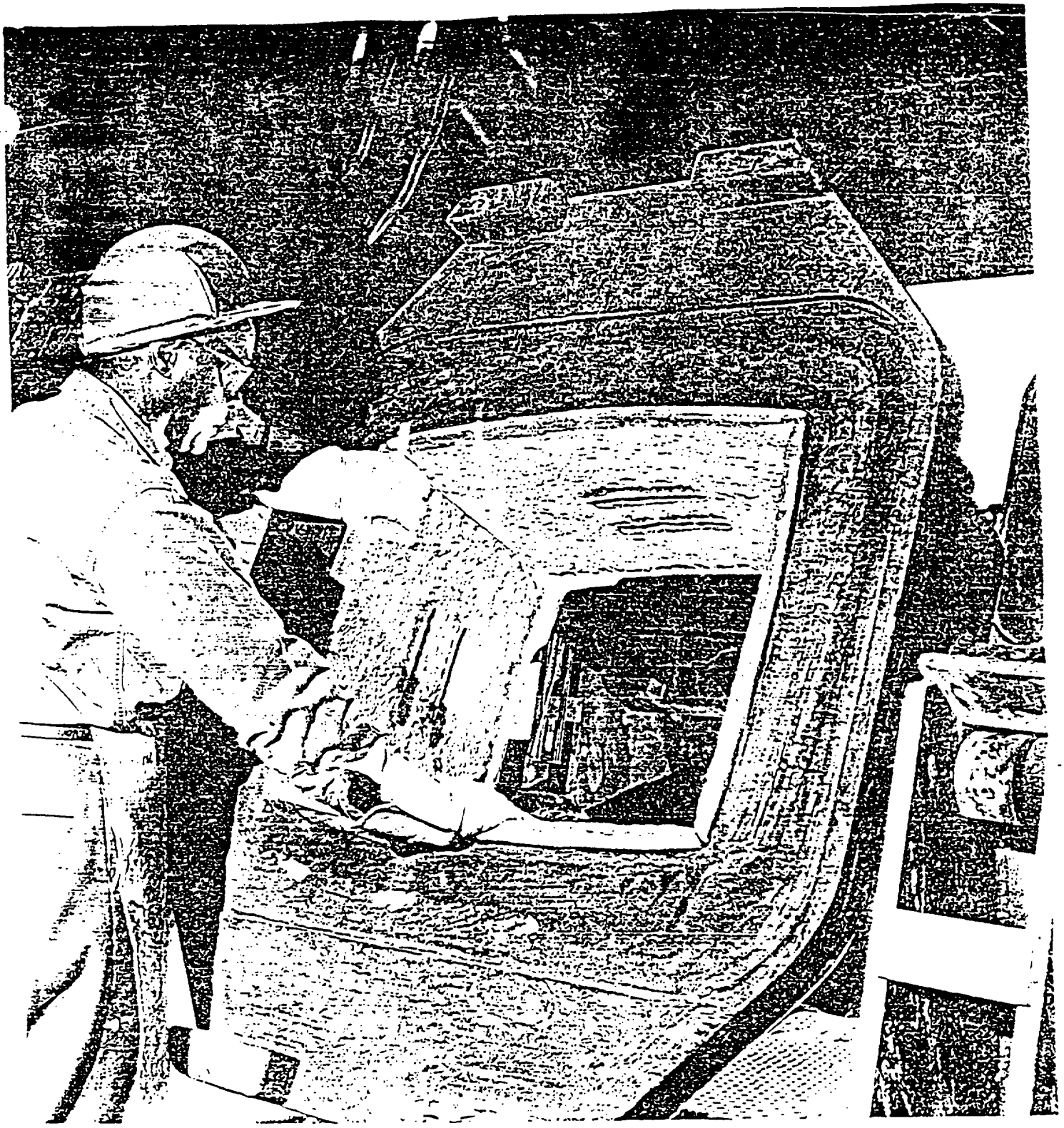



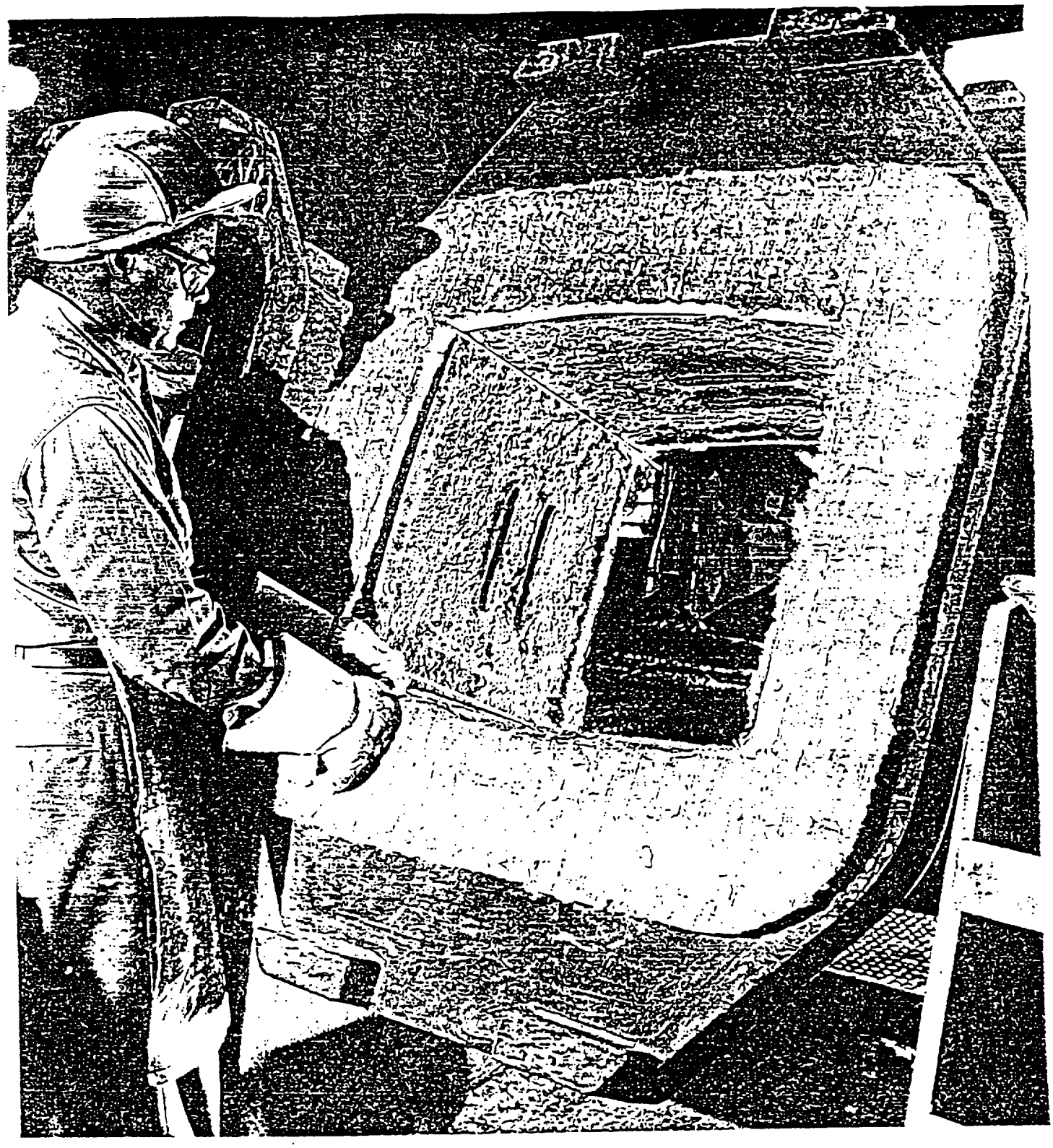

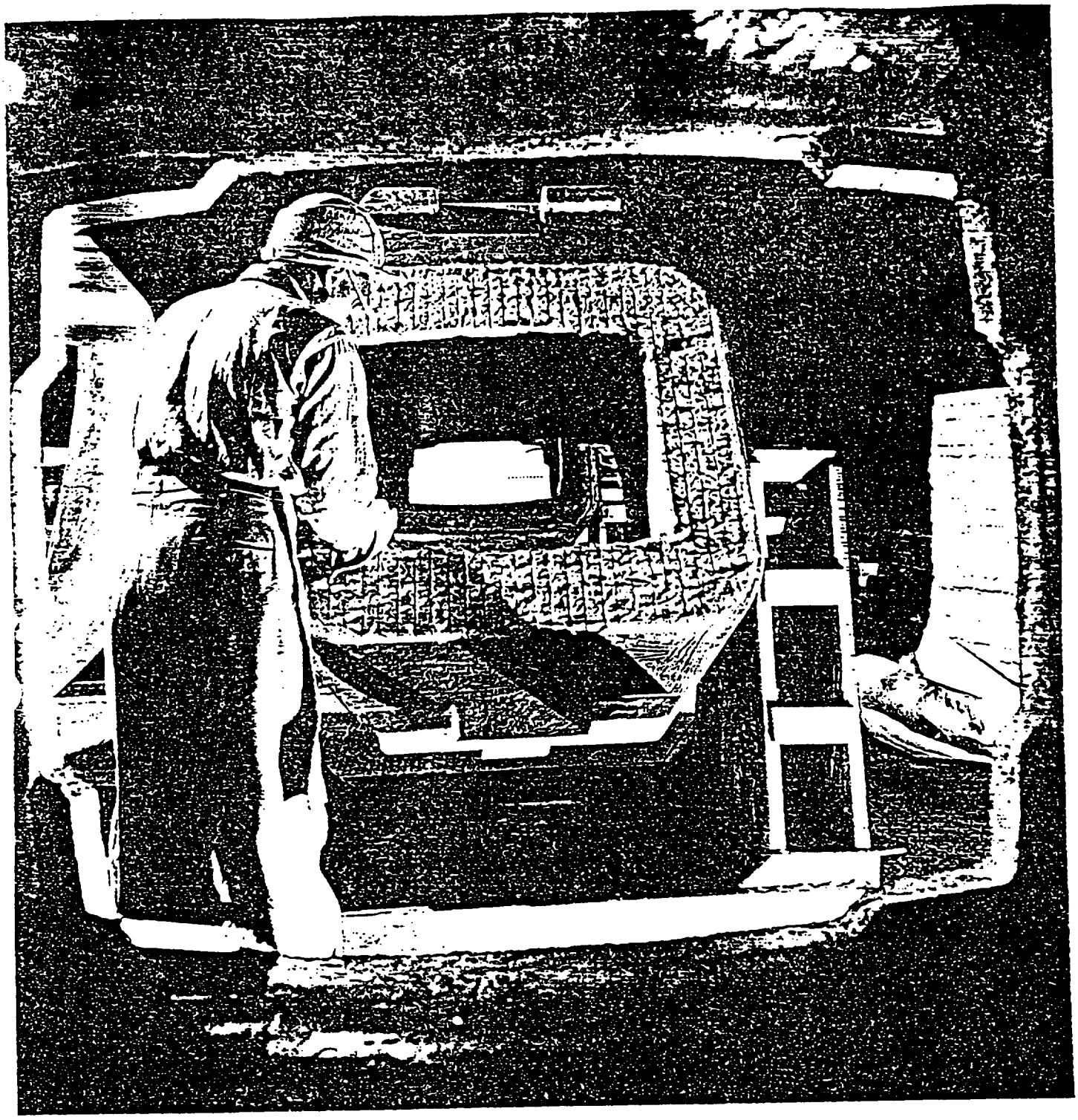

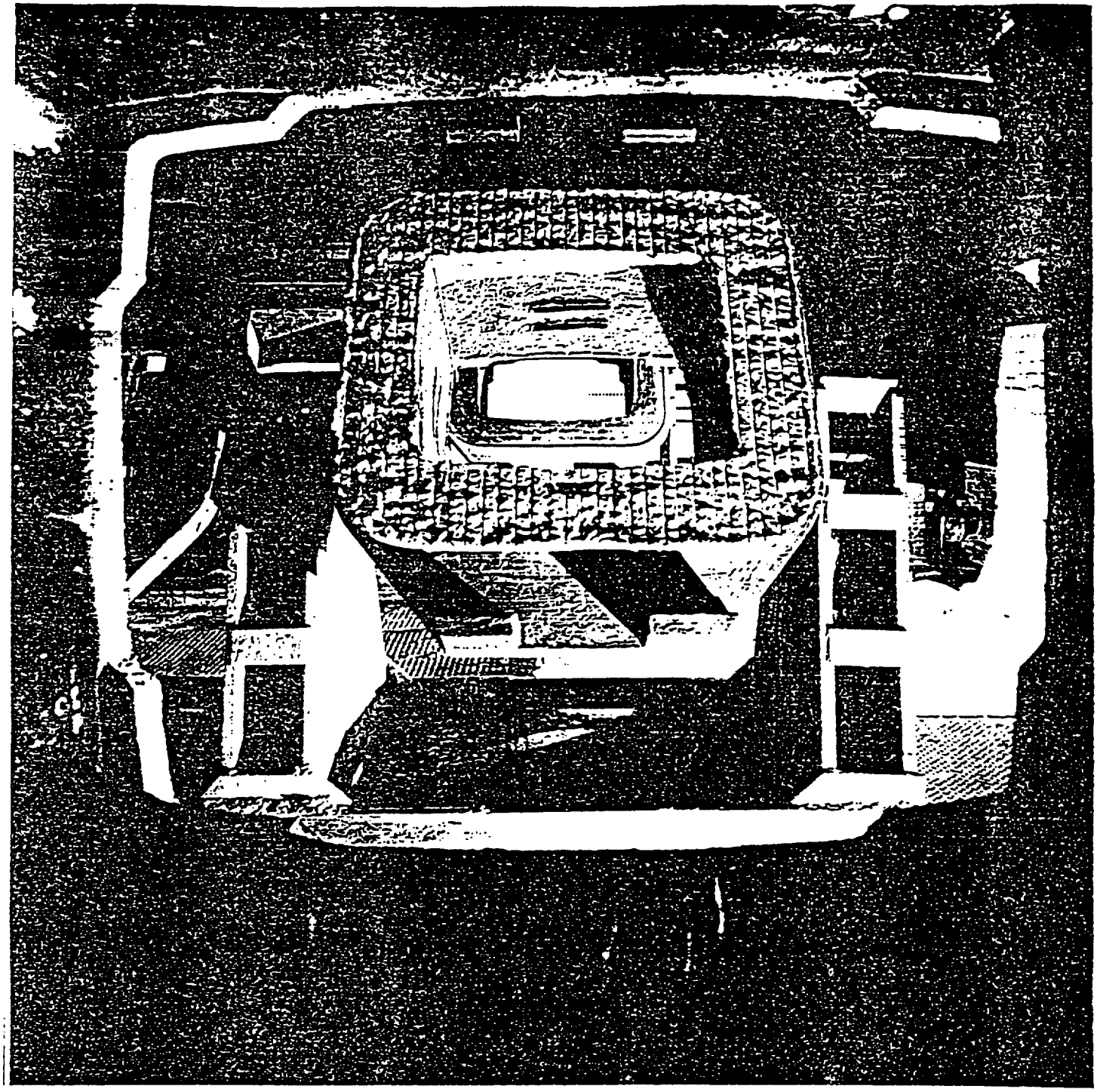

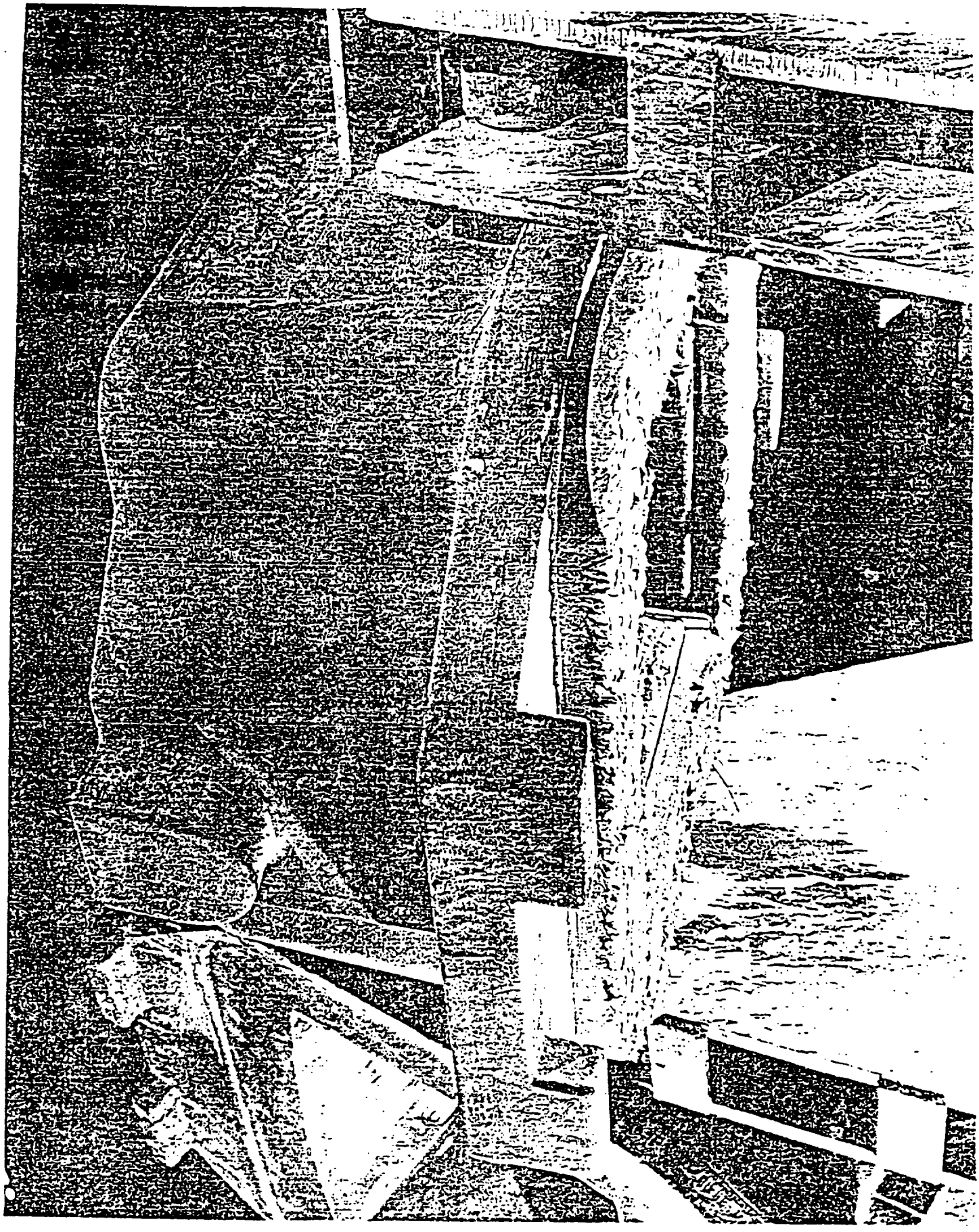

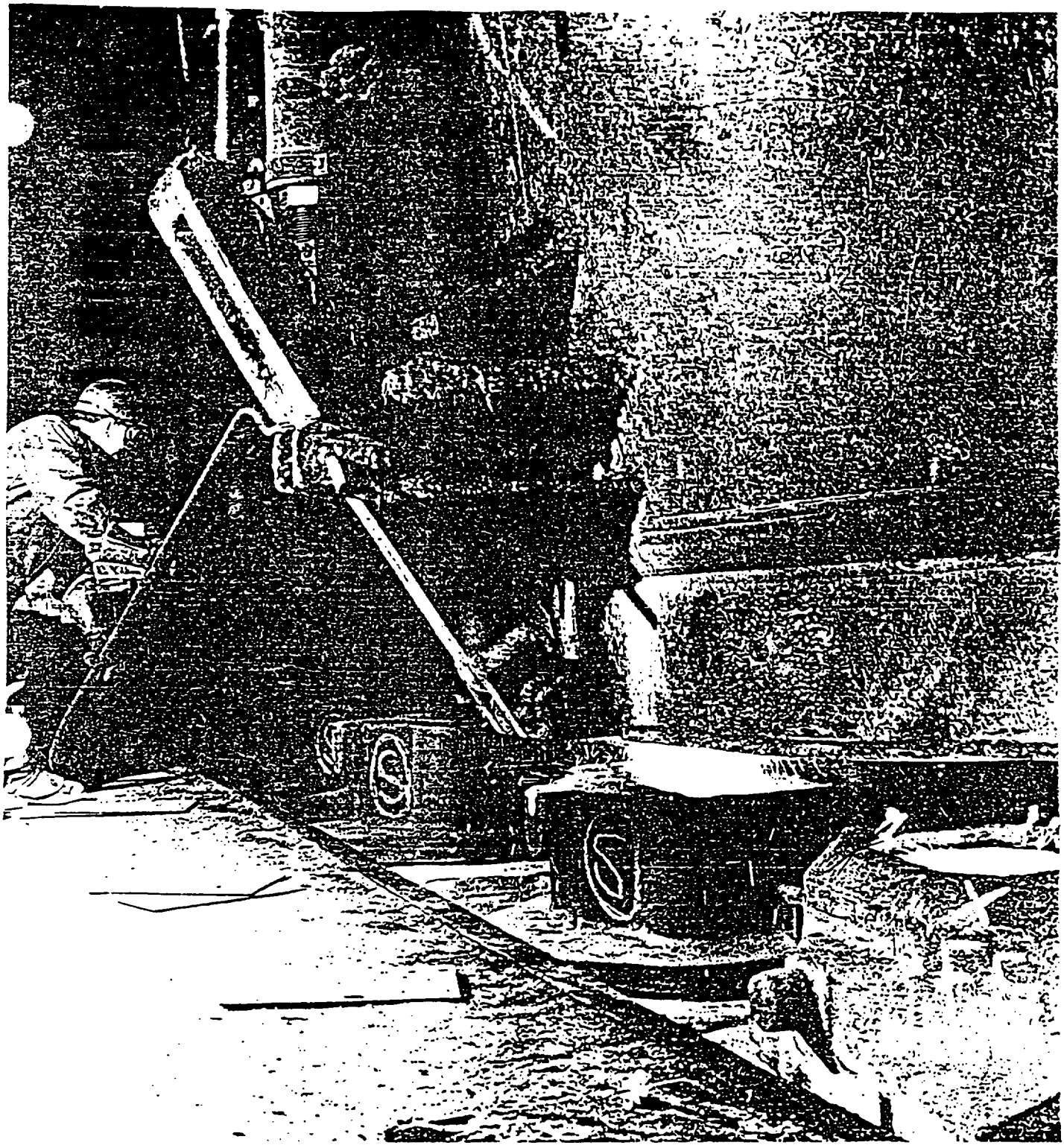

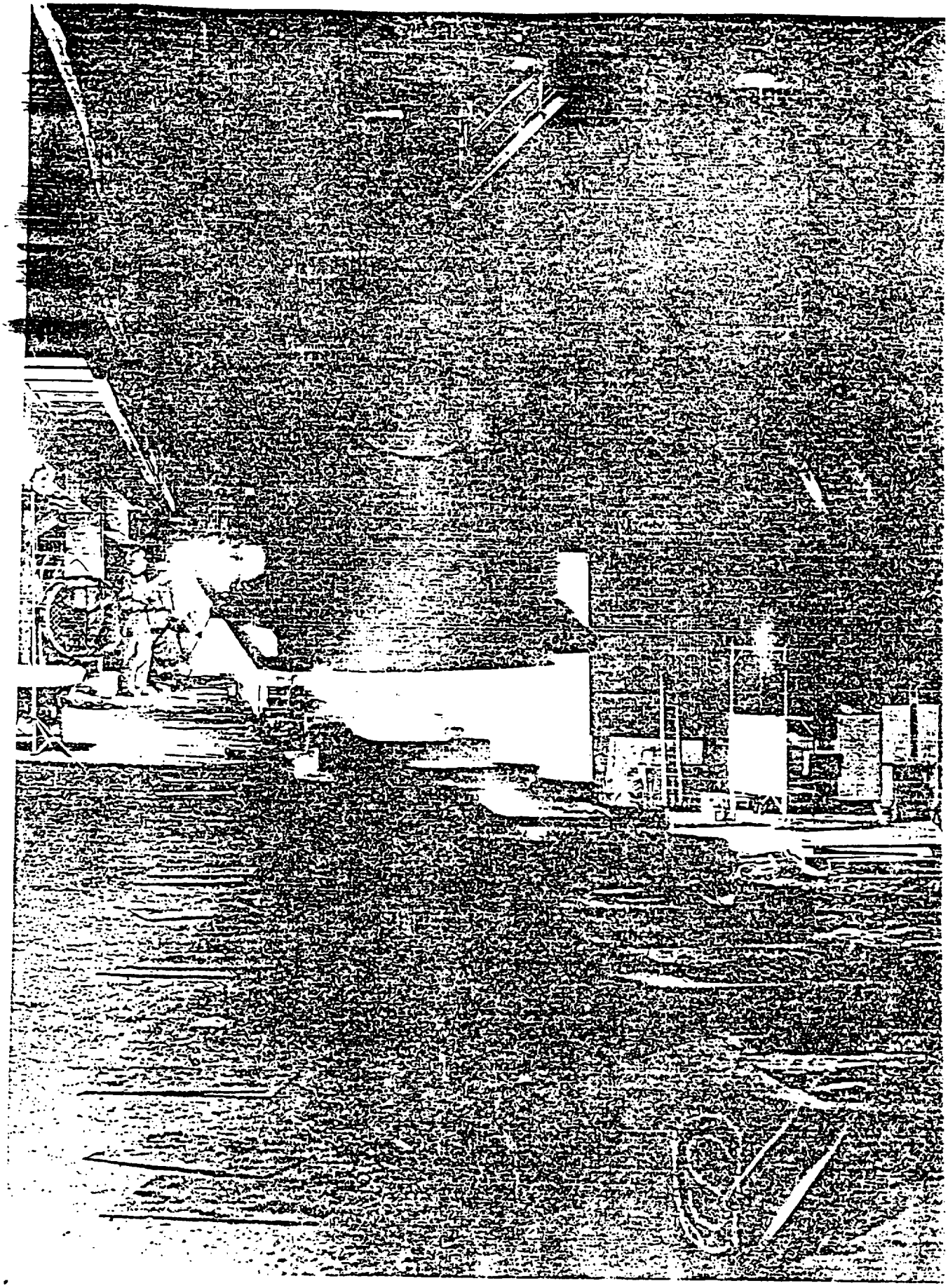





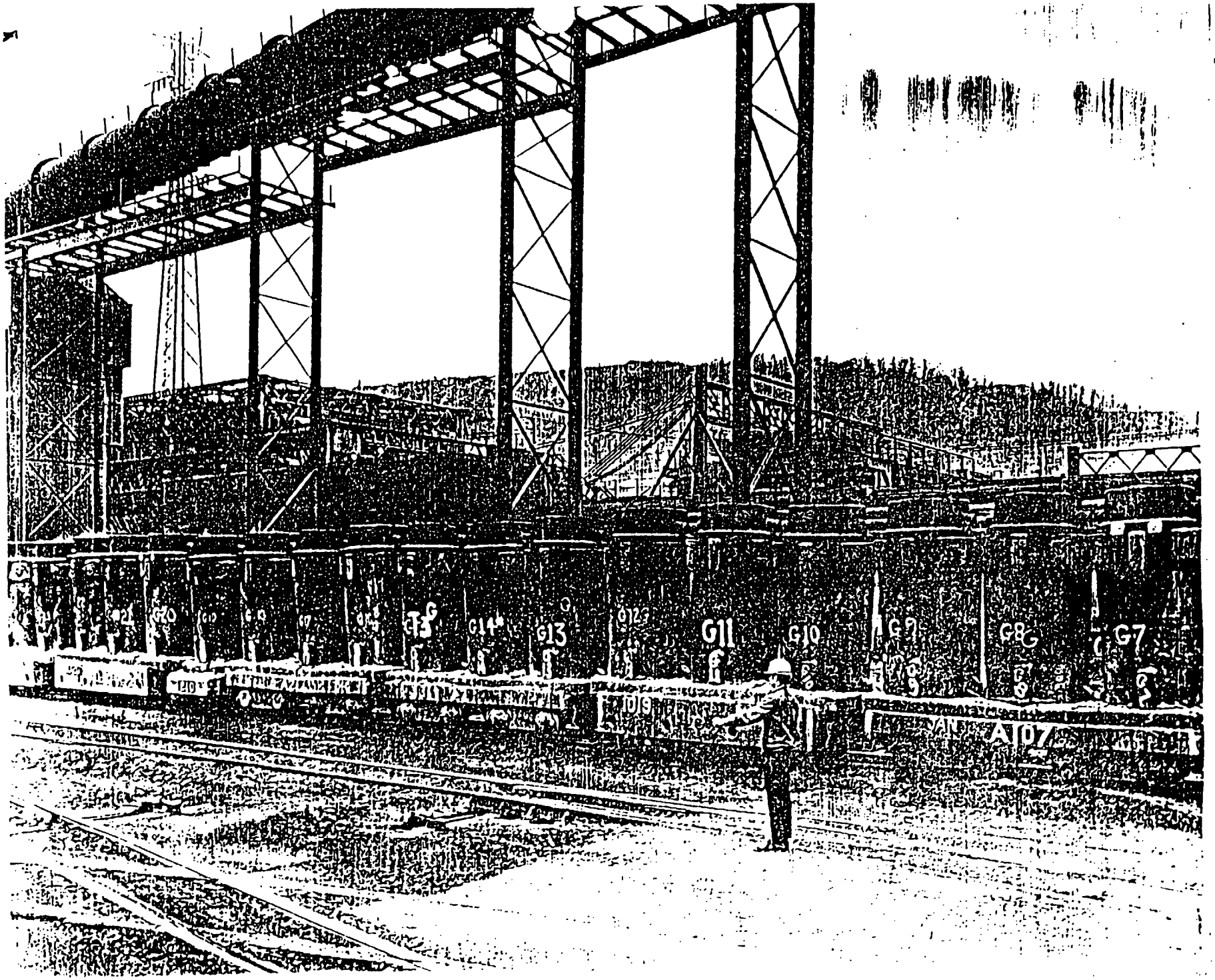
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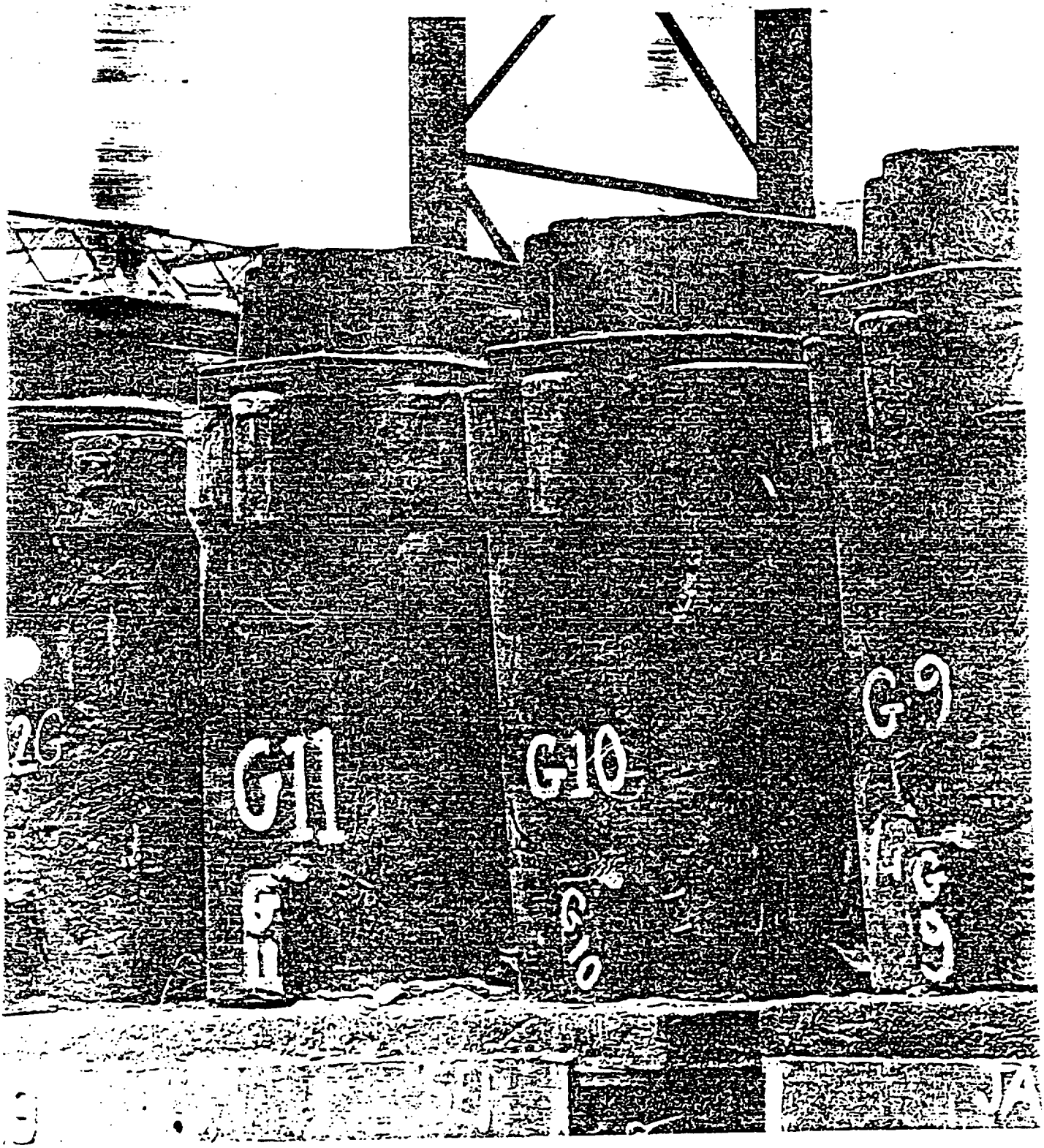
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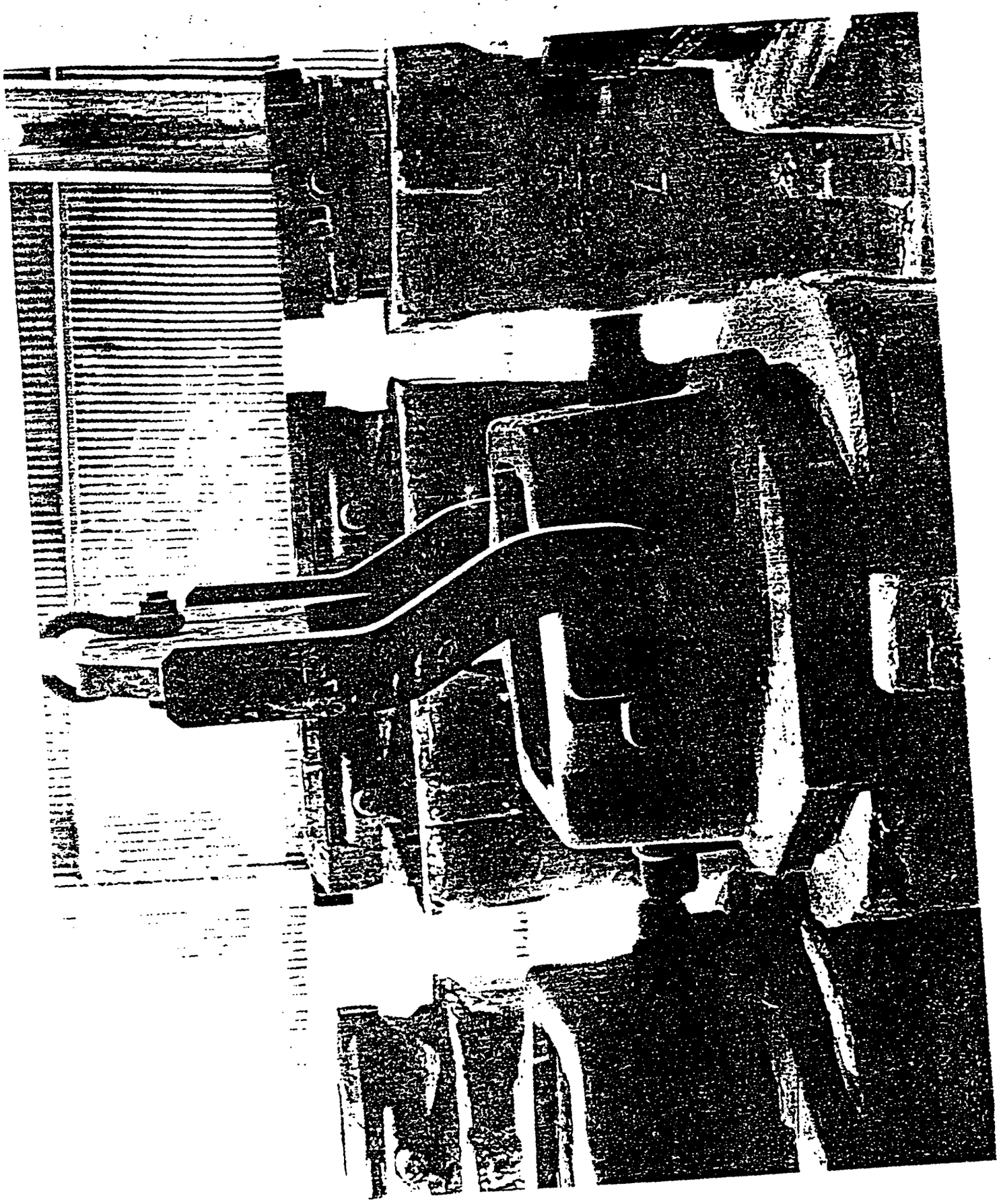

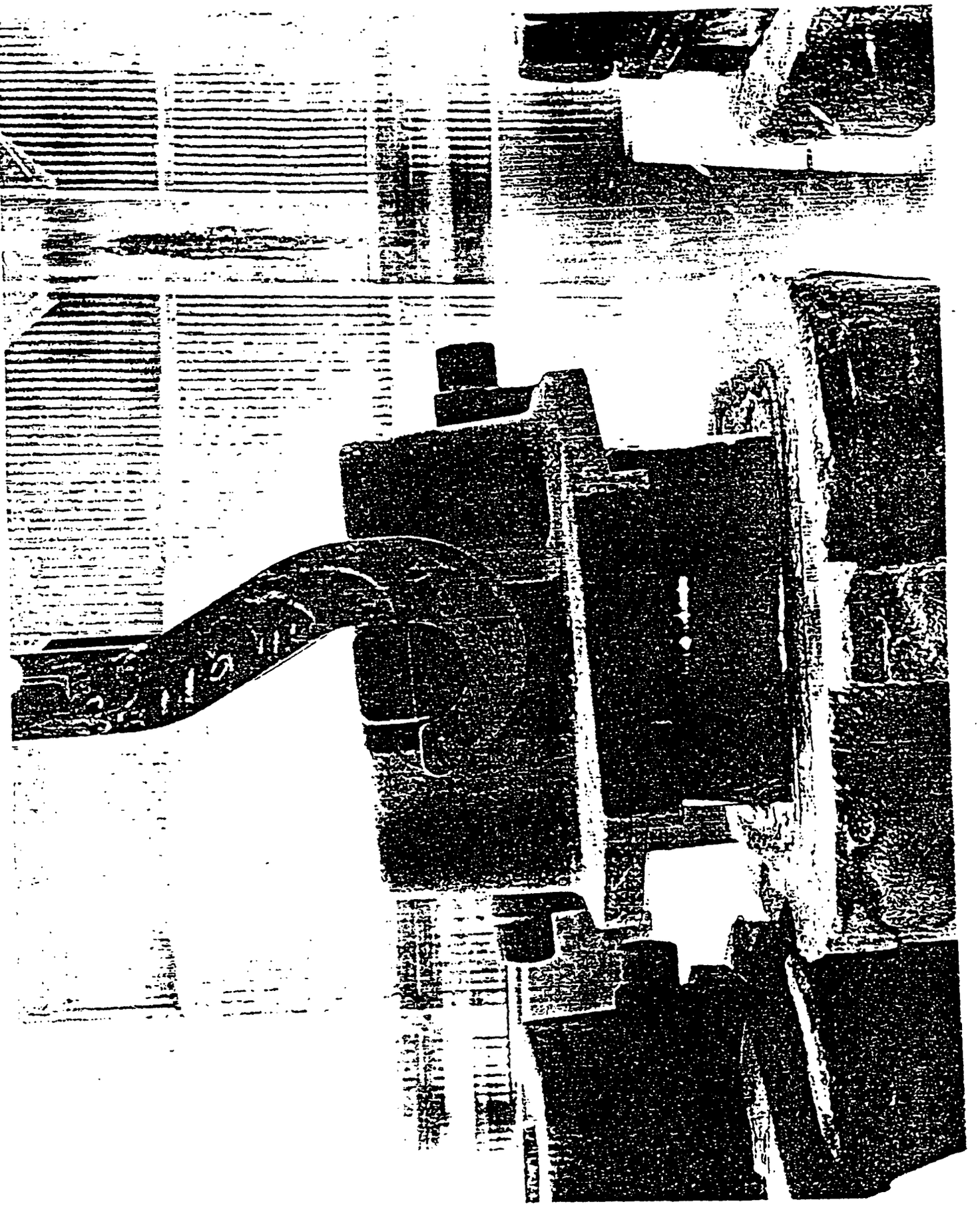

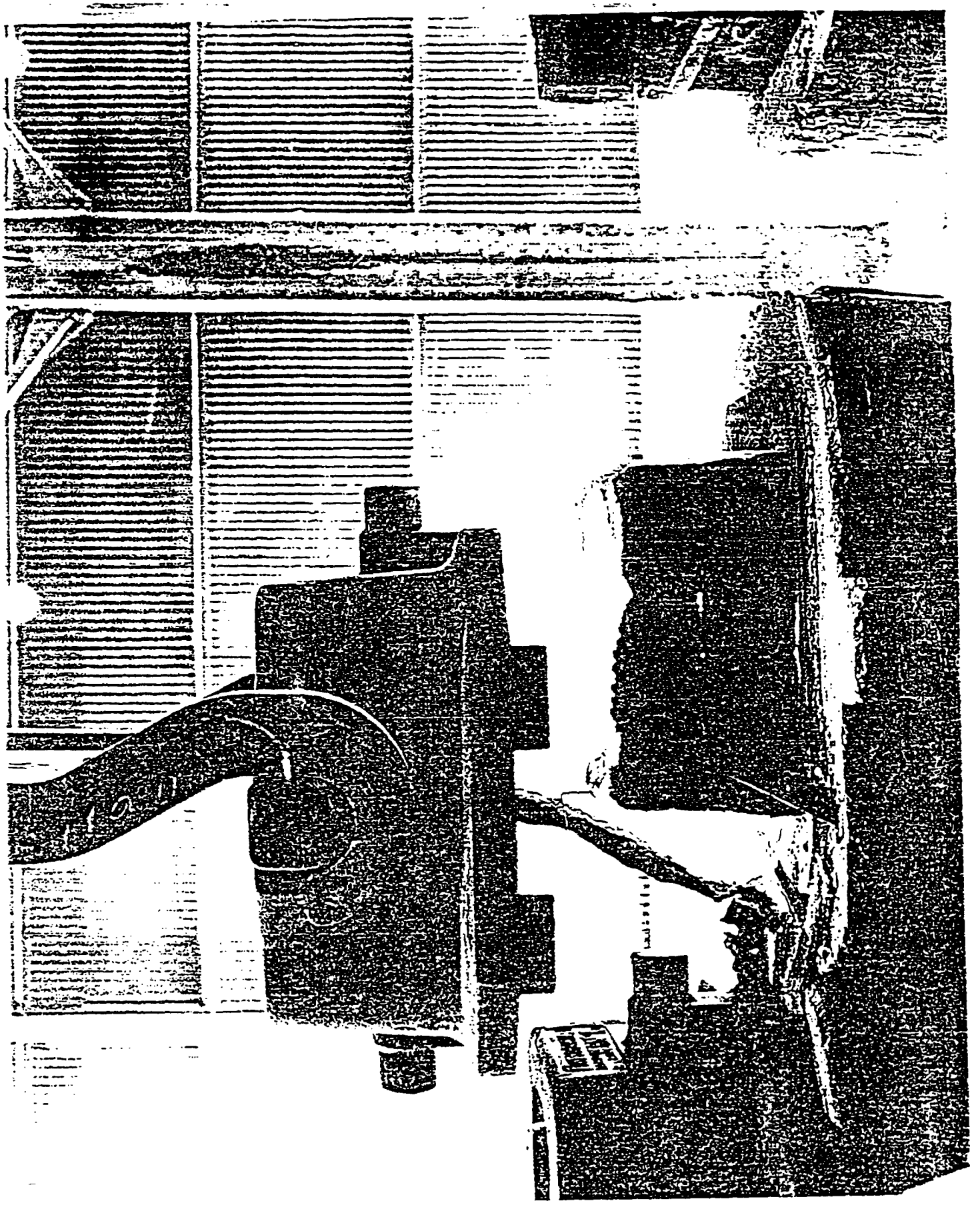

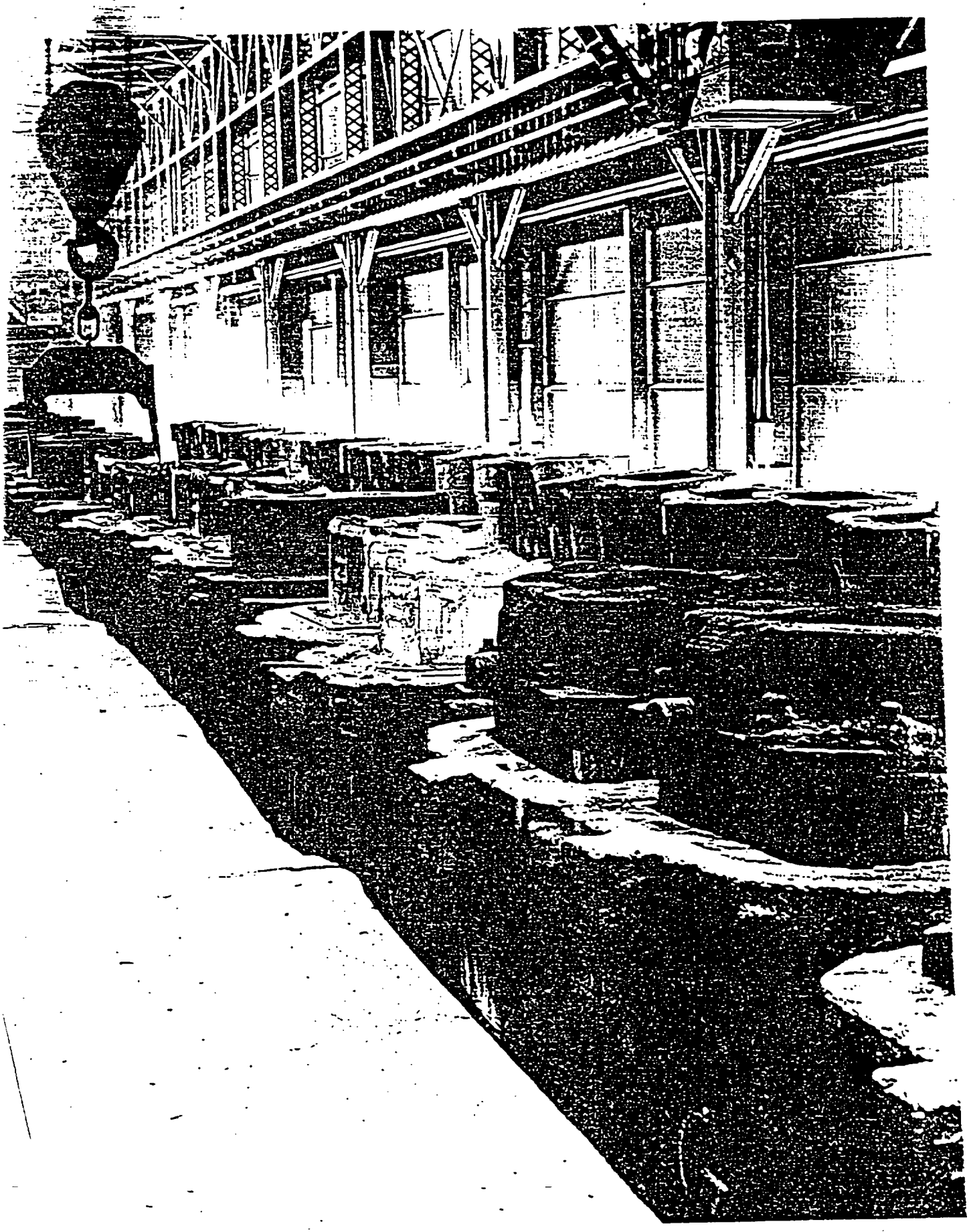



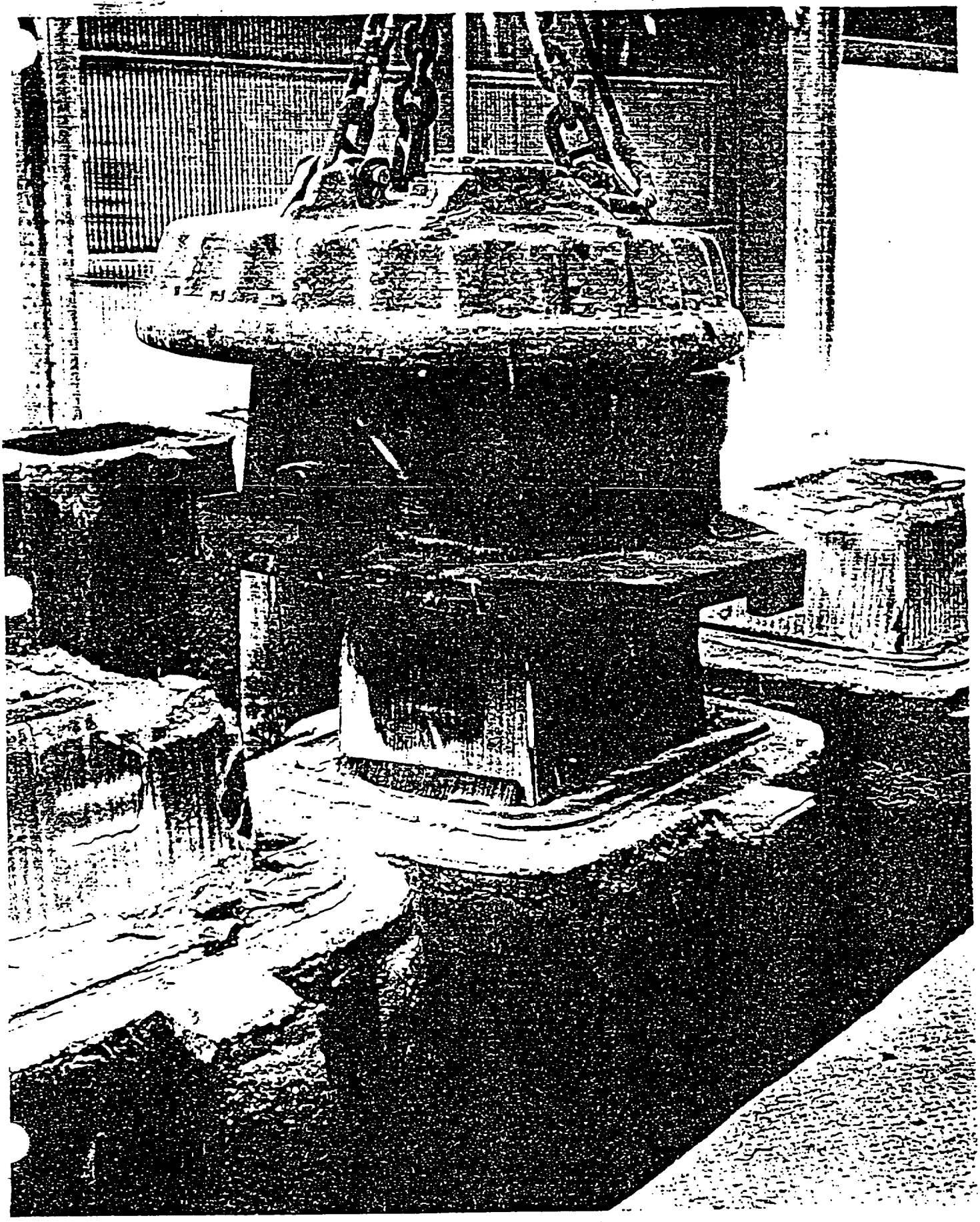

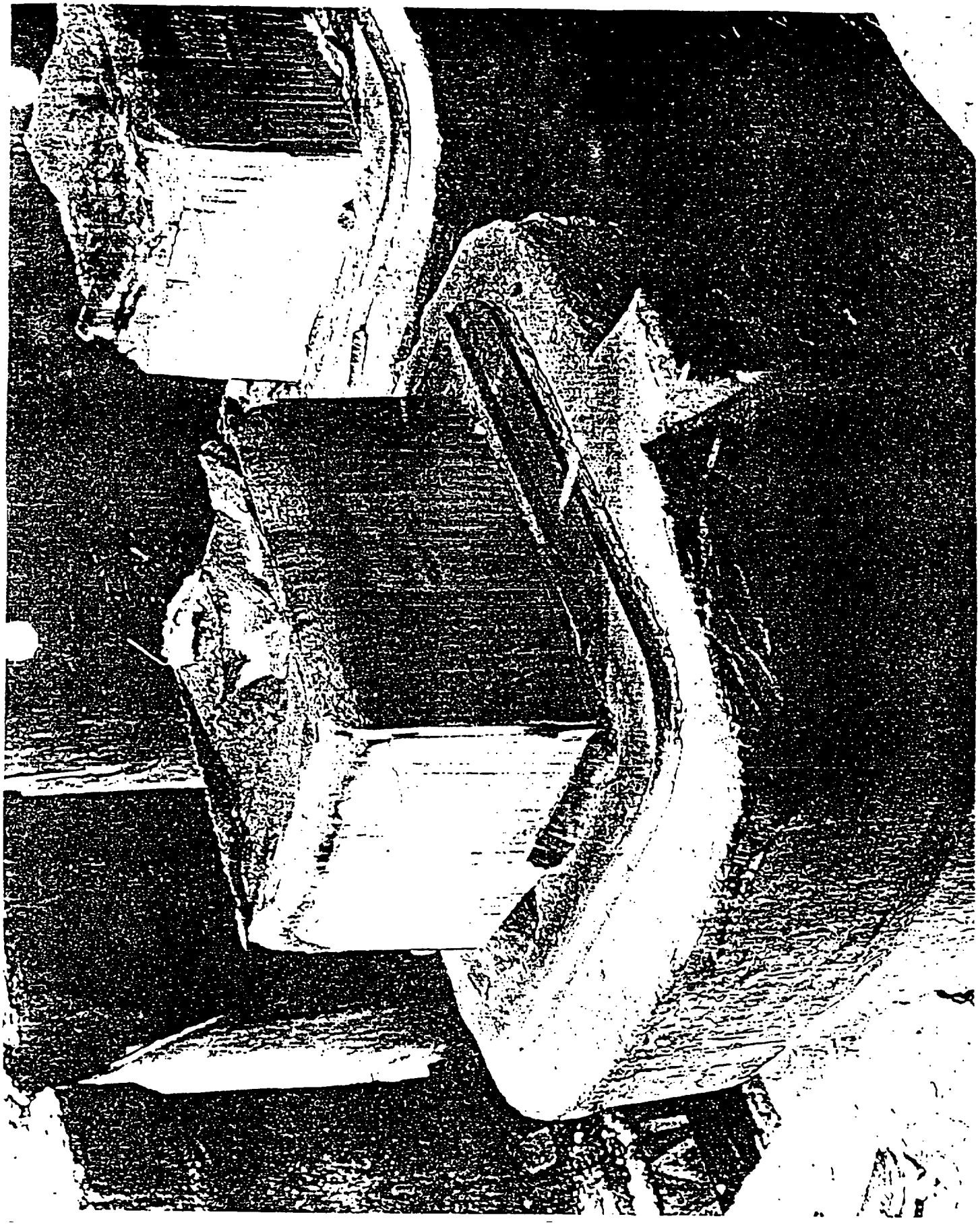

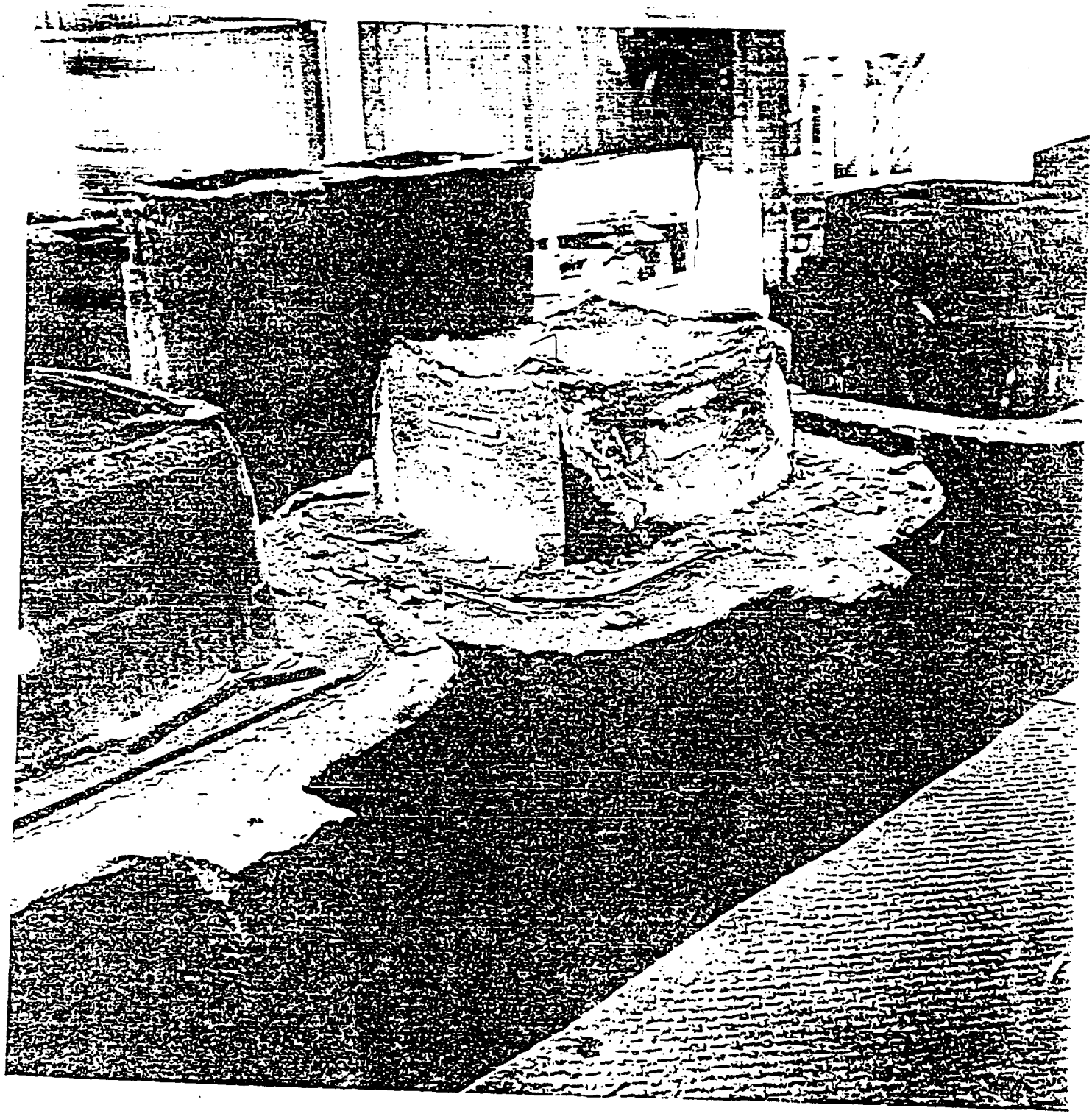

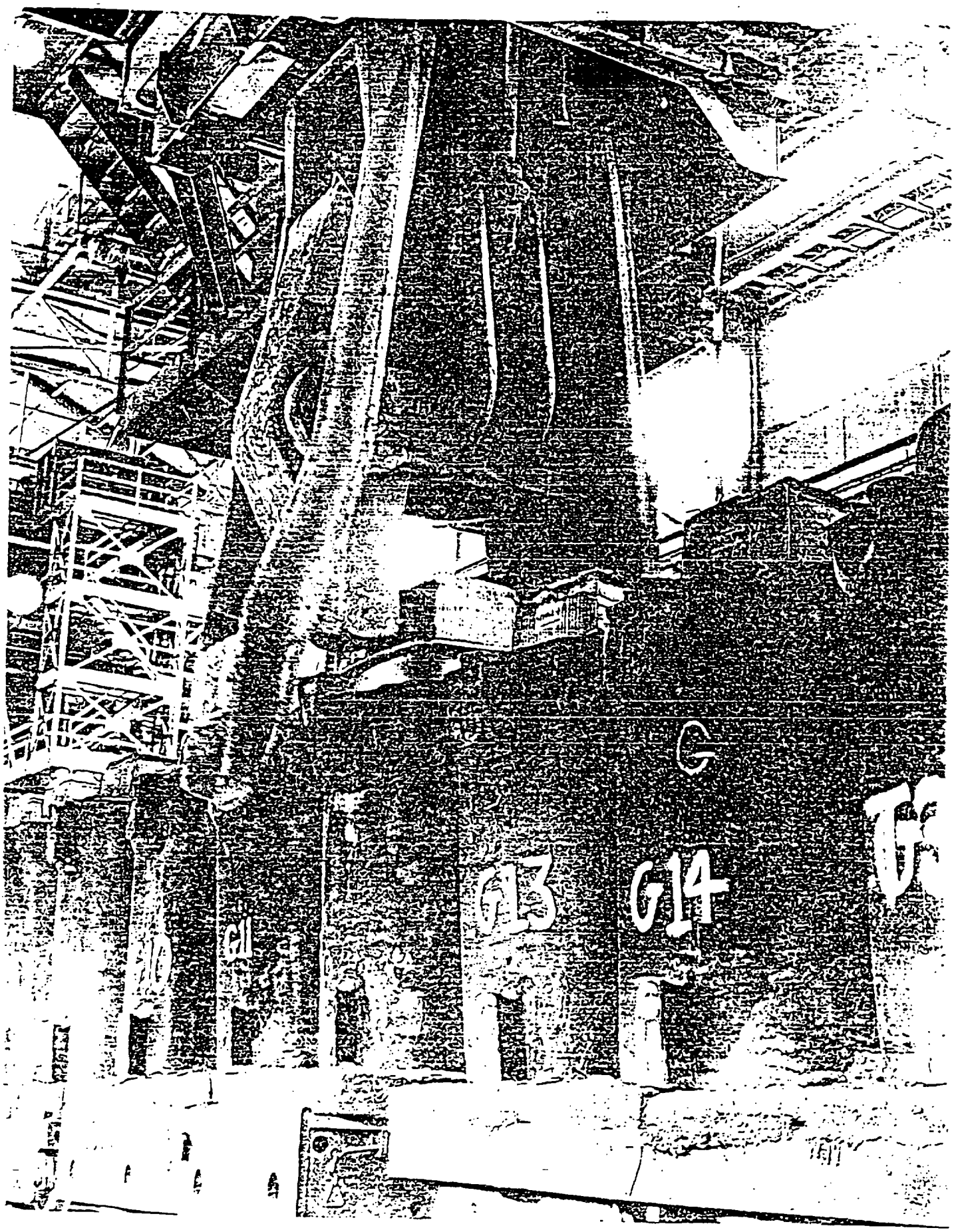
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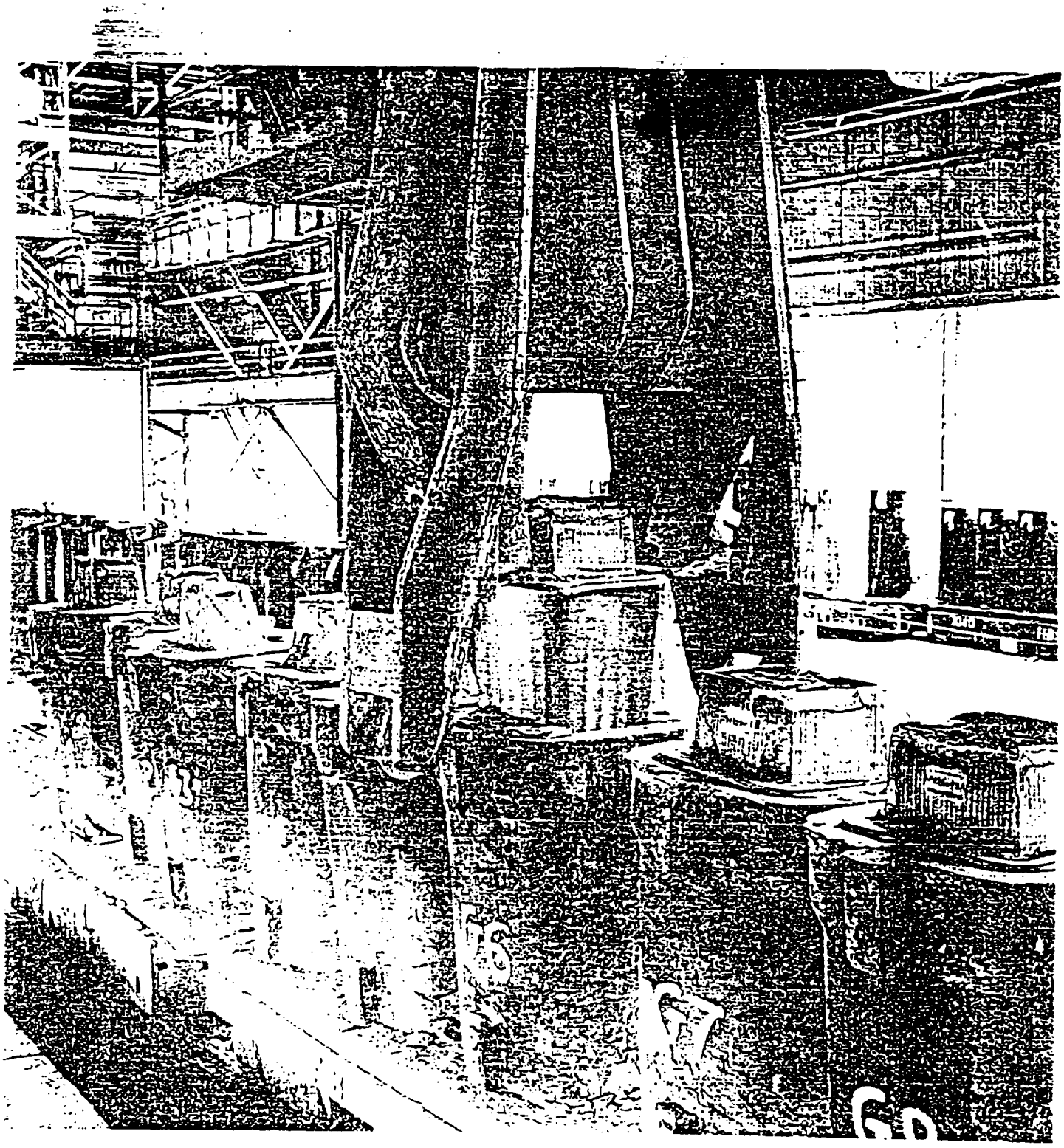

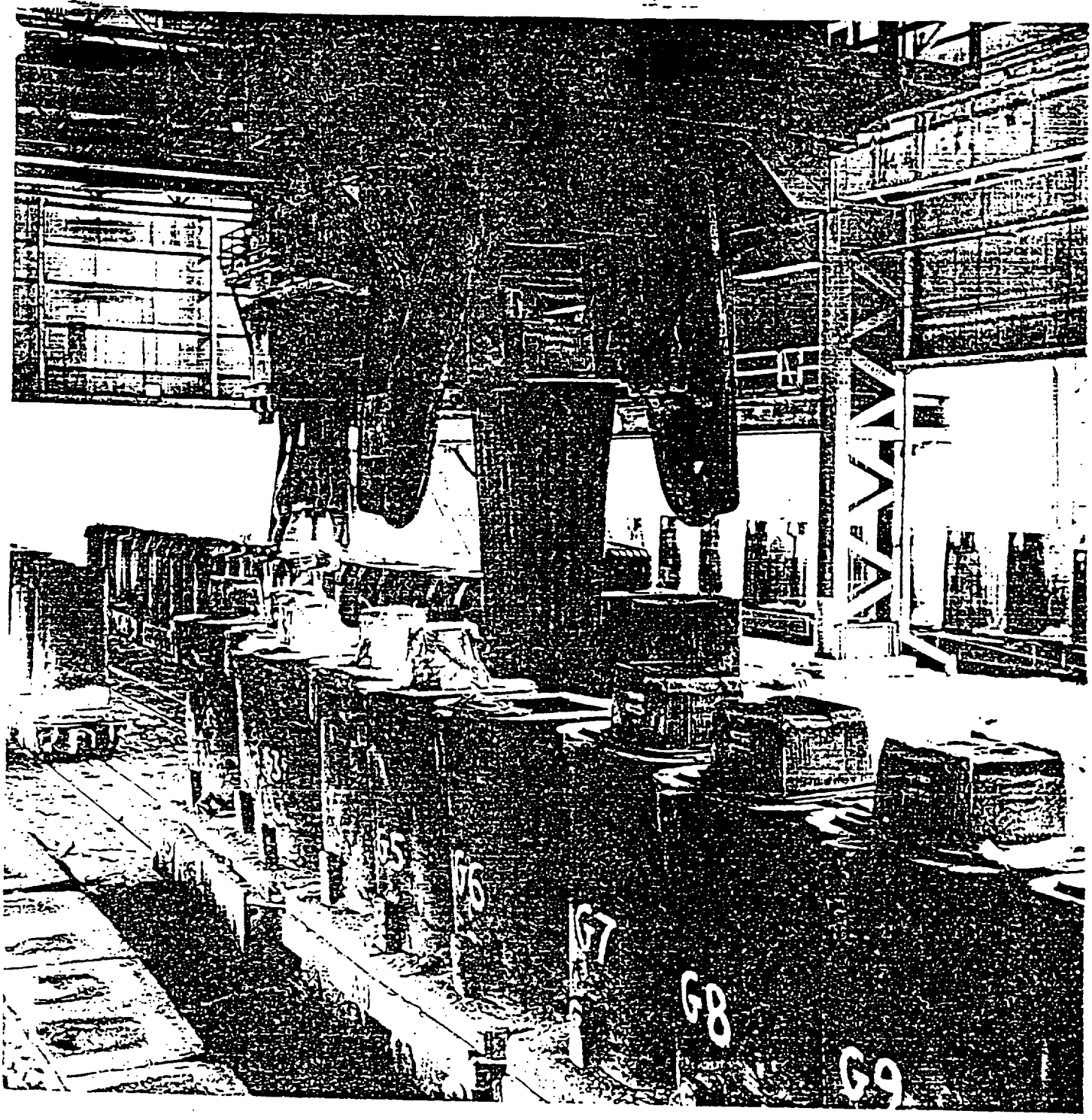
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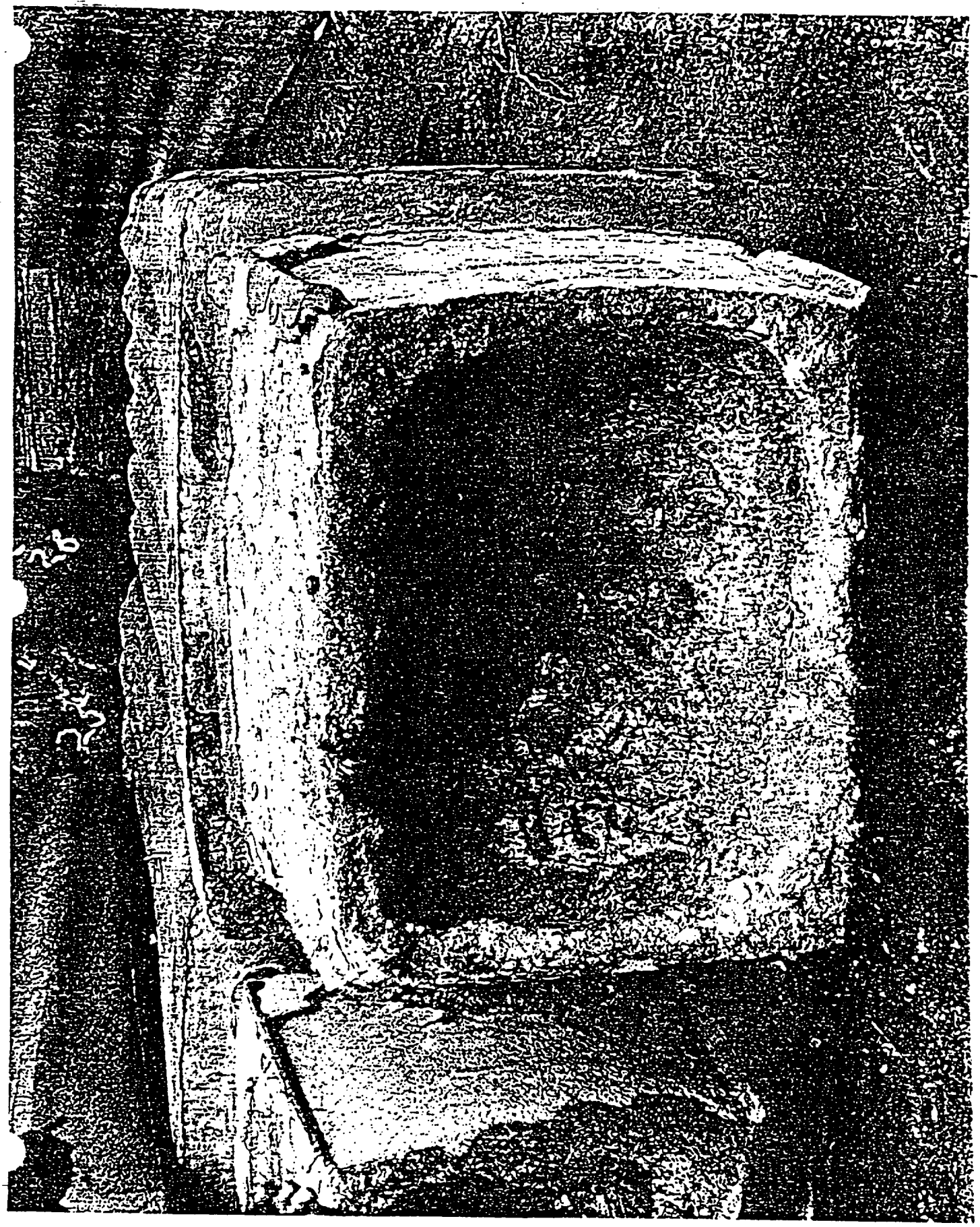

THERE IS A

Proflex®

HOT TOP SYSTEM

FOR ANY
INGOT MOLD
!!!

Foseco®

3182

FOSECO, INC.

ADVANTAGES OF FOSECO "SEAL-ON" HOT TOP SYSTEM

A. Hot Top Platform – Preparation and Maintenance

1. Greatly improved casting life – no thermal damage or fire-checking.

2. Minimum casting maintenance – no ring clip holes or bushings requiring regular replacement.

3. Retains all the proven advantages of the solid – casting dry-liner hot top pioneered by Foseco:

   (a) Totally dry system,
   (b) Ease and rapidity of setting,
   (c) Rapid turn-around requiring smaller casting inventory,
   (d) Reduced labor requirement,
   (e) Minimum maintenance,
   (f) Cleaner hot top house – no debris,
   (g) Cooler working conditions – no air pollution from open gas flames.

4. No expendable hardware – clips removed after setting.

5. No breakage of gasket rings during setting of hot top on mold.

6. Quicker setting – placed on top of mold instead of into mold.

7. Reduction in time needed in burning overfill skulls from casting.

B. Pouring Pits – Tracking and Pouring

1. No damage to hot top during tracking.
2. No seal leaks.
3. Positive seal regardless of mold size variation.
4. No junction leaks experienced even under full running stopper conditions.
5. No shut-off necessary during pouring of ingot and hot top.
6. Reduced pouring time as no shut-off necessary.
7. Less chance of running stopper due to fewer shut-offs and reduced pouring time.
8. Possible reduction in pouring time due to no seal leaks and no backfills necessary because of seal leaks.
9. Running stopper heat can be handled efficiently with minimum of problems.
10. Heat can be moved immediately after pouring.

Foseco®

C. Hot Top Platform – Stripping of Castings

1. No Head Stickers

   (a) Even full running stopper heats have no head stickers,

   (b) Head castings can be removed with magnet if pouring skulls interfere with lifting bales.

2. No head casting stripping delays assures prompt delivery to ingot stripper.

D. Ingot Stripper

1. No head sticker castings to be removed at this point – all ingots immediately available for stripping.

2. No collapsed heads – head more solid because of wider flatter feed.

3. Large stripping projections on head assure easy stripping.

4. Ingot more free to strip because of no junction seal projections wedging ingot in mold – some ingot movement is possible to assist in cracking mold bottom stickers.

5. Less stripper delays assures prompt delivery to soaking pits.

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E. Soaking Pits

1. More predictable soaking pit availability as ingots are charged on schedule.
2. Decreased soaking time due to decreased track time.
3. Large stripping projections on head assure easy removal from mold.
4. Fewer banked ingots because of no stickers and fewer mold stickers, leading to:
   (a) Reduction in cold steel to be charged at later date,
   (b) Reduction in lost identification of banked ingots.
5. Less debris charged and left in soaking pit.
6. Better soaking pit scheduling assures better rolling mill scheduling and availability.

F. Rolling Mill

1. Better rolling mill scheduling due to readily available properly heated ingots.
2. No collar roll-backs from junction seals or seal leaks.
3. Less over-roll due to smaller shoulder.
4. Elimination of hanger cracks because of no seal leaks.
5. Clean hot top junction – no wiper strip to become embedded, no sand entrapment.
6. Less contamination of scale pit by hot top materials.
7. Gives more product weight from same mold, or same product weight from lighter, shorter mold.
8. No rolled-in chicken-wire or wiper strips.

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1. Improved feeding characteristics mean more consistent metallurgy:

   (a) Less segregation below hot top line,
   (b) Reduced possibility of hot top material inclusions,
   (c) Completely dry system assures no moisture problems from hot top.

2. Improved yield possible because of:

   (a) Less hanger cracks,
   (b) Fewer banked ingots means fewer cracked ingots,
   (c) Elimination of back-fills reduces occurrance of inclusions,
   (d) Smaller cleaner shoulder gives less over-roll.
   (e) No metallurgical problems from running stopper heats,
   (f) Heats in pits on schedule reduces possibility of cracked ingots from charging cold steel,
   (g) Fewer banked ingots means less scale loss in heating for rolling.

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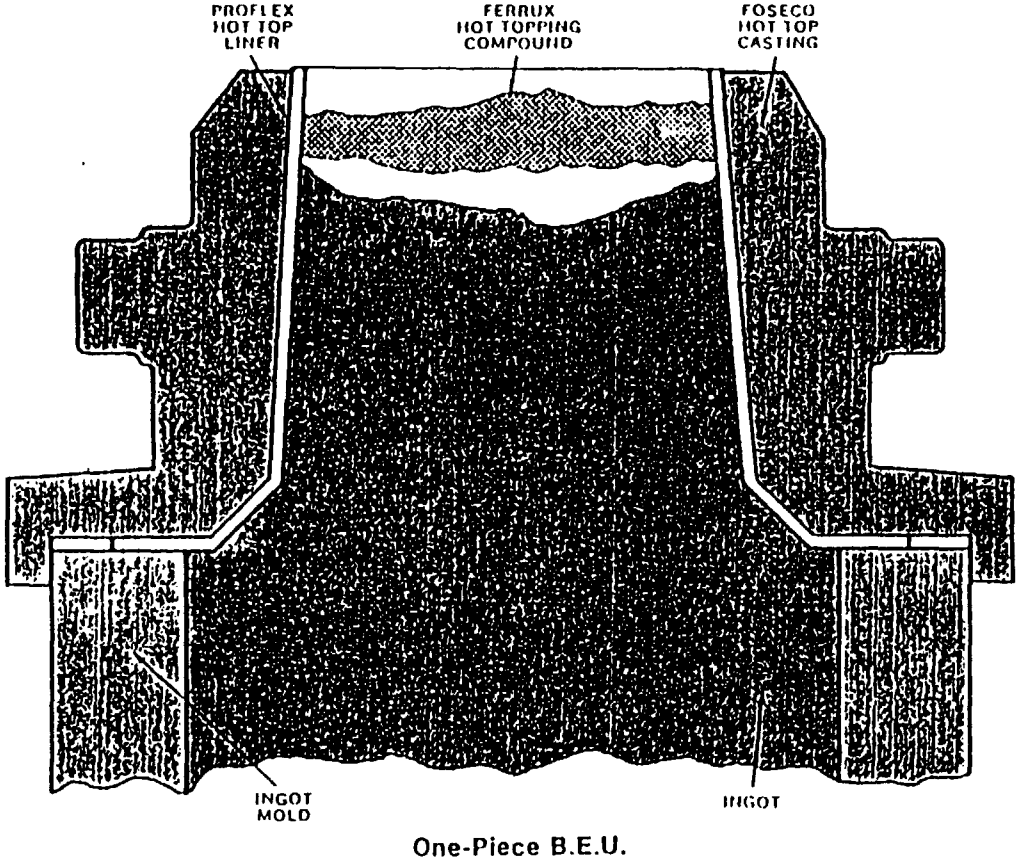


One-Piece B.E.U.

- ONE-PIECE PRE-FORMED HOT TOP FOR B.E.U. INGOTS
- ONE-PIECE PRE-FORMED HOT TOP FOR B.E.D. INGOTS
- ONE & TWO-PIECE FOLD-FORM SELF-HINGED LINER
- TWO-PIECE SLAB MOLD LINER
- FOUR-PIECE SLAB MOLD LINER

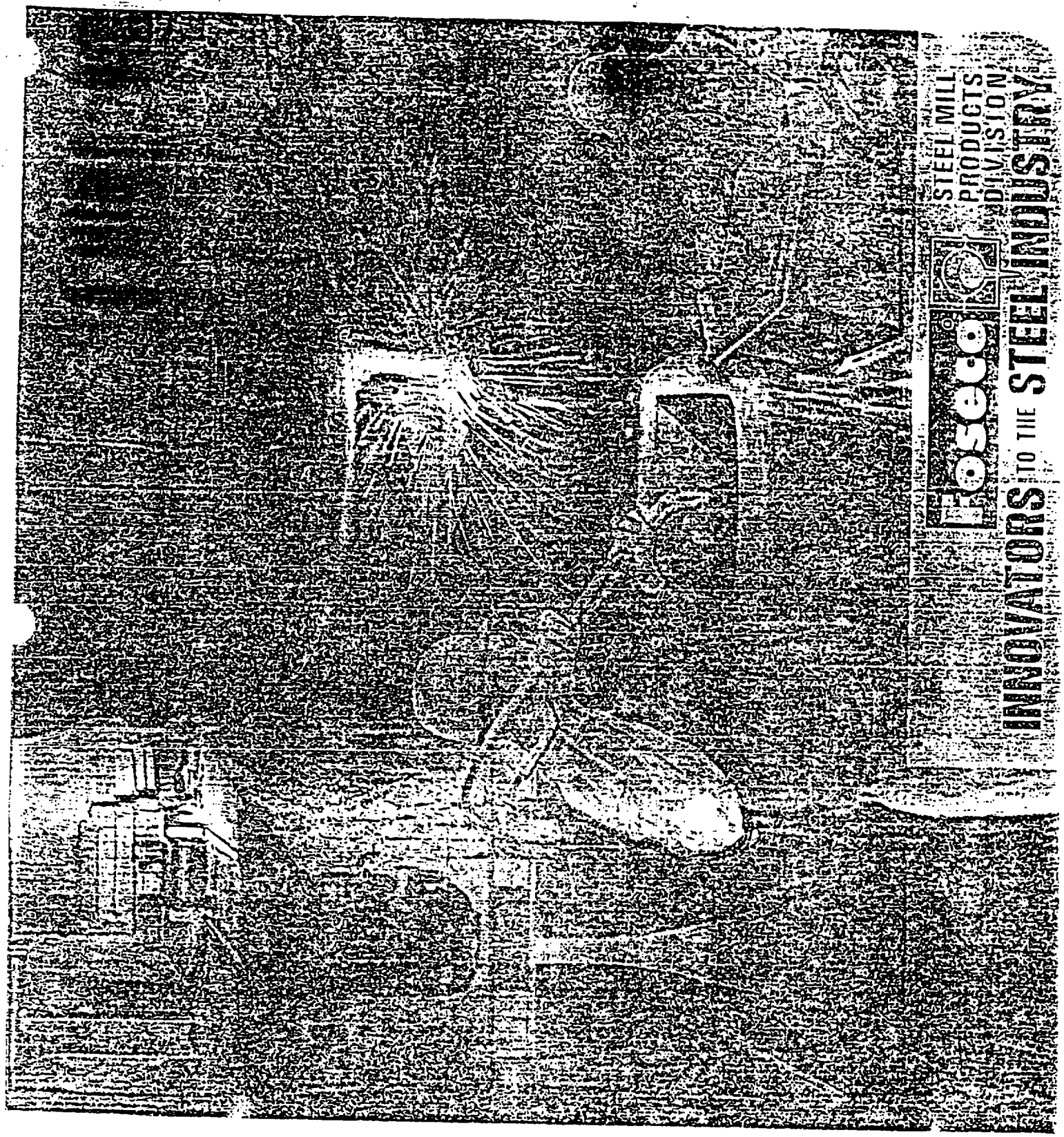
PROFLEX HOT TOP SYSTEMS BRING YOU THESE ADDED BENEFITS:

BETTER FIT . . . they flex or compress to conform to ingot mold interior contours . . . minimize molten metal by-pass and hangers.

BETTER STRENGTH . . . PROFLEX'S ability to withstand abuse eliminates breakage losses.

LIGHTER WEIGHT . . . PROFLEX is 40% lighter than the next lightest hot top liner. This increases ease of handling, reduces labor and shipping costs.

Foseco®


STEEL MILL
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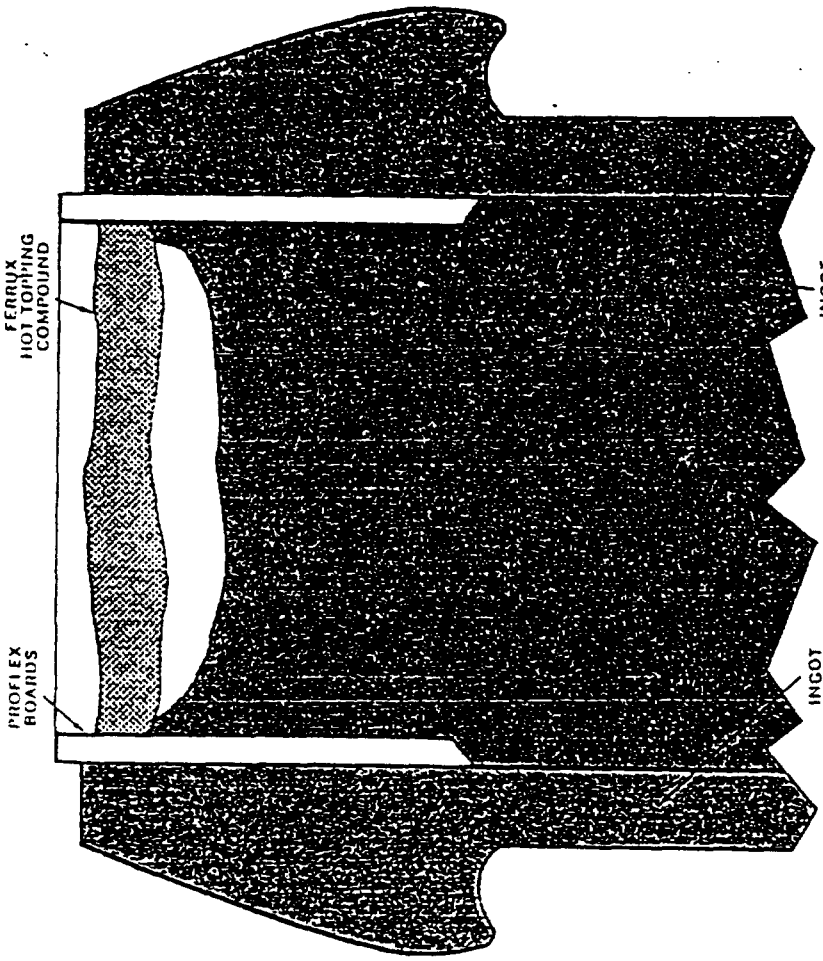
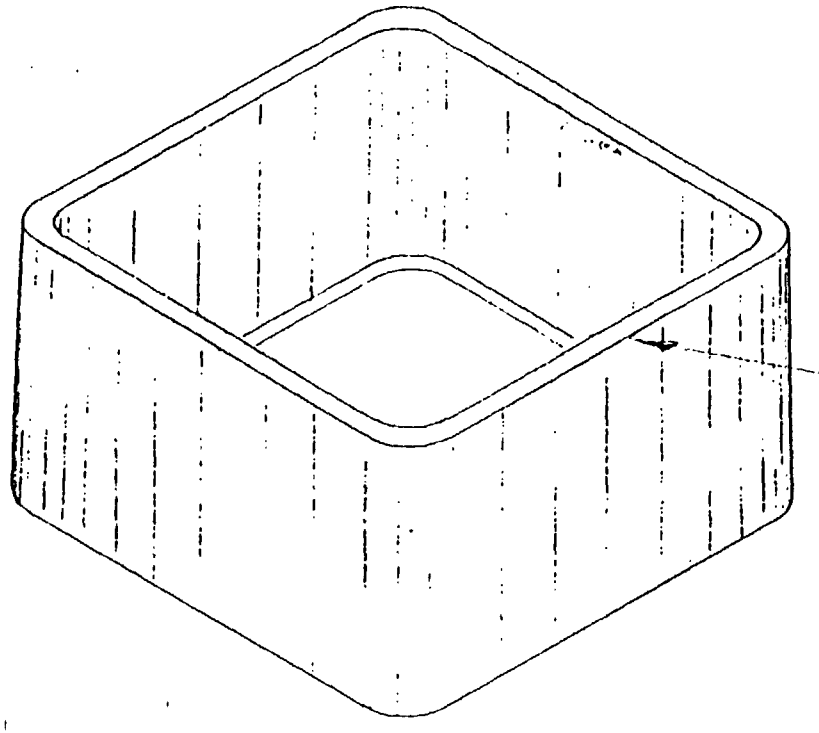
INNOVATIONS TO THE STEEL INDUSTRY

Foseco



Slab Mold Liners



Fosco®

NOTES

1. PROFLEX® TOP MADE IN ONE PIECE.
2. INSERT TOP IN MOLD. PRE-BENT Z STRAPS REGULATE DEPTH OF INSERTION.
3. EXPANSION RING IS MADE SLIGHTLY OVERSIZE FOR INTERFERENCE FIT.
4. RING IS EXPANDED WITH SPECIAL T-BAR TOOL.
5. TOP IS READY FOR USE.

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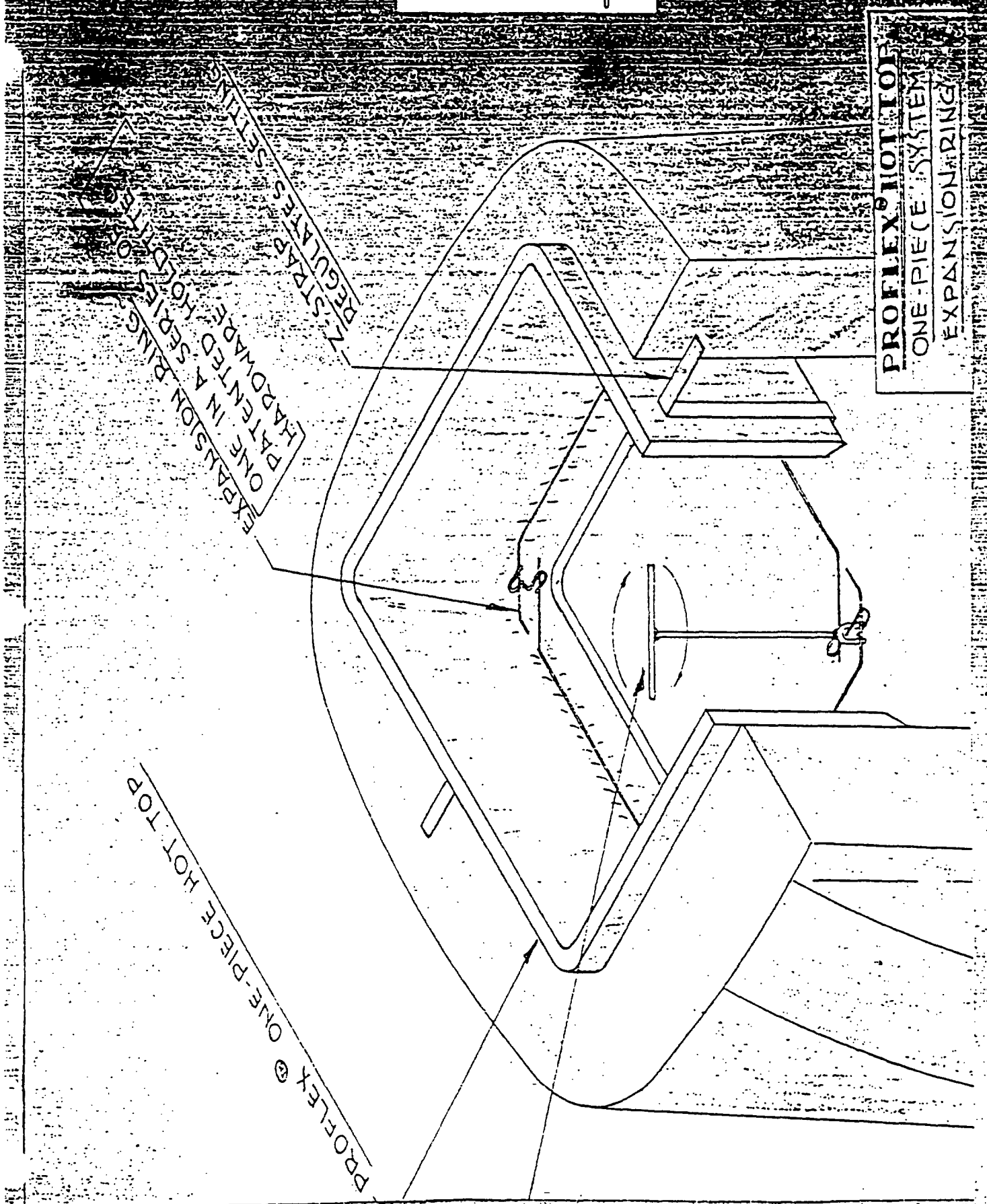
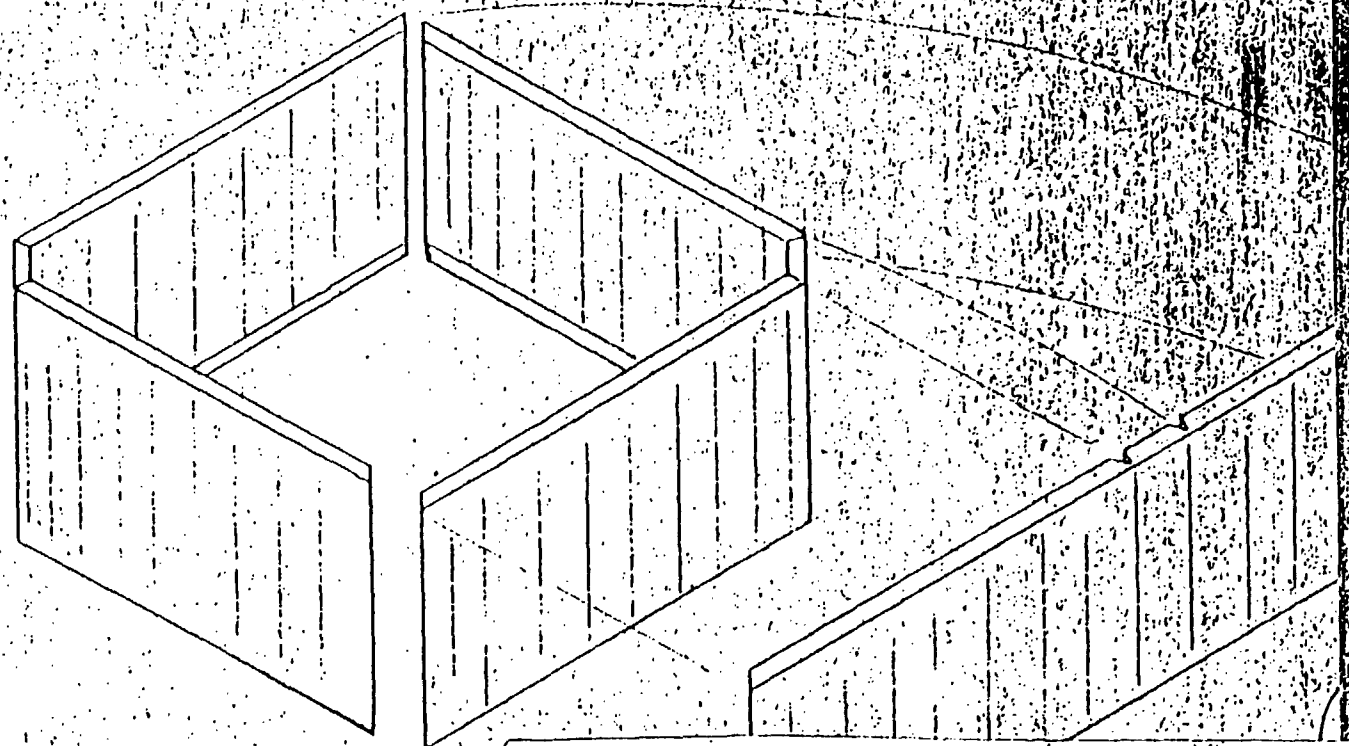
Foseco


PROFLEX® HOT TOP
ONE-PIECE SYSTEM
EXPANSION RING
Z-STRAP
REGULATES SETTING
EXPANSION RING
ONE IN A SERIES OF
PATENTED HOLDFITE
HARDWARE
PROFLEX® ONE-PIECE HOT TOP



NOTES

1. PROFLEX® PANELS MADE FLAT, TO BE "WRAPPED UP" AS SHOWN
2. TWO PANELS WRAPPED UP AND INSERTED IN MOLD. SMALL HANGERS NOT SHOWN, MAY BE REQUIRED TO SUSPEND HOT TOP UNTIL RETAINING HARDWARE IS INSTALLED
3. EXPANSION RING IS MADE SLIGHTLY OVERSIZE FOR "INTERFERENCE FIT"
4. RING IS EXPANDED WITH SPECIAL T-BAR TOOL
5. TOP IS READY FOR USE

Foseco®

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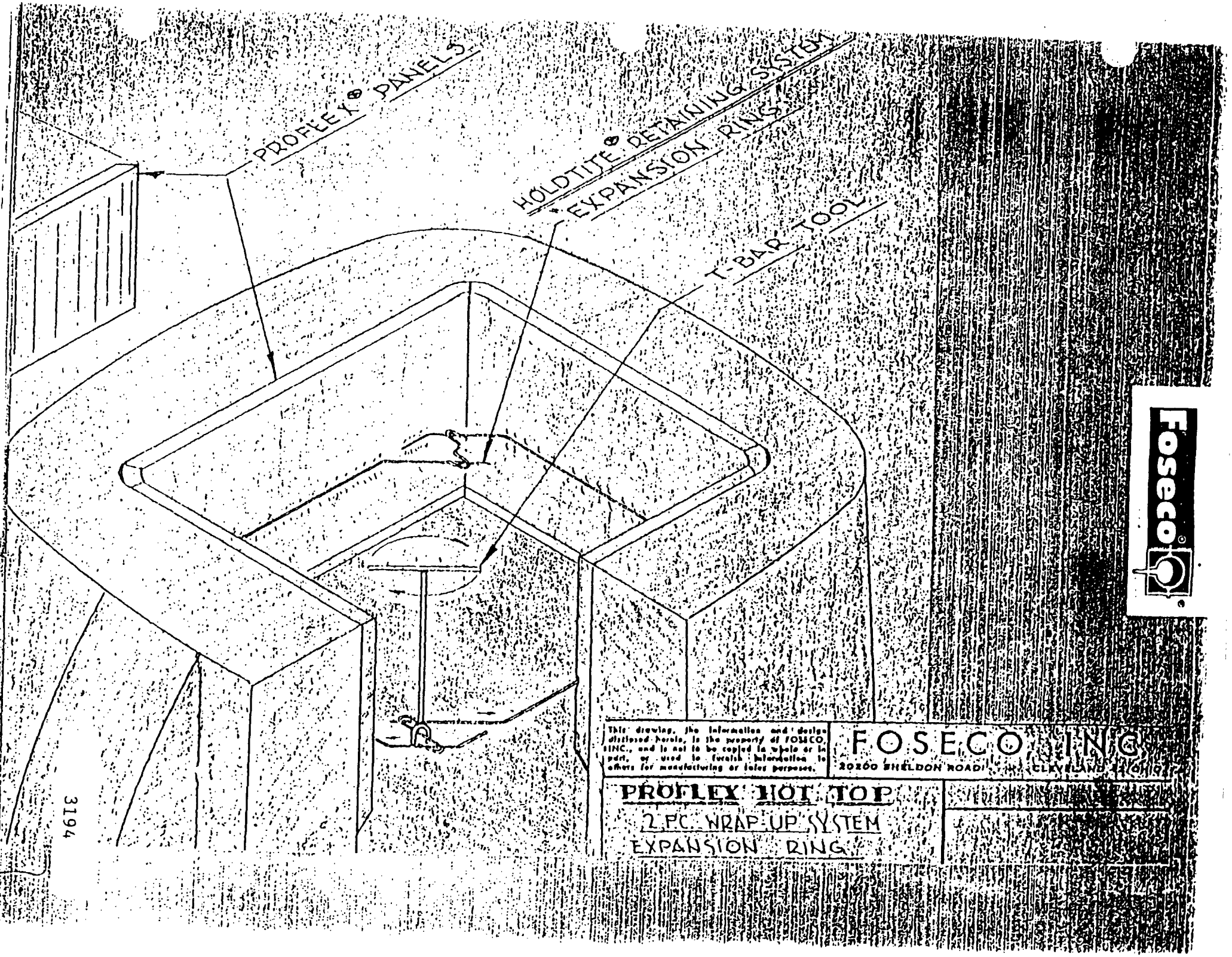
PROFLEX® PANELS
HOLDTITE® RETAINING SYSTEM
EXPANSION RING
T-BAR TOOL
Foseco®
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FOSECO INC
20200 SHELDON ROAD
CLEVELAND OHIO
PROFLEX HOT TOP
2 PC WRAP UP SYSTEM
EXPANSION RING
3194

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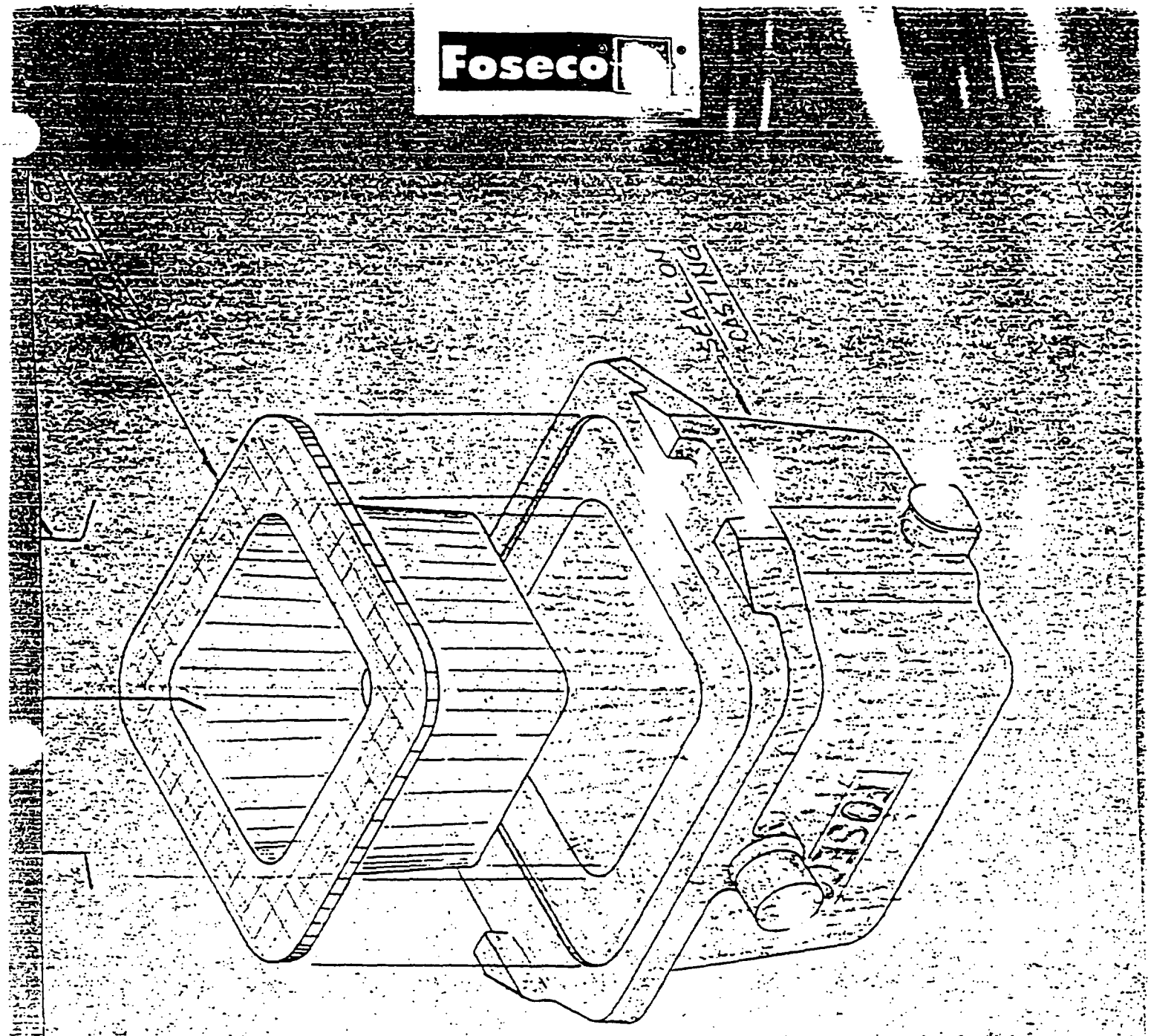

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HE SERIES
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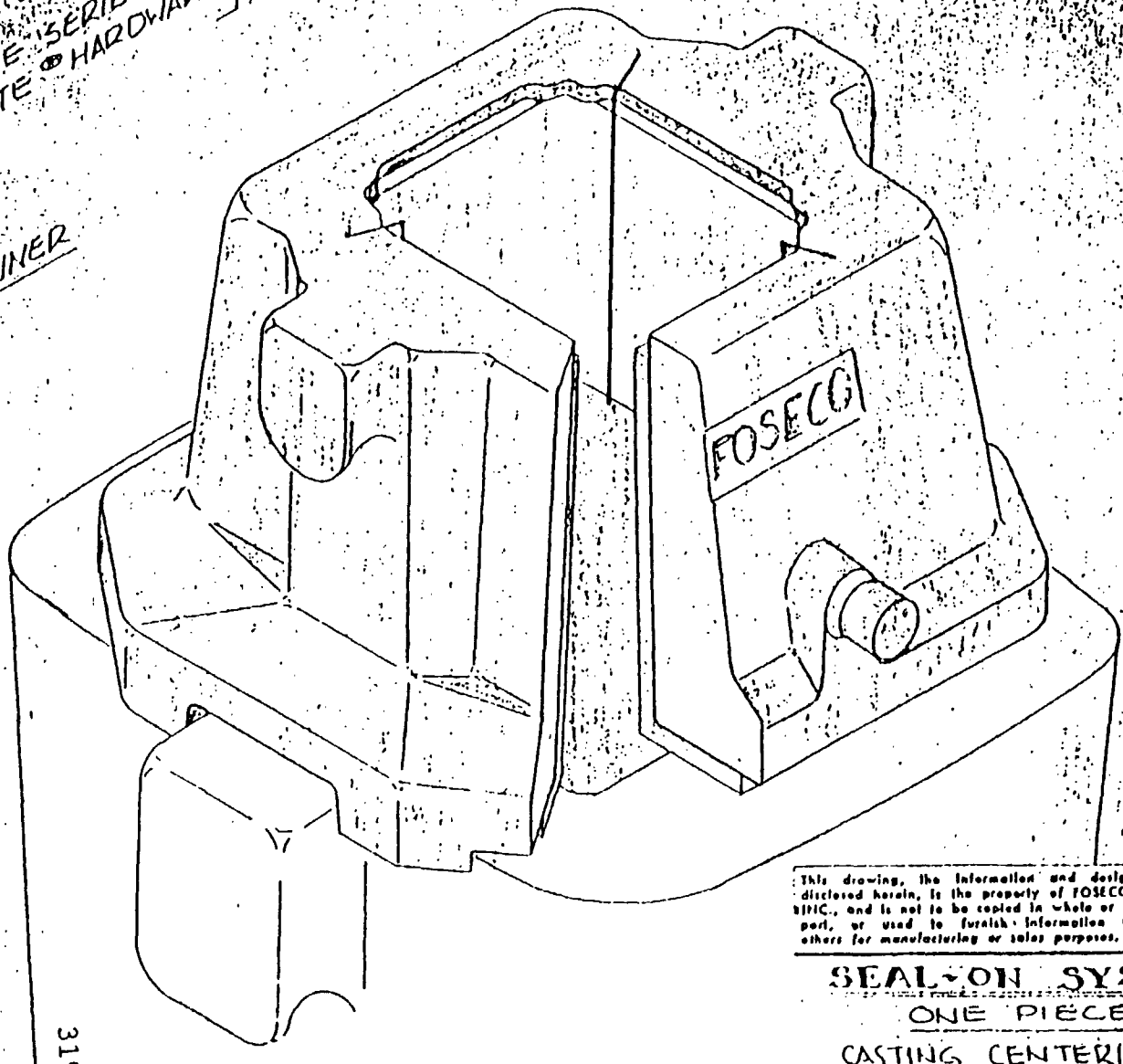
LINER



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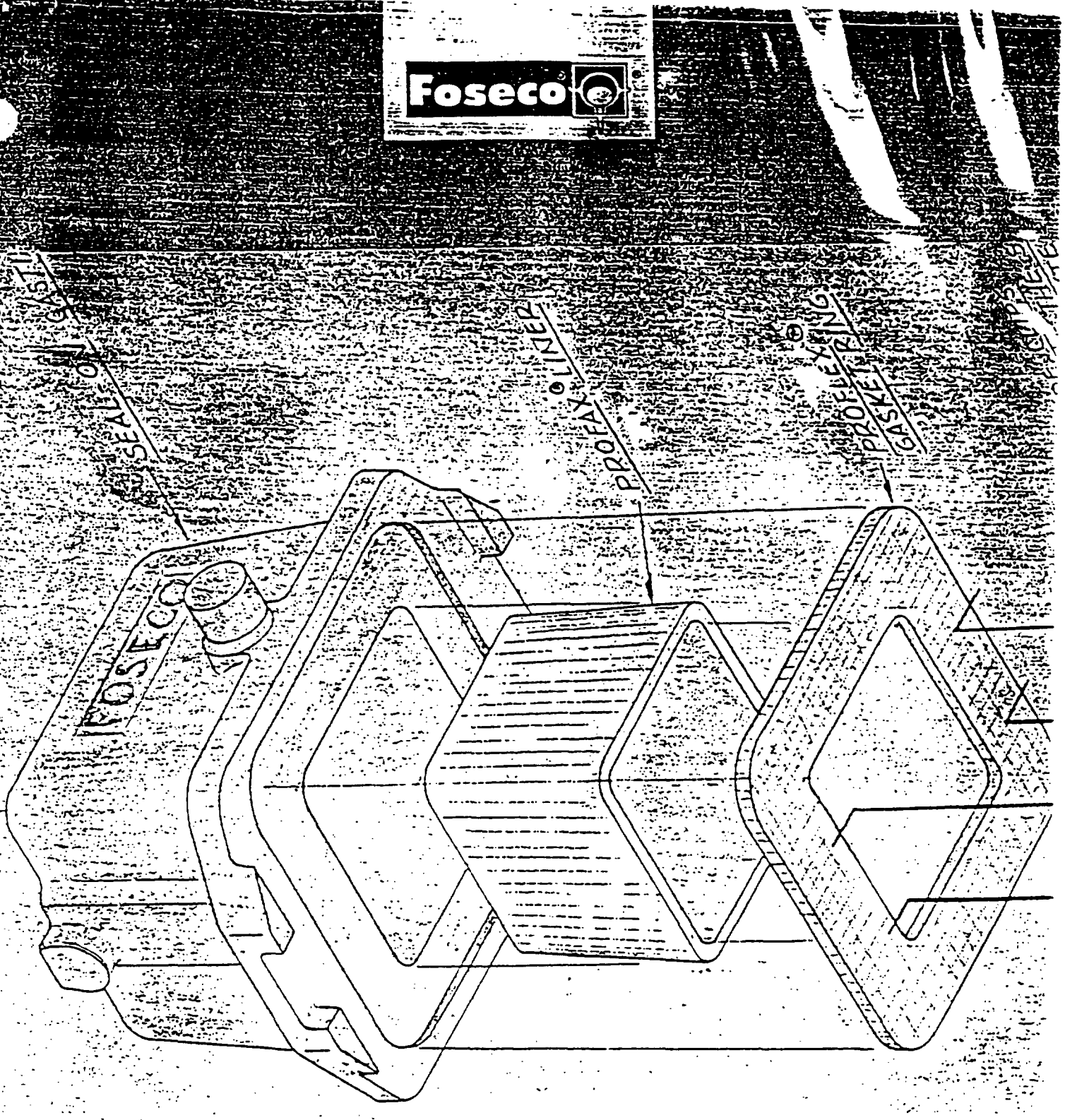
FOSECO, INC.
20200 SHELDON ROAD CLEVELAND 42, OHIO

SEAL-ON SYSTEM
ONE PIECE
CASTING CENTERING LUGS

Foseco



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