

December 7, 1961

SUPERSEDING

Int. Fed. Spec. DD-T-0090a (COM-BDSA)

September 24, 1959

FEDERAL SPECIFICATION

TABLEWARE, GLASS, (BOWLS, CUPS, DISHES, PLATES, AND SAUCERS)

This specification was approved by the Commissioner, Federal Supply Service, General Services Administration, for the use of all Federal Agencies.

1. SCOPE AND CLASSIFICATION

1.1 Scope. This specification covers glass tableware for use by civilian and military agencies in preparing, serving, and storing food.

1.2 Classification. Glass tableware shall be of the type specified in table I of this specification. (See 6.1.)

2. APPLICABLE SPECIFICATIONS, STANDARDS, AND OTHER PUBLICATIONS.

2.1 Specifications and standards. The following specification and standards, of the issues in effect on date of invitation for bids, form a part of this specification:

Federal Specifications:

L-P-406—Plastics, Organic: General Specifications, Test Methods.

PPP-B-585—Boxes, Wood, Wirebound.

PPP-B-591—Boxes, Fiberboard, Wood Cleated.

PPP-B-601—Boxes, Wood, Cleated-Plywood.

PPP-B-621—Boxes, Wood, Nailed and Lock-Corner.

PPP-B-636—Box, Fiberboard.

Federal Standards:

Federal Standard No. 102—Preservation, Packaging, and Packing Levels.

Federal Standard No. 123—Marking for Domestic Shipment (Civilian Agencies).

(Activities outside the Federal Government may obtain copies of Federal Specifications, Standards, and Handbooks as outlined under General Information in the Index of Federal Specifications, Standards, and Handbooks and at the prices indicated in the Index. The Index, which includes cumulative monthly supplements as issued, is for sale on a subscription basis by the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C.)

(Single copies of this specification and other product specifications required by activities outside the Federal Government for bidding purposes are available without charge at the General Services Administration Regional Offices in Boston, New York, Atlanta, Chicago, Kansas City, Mo., Dallas, Denver, San Francisco, Los Angeles, Seattle, and Washington, D.C.)

(Federal Government activities may obtain copies of Federal Specifications, Standards, and Handbooks from established distribution points in their agencies.)

Military Specifications:

MIL-B-10377—Box, Wood Cleated, Veneer, Paper Overlaid.

MIL-L-10547—Liners, Case, Waterproof.

Military Standards:

MIL-STD-105—Sampling Procedures and Tables for Inspection by Attributes.

MIL-STD-109—Inspection Terms and Definitions.

MIL-STD-129—Marking for Shipment and Storage.

(Copies of Military Specifications and Standards required by contractors in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

2.2 Other publications. The following publications, of the issues in effect on date of invitation for bids, form a part of this specification.

Post Office Department Publication:

Postal Regulations.

(Application for copies should be addressed to the Post Office Department, Washington 25, D.C.)

Consolidated Classification Committee Publication:

Consolidated Freight Classification Rules.

(Application for copies should be addressed to the Consolidated Classification Committee, 202 Chicago Union Station, Chicago 6, Ill.)

American Trucking Associations Inc. Publication:

Motor Freight Classification Rules.

(Application for copies should be addressed to the American Trucking Associations, Inc., 1424 16th Street NW., Washington 6, D.C.)

3. REQUIREMENTS

3.1 Items. Unless otherwise specified in the invitation for bids, the items shall be of the dimensions, weights and capacities shown in table I.

3.1.1. Material. Material shall be glass, treated to increase its resistance to mechanical shock. Unless otherwise specified, the ware shall have a white opal body.

3.2 Design and shape. Tableware shall conform to the designs and shapes shown on items 1 through 26 of this specification.

3.3 Dimensions, weights and capacities. When tested in accordance with 4.2.1, tableware shall conform to the dimensions, weights, and capacities shown in table 1.

3.3.1 Dimensional tolerances. In table I nominal dimensions are shown. A tolerance shall be allowed on those dimensions as follows:

(a) *Outside top diameter:*

Items Nos. 1 through 8 and Nos. 10 through 24 plus or minus $\frac{1}{16}$ inch.
Items Nos. 9, 25, and 26 plus or minus $\frac{1}{8}$ inch.

(b) *Diameter of base:*

Plus or minus $\frac{1}{16}$ inch.

(c) *Overall height:*

Items Nos. 1 through 18 and Nos. 20 through 26 plus or minus $\frac{1}{16}$ inch.
Item No. 19 plus or minus $\frac{1}{8}$ inch.

(d) *Center bottom thickness:*

Items Nos. 1 through 6 and Nos. 8 through 26 plus $\frac{3}{4}$ inch, minus $\frac{1}{32}$ inch.
Item No. 7 plus $\frac{1}{16}$ inch, minus $\frac{1}{32}$ inch.

3.4 Physical requirements. Tableware shall conform to the physical requirements shown in table II when tested as specified in 4.3.1, 4.3.2, 4.3.3, 4.3.4 and 4.3.7.

TABLE I

Item No.	Article	Outside top diameter	Diameter of base	Overall height	Minimum capacity	Center bottom thickness	Maximum weight
		Inches	Inches	Inches	Fluid ounces	Inches	Ounces
1	Bowl.....	4 $\frac{7}{8}$	2 $\frac{3}{4}$	1 $\frac{13}{16}$	8. 4	1 $\frac{1}{64}$	10 $\frac{1}{2}$
2	Bowl.....	5 $\frac{5}{8}$	3 $\frac{5}{64}$	2 $\frac{1}{8}$	14. 0	$\frac{5}{32}$	13 $\frac{3}{4}$
3	Bowl.....	5 $\frac{5}{8}$	2 $\frac{7}{8}$	2 $\frac{5}{16}$	18. 0	$\frac{1}{4}$	17
4	Bowl, salad.....	7 $\frac{1}{2}$	2 $\frac{3}{4}$	2 $\frac{1}{2}$	-----	1 $\frac{1}{64}$	16 $\frac{1}{4}$
5	Bowl, salad.....	8 $\frac{3}{4}$	3 $\frac{1}{2}$	3 $\frac{1}{16}$	-----	$\frac{3}{16}$	23
6	Cup.....	3 $\frac{13}{16}$	1 $\frac{19}{32}$	2 $\frac{5}{16}$	6. 5	$\frac{3}{16}$	8
7	Cup, drinking.....	3 $\frac{19}{32}$	2	3 $\frac{25}{64}$	10. 5	$\frac{7}{32}$	13
8	Cup, egg.....	3 $\frac{5}{8}$	1 $\frac{13}{16}$	2 $\frac{1}{2}$	6. 5	1 $\frac{1}{64}$	8 $\frac{1}{4}$
9	Dish, food serving, round platter.....	9 $\frac{27}{32}$	5 $\frac{1}{16}$	2 $\frac{3}{16}$	-----	$\frac{1}{4}$	36
10	Dish, grapefruit.....	6 $\frac{1}{2}$	3 $\frac{3}{16}$	1 $\frac{15}{32}$	-----	1 $\frac{1}{64}$	12 $\frac{1}{4}$
11	Dish, fruit, sauce.....	4 $\frac{3}{4}$	2 $\frac{1}{4}$	1 $\frac{1}{16}$	4. 0	1 $\frac{1}{64}$	7 $\frac{1}{2}$
12	Mug.....	3 $\frac{3}{2}$	2 $\frac{1}{2}$	3 $\frac{1}{8}$	6. 5	$\frac{7}{32}$	10 $\frac{1}{2}$
13	Plate.....	8	5	1 $\frac{13}{16}$	-----	1 $\frac{1}{64}$	18 $\frac{1}{4}$
14	Plate, bread and butter.....	5 $\frac{1}{2}$	3 $\frac{7}{32}$	1 $\frac{1}{16}$	-----	1 $\frac{1}{64}$	8
15	Plate, bread and butter.....	6 $\frac{3}{4}$	3 $\frac{29}{32}$	1 $\frac{5}{64}$	-----	1 $\frac{1}{64}$	12 $\frac{1}{2}$
16	Plate, 3 compartment.....	9 $\frac{1}{2}$	7	1 $\frac{13}{16}$	-----	1 $\frac{1}{64}$	24 $\frac{1}{2}$
17	Plate, dinner.....	9	5 $\frac{3}{32}$	3 $\frac{1}{32}$	-----	1 $\frac{1}{64}$	22
18	Plate, dinner.....	9 $\frac{3}{8}$	5 $\frac{5}{8}$	3 $\frac{1}{32}$	-----	$\frac{3}{16}$	23
19	Plate, dinner.....	9 $\frac{1}{8}$	5 $\frac{1}{2}$	1 $\frac{5}{16}$	-----	1 $\frac{3}{64}$	23
20	Plate, salad.....	7 $\frac{1}{4}$	4 $\frac{13}{32}$	1 $\frac{5}{64}$	-----	1 $\frac{1}{64}$	14 $\frac{1}{4}$
21	Platter.....	9 $\frac{1}{2}$ X 7	5 $\frac{11}{16}$ X 3 $\frac{1}{16}$	1 $\frac{7}{32}$	-----	$\frac{3}{16}$	16
22	Platter.....	11 $\frac{1}{2}$ X 8	7 $\frac{11}{16}$ X 4 $\frac{1}{16}$	1 $\frac{1}{32}$	-----	$\frac{3}{16}$	22 $\frac{1}{2}$
23	Saucer.....	5 $\frac{7}{8}$	2 $\frac{25}{32}$	1 $\frac{5}{16}$	-----	$\frac{5}{32}$	9 $\frac{1}{4}$
24	Saucer.....	6 $\frac{1}{4}$	3	$\frac{7}{8}$	-----	1 $\frac{3}{64}$	10 $\frac{1}{2}$
25	Saucer, wide rim.....	5 $\frac{7}{8}$	3 $\frac{1}{4}$	1 $\frac{5}{16}$	-----	1 $\frac{1}{64}$	9 $\frac{1}{4}$
26	Soup, rim.....	9 $\frac{1}{8}$	4 $\frac{1}{2}$	1 $\frac{5}{8}$	-----	$\frac{3}{16}$	23 $\frac{1}{2}$

TABLE II.—Physical requirements

Item No.	Article	Rim warpage (4.3.7)	Bottom warpage (4.3.7)	Impact strength (4.3.1)	Drop strength (4.3.2)	Breakage test number (4.3.3)	Average chipping resistance (4.3.4)
				<i>Ft.-lb.</i>	<i>Inches</i>		
1	Bowl.....			.25		20	
2	Bowl.....			.40		25	
3	Bowl, eating.....			.50		35	
4	Bowl, salad.....	.062	.020		25	25	.16
5	Bowl, salad.....	.062	.020		50	30	.16
6	Cup.....			.30		40	
7	Cup, drinking.....			.30		35	
8	Cup, egg.....			.25		40	
9	Dish, food serving, round platter.....	.078	.031		55	40	.16
10	Dish, grapefruit.....	.046	.020		25	30	.16
11	Dish, fruit, sauce.....	.031	.020		60	20	.16
12	Mug.....			.30		40	
13	Plate.....	.062	.031		30	25	.16
14	Plate, bread & butter.....	.046	.020		30	20	.16
15	Plate, bread & butter.....	.046	.020		30	25	.16
16	Plate, 3 compartment.....	.062	.031		15	40	.16
17	Plate, dinner.....	.062	.031		20	30	.16
18	Plate, dinner.....	.062	.031		20	30	.16
19	Plate, dinner.....	.078	.031		20	35	.16
20	Plate, salad.....	.046	.031		25	25	.16
21	Platter.....	.062	.031			30	.16
22	Platter.....	.062	.031			30	.16
23	Saucer.....	.046	.020		50	20	.16
24	Saucer, cup.....	.062	.020		35	30	.16
25	Saucer, wide rim.....	.046	.020		45	20	.16
26	Soup, rim.....	.062	.031		40	30	.16

3.5 Surface abrasion. Tableware shall show no signs of rupture, cracking, or chipping when tested as specified in 4.3.5.

3.6 Thermal shock resistance. Tableware shall be capable of withstanding the thermal endurance test as specified in 4.3.6.

3.7 Warpage. Ware shall not show warpage greater than that shown in table II, when tested in accordance with 4.3.7.

3.8 Marking for identification. Unless otherwise specified, tableware shall be permanently and distinctly marked on the bottom with the name of the manufacturer or the brand name or trademark of such known character as to be readily identified with same manufacturer.

3.9 Decoration of ware. Ware shall be decorated according to the requirements of the purchasing officer.

3.10 Finish and workmanship. The finish and workmanship of tableware shall be in accordance with classification of defects in table V. AQL of one major and two minor defects per

piece. Inspection practice to be performed in accordance with MIL-STD-105. Edges shall be well rounded and sufficiently fire polished to remove fins and sharp edges.

4. SAMPLING, INSPECTION, AND TEST PROCEDURES

4.1 Inspection responsibility. The supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified, the supplier may utilize his own or any other inspection facilities and services acceptable to the Government. Inspection records of the examination and tests shall be kept complete and available to the Government as specified in the contract or order (see 6.1). The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

4.1.1 Preproduction sample inspection. When required, examination and testing of the

preproduction sample shall be made of a completely fabricated item for all provisions of this specification applicable to end product examination and tests before regular production is started.

4.1.2 Sampling for inspection and acceptance. Sampling for inspection and acceptance shall be performed in accordance with the provisions set forth in MIL-STD-105, except where otherwise indicated. The inspection terms and definitions shall be interpreted in accordance with MIL-STD-109.

4.1.2.1 Component and material inspection. In accordance with 4.1 above, the supplier is responsible for insuring that components and materials used are manufactured, tested, and inspected in accordance with the requirements of referenced subsidiary specifications and standards to the extent specified or, if none, in accordance with this specification.

4.1.2.2 Sampling for inspection of filled containers. The containers from which the tableware is sampled in accordance with 4.1.2.1 shall be inspected by the Government inspector to verify compliance with all requirements specified in Section 5—PREPARATION FOR DELIVERY, with lot acceptance based on table III.

4.1.3 Sampling for lot acceptance tests. From each lot of tableware the Government inspector shall select a random sample as specified in table IV for each required destructive test (see 4.3.1 to 4.3.5, inclusive) and for each required nondestructive test (see 4.3.6 and 4.3.7)

(The surface abrasion test may be made on the samples to be used for the breakage characteristics test, and the samples used for the warpage test may be used for any of the other tests.)

4.1.4 Lot acceptance tests.

4.1.4.1 Impact strength, drop, breakage, thermal shock, and warpage. From each lot of tableware the Government inspector shall select random samples as specified in 4.1.3 for the required tests (see 4.3.1, 4.3.2, 4.3.3, 4.3.6, and 4.3.7). If the number of pieces of tableware failing any one of these tests exceeds the acceptance number specified in table IV, the lot represented by the sample shall be rejected. If the total number of pieces failing is exactly the number specified in column 4 of table IV then, at the supplier's request, a retest shall be conducted on the lot of rejected ware using a selected random sample of the same size used in making the first test. If the total number of pieces of tableware failing the first test plus the retest exceeds the total acceptance number specified in table IV, the lot represented by the sample shall be rejected. At the Government inspector's discretion, a retest may be made only on the test on which the first sample failed or a complete retest covering all the tests may be made on the lot in question.

4.1.4.2 Chipping resistance and surface abrasion. From each lot of tableware the Government inspector shall select a random sample as specified in 4.1.3 for the required tests (see 4.3.4 and 4.3.5). On the surface abrasion test if any failures occur, regardless of sample size

TABLE III.—Sampling for dimensional and visual inspection AQL (approx.)—2.5 percent defective

Number of pieces in inspection lot	Tableware			Containers		
	Number of pieces in sample ¹	Acceptance number (defectives)	Rejection number (defectives)	Number of pieces in sample	Acceptance number (defectives)	Rejection number (defectives)
Up to 300.....	25	1	2	3	0	1
301 to 500.....	35	2	3	4	0	1
501 to 800.....	50	3	4	5	0	1
801 to 1,300.....	75	4	5	8	0	1
1,301 to 3,200.....	110	6	7	11	1	2
3,201 to 8,000.....	150	8	9	15	1	2
8,001 to 22,000.....	225	11	12	22	1	2
22,001 to 110,000.....	300	14	15	30	2	3
110,001 and over.....	450	20	21	45	3	4

¹ Not more than 10 pieces shall be taken from any one container.

TABLE IV.—Sampling for lot acceptance tests

Number of pieces in inspection lot				For lots requiring retest
	Number of sample pieces for each lot acceptance test ¹	Acceptance number of failures on any one test	Rejection number of failures on any one test	Total acceptance number of failures on any one test—failures on first test plus failures on retest
0 to 1,300-----	15	1	2	3
1,301 to 3,200-----	25	2	3	5
3,201 to 8,000-----	35	3	4	7
8,001 to 22,000-----	50	4	5	9
22,001 and over-----	75	6	7	13

¹ Not more than 10 pieces shall be taken from any one container.

the lot shall be rejected and no retest shall be permitted. On the chipping resistance test, the average chipping energy of all the test pieces shall determine whether the lot shall be accepted or rejected. If the first test pieces fail to meet the minimum average chipping resistance requirements, a retest shall be made at the supplier's request using a selected random sample of the same size used in making the first test. If the average chipping resistance of the total pieces tested, that is the average of the first test sample and the retest sample, does not meet the minimum average chipping resistance requirements the lot shall be rejected.

4.2 Inspection.

4.2.1 Dimensional and visual inspection.

Each of the sample pieces of tableware selected in accordance with table III shall be dimensionally and visually inspected by the Government inspector to verify compliance with 3.3, 3.3.1 and 3.10 of this specification. Any piece in the sample containing one or more dimensional or visual defects shall be rejected, and if the number of defective pieces in any sample exceeds the acceptance number for that sample, the lot represented by the sample shall be rejected.

4.3 Test procedures.

4.3.1 Impact strength.

4.3.1.1 Apparatus.

Impact strength test shall be made on the items listed in table II for which impact strength is shown and the ware must meet the impact strength (foot poundage) requirements in that table. The ware shall be tested by using the apparatus shown in figures 1 and 2. The hammer for this test shall be a plastic ball $2\frac{3}{8}$ inches in diameter and weighing approximately 5 ounces. The plastic ball shall

have a Rockwell hardness of 105 to 120 on the "M" scale (see method 1081 of L-P-406). The ball shall be attached to the steel tape by the illustrated holding cradle and the weight of the assembly shall be approximately 12 ounces. The dial of the apparatus shall be properly calibrated for the assembly used. Both faces of the "V" block shall be lined with $\frac{1}{4}$ -inch tempered pressed wood smooth side out (securely fastened to insure complete surface contact with the "V" block) having a Rockwell hardness of from 65 to 95 on the "R" scale.

4.3.1.2 Procedure. Before testing, the inside surface of each specimen to be tested shall be abraded parallel to its principal (vertical) axis by means of fresh No. 150-grit silicon carbide paper or cloth mounted on a steel cylinder 1 inch in diameter, 4 inches long. A recommended method used for abrading the ware is as follows:

(a) The specimen is held on its side and the cylinder held lightly at one end in an approximately horizontal position and permitted to rest the major portion of its weight on the rim of the specimen. The cylinder is then moved in and out abrading the rim so as to produce scratches not more than $\frac{1}{16}$ inch apart. During this abrading motion the specimen and cylinder are slowly rotated as the abrading continues around the rim. Normally, one or two revolutions of the specimen will suffice.

(b) The specimen, resting on its base, shall be placed between the two cast-iron blocks, lined with tempered pressed wood as above, forming a 90-degree

"V" and the apparatus shall be so adjusted that when hammer hangs vertically, its impact point touches the article at the junction of the rim curvature and side wall and in the plane of the bisector of the angle of the "V". The specimen shall be struck (four blows), each blow approximately 90 degrees apart and at an energy value specified in table II. Failure in each case is defined as the development of a rupture or crack or the breaking of a portion of the ware.

4.3.2 Drop test. The drop test shall be made on items listed in table II, for which drop strength is shown and the ware must meet the drop strength requirement in that table. Prior to dropping, each specimen to be tested shall be abraded by hand on the entire inner and outer surfaces using fresh No. 150-grit silicon carbide paper or cloth. Special care shall be given to abrading the inner and outer well portions and rim of the specimen. Care shall be taken that the specimen is abraded in all directions in such a manner that the scratches, even though small and difficult to see, will be a maximum of $\frac{1}{16}$ inch apart. Specimen shall then be tested by dropping onto a level, smooth maple plank $1\frac{1}{2}$ inches thick, approximately 14 inches wide and 20 inches long, which is supported on two wood strips $1\frac{1}{4}$ inches wide, $\frac{3}{4}$ inch thick parallel to and 2 inches from the ends of the plank. The plank shall be supported solidly by bolting two bolts through each of these strips to a solid concrete base or floor. The specimens shall be dropped bottom downward in such a manner so as to strike as nearly flat as possible. A vacuum chuck or other suitable dropping mechanism may be used so that ware will strike flat. Three drops shall be made on each specimen at the height specified in table II.

4.3.3 Breakage test. Breakage tests shall be run on each item of tableware. The test shall be made by placing the specimen upright on its base upon a solid support ($1\frac{1}{4}$ -inch maple plank as used for the drop test and specified in 4.3.2), placing a steel center punch (point ground to approximately a 60-degree including angle) in contact with the center of the inside surface of the bottom and striking with a hammer in successive blows of increasing severity until

breakage occurs. The specimen should break into a small number of irregular shaped pieces not greater in number than specified in table II and it must not dice. Any piece $\frac{1}{4}$ inch or more on any three of its adjacent edges (excluding the thickness dimension) shall be included in the number counted. Smaller fragments shall not be counted.

4.3.4 Chipping resistance.

4.3.4.1 Apparatus. The chipping resistance test shall be made on the items listed in table II, for which an average chipping resistance is shown and the ware must meet the chipping resistance requirements in that table. The ware shall be tested by using the apparatus and 6-ounce hammer as shown in figure 2. The hammer shall be steel hardened to a Rockwell hardness of 45 to 60 on the "C" scale. The curved impact face of the hammer shall be smooth.

4.3.4.2 Procedure. The specimen resting on its base shall be placed between the two cast-iron blocks, not lined, and the apparatus so adjusted that when the hammer hangs vertically the center of the impact face of the chipping hammer touches the edge of the test specimen in the plane of the bisector of the angle of the "V". The specimen shall be repeatedly struck on the edge at the same point by the hammer with blows of increasing force until failure occurs, beginning with an initial blow of 0.11 foot-pound and increasing the force of each succeeding blow in increments of 0.02 foot-pound until failure occurs. Failure consists in chipping the edge of the test specimen so that fragments are removed and the chipped portion of the rim is approximately $\frac{3}{8}$ inch in any one dimension. The specimen shall be tested at three equally spaced points on its periphery and the average energy for the three points tested shall be the value reported.

4.3.5 Surface abrasion. The surface abrasion test shall be made on each item of tableware. Each specimen shall be thoroughly abraded on the entire inner and outer surfaces using fresh No. 50-grit silicon carbide paper or cloth. After abrading, the specimen shall be immersed in tap water for 5 minutes. The development of a rupture, or any cracking or chipping, shall constitute failure.

4.3.6 Thermal shock. Thermal shock tests

TABLE V.—*Defects***A Major:**

- 1 Stone (undissolved material)—Maximum size $\frac{3}{32}$ inch.
- 2 Blisters (solid or closed)—Maximum size $\frac{3}{32}$ inch.
Blisters (soft or open)—Reject all degrees.
- 3 Chip—Reject all degrees.
- 4 Crack—Reject all degrees.
- 5 Rack Marks (small notch on foot)—Reject marks over $\frac{1}{8}$ inch in width or length.
Discoloration of rack marks is not a defect.

B Minor:

- 1 Smeared decorations.
- 2 Misplaced decorations.
- 3 Color off standard.

shall be made on all types of tableware. Test specimens of ware shall be heated in an oven at a temperature of 300 degrees plus or minus 5 degrees Fahrenheit (F.) for a period of not less than 30 minutes. The ware shall then be immediately plunged into a cold water bath maintained at a temperature of 32 to 40 degrees F. Any cracking or chipping shall constitute failure.

4.3.7 Warpage. Warpage shall be measured by placing the specimen base down on a plane surface and held firmly in place by exerting pressure with one finger at the center of the specimen. In this position, the specimen shall be sufficiently plane that a feeler gauge of a thickness as specified in table II cannot be inserted at any point between the base of the ware and the supporting surface. After testing the ware for base warpage the specimen shall then be placed rim downward on a plane surface and the same test procedure repeated using a feeler gauge of a thickness as specified for rim warpage in table II.

5. PREPARATION FOR DELIVERY
(Levels of preservation, packaging and packing protection used are defined in Fed. Std. 102 (for civil agencies only).)

5.1 Packaging.**5.1.1 Level A.****5.1.1.1 Items, 1, 2, and 3: Bowls, eating.**

5.1.1.1.1 Two sets of slotted partitions shall be so designed as to provide individual cells for each bowl. The two partitions shall be designed to contain eight bowls each in length and three each in width.

5.1.1.1.2 A dividing pad (to separate the two partitions containing 24 bowls each) and all partitions shall be made of double-faced corrugated fiberboard in accordance with PPP-B-636, shall have a bursting strength of not less than 275 p.s.i., and shall be of "A" or "C" flute.

5.1.1.1.3 All bowls shall be inserted on edge into the individual cells formed by the partition pieces. The two outside rows of eight bowls shall be placed into cells so that four bowls have their bases facing each end of the box. The middle row shall be packed so that the bases of four bowls of each end shall face the center of the box (total bowls—48).

5.1.1.2 Items 4, 5, 9, and 26: Bowls, salad; dish, food serving; and soup, rim.

5.1.1.2.1 A carton shall be so designed as to provide space for four liners each forming a rectangle, positioned two by two and containing six dishes each.

5.1.1.2.2 Each dish shall be separated by a square separator pad at least 2 inches greater than the maximum dimension of the dish and shall be made of .009-inch chip paper having a

minimum weight of 21 pounds per 1,000 square feet.

5.1.1.2.3 The liners shall be made of double-faced corrugated fiberboard in accordance with PPP-B-636, shall have a bursting strength of not less than 275 p.s.i., and shall be of "A" or "C" flute.

5.1.1.2.4 The dishes shall be stacked on edge with bases toward the center of the carton (total dishes—24).

5.1.1.3 Items 6, 7, 8, and 12: Cups and mugs.

5.1.1.3.1 Three sets of slotted partitions shall be so designed as to provide cells for each cup or mug. The three partitions shall be designed to contain four cups or mugs in length and four in width.

5.1.1.3.2 Two dividing pads (separating the three partitions carrying 16 cups or mugs each) and all partitions shall be made of double-faced corrugated fiberboard in accordance with PPP-B-636, shall have a bursting strength of not less than 275 p.s.i., and shall be of "A" or "C" flute.

5.1.1.3.3 All cups or mugs in the bottom partition shall be placed bases down, in the middle partition bases up or down, and in the top partition bases up (total cups or mugs—48).

5.1.1.4 Items 10, 11, 14, 15, 20, 23, 24, and 25: Dish, grapefruit; dish, fruit, sauce; plates, bread and butter; plate, salad; saucers.

5.1.1.4.1 One set of slotted partitions shall be designed so as to provide four cells, each cell to contain stacks of 12 dishes.

5.1.1.4.2 Each dish shall be separated by a square separator pad at least 2 inches greater than the maximum dimension of the dish and shall be made of .009-inch chip paper having a minimum weight of 21 pounds per 1,000 square feet.

5.1.1.4.3 The set of slotted partitions shall be made of double-faced corrugated fiberboard in accordance with PPP-B-636, shall have a bursting strength of not less than 275 p.s.i., and shall be of "A" or "C" flute.

5.1.1.4.4 All dishes shall be stacked flat in the carton. Two diagonal stacks shall be stacked with bases down and the other two diagonal stacks with bases up (total dishes—48).

5.1.1.5 Items 13, 16, 17, 18, 19, 21, and 22: Plate; plate, 3 compartment; plate, dinner; and platters.

5.1.1.5.1 One corrugated fiberboard sheet shall be so scored and folded as to form a shell or tube containing 24 platters or plates.

5.1.1.5.2 Each dish shall be separated by a square separator pad at least 1 inch greater than the maximum dimension of the dish and shall be made of .009-inch chip paper having a minimum weight of 21 pounds per 1,000 square feet.

5.1.1.5.3 A top pad, a dividing pad (separating the two stacks of twelve platters or plates) and a bottom pad shall be made of double-faced corrugated fiberboard in accordance with PPP-B-636, shall have a bursting strength of not less than 275 p.s.i., and shall be of "A" or "C" flute.

5.1.1.5.4 All dishes shall be packed flat, 12 with bases up, 12 with bases down and bases shall face the dividing pad (total dishes—24).

5.1.2 Level C. Unless otherwise specified, glass tableware shall be packaged in accordance with the manufacturer's commercial practice.

5.2 Packing.

5.2.1 Level A. Tableware, packaged in accordance with level A as specified (see 6.1) shall be packed in overseas type wood cleated fiberboard, nailed wood, wirebound wood, corrugated or solid fiberboard, wood cleated paper overlaid, or wood cleated plywood boxes conforming to PPP-B-591, PPP-B-621, PPP-B-585, PPP-B-636, class 2 V3c or V3s, MIL-B-10377 or PPP-B-601, respectively, at the option of the contractor. Shipping containers shall have case liners conforming to MIL-L-10547 and shall be closed and sealed in accordance with the appendix thereto. Case liners for boxes conforming to PPP-B-636 may be omitted provided all joints of the boxes are sealed with tape as specified in the appendix of the box specification. Box closures shall be as specified in the applicable box specification or appendix thereto. The gross weight of wood boxes shall not exceed 200 pounds; fiberboard boxes shall not exceed the weight limitations of the applicable box specifications.

5.2.2 Level B. Tableware, packaged as specified (see 6.1) shall be packed in domestic type wood cleated fiberboard, nailed wood, wire bound, cleated plywood or wood cleated veneer paper overlaid boxes or fiber boxes,

conforming to PPP-B-591, PPP-B-621, PPP-B-585, PPP-B-601, MIL-B-10377 or PPP-B-636, respectively, at the option of the contractor. Box closure shall be as specified in the applicable box specification or appendix thereto. The gross weight of wood or wood cleated boxes shall not exceed 200 pounds; fiber boxes shall not exceed the weight limitations of the applicable box specification. Unit fiber boxes conforming to PPP-B-636 shall be closed as specified herein, and used as the shipping container, need not be overpacked.

5.2.3 Level C. Tableware packaged as specified (see 6.1) shall be packed in containers and in a manner which will insure acceptance by common carrier and safe delivery at destination. Shipping containers shall comply to the Uniform freight classification, rate, rules and regulations or other regulations as applicable to the mode of transportation.

5.3 Marking.

5.3.1 Marking (Civil Agencies). Unless otherwise specified, shipping containers shall be marked according to Fed. Std. No. 123. Each shipping container shall be printed or stenciled on the top of the container with letters at least three-quarters of an inch high as follows:

GLASS—DO NOT DROP OR THROW

5.3.2 Fragile label. At least three surfaces of shipping container shall bear a printed fractured disk, in red, on which is imposed the word "FRAGILE". On cartons for all items except eating dish and saucer, the fractured disk shall be 4 inches in diameter, and shall be so placed as to be conspicuous, but not to interfere with other markings. The disk shall not be placed on the lower one-third of the sides of the box, unless specifically required by

law. The disk for the eating dish and saucer cartons shall be 3 inches in diameter and the preceding restriction on the placement of the disk shall not apply.

5.3.3 Military. In addition to any special marking required by the contract or order, shipments shall be marked in accordance with MIL-STD-129, and shall include Fragile Marking.

6. NOTES

6.1 Ordering data. Purchasers should exercise any desired options offered herein, and procurement documents should specify the following:

- (a) Title, number, and date of this specification.
- (b) Item required (see 1.2 and 3.1).
- (c) The color of the body, if other than white opal body (see 3.1.1).
- (d) Any additional marking for identification if necessary (see 3.8).
- (e) The decoration to be applied to the ware (see 3.9).
- (f) Both the level of packaging and the level of packing required (see 5.1 and 5.2).

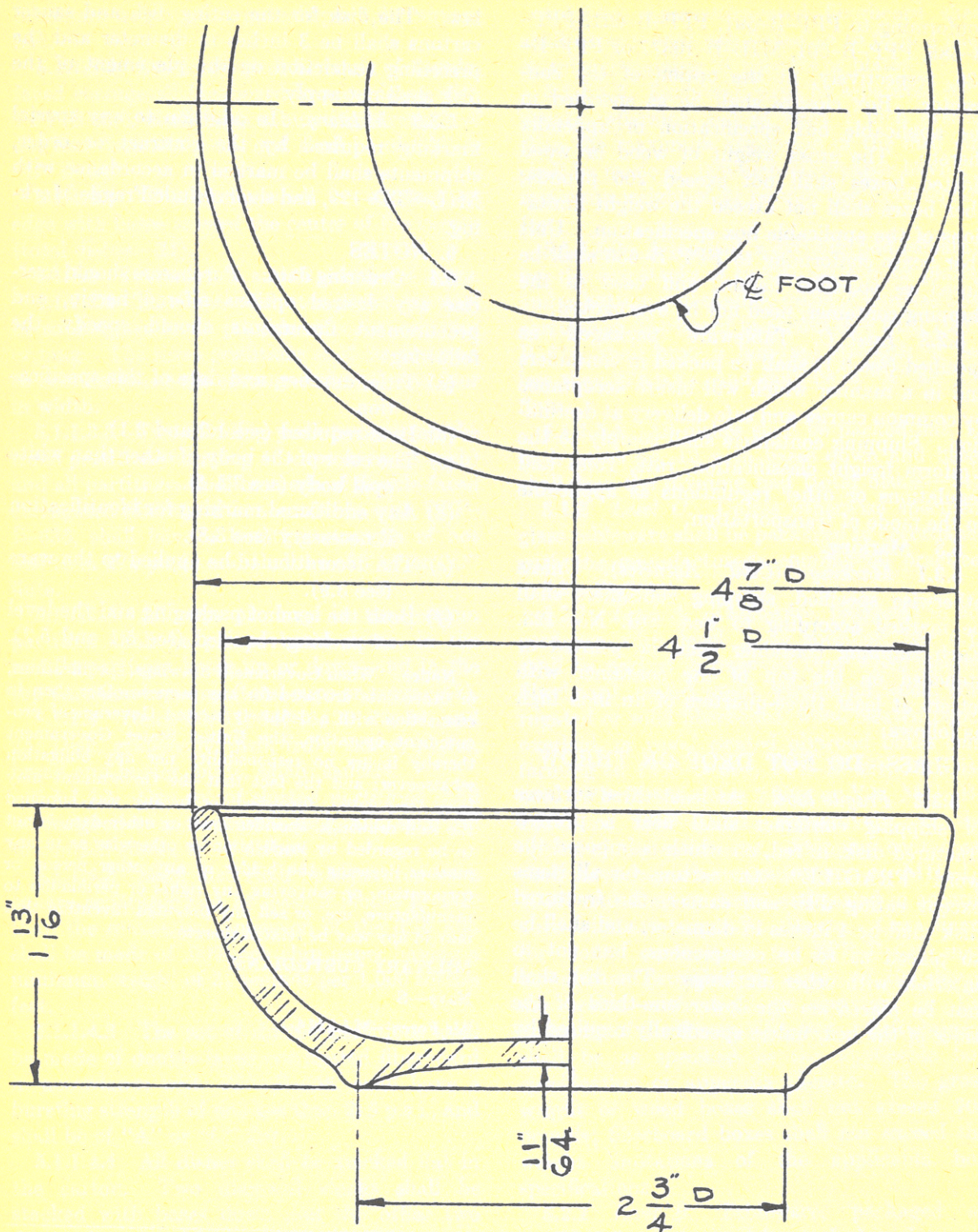
Notice. When Government drawings, specifications, or other data are used for any purpose other than in connection with a definitely related Government procurement operation, the United States Government thereby incurs no responsibility nor any obligation whatsoever; and the fact that the Government may have formulated, furnished, or in any way supplied the said drawings, specifications, or other data is not to be regarded by implication or otherwise as in any manner licensing the holder or any other person or corporation, or conveying any rights or permission to manufacture, use, or sell any patented invention that may in any way be related thereto.

MILITARY CUSTODIANS:

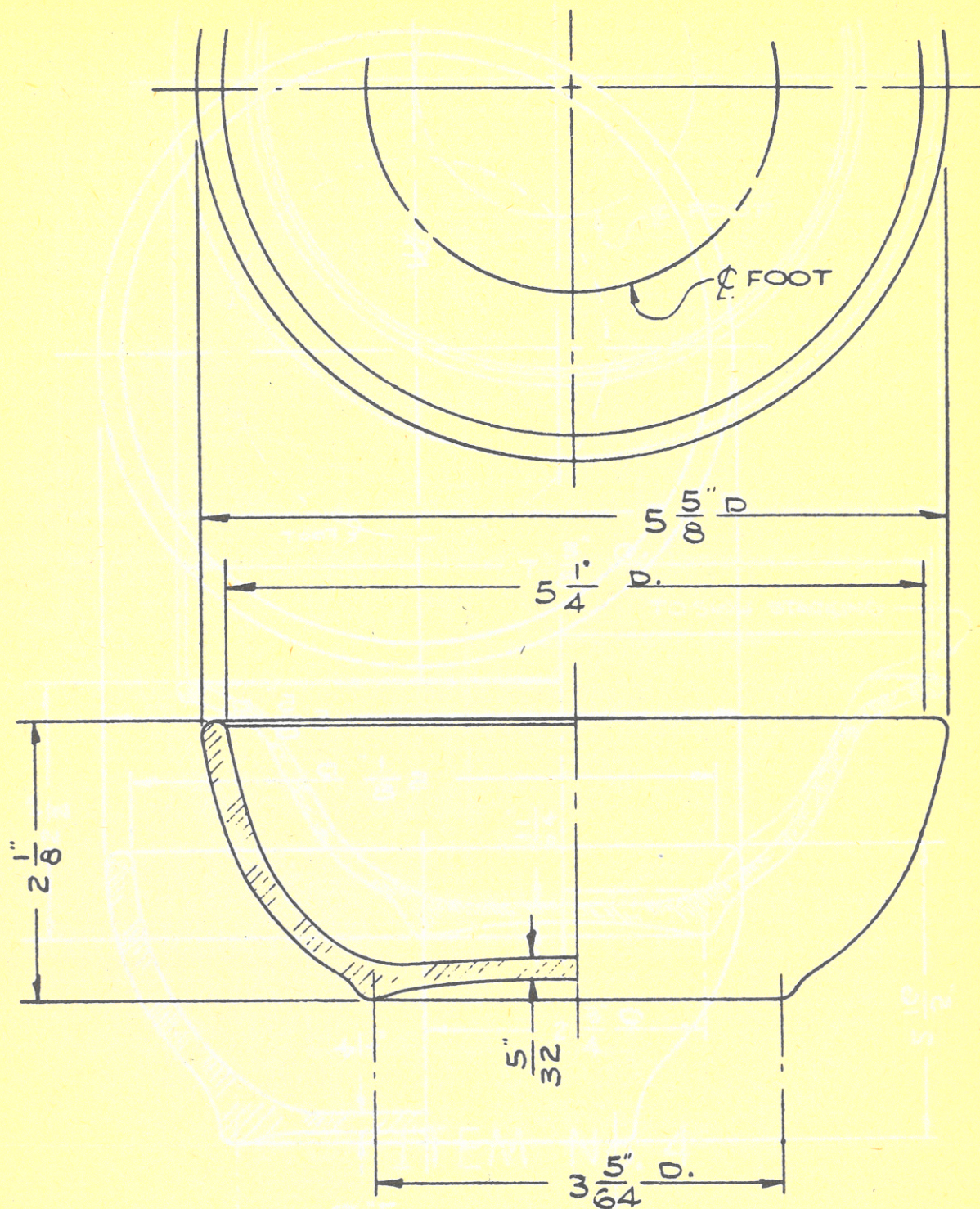
Navy—S

Air Force—MAAMA

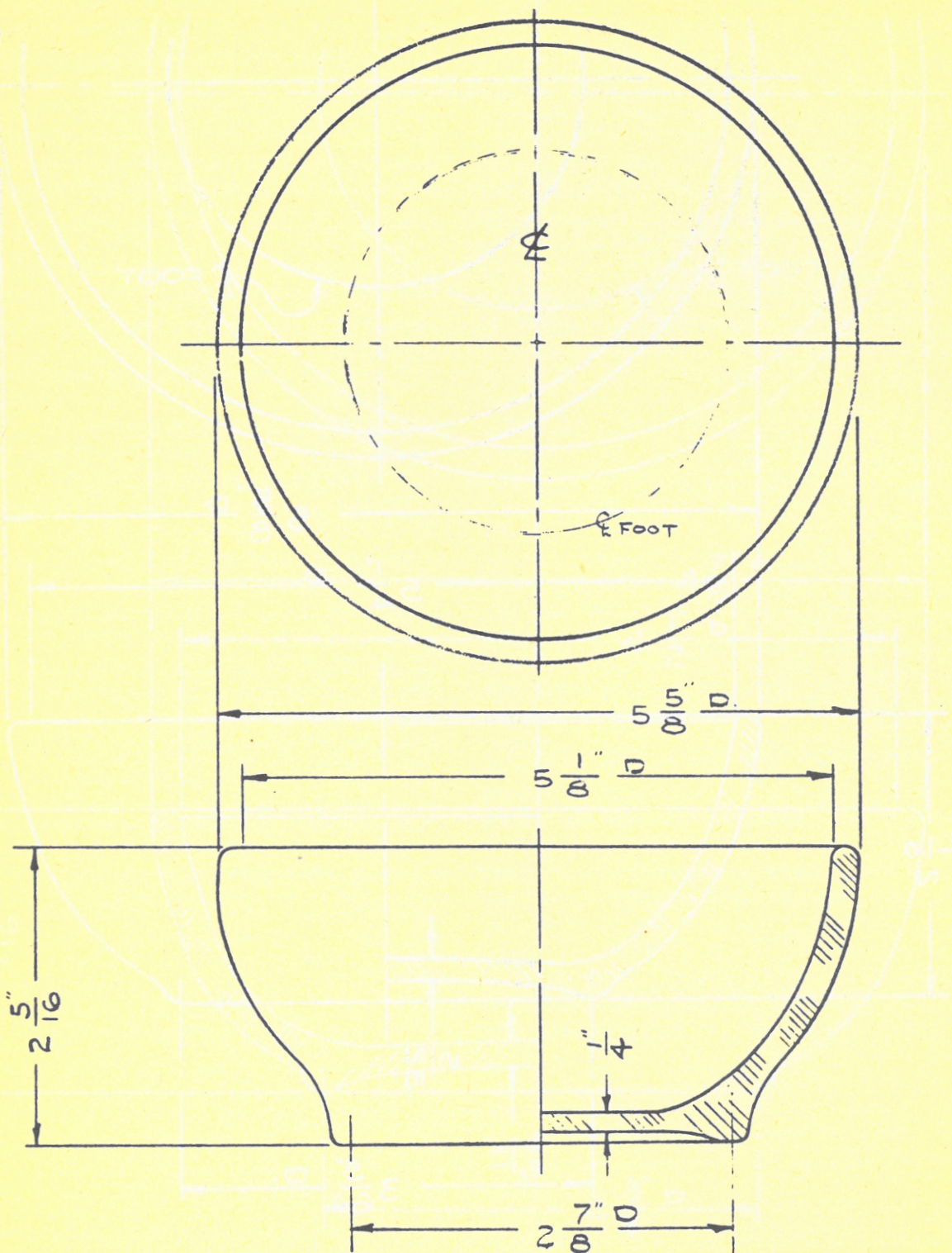
Copies of this specification may be purchased for 55 cents each.



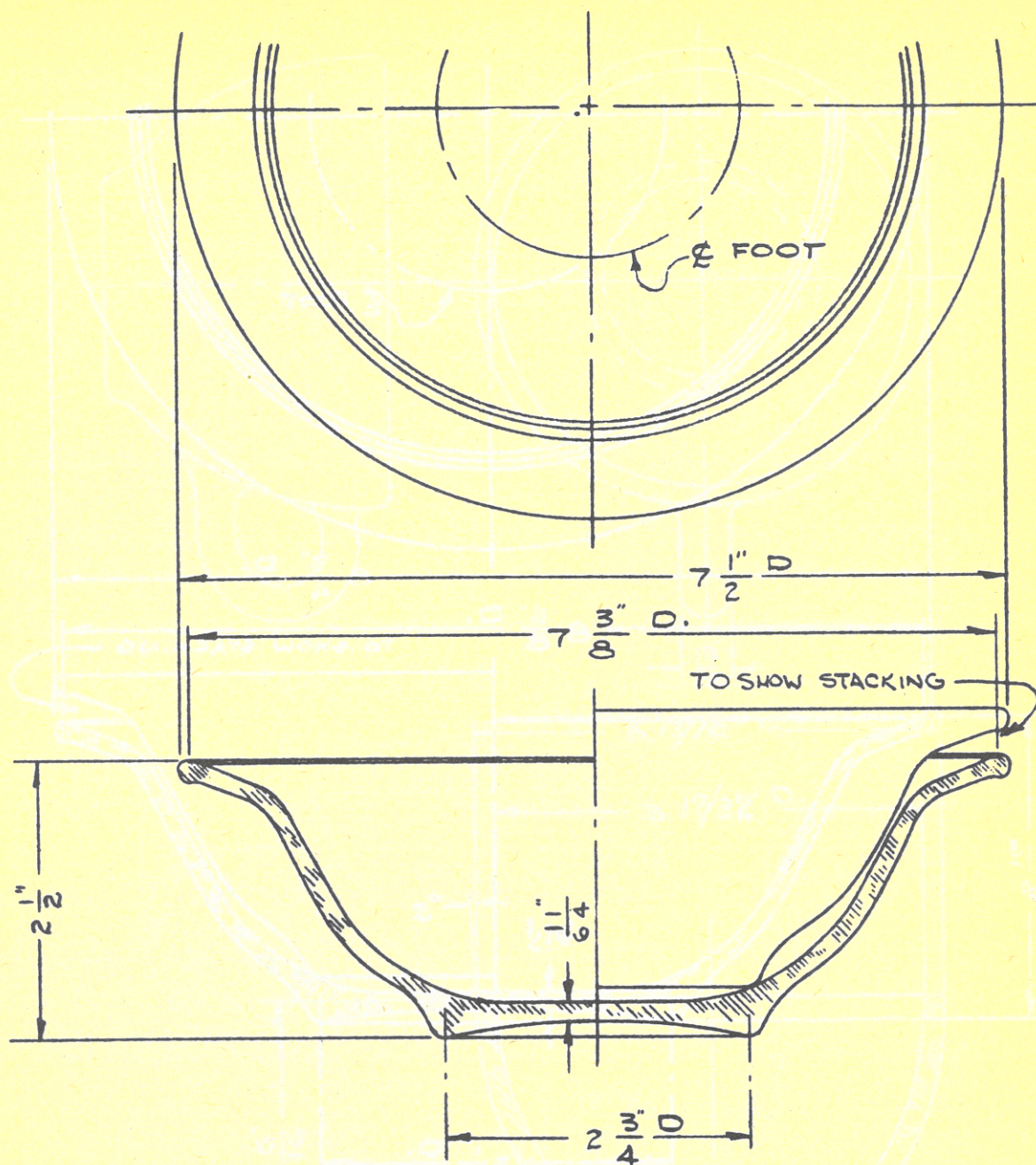
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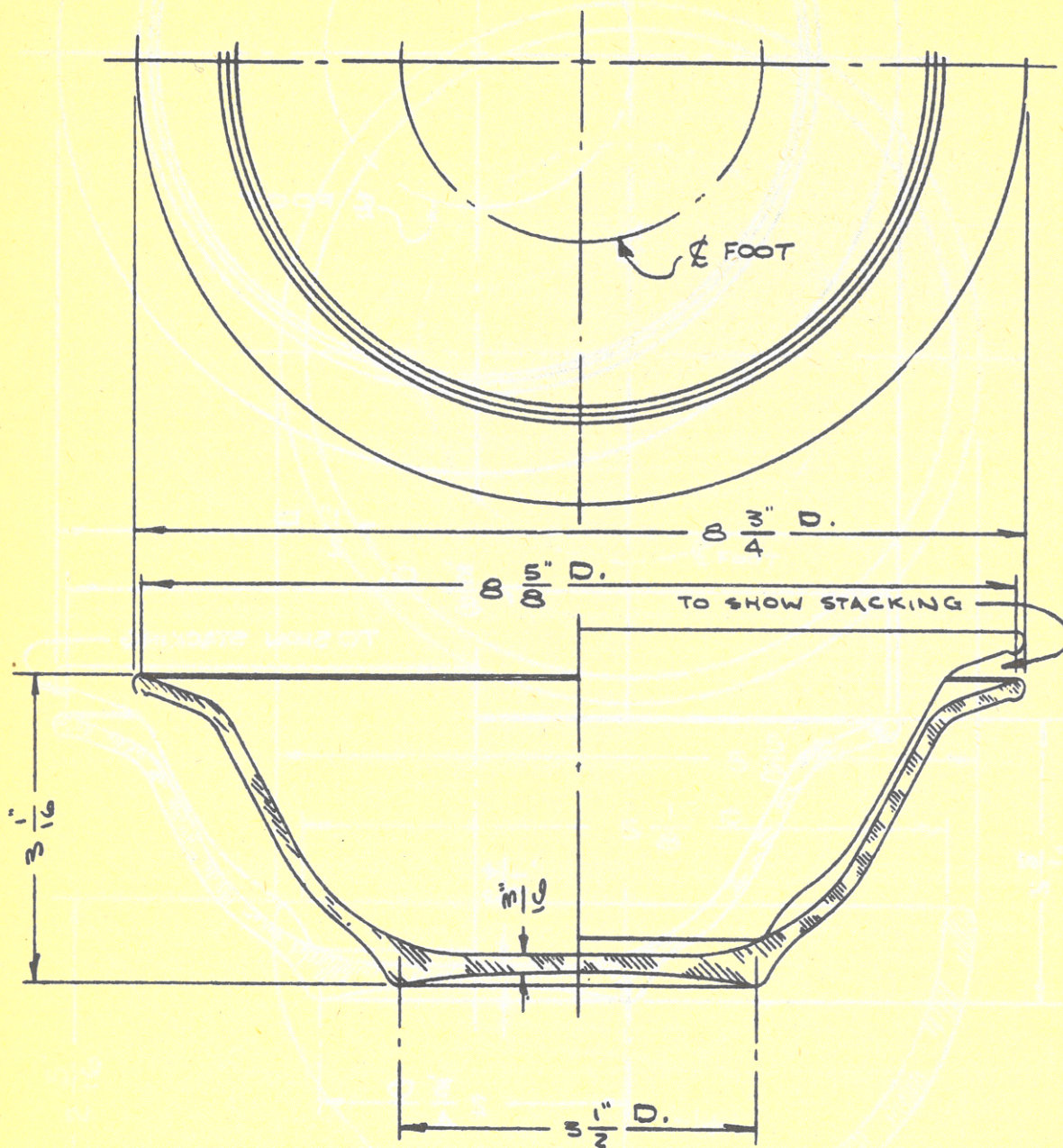


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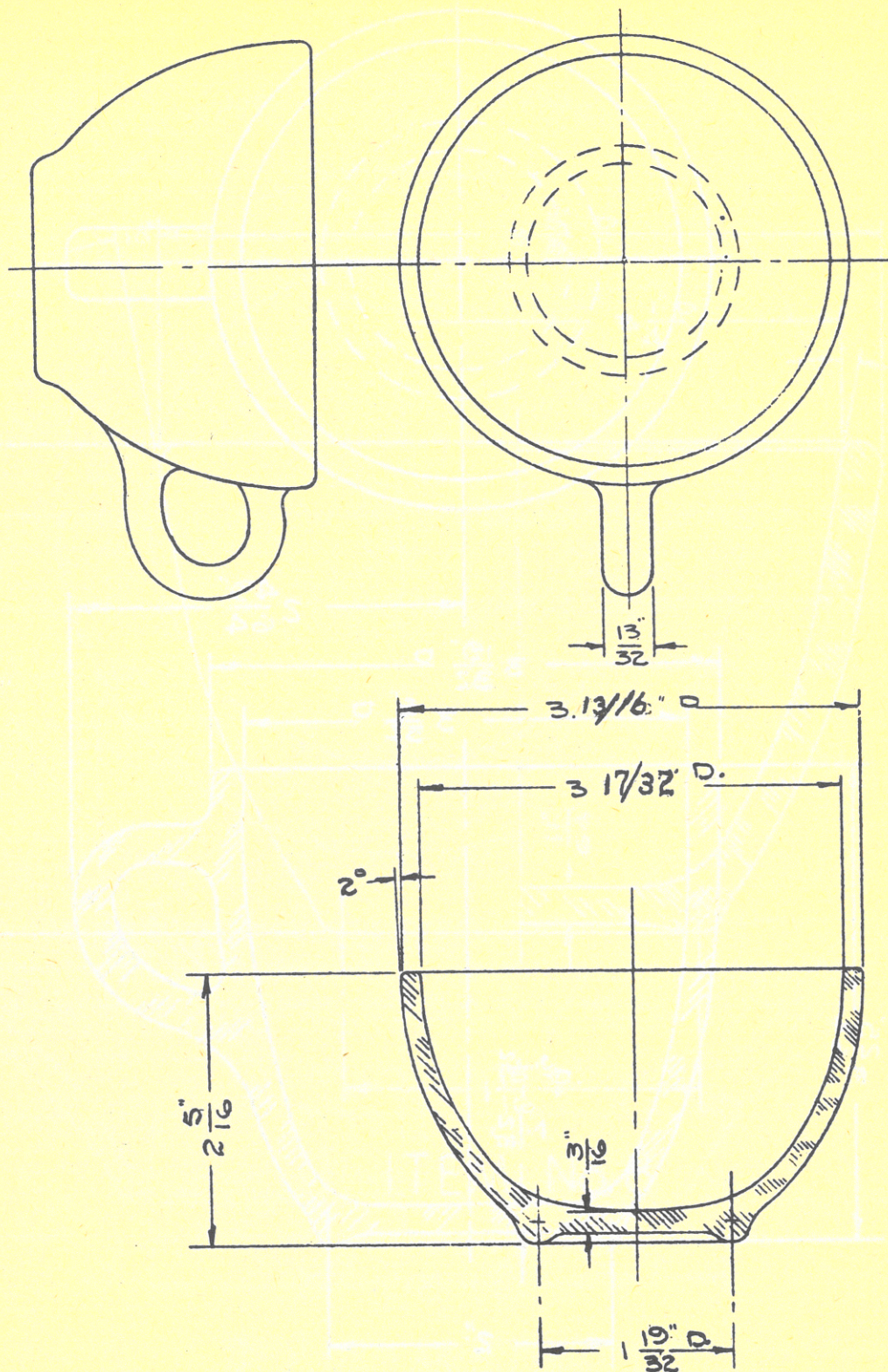


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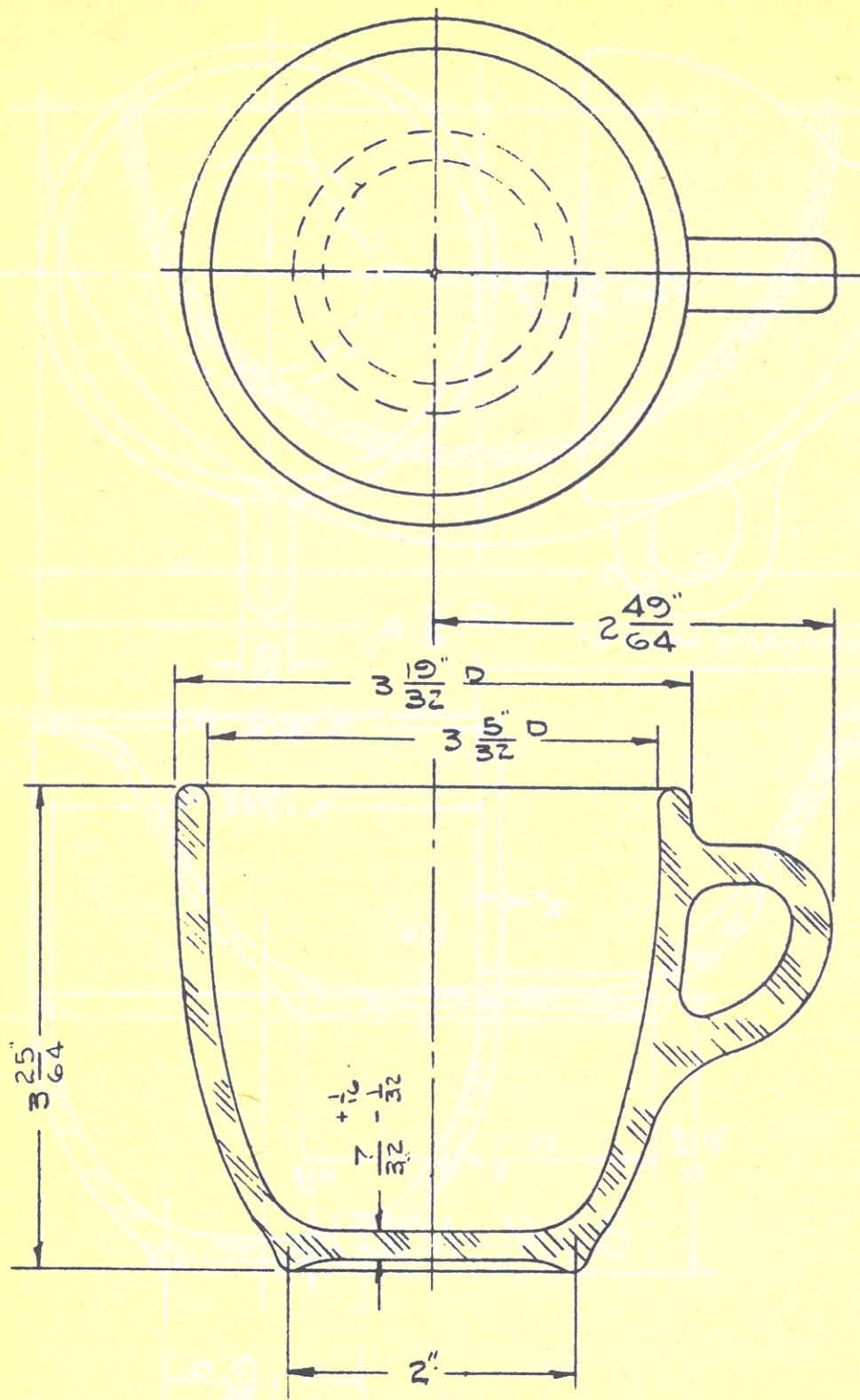
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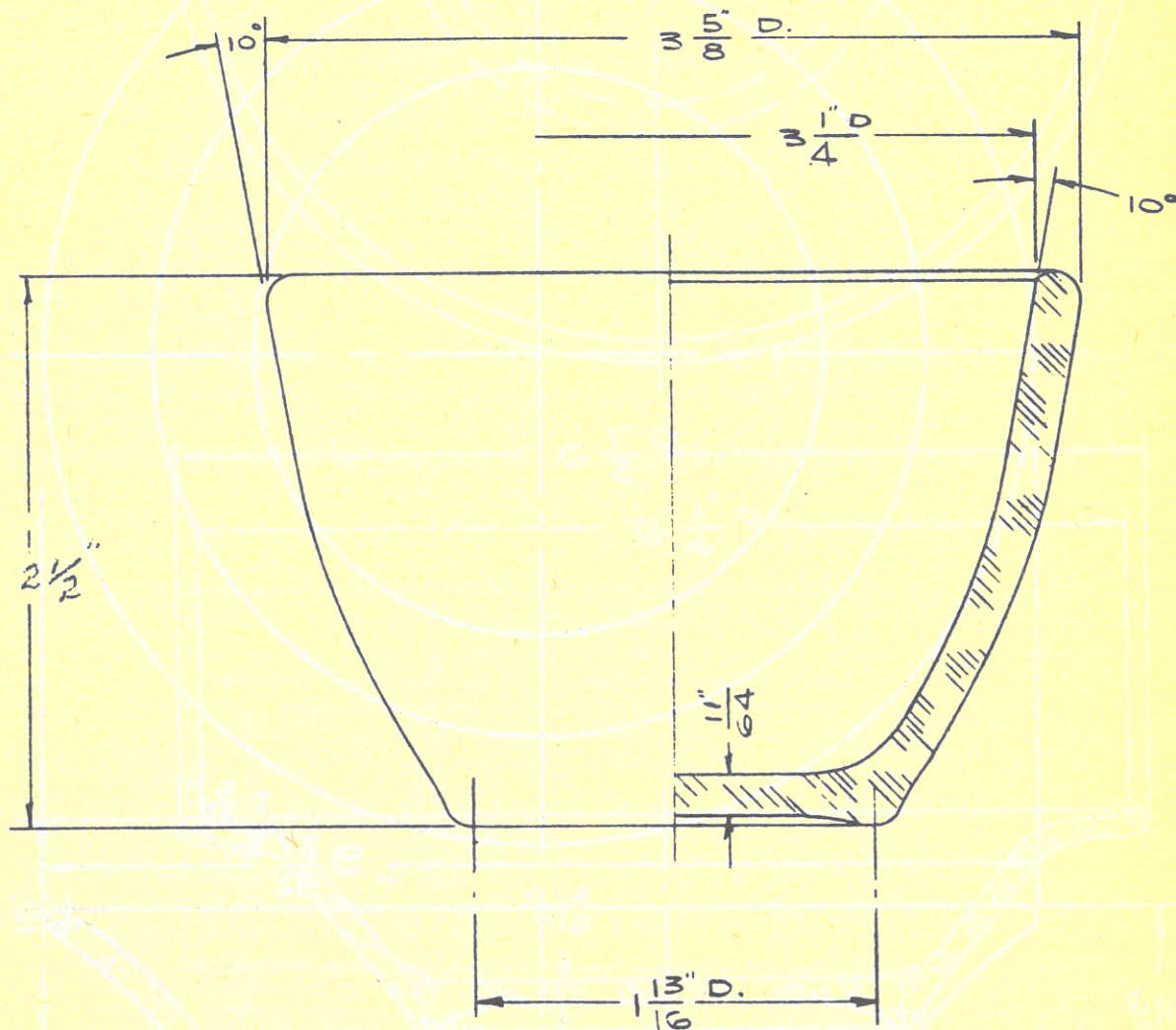
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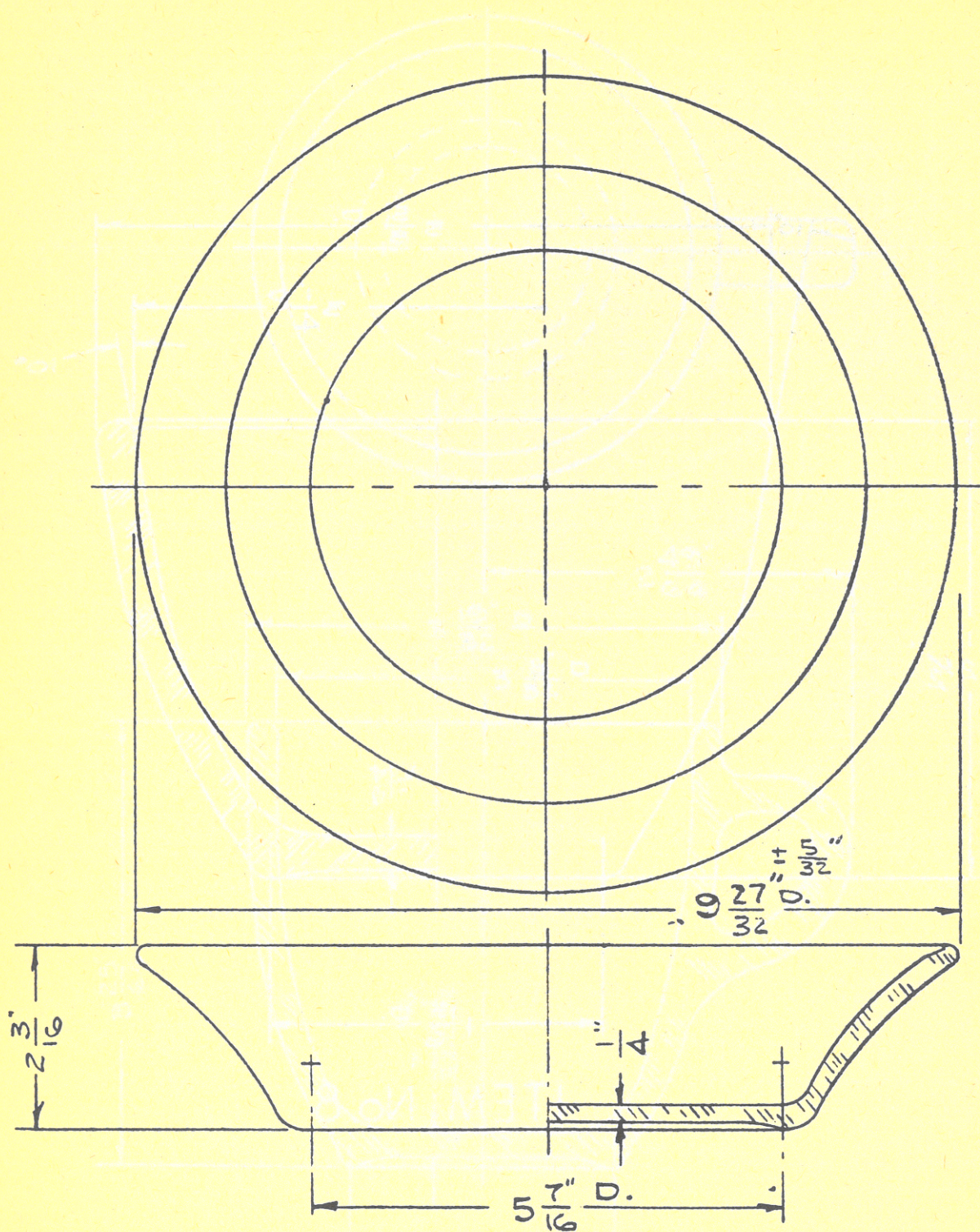
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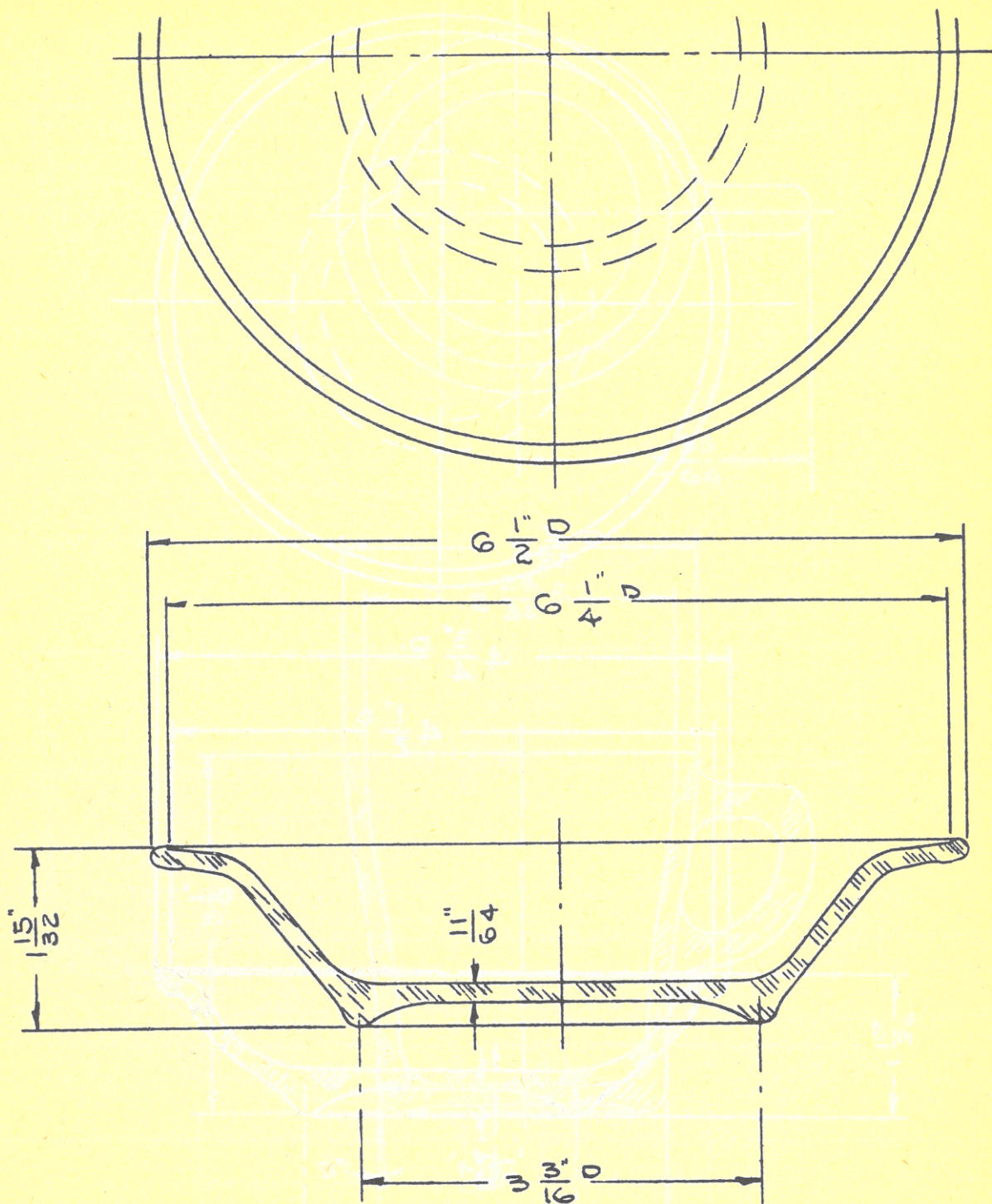


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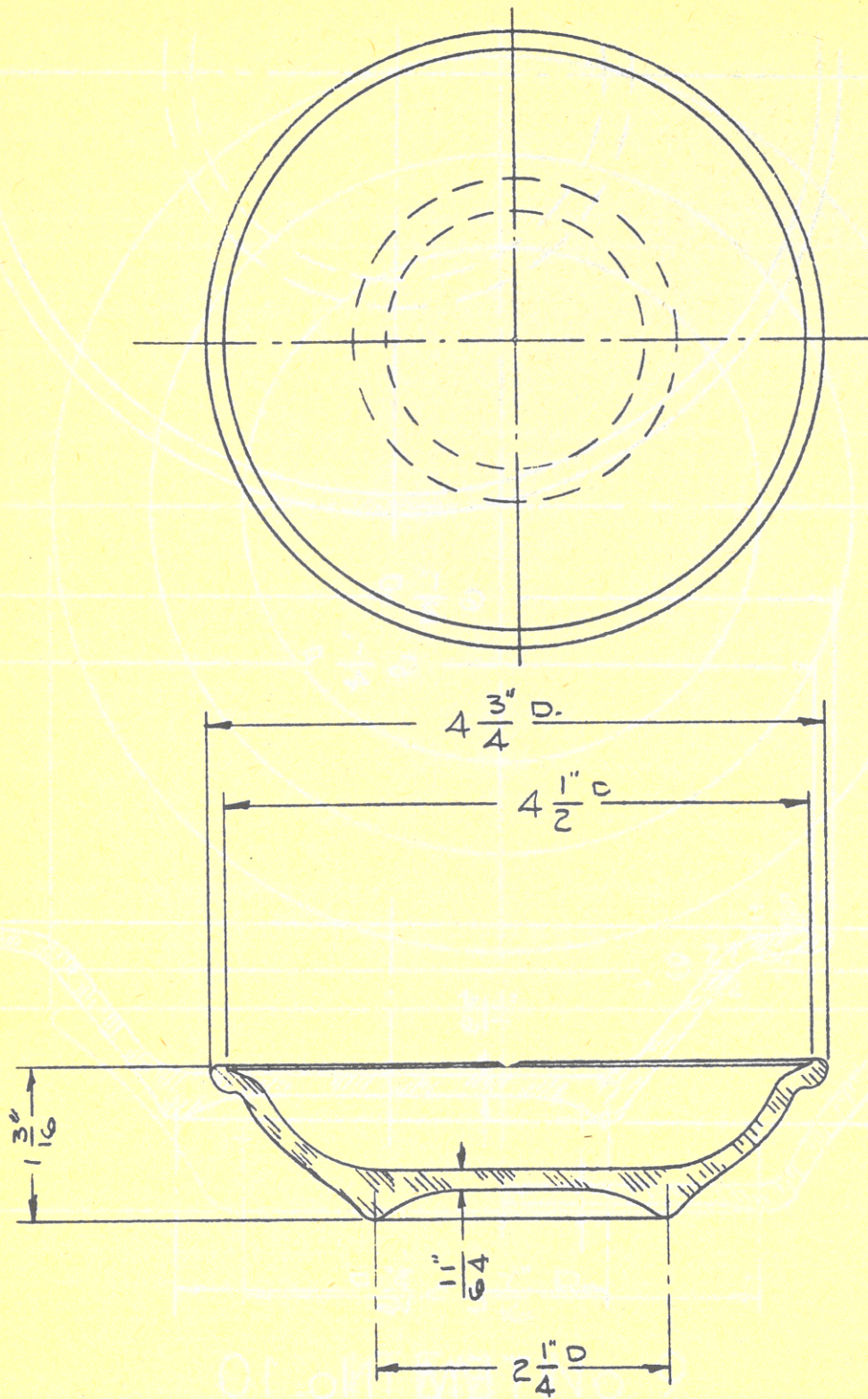


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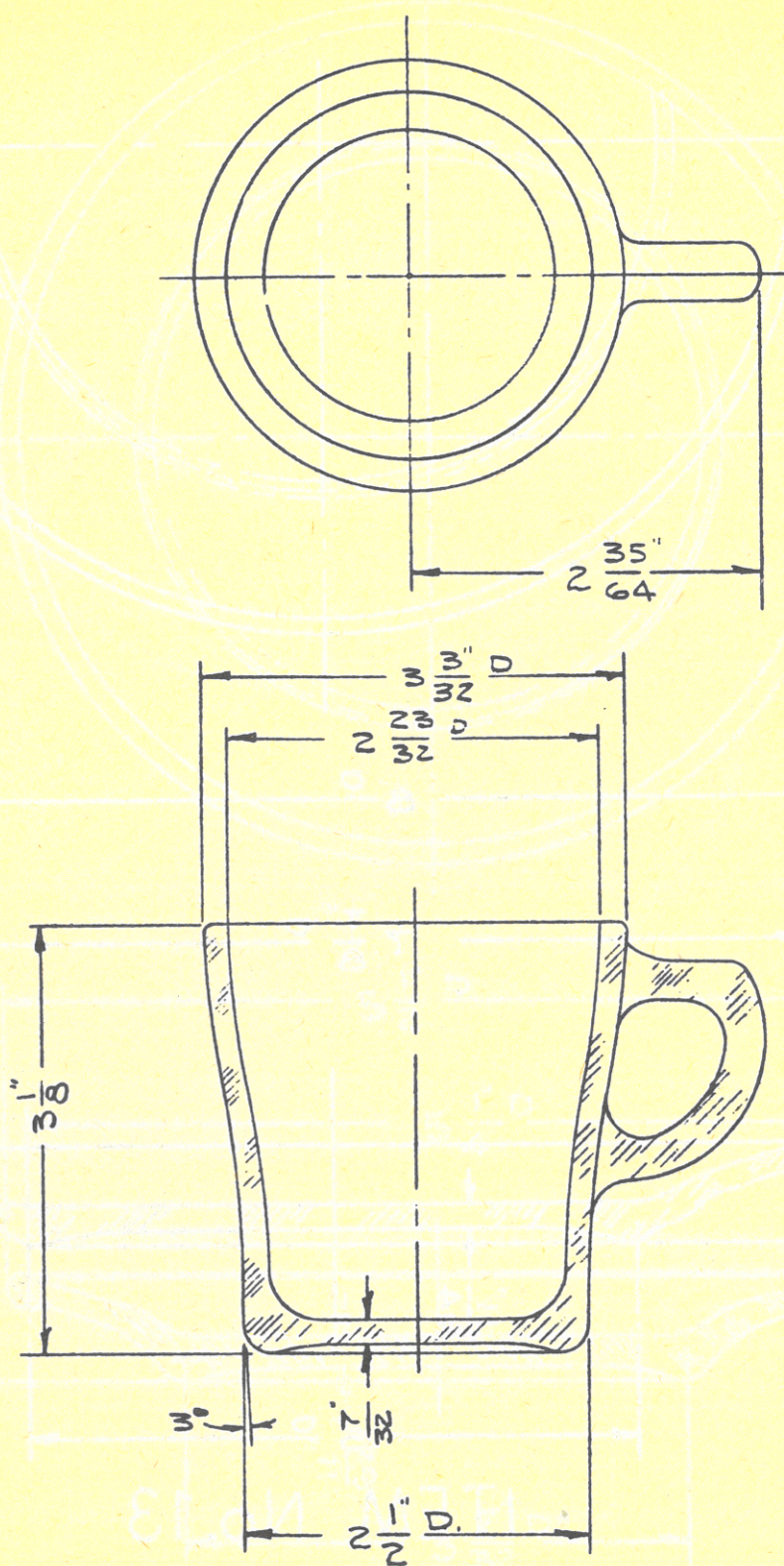
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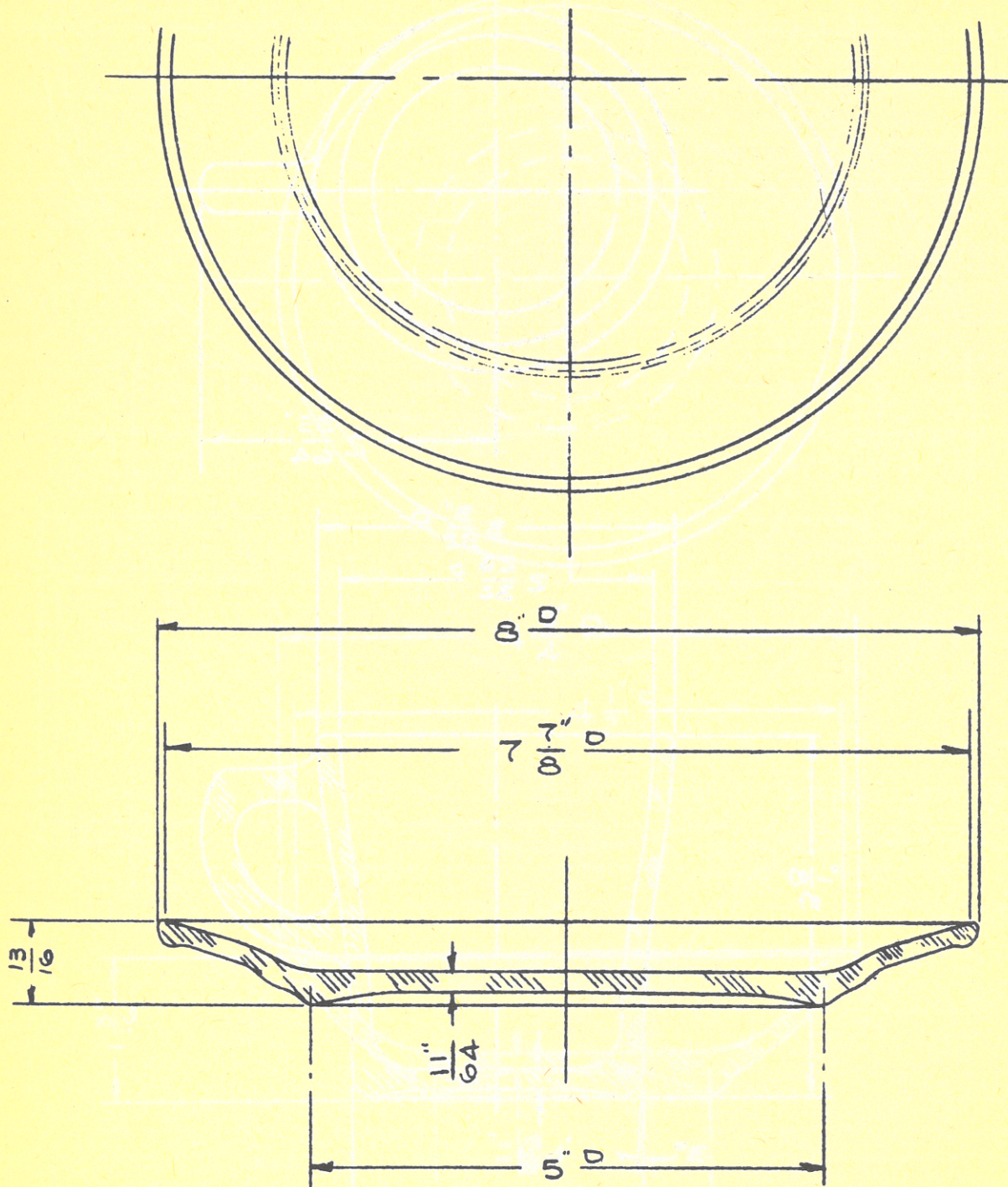
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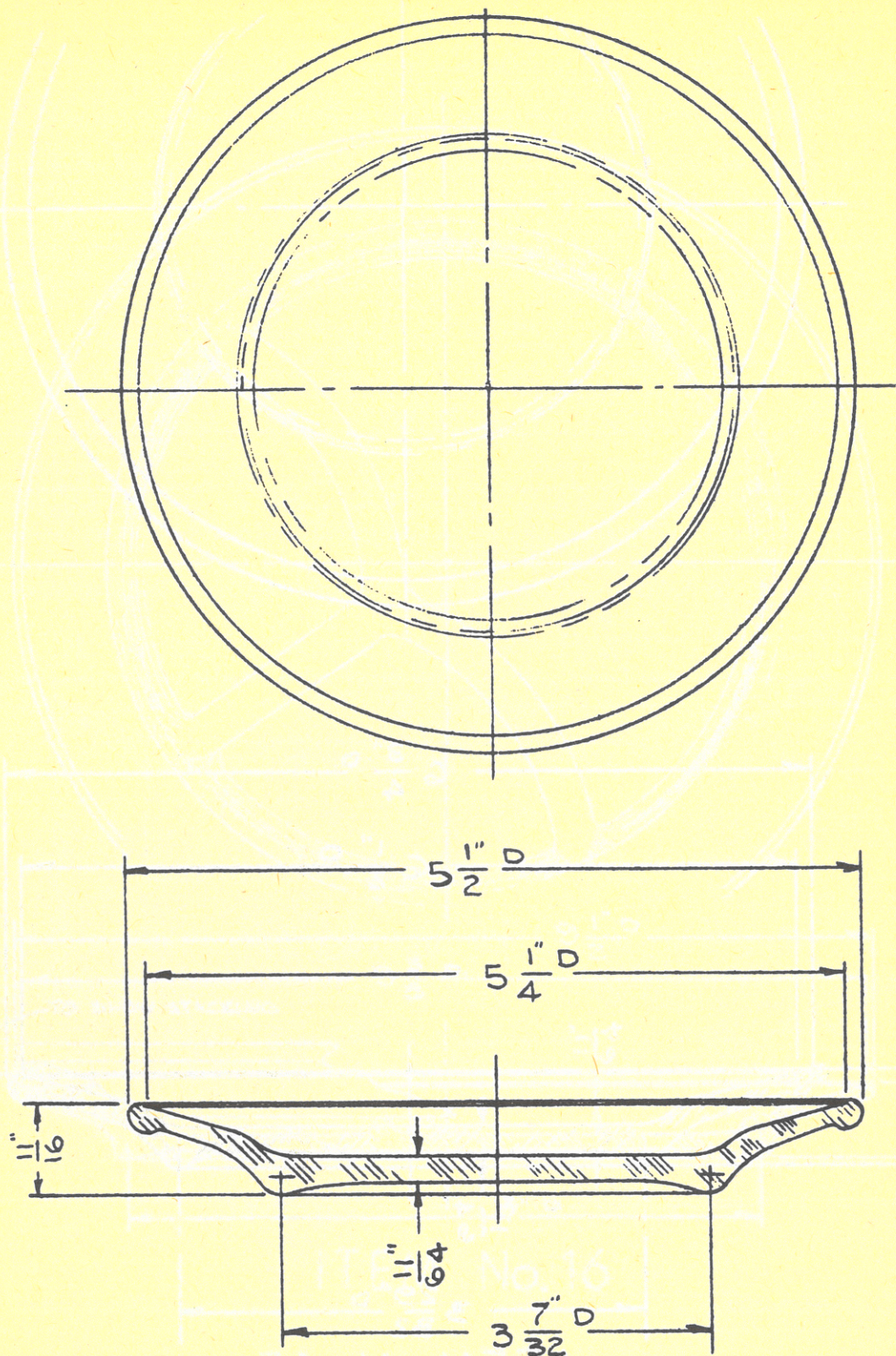
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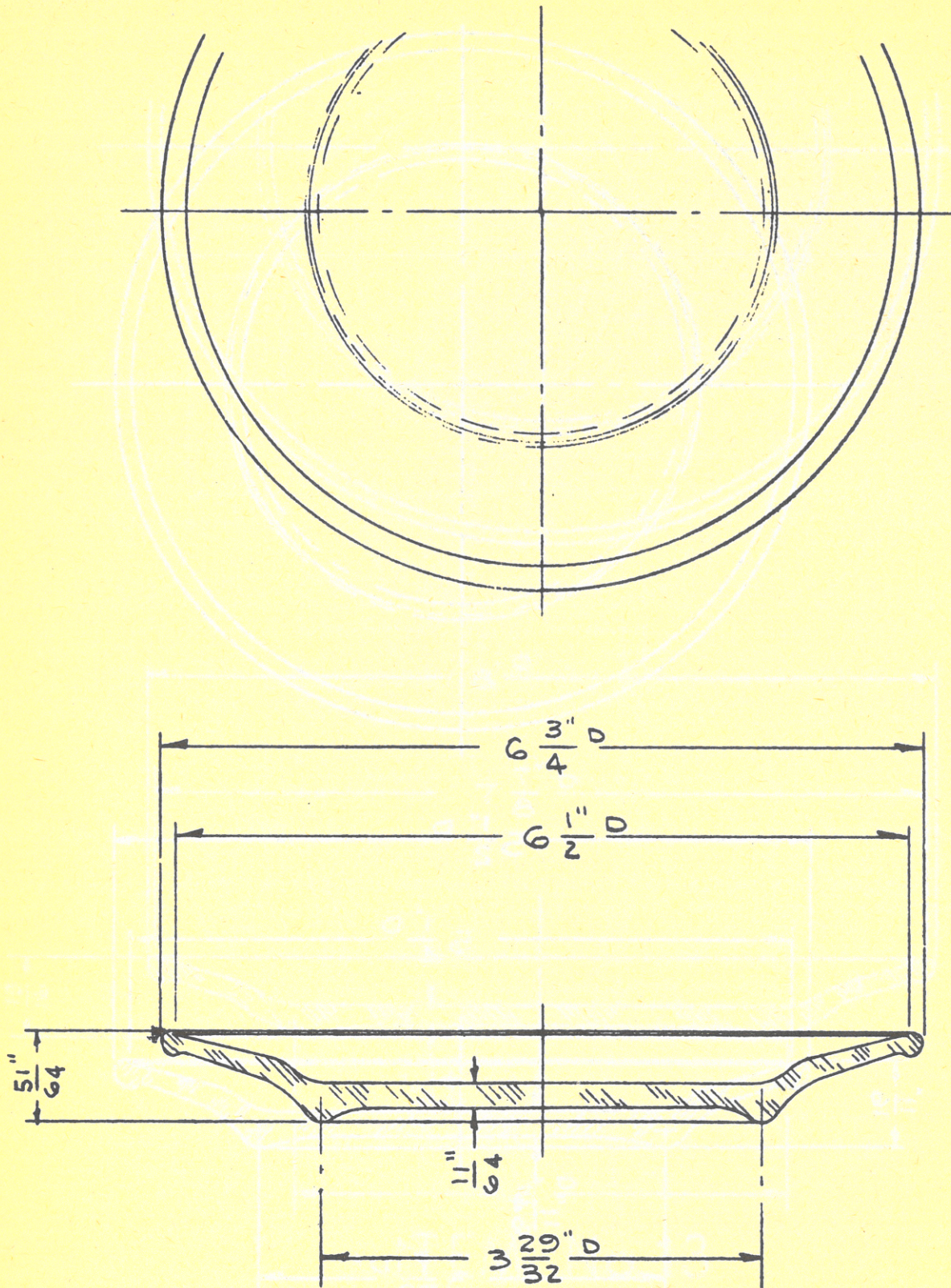
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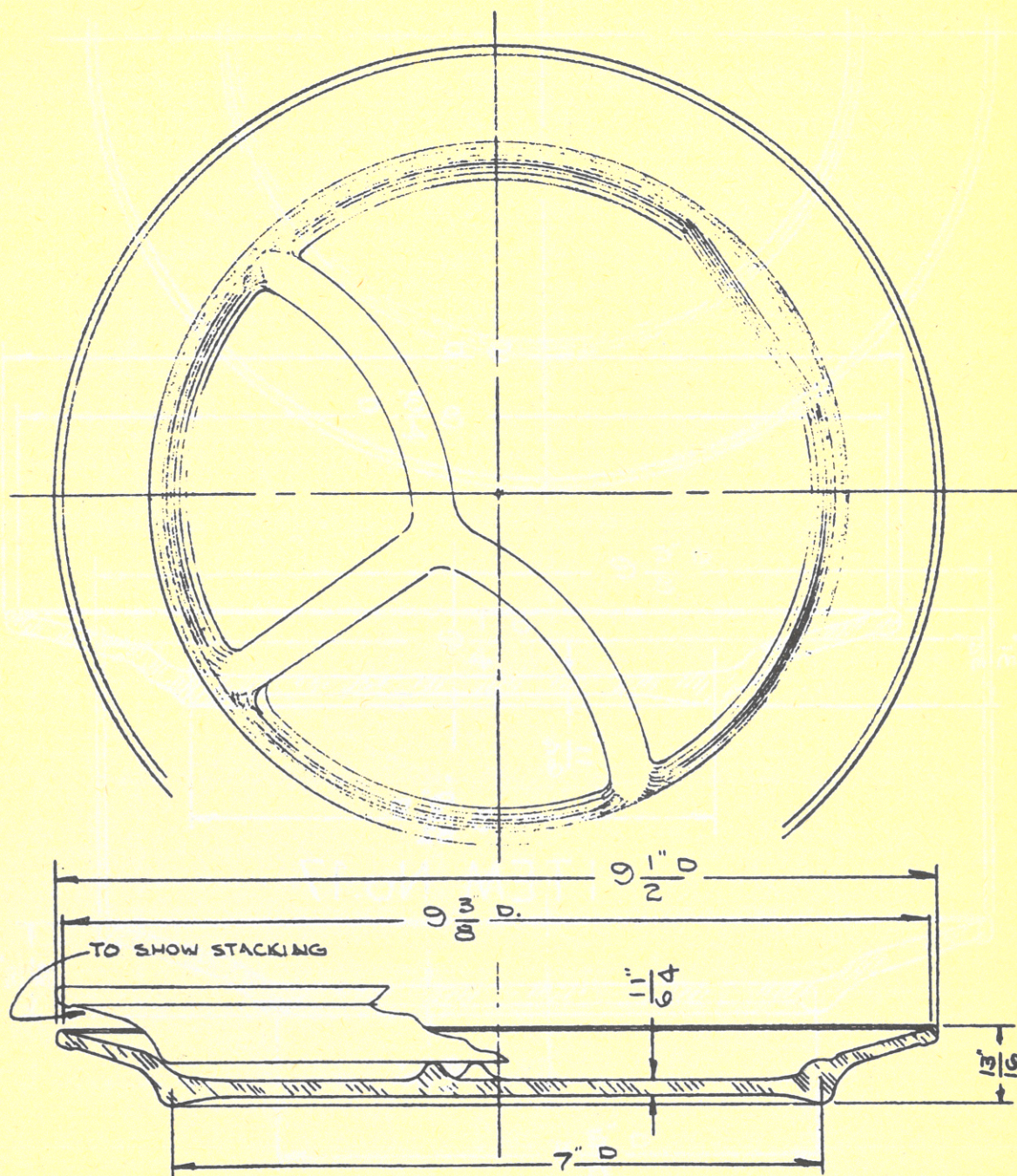
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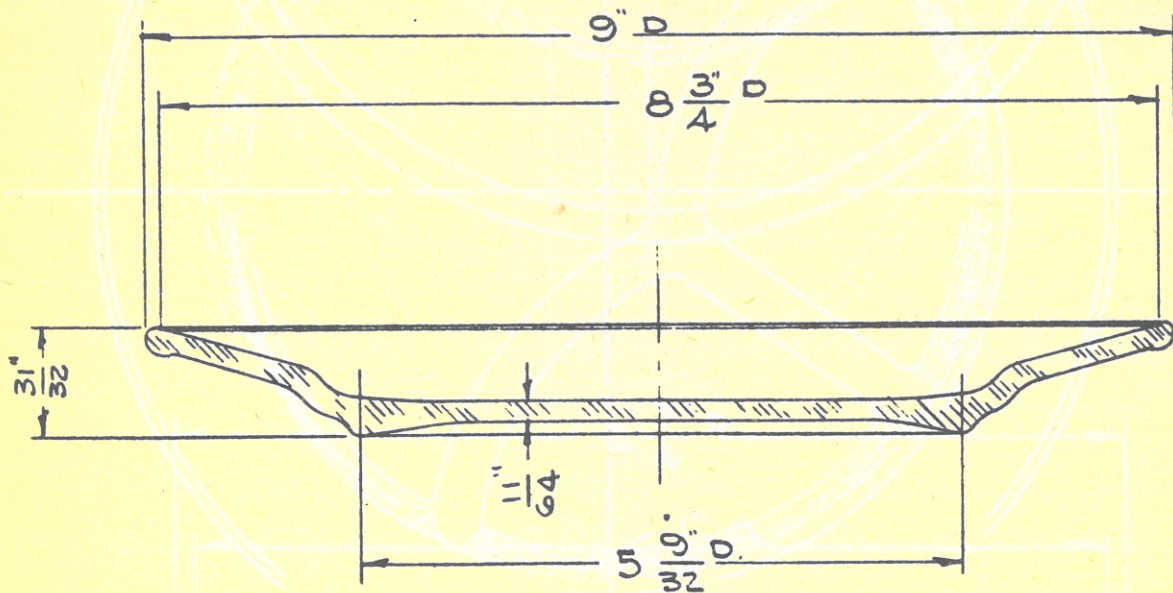
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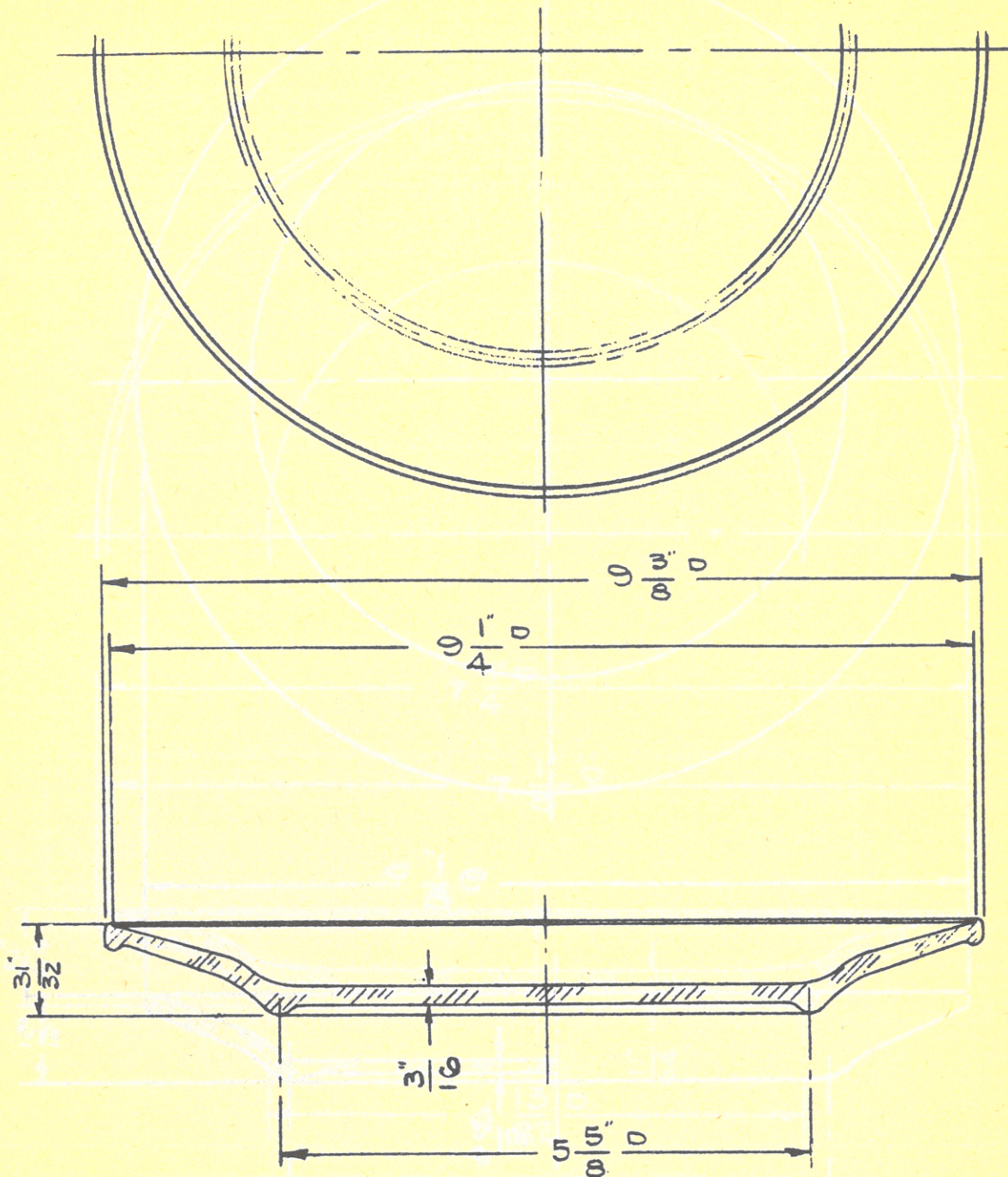
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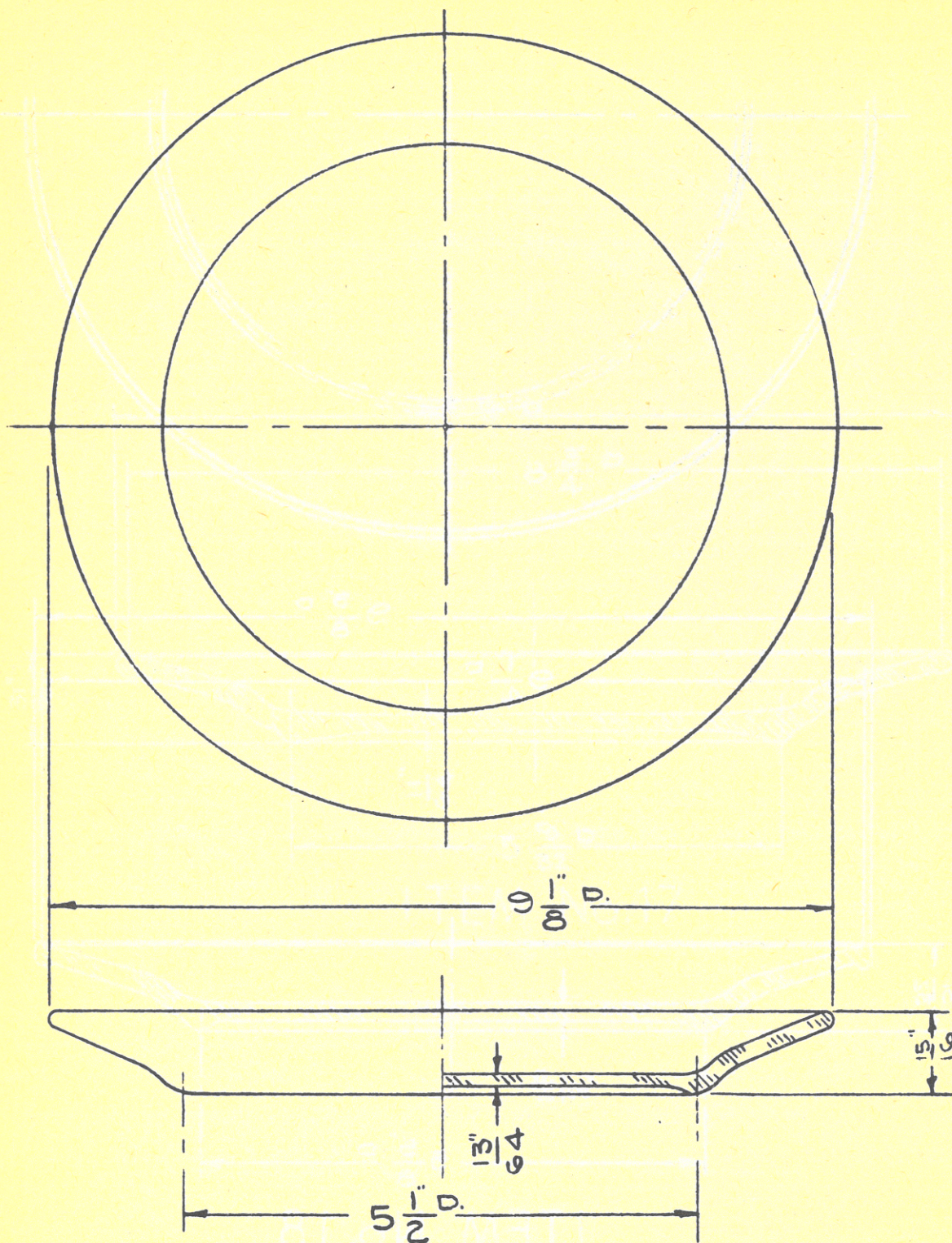
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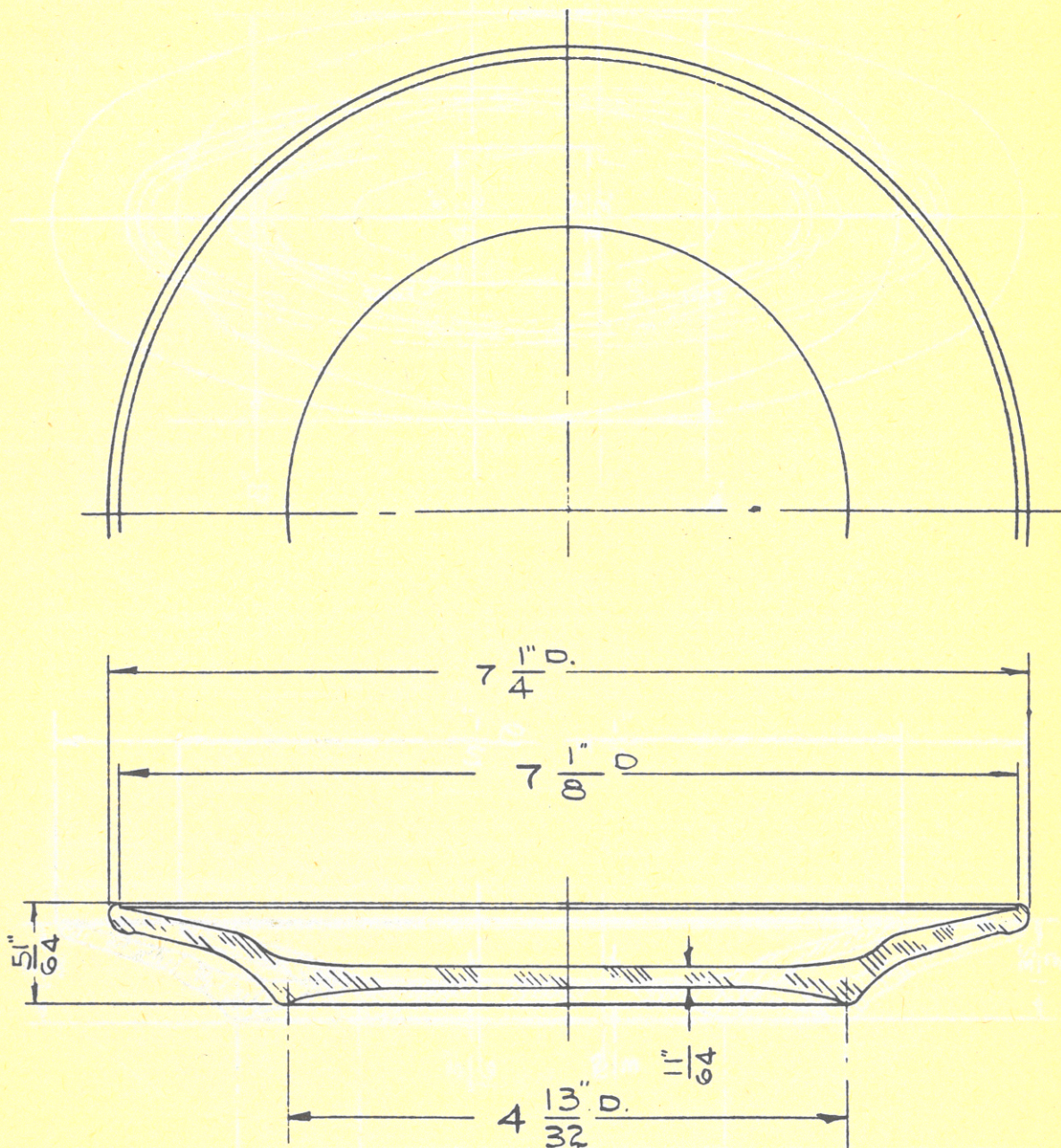
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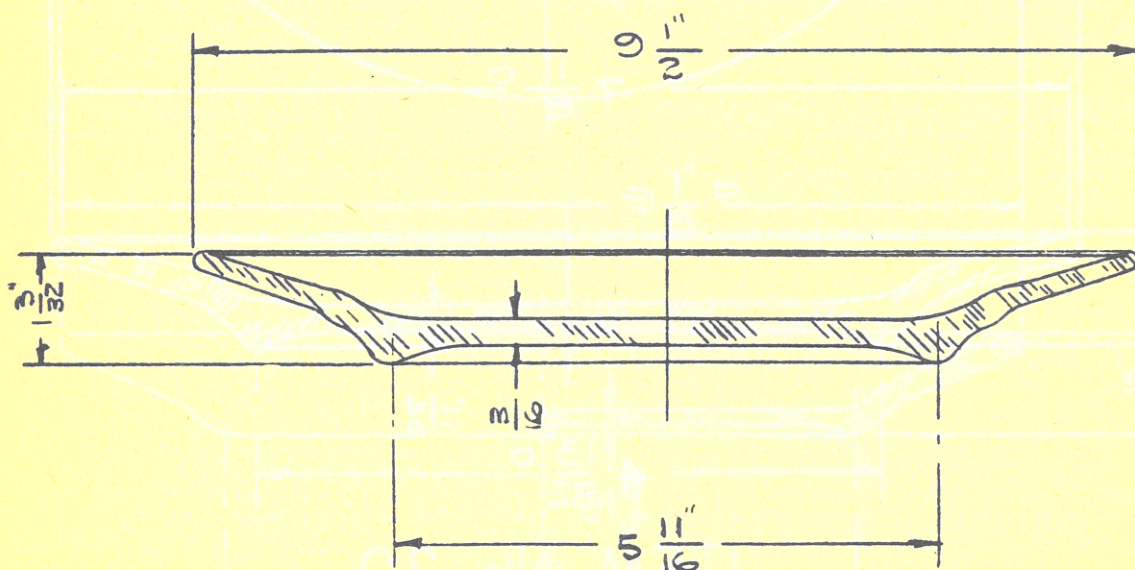
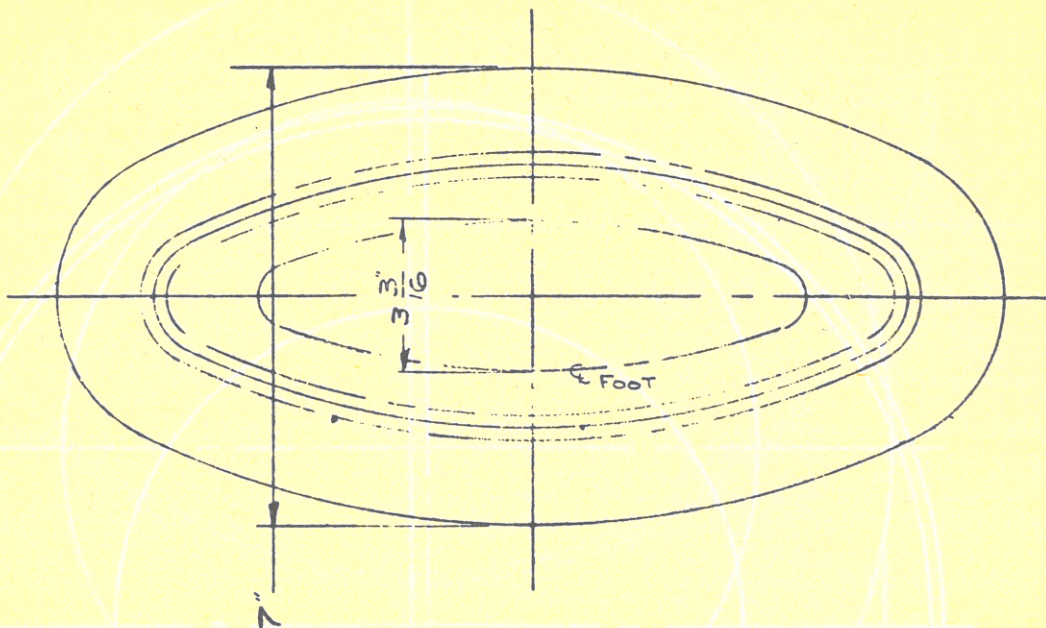
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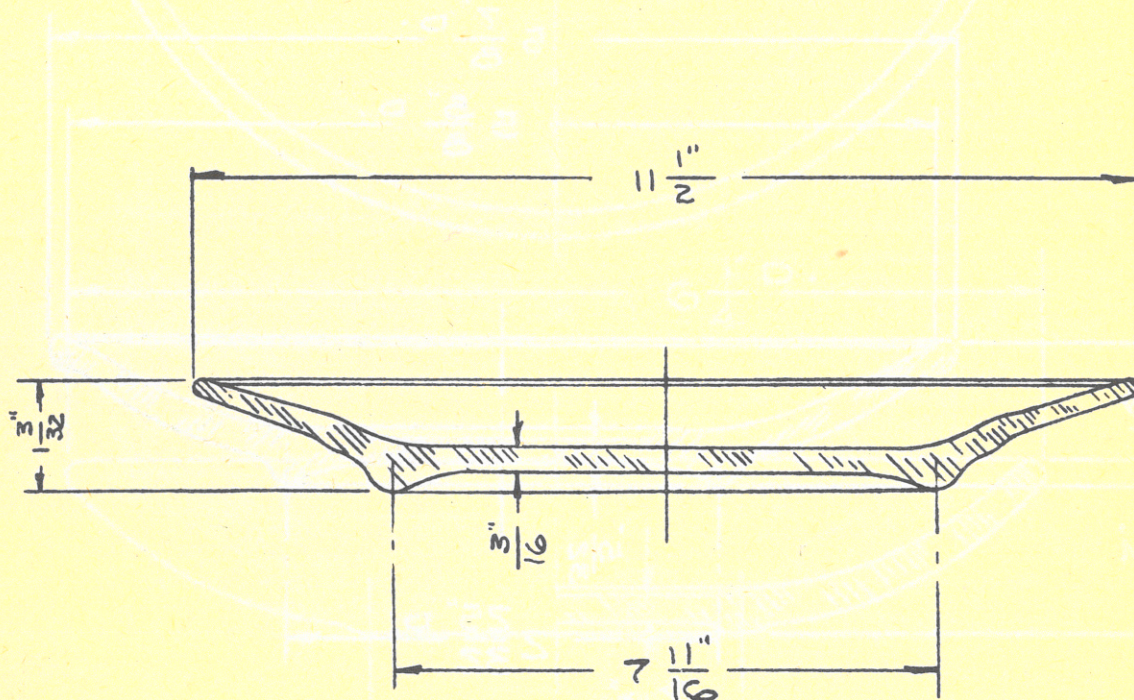
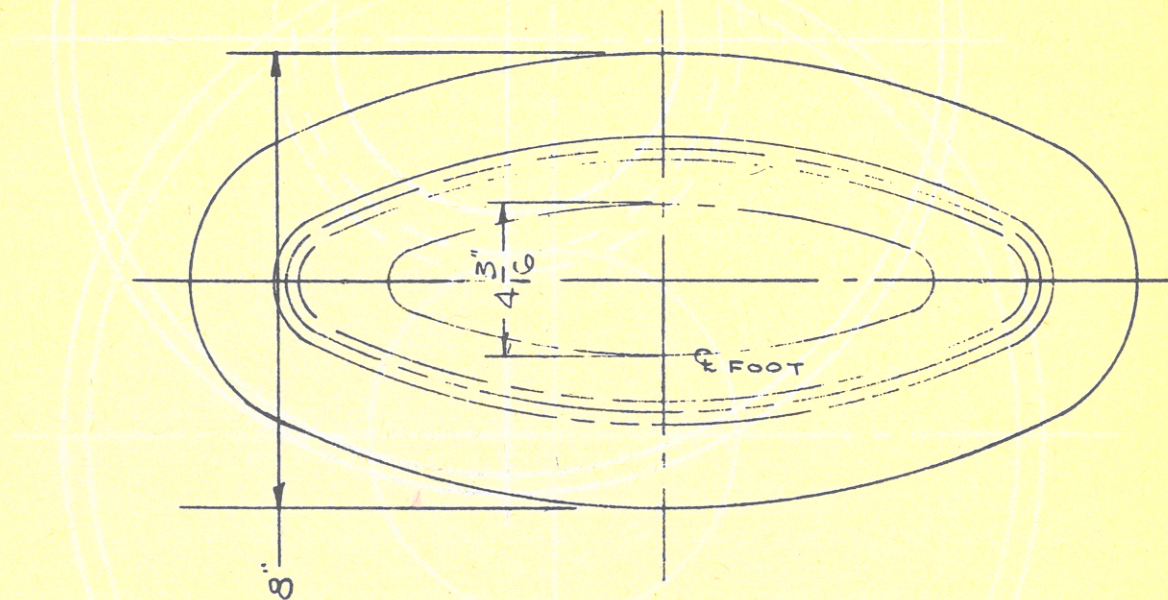


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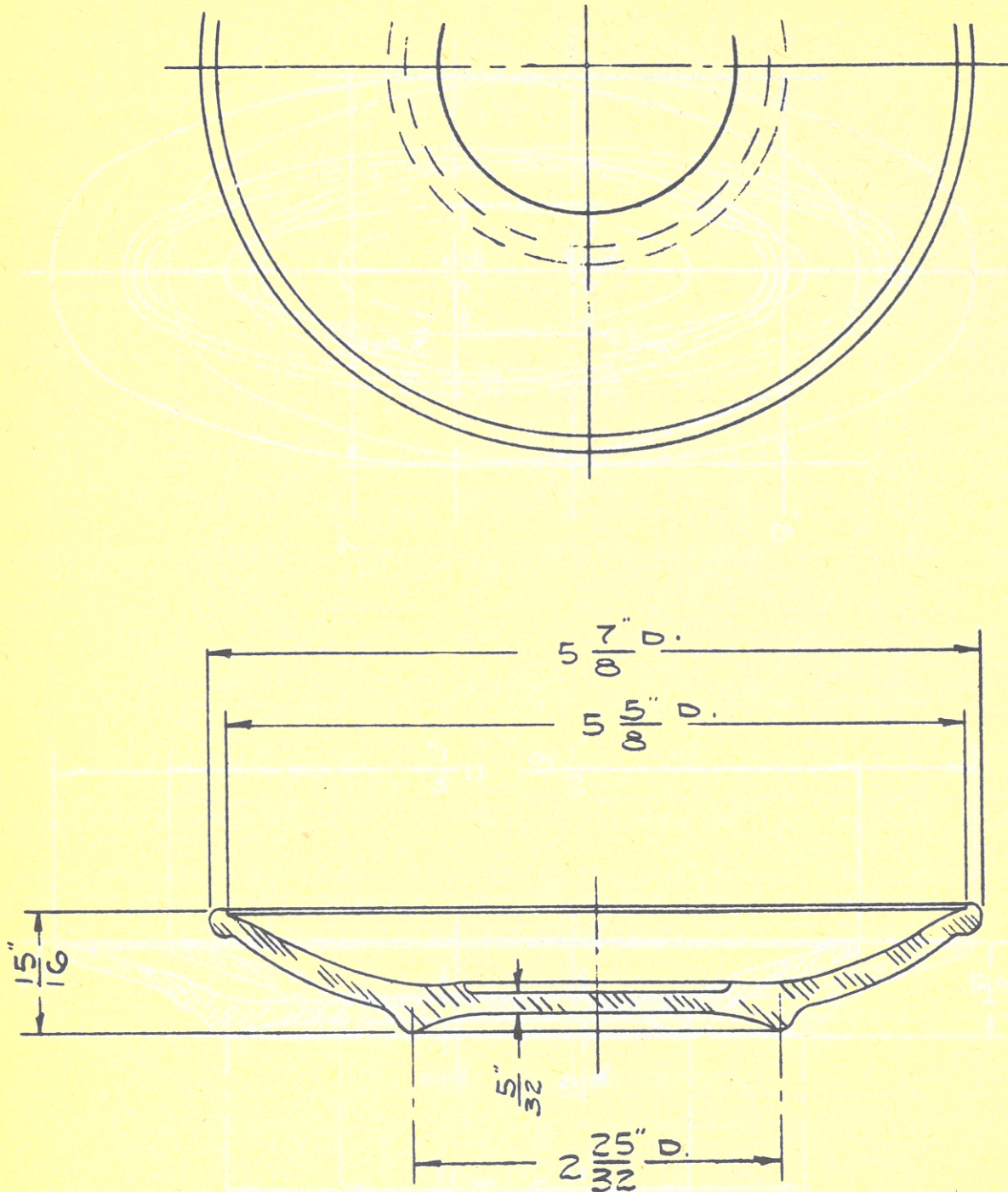
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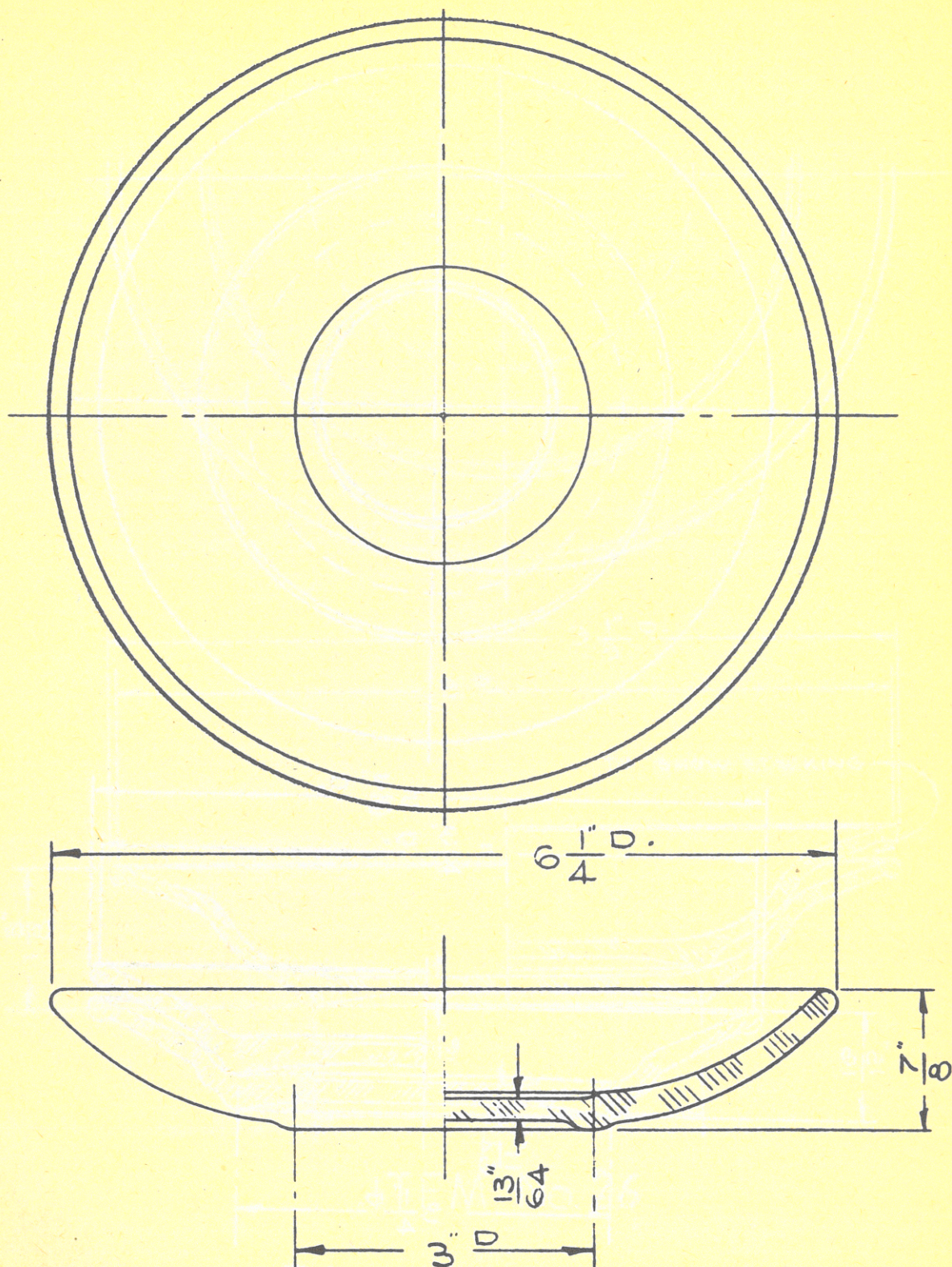


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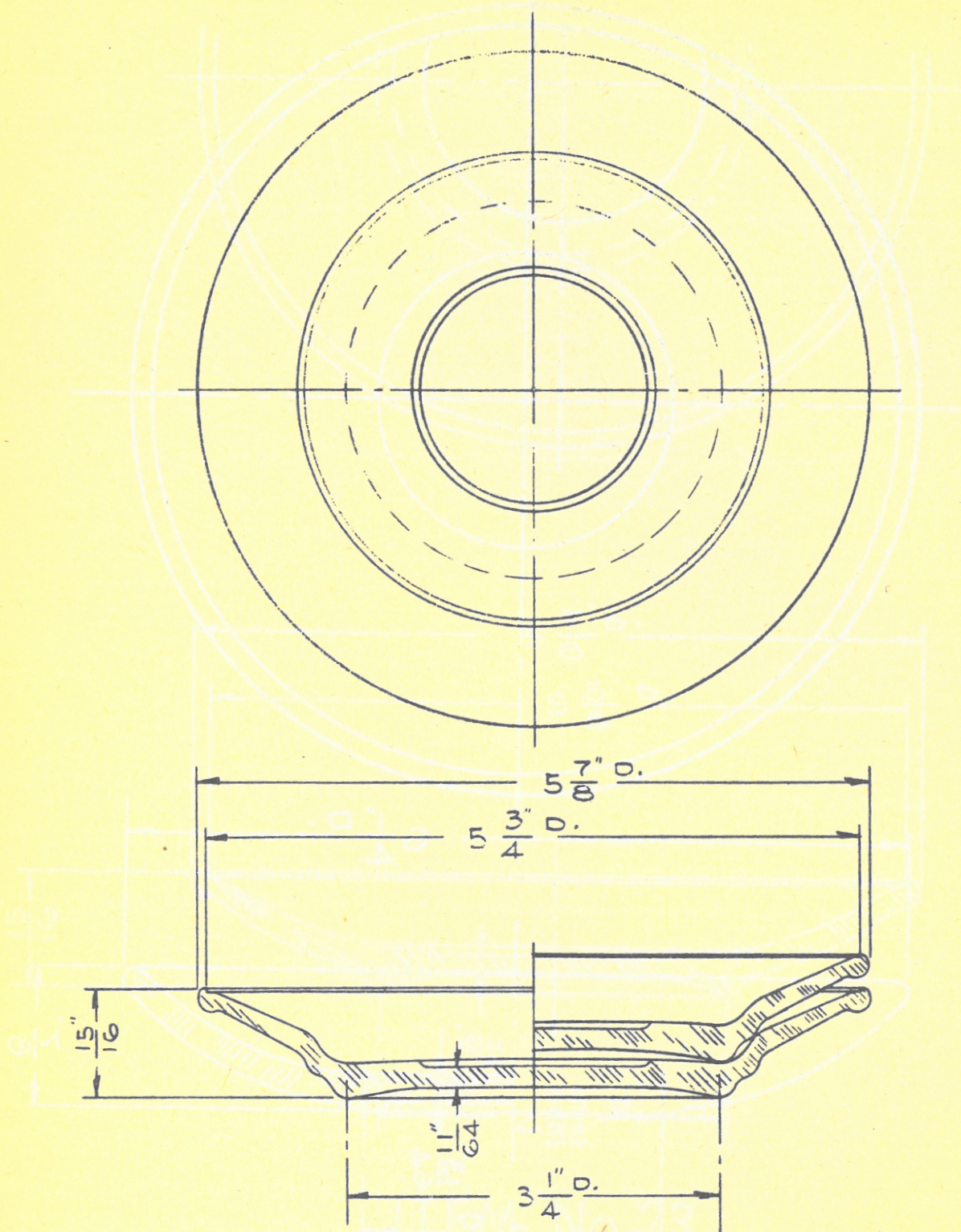
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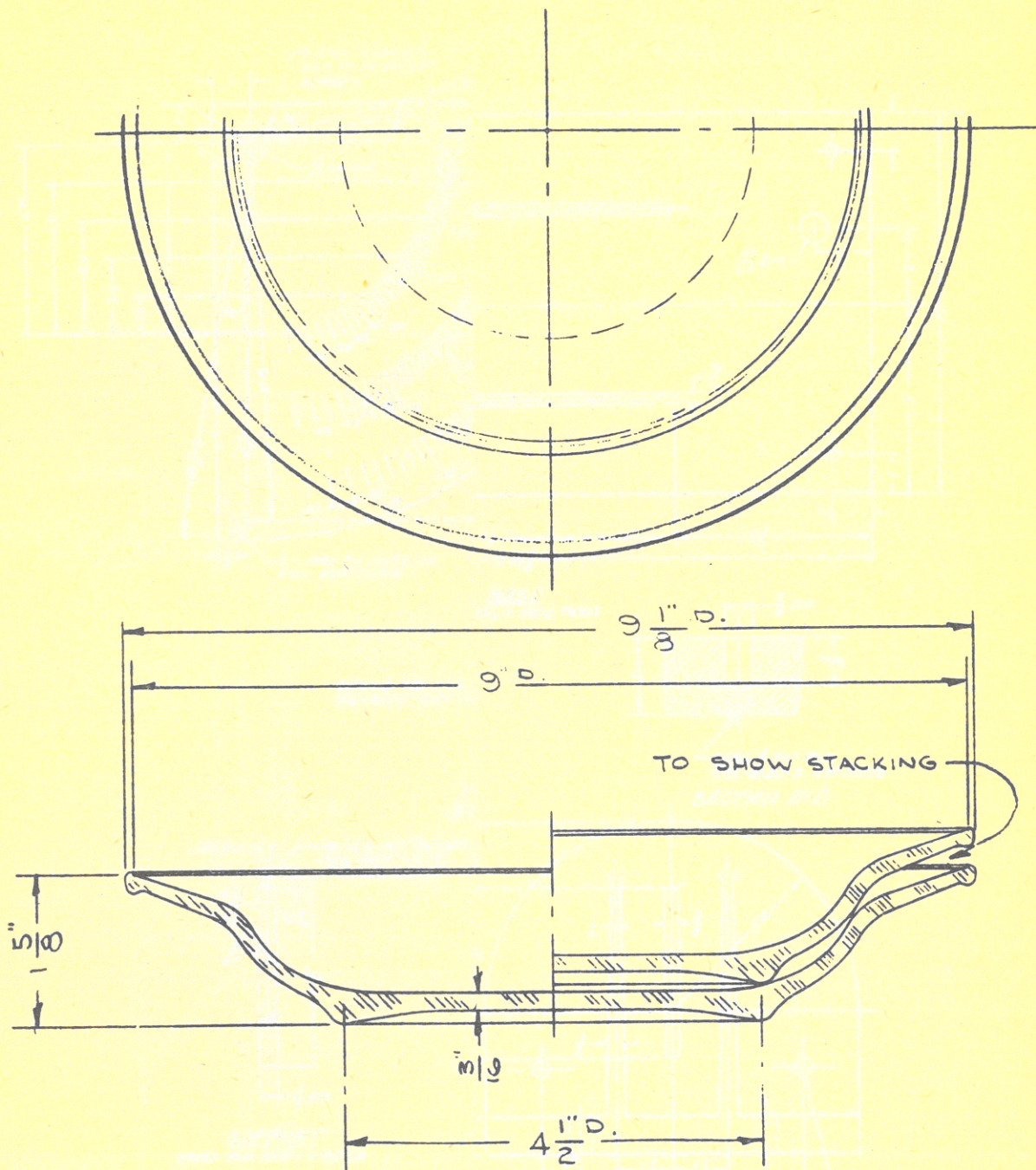
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ITEM No. 25



ITEM No. 26