US00D956705S

(12) **United States Design Patent** (10) **Patent No.: US D956,705 S**
Luo et al. (45) **Date of Patent: ** Jul. 5, 2022**

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(54) **COOLING PLATE FOR A SEMICONDUCTOR PROCESSING APPARATUS**

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(73) Assignee: **Lam Research Corporation**, Fremont, CA (US)

(**) Term: **15 Years**

(21) Appl. No.: **29/733,653**

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(30) **Foreign Application Priority Data**

Nov. 7, 2019 (KR) 30-2019-0053204

(51) **LOC (13) Cl.** **13-03**

(52) **U.S. Cl.**
USPC **D13/179**; D13/182

(58) **Field of Classification Search**
USPC D13/179, 182, 184; D23/231, 371, 387, D23/370; D14/230
(Continued)

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Primary Examiner — April Rivas
(74) *Attorney, Agent, or Firm* — Weaver Austin Villeneuve & Sampson LLP

(57) **CLAIM**

We claim the ornamental design for a cooling plate for a semiconductor processing apparatus, as shown and described.

DESCRIPTION

FIG. **1** depicts a perspective view of a first cooling plate for a semiconductor processing apparatus.

FIG. **2** depicts another perspective view of the first cooling plate for a semiconductor processing apparatus of FIG. **1**.

FIG. **3** depicts yet another perspective view of the first cooling plate for a semiconductor processing apparatus of FIG. **1**.

FIG. **4** depicts another perspective view of the first cooling plate for a semiconductor processing apparatus of FIG. **1**.

FIG. **5** depicts yet another perspective view of the first cooling plate for a semiconductor processing apparatus of FIG. **1**.

FIG. **6** depicts a top view of the first cooling plate for a semiconductor processing apparatus of FIG. **1**.

FIG. **7** depicts a bottom view of the first cooling plate for a semiconductor processing apparatus of FIG. **1**.

FIG. **8** depicts a front view of the first cooling plate for a semiconductor processing apparatus of FIG. **1**.

FIG. **9** depicts a back view of the first cooling plate for a semiconductor processing apparatus of FIG. **1**.

FIG. **10** depicts a right side view of the first cooling plate for a semiconductor processing apparatus of FIG. **1**.

FIG. **11** depicts a left side view of the first cooling plate for a semiconductor processing apparatus of FIG. **1**.

FIG. **12** depicts a perspective view of a second cooling plate for a semiconductor processing apparatus.

FIG. **13** depicts another perspective view of the second cooling plate for a semiconductor processing apparatus of FIG. **12**.

FIG. **14** depicts yet another perspective view of the second cooling plate for a semiconductor processing apparatus of FIG. **12**.

FIG. **15** depicts another perspective view of the second cooling plate for a semiconductor processing apparatus of FIG. **12**.

FIG. **16** depicts yet another perspective view of the second cooling plate for a semiconductor processing apparatus of FIG. **12**.

FIG. **17** depicts a top view of the second cooling plate for a semiconductor processing apparatus of FIG. **12**.

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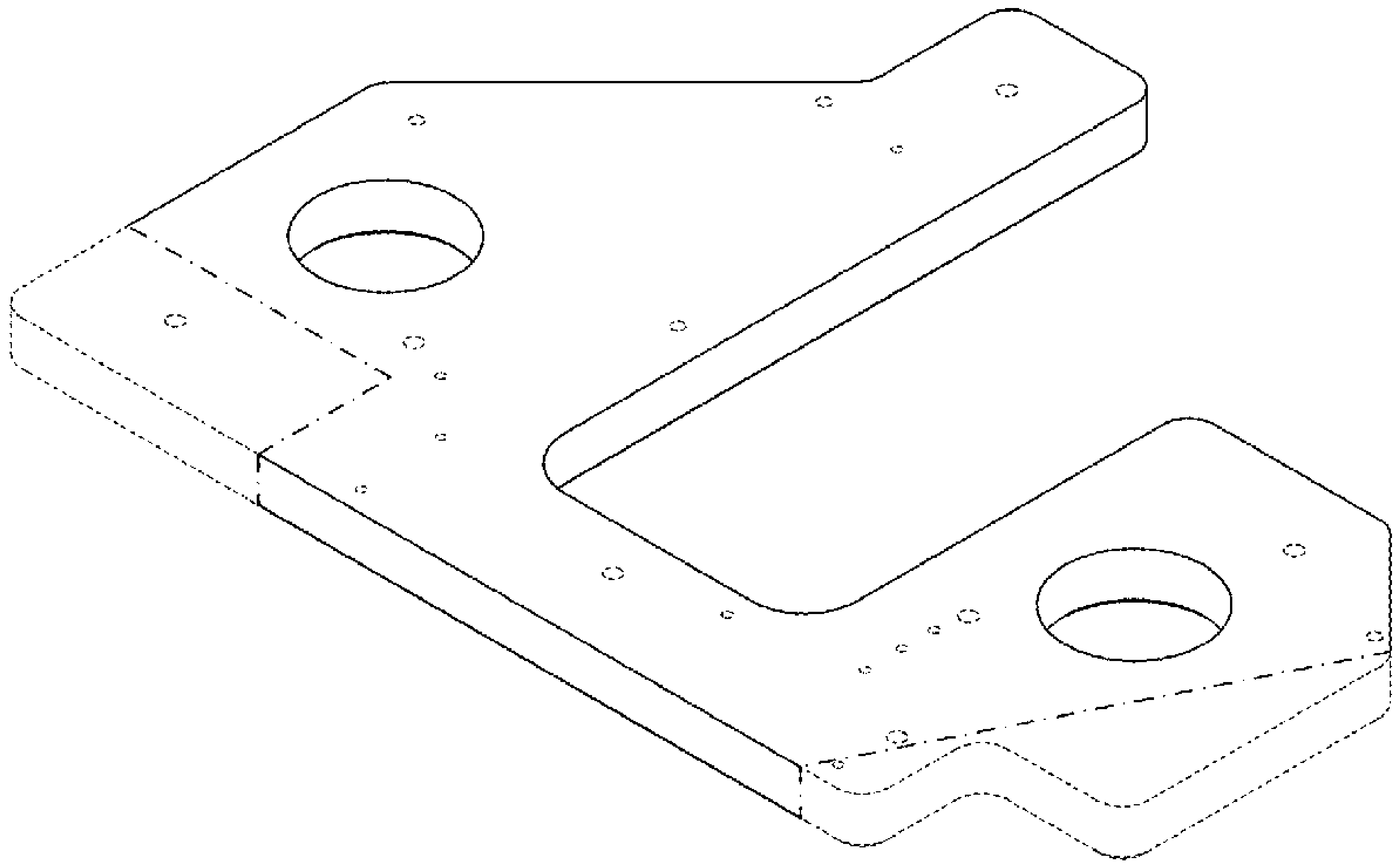

FIG. **18** depicts a bottom view of the second cooling plate for a semiconductor processing apparatus of FIG. **12**.

FIG. **19** depicts a front view of the second cooling plate for a semiconductor processing apparatus of FIG. **12**.

FIG. **20** depicts a back view of the second cooling plate for a semiconductor processing apparatus of FIG. **12**.

FIG. **21** depicts a right side view of the second cooling plate for a semiconductor processing apparatus of FIG. **12**.

FIG. **22** depicts a left side view of the second cooling plate for a semiconductor processing apparatus of FIG. **12**.

FIG. **23** depicts a perspective view of a third cooling plate for a semiconductor processing apparatus.

FIG. **24** depicts another perspective view of the third cooling plate for a semiconductor processing apparatus of FIG. **23**.

FIG. **25** depicts yet another perspective view of the third cooling plate for a semiconductor processing apparatus of FIG. **23**.

FIG. **26** depicts another perspective view of the third cooling plate for a semiconductor processing apparatus of FIG. **23**.

FIG. **27** depicts yet another perspective view of the third cooling plate for a semiconductor processing apparatus of FIG. **23**.

FIG. **28** depicts a top view of the third cooling plate for a semiconductor processing apparatus of FIG. **23**.

FIG. **29** depicts a bottom view of the third cooling plate for a semiconductor processing apparatus of FIG. **23**.

FIG. **30** depicts a front view of the third cooling plate for a semiconductor processing apparatus of FIG. **23**.

FIG. **31** depicts a back view of the third cooling plate for a semiconductor processing apparatus of FIG. **23**.

FIG. **32** depicts a right side view of the third cooling plate for a semiconductor processing apparatus of FIG. **23**; and,

FIG. **33** depicts a left side view of the third cooling plate for a semiconductor processing apparatus of FIG. **23**.

Broken, dashed lines are used to represent portions of the article that do not form a part of the design. The broken, dash-dot-dash boundary line is used to represent a boundary between claimed and unclaimed subject matter.

1 Claim, 12 Drawing Sheets

(58) **Field of Classification Search**

CPC . H01Q 1/428; H01Q 1/02; H01Q 1/38; H01L 23/367; H01L 23/3672; H05K 7/20254; F28F 3/022; F28F 3/04; F28F 21/065; G02B 1/111; F28D 15/0275; F04D 29/281

See application file for complete search history.

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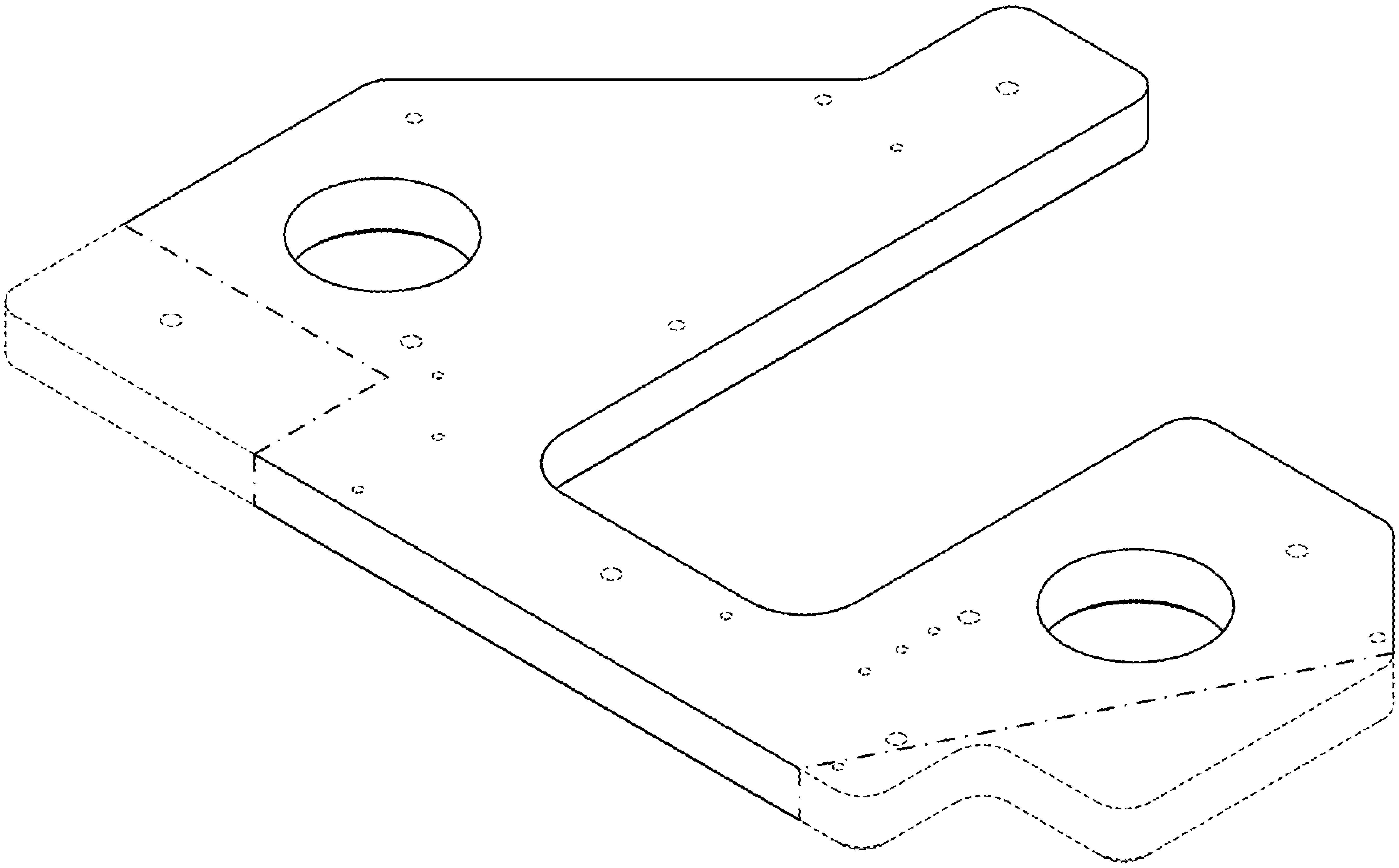


FIG. 1

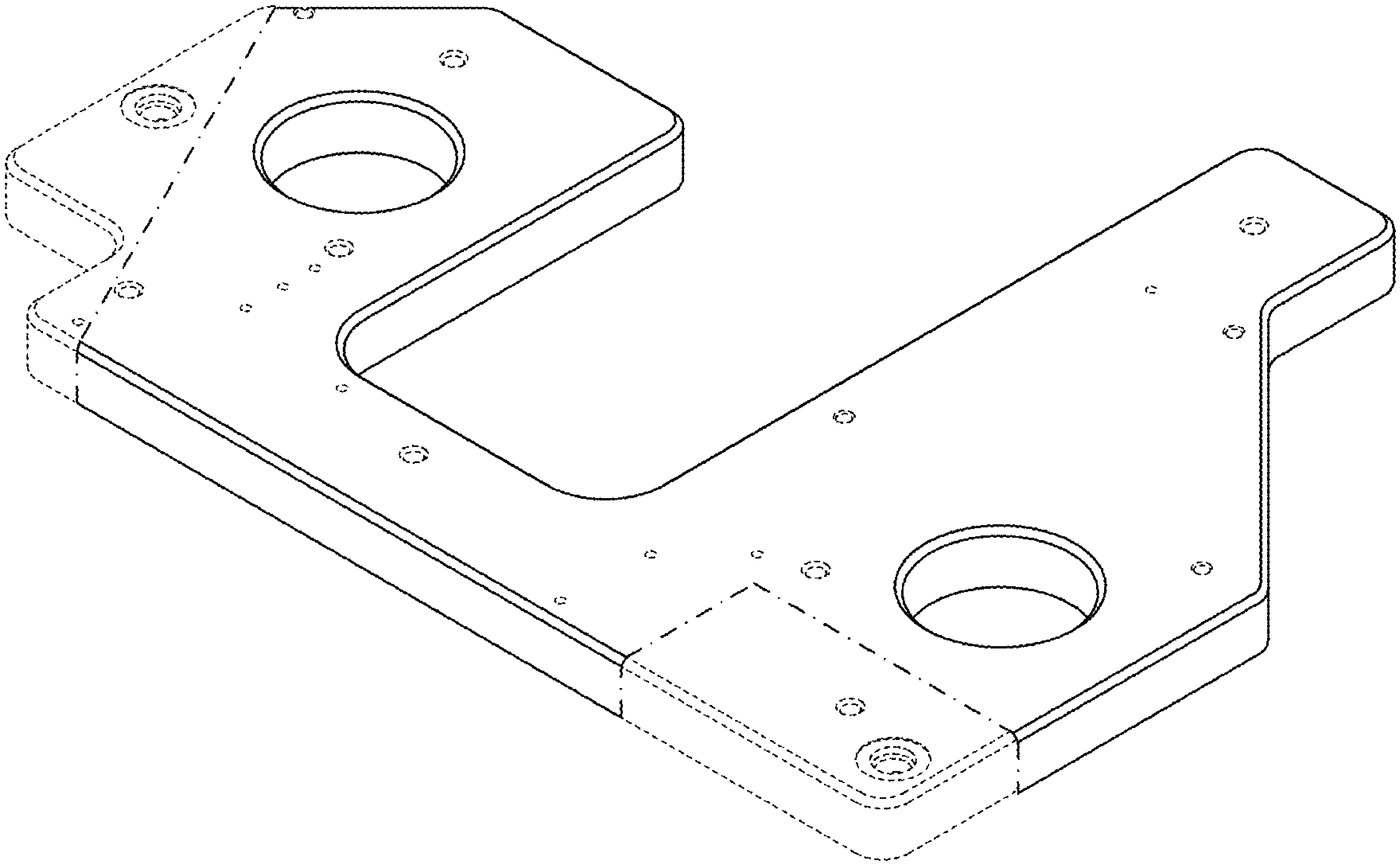


FIG. 2

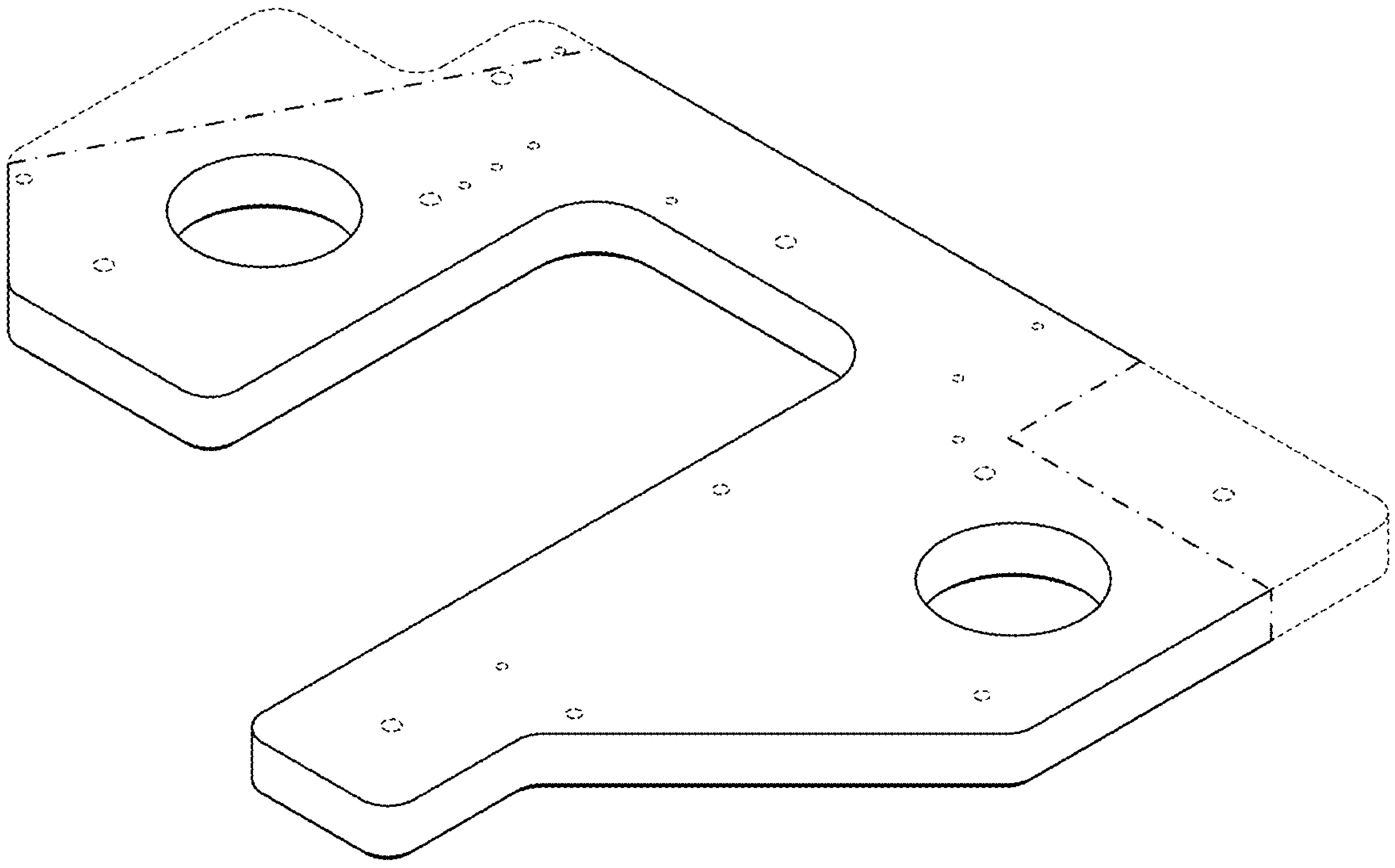


FIG. 3

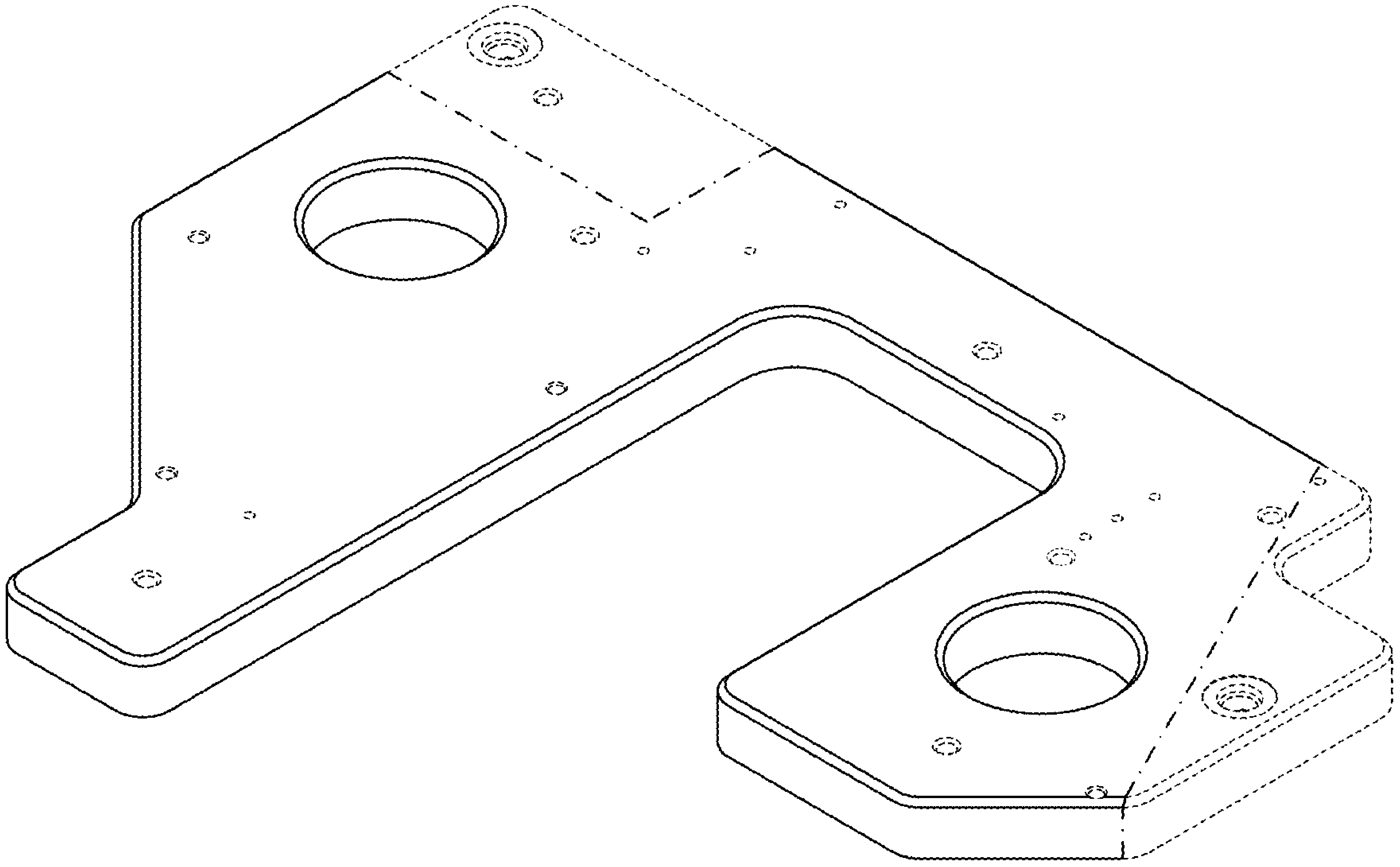


FIG. 4

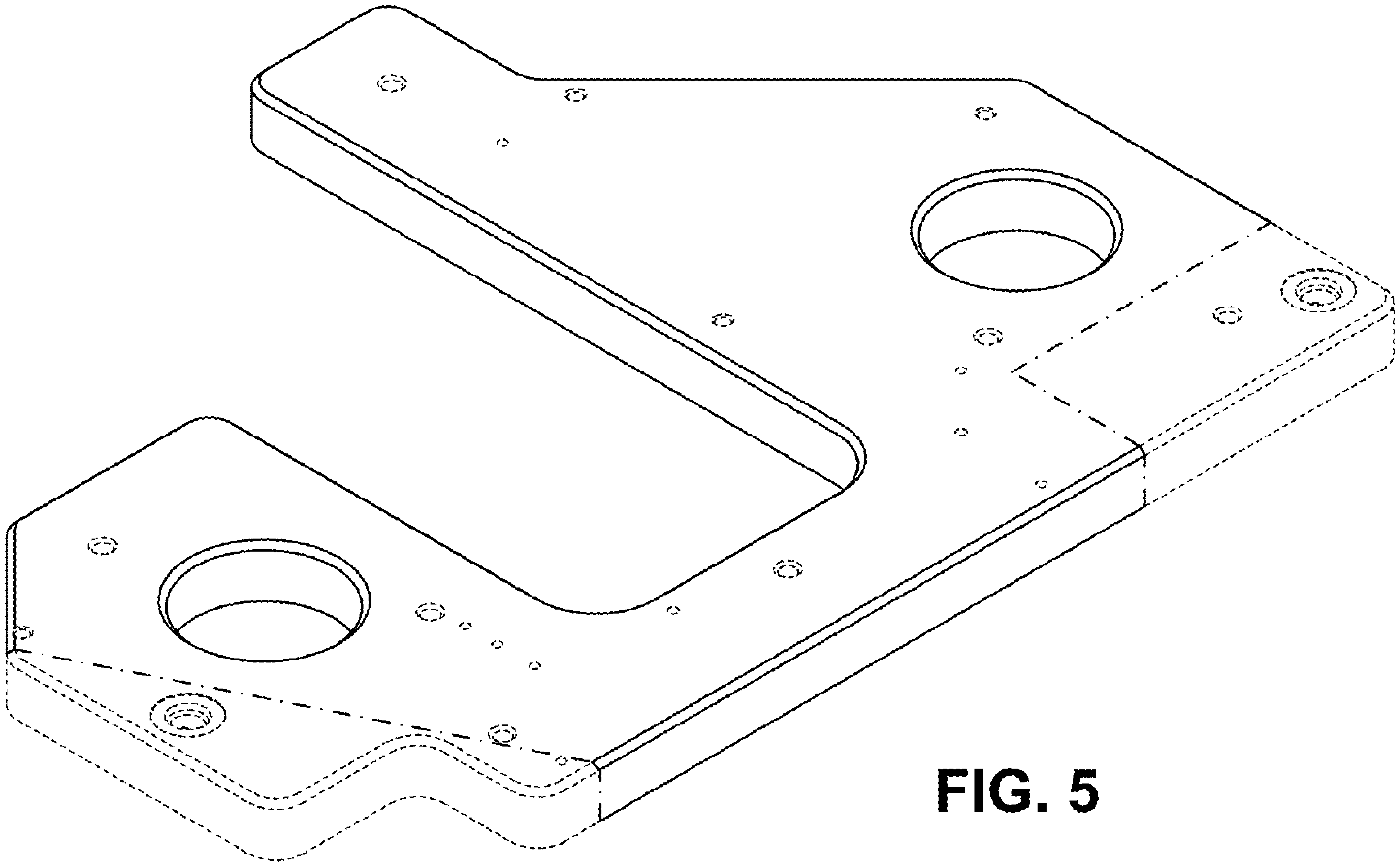


FIG. 5

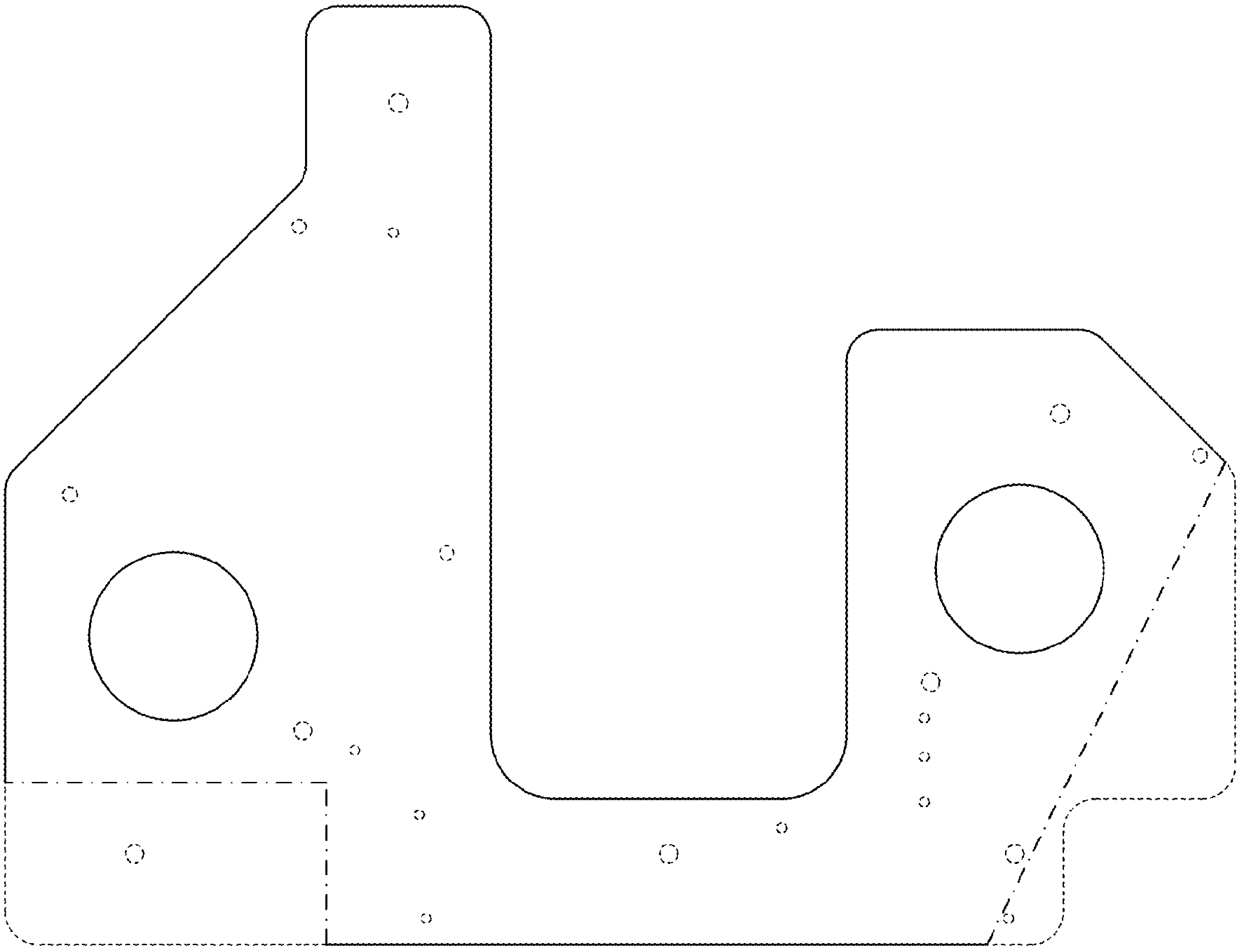


FIG. 6

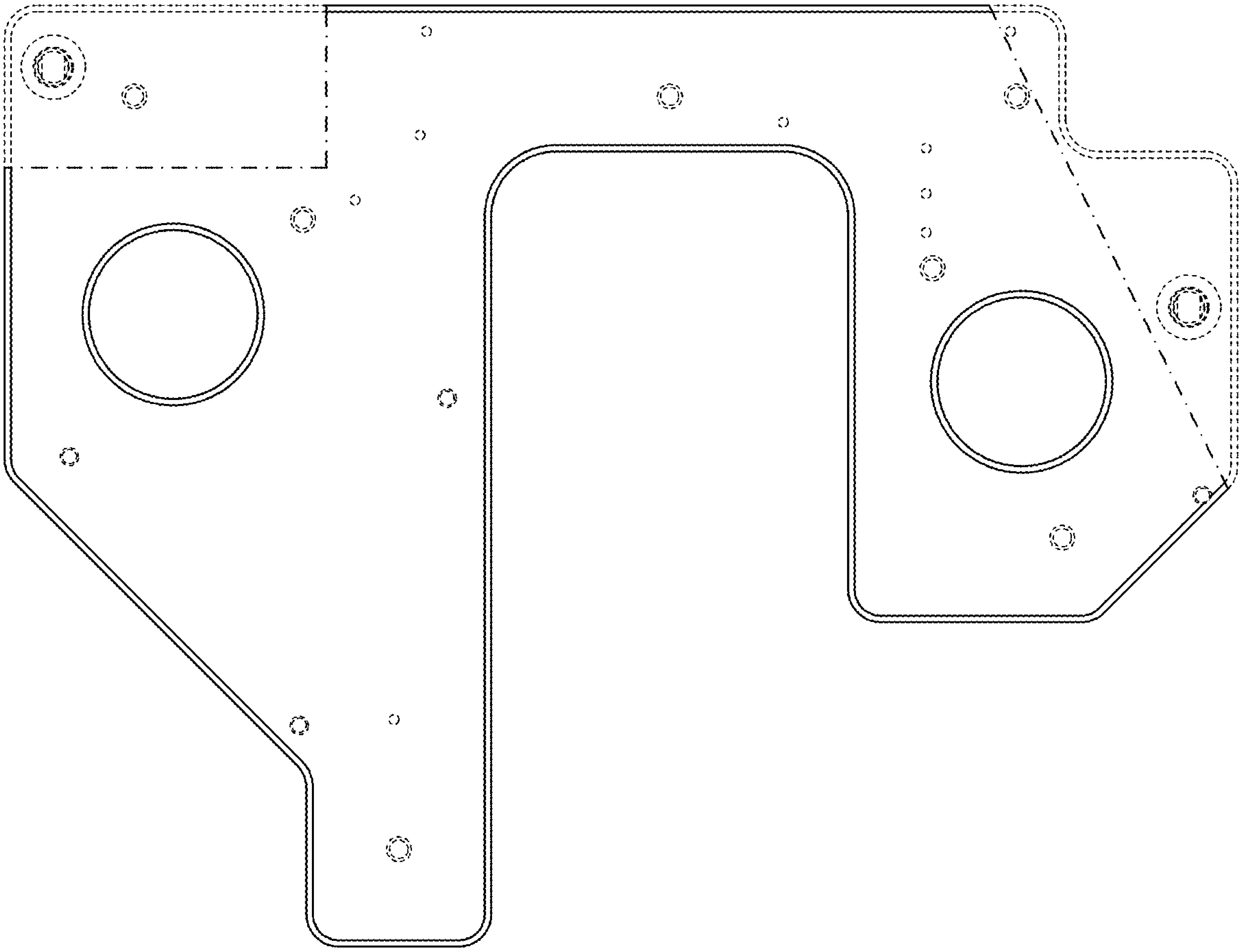


FIG. 7

FIG. 8

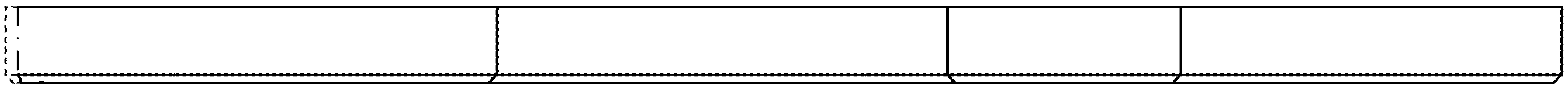


FIG. 9

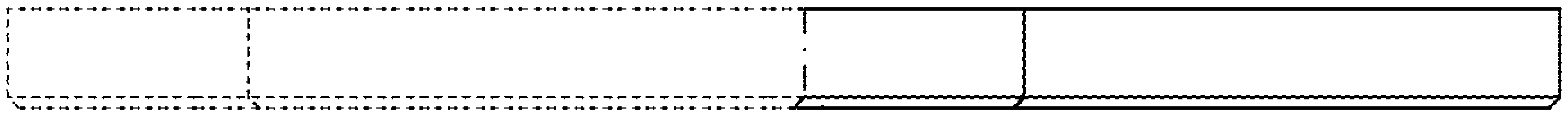
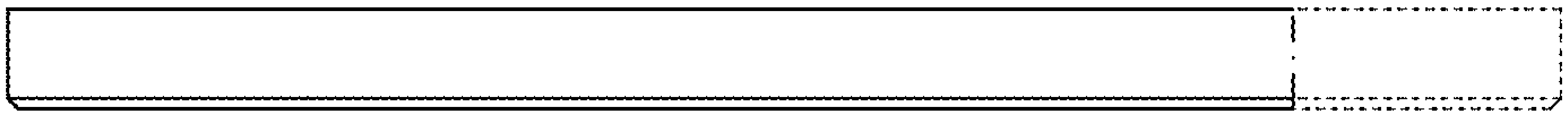


FIG. 10



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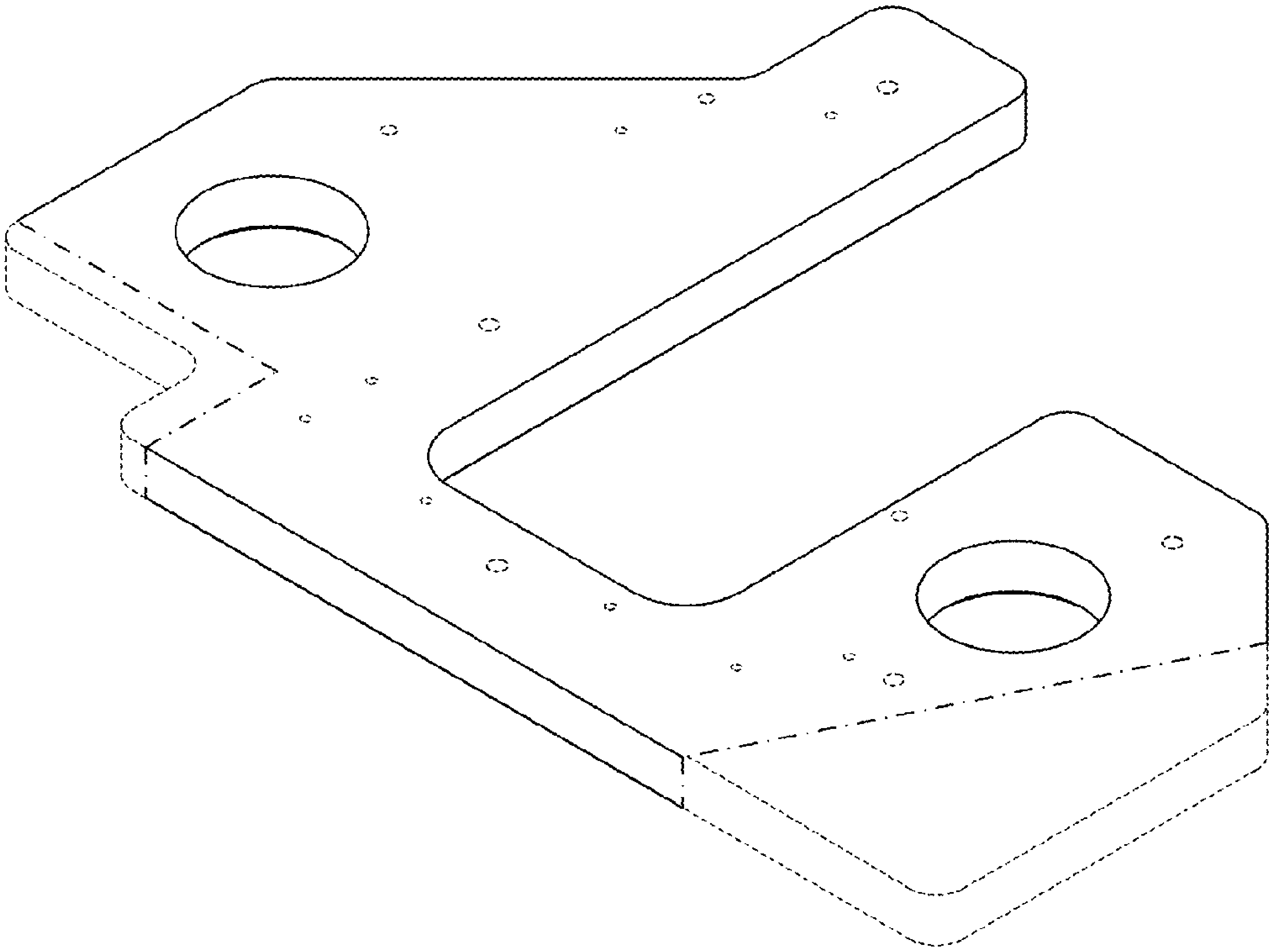

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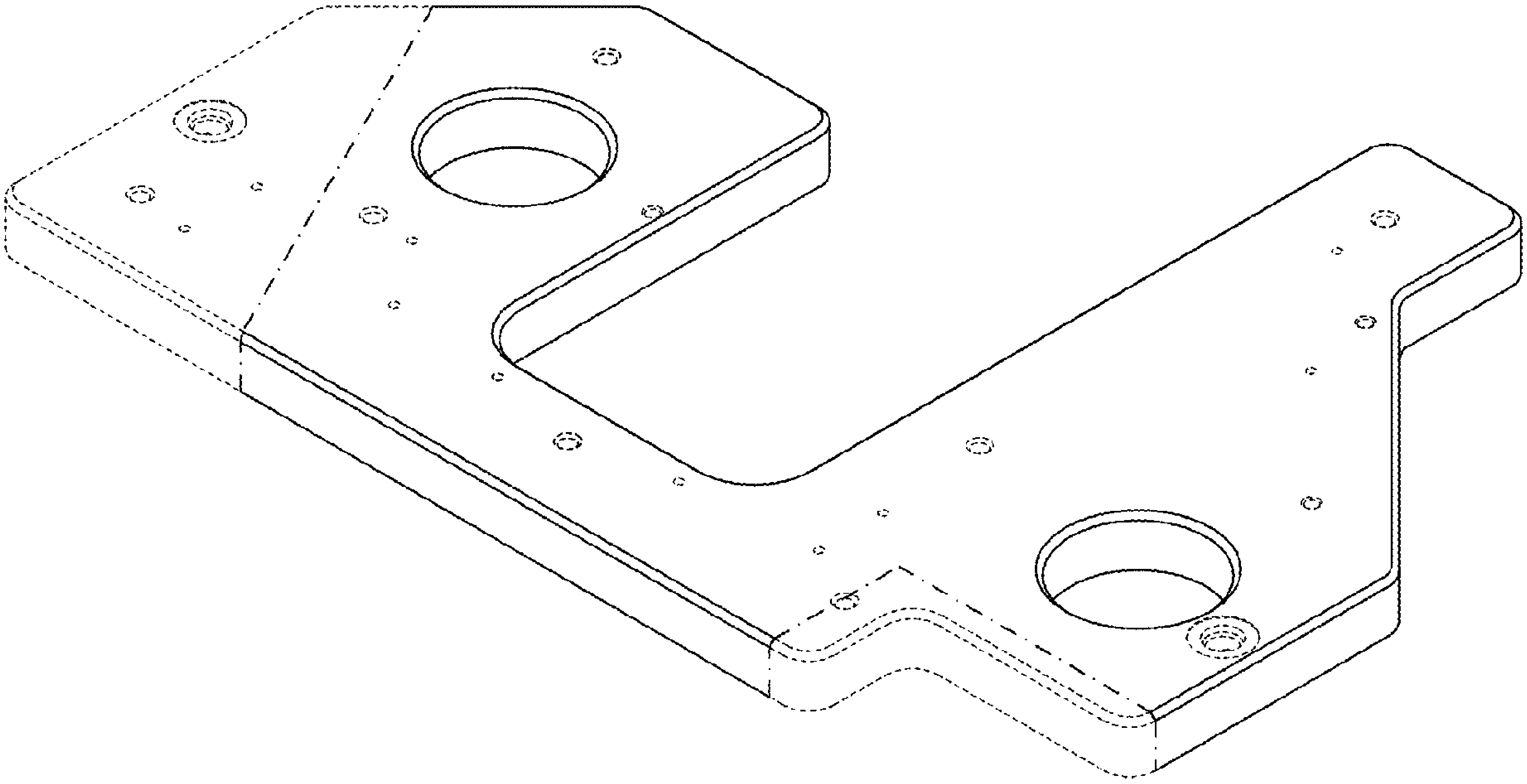

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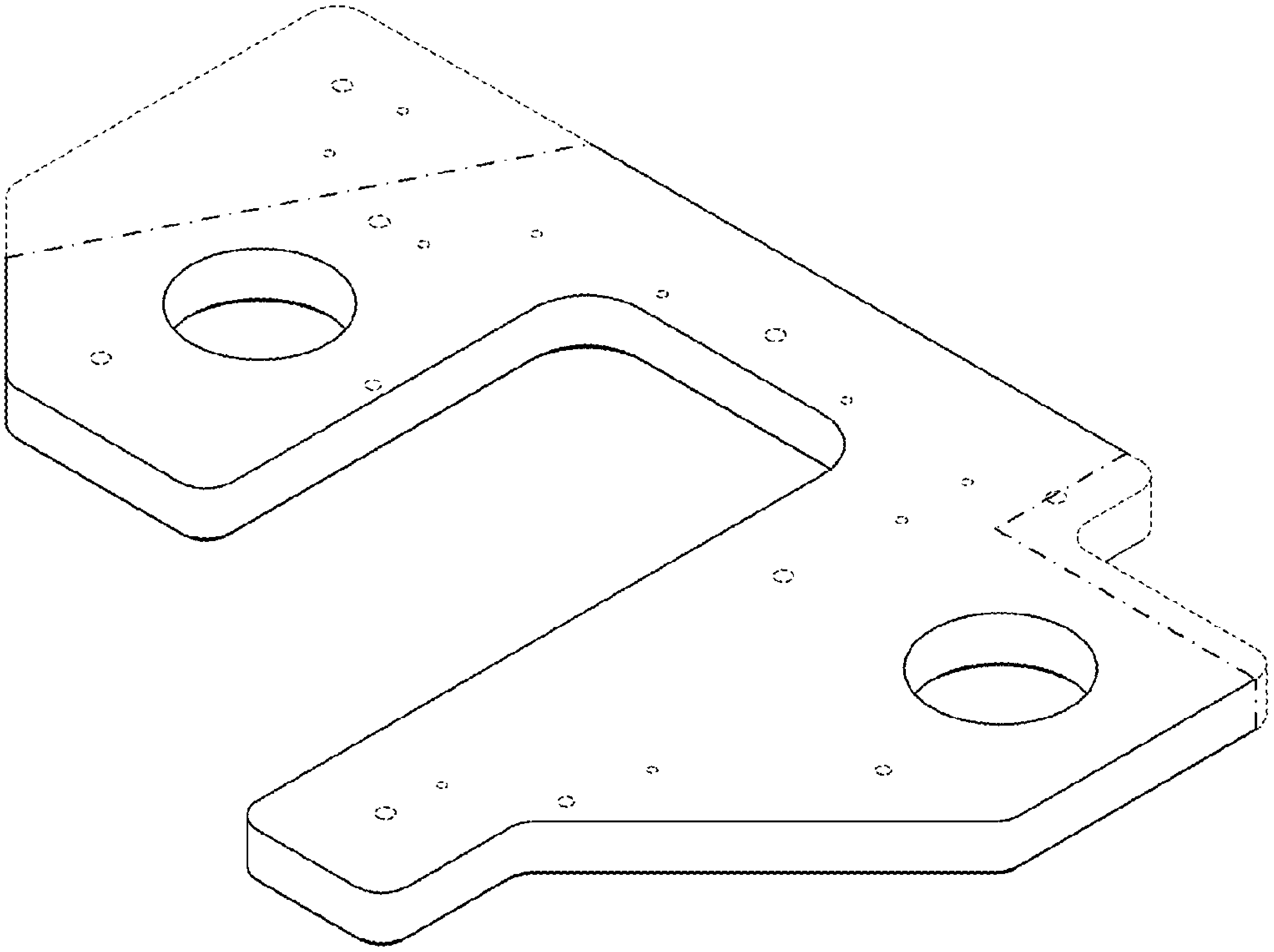


FIG. 14

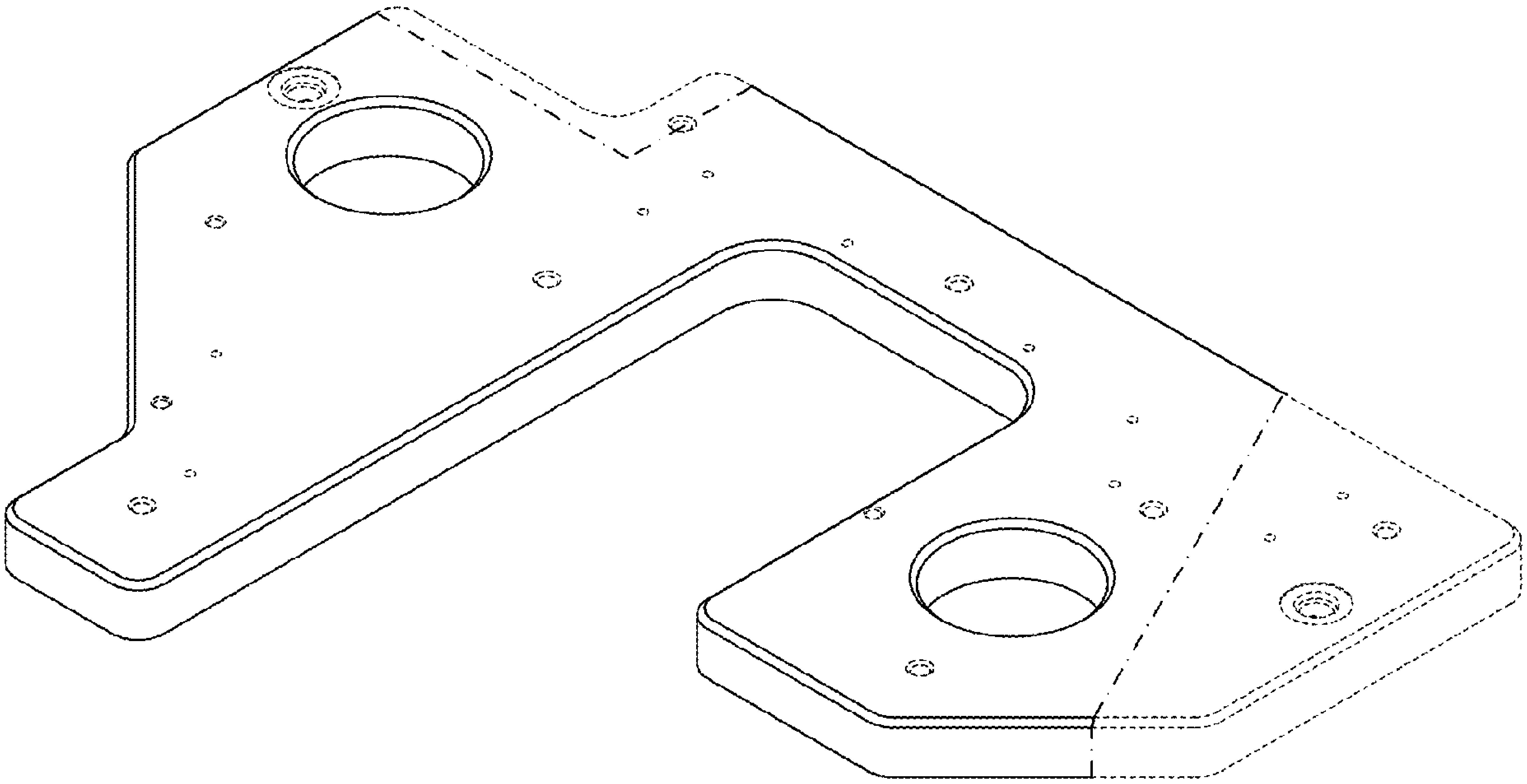
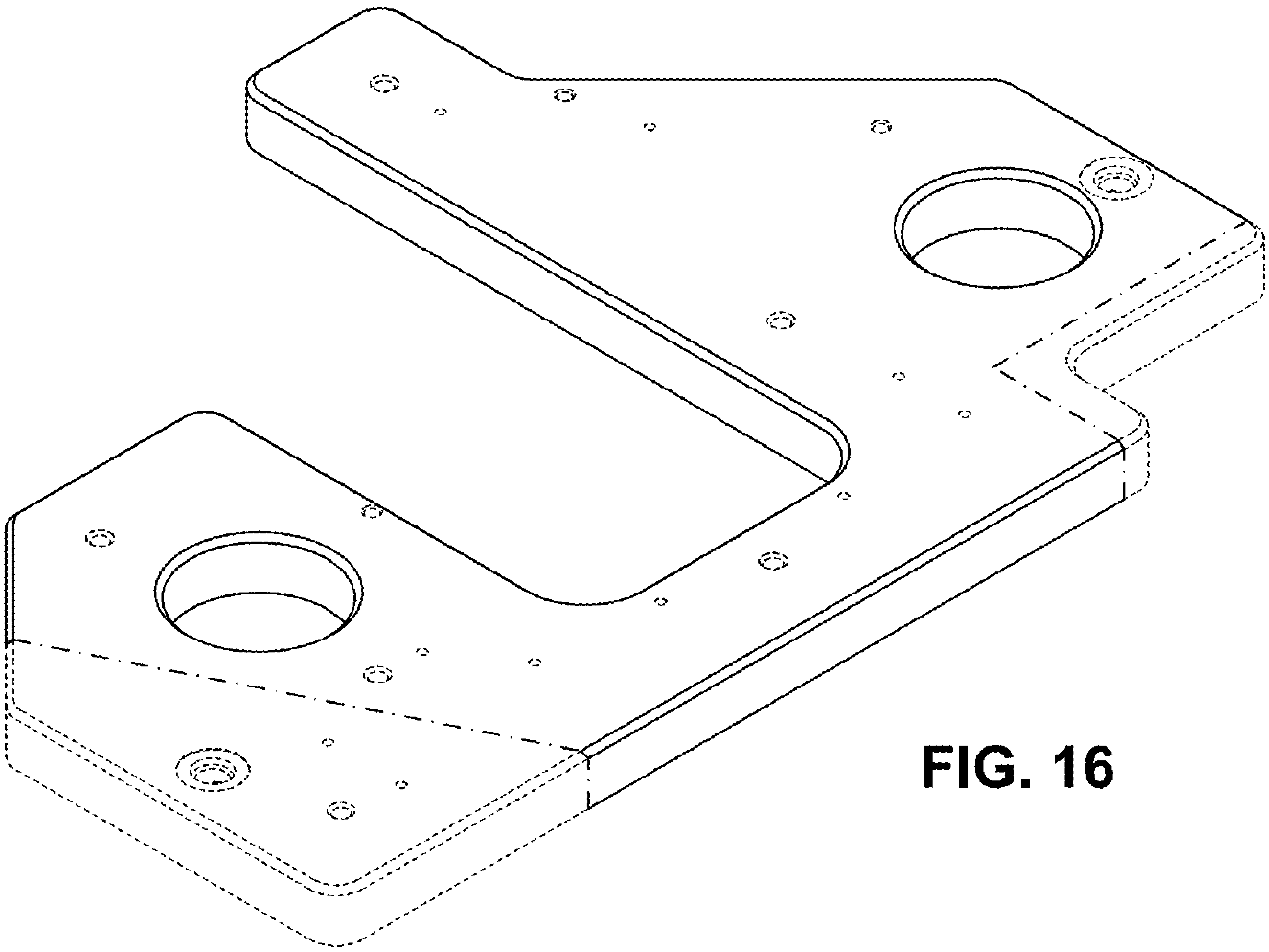


FIG. 15



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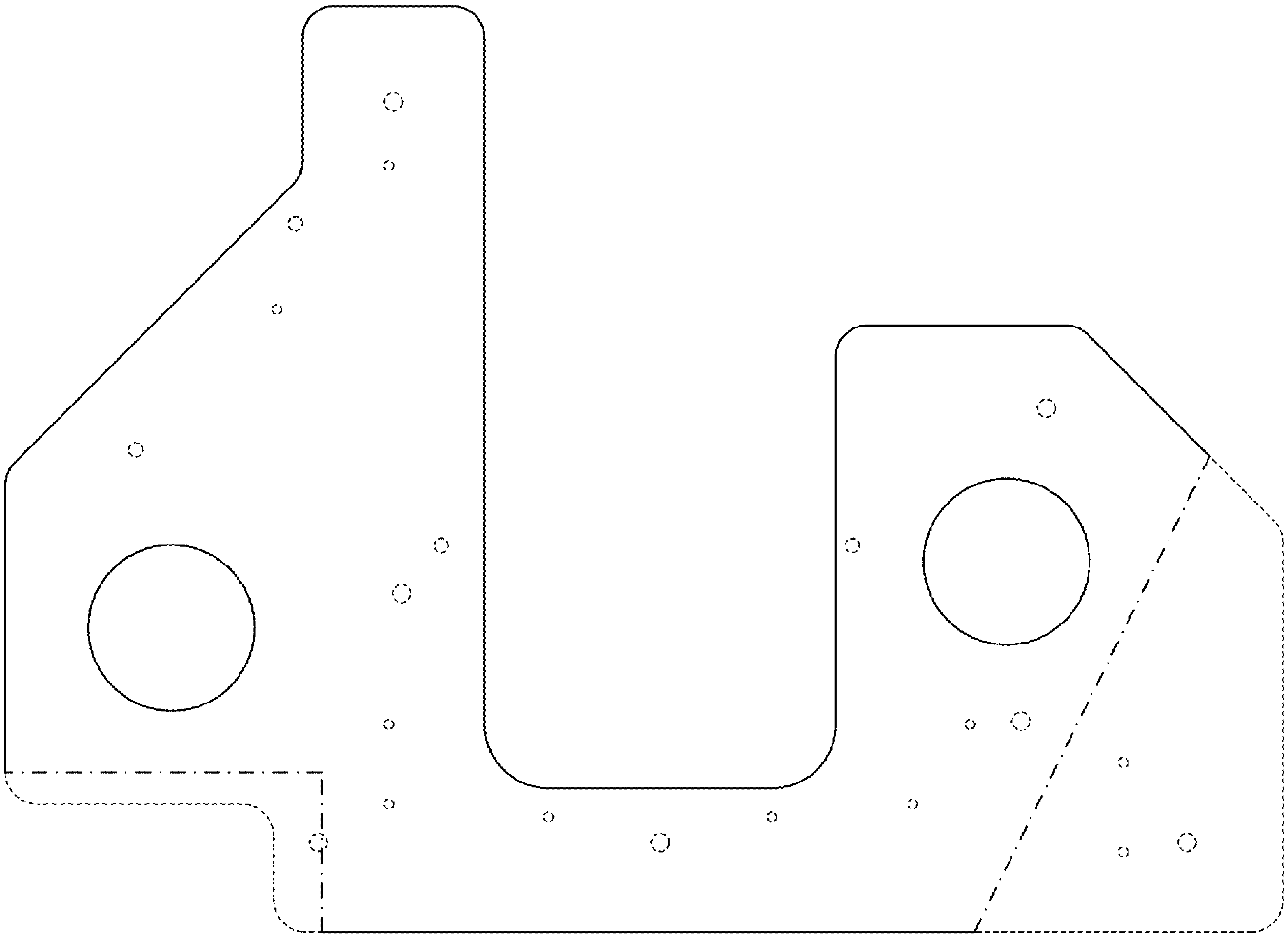

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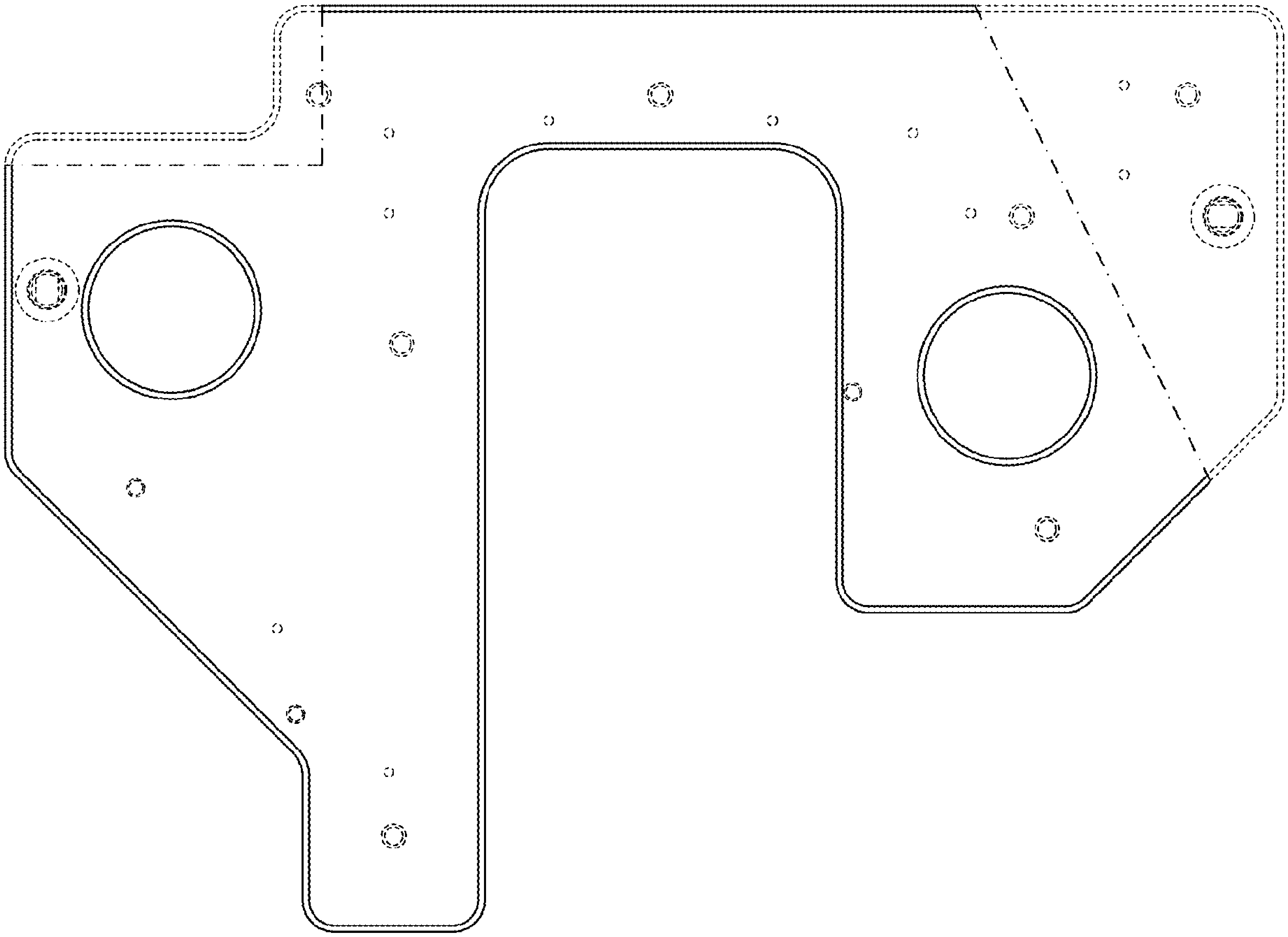


FIG. 18

FIG. 19

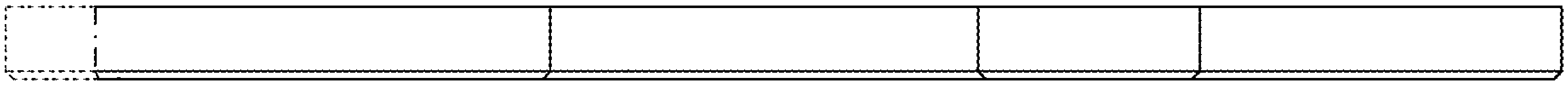


FIG. 20

FIG. 21

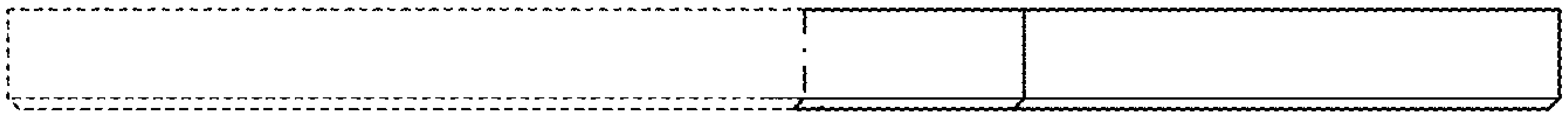
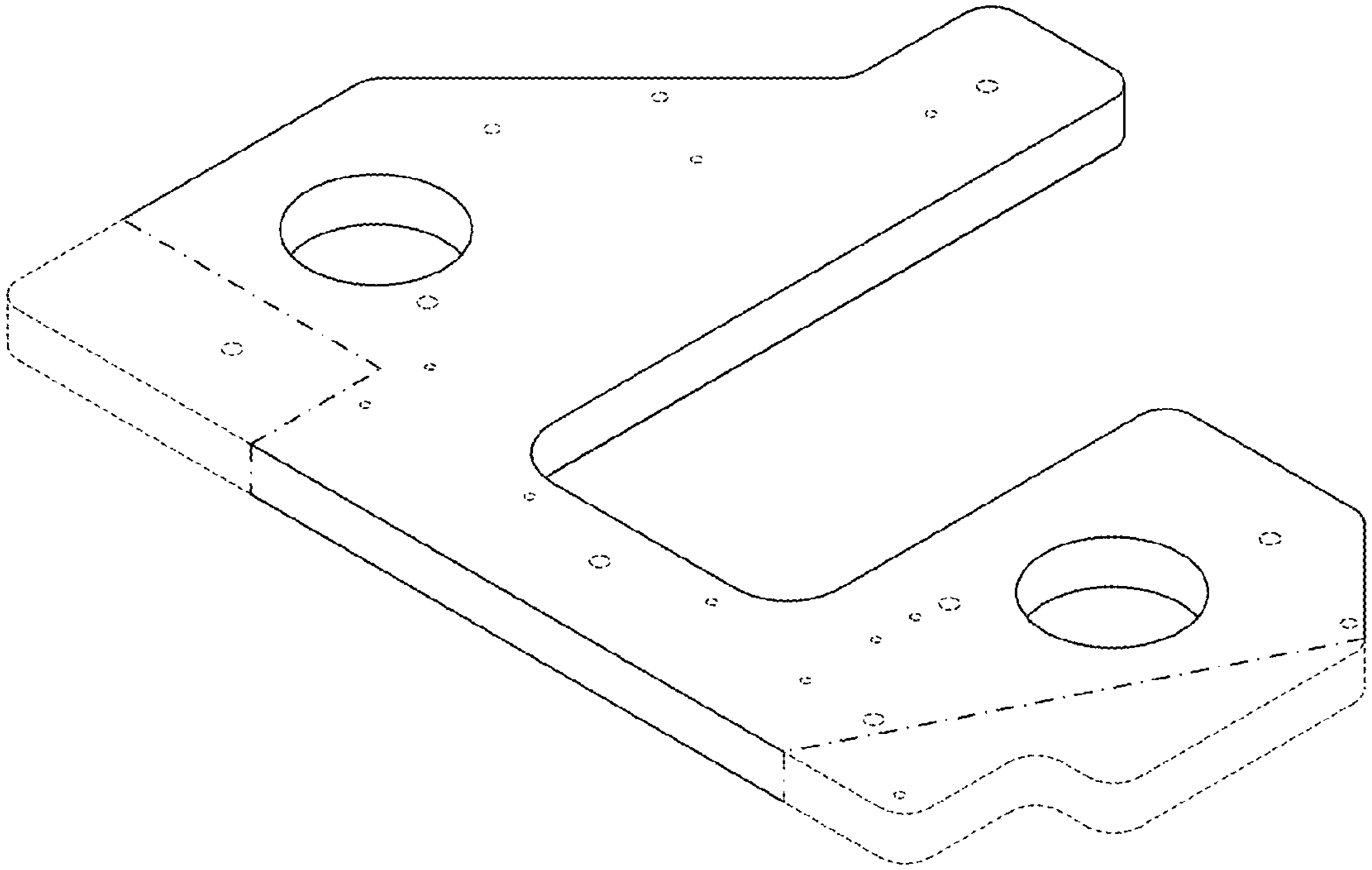


FIG. 22



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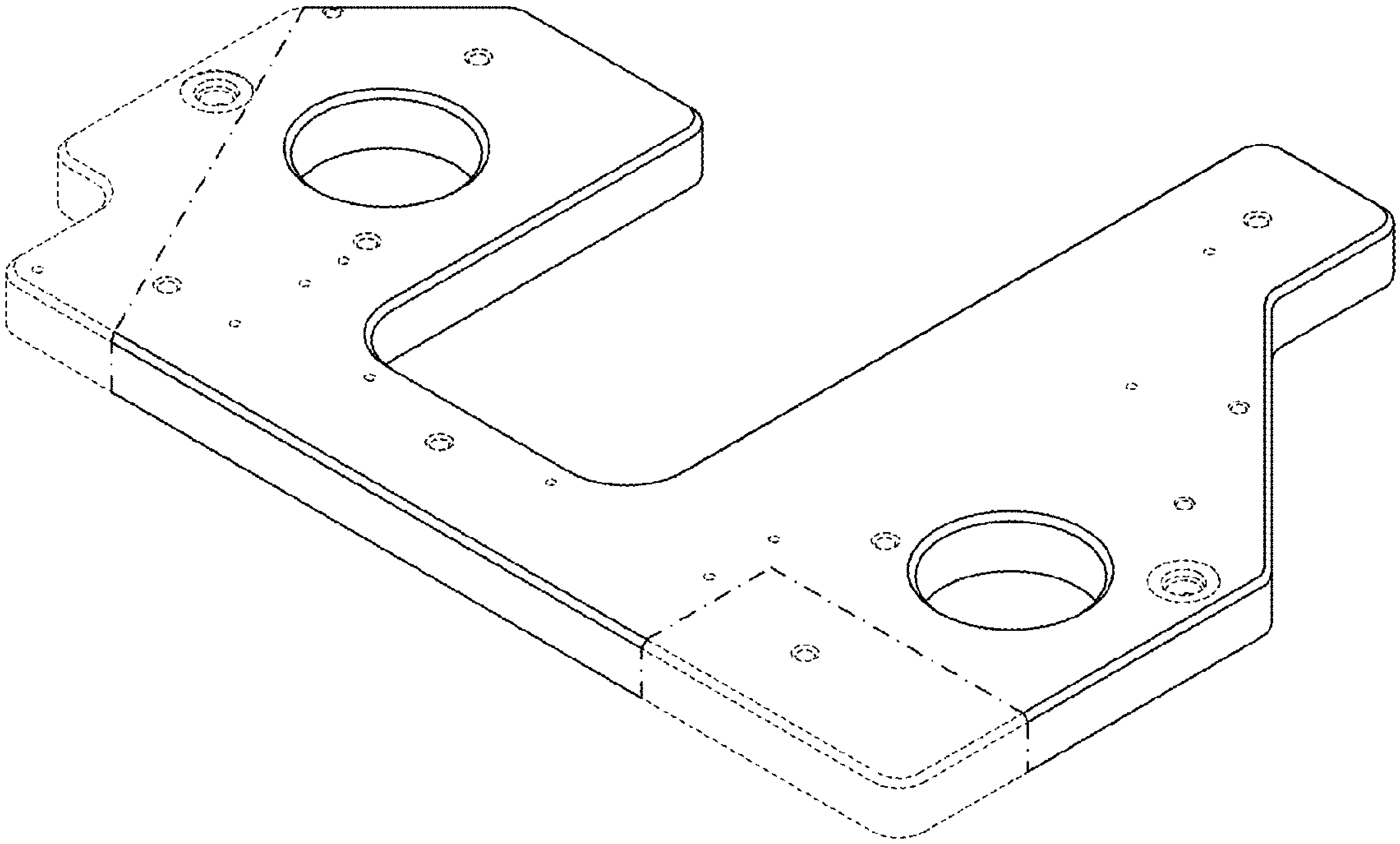
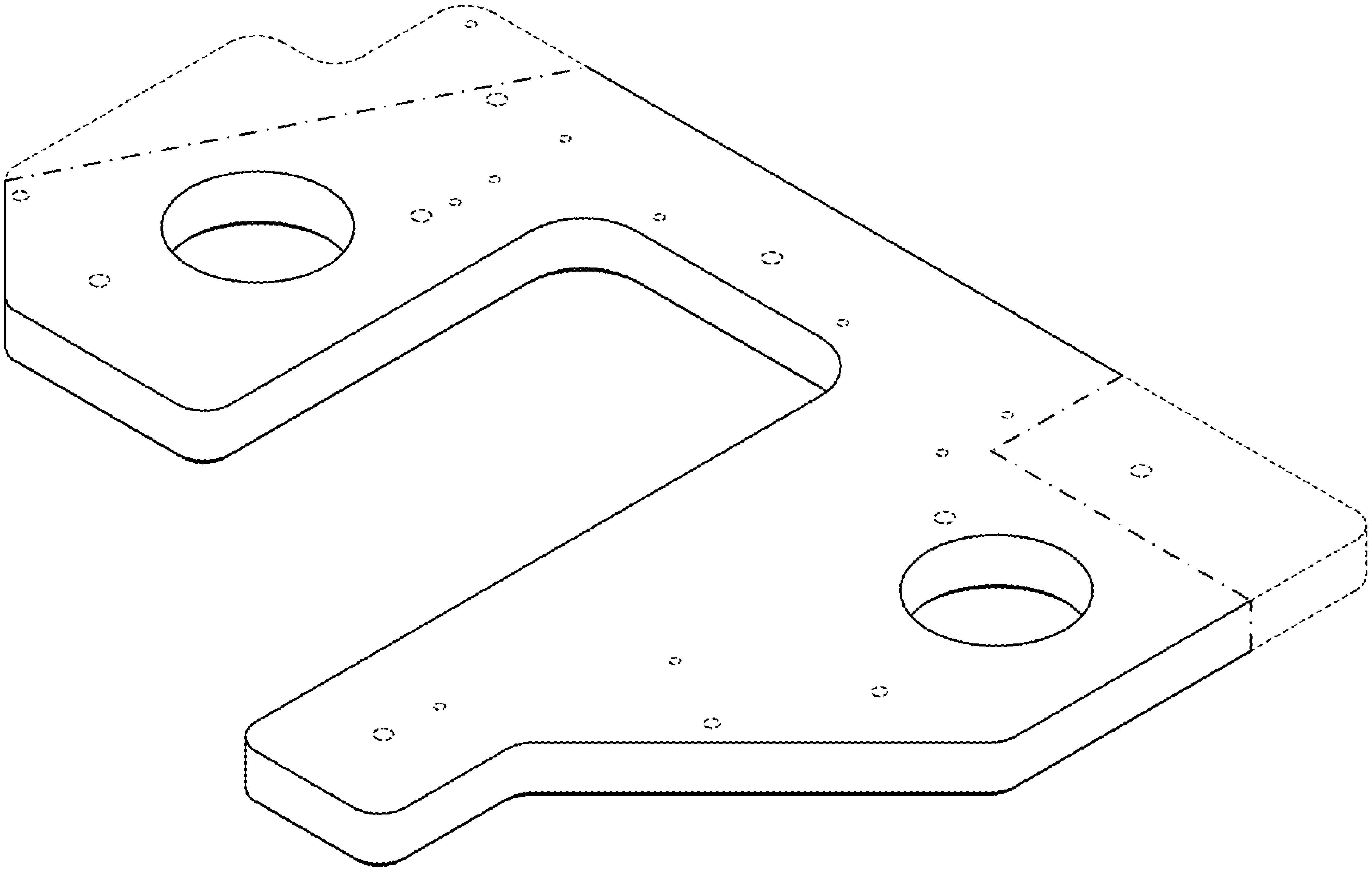


FIG. 24



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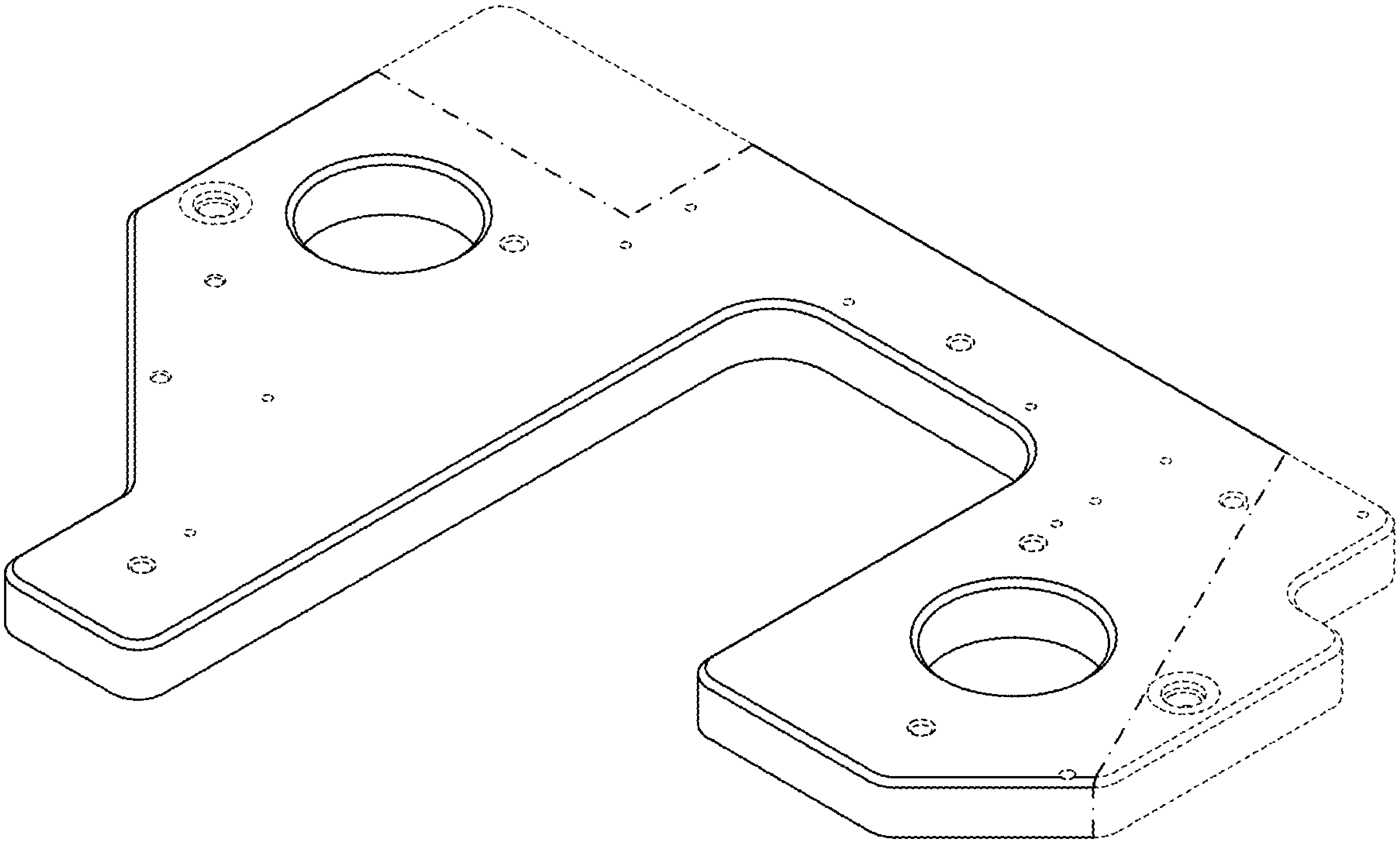


FIG. 26

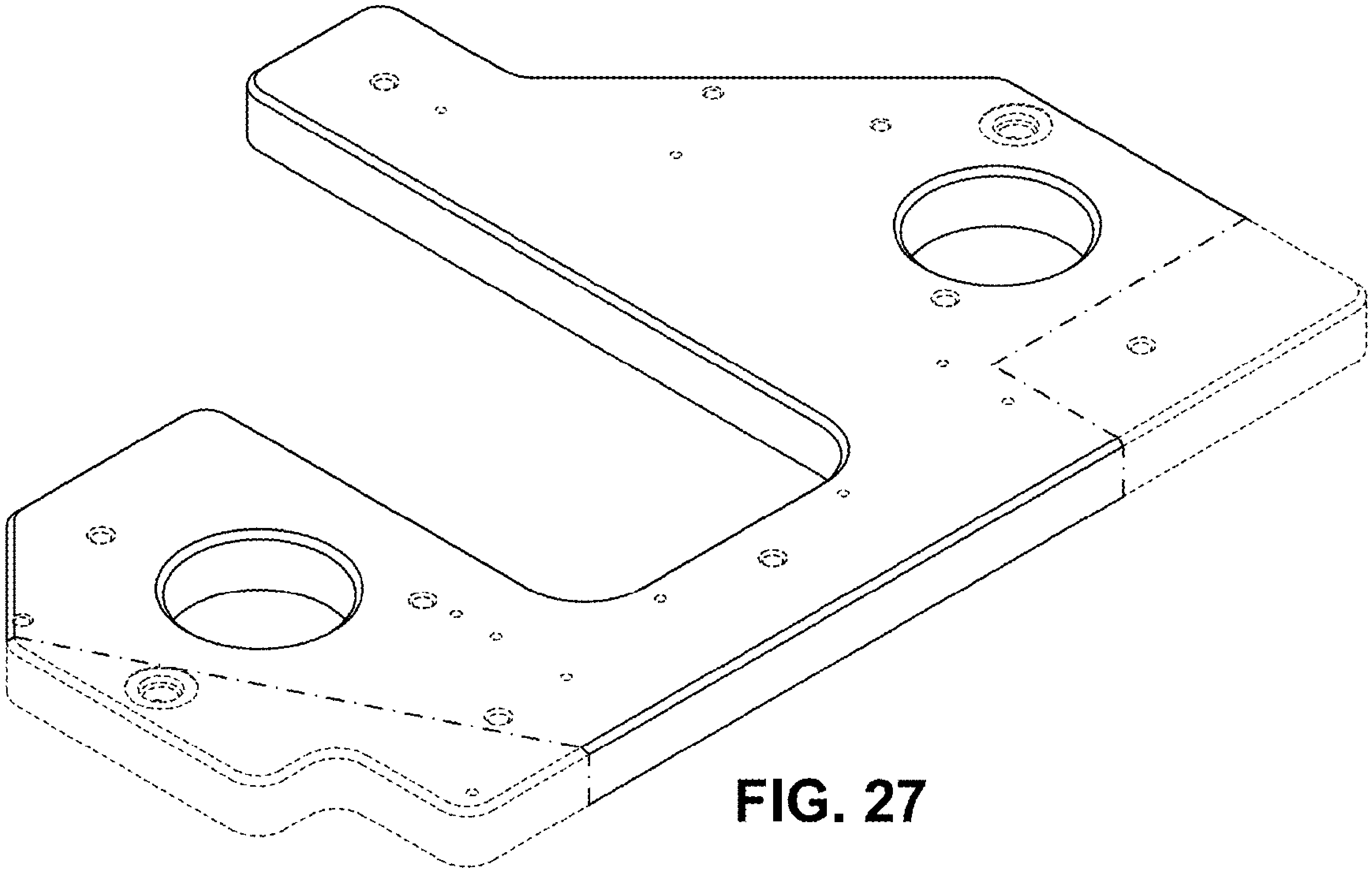
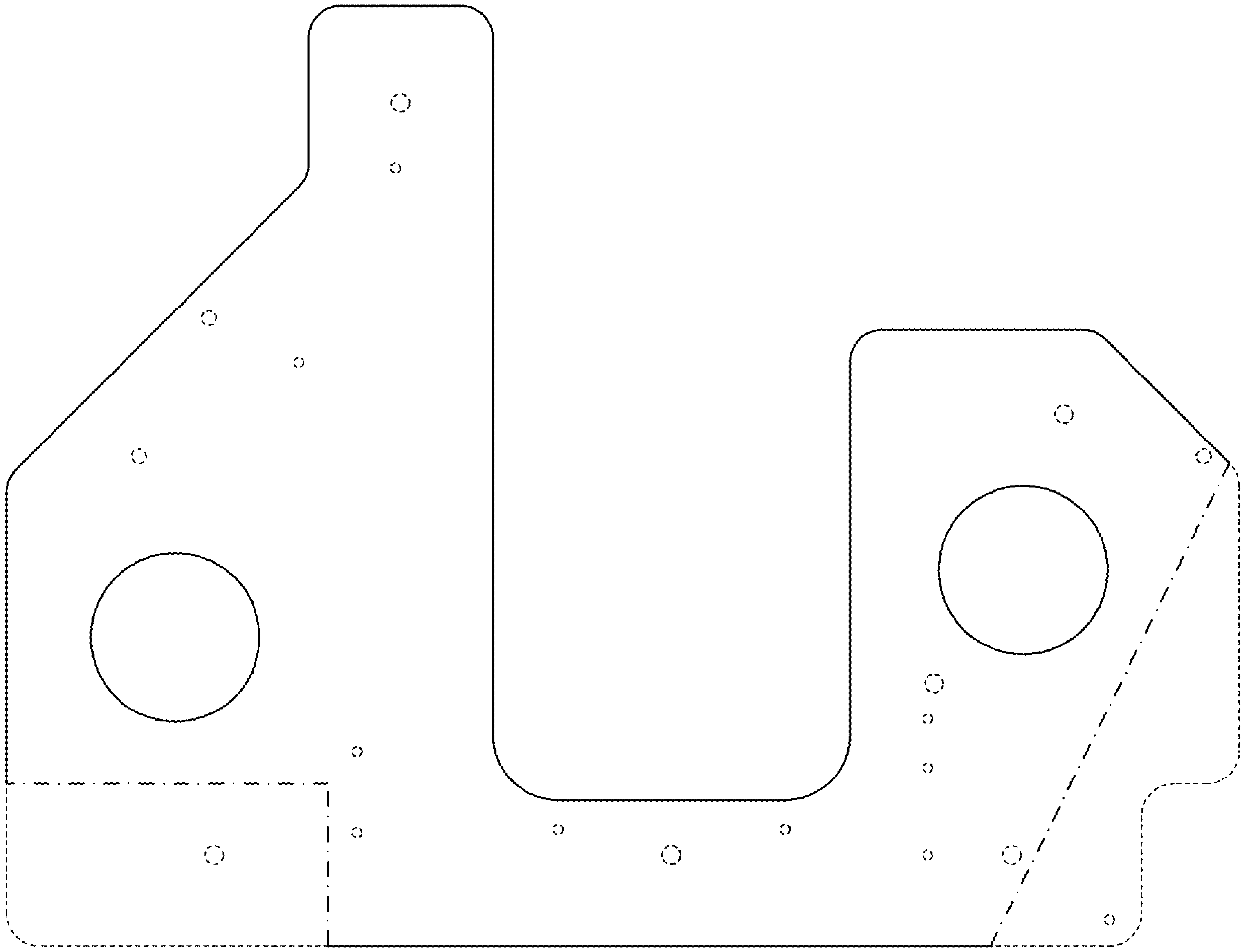


FIG. 27



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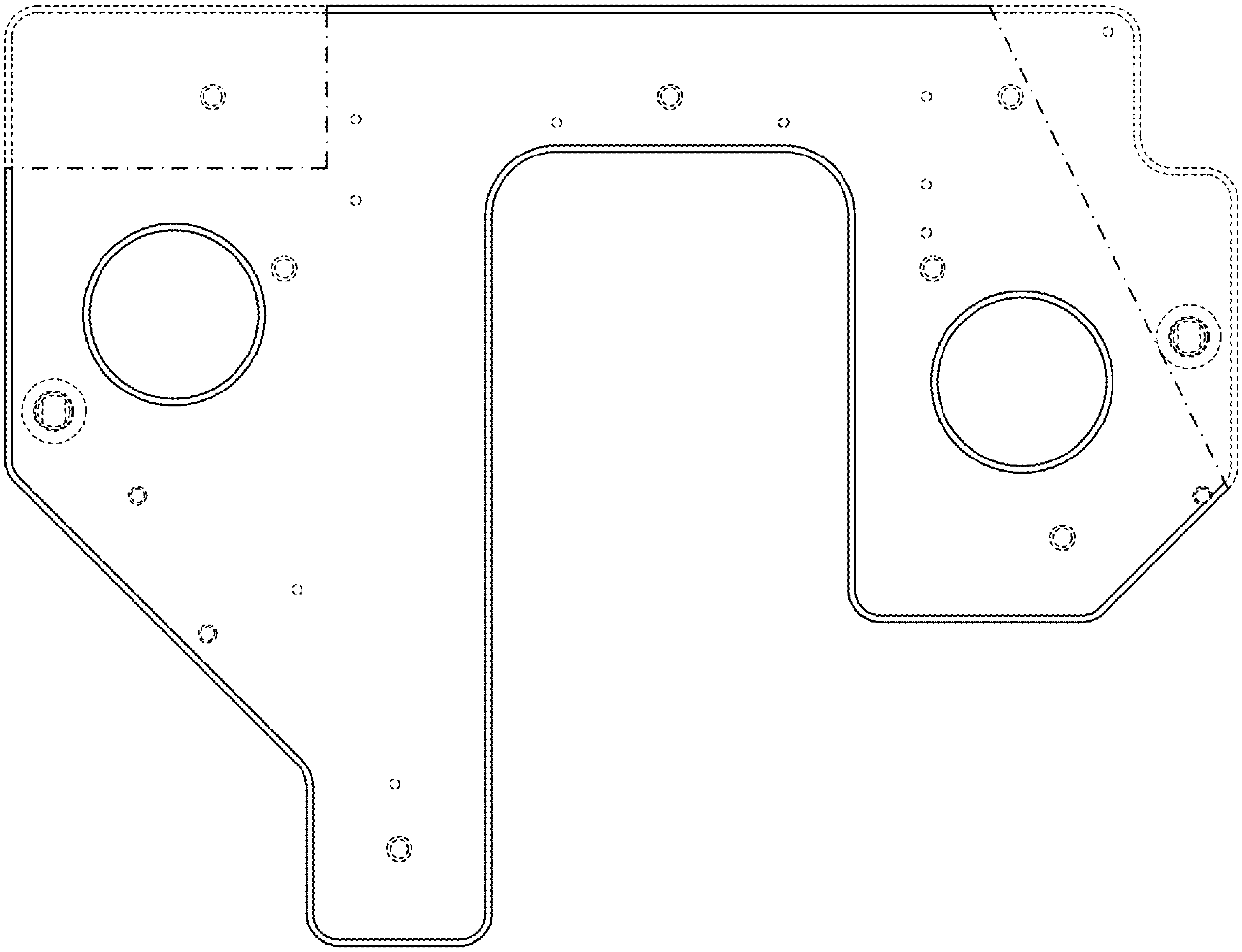

FIG. 29

FIG. 30

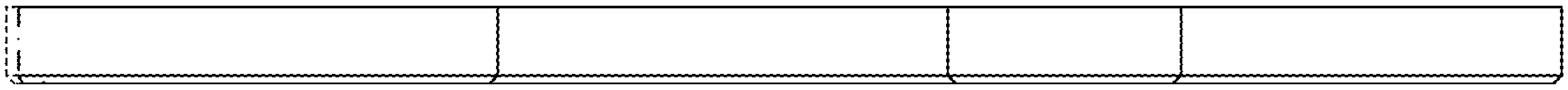

FIG. 31

FIG. 32

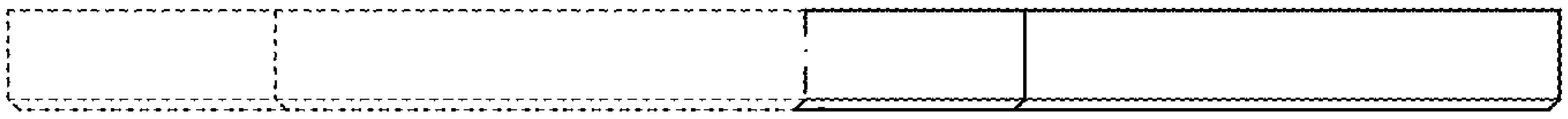

FIG. 33