



US00D880559S

(12) **United States Design Patent** (10) **Patent No.:** **US D880,559 S**  
**Lin** (45) **Date of Patent:** **\*\* Apr. 7, 2020**

(54) **THERMAL IMAGER**  
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D16/250, 235, 130, 134, 136, 238, 243;  
D14/417, 138 C, 240, 248, 203.1, 203.3,  
D14/203.7, 218, 207, 440, 402, 454, 407,  
D14/408, 252, 253; D10/104.1, 50, 65,  
D10/74, 70, 118.2, 66; D12/187;  
D29/102, 122, 103; D3/269, 267;  
D30/199  
CPC ..... G03B 17/00; G03B 17/02; G03B 17/56;  
G03B 17/04; G03B 17/14; G03B 17/08;  
G03B 15/03; G03B 15/06; H04N  
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(Continued)

(56) **References Cited**  
U.S. PATENT DOCUMENTS  
D277,462 S \* 2/1985 Jacobsen ..... D10/70  
D466,540 S \* 12/2002 Lannstedt ..... D16/202  
D518,057 S \* 3/2006 Johnson ..... D14/428  
(Continued)

FOREIGN PATENT DOCUMENTS

CN 304116647 \* 4/2017  
CN 304197188 \* 7/2017  
(Continued)

OTHER PUBLICATIONS

Hikvision H10 handheld temperature measuring thermal imager, published 2019 [online], [retrieved Jan. 5, 2020], Available from Internet, URL: [http://www.cioe.cn/en/zsml/bull\\_detail\\_3562.html](http://www.cioe.cn/en/zsml/bull_detail_3562.html).  
(Continued)

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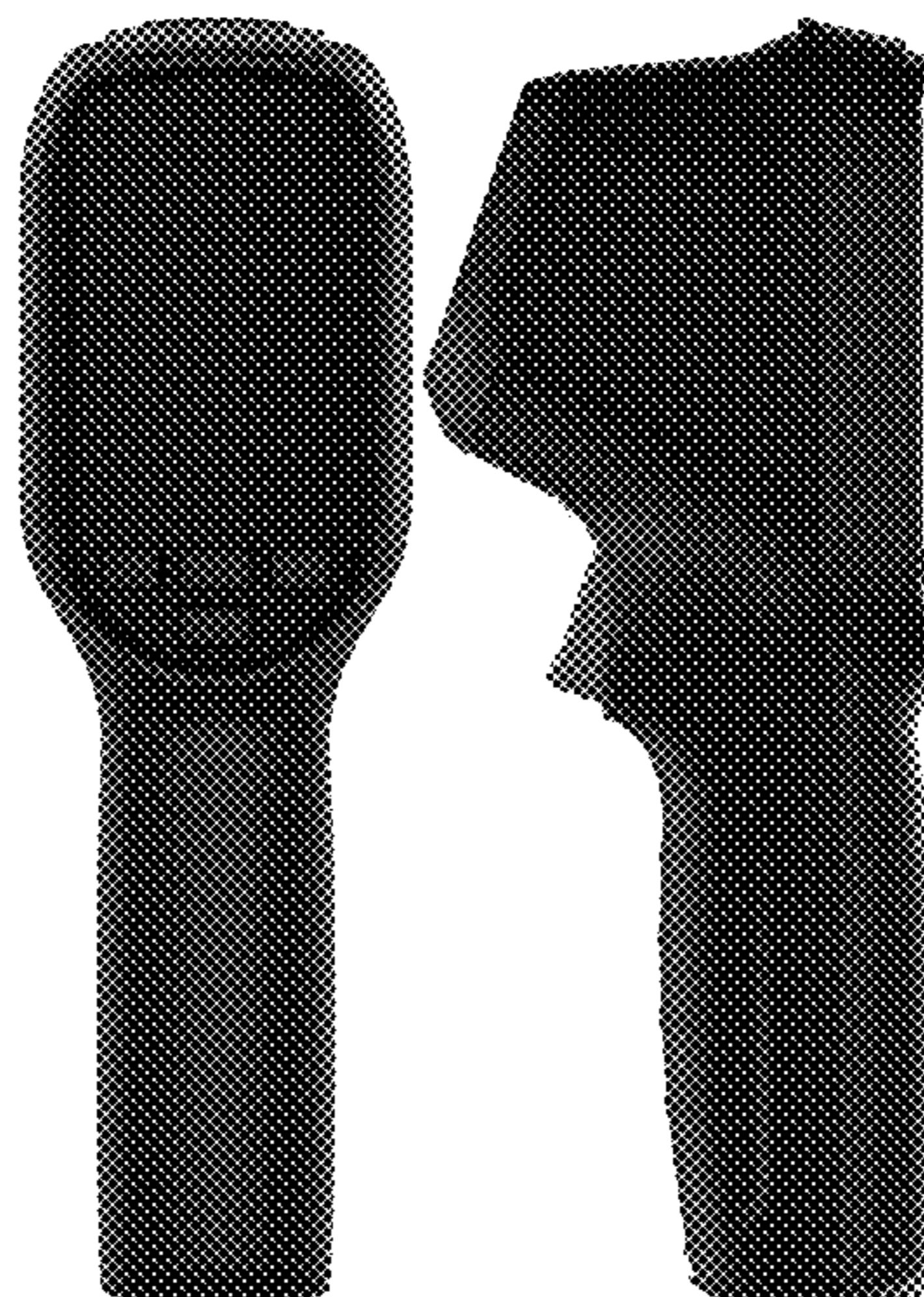
(57) **CLAIM**

The ornamental design for a thermal imager, as shown and described.

**DESCRIPTION**

FIG. 1 is a front view of a thermal imager showing my new design;  
FIG. 2 is a left view of the thermal imager shown in FIG. 1;  
FIG. 3 is a right view of the thermal imager shown in FIG. 1;  
FIG. 4 is a top view of the thermal imager shown in FIG. 1;  
FIG. 5 is a bottom view of the thermal imager shown in FIG. 1;  
FIG. 6 is a back view of the thermal imager shown in FIG. 1; and,  
FIG. 7 is a perspective view of the thermal imager shown in FIG. 1.

**1 Claim, 6 Drawing Sheets**



(58) **Field of Classification Search**  
 CPC . H04N 13/239; H04N 2101/00; F16M 13/00  
 See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D525,640	S *	7/2006	Bloch	.....	D16/208
D532,813	S *	11/2006	Speggiorin	.....	F16M 11/14 D16/243
D540,838	S *	4/2007	Aronsson	.....	D16/206
7,236,243	B2 *	6/2007	Beecroft	.....	G01J 3/02 356/328
D585,927	S *	2/2009	Sheard	.....	D16/206
D588,596	S *	3/2009	Mazzone	.....	D14/426
D599,392	S *	9/2009	Hamrelius	.....	D16/206
D623,754	S *	9/2010	Tuhkanen	.....	D24/186
D658,222	S *	4/2012	Elrod	.....	D16/206
D665,440	S *	8/2012	Sigward	.....	D16/206
D666,928	S *	9/2012	Elrod	.....	D10/57
D677,298	S *	3/2013	Hallgren	.....	D16/206
D710,424	S *	8/2014	Hallgren	.....	D16/206
D723,605	S *	3/2015	Palm	.....	D16/206
D729,247	S *	5/2015	Hackett	.....	D14/426
D757,838	S *	5/2016	Laho	.....	D16/206
D780,825	S *	3/2017	Kim	.....	D10/103
D805,571	S *	12/2017	Hogstedt	.....	D16/206
D805,572	S *	12/2017	Hogstedt	.....	D16/206
D828,862	S *	9/2018	Fang	.....	D16/130
10,079,983	B2 *	9/2018	Woolfenden	.....	G02B 13/14
D849,574	S *	5/2019	Sanders	.....	D10/78
D861,692	S *	10/2019	Memke	.....	D14/428
D865,028	S *	10/2019	Hogstedt	.....	D16/206

2004/0129881	A1 *	7/2004	Hamrelius	.....	G01J 5/025 250/330
2009/0190916	A1 *	7/2009	Sharp	.....	G03B 17/02 396/425
2010/0046577	A1 *	2/2010	Sheard	.....	G01J 5/026 374/130
2012/0307039	A1 *	12/2012	Holmes	.....	H04N 5/2251 348/82
2012/0314083	A1 *	12/2012	Ratliff	.....	H04N 5/2251 348/164
2013/0083199	A1 *	4/2013	Choi	.....	H04N 5/332 348/164
2014/0002668	A1 *	1/2014	Nguyen	.....	G01J 5/0205 348/164
2014/0028854	A1 *	1/2014	Heinke	.....	H04N 5/33 348/164
2014/0160299	A1 *	6/2014	Mumaw	.....	H04N 5/3651 348/164
2017/0285444	A1 *	10/2017	Dunne	.....	G01S 17/023

FOREIGN PATENT DOCUMENTS

CN	304406507	* 12/2017
CN	304671202	* 6/2018

OTHER PUBLICATIONS

Hikvision Handheld Thermography DS-2TP31 performance demo, published Nov. 1, 2019 [online], [retrieved Jan. 5, 2020], Available from Internet, URL: <https://www.youtube.com/watch?v=tcUIFxJmkiY>.\*

\* cited by examiner



FIG. 1

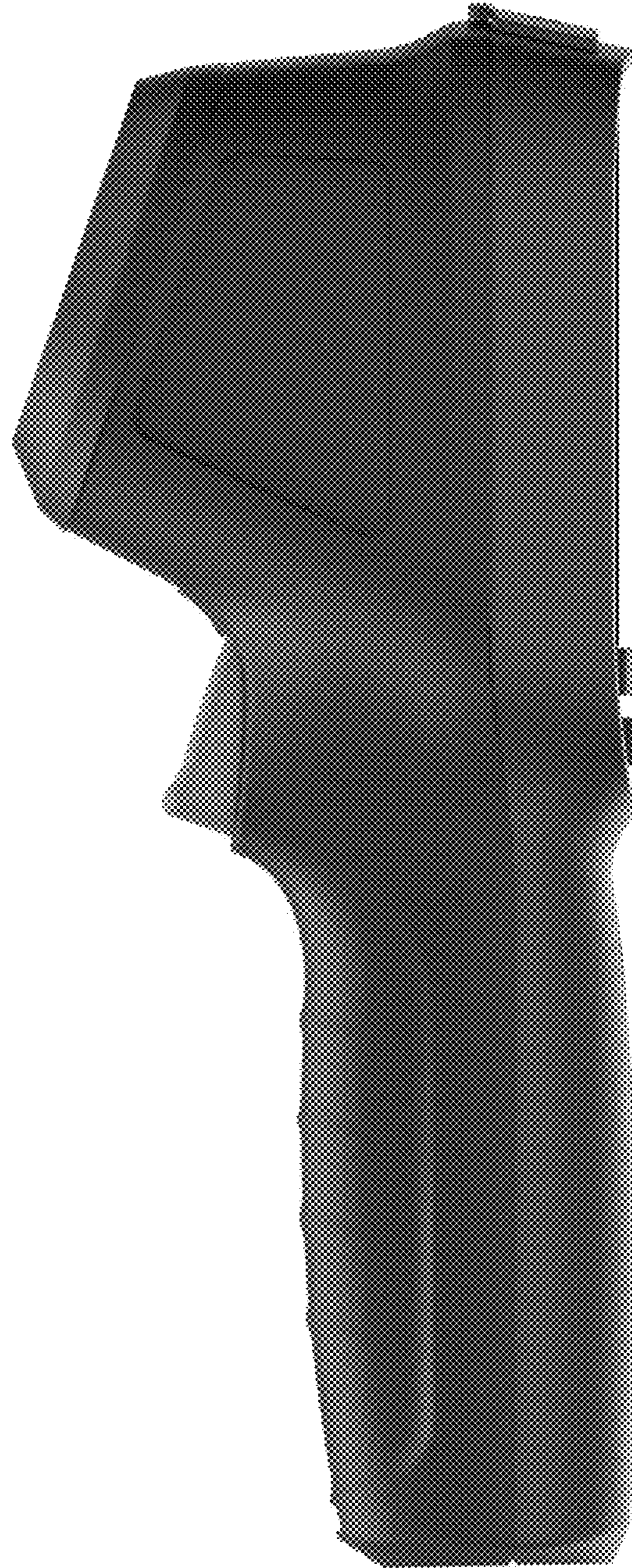


FIG. 2

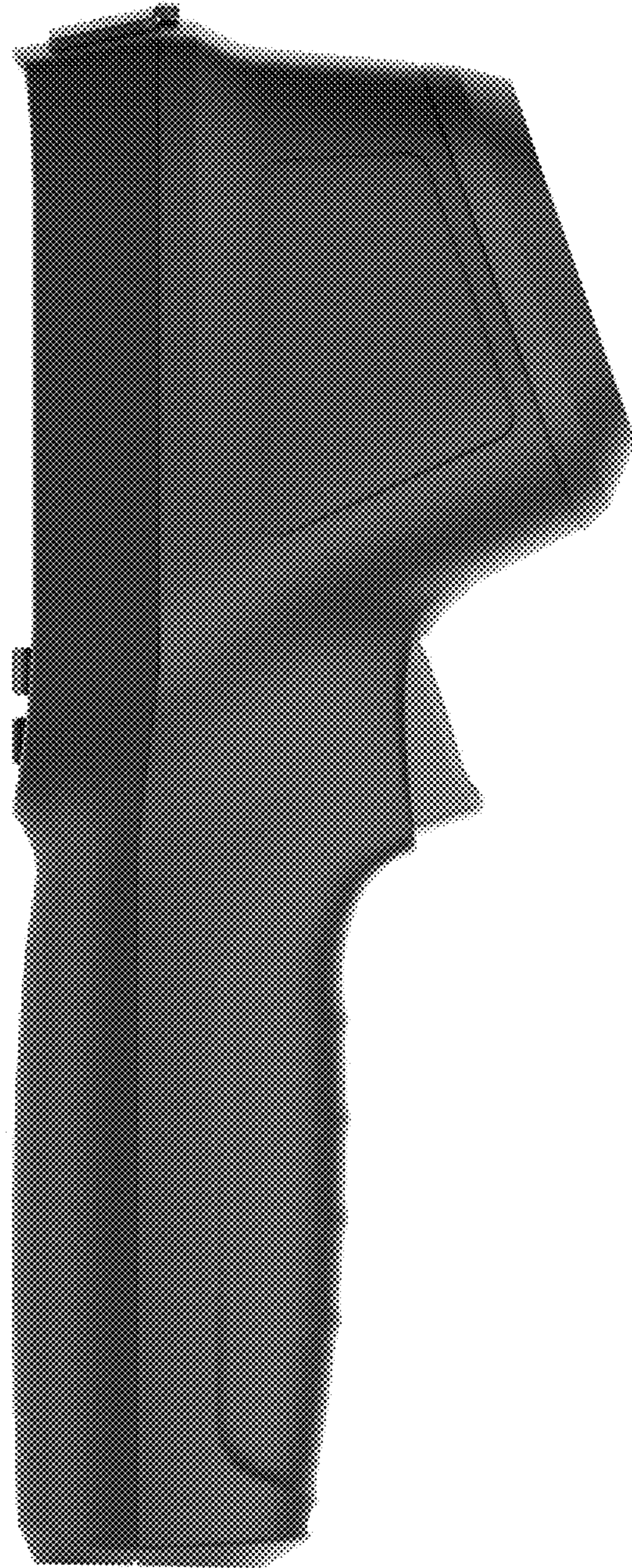


FIG. 3



FIG. 4



FIG. 5



FIG. 6



FIG. 7