

FIG.1

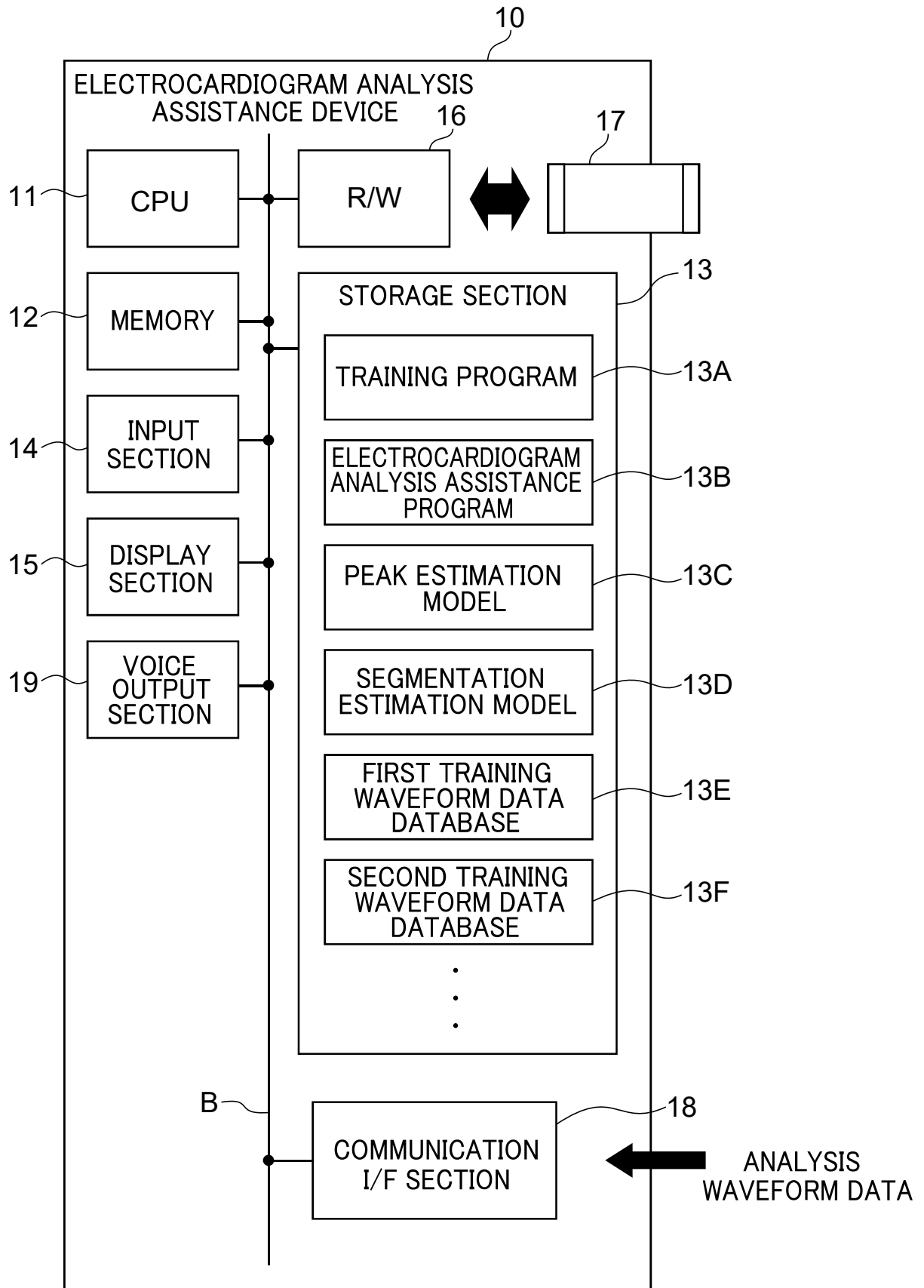


FIG.2

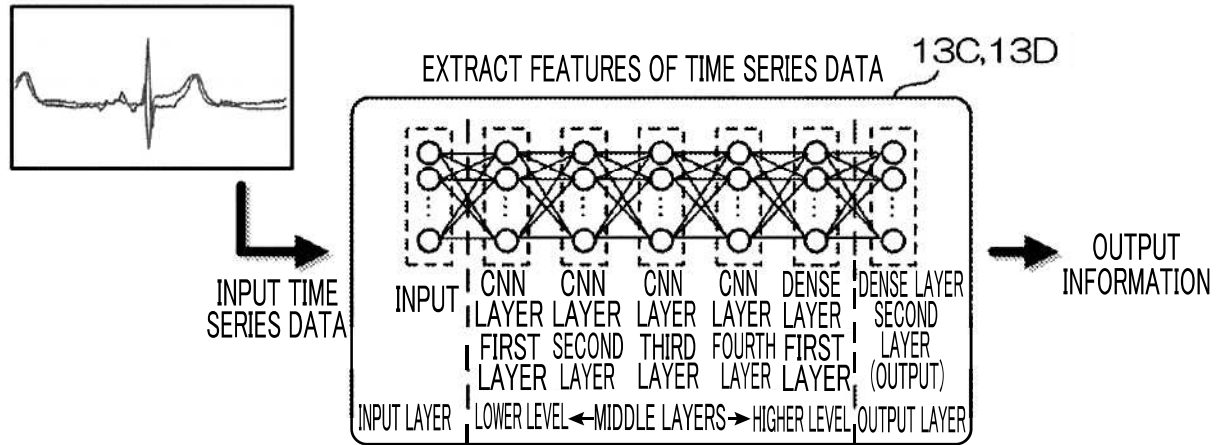


FIG.3

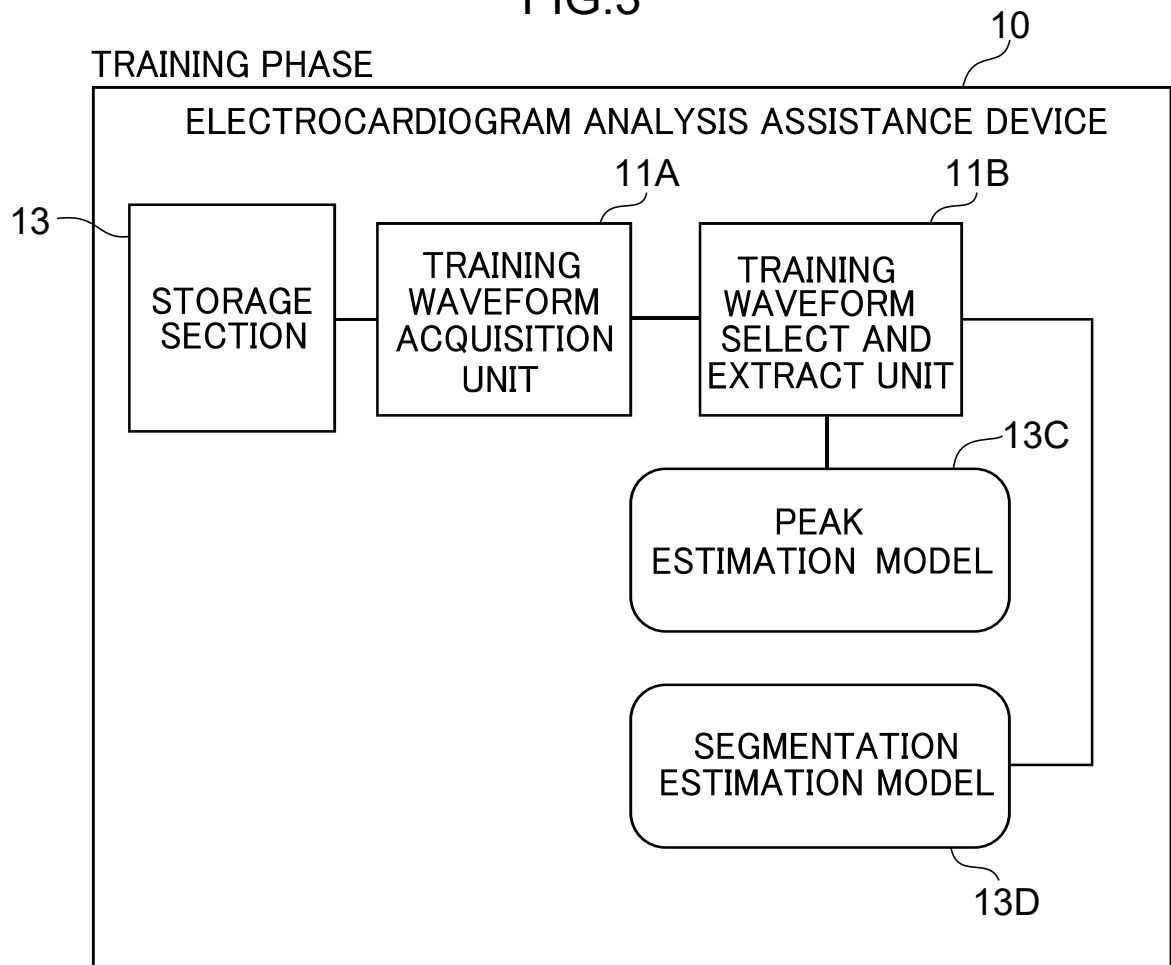


FIG.4

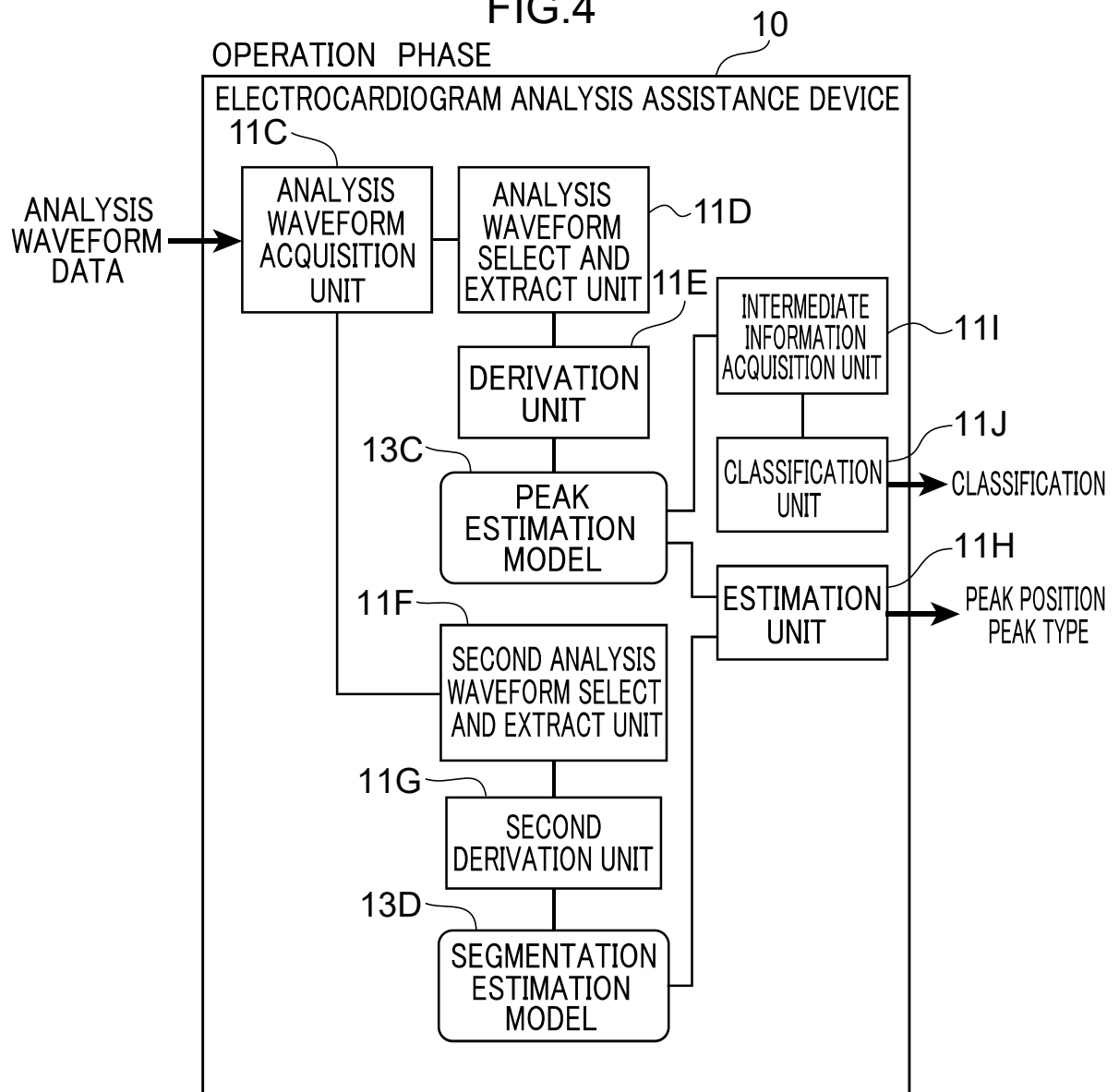
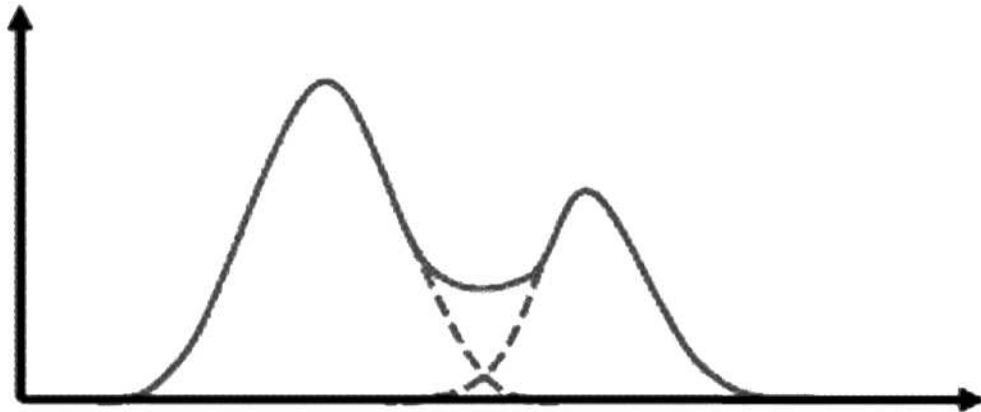


FIG.5

CLUSTERING USING GMM



TECHNIQUE FOR APPROXIMATING FREELY SELECTED CONTINUOUS
FUNCTION BY ADDING TOGETHER PLURAL GAUSSIAN DISTRIBUTIONS.
NUMBER OF GAUSSIAN DISTRIBUTIONS = NUMBER OF CLASSIFICATIONS

FIG.6

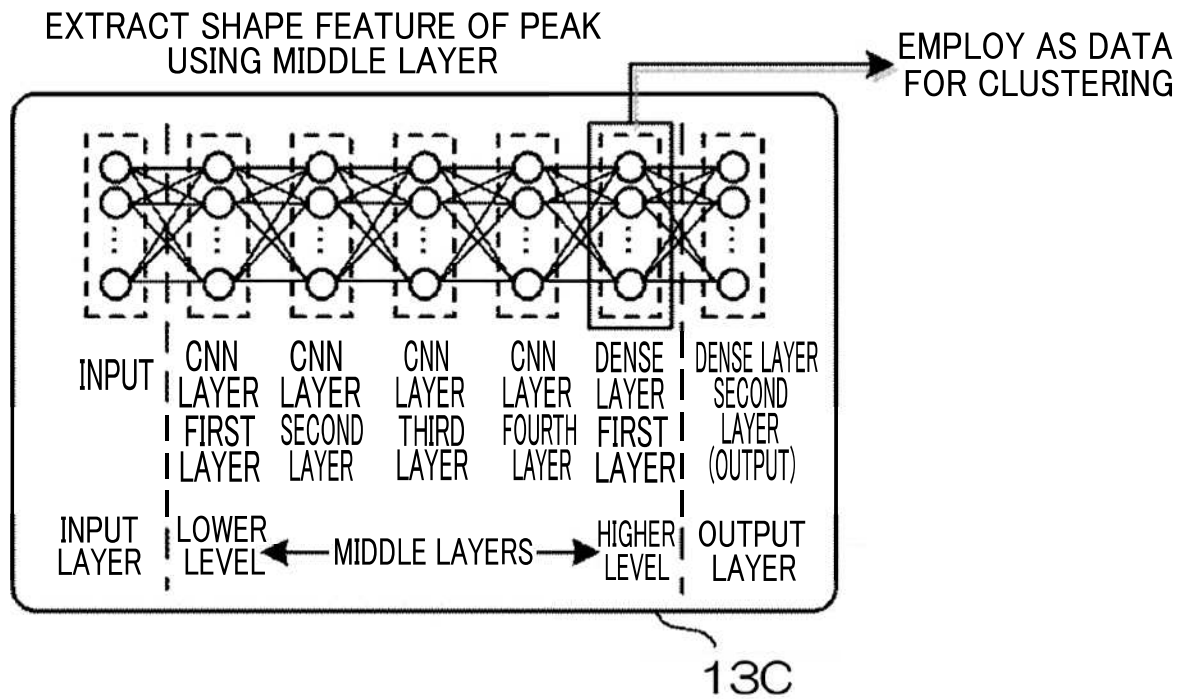


FIG.7

FIRST TRAINING WAVEFORM DATA DATABASE

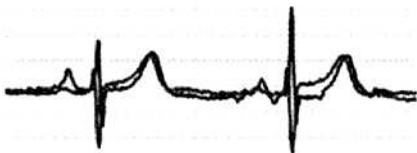
WAVEFORM ID	WAVEFORM DATA	PEAK INFORMATION
W1001		N or S
W1002		FALSE
• • •	• • •	• • •

FIG.8

SECOND TRAINING WAVEFORM DATA DATABASE

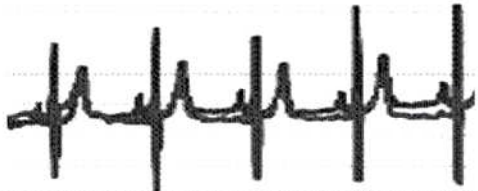
WAVEFORM ID	WAVEFORM DATA	SEGMENT TYPE INFORMATION
W2001		NORMAL SEGMENT
W2002		ATRIAL FIBRILLATION
• • •	• • •	• • •

FIG.9

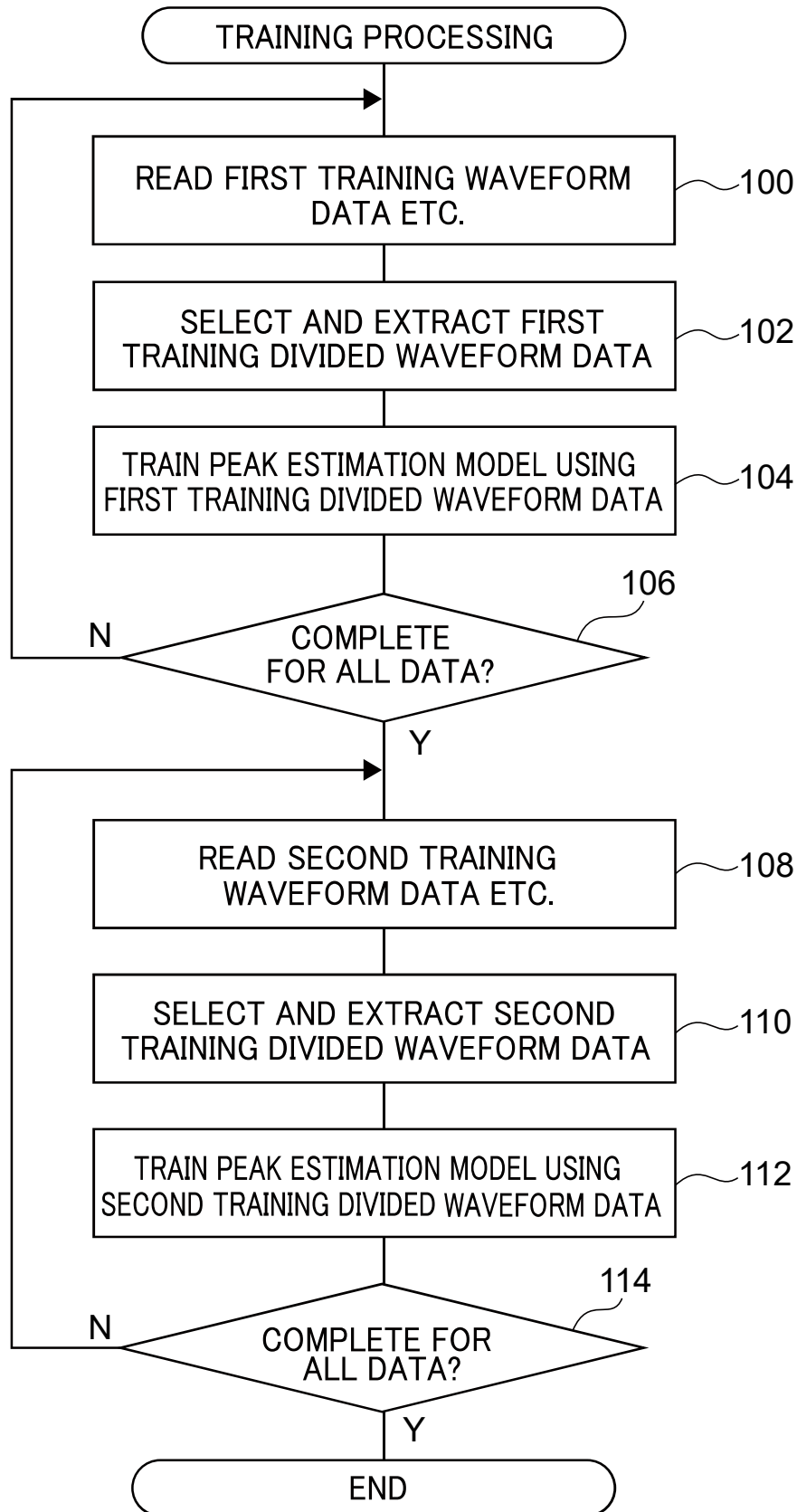


FIG.10

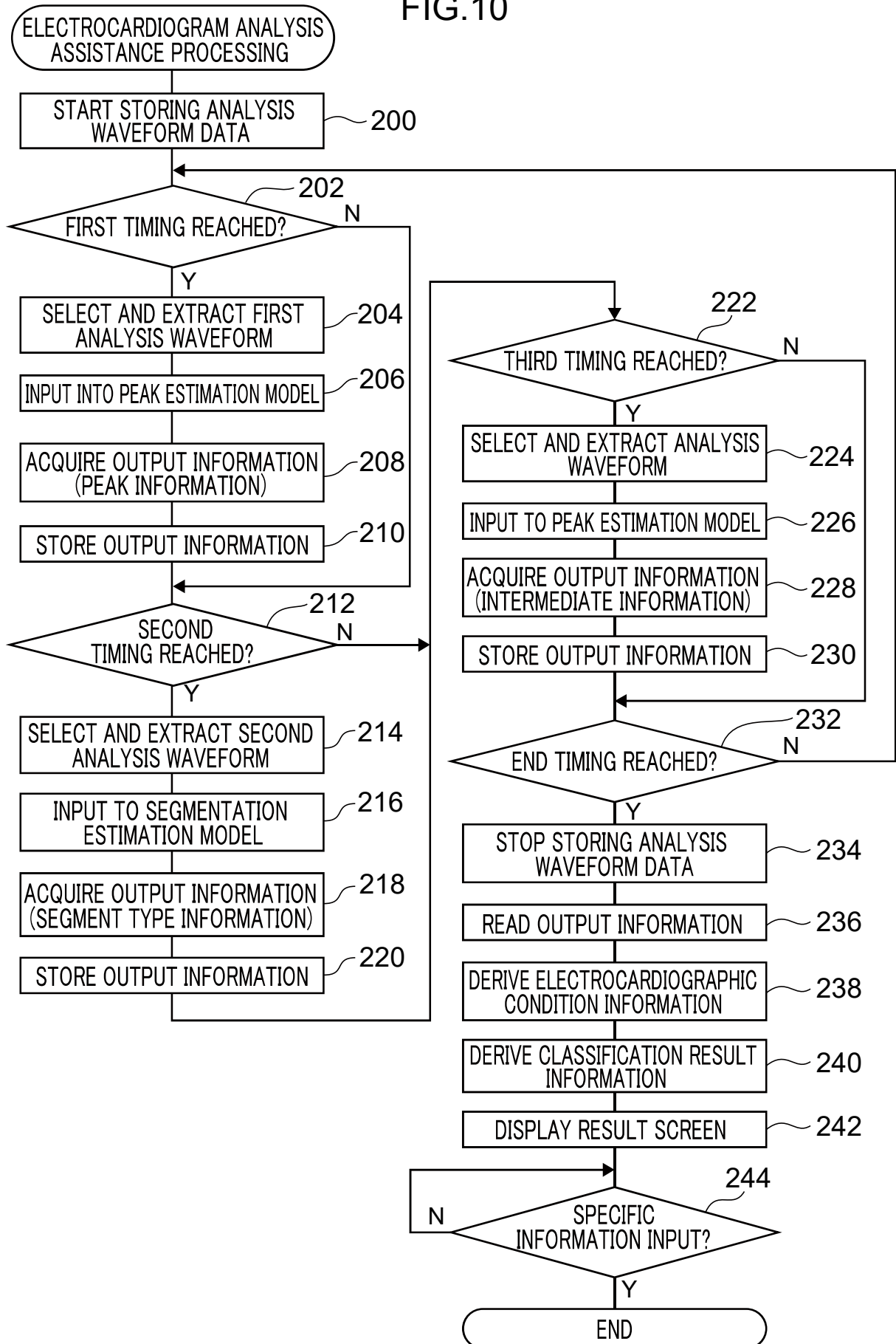


FIG.11

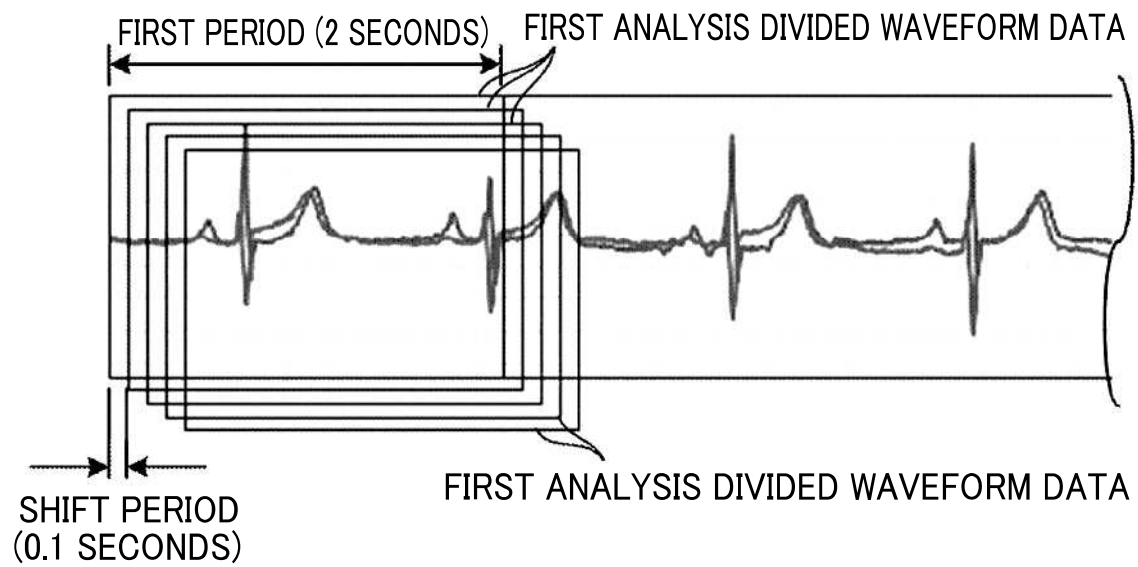


FIG.12

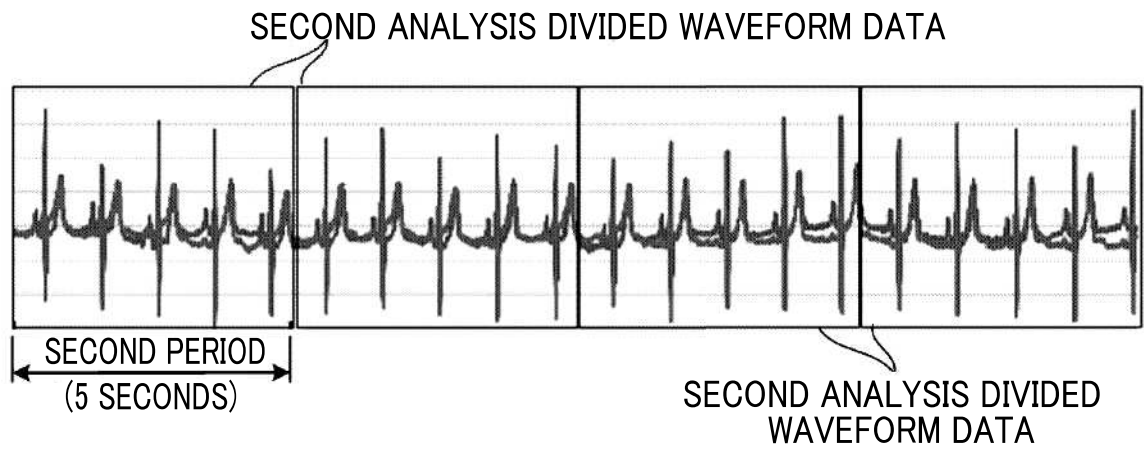


FIG.13

OUTPUT OF PEAK ESTIMATION MODEL

0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8
F	F	F	N	N	F	F	F	F	F	N	N	N	F	F	F	F	F	F	F	F	V	V	F	F	F	F	N	V	F	F	F	n	n	F	F	F	F	F	F	N	N	F	F	-	-			

CONTRACTION

0.35	1.2	2.15	2.75	3.45	4.2	5.1	6.05	6.9	7.65	8.35	9.05	9.65	10.2	11.1	11.95	12.65	13.6	14.45	15.25	16.1	16.9	17.6	18.45	19.25	...	...	...	...	...	...	...
N	N	V	V	n	N	V	N	n	N	N	N	N	n	n	V	n	N	N	N	V	N	V	n	n	...	...	...	...	...	...	...

FIG.14

OUTPUT OF SEGMENTATION ESTIMATION MODEL

0~5	5~10	10~15	15~20	-
N	N	n	N/A	-

FIG.15

OUTPUT OF PEAK ESTIMATION MODEL (CONTRACTED)

0.35	1.2	2.15	2.75	3.45	4.2	5.1	6.05	6.9	7.65	8.35	9.05	9.65	10.2	11.1	11.95	12.65	13.6	14.45	15.25	16.1	16.9	17.6	18.45	19.25	...	...
N	N	V	V	N	N	V	N	N	N	N	N	N	N	N	V	N	N	N	N	N	V	N	V	N	...	...

OUTPUT OF SEGMENTATION ESTIMATION MODEL

0~5	5~10	10~15	15~20	-
N	N	n	N/A	-

↓ SYNthesize
TOGETHER

ELECTROCARDIOGRAPHIC CONDITION INFORMATION

0.35	1.2	2.15	2.75	3.45	4.2	5.1	6.05	6.9	7.65	8.35	9.05	9.65	10.2	11.1	11.95	12.65	13.6	14.45	15.25	16.1	16.9	17.6	18.45	19.25
N	N	V	V	N	N	V	N	N	N	N	N	N	N	N	V	N	N	N	N/A	N/A	N/A	N/A	N/A	N/A

FIG.16

ELECTROCARDIOGRAPHIC CONDITION INFORMATION

0.35	1.2	2.15	2.75	3.45	4.2	5.1	6.05	6.9	7.65	8.35	9.05	9.65	10.2	11.1	11.95	12.65	13.6	14.45	15.25	16.1	16.9	17.6	18.45	19.25
N	N	V	V	N	N	V	N	N	N	N	N	N	N	n	V	n	n	n	n	N/A	N/A	N/A	N/A	N/A

FRACTIONAL
SHORTENING RULE

ELECTROCARDIOGRAPHIC CONDITION INFORMATION
(FINAL RESULT)

0.35	1.2	2.15	2.75	3.45	4.2	5.1	6.05	6.9	7.65	8.35	9.05	9.65	10.2	11.1	11.95	12.65	13.6	14.45	15.25	16.1	16.9	17.6	18.45	19.25
N	N	V	V	N	N	V	N	N	N	S	S	S	n	n	V	n	n	n	n	N/A	N/A	N/A	N/A	N/A

FIG.17

RESULT SCREEN

ANALYSIS RESULT AND CLASSIFICATION RESULTS ARE AS FOLLOWS:

ANALYSIS RESULT

0.35	1.2	2.15	2.75	3.45	4.2	5.1	6.05	6.9	7.65	...
N	N	V	V	N	N	V	N	N	N	

CLASSIFICATION RESULT

STANDARD WAVEFORM: 40
PEAKED T WAVE WAVEFORM: 14
WIDE QRS WAVE WAVEFORM: 4
OTHER: 2

END

FIG.18

