

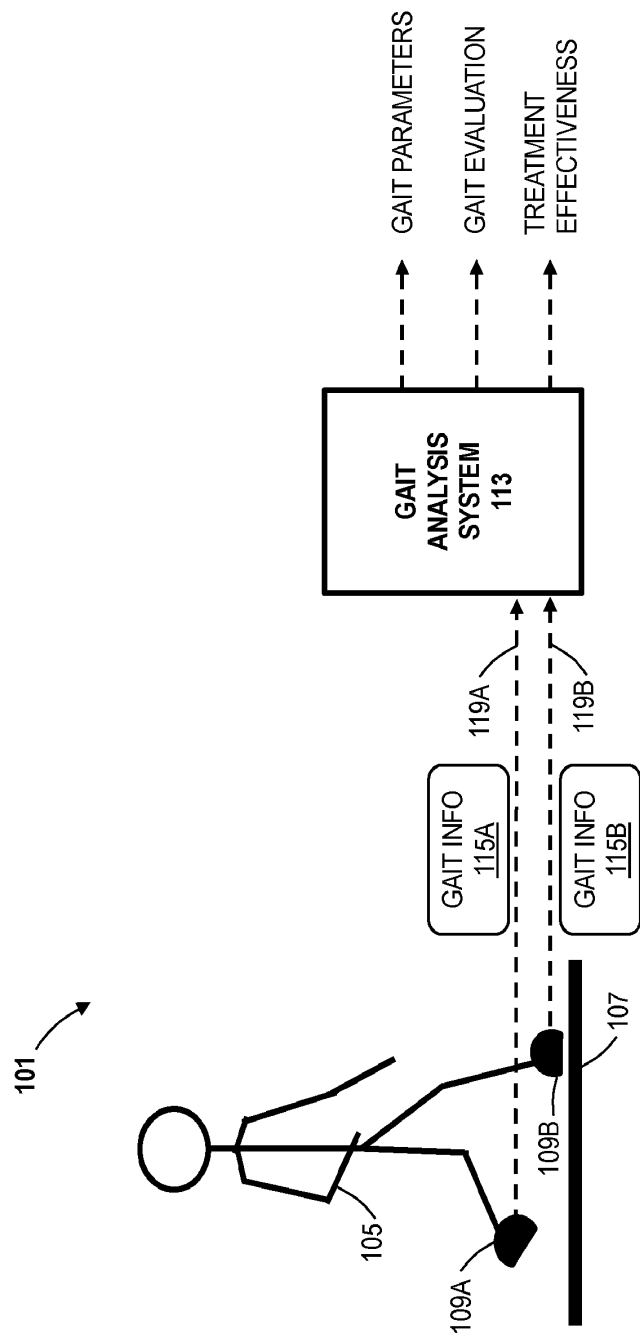
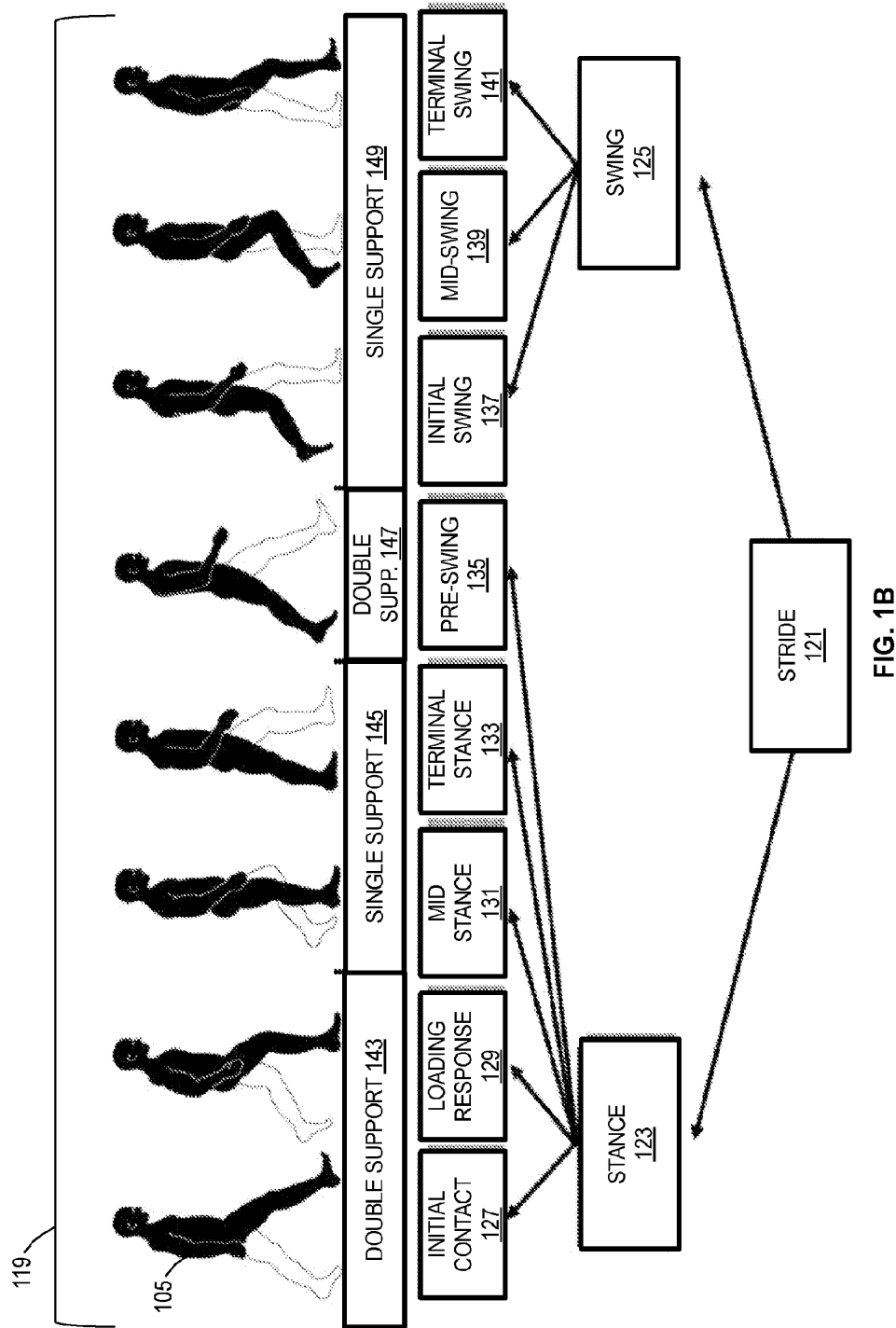


FIG. 1A



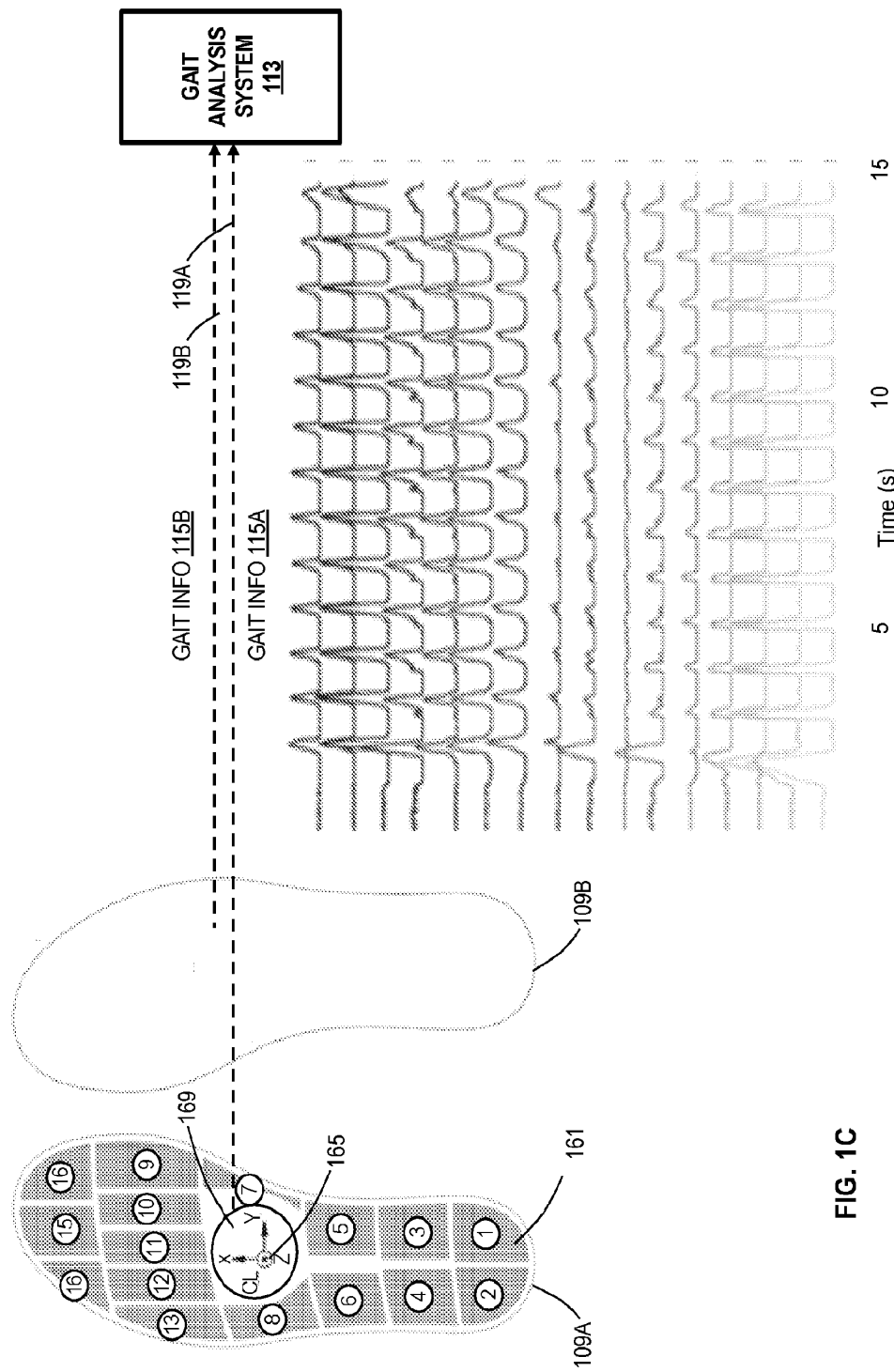


FIG. 1C

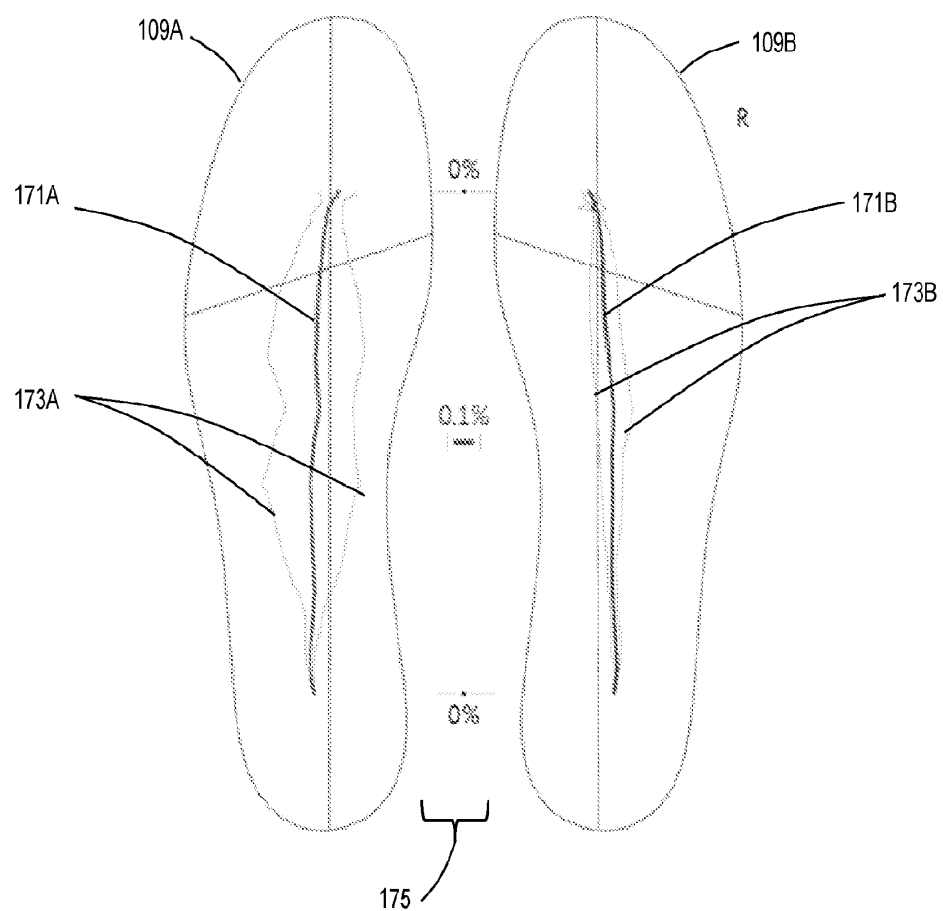


FIG. 1D

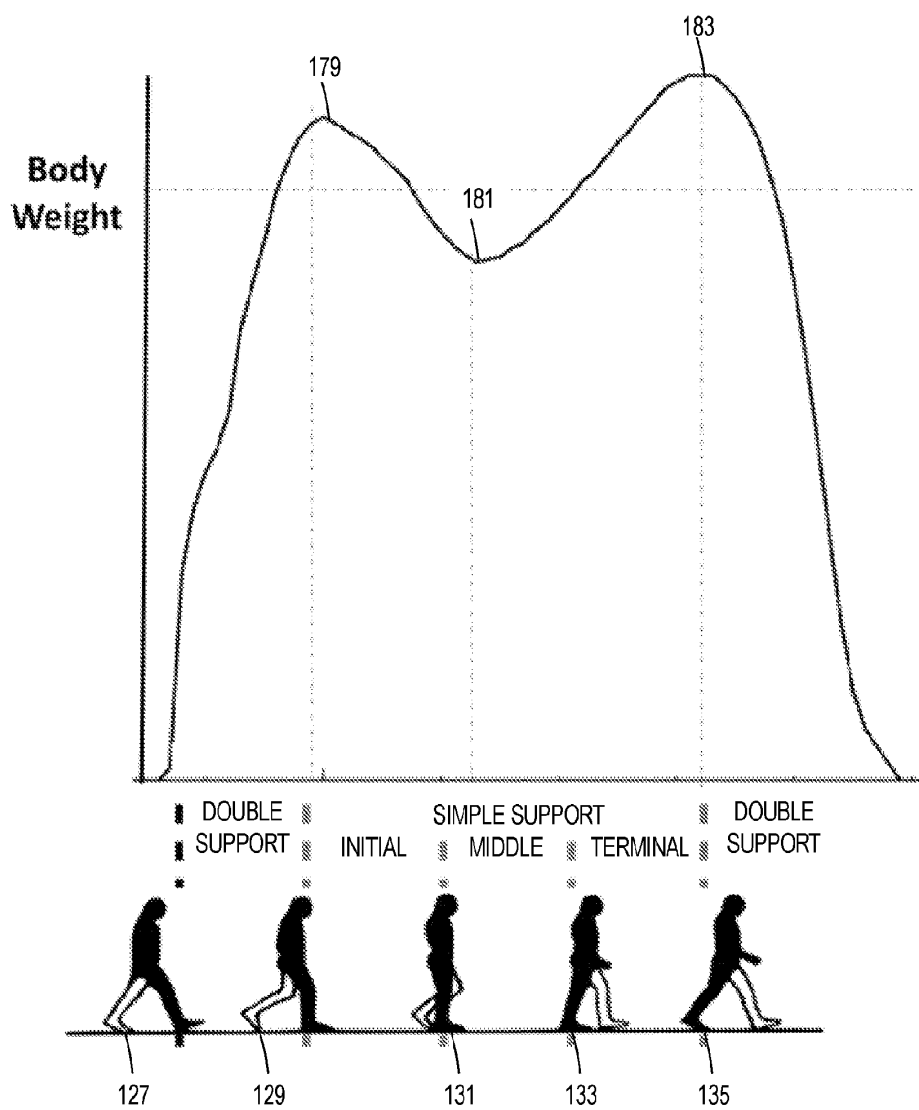


FIG. 1E

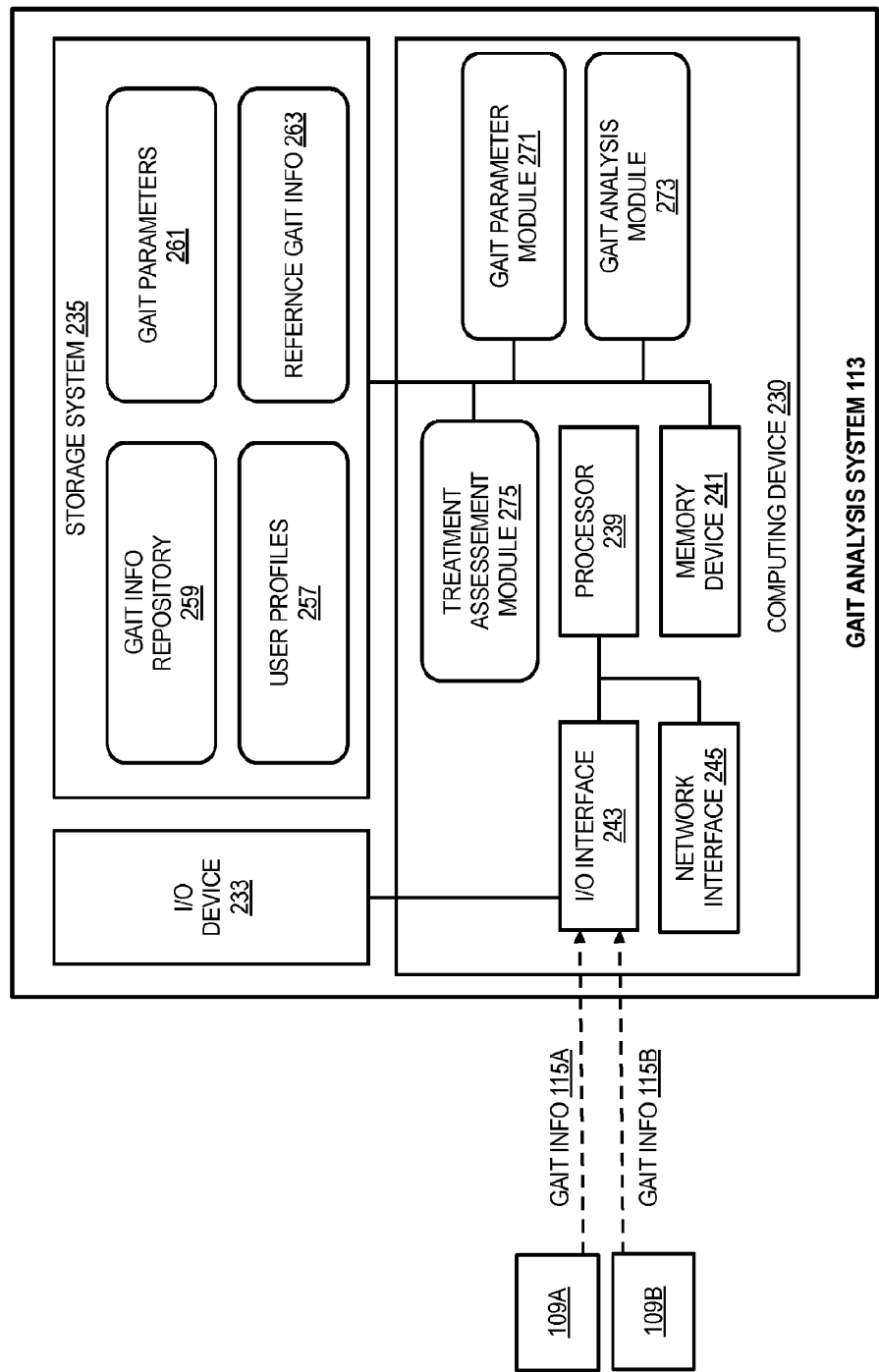


FIG. 2

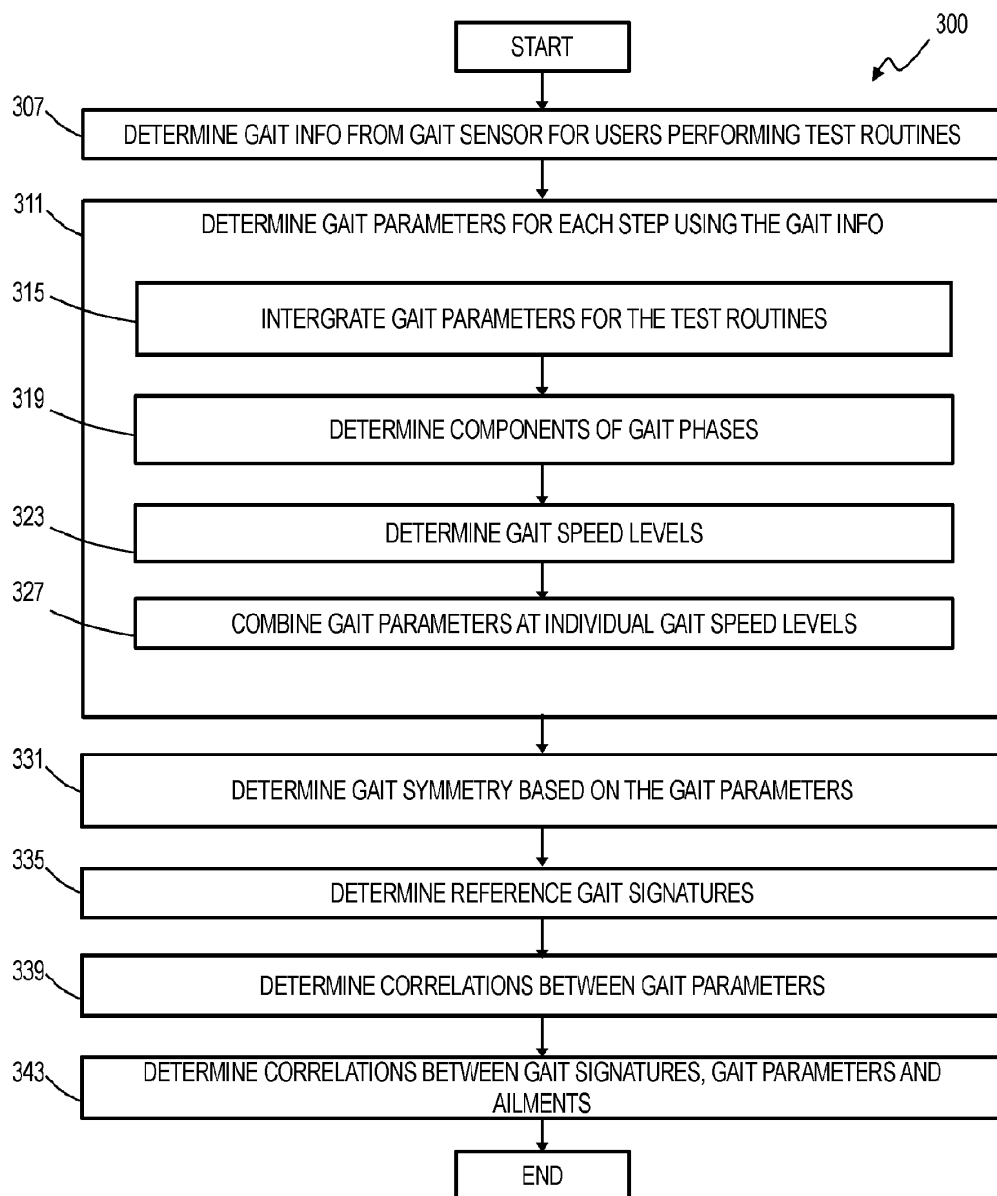


FIG. 3

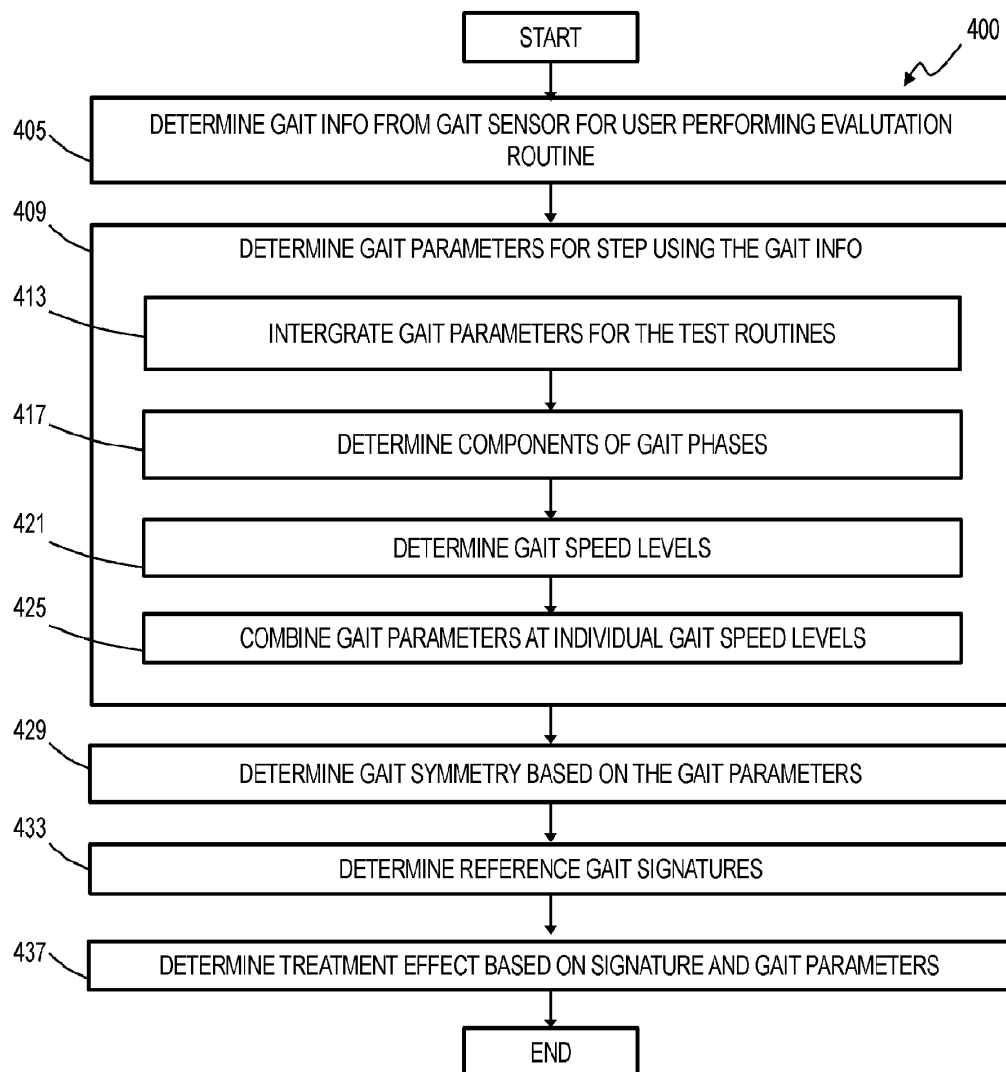


FIG. 4

Center of Pressure (COP)		
Mean gait line length (left)	mm	Length of the average gait line (left foot)
Mean gait line length (right)	mm	Length of the average gait line (right foot)
Mean gait line width (left)	mm	Width of the average gait line (left foot)
Mean gait line width (right)	mm	Width of the average gait line (right foot)
Mean COP (AP/ML) in x direction (left)	mm	Mean of center of pressure in x direction (left foot)
Mean COP (AP/ML) in y direction (left)	mm	Mean of center of pressure in y direction (left foot)
Mean COP (AP/ML) in x direction (right)	mm	Mean of center of pressure in x direction (right foot)
Mean COP (AP/ML) in y direction (right)	mm	Mean of center of pressure in y direction (right foot)
SD COP (AP/ML) in x direction (left)	mm	Standard deviation of center of pressure in x direction (left foot)
SD COP (AP/ML) in y direction (left)	mm	Standard deviation of center of pressure in y direction (left foot)
SD COP (AP/ML) in x direction (right)	mm	Standard deviation of center of pressure in x direction (right foot)
SD COP (AP/ML) in y direction (right)	mm	Standard deviation of center of pressure in y direction (right foot)
Length of Bounding box of COP (AP/ML)(left)	mm	Length of the box just containing all COP points (left foot)
Width of Bounding box of COP (AP/ML)(left)	mm	Width of the box just containing all COP points (left foot)
Length of Bounding box of COP (AP/ML)(right)	mm	Length of the box just containing all COP points (right foot)
Width of Bounding box of COP (AP/ML)(right)	mm	Width of the box just containing all COP points (right foot)
Mean COP velocity (left)	mm/s	Mean velocity of the COP travelling across the sensor insole surface (left foot)
Mean COP velocity (right)	mm/s	Mean velocity of the COP travelling across the sensor insole surface (right foot)
COP trace length (left)	mm	Overall travel of the COP across the sensor insole surface (left foot)
COP trace length (right)	mm	Overall travel of the COP across the sensor insole surface (right foot)

FIG. 5A

Ground Reaction Force (GRF)		
Mean total force during stance phase (left)	N	Mean force of all steps (left foot)
Mean total force during stance phase (right)	N	Mean force of all steps (right foot)
Maximum total force during stance phase (left)	N	Maximum force of all steps (left foot)
Maximum total force during stance phase (right)	N	Maximum force of all steps (right foot)
Mean of all maxima of total force during all stance phase (left)	N	Averages of maximum total force of all steps (left foot)
Mean of all maxima of total force during all stance phase (right)	N	Averages of maximum total force of all steps (right foot)
Temporal parameters		
Mean gait cycle time	s	Time from the one heel strike to the next heel strike of the same foot, averaged over all steps
Mean gait cadence	Strides/min	Number of strides per minute
Mean double support time	s	Mean double support time, relative to the mean gait cycle time
Mean fraction of double support	%	Mean double support time, relative to the mean gait cycle time
Mean double support time (left)	s	Side-specific double support time(left), with the left mean double support time considering the time starting from the right foot's heel strike to the left foot's toe off (and vice versa)
Mean double support time (right)	s	Side-specific double support time(right), with the right mean double support time considering the time starting from the left foot's heel strike to the right foot's toe off (and vice versa)
Mean step duration (left)	s	Average time between consecutive heel strike of the left foot
Mean step duration (right)	s	Average time between consecutive heel strike of the right foot
Mean stance duration (left)	s	Time from heel strike to toe off (of left foot side), averaged over all steps
Mean stance duration (right)	s	Time from heel strike to toe off (of right foot side), averaged over all steps

FIG. 5B

Temporal parameters		
SD stance duration (left)	s	Standard deviation of duration of stance phase (left foot)
SD stance duration (right)	s	Standard deviation of duration of stance phase (right foot)
Mean swing duration (left)	s	Time from toe off to heel strike (of left foot side), averaged over all steps
Mean swing duration (right)	s	Time from toe off to heel strike (of right foot side), averaged over all steps
SD swing duration (left)	s	Standard deviation of duration of swing phase (left foot)
SD swing duration (right)	s	Standard deviation of duration of swing phase (right foot)
Mean fraction of stance phase (left)	%	Mean stance duration, relative to the mean gait cycle time (left foot)
Mean fraction of stance phase (right)	%	Mean stance duration, relative to the mean gait cycle time (right foot)
SD fraction of stance phase (left)	%	Standard deviation of fraction of stance phase (left foot)
SD fraction of stance phase (right)	%	Standard deviation of fraction of stance phase (right foot)
Mean fraction of swing duration (left)	%	Mean swing duration, relative to the mean gait cycle time (left foot)
Mean fraction of swing duration (right)	%	Mean swing duration, relative to the mean gait cycle time (right foot)
SD fraction of swing duration (left)	%	Standard deviation of fraction of swing phase (left foot)
SD fraction of swing duration (right)	%	Standard deviation of fraction of swing phase (right foot)
Force raise (left)	s	Time to first force peak after initial ground contact (left foot)
Force raise (right)	s	Time to first force peak after initial ground contact (right foot)
Takeoff Dynamics (left)	1	Ratio of force value of force minimum in stance phase and 2nd force peak (takeoff) (left foot)
Takeoff Dynamics (right)	1	Ratio of force value of force minimum in stance phase and 2nd force peak (takeoff) (right foot)
Gait direction dynamics (left)	g	Amplitude of foot acceleration in direction of walking (left foot)
Gait direction dynamics (right)	g	Amplitude of foot acceleration in direction of walking (right foot)
Spatial parameters		
Mean stride length	m	The displacement of the same foot in walking direction. This parameter is the mean over all detected steps. The mean is determined from left and right data, separately, and finally averaged over left and right
Foot flexibility (left)	g	Amplitude of foot acceleration in body's vertical direction (left foot)
Foot flexibility (right)	g	Amplitude of foot acceleration in body's vertical direction (right foot)
Walking distance	m	The walking distance traveled over the entire measurement
Mean walking speed	m/s	The mean stride length divided by the mean gait cycle time.

FIG. 5C

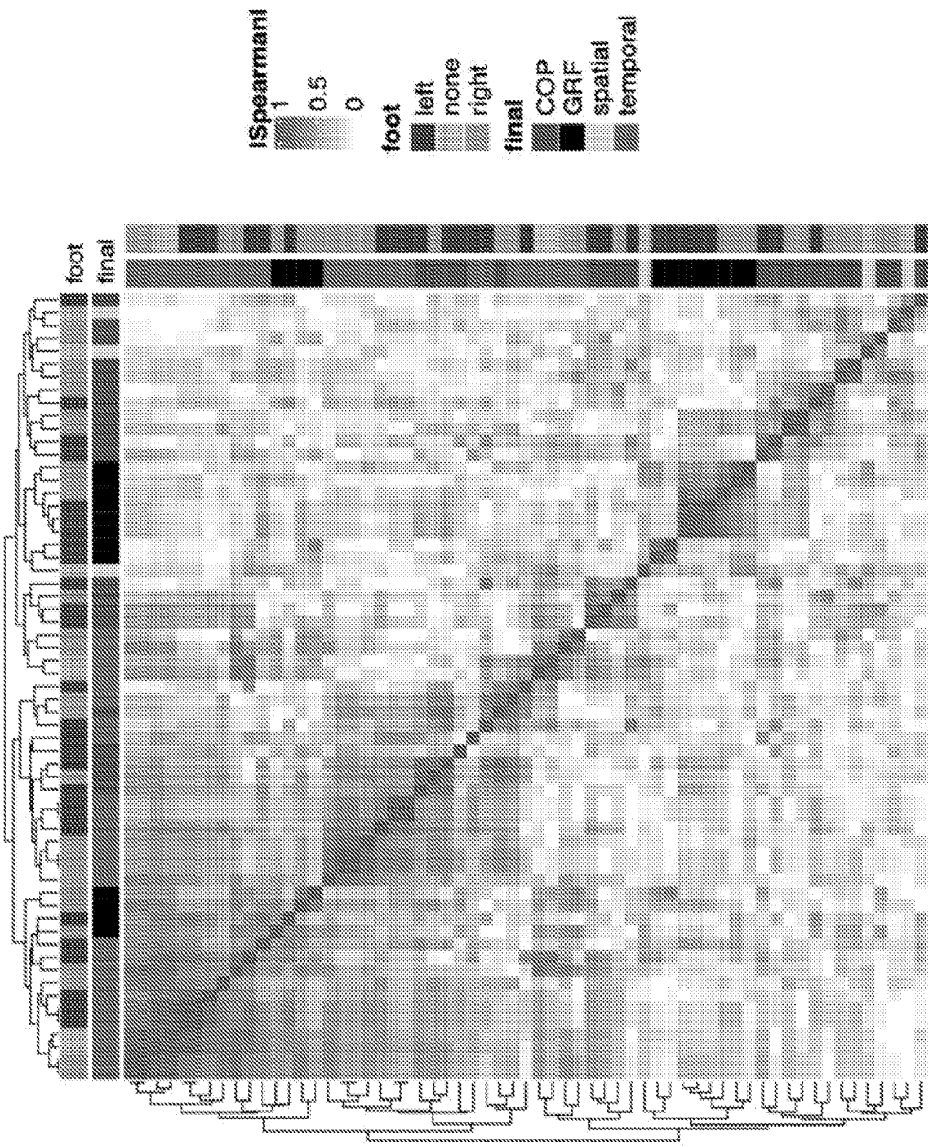


FIG. 6A

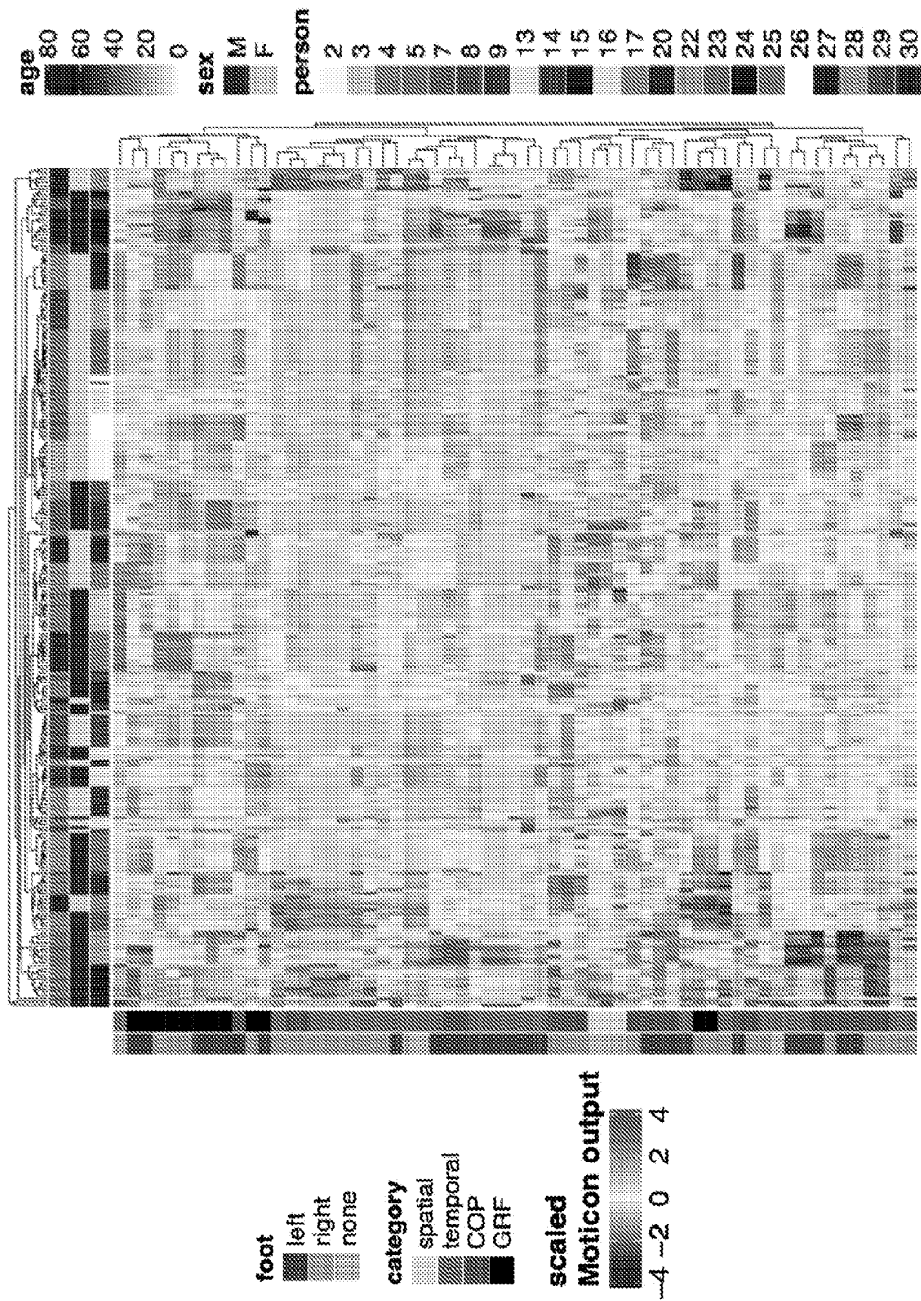


FIG. 6B

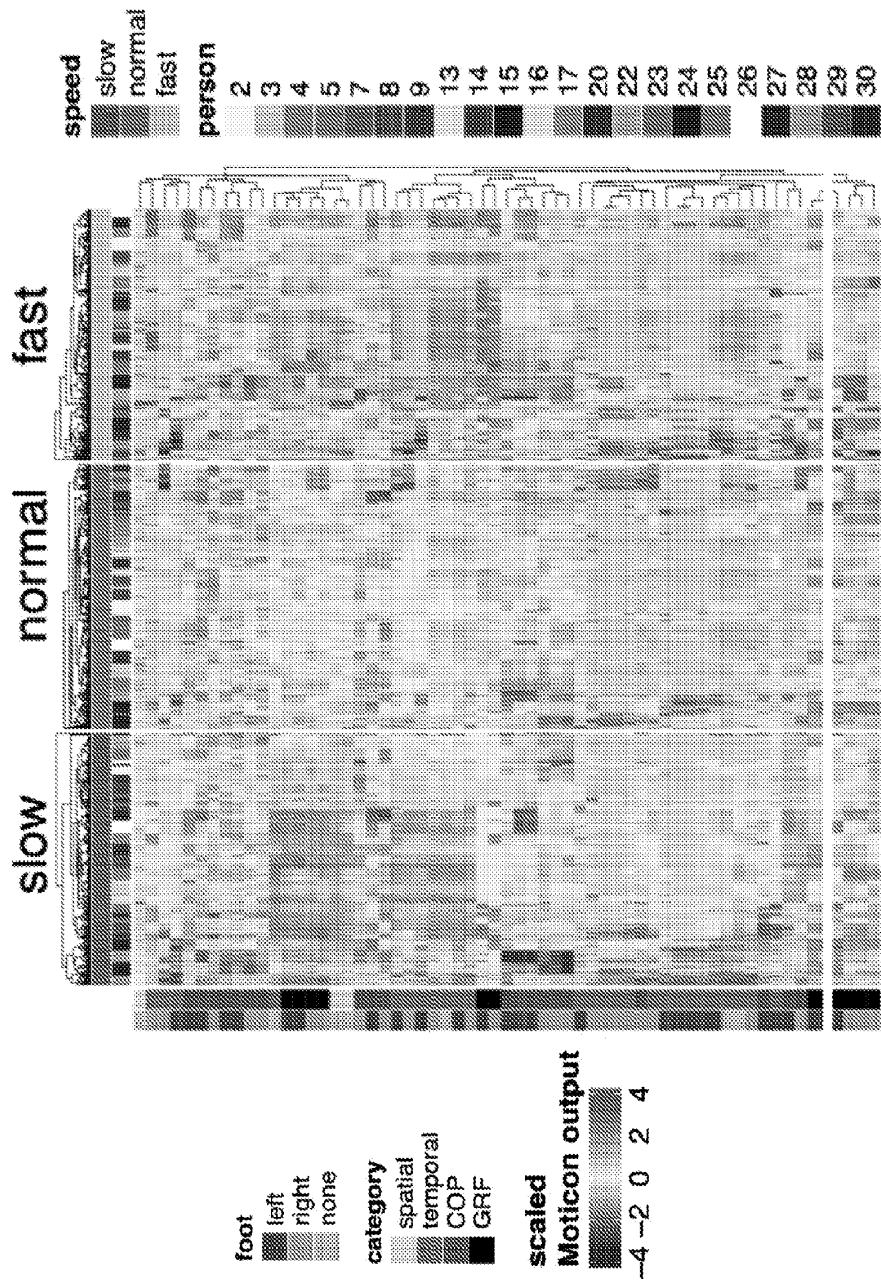


FIG. 6C