

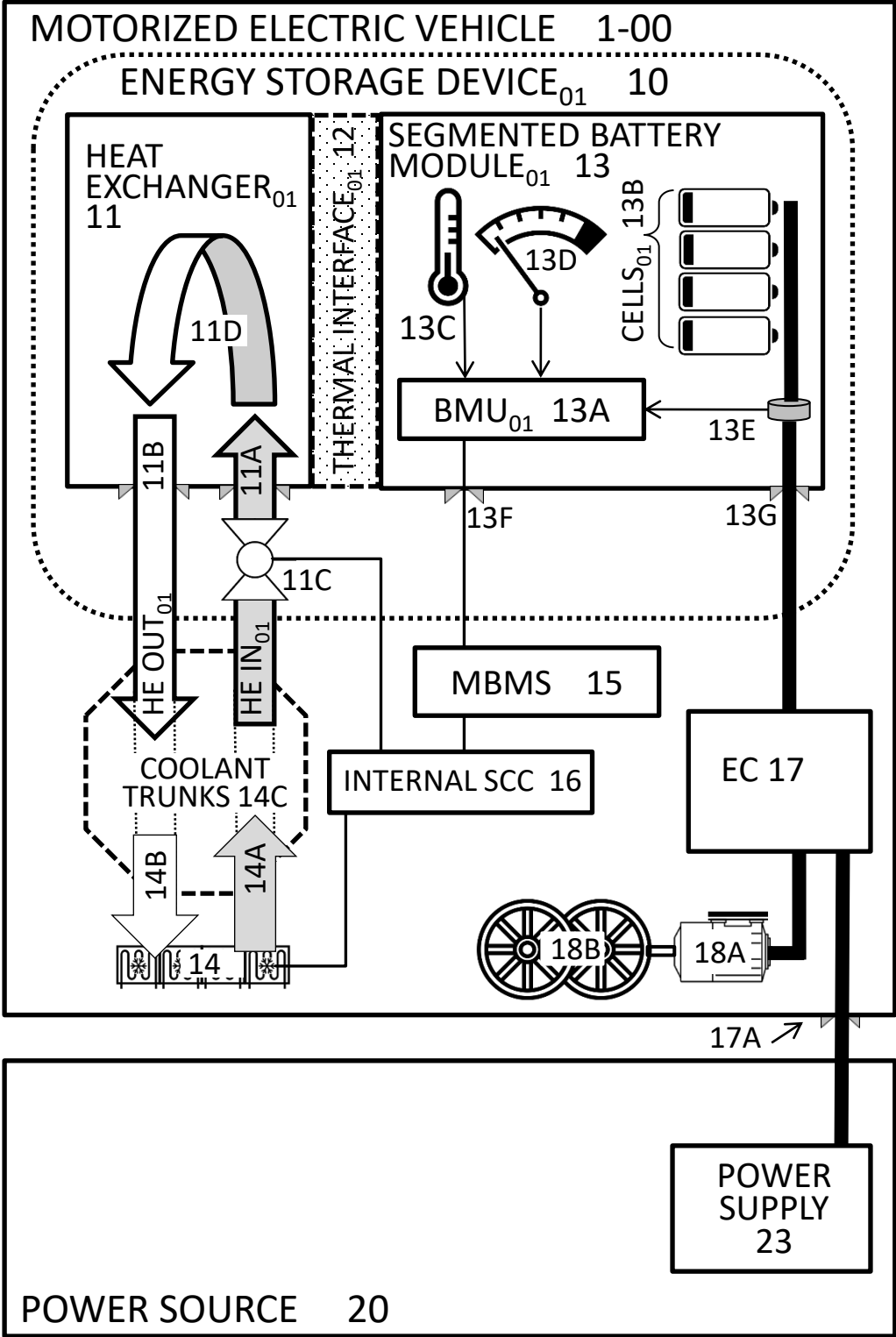


FIG. 1

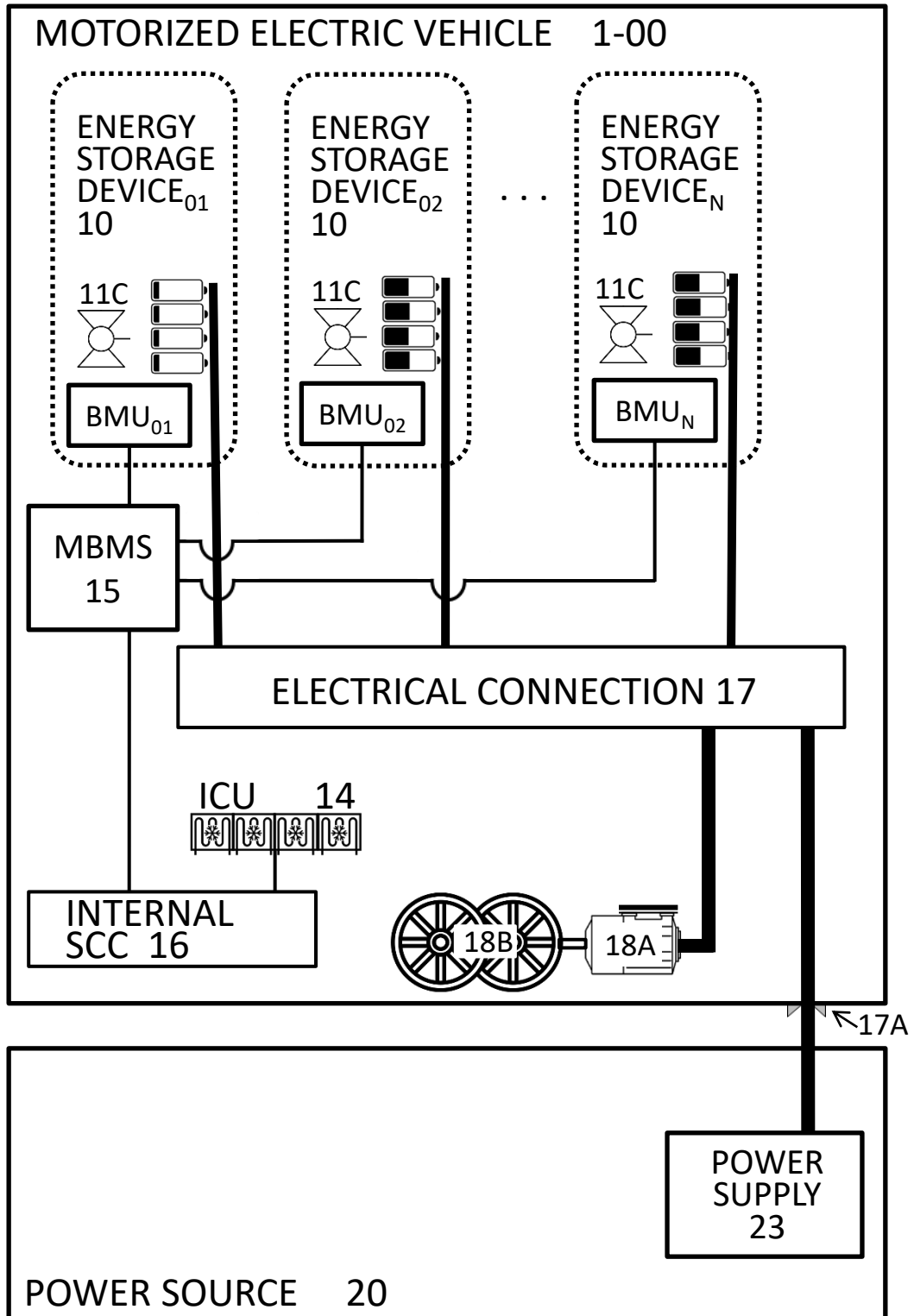


FIG. 2

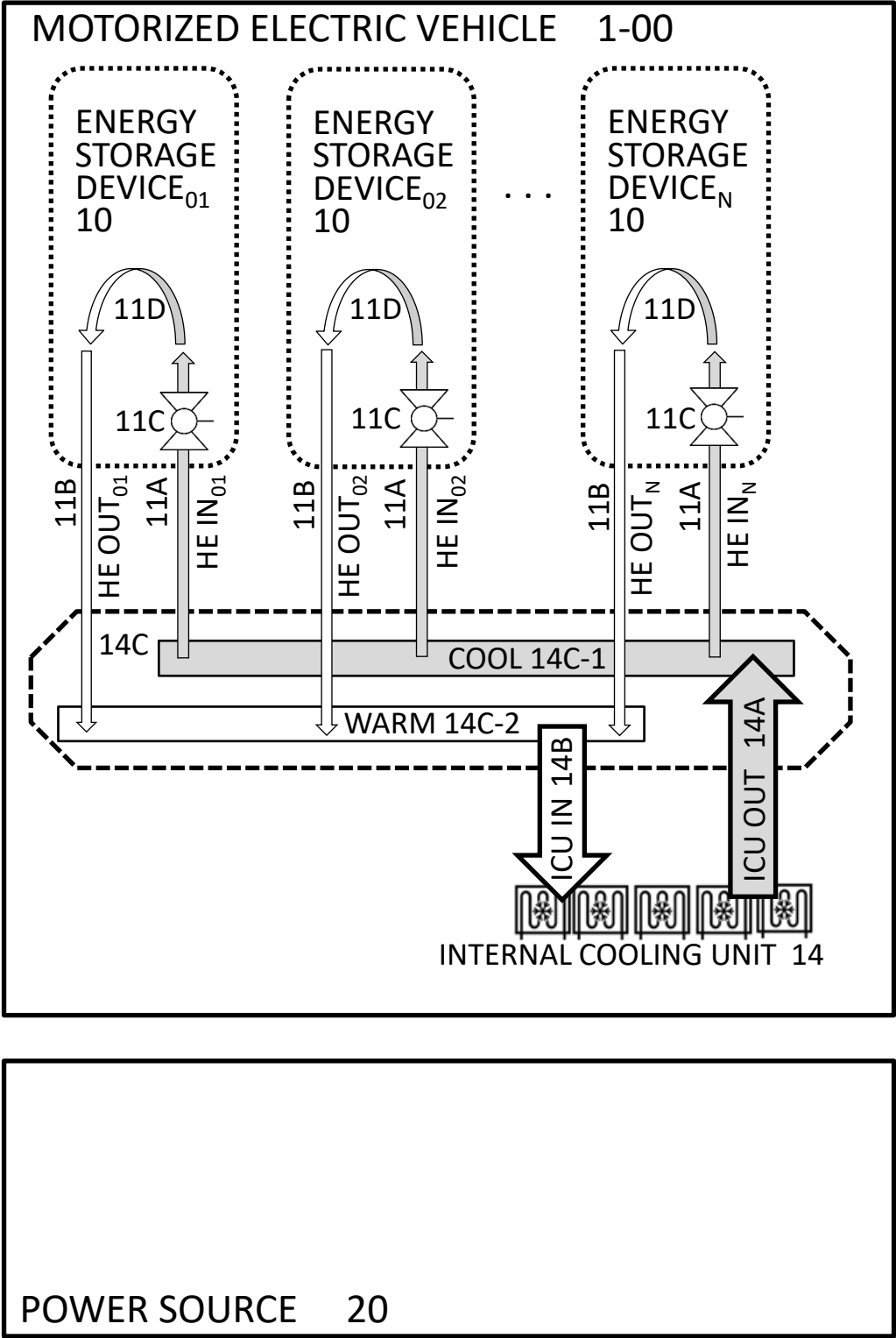


FIG. 3

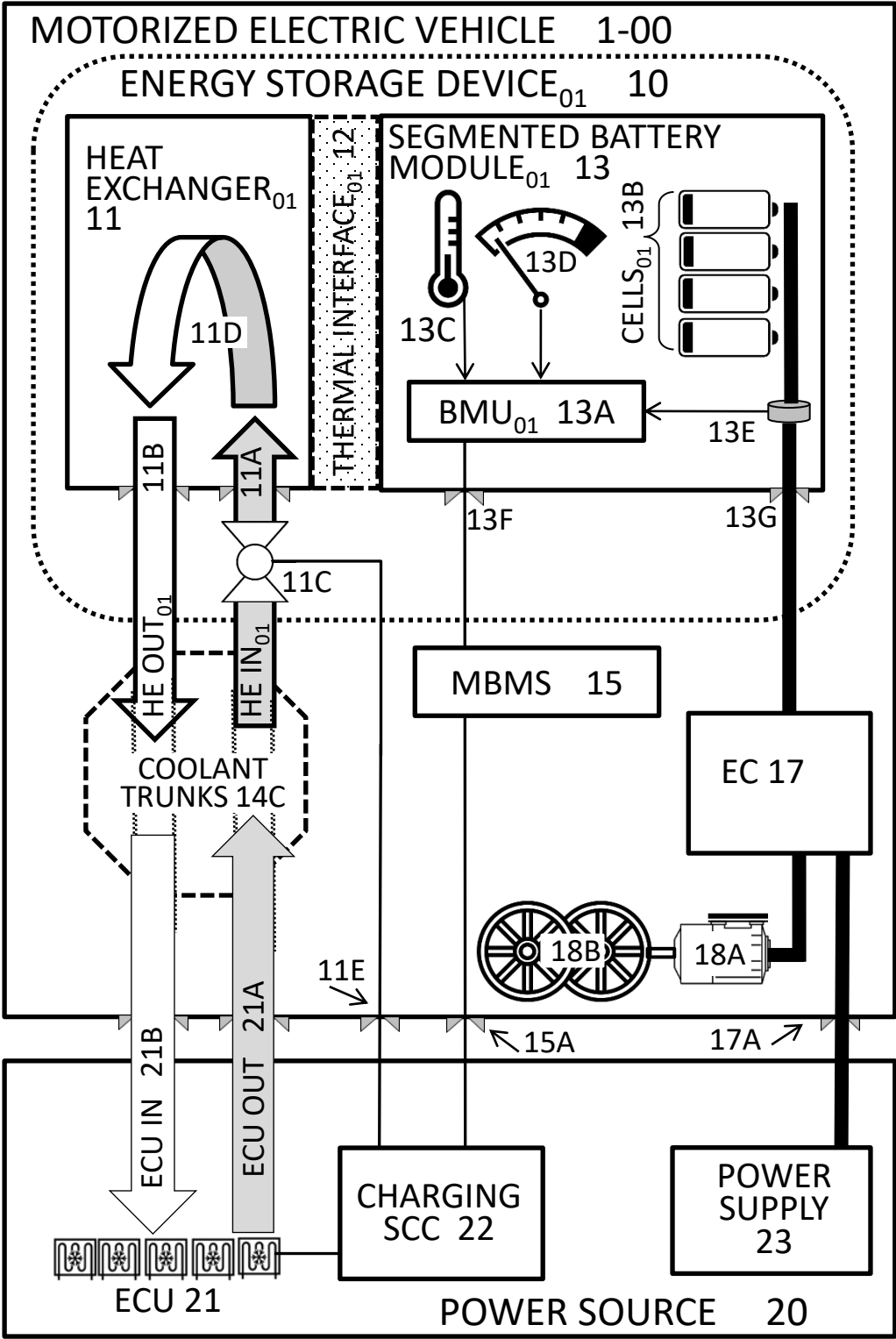


FIG. 4

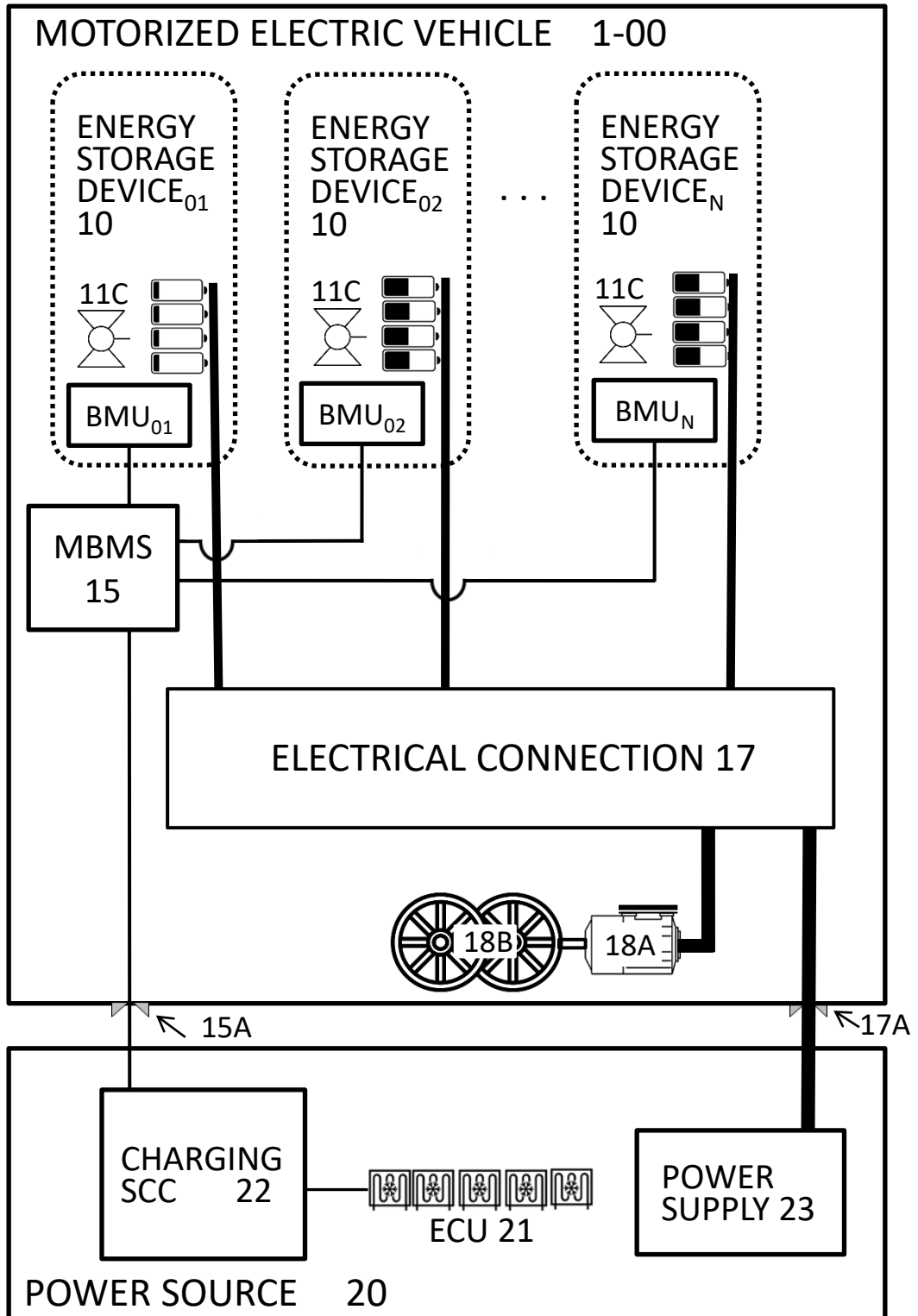


FIG. 5

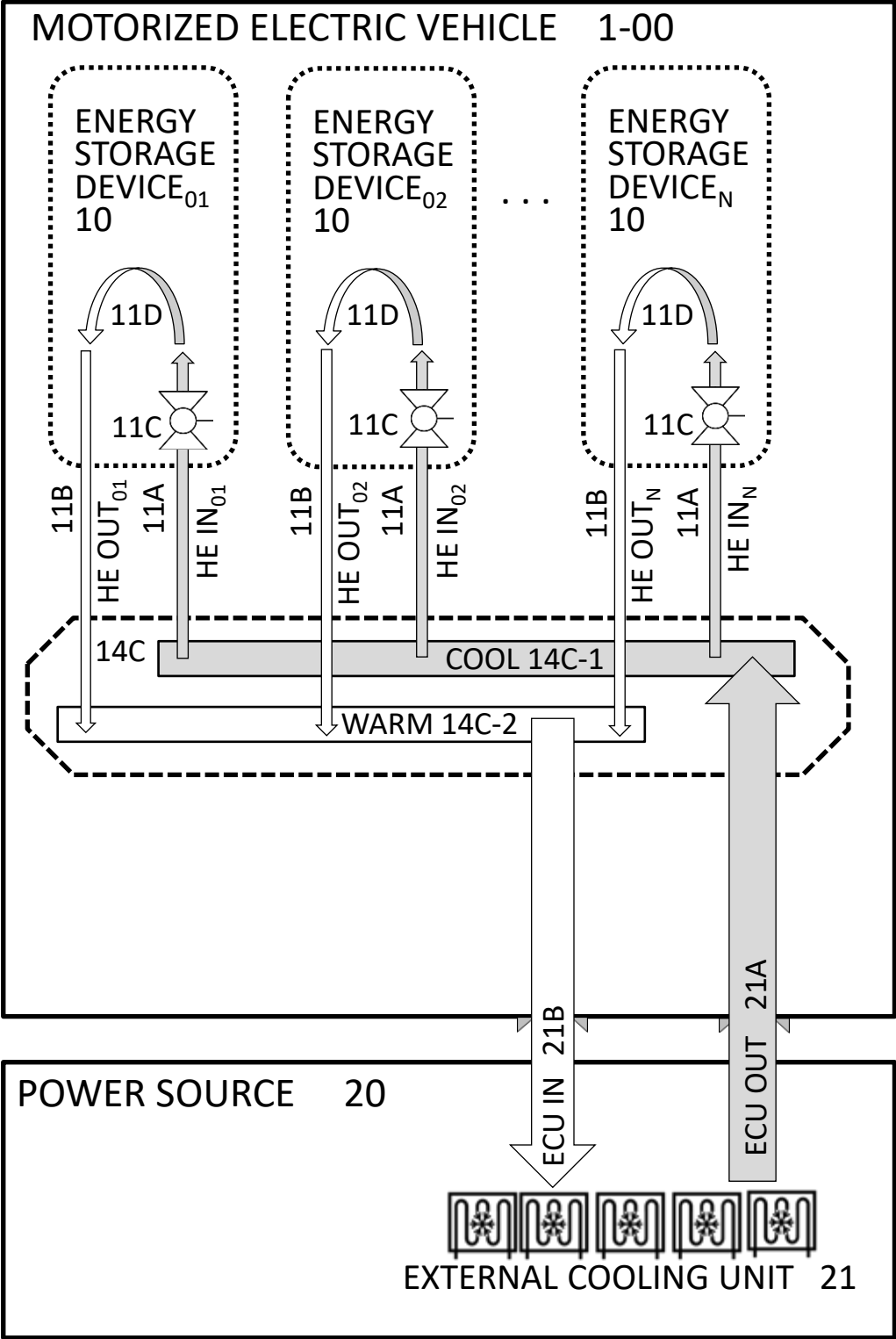


FIG. 6A

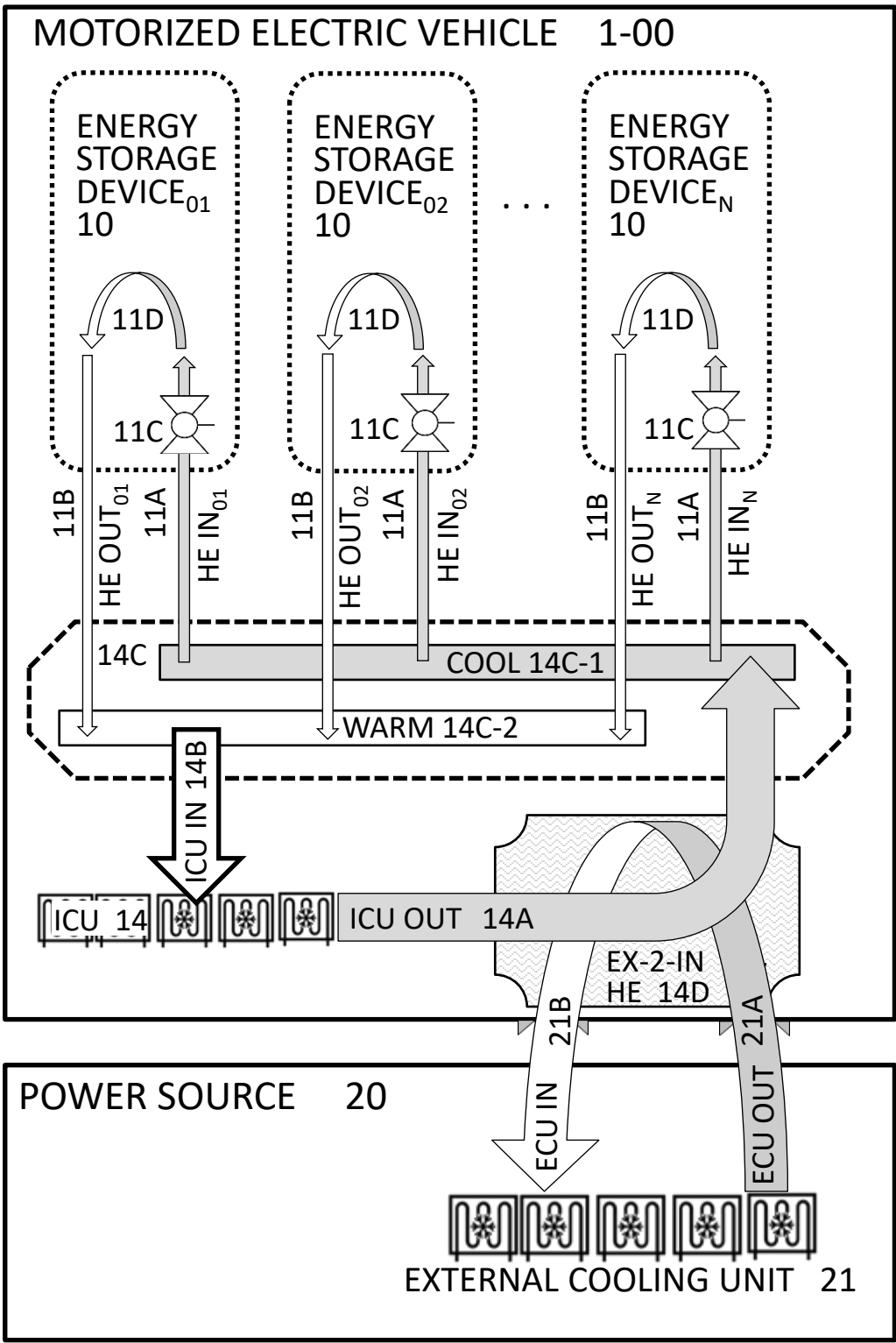


FIG. 6B

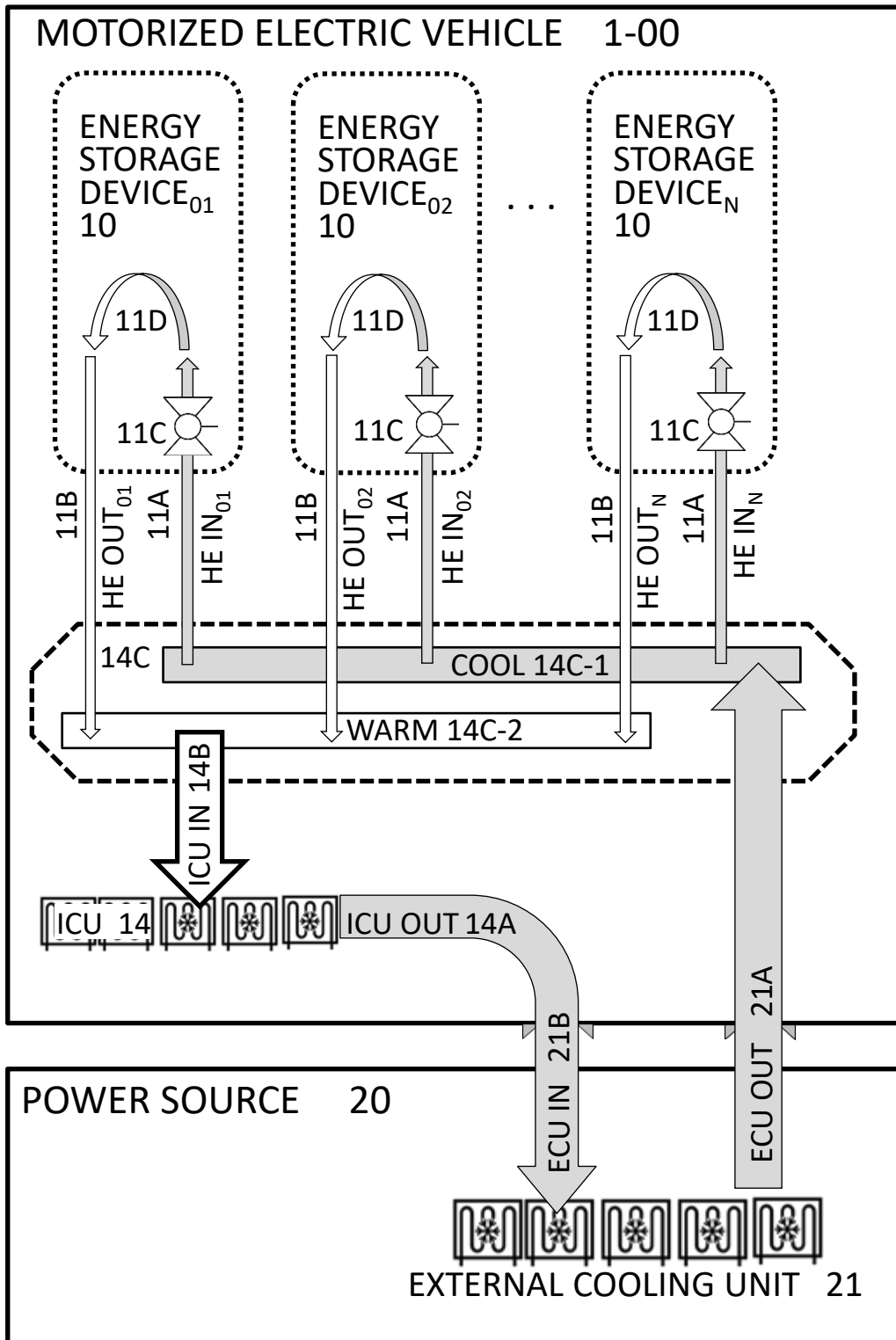


FIG. 6C

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7-00



COLLECT SENSOR INFORMATION FROM THE SENSORS OF EACH ENERGY STORAGE DEVICE, THE SENSOR INFORMATION TRANSMITTED FROM EACH SENSOR TO THE BMU OF THE ENERGY STORAGE DEVICE, TO THE MBMS WIRELESSLY OR BY WIRE VIA THE BMU CONNECTOR OF THE ENERGY STORAGE DEVICE, TO THE INTERNAL SCC	7-01
ACCESS THE PARAMETERS FOR EACH ENERGY STORAGE DEVICE FROM THE SET OF PARAMETERS STORED IN THE INTERNAL SCC	7-02
EMPLOY THE INTERNAL SCC TO CALCULATE OR RECALCULATE THE OPTIMAL RANGE FOR THE HE FLOW RATE THROUGH THE HE FLOW CONTROLLER OF EACH ENERGY STORAGE DEVICE EMPLOYING EITHER A THERMAL MODEL FOR THE ENERGY STORAGE DEVICE AND/OR A CONTROL LOOP TO MAINTAIN SEGMENTED BATTERY MODULE OF THE ENERGY STORAGE DEVICE WITHIN A PREFERRED TEMPERATURE RANGE	7-03
ADJUST THE HE FLOW RATE THROUGH THE HE FLOW CONTROLLER TO WITHIN THE OPTIMAL RANGE, COLLECT SENSOR INFORMATION, AND REPEAT CALCULATIONS	7-04



FIG. 7



PARK ELECTRIC VEHICLE AT POWER SOURCE AND CONNECT: (1) ECU INLET AND ECU OUTLET TO COOLANT TRUNKS; (2) CHARGING SCC TO MBMS VIA THE MBMS CONNECTOR; AND (3) POWER SUPPLY TO THE ELECTRICAL CONNECTION VIA THE ELECTRICAL CONNECTION CONNECTOR	8-01
COLLECT SENSOR INFORMATION FROM SENSORS, TRANSMIT SENSOR INFORMATION TO THE MBMS VIA THE BMU CONNECTOR, AND RECEIVE SENSOR INFORMATION AT THE CHARGING SCC VIA THE MBMS CONNECTOR	8-02
ACCESS THE PARAMETERS FOR EACH ENERGY STORAGE DEVICE FROM THE SET OF PARAMETERS STORED IN THE CHARGING SCC	8-03
COMMENCE CHARGING SESSION TO CHARGE THE BATTERY CELLS OF EACH ENERGY STORAGE DEVICE	8-04
CALCULATE OR RECALCULATE THE OPTIMAL RANGE FOR THE HE FLOW RATE THROUGH THE HE FLOW CONTROLLER EMPLOYING EITHER A THERMAL MODEL OR A CONTROL LOOP TO MAINTAIN SEGMENTED BATTERY MODULE WITHIN A PREFERRED TEMPERATURE RANGE	8-05
ADJUST THE HE FLOW RATE THROUGH THE HE FLOW CONTROLLER WITHIN THE OPTIMAL RANGE, COLLECT SENSOR INFORMATION, AND REPEAT CALCULATIONS UNTIL COMPLETION OF CHARGING SESSION	8-06
END CHARGING SESSION	8-07
DISCONNECT ECU INLET AND ECU OUTLET FROM COOLANT TRUNKS, CHARGING SCC FROM MBMS CONNECTOR, AND POWER SUPPLY FROM ELECTRICAL CONNECTION CONNECTOR	8-08
MOVE ELECTRIC VEHICLE OUT FROM POWER SOURCE, OPTIONALLY COOLING THE SEGMENTED BATTERY MODULES DURING MOTORIZED OPERATION OF THE ELECTRIC VEHICLE USING AN INTERNAL COOLING UNIT AS CONTROLLED BY AN INTERNAL SCC	8-09

FIG. 8