FIG. 1

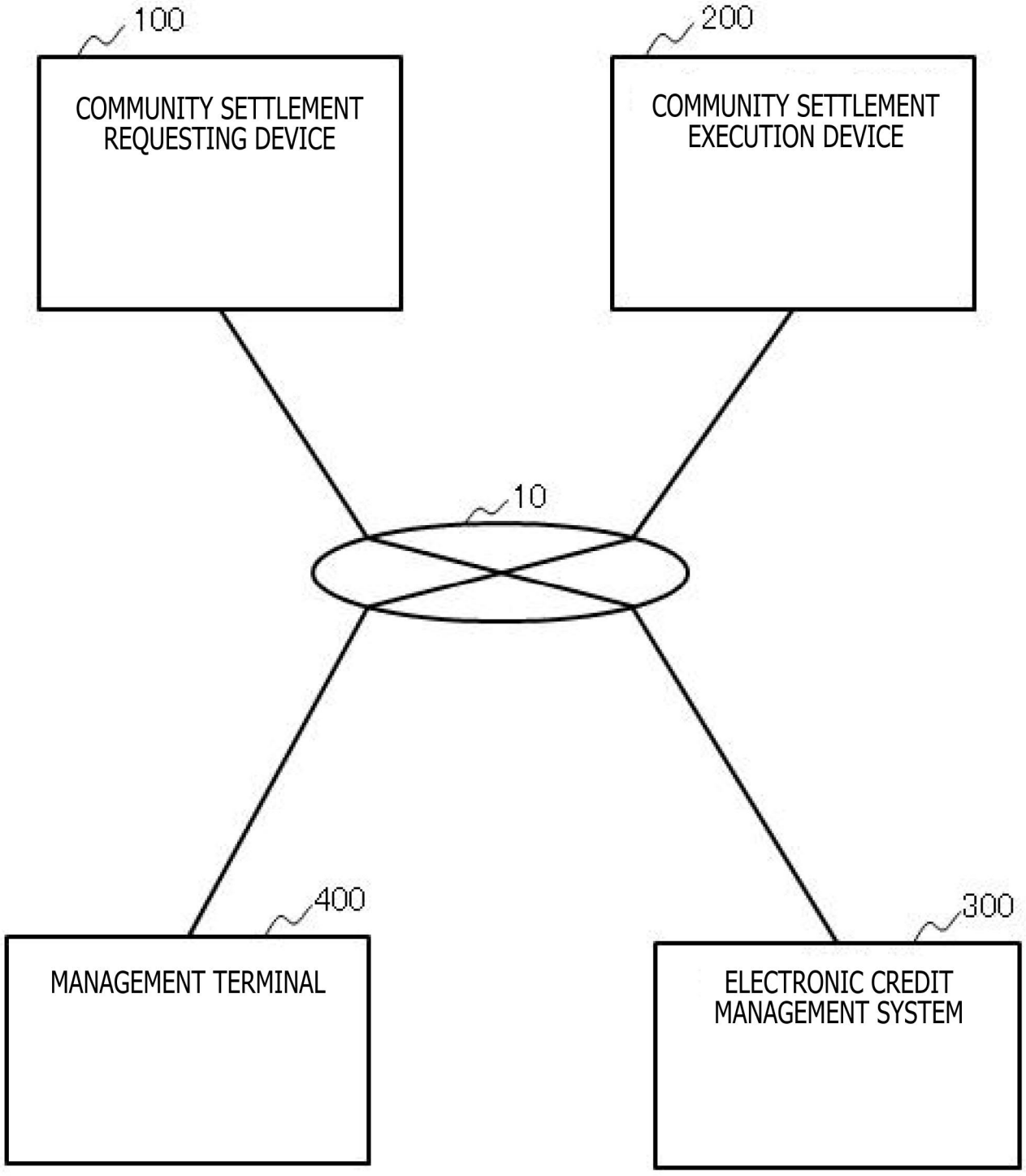

100
COMMUNITY SETTLEMENT REQUESTING DEVICE
200
COMMUNITY SETTLEMENT EXECUTION DEVICE
10
400
MANAGEMENT TERMINAL
300
ELECTRONIC CREDIT MANAGEMENT SYSTEM

FIG. 2

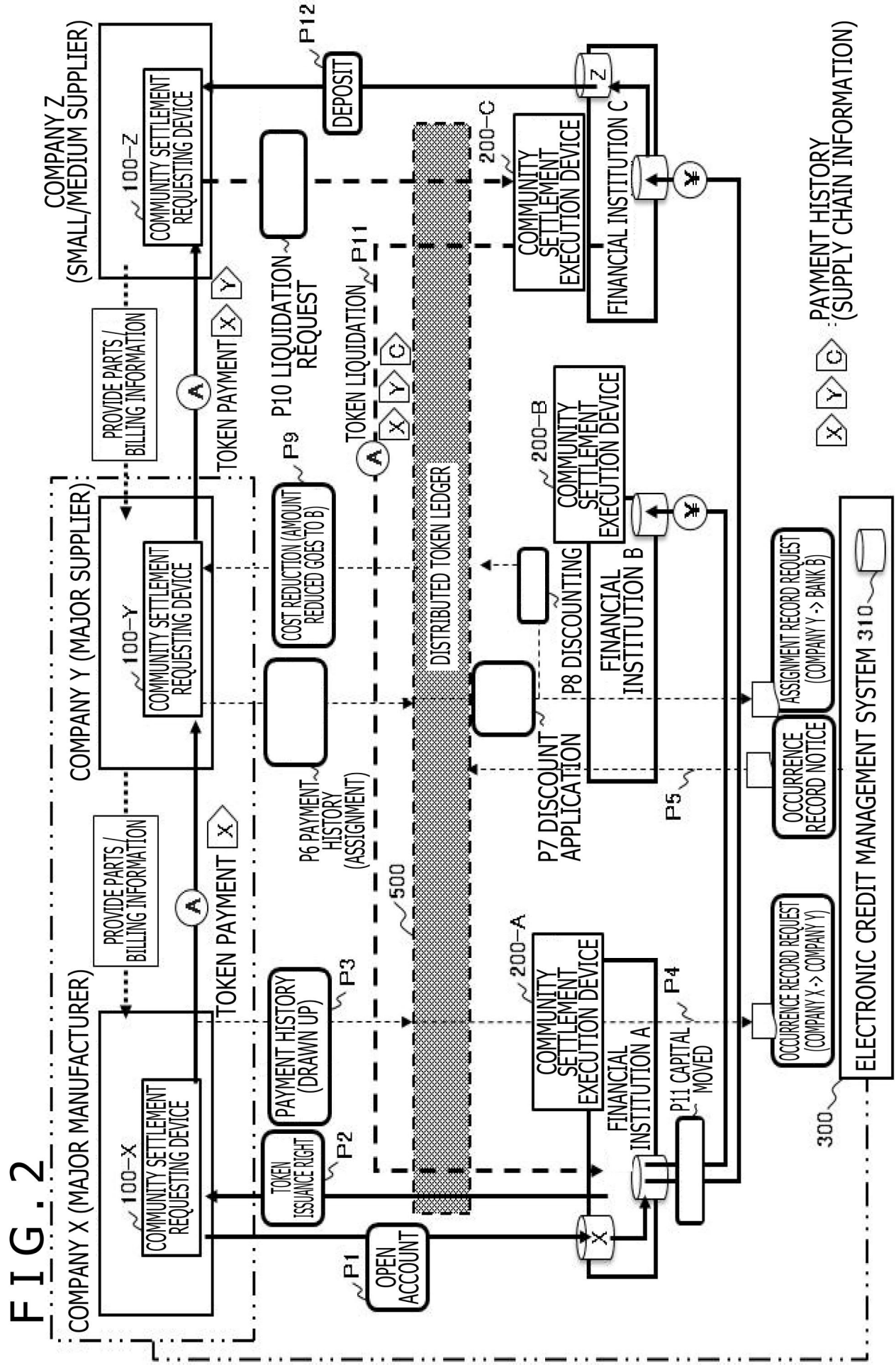

COMPANY X (MAJOR MANUFACTURER)
COMPANY Y (MAJOR SUPPLIER)
COMPANY Z (SMALL/MEDIUM SUPPLIER)
100-X COMMUNITY SETTLEMENT REQUESTING DEVICE
100-Y COMMUNITY SETTLEMENT REQUESTING DEVICE
100-Z COMMUNITY SETTLEMENT REQUESTING DEVICE
PROVIDE PARTS / BILLING INFORMATION
PROVIDE PARTS / BILLING INFORMATION
TOKEN PAYMENT
TOKEN PAYMENT
P1 OPEN ACCOUNT
P2 TOKEN ISSUANCE RIGHT
P3 PAYMENT HISTORY (DRAWN UP)
P4 P11 CAPITAL MOVED
P5
P6 PAYMENT HISTORY (ASSIGNMENT)
P7 DISCOUNT APPLICATION
P8 DISCOUNTING
P9 COST REDUCTION (AMOUNT REDUCED GOES TO B)
P10 LIQUIDATION REQUEST
P11 TOKEN LIQUIDATION
P12 DEPOSIT
500 DISTRIBUTED TOKEN LEDGER
200-A COMMUNITY SETTLEMENT EXECUTION DEVICE
200-B COMMUNITY SETTLEMENT EXECUTION DEVICE
200-C COMMUNITY SETTLEMENT EXECUTION DEVICE
FINANCIAL INSTITUTION A
FINANCIAL INSTITUTION B
FINANCIAL INSTITUTION C
OCCURRENCE RECORD REQUEST (COMPANY X -> COMPANY Y)
OCCURRENCE RECORD NOTICE
ASSIGNMENT RECORD REQUEST (COMPANY Y -> BANK B)
300 ELECTRONIC CREDIT MANAGEMENT SYSTEM 310
: PAYMENT HISTORY (SUPPLY CHAIN INFORMATION)

FIG. 3

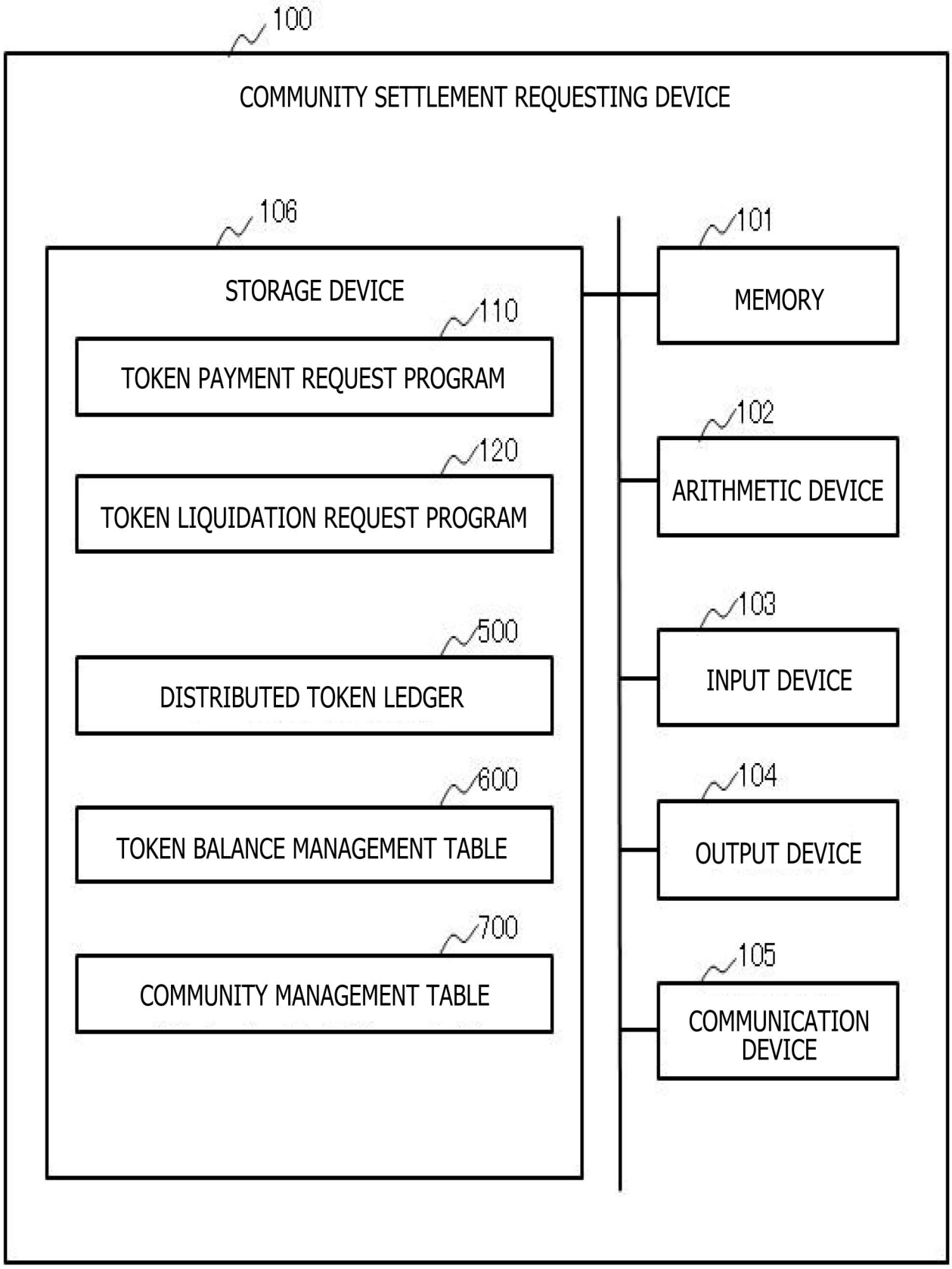

100
COMMUNITY SETTLEMENT REQUESTING DEVICE
106
STORAGE DEVICE
110
TOKEN PAYMENT REQUEST PROGRAM
120
TOKEN LIQUIDATION REQUEST PROGRAM
500
DISTRIBUTED TOKEN LEDGER
600
TOKEN BALANCE MANAGEMENT TABLE
700
COMMUNITY MANAGEMENT TABLE
101
MEMORY
102
ARITHMETIC DEVICE
103
INPUT DEVICE
104
OUTPUT DEVICE
105
COMMUNICATION DEVICE

FIG. 4

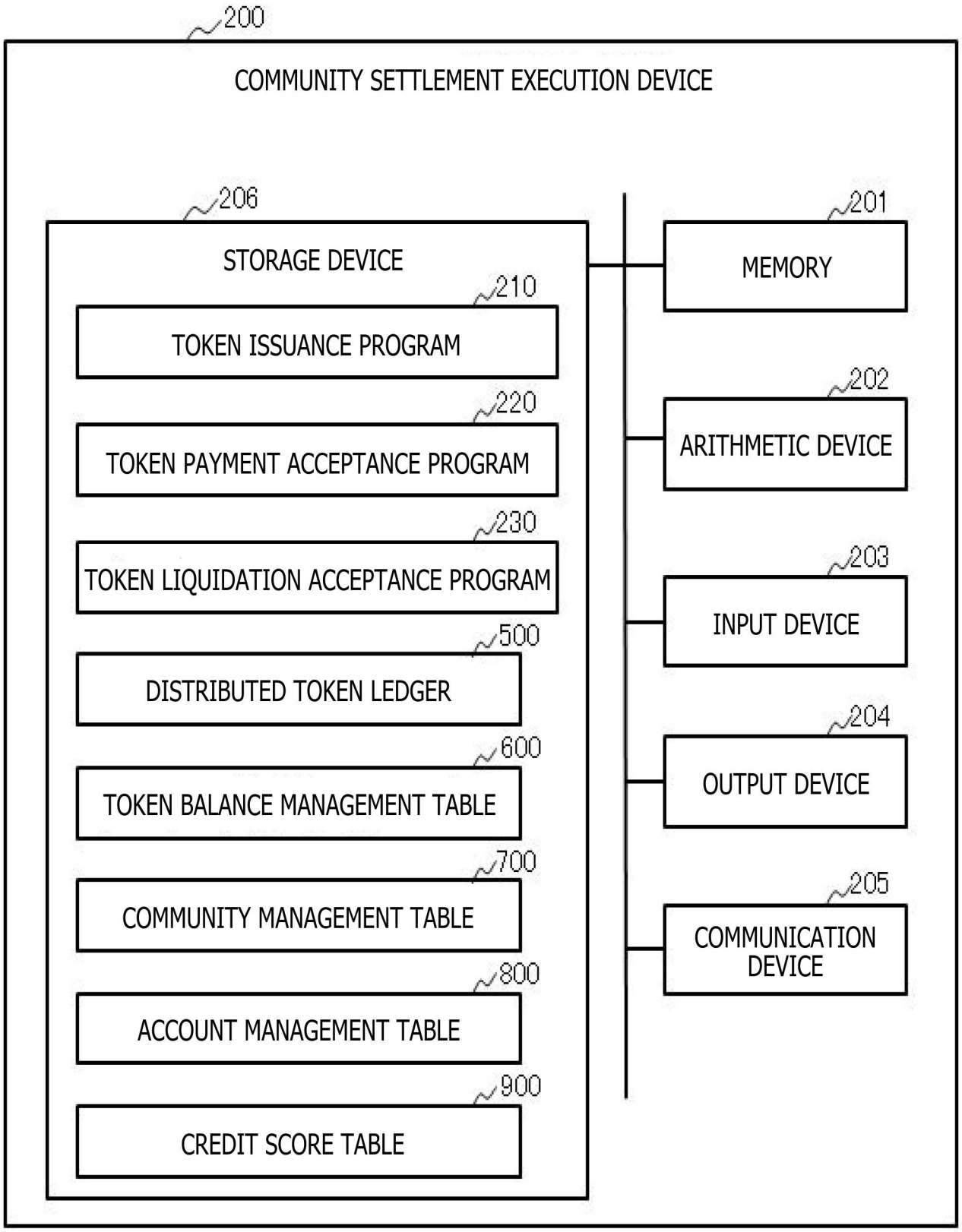

200
COMMUNITY SETTLEMENT EXECUTION DEVICE
206
STORAGE DEVICE
210
TOKEN ISSUANCE PROGRAM
220
TOKEN PAYMENT ACCEPTANCE PROGRAM
230
TOKEN LIQUIDATION ACCEPTANCE PROGRAM
500
DISTRIBUTED TOKEN LEDGER
600
TOKEN BALANCE MANAGEMENT TABLE
700
COMMUNITY MANAGEMENT TABLE
800
ACCOUNT MANAGEMENT TABLE
900
CREDIT SCORE TABLE
201
MEMORY
202
ARITHMETIC DEVICE
203
INPUT DEVICE
204
OUTPUT DEVICE
205
COMMUNICATION DEVICE

FIG. 5

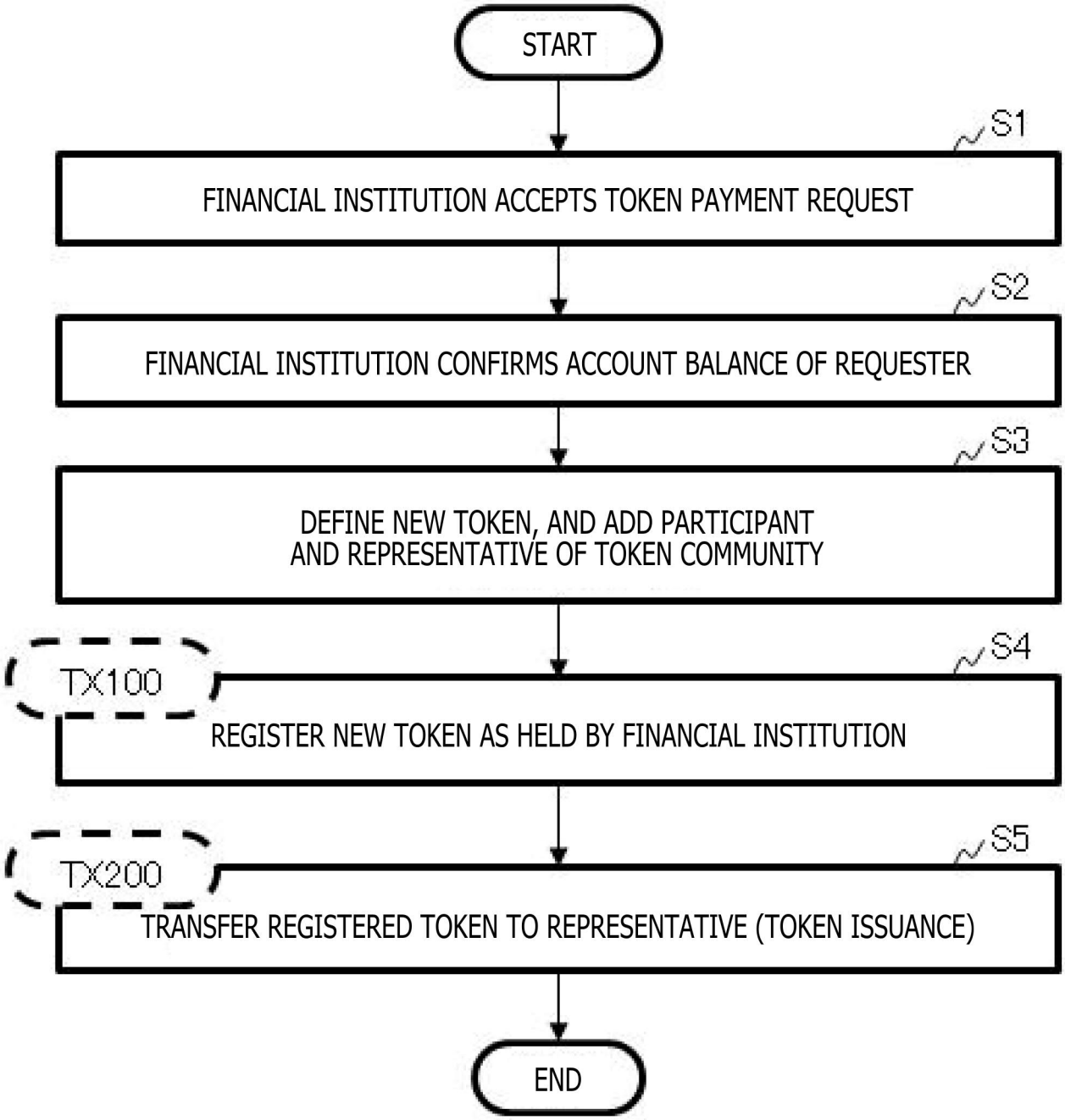

START
S1
FINANCIAL INSTITUTION ACCEPTS TOKEN PAYMENT REQUEST
S2
FINANCIAL INSTITUTION CONFIRMS ACCOUNT BALANCE OF REQUESTER
S3
DEFINE NEW TOKEN, AND ADD PARTICIPANT AND REPRESENTATIVE OF TOKEN COMMUNITY
TX100
S4
REGISTER NEW TOKEN AS HELD BY FINANCIAL INSTITUTION
TX200
S5
TRANSFER REGISTERED TOKEN TO REPRESENTATIVE (TOKEN ISSUANCE)
END

FIG. 6

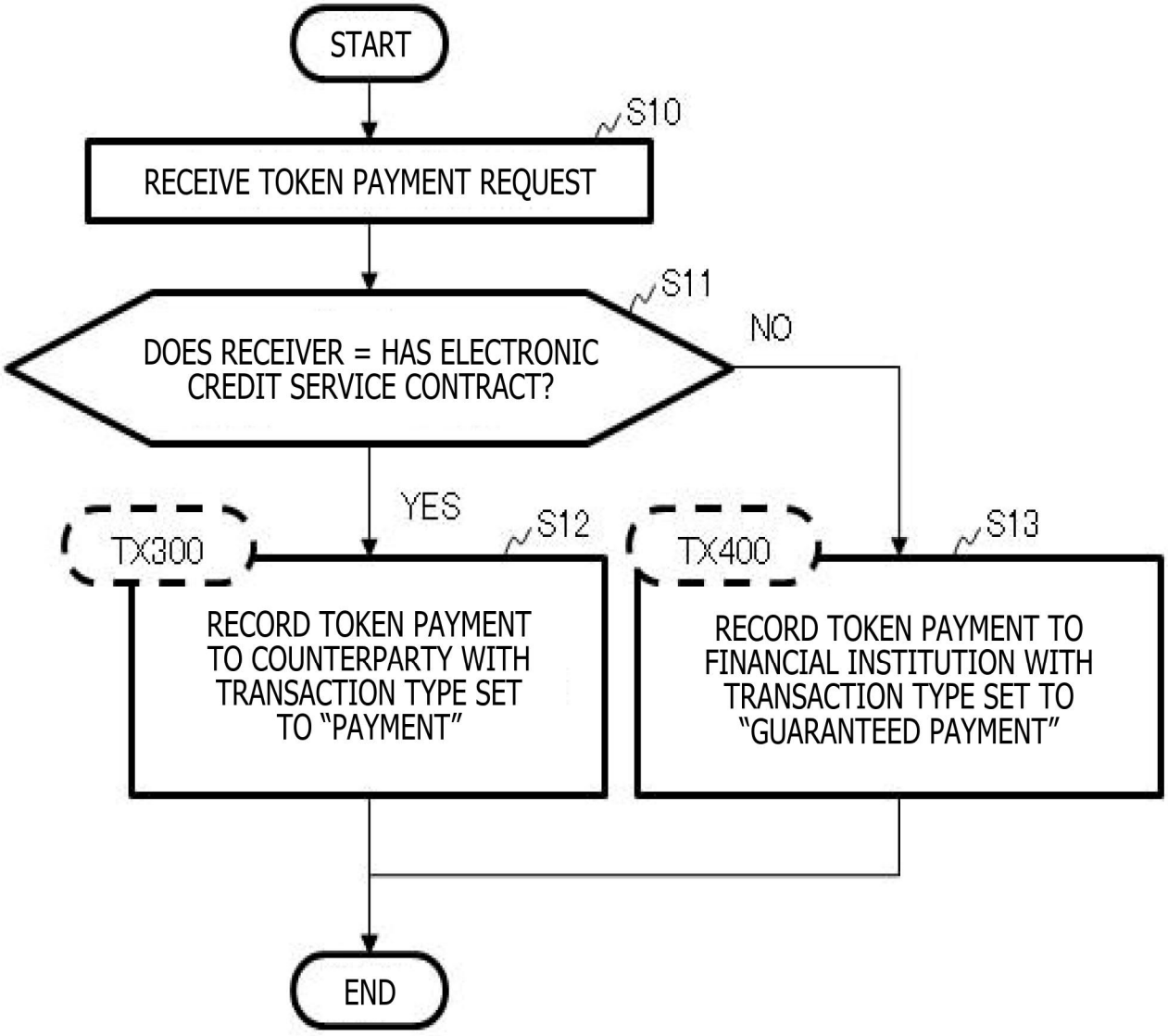

START
S10
RECEIVE TOKEN PAYMENT REQUEST
S11
DOES RECEIVER = HAS ELECTRONIC CREDIT SERVICE CONTRACT?
NO
YES
TX300
S12
RECORD TOKEN PAYMENT TO COUNTERPARTY WITH TRANSACTION TYPE SET TO "PAYMENT"
TX400
S13
RECORD TOKEN PAYMENT TO FINANCIAL INSTITUTION WITH TRANSACTION TYPE SET TO "GUARANTEED PAYMENT"
END

FIG. 7

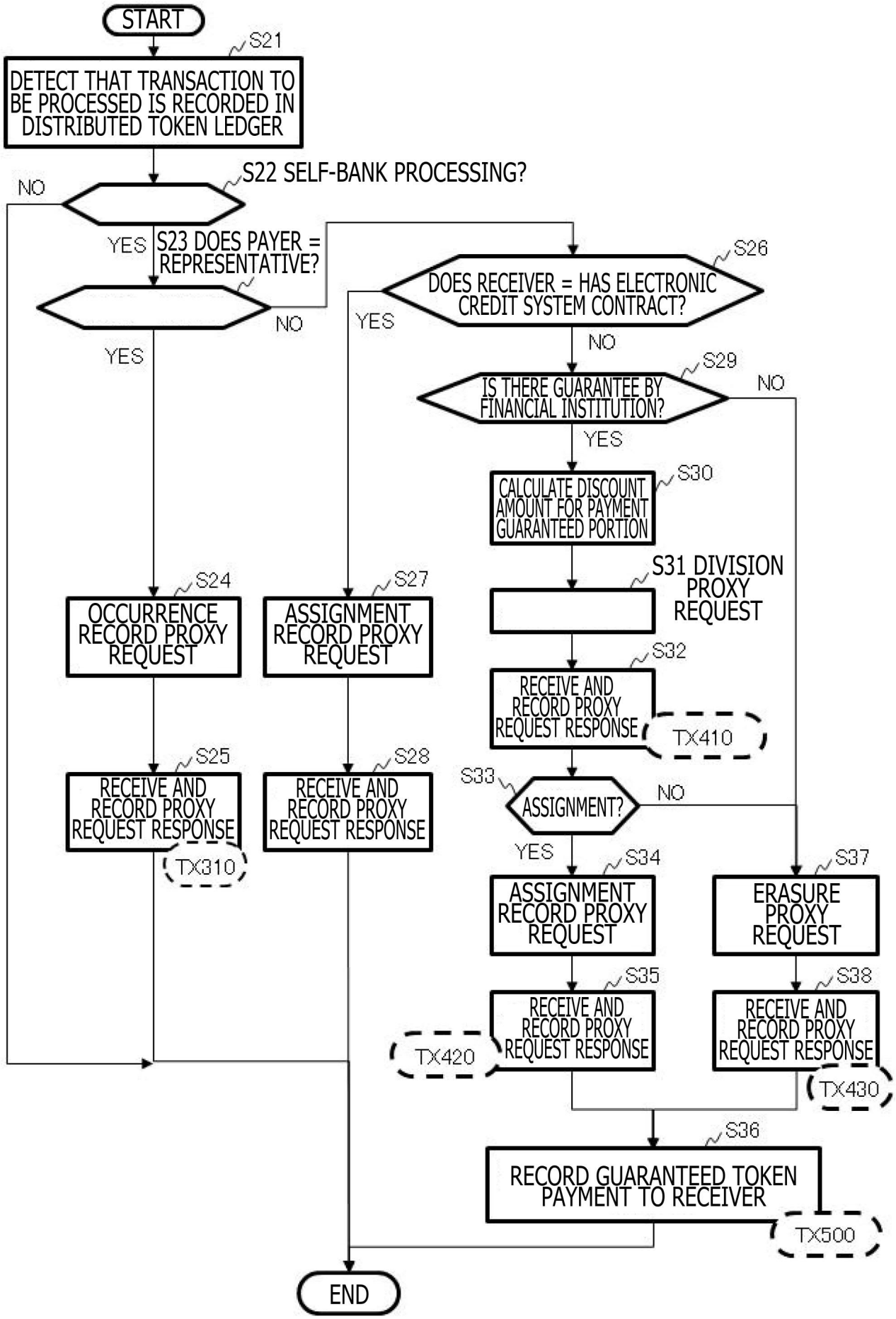

START
S21
DETECT THAT TRANSACTION TO BE PROCESSED IS RECORDED IN DISTRIBUTED TOKEN LEDGER
S22 SELF-BANK PROCESSING?
NO
YES
S23 DOES PAYER = REPRESENTATIVE?
NO
YES
S26
DOES RECEIVER = HAS ELECTRONIC CREDIT SYSTEM CONTRACT?
YES
NO
S29
IS THERE GUARANTEE BY FINANCIAL INSTITUTION?
NO
YES
S30
CALCULATE DISCOUNT AMOUNT FOR PAYMENT GUARANTEED PORTION
S31 DIVISION PROXY REQUEST
S24
OCCURRENCE RECORD PROXY REQUEST
S27
ASSIGNMENT RECORD PROXY REQUEST
S32
RECEIVE AND RECORD PROXY REQUEST RESPONSE
TX410
S25
RECEIVE AND RECORD PROXY REQUEST RESPONSE
TX310
S28
RECEIVE AND RECORD PROXY REQUEST RESPONSE
S33
ASSIGNMENT?
NO
YES
S34
ASSIGNMENT RECORD PROXY REQUEST
S37
ERASURE PROXY REQUEST
S35
RECEIVE AND RECORD PROXY REQUEST RESPONSE
TX420
S38
RECEIVE AND RECORD PROXY REQUEST RESPONSE
TX430
S36
RECORD GUARANTEED TOKEN PAYMENT TO RECEIVER
TX500
END

FIG. 8

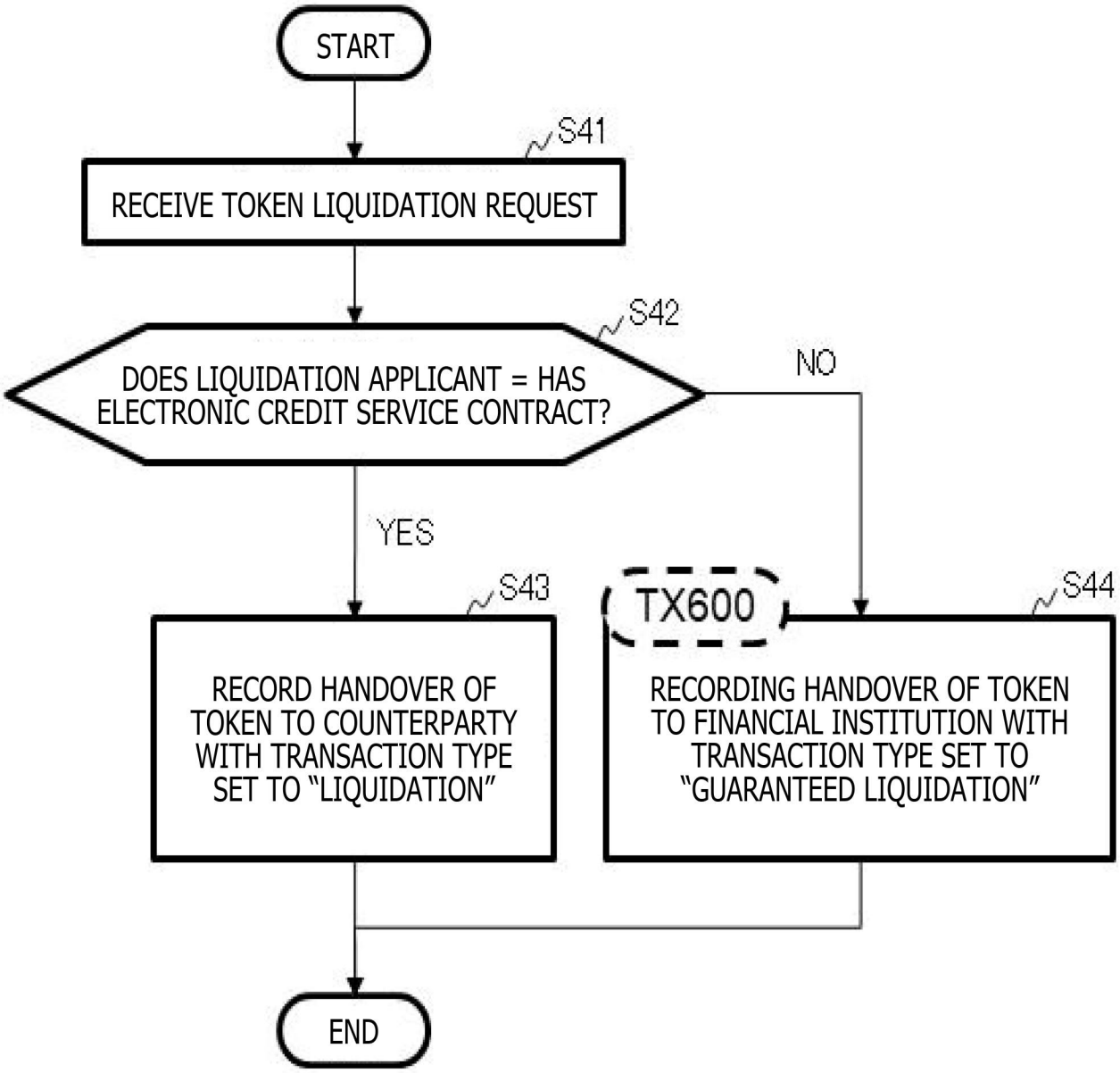

START
S41
RECEIVE TOKEN LIQUIDATION REQUEST
S42
DOES LIQUIDATION APPLICANT = HAS ELECTRONIC CREDIT SERVICE CONTRACT?
NO
YES
S43
RECORD HANDOVER OF TOKEN TO COUNTERPARTY WITH TRANSACTION TYPE SET TO "LIQUIDATION"
TX600
S44
RECORDING HANDOVER OF TOKEN TO FINANCIAL INSTITUTION WITH TRANSACTION TYPE SET TO "GUARANTEED LIQUIDATION"
END

FIG. 9

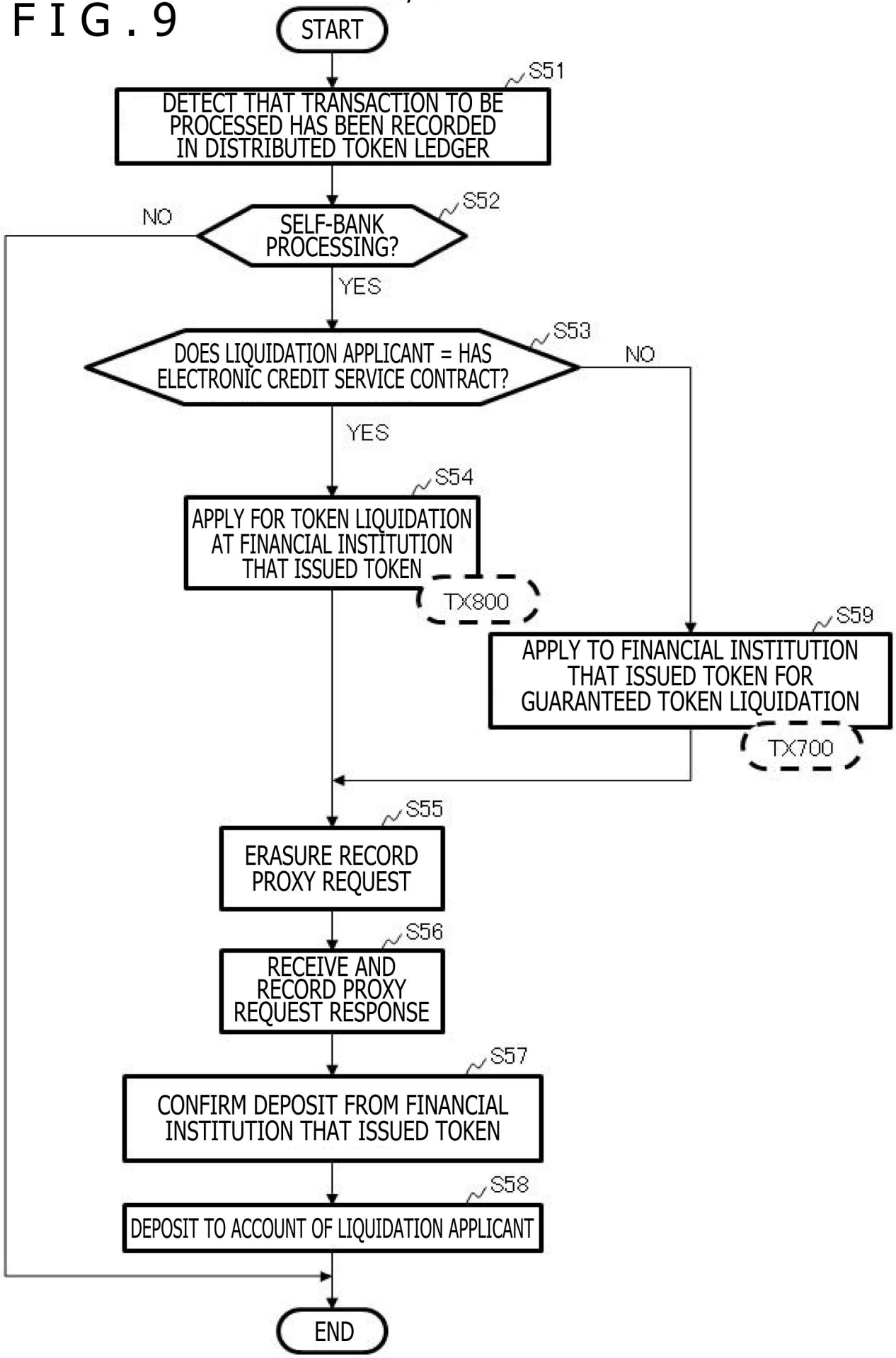

START
S51
DETECT THAT TRANSACTION TO BE PROCESSED HAS BEEN RECORDED IN DISTRIBUTED TOKEN LEDGER
S52
SELF-BANK PROCESSING?
NO
YES
S53
DOES LIQUIDATION APPLICANT = HAS ELECTRONIC CREDIT SERVICE CONTRACT?
NO
YES
S54
APPLY FOR TOKEN LIQUIDATION AT FINANCIAL INSTITUTION THAT ISSUED TOKEN
TX800
S59
APPLY TO FINANCIAL INSTITUTION THAT ISSUED TOKEN FOR GUARANTEED TOKEN LIQUIDATION
TX700
S55
ERASURE RECORD PROXY REQUEST
S56
RECEIVE AND RECORD PROXY REQUEST RESPONSE
S57
CONFIRM DEPOSIT FROM FINANCIAL INSTITUTION THAT ISSUED TOKEN
S58
DEPOSIT TO ACCOUNT OF LIQUIDATION APPLICANT
END

FIG. 10

800 ACCOUNT MANAGEMENT TABLE

801 ACCOUNT NUMBER	802 USER NAME	803 BALANCE
1000000	COMPANY X	350

FIG. 11

700 COMMUNITY MANAGEMENT TABLE

701 TOKEN NAME	702 ISSUE AMOUNT	703 PARTICIPANT NAME	704 REPRESENTATIVE FLAG	705 DENSAI CONTRACT PRESENCE/ ABSENCE
SC01	350	COMPANY X	Y	Y
		COMPANY Y	N	Y
		COMPANY Y	N	N
...	...	...	...	...

FIG. 12

600 TOKEN BALANCE MANAGEMENT TABLE

601 TOKEN NAME	602 TOKEN BALANCE	603 EXPIRATION DATE	604 EXCHANGE START DATE	
SC01	300	NONE	NONE	
...	...	...	...	

FIG. 13

500 DISTRIBUTED TOKEN LEDGER

501 TRANSACTION ID	502 TRANSACTION CONTENT	503 PAYER	504 RECEIVER	505 TRANSACTION AMOUNT	506 TARGET TRANSACTION	507 RECORD ID	508 GUARANTOR
TX100	REGISTRATION	—	FINANCIAL INSTITUTION A	350	—		
TX200	ISSUANCE	FINANCIAL INSTITUTION A	COMPANY X	350	—		
TX300	PAYMENT	COMPANY X	COMPANY Y	100	—		
TX310	OCCURRENCE RECORD	—	—	—	TX300	D10	
TX400	GUARANTEED PAYMENT	COMPANY Y	FINANCIAL INSTITUTION B	100			
TX410	DIVISION RECORD	—	—	—	TX400	D20, D21, D22	
TX420	ASSIGNMENT RECORD	—	—	—	TX400	D22	
TX430	ERASURE RECORD	—	—	—	TX400	D21	
TX500	DISCOUNTED PAYMENT	FINANCIAL INSTITUTION B	COMPANY Z	80			FINANCIAL INSTITUTION B
TX600	GUARANTEED LIQUIDATION	COMPANY Z	FINANCIAL INSTITUTION C	80			FINANCIAL INSTITUTION B
TX700	EXCHANGE	FINANCIAL INSTITUTION C	FINANCIAL INSTITUTION A	80			FINANCIAL INSTITUTION B
TX800	EXCHANGE	FINANCIAL INSTITUTION B	FINANCIAL INSTITUTION A	20			
TX810	ASSIGNMENT RECORD	—	—	—	TX800	D22	
TX900	DELETION	FINANCIAL INSTITUTION A	—	100			

FIG. 14

310 ELECTRONIC CREDIT MANAGEMENT TABLE

311 RECORD ID	312 DEBTOR	313 CREDITOR	314 CREDIT AMOUNT	315 DELETION FLAG
D10	COMPANY X	COMPANY Y	100	D
D20	COMPANY X	COMPANY Y	100	D
D21	COMPANY X	COMPANY Y	80	
D22	COMPANY X	COMPANY Y	20	D
		FINANCIAL INSTITUTION B		D
		FINANCIAL INSTITUTION A		

FIG. 15

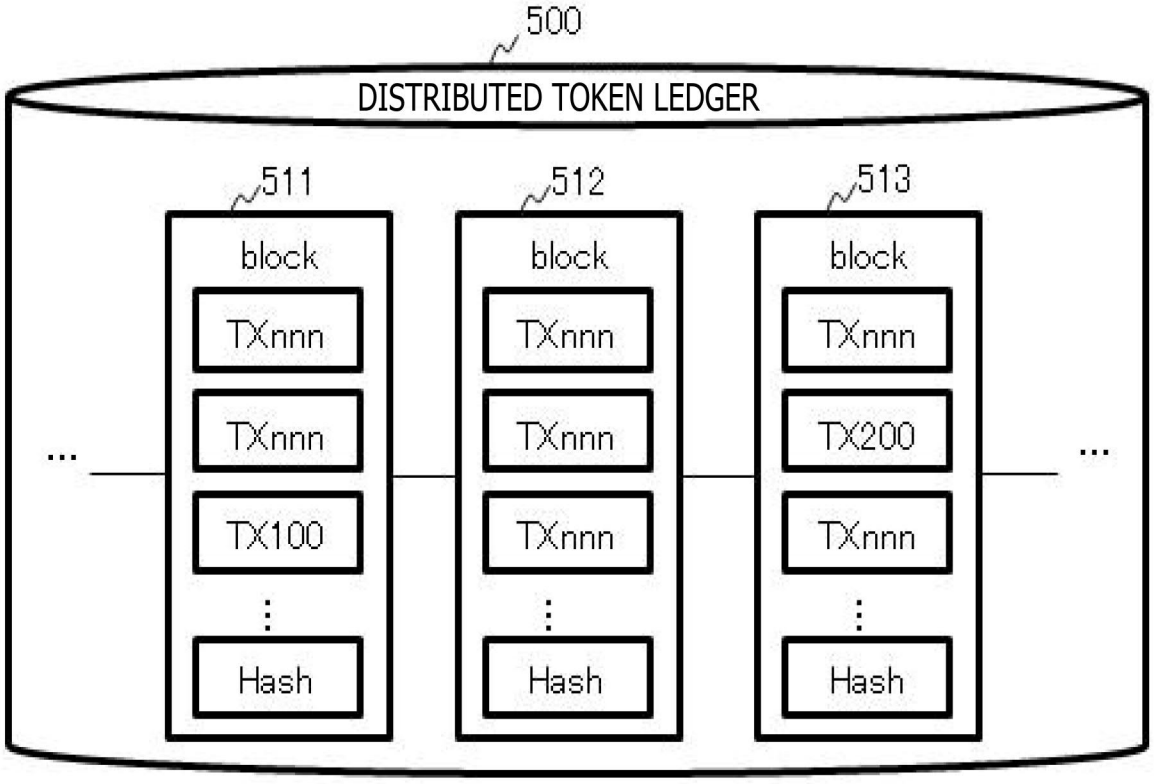


FIG. 16

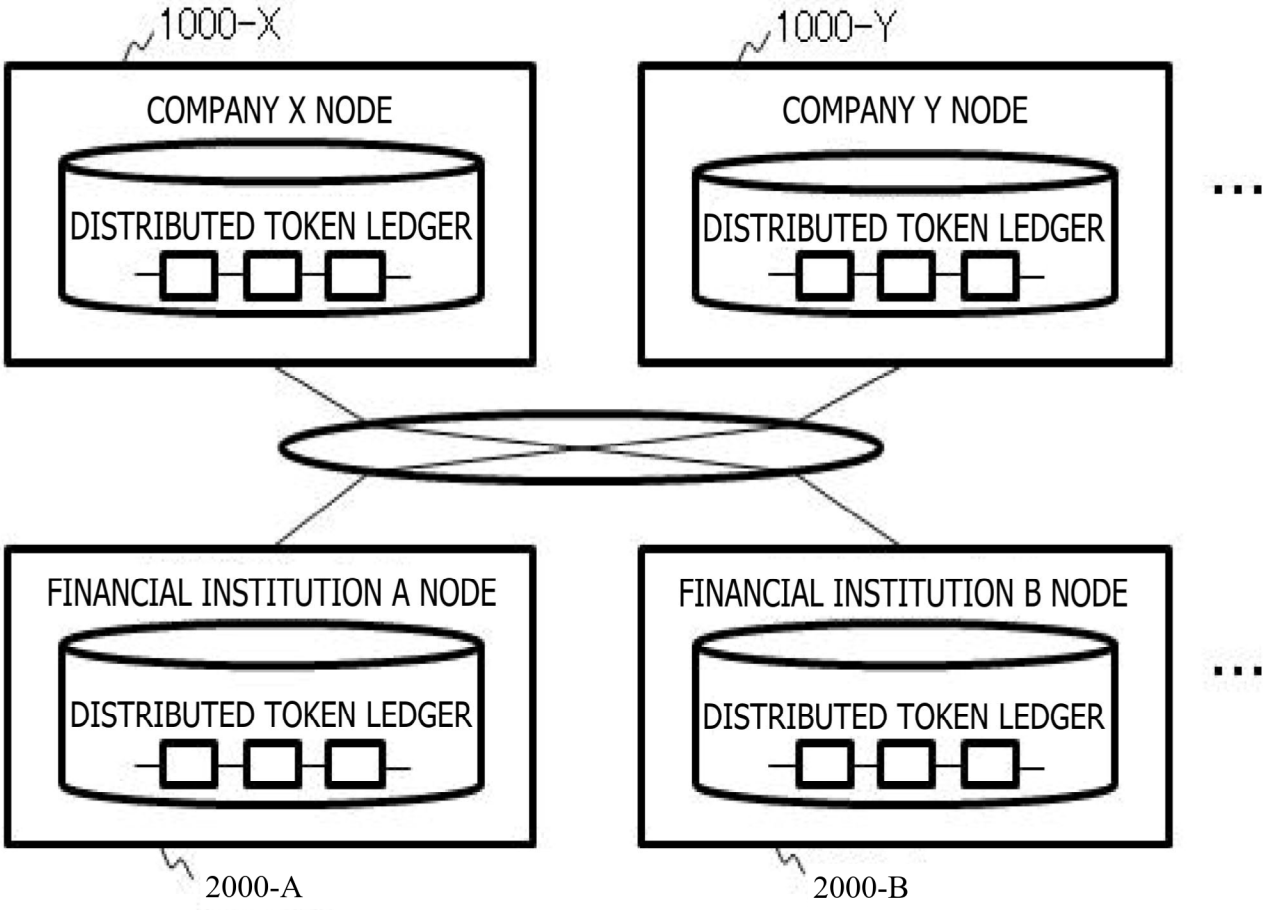
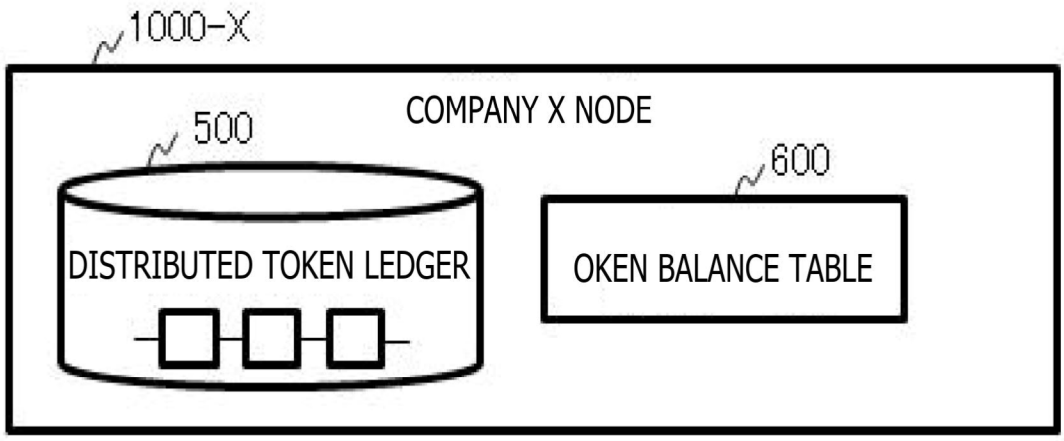

1000-X
COMPANY X NODE
DISTRIBUTED TOKEN LEDGER
1000-Y
COMPANY Y NODE
DISTRIBUTED TOKEN LEDGER
...
FINANCIAL INSTITUTION A NODE
DISTRIBUTED TOKEN LEDGER
2000-A
FINANCIAL INSTITUTION B NODE
DISTRIBUTED TOKEN LEDGER
2000-B
...

FIG. 17


1000-X
COMPANY X NODE
500
DISTRIBUTED TOKEN LEDGER
600
OKEN BALANCE TABLE