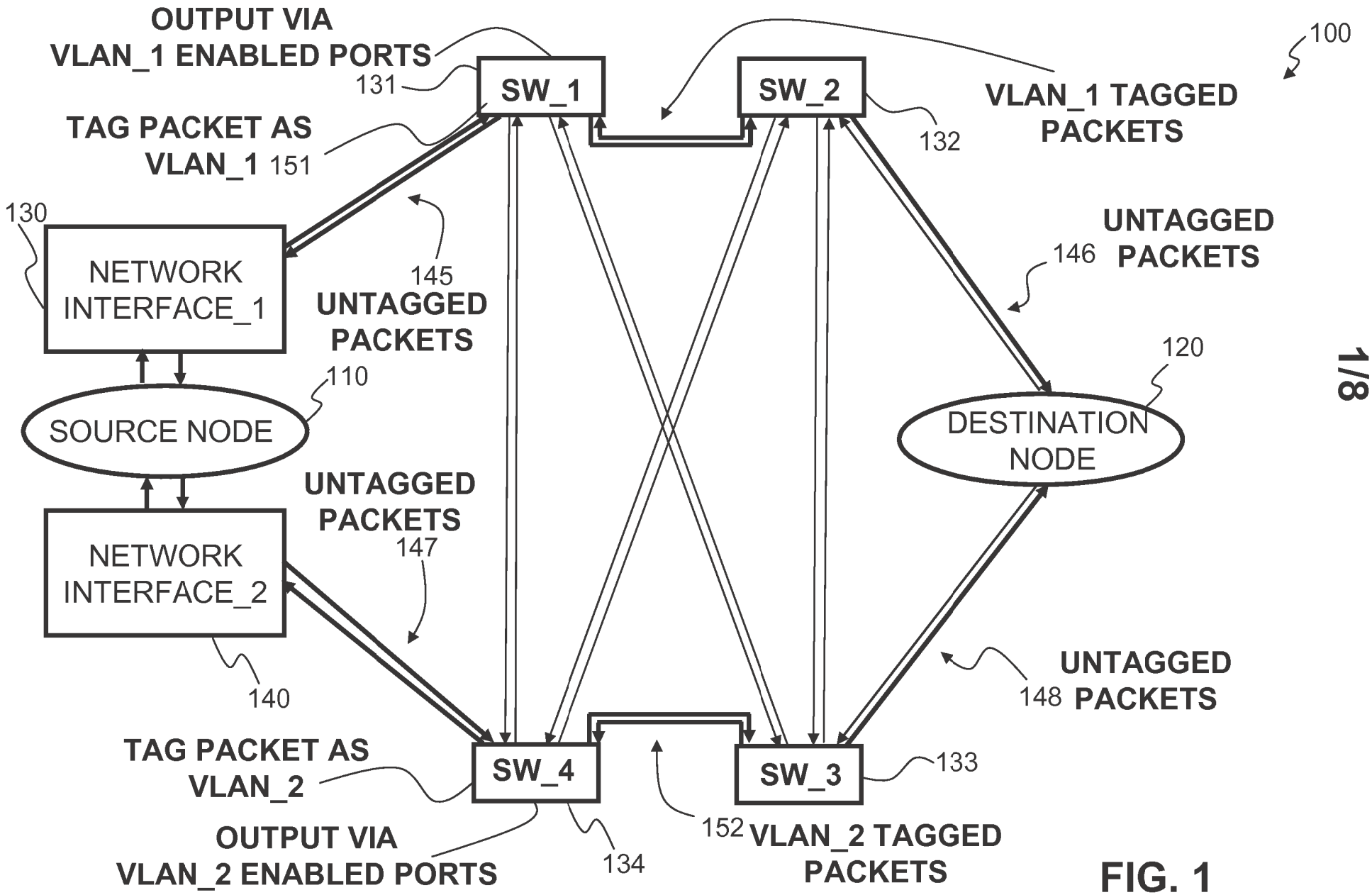
OUTPUT VIA
VLAN_1 ENABLED PORTS
131
SW_1
SW_2
100
VLAN_1 TAGGED
PACKETS
132
TAG PACKET AS
VLAN_1 151
130
NETWORK
INTERFACE_1
145
UNTAGGED
PACKETS
UNTAGGED
PACKETS
146
120
110
SOURCE NODE
DESTINATION
NODE
UNTAGGED
PACKETS
147
NETWORK
INTERFACE_2
140
UNTAGGED
148 PACKETS
TAG PACKET AS
VLAN_2
SW_4
SW_3
133
OUTPUT VIA
VLAN_2 ENABLED PORTS
134
152 VLAN_2 TAGGED
PACKETS

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FIG. 1

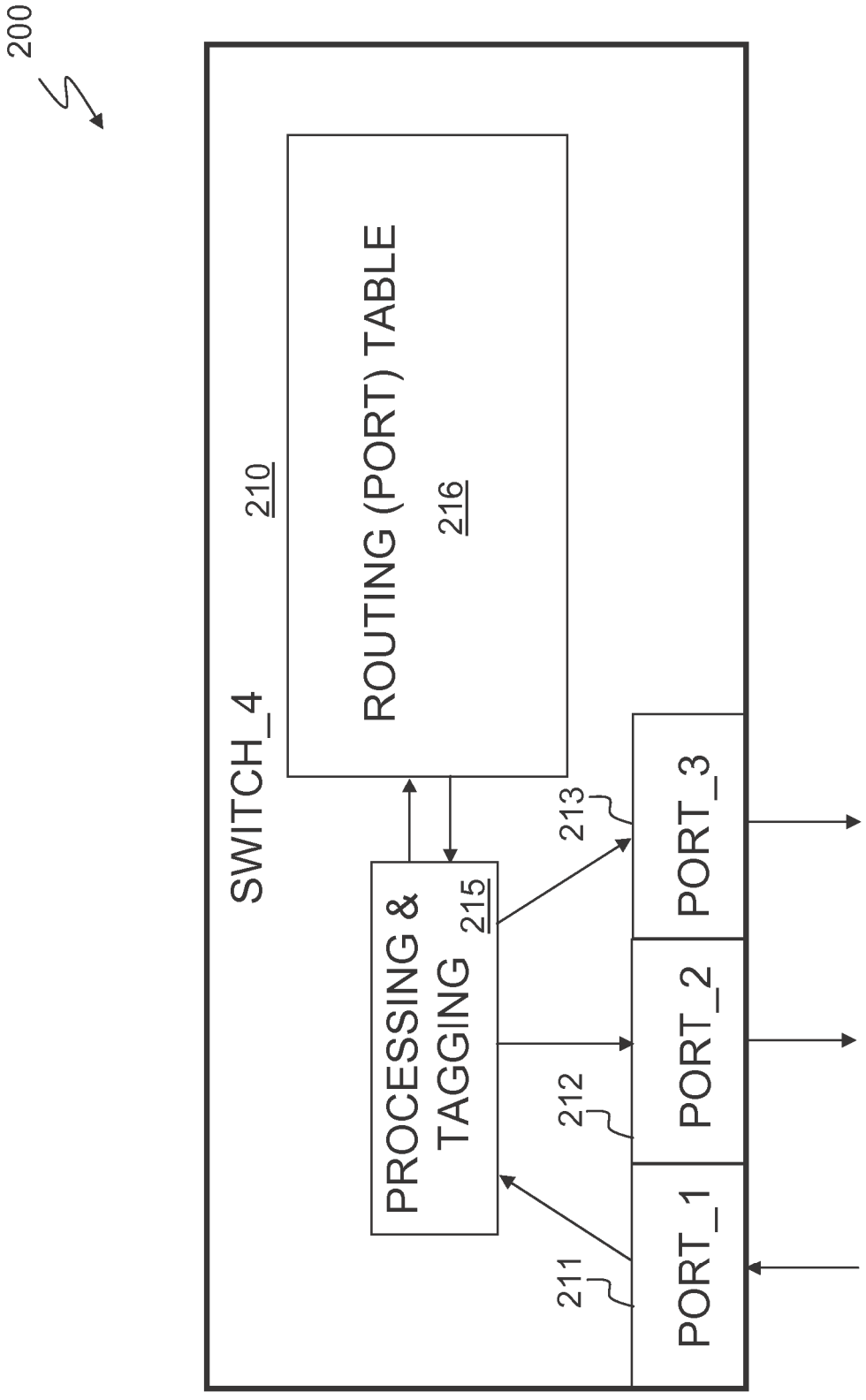
200
SWITCH_4
210
ROUTING (PORT) TABLE
216
PROCESSING & TAGGING
215
211
212
213
PORT_1
PORT_2
PORT_3

FIG. 2

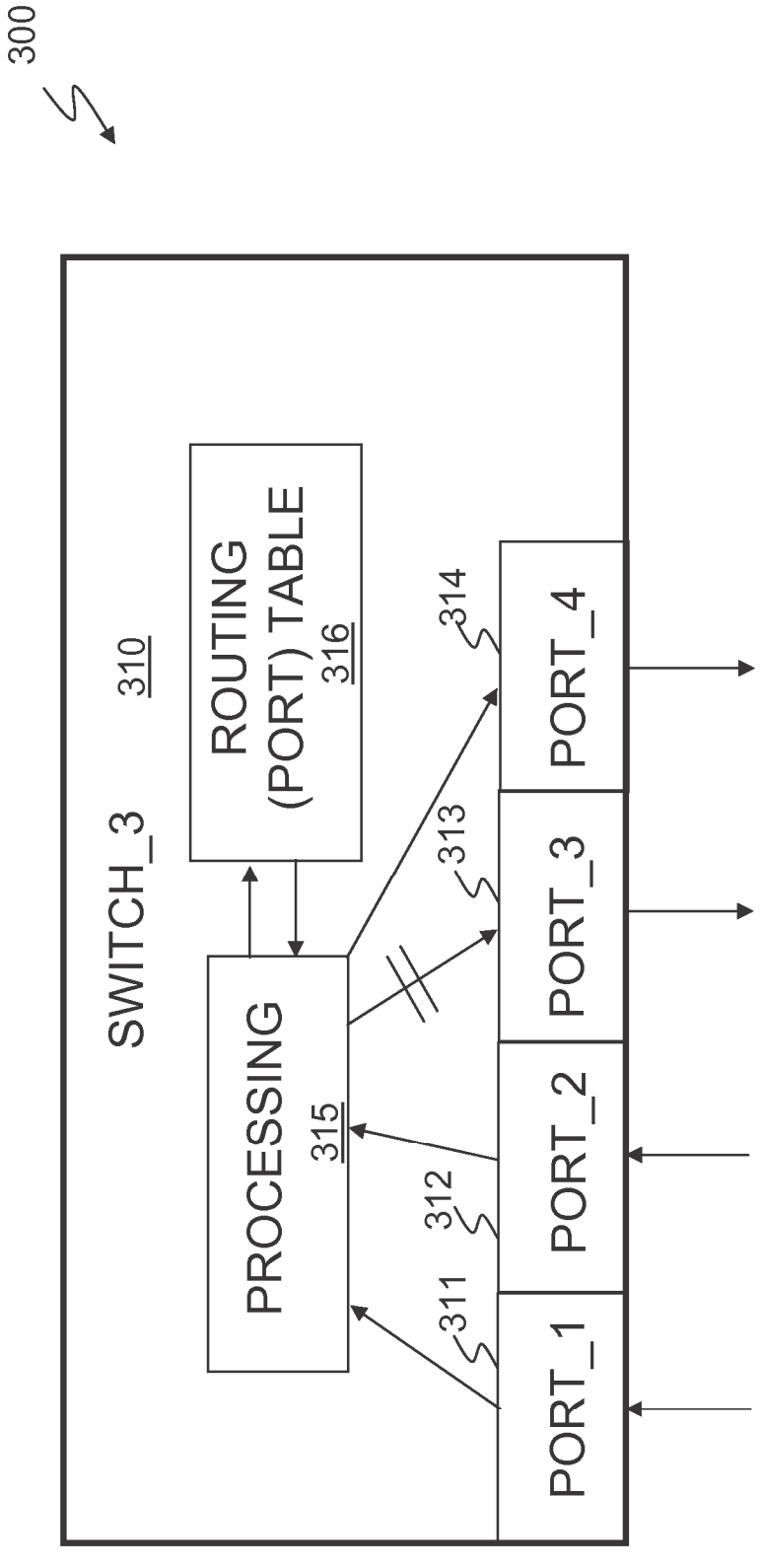
300
SWITCH_3
310
ROUTING
(PORT) TABLE
316
PROCESSING
315
311
312
313
314
PORT_1
PORT_2
PORT_3
PORT_4
VLAN_2
TAGGED
(FROM SW_4)
VLAN_1
TAGGED
(FROM SW_1)
(OPTIONAL)

FIG. 3

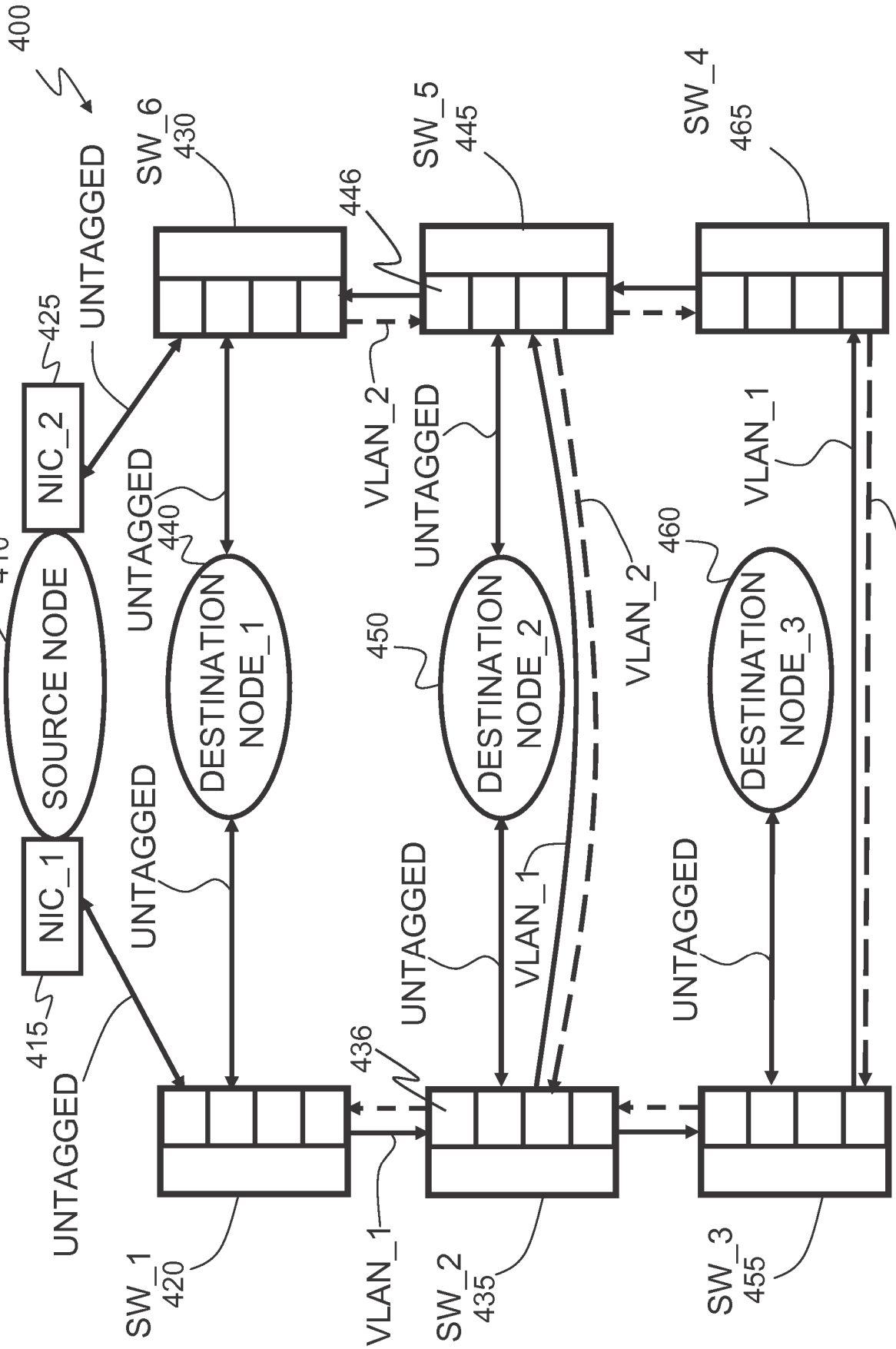
400
SW_6
430
SW_5
445
SW_4
465
446
425
UNTAGGED
NIC_2
410
SOURCE NODE
NIC_1
415
UNTAGGED
UNTAGGED
440
DESTINATION NODE_1
UNTAGGED
VLAN_2
UNTAGGED
450
DESTINATION NODE_2
VLAN_2
460
VLAN_1
DESTINATION NODE_3
VLAN_2
UNTAGGED
436
UNTAGGED
VLAN_1
UNTAGGED
SW_1
420
VLAN_1
SW_2
435
SW_3
455

FIG. 4

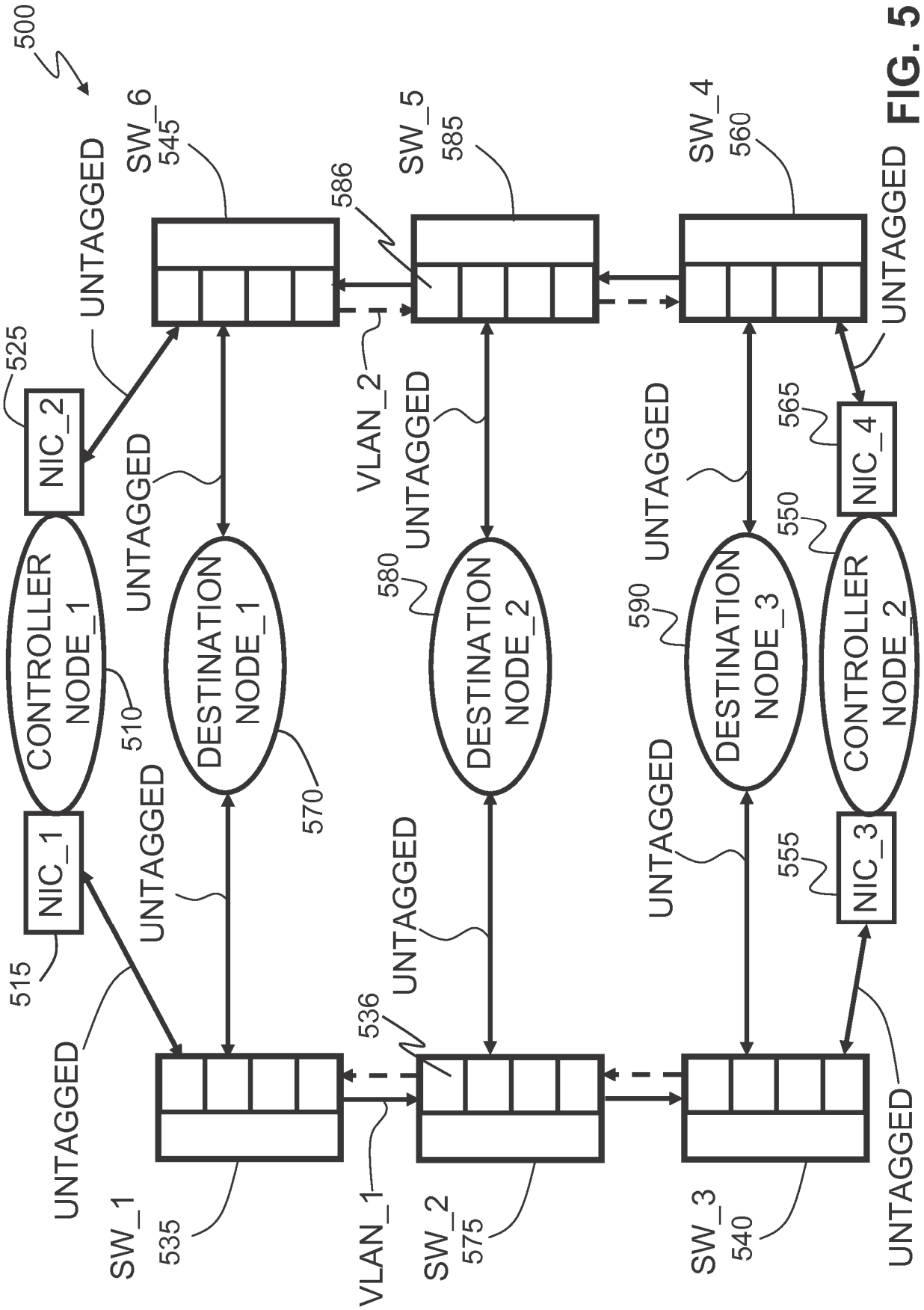
500
SW_6
545
SW_5
585
SW_4
560
586
UNTAGGED
UNTAGGED
525
NIC_2
VLAN_2
UNTAGGED
565
NIC_4
UNTAGGED
UNTAGGED
580
590
550
CONTROLLER NODE_1
510
DESTINATION NODE_1
DESTINATION NODE_2
DESTINATION NODE_3
CONTROLLER NODE_2
570
UNTAGGED
UNTAGGED
UNTAGGED
555
515
NIC_1
NIC_3
536
UNTAGGED
UNTAGGED
SW_1
535
VLAN_1
SW_2
575
SW_3
540
UNTAGGED

FIG. 5

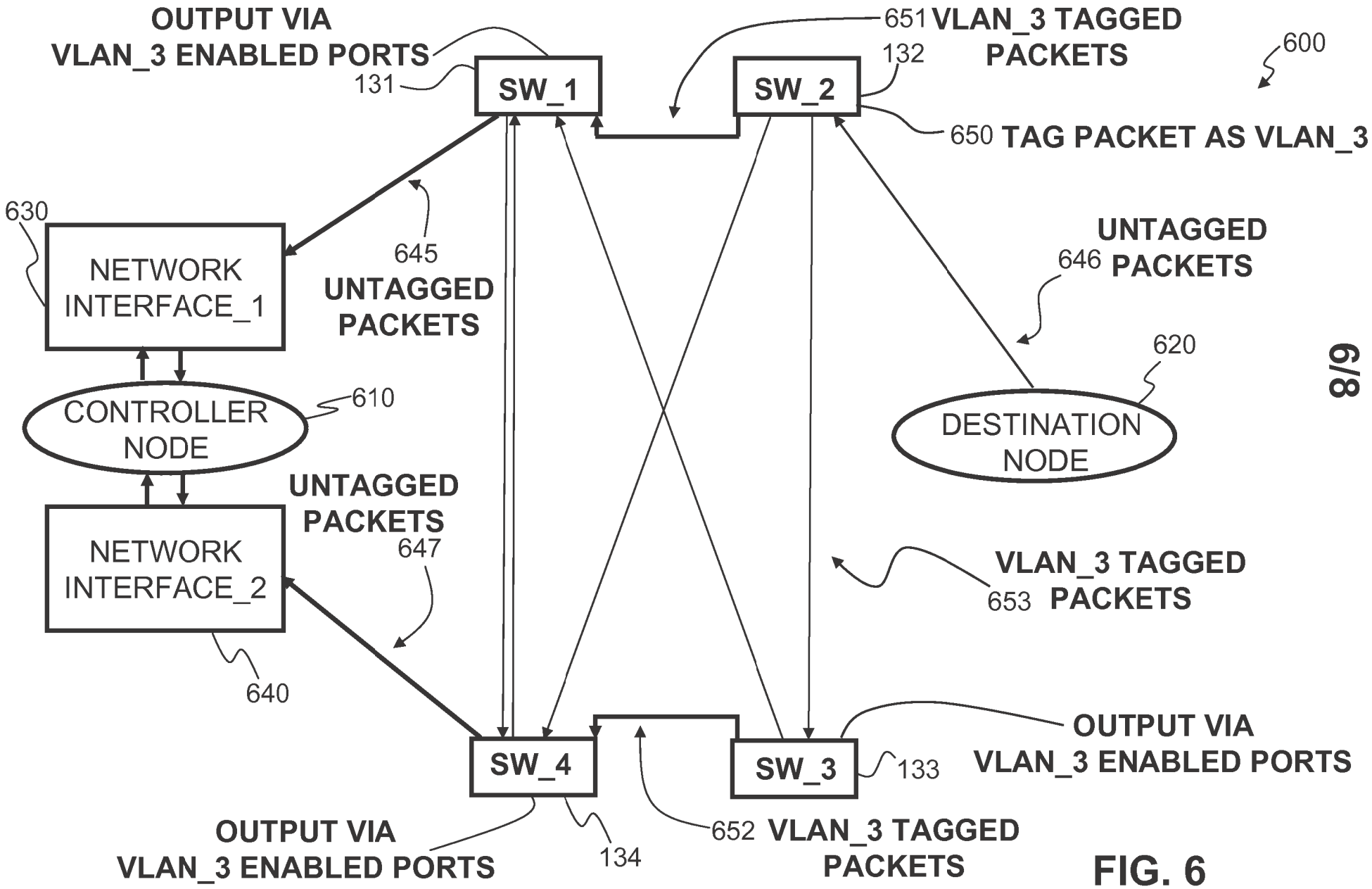
OUTPUT VIA
VLAN_3 ENABLED PORTS
131
SW_1
651 VLAN_3 TAGGED
PACKETS
132
SW_2
600
650 TAG PACKET AS VLAN_3
630
NETWORK
INTERFACE_1
645
UNTAGGED
PACKETS
UNTAGGED
646 PACKETS
620
CONTROLLER
NODE
610
DESTINATION
NODE
UNTAGGED
PACKETS
647
NETWORK
INTERFACE_2
VLAN_3 TAGGED
653 PACKETS
640
SW_4
SW_3
133
OUTPUT VIA
VLAN_3 ENABLED PORTS
OUTPUT VIA
VLAN_3 ENABLED PORTS
134
652 VLAN_3 TAGGED
PACKETS

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FIG. 6

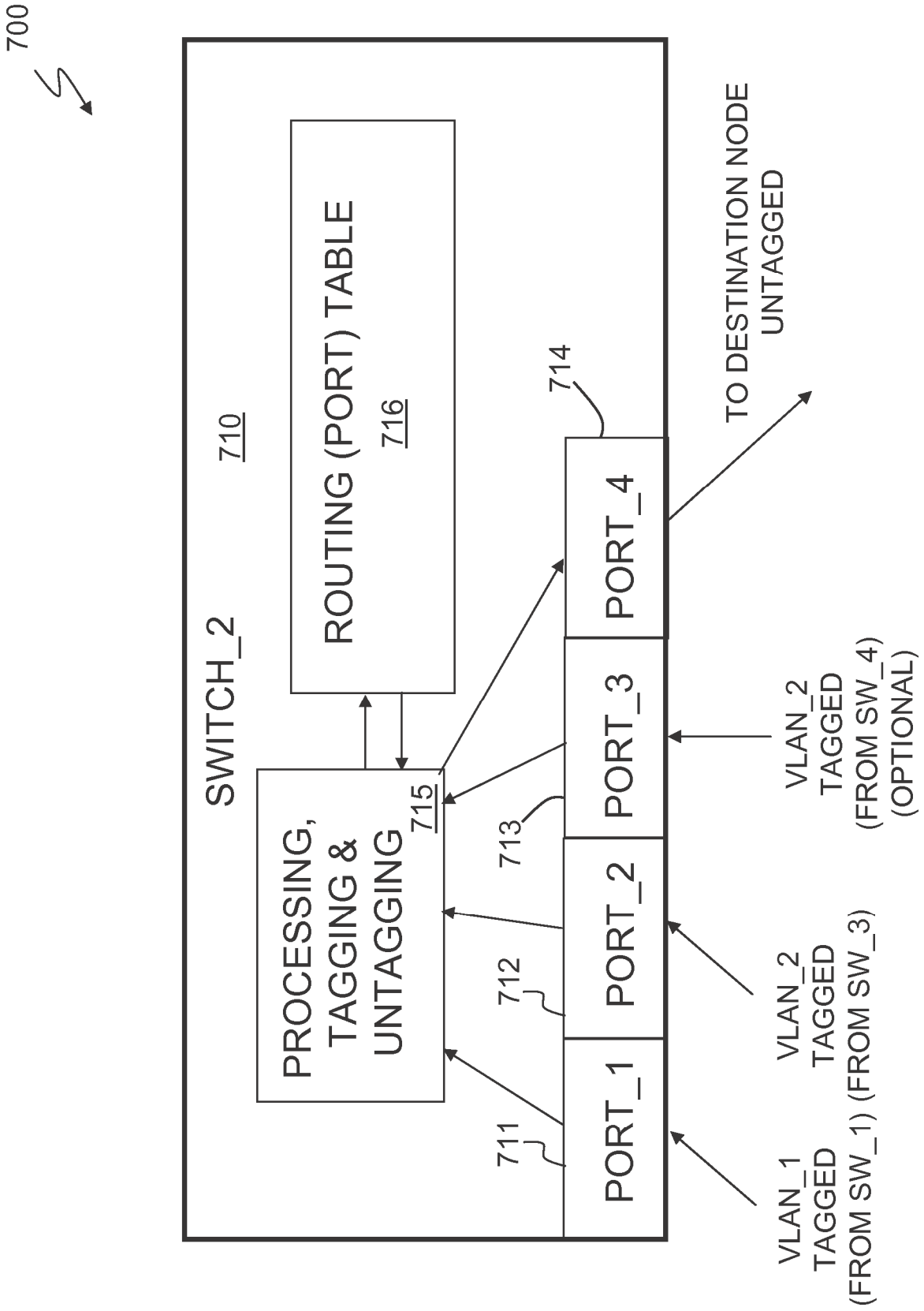
700
SWITCH_2
710
ROUTING (PORT) TABLE
716
PROCESSING, TAGGING & UNTAGGING
715
711
712
713
714
PORT_1
PORT_2
PORT_3
PORT_4
VLAN_1 TAGGED (FROM SW_1)
VLAN_2 TAGGED (FROM SW_3)
VLAN_2 TAGGED (FROM SW_4) (OPTIONAL)
TO DESTINATION NODE UNTAGGED

FIG. 7A

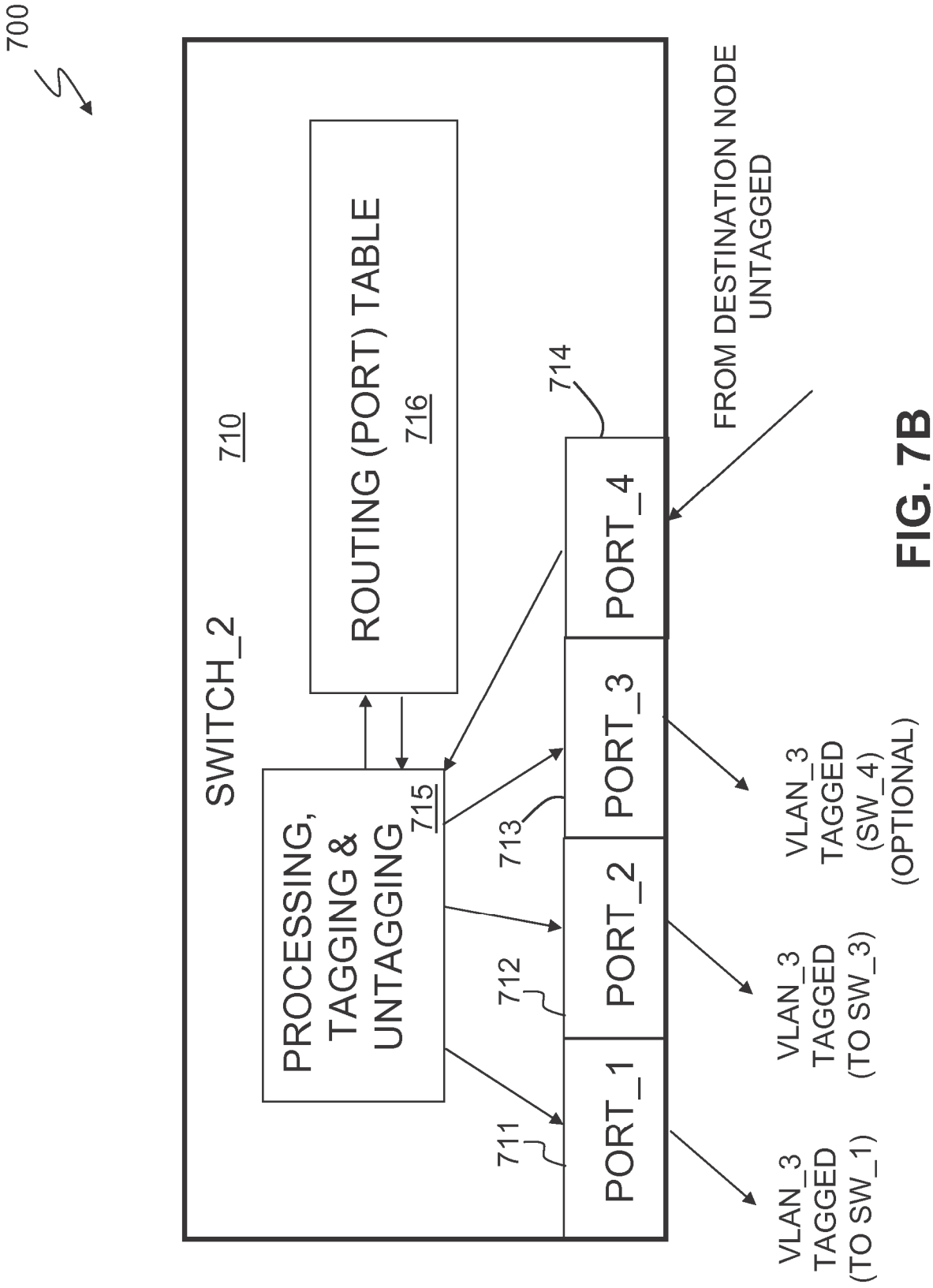
700
SWITCH_2
710
ROUTING (PORT) TABLE
716
PROCESSING, TAGGING & UNTAGGING
715
711
712
713
714
PORT_1
PORT_2
PORT_3
PORT_4
FROM DESTINATION NODE
UNTAGGED
VLAN_3 TAGGED (TO SW_1)
VLAN_3 TAGGED (TO SW_3)
VLAN_3 TAGGED (SW_4) (OPTIONAL)

FIG. 7B