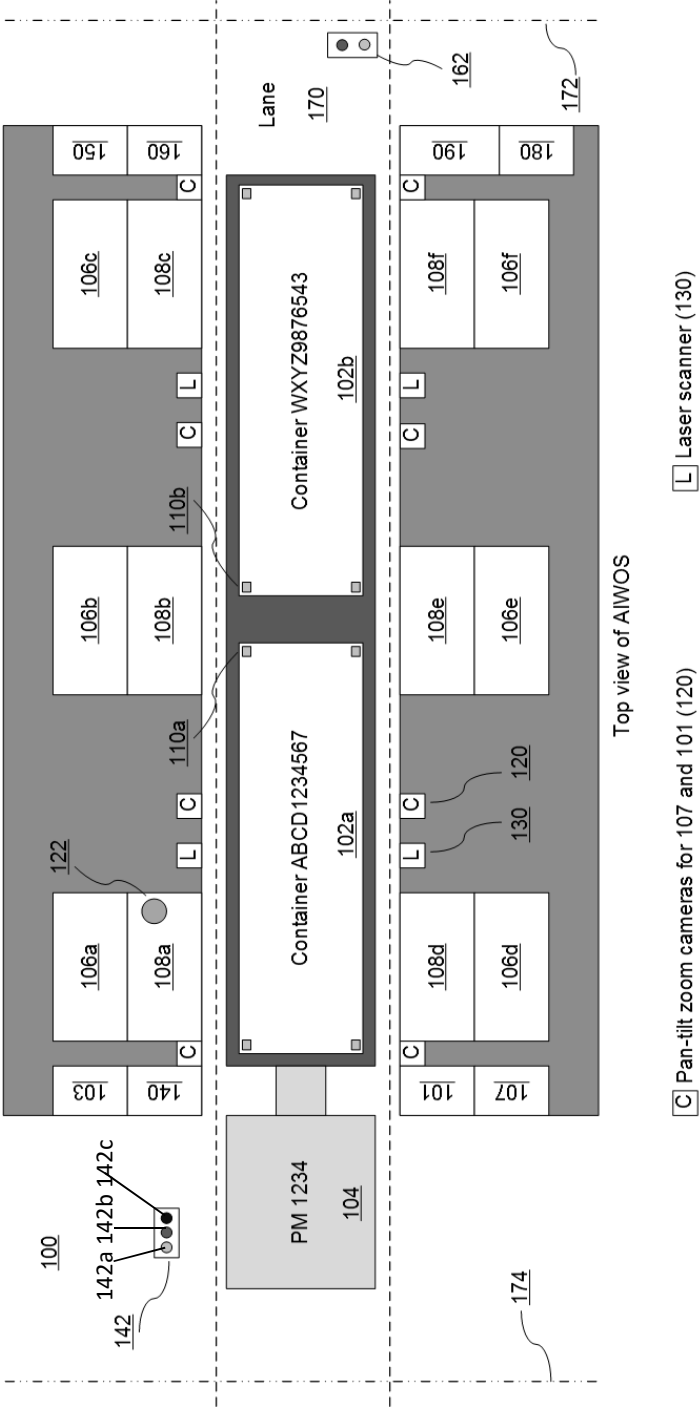


Figure 1



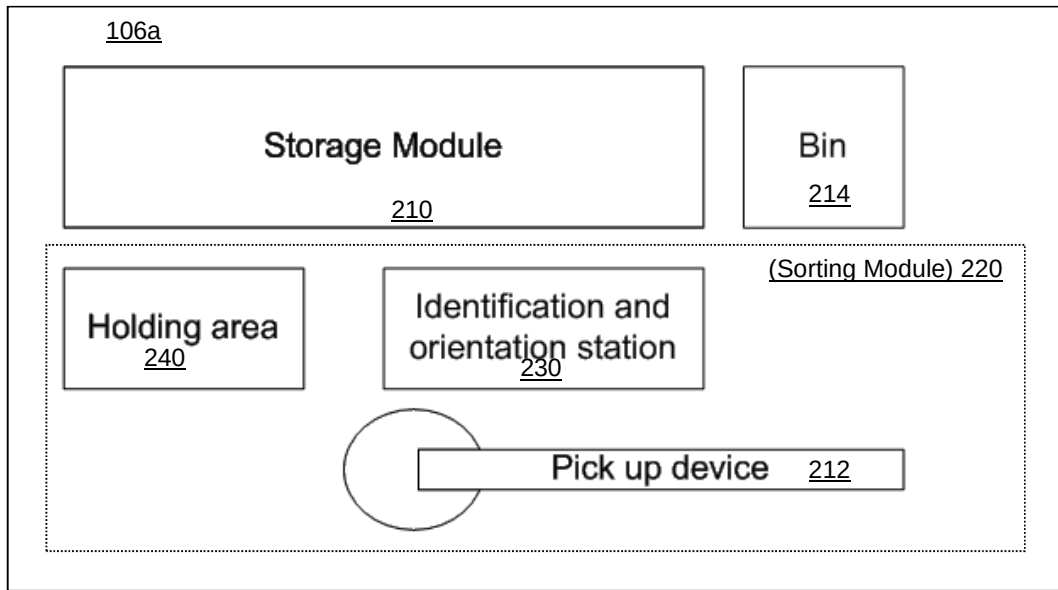
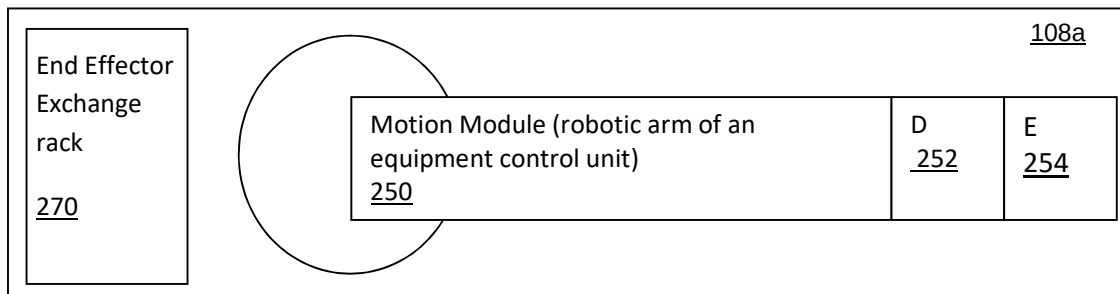


Figure 2

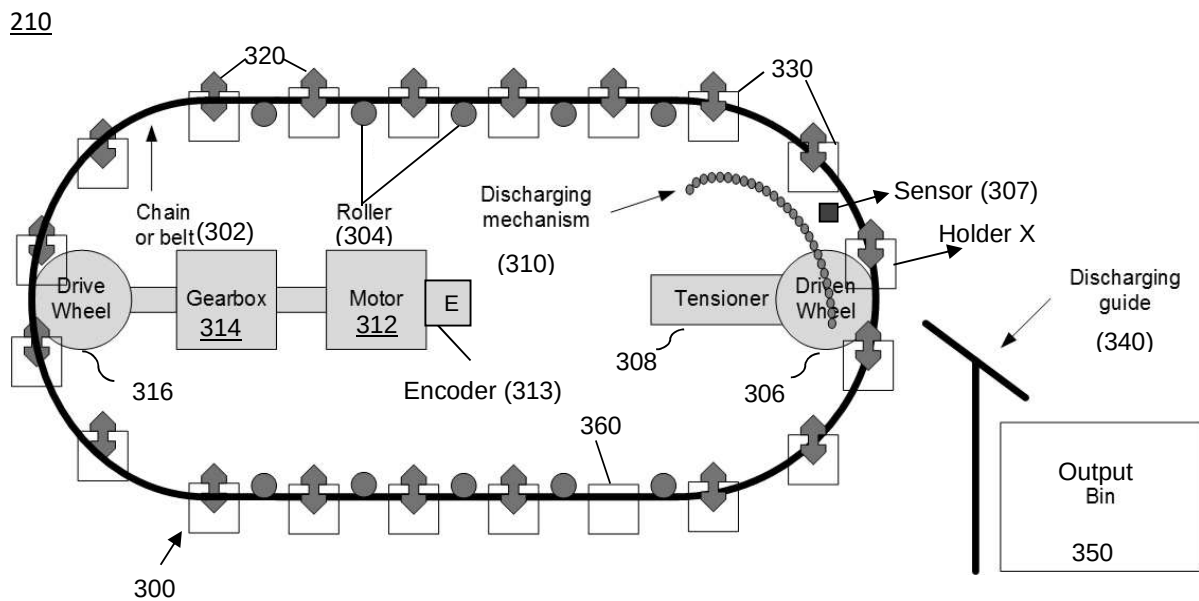


Figure 3A (Side View)

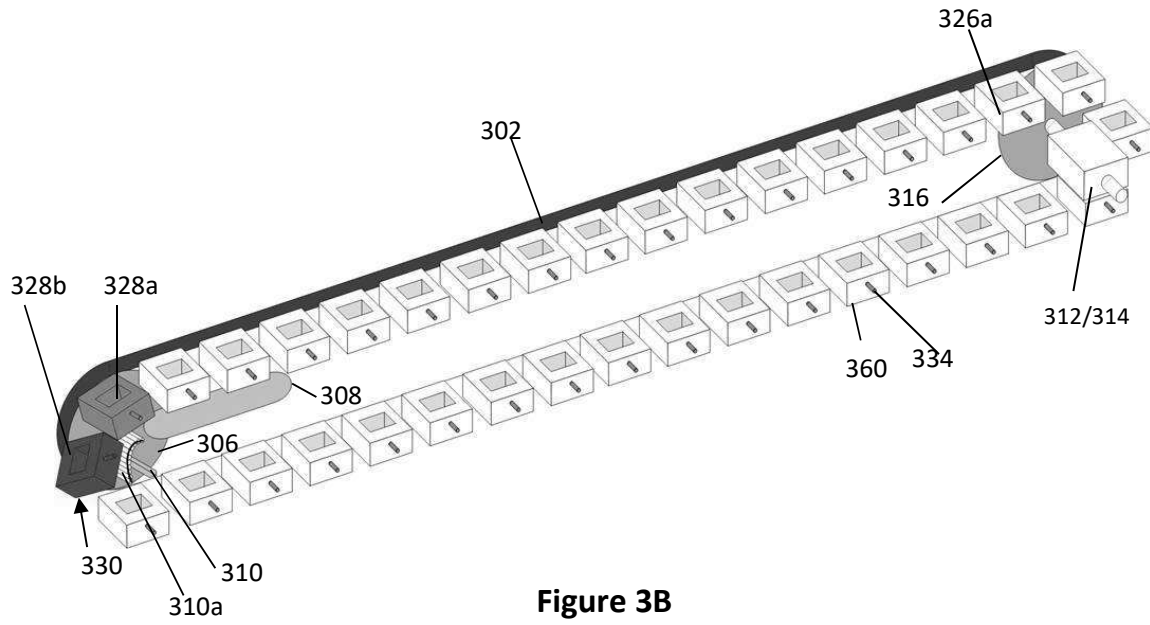


Figure 3B

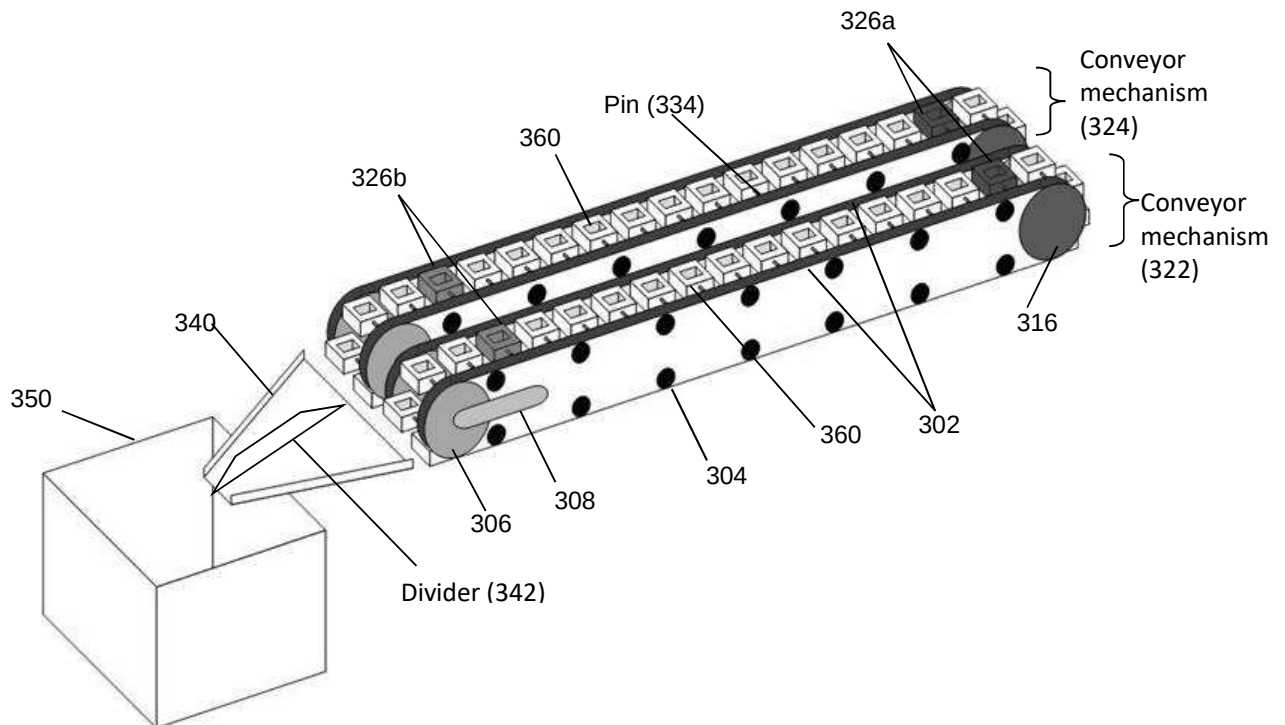


Figure 3C

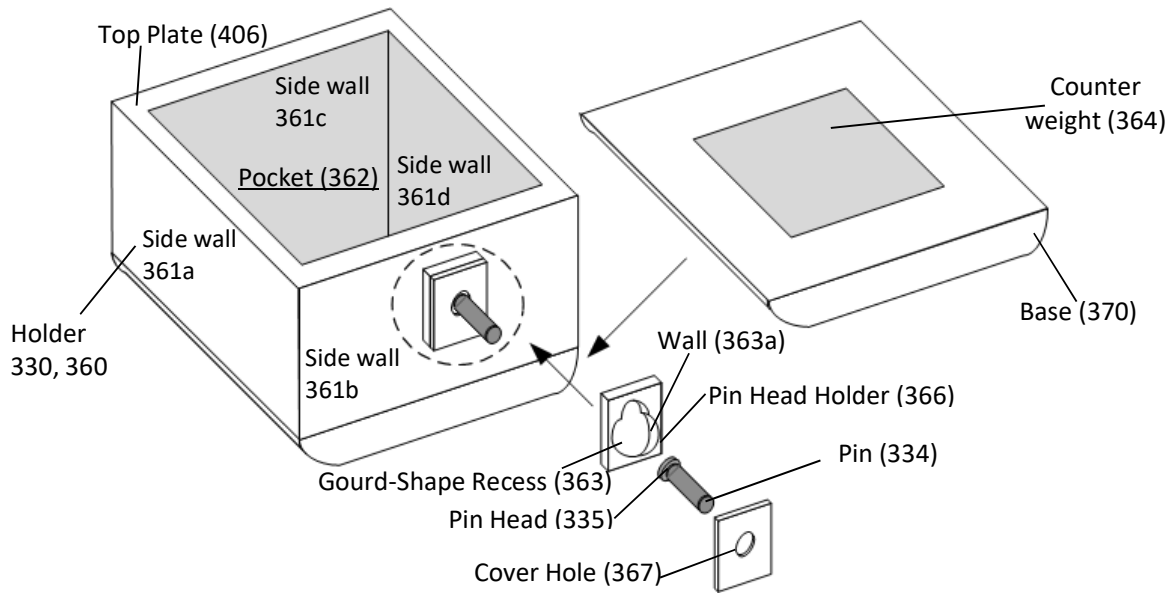


Figure 3D

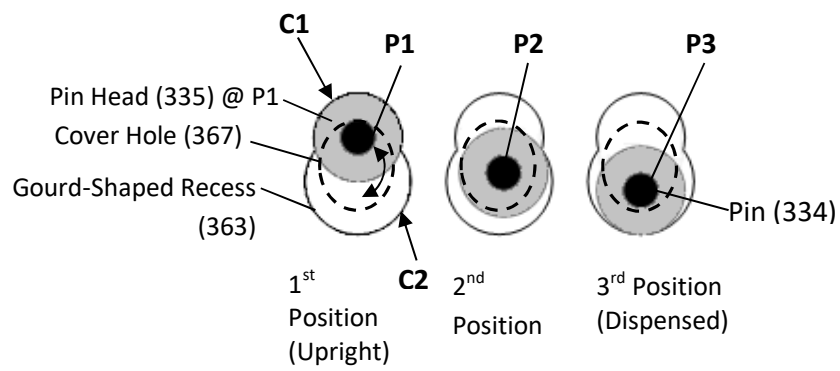


Figure 3E

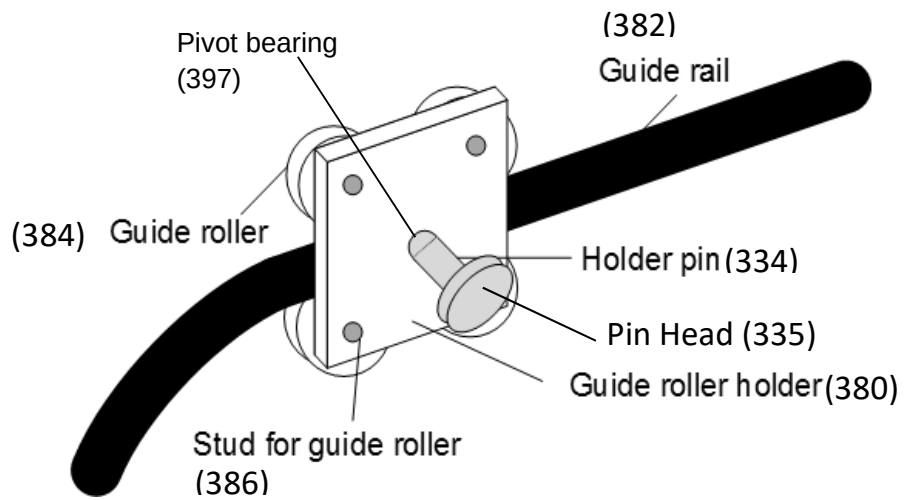
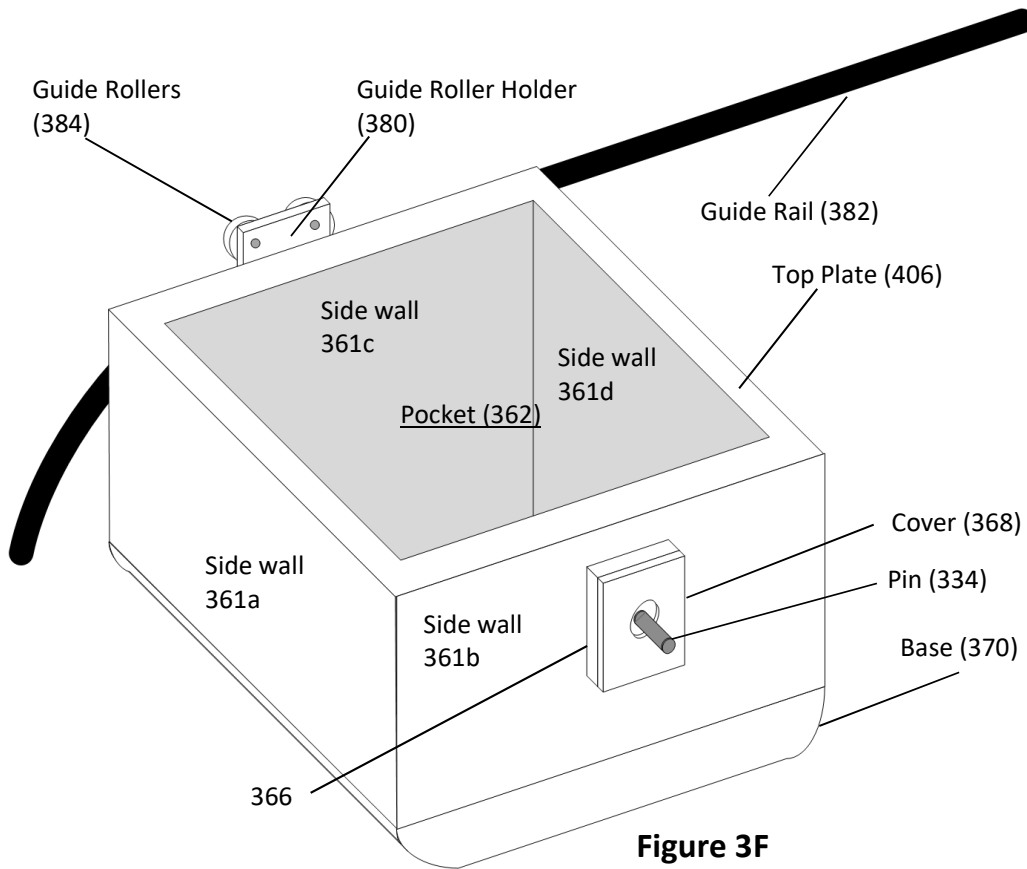


Figure 3G

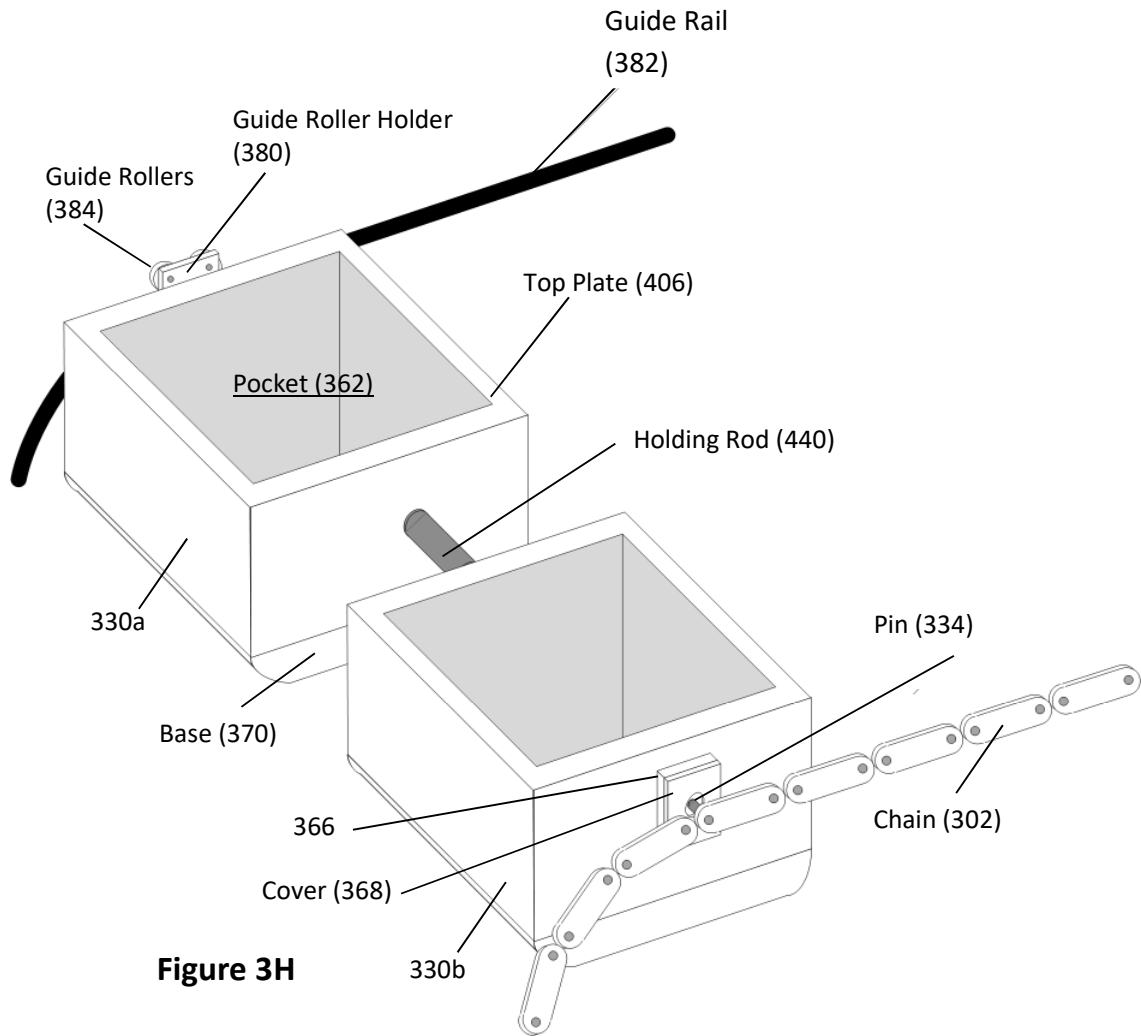


Figure 3H

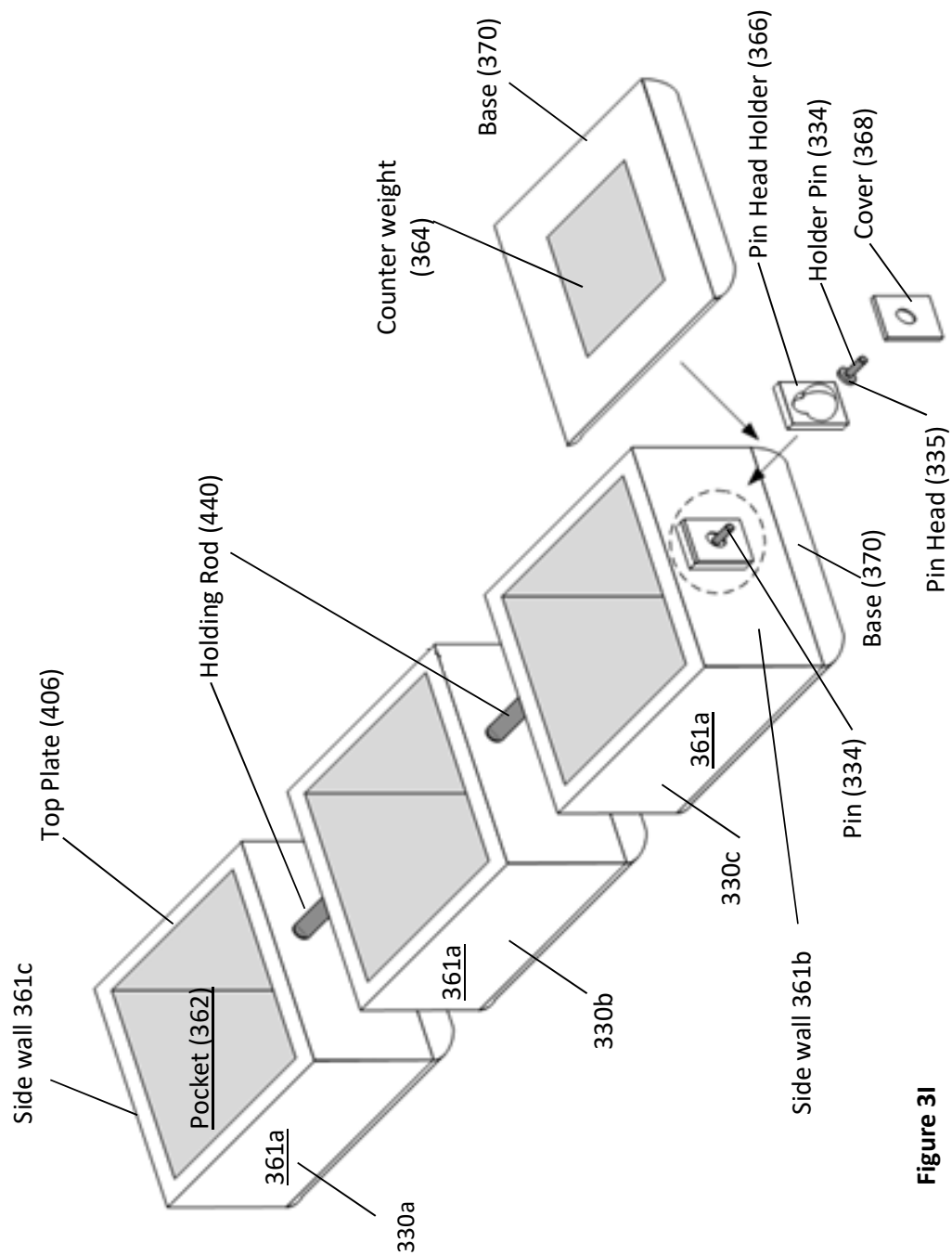


Figure 3I

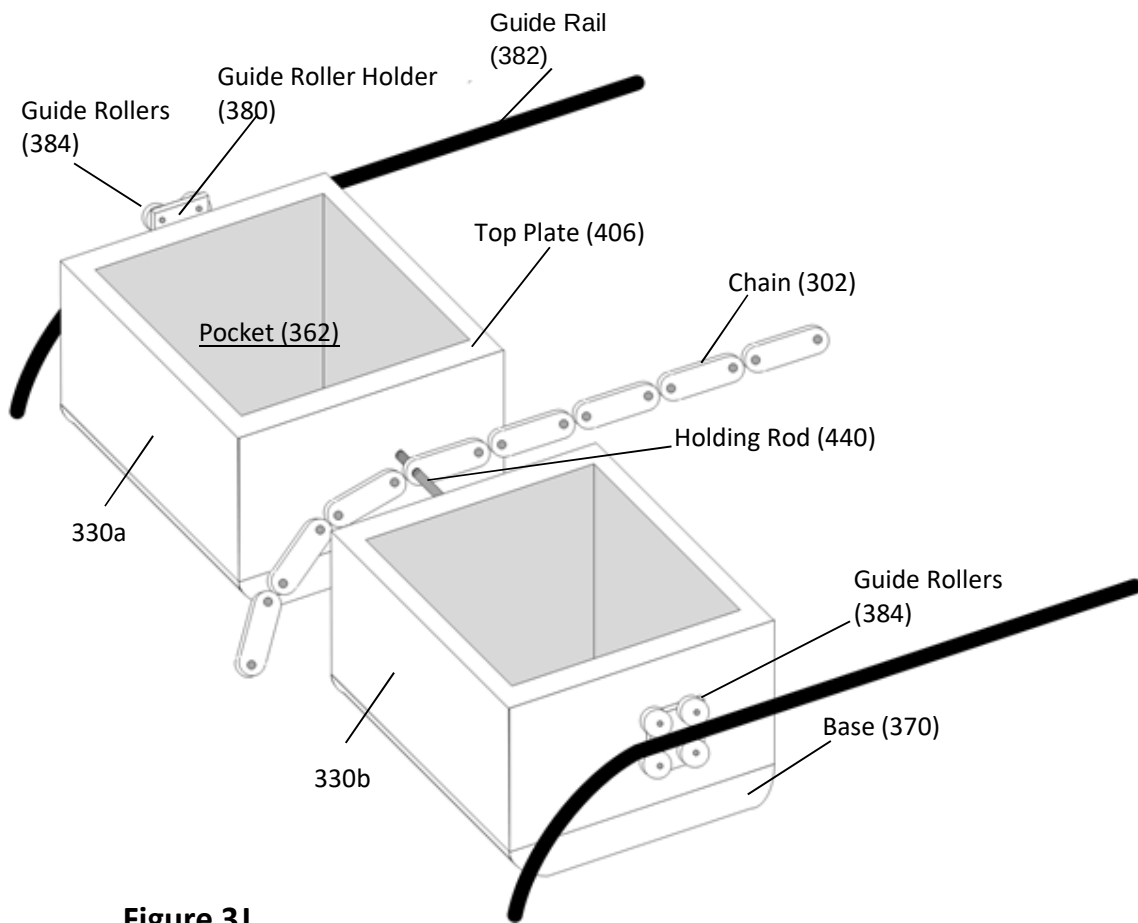


Figure 3J

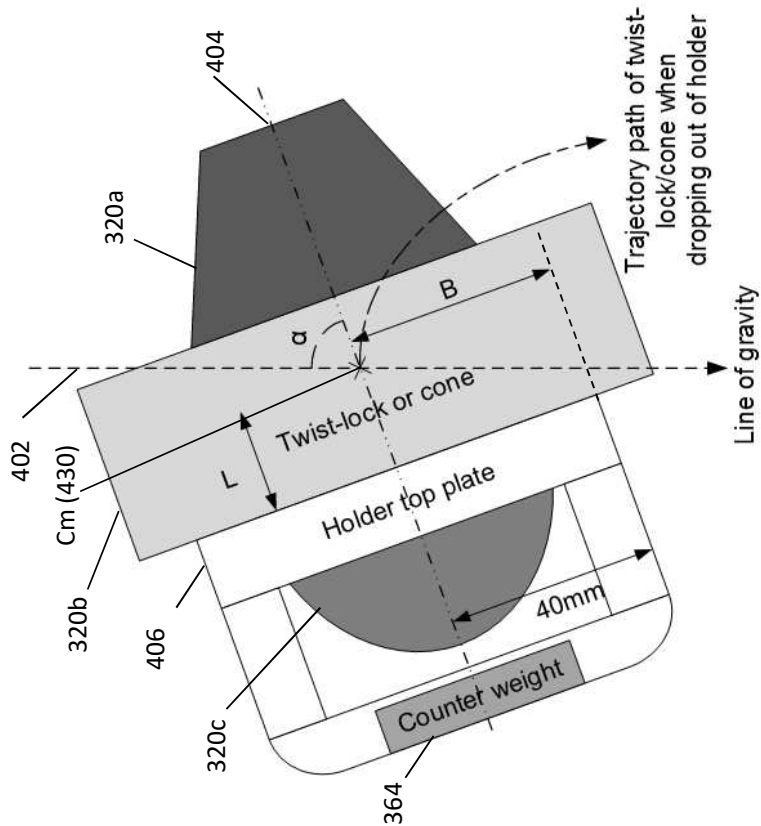


Figure 4B

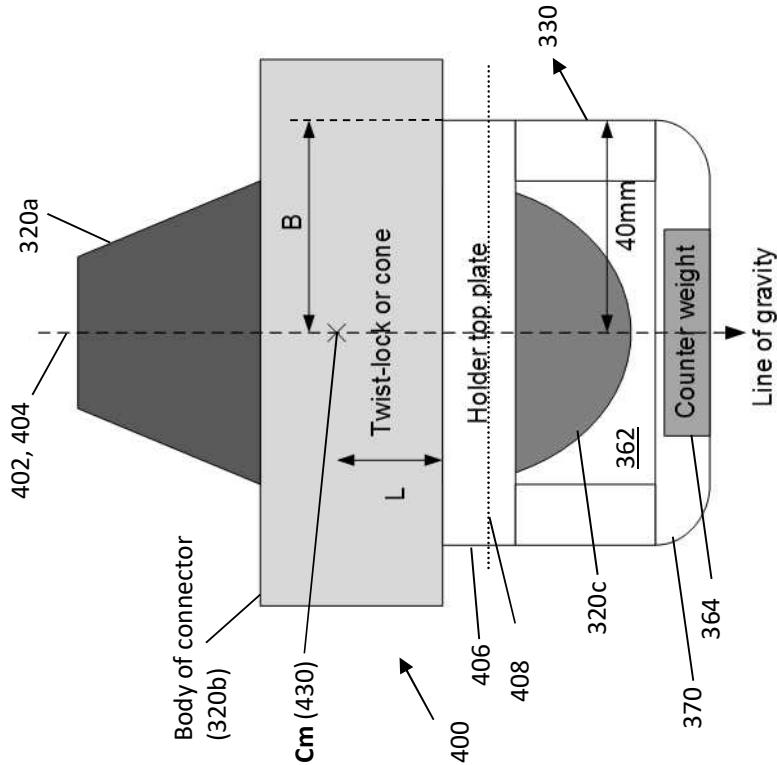


Figure 4A

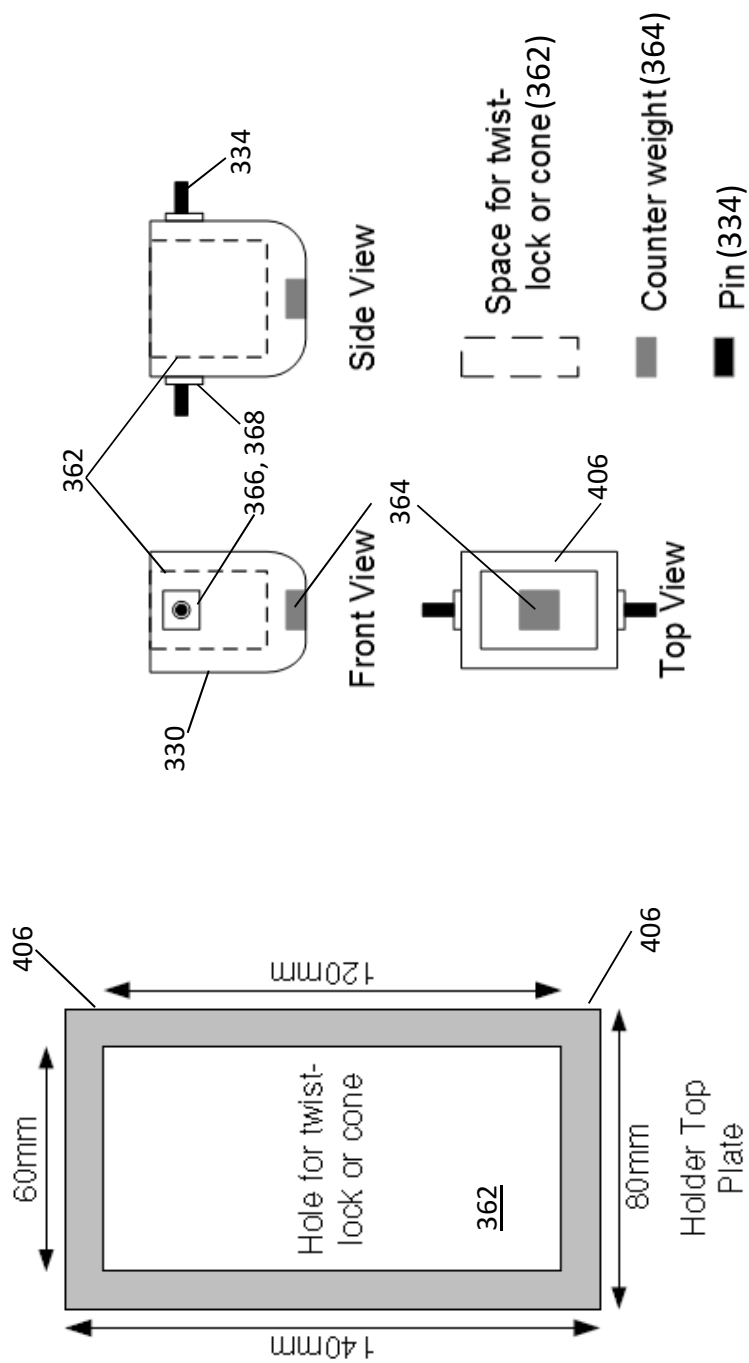


Figure 4D

Figure 4C

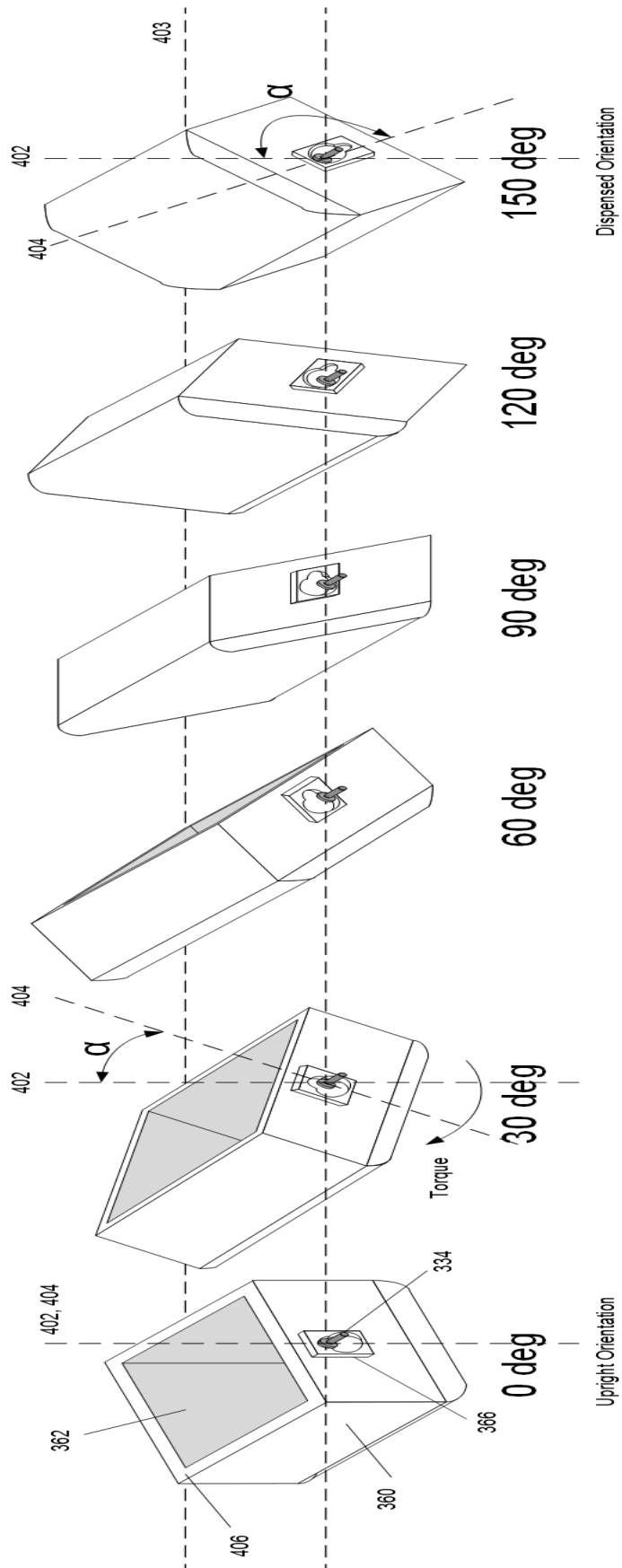


Figure 4E

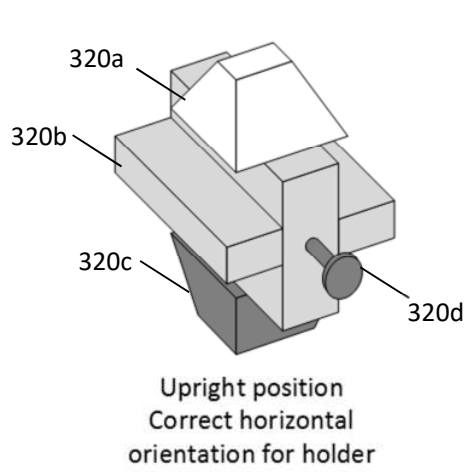


Figure 5A

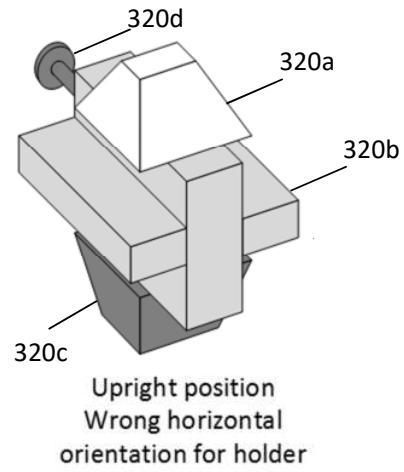


Figure 5C

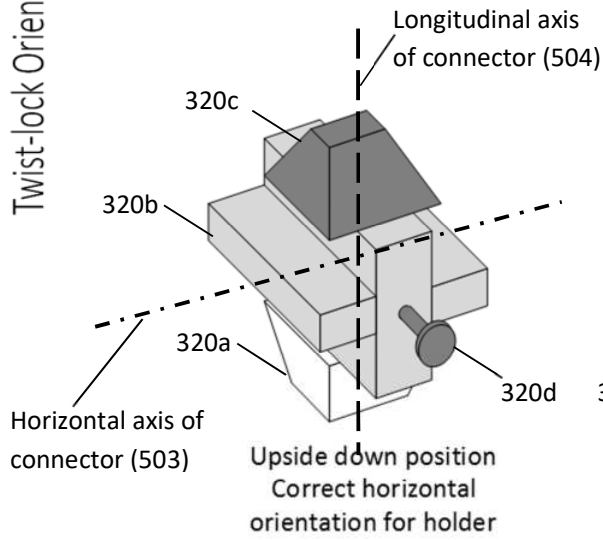


Figure 5B

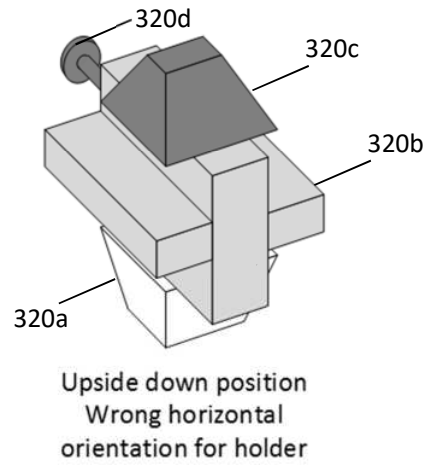


Figure 5D

Orientation Unit (232)

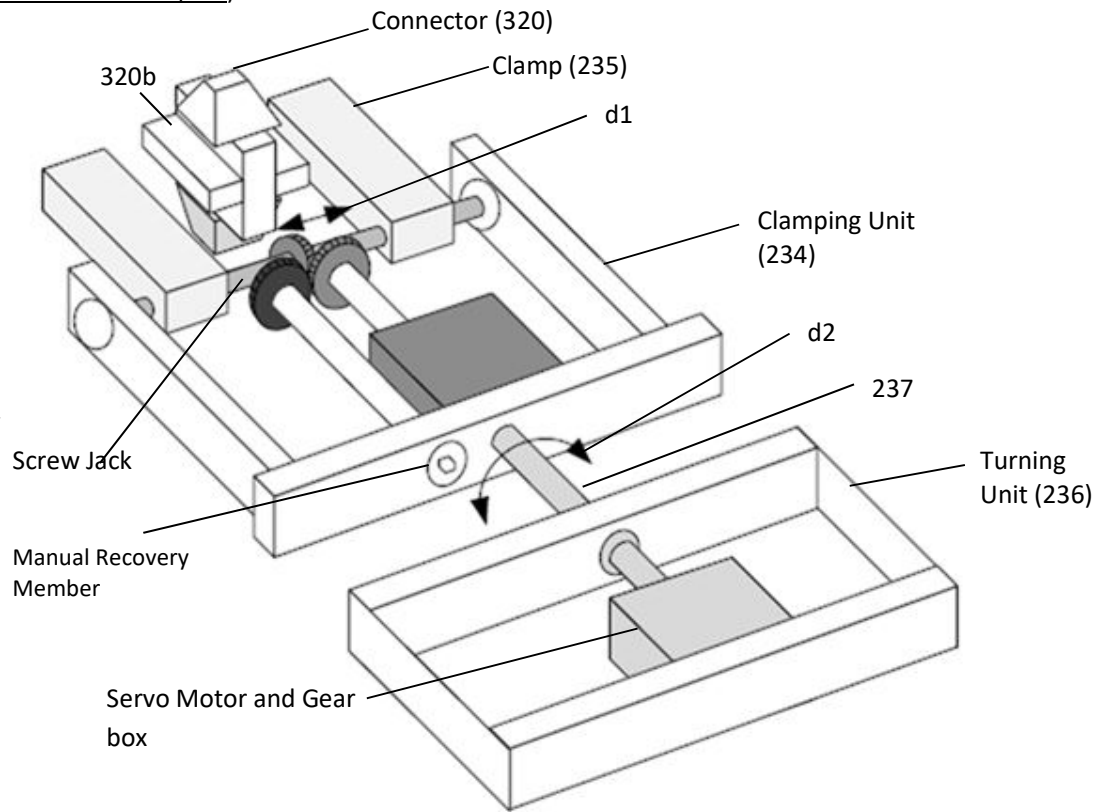


Figure 5E

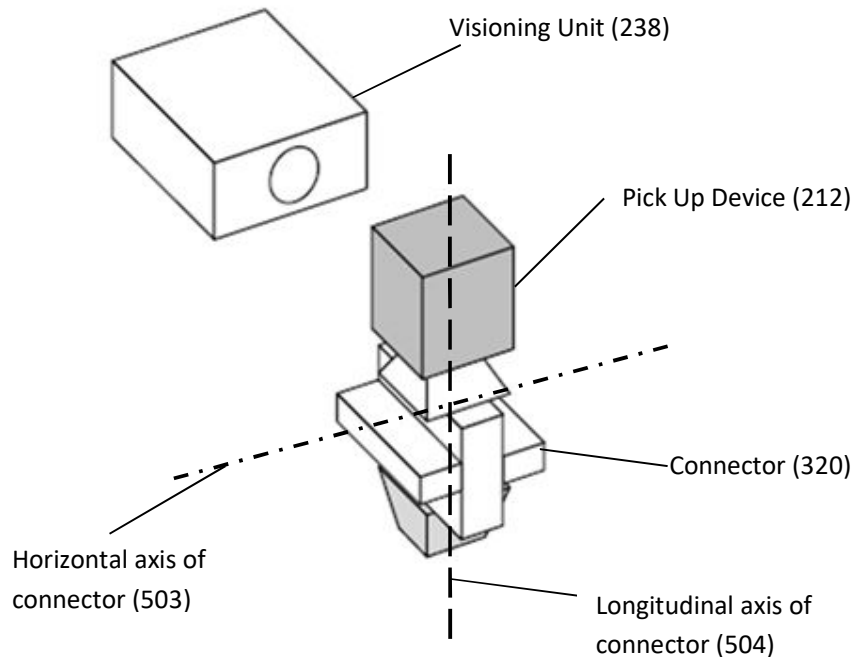
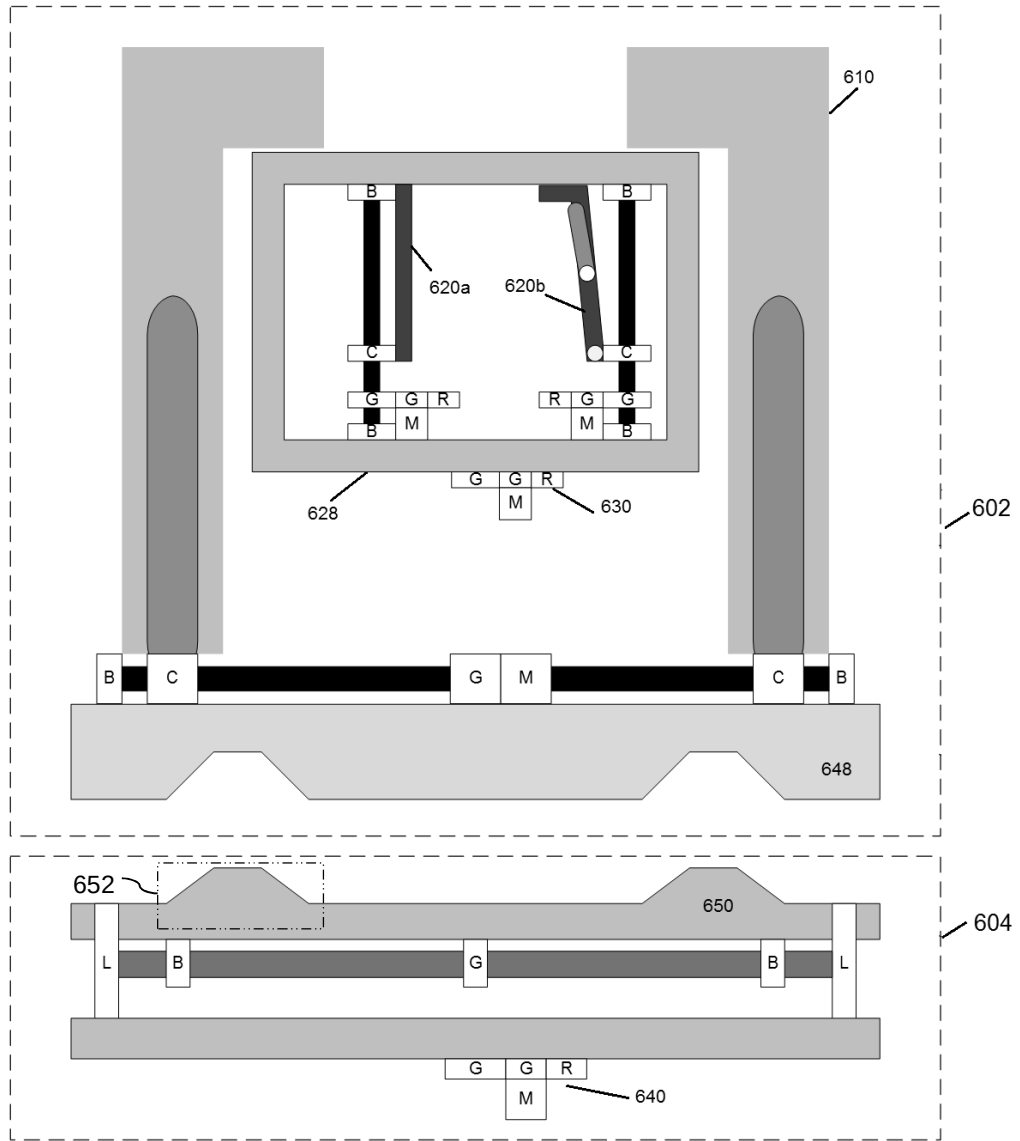


Figure 5F

600



Side view of End effector



Figure 6A

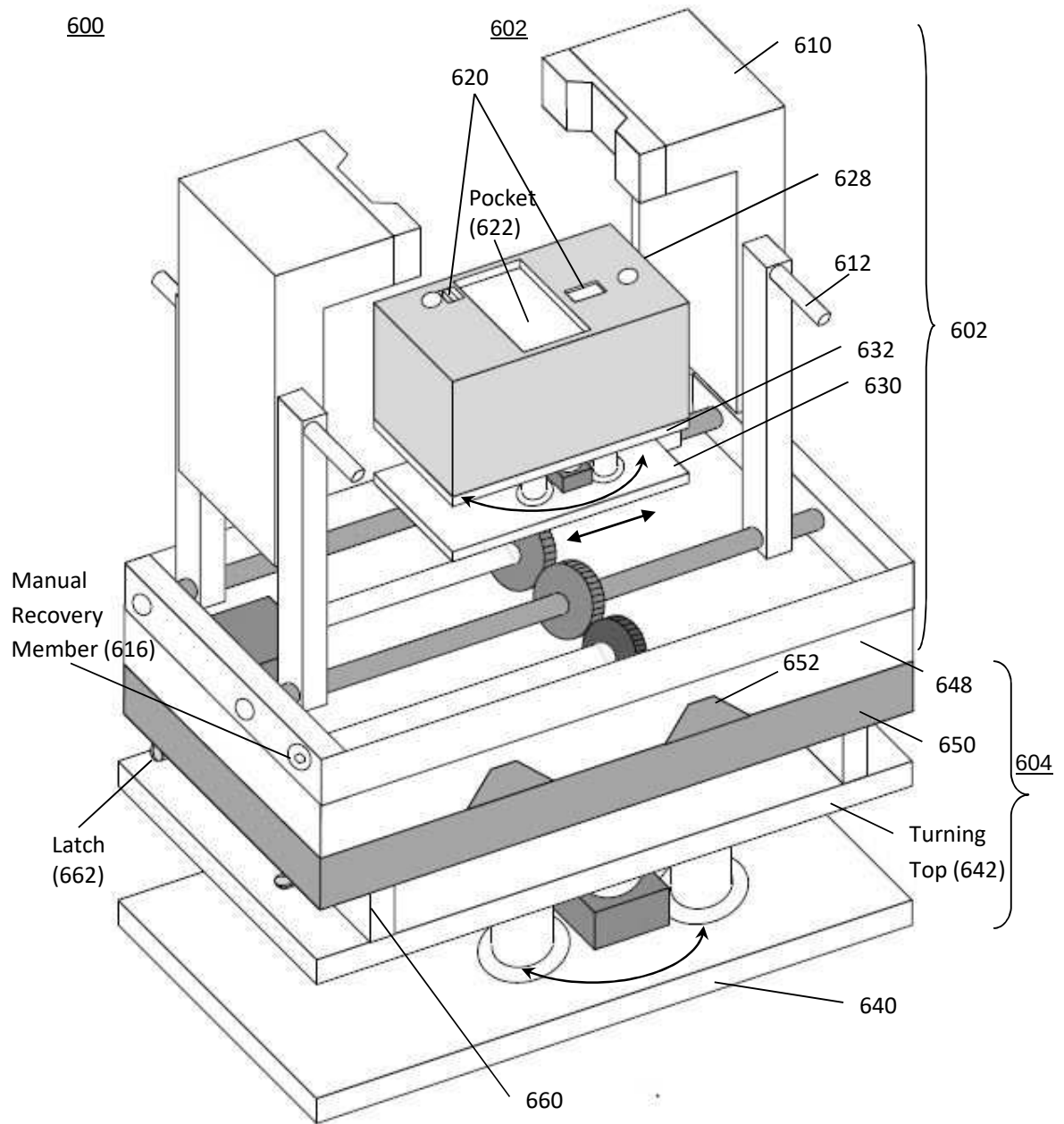


Figure 6B

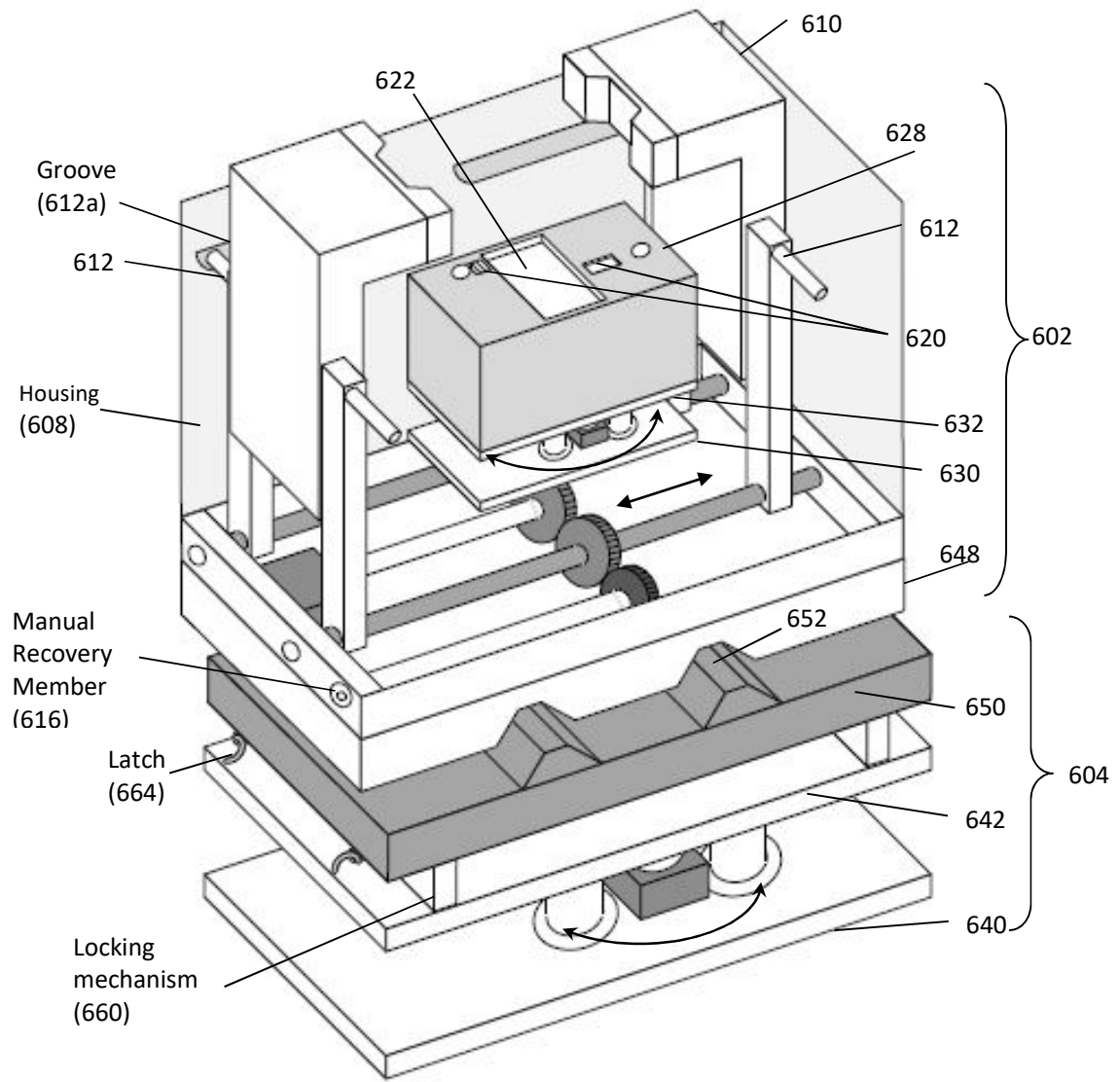


Figure 6C

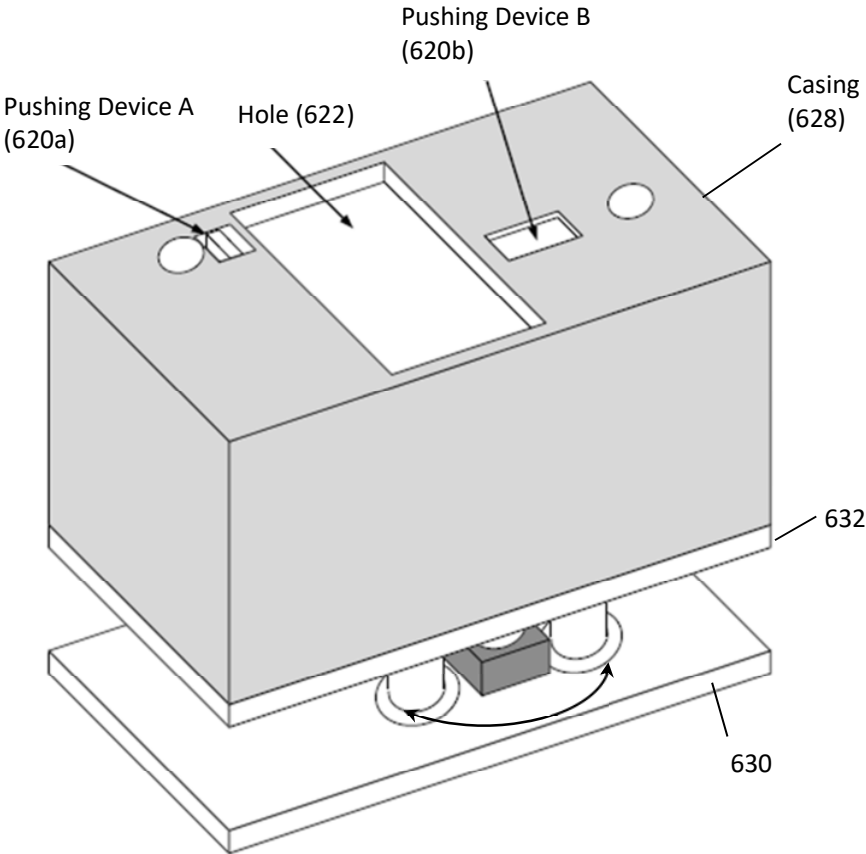


Figure 6D

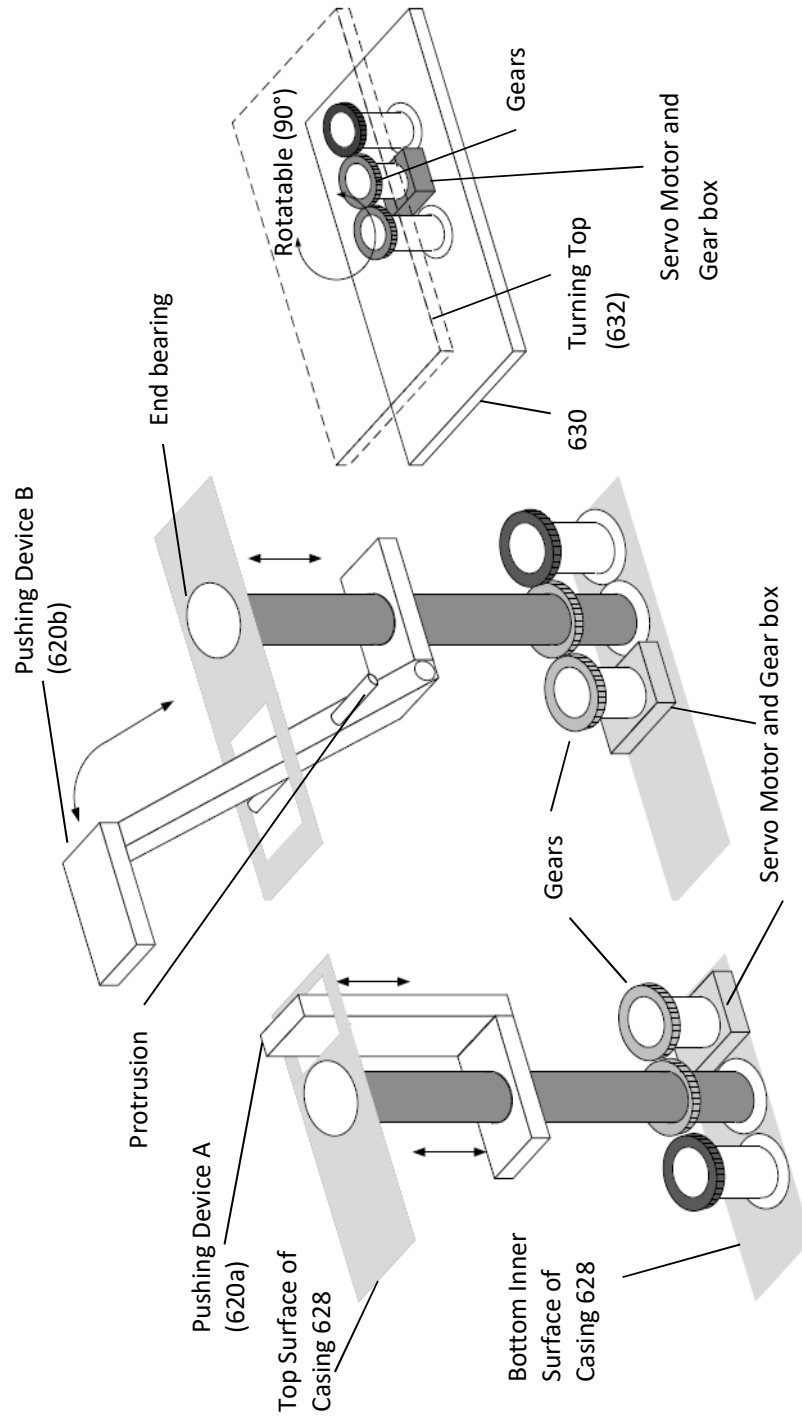


Figure 6G (90°)

Figure 6F

Figure 6E

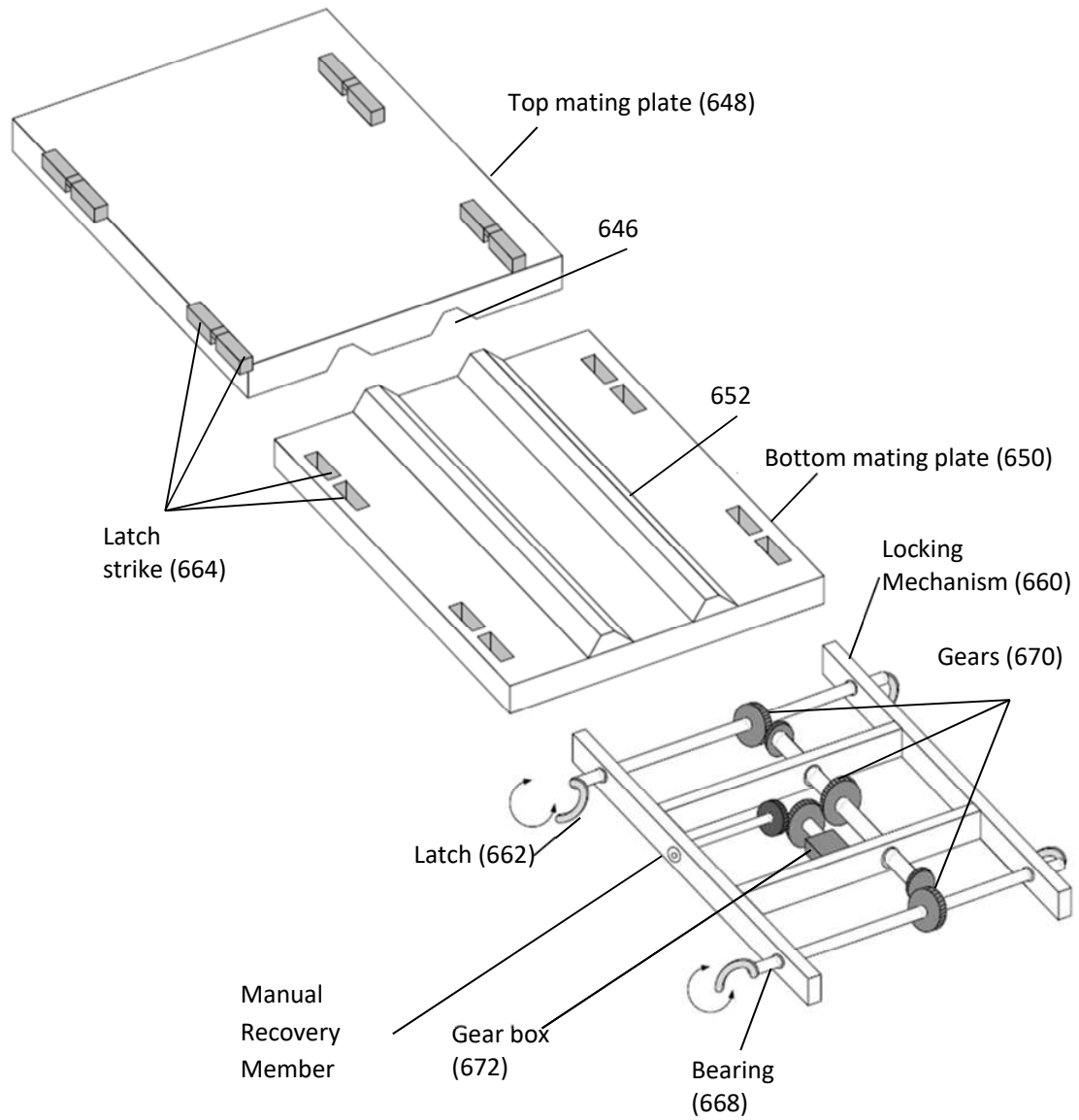


Figure 6H

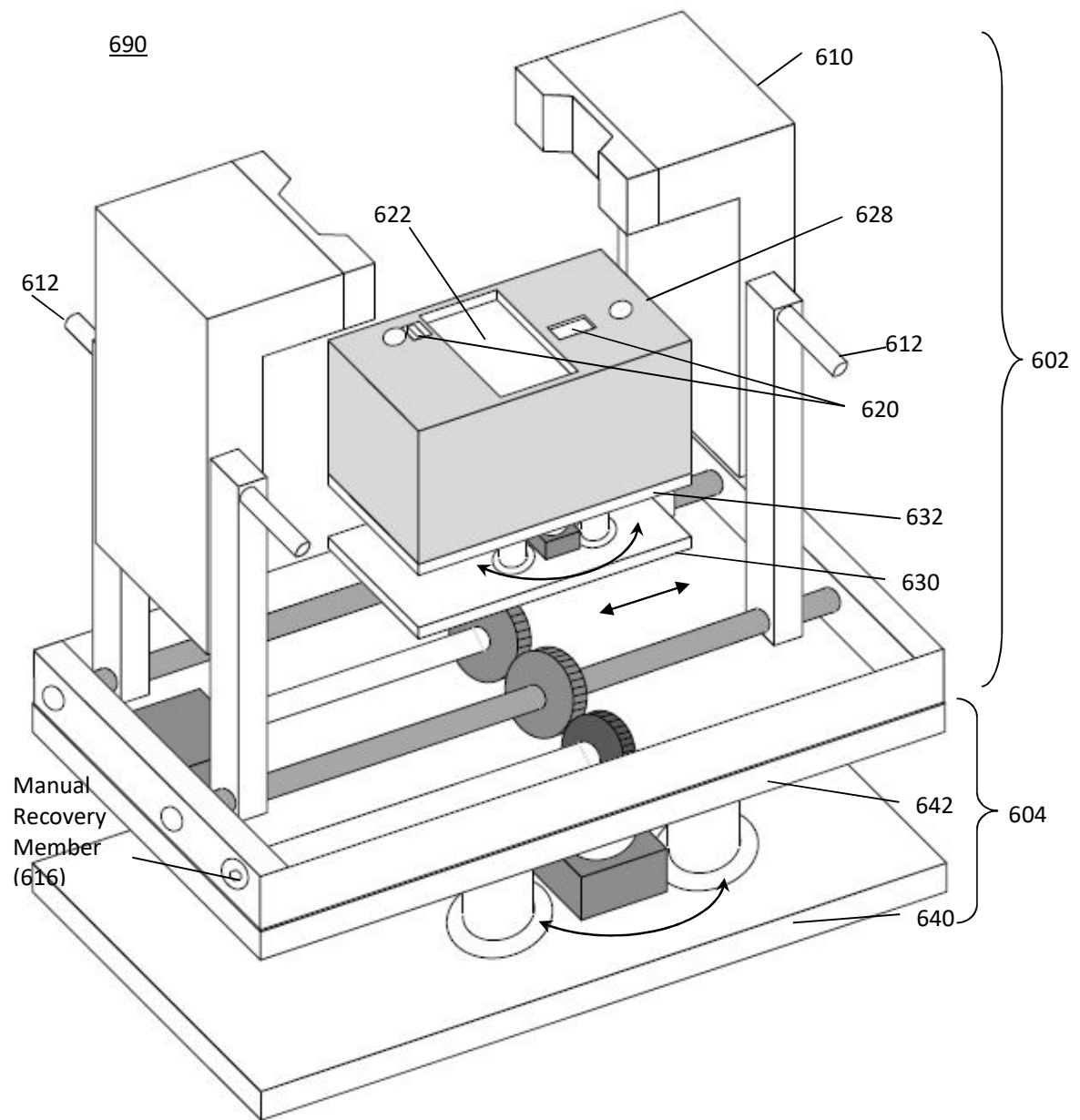
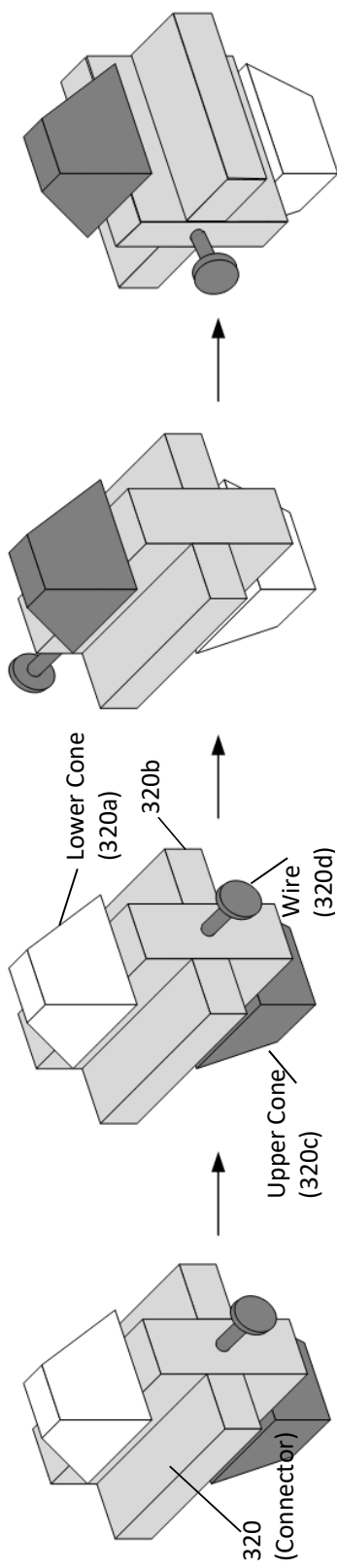


Figure 6I



Twist-lock in holder

Twist-lock taken out of holder by end effector (end effector in upside down orientation)

End effector in upright position for coning

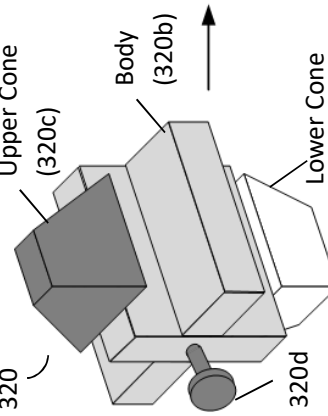
Twist-lock inside corner casting (turned 90 degrees).

Figure 7A

Figure 7B

Figure 7C

Figure 7D



Twist-lock in corner casting

Twist-lock taken out of corner casting by end effector (turned 90 degrees)

End effector in upside position ready to put twist-lock into holder

Twist-lock inside holder

Figure 7E

Figure 7F

Figure 7G

Figure 7H

Figure 8A

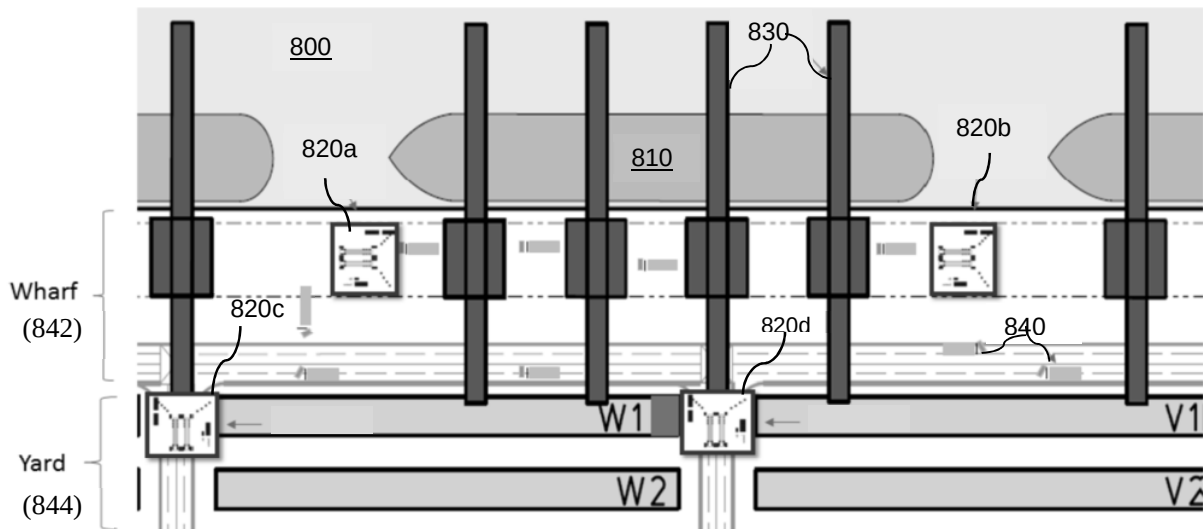


Figure 8B

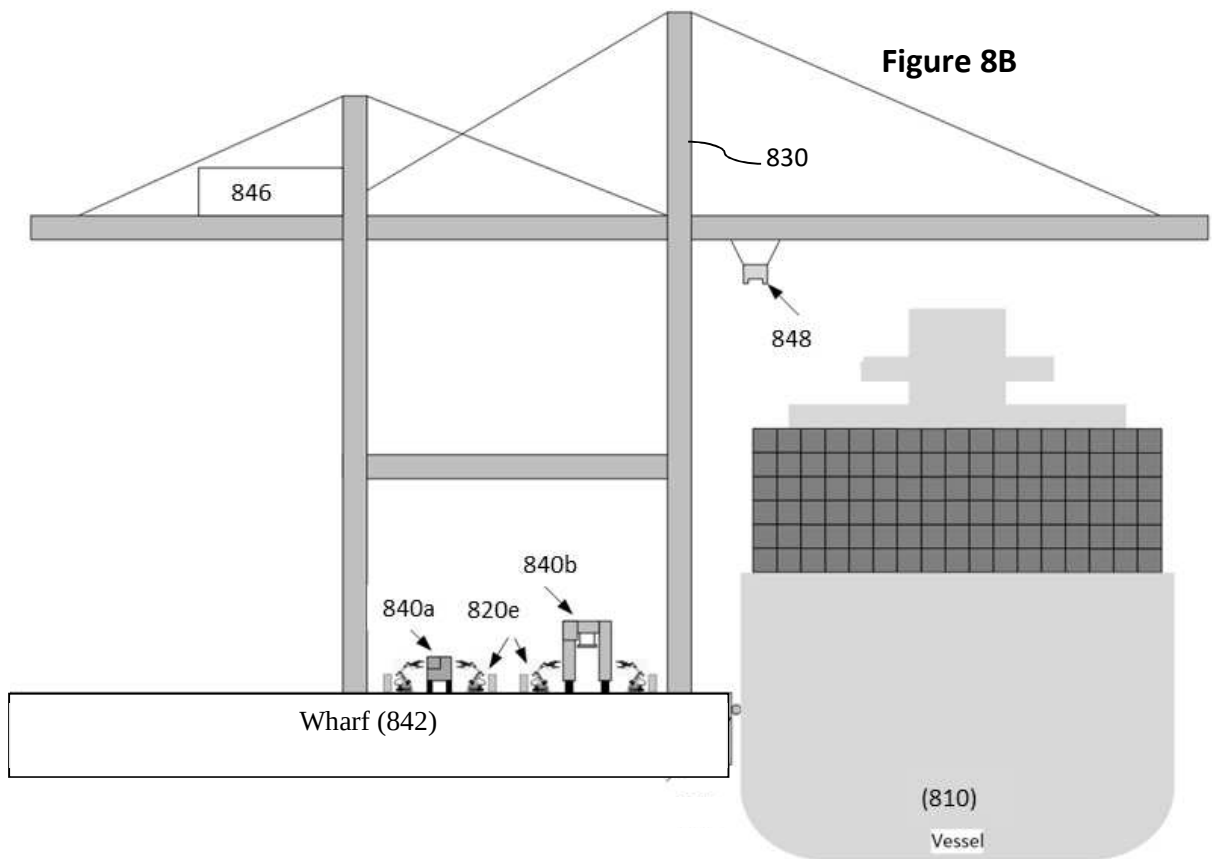


Figure 8C

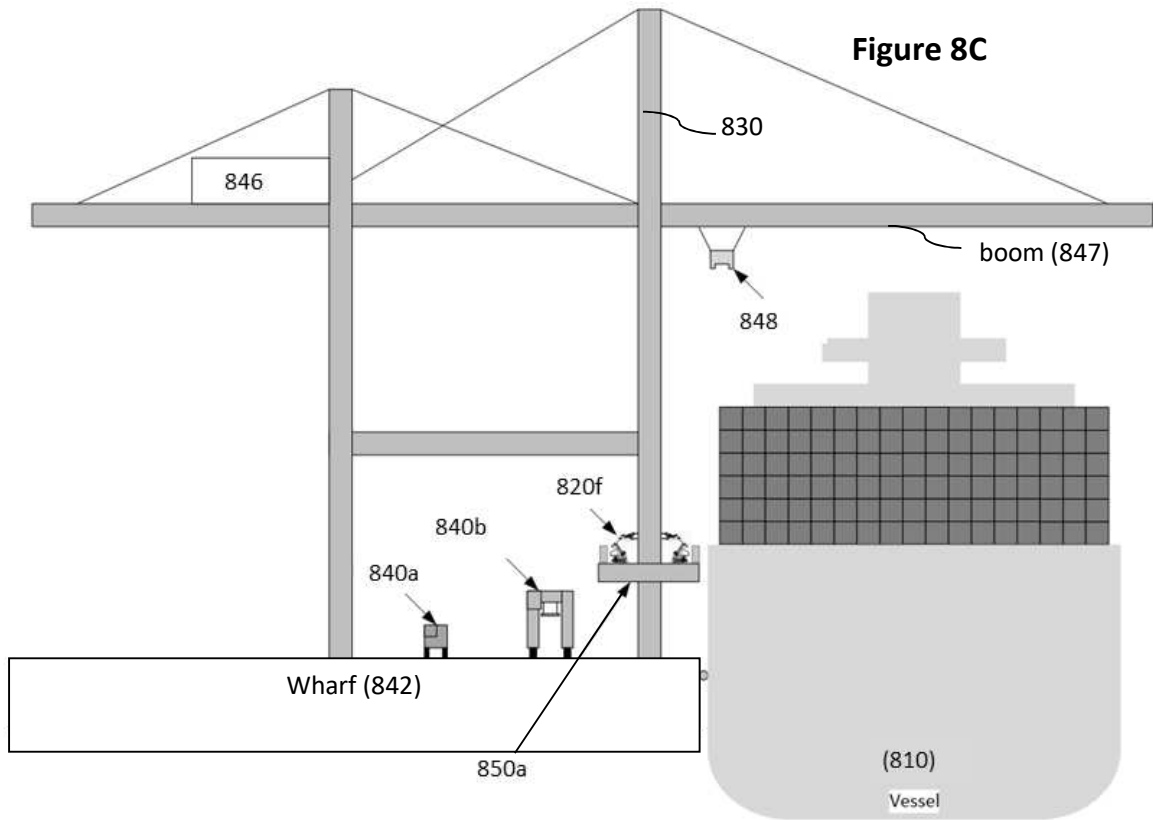
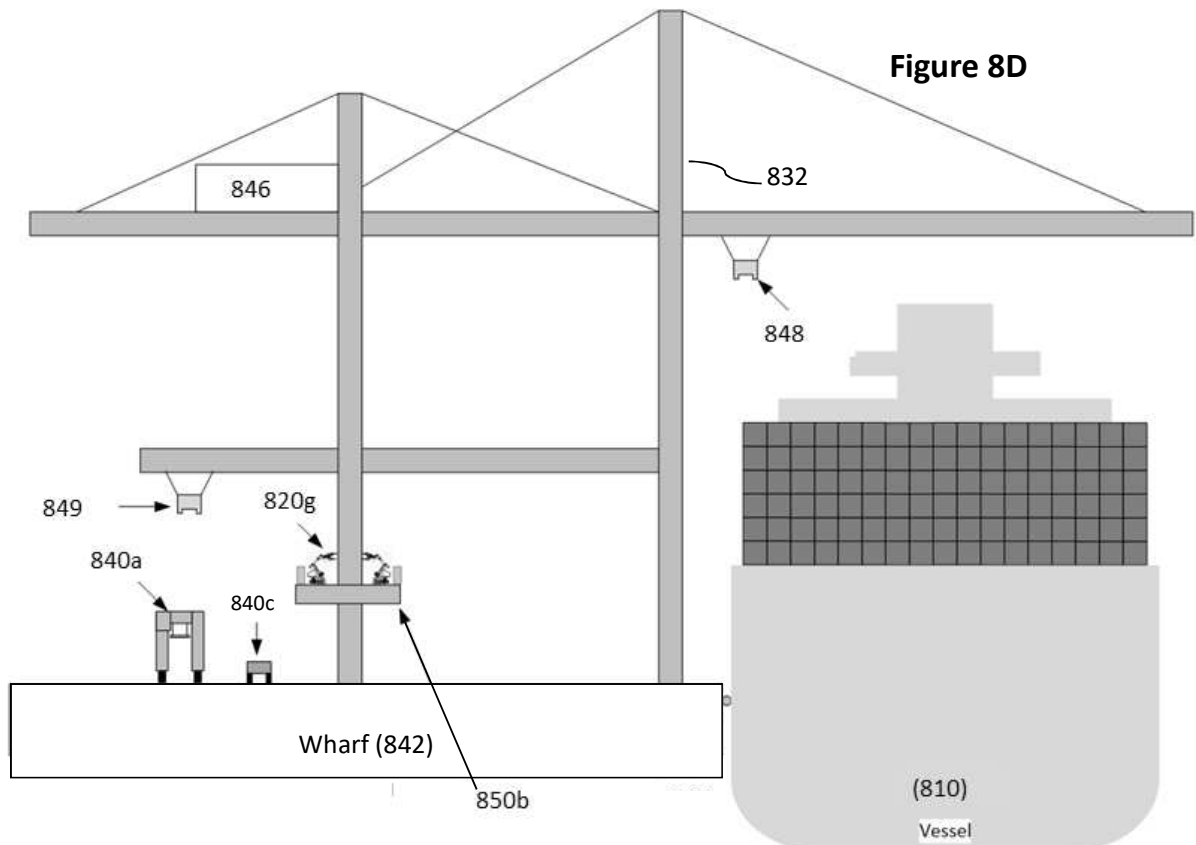
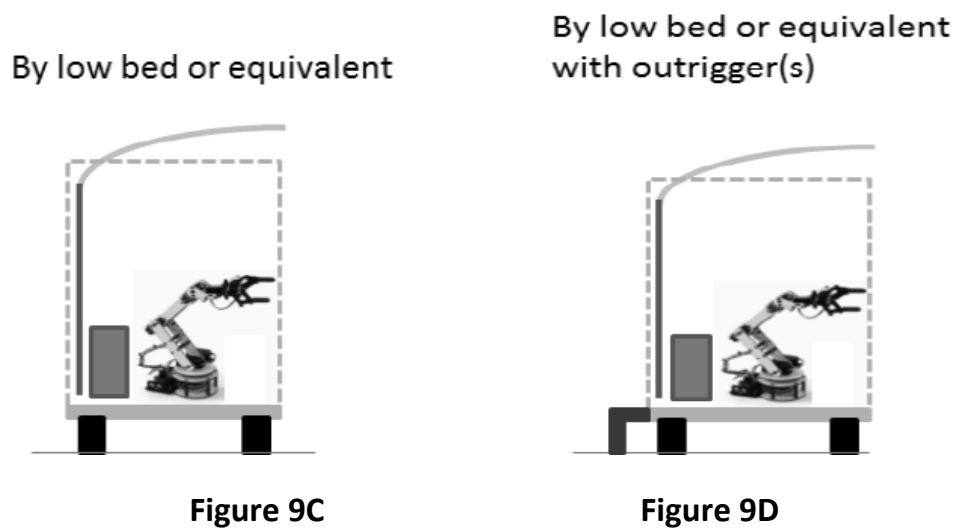
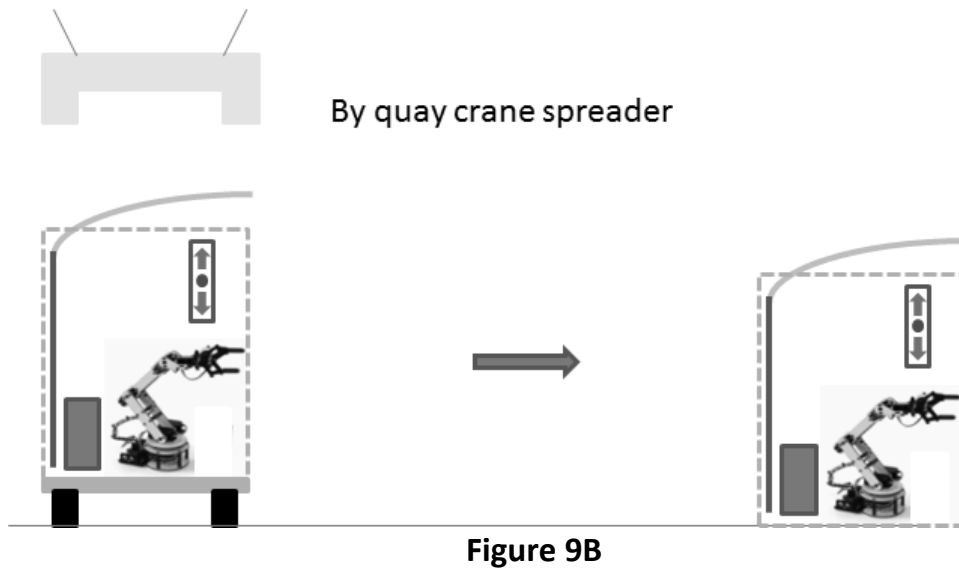
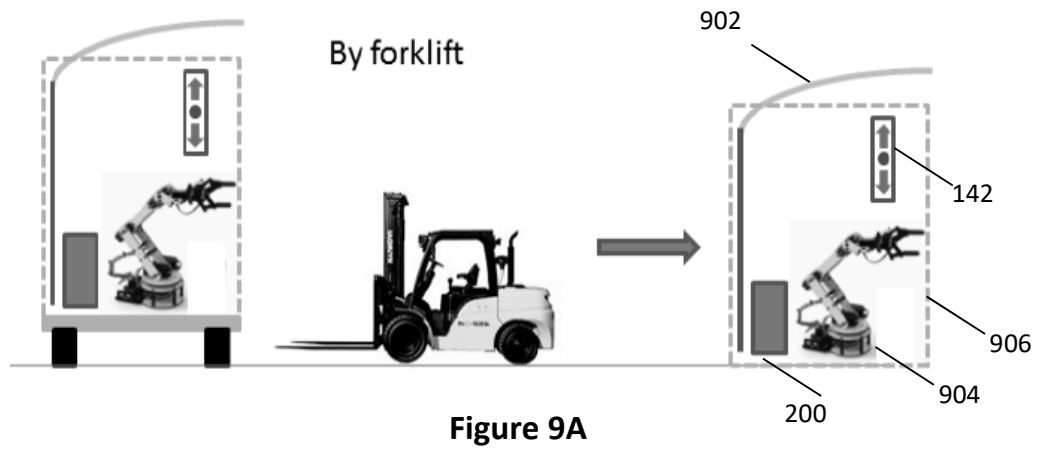


Figure 8D





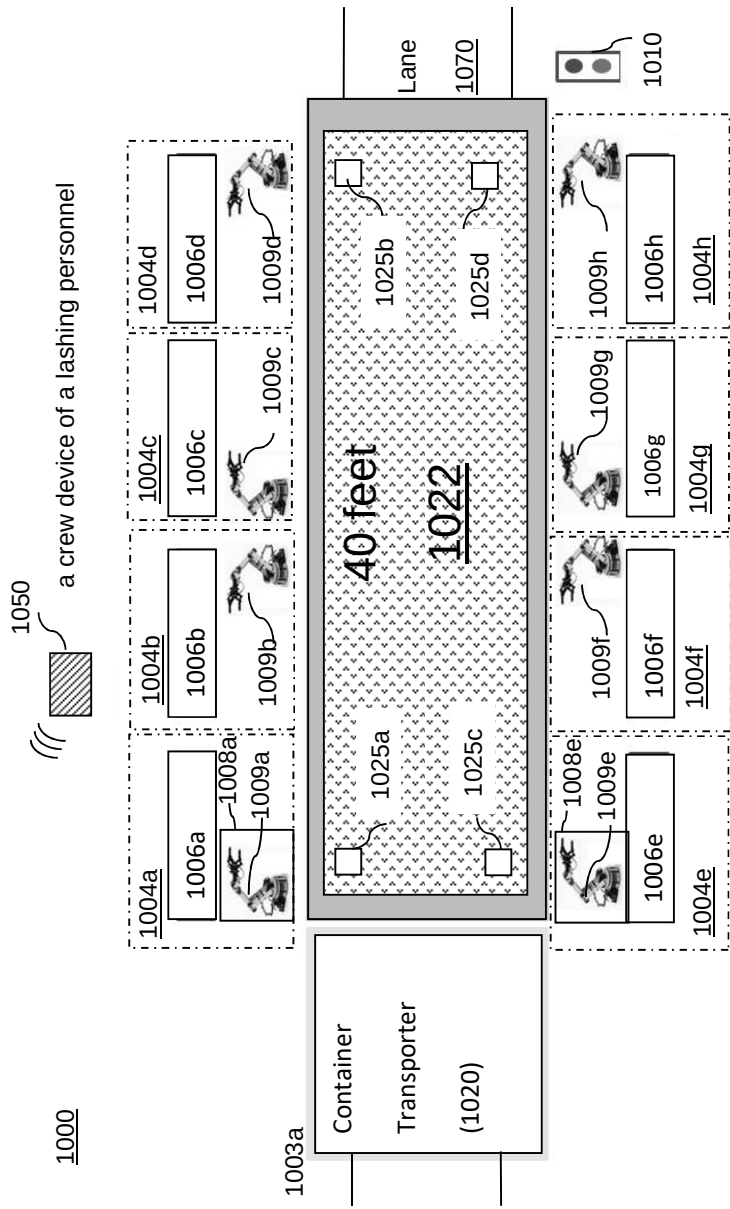


Figure 10

1100

Connector	Location of connector (1100a)		Type/Model of connector (1100b)
	Roller Chain	Holder S/N	
1102	A	1	Twist-lock – C5AM-DF
1104	A	12	Cone – SDL-4
1106	A	2	Empty
1108	B	5	Twist-lock – FA8
1110	B	8	Cone – IS-1T/LF

Figure 11A

1200

Vehicle Number in Queue/Action	No. of Containers/ Size of each respective container	Container Number of each respective container	Type of connector	Model of connector
1234, Coning	2, 20 feet, 20 feet	ABCD1234567, WXYZ9876543	Twist-lock, Twist-lock	C5AM-DF, C5AM-DF
2345, Deconing	1, 40 feet	PQST2345678	Cone	IS-1T/LF
4567, Coning	1, 20 feet, empty	ABCD7654321, Not applicable	Twist-lock, NA	C5AM-DF, NA
5678, 6789, Coning, Coning	1, 1, 20 feet, 20 feet	BCDE1234567, WXYZ9876543	Cone, Twist-lock	IS-1T/LF, C5AM-DF

Figure 11B

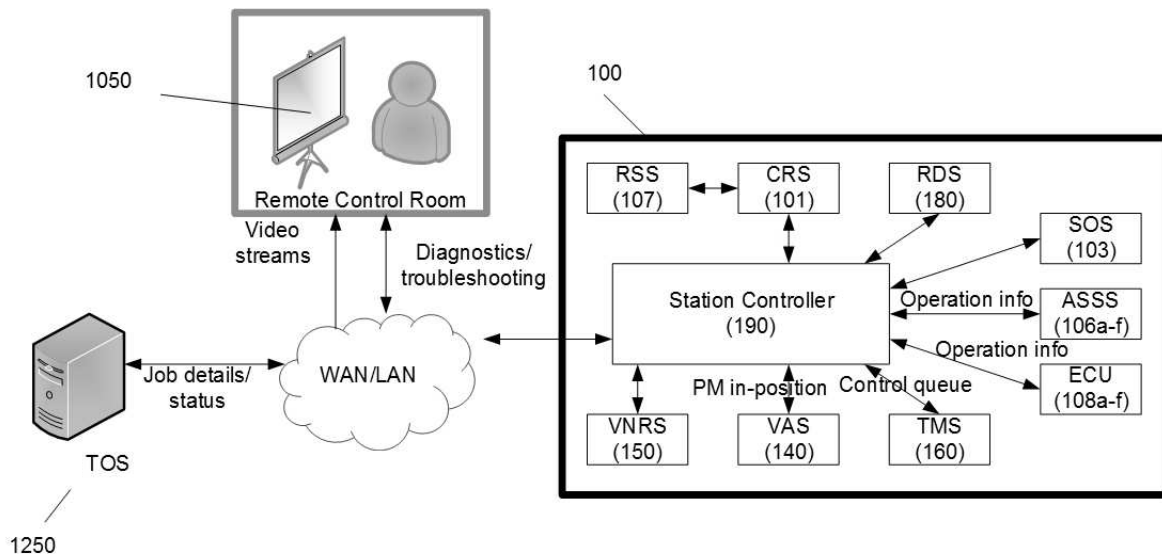


Figure 12A

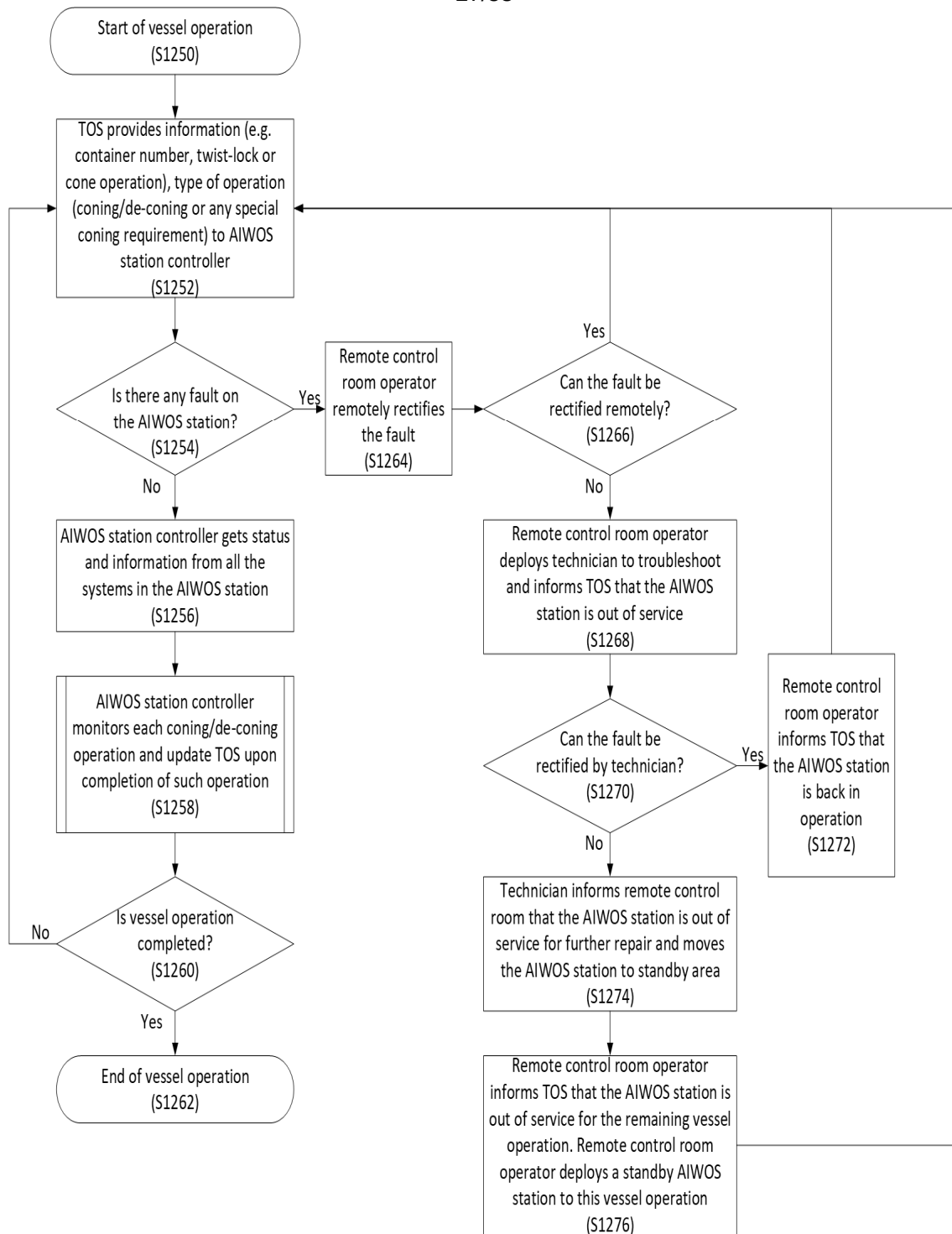


Figure 12B (AIWOS System Workflow)

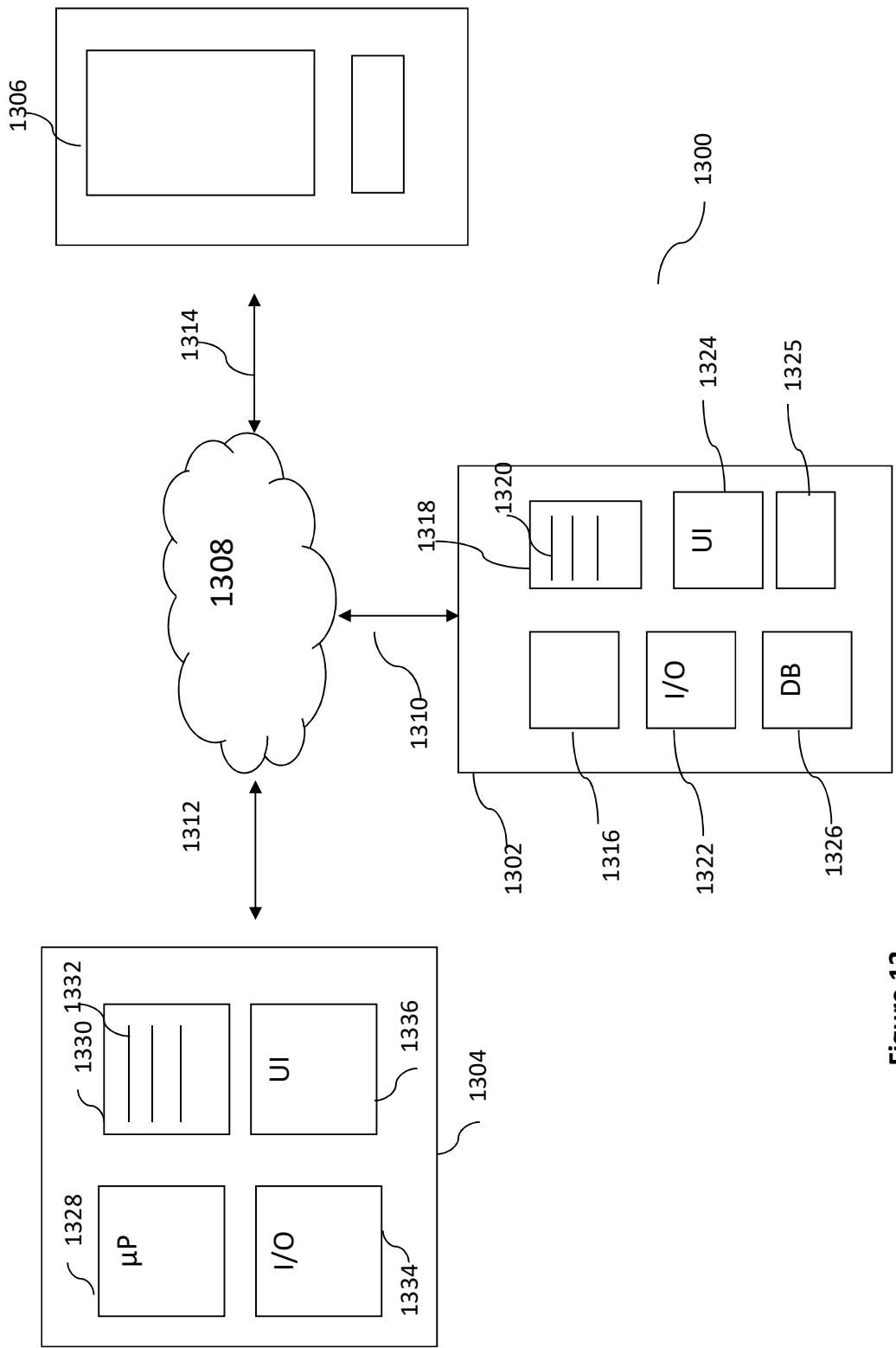


Figure 13

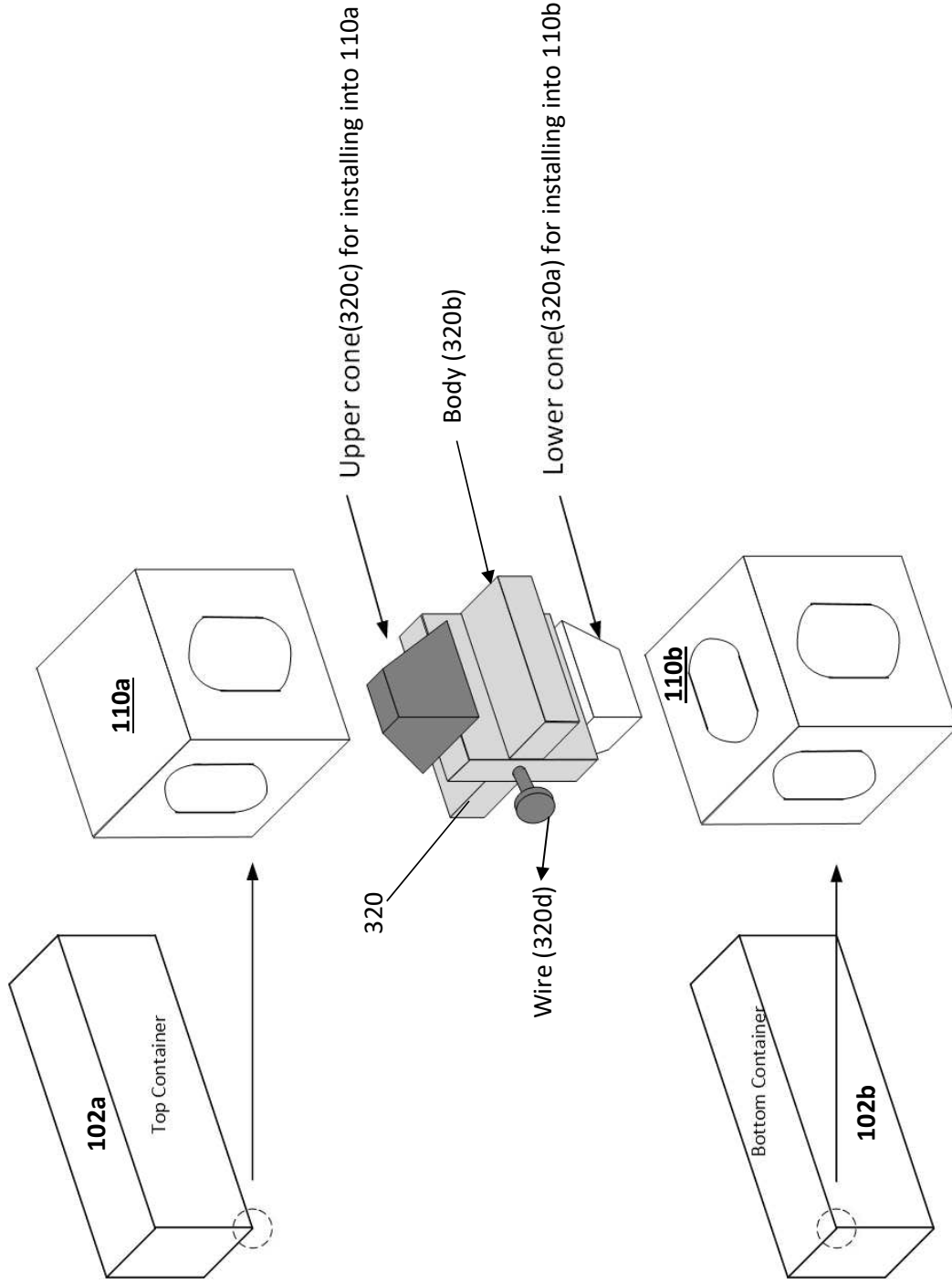


Figure 14

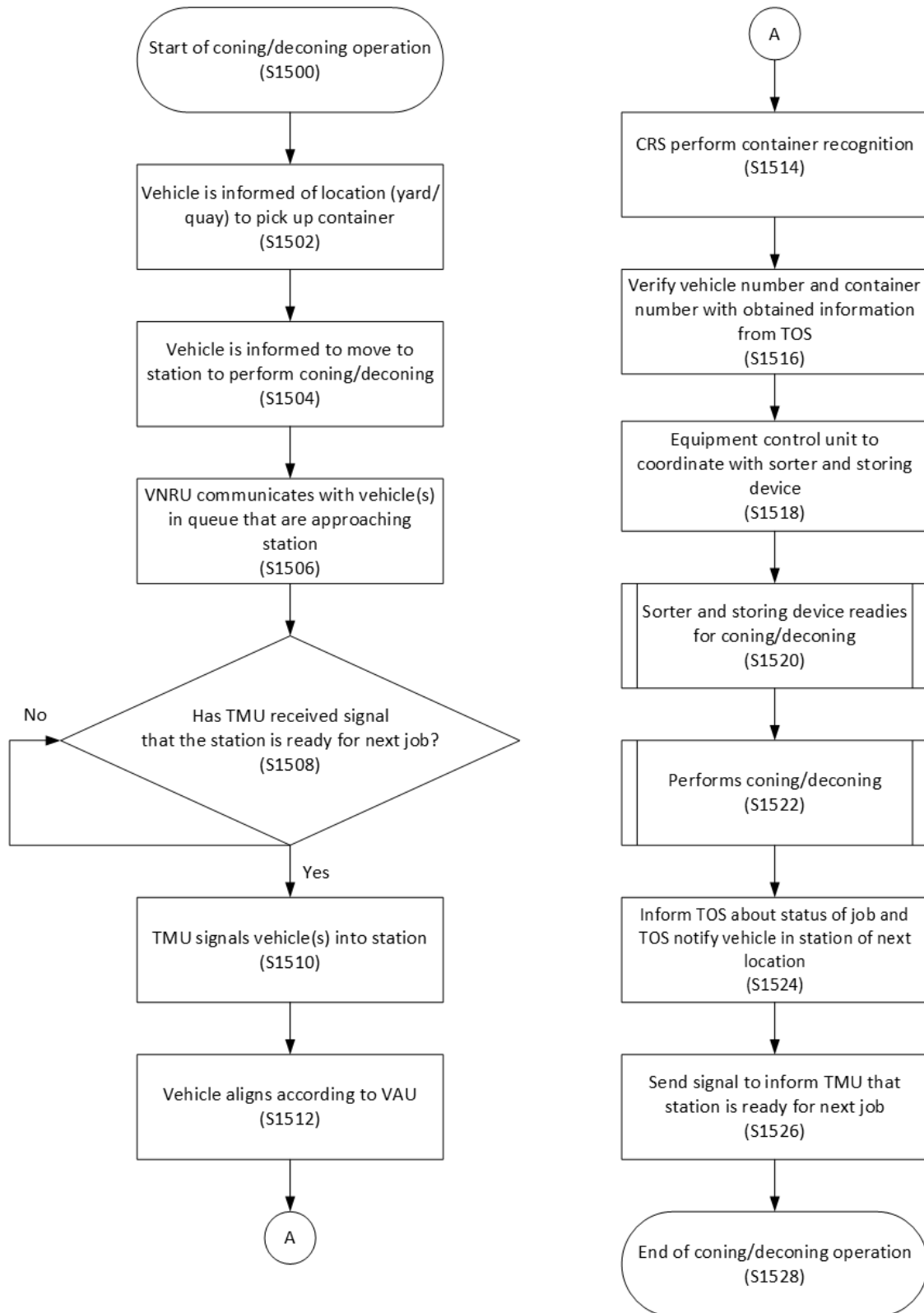
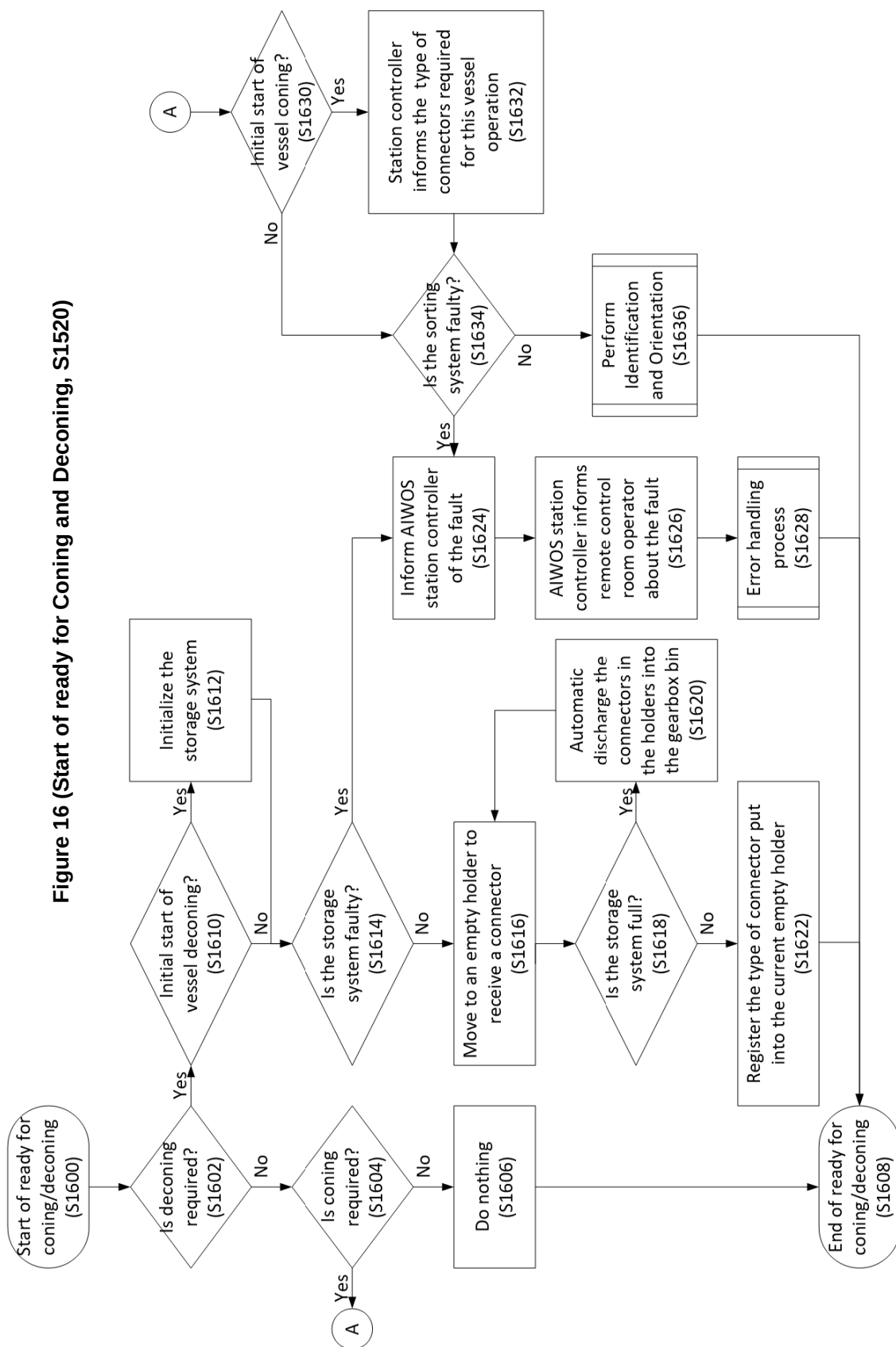


Figure 15 (S1258)

Figure 16 (Start of ready for Coning and Deconing, S1520)



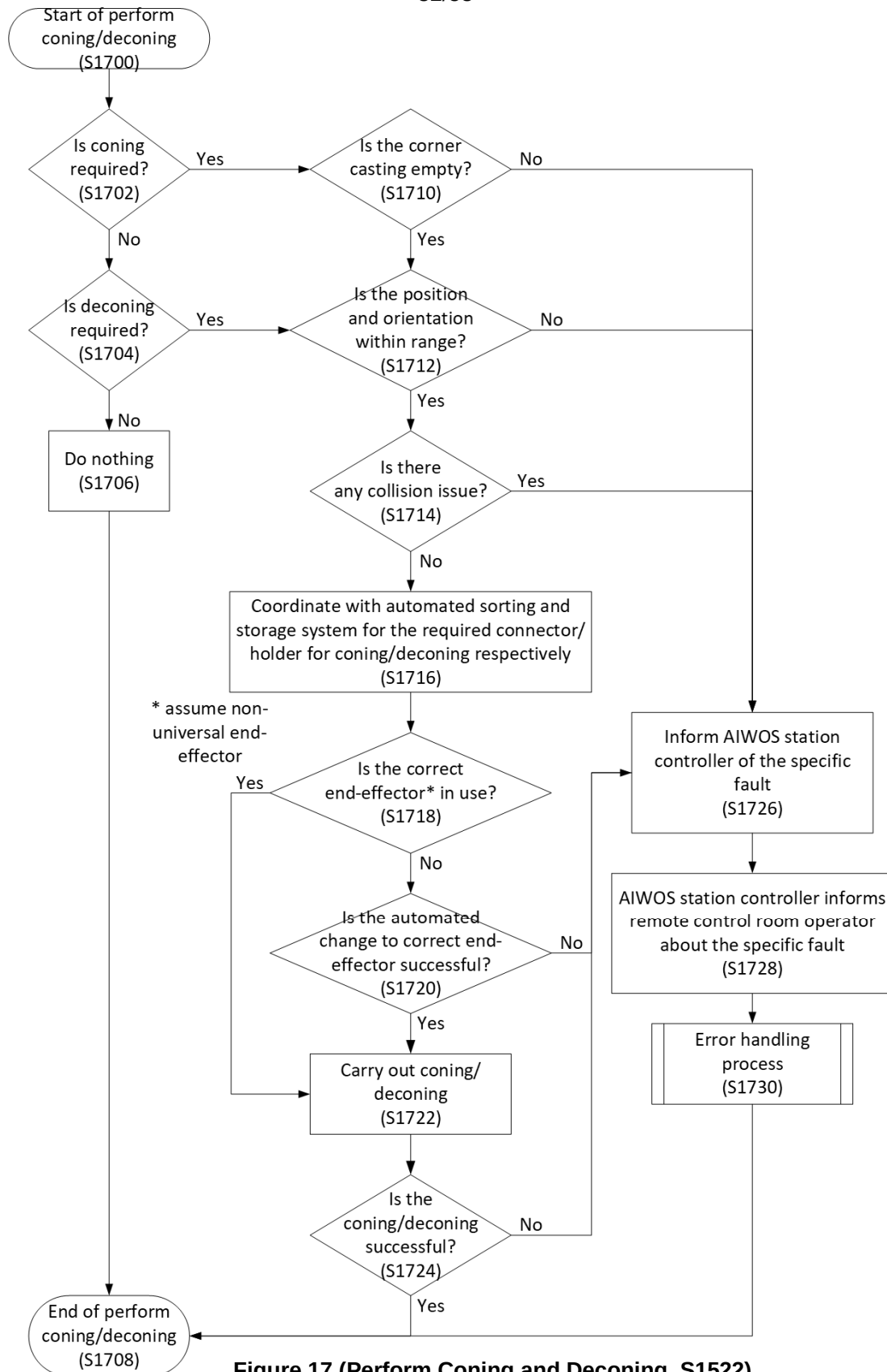


Figure 17 (Perform Coning and Deconing, S1522)

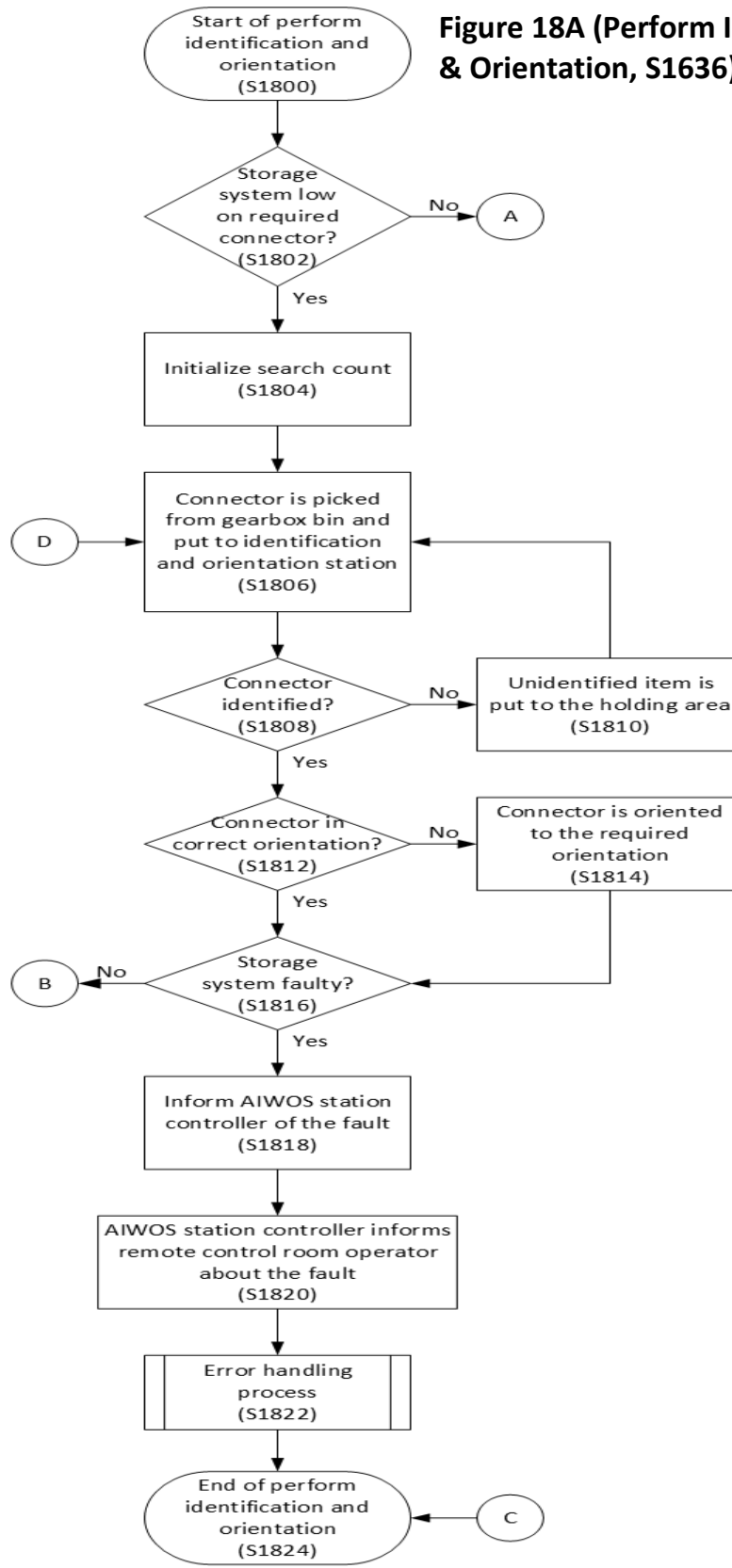
Figure 18A (Perform Identification & Orientation, S1636)

Figure 18B (Perform Identification & Orientation, S1636)

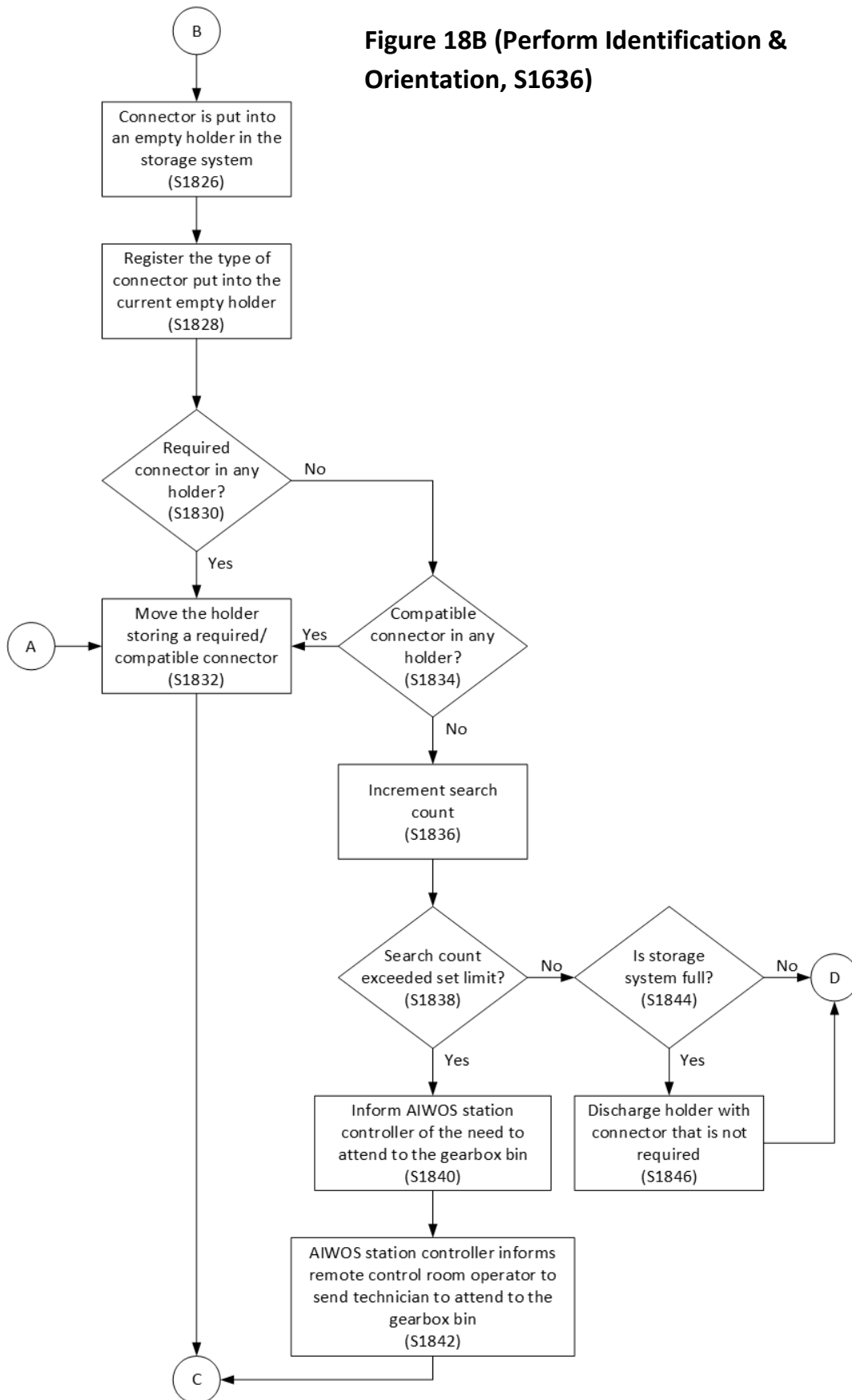
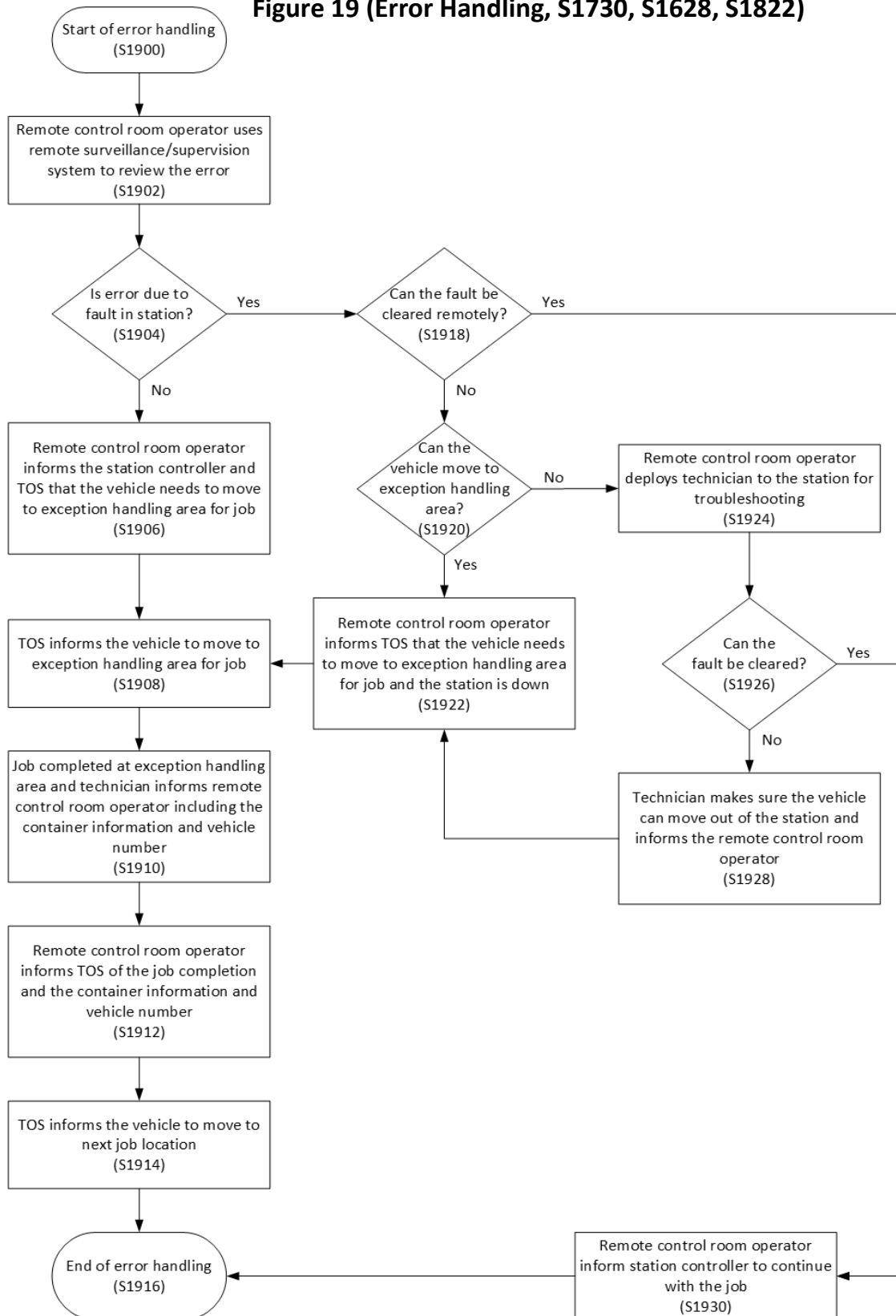


Figure 19 (Error Handling, S1730, S1628, S1822)



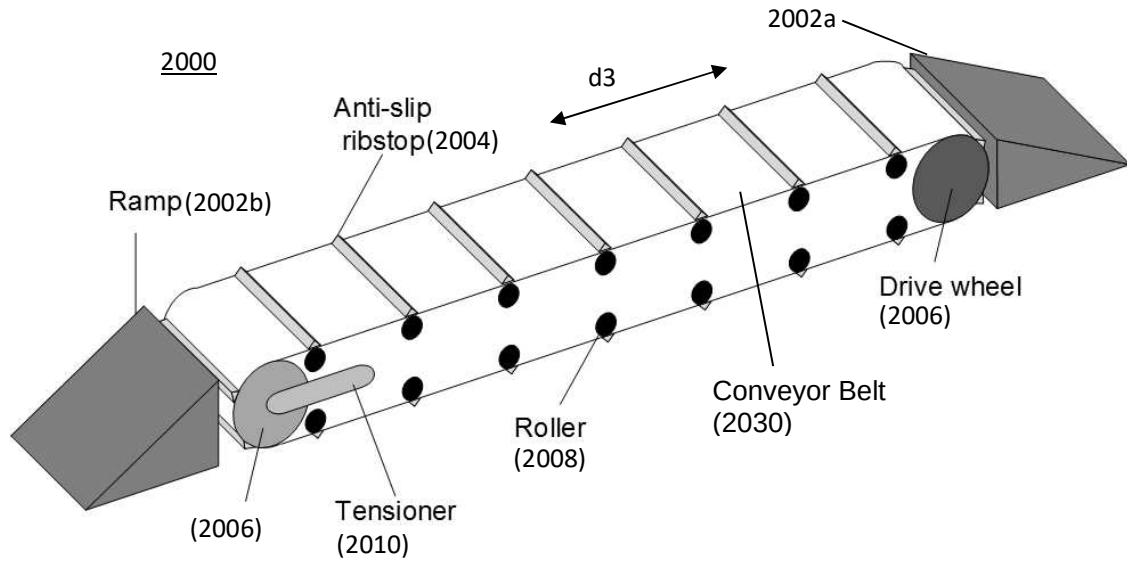


Figure 20

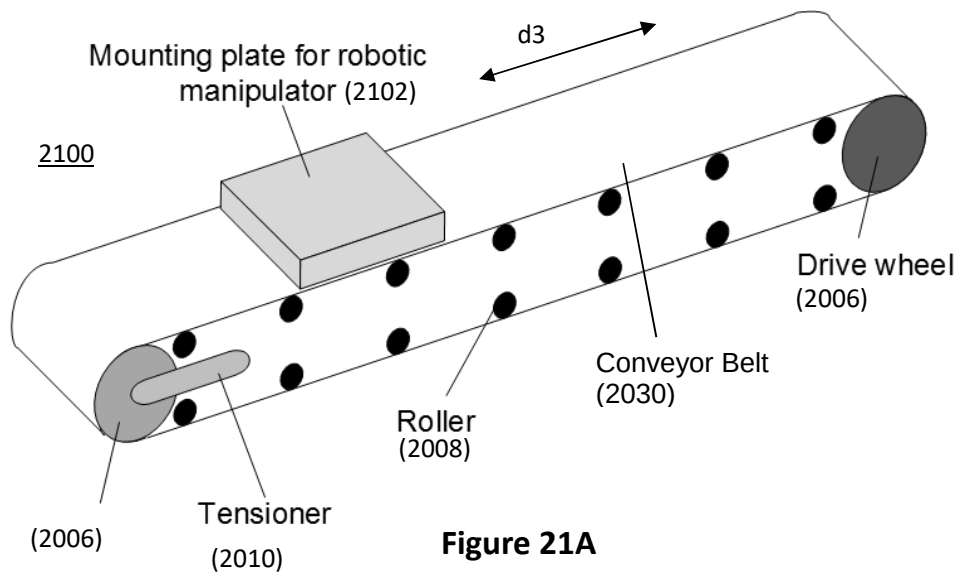


Figure 21A

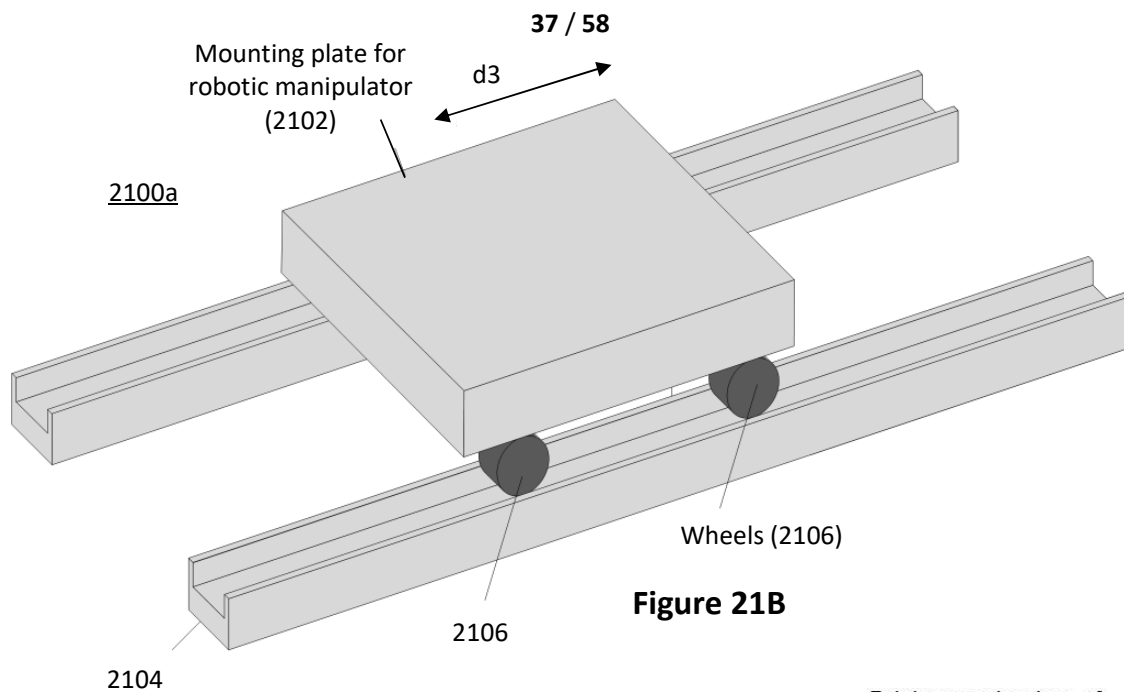


Figure 21B

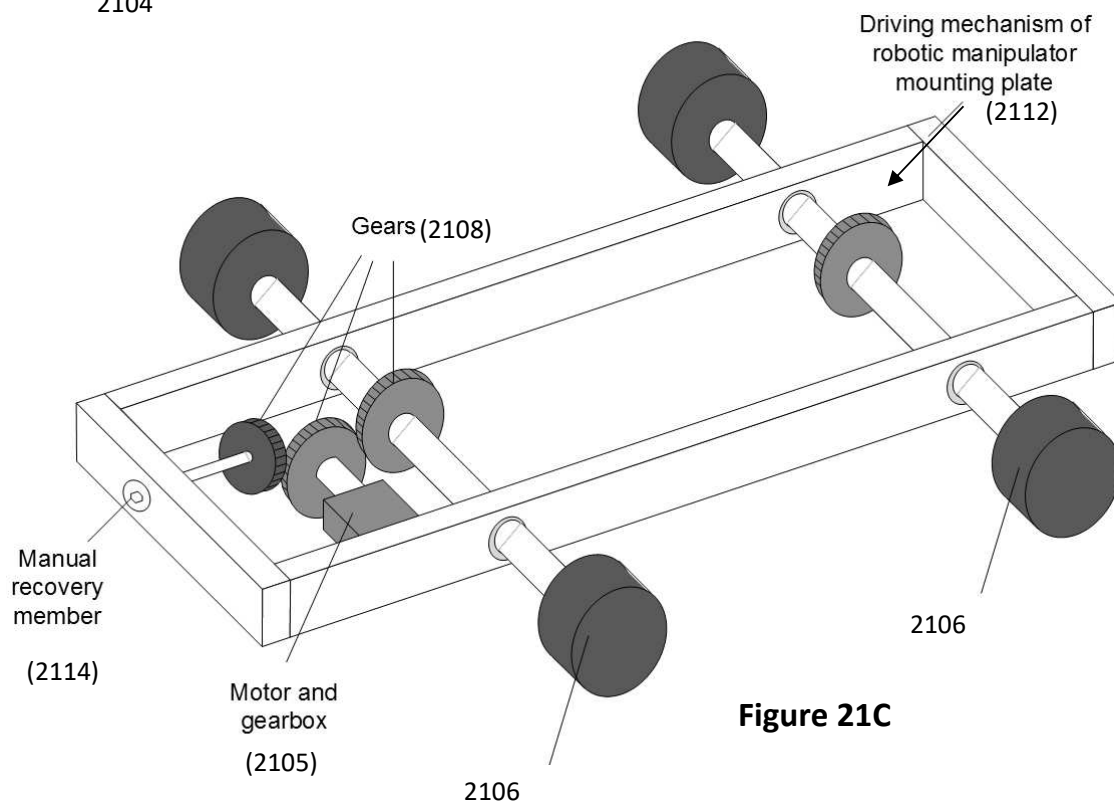


Figure 21C

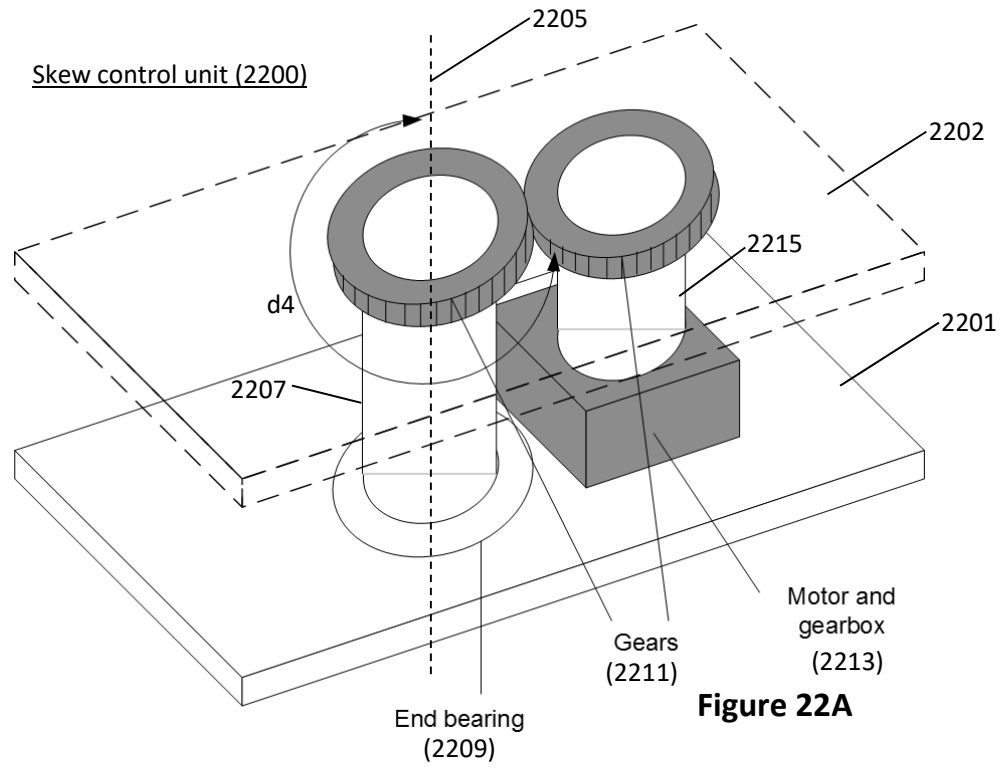


Figure 22A

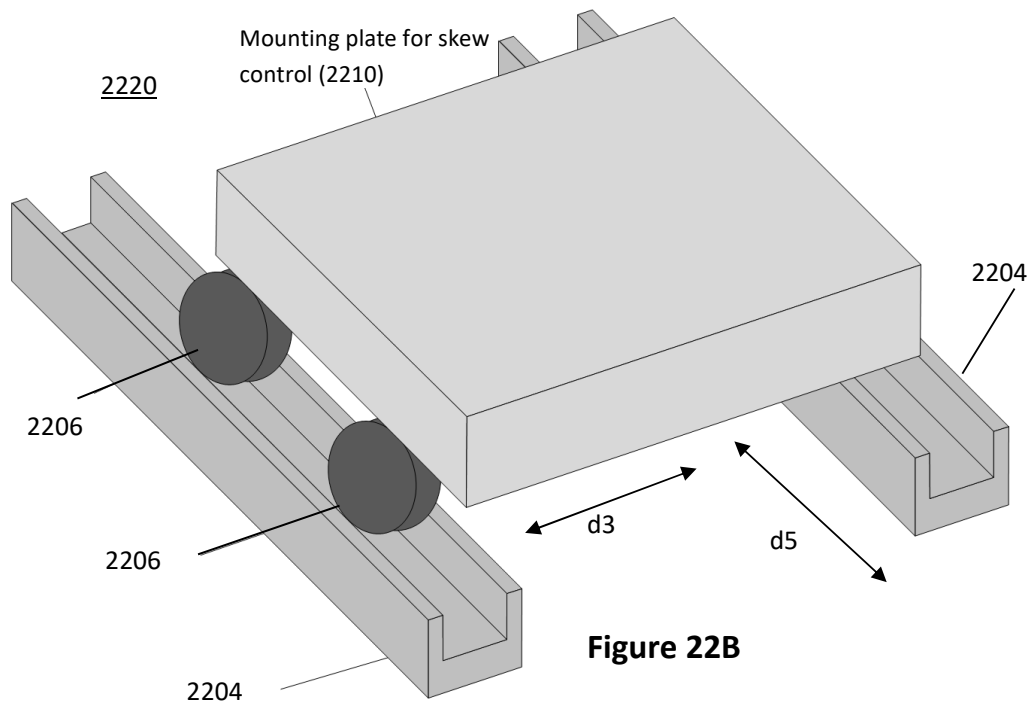


Figure 22B

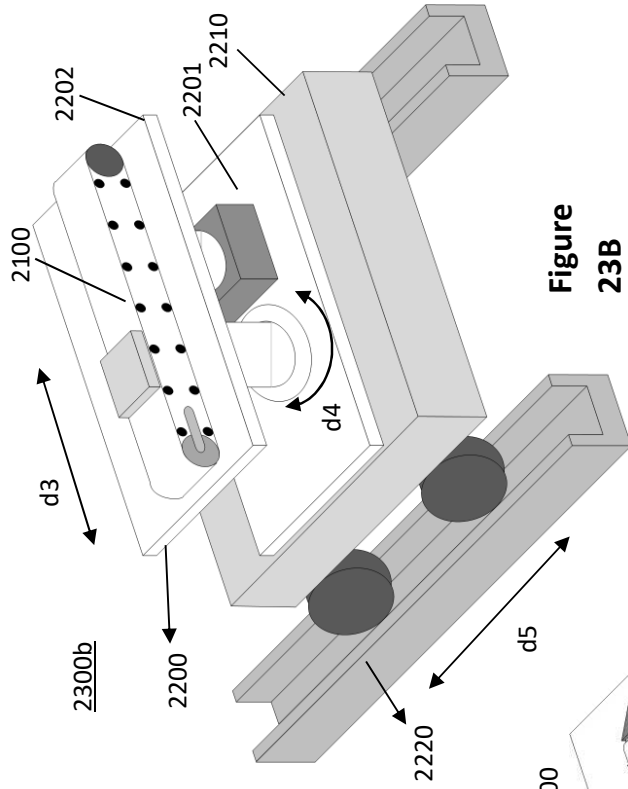


Figure 23B

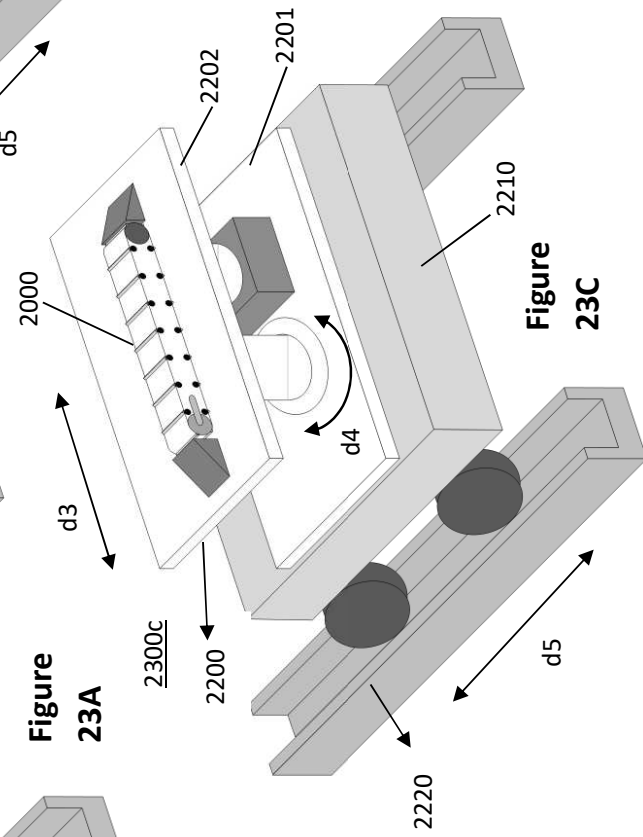


Figure 23C

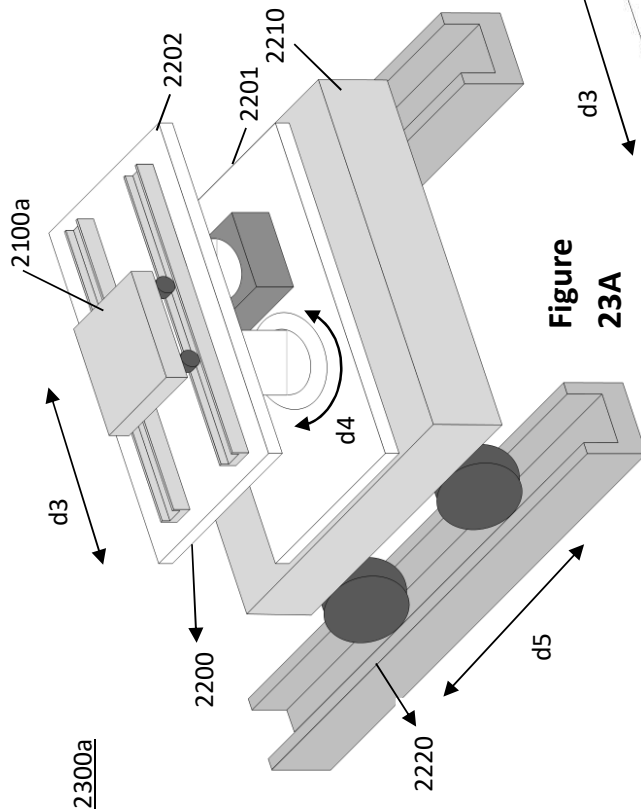


Figure 23A

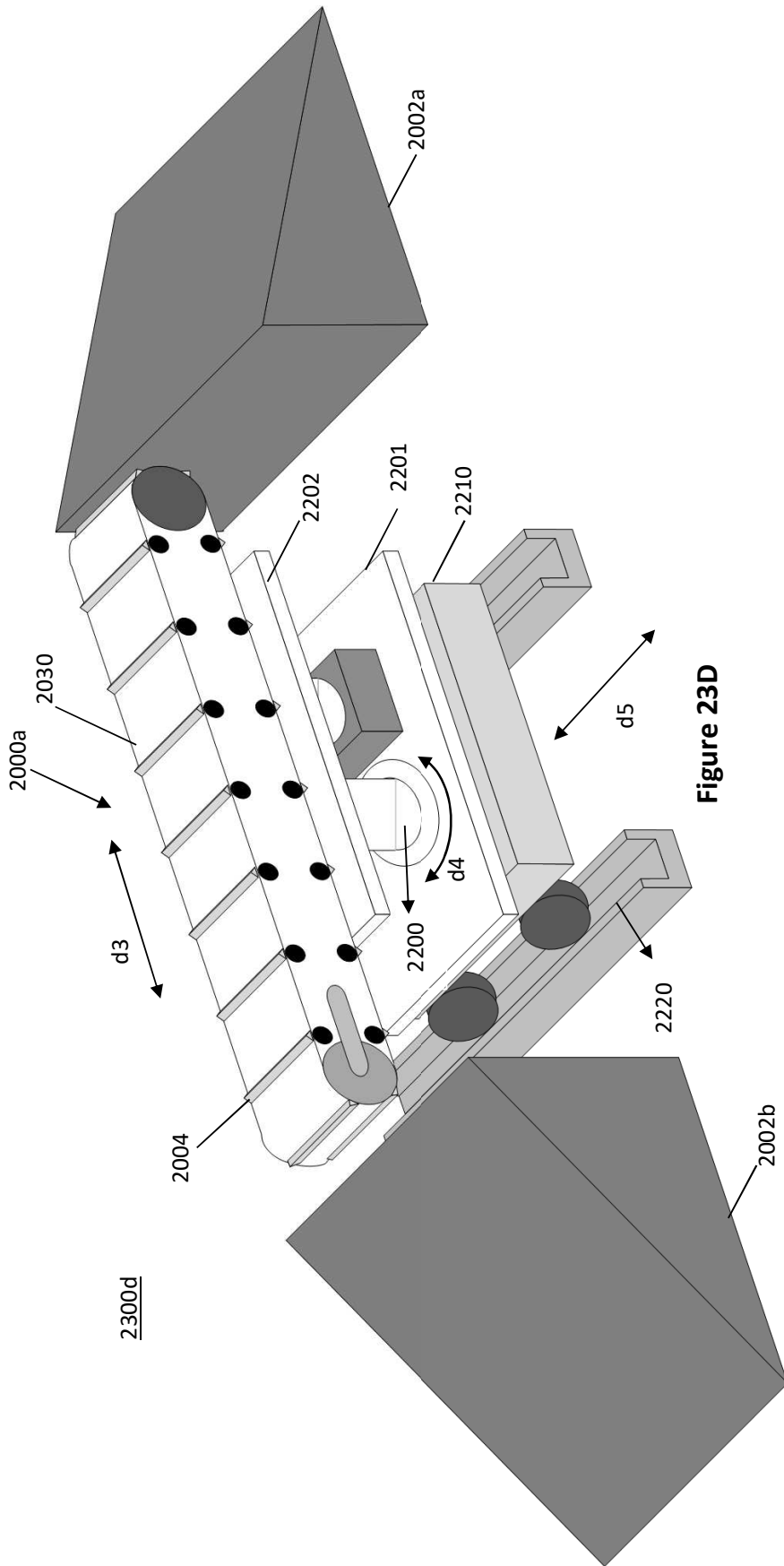


Figure 23D

Discharging mechanism extended

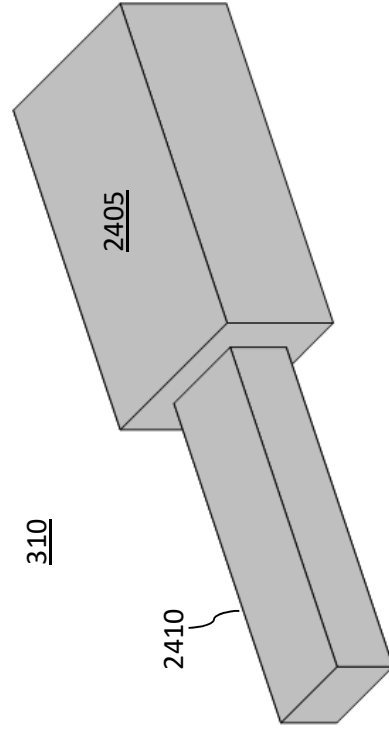


Figure 24B

Discharging mechanism retracted

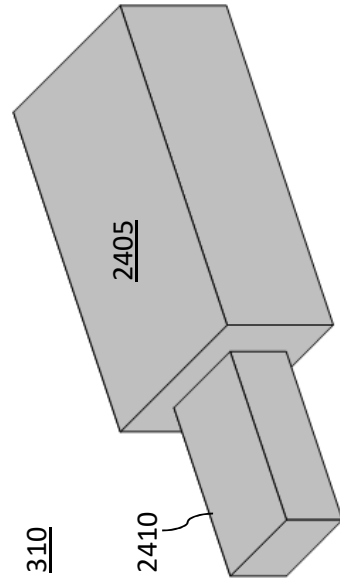


Figure 24A

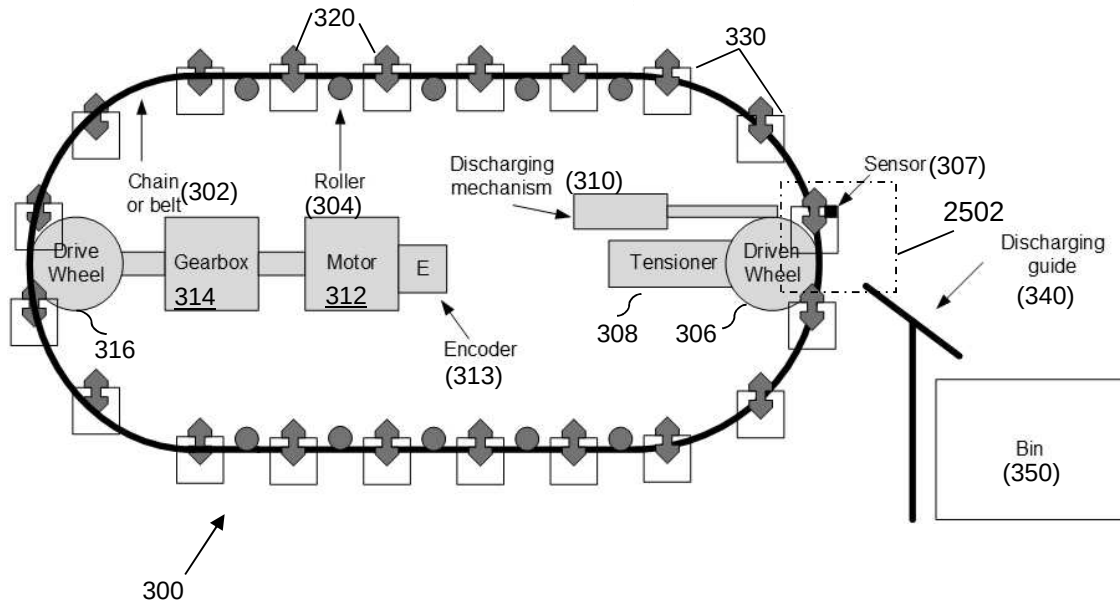


Figure 25A

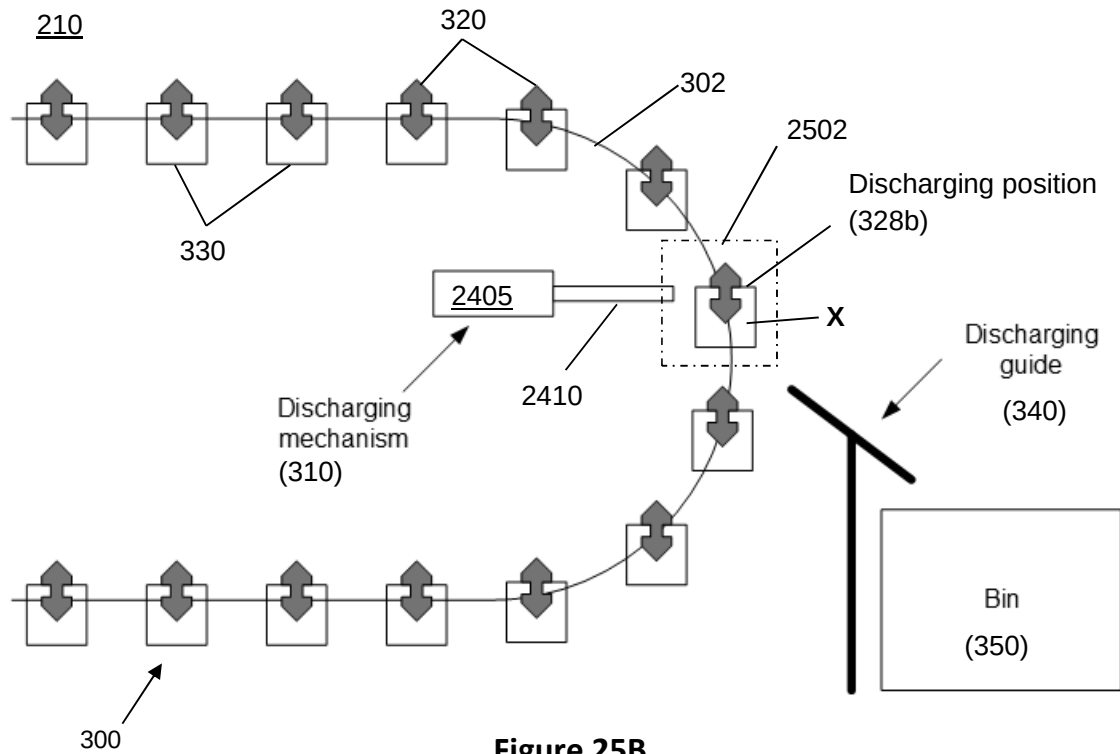
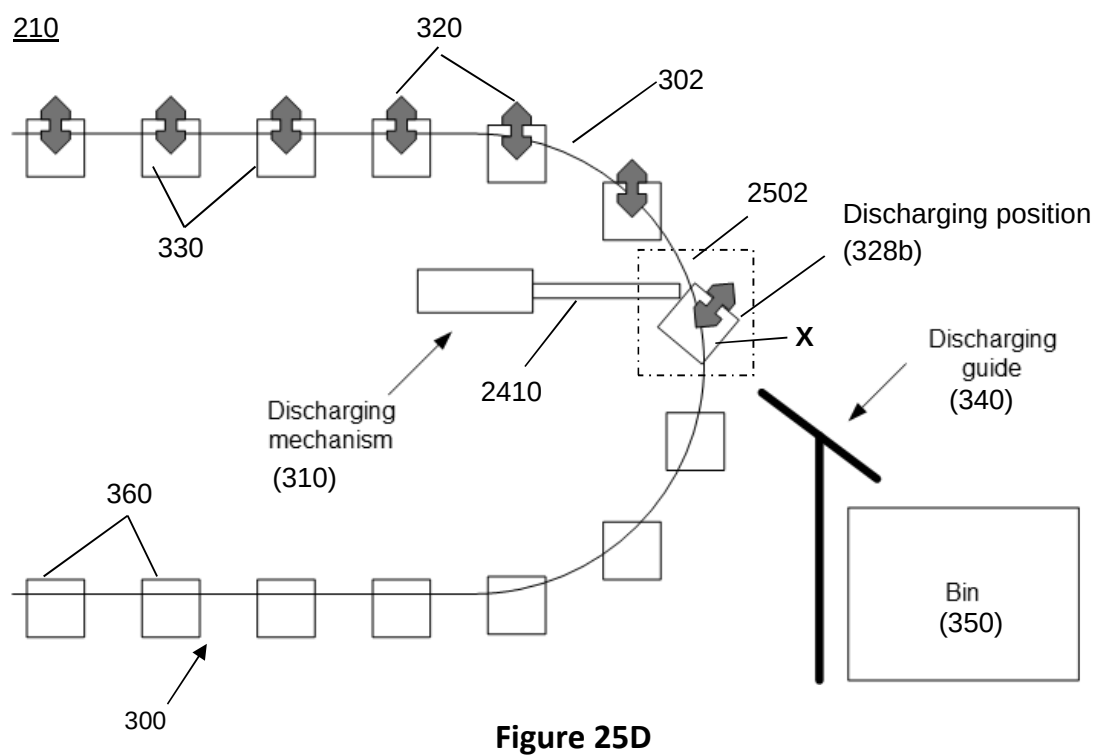
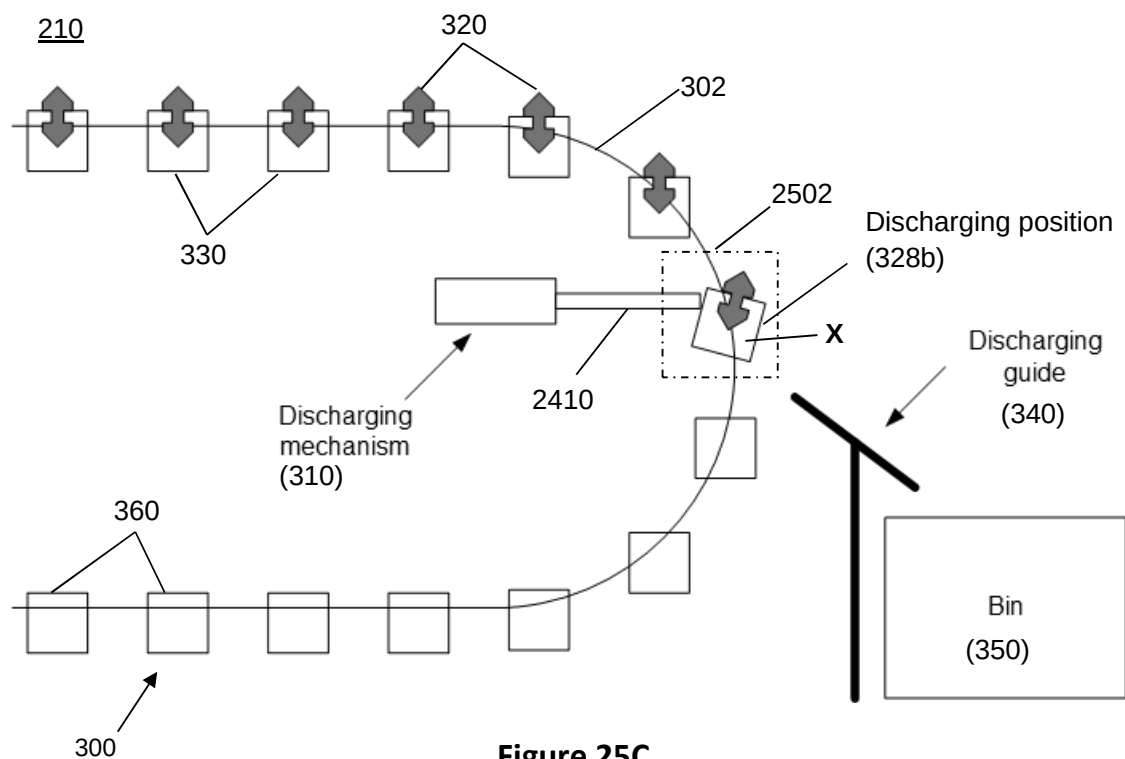


Figure 25B



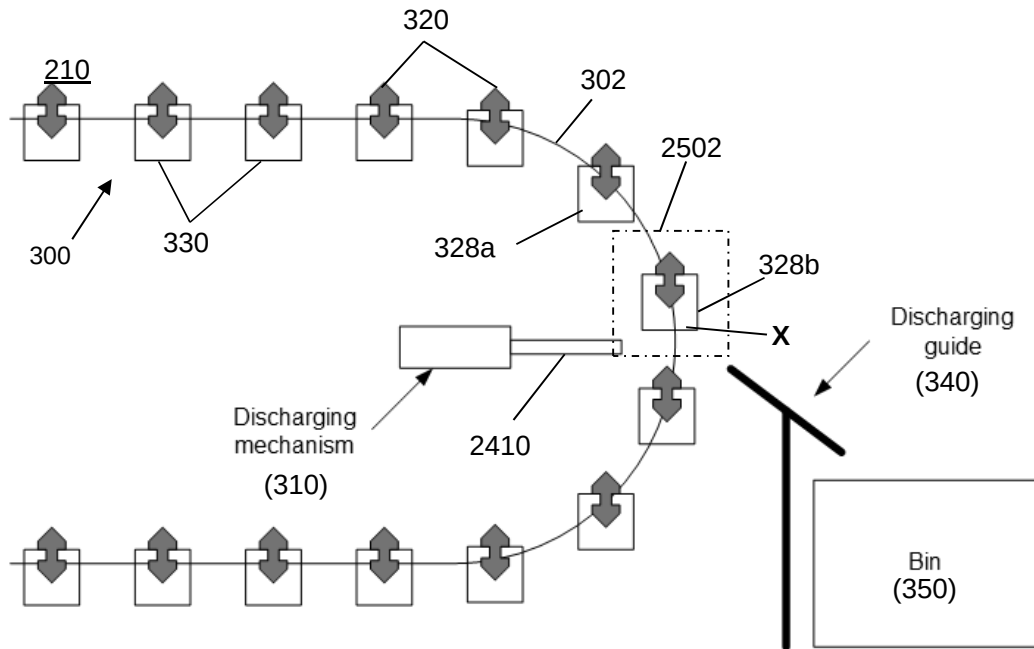


Figure 26B

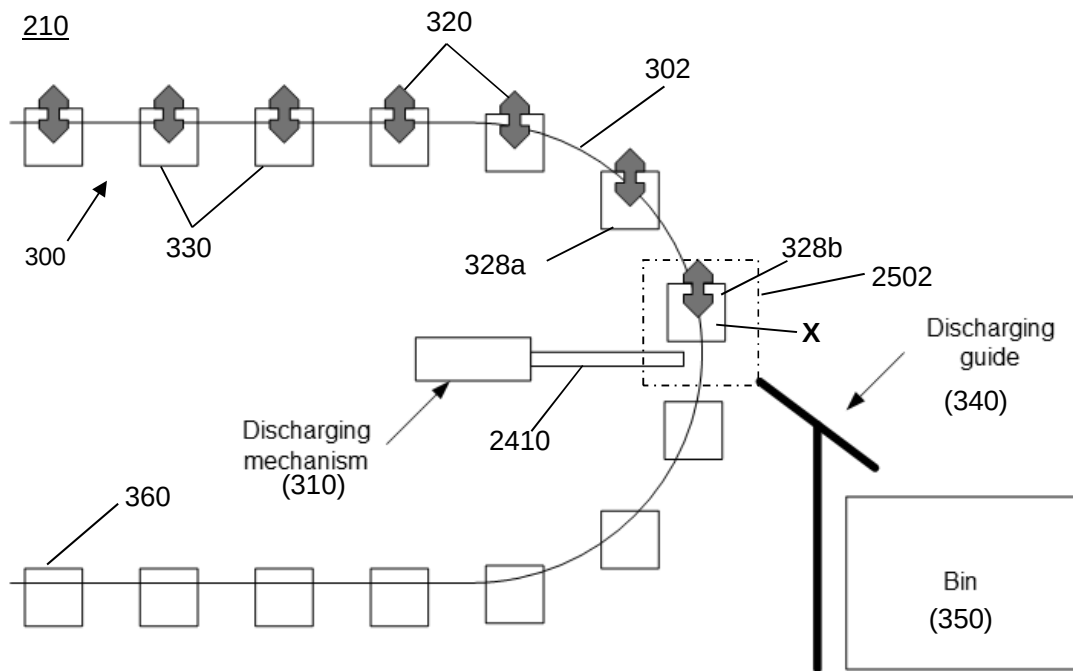


Figure 26C

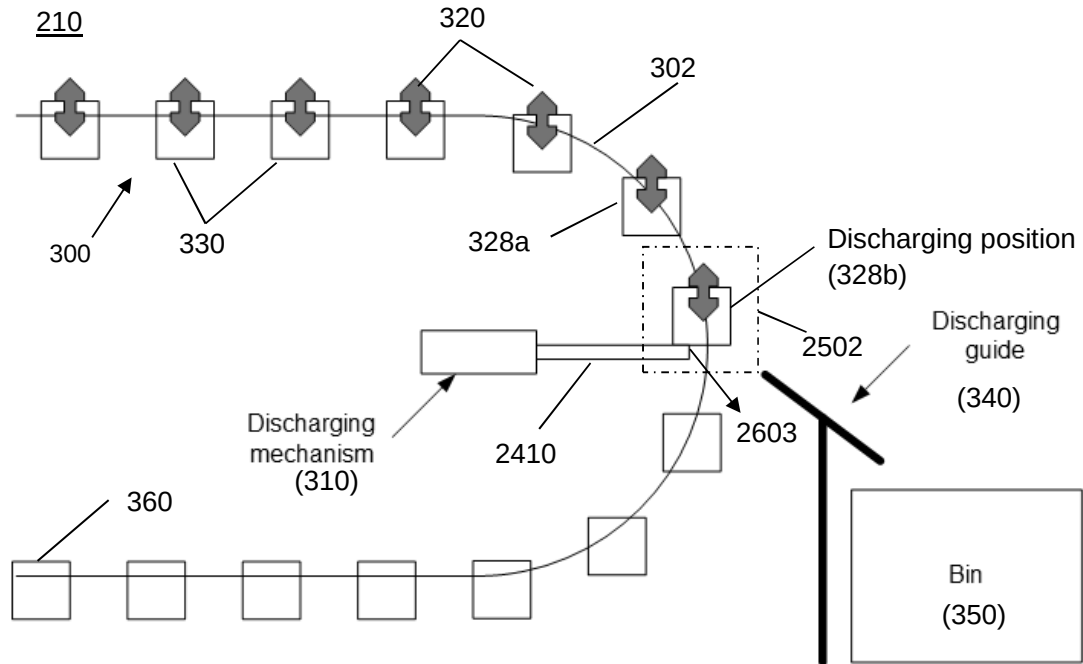


Figure 26D

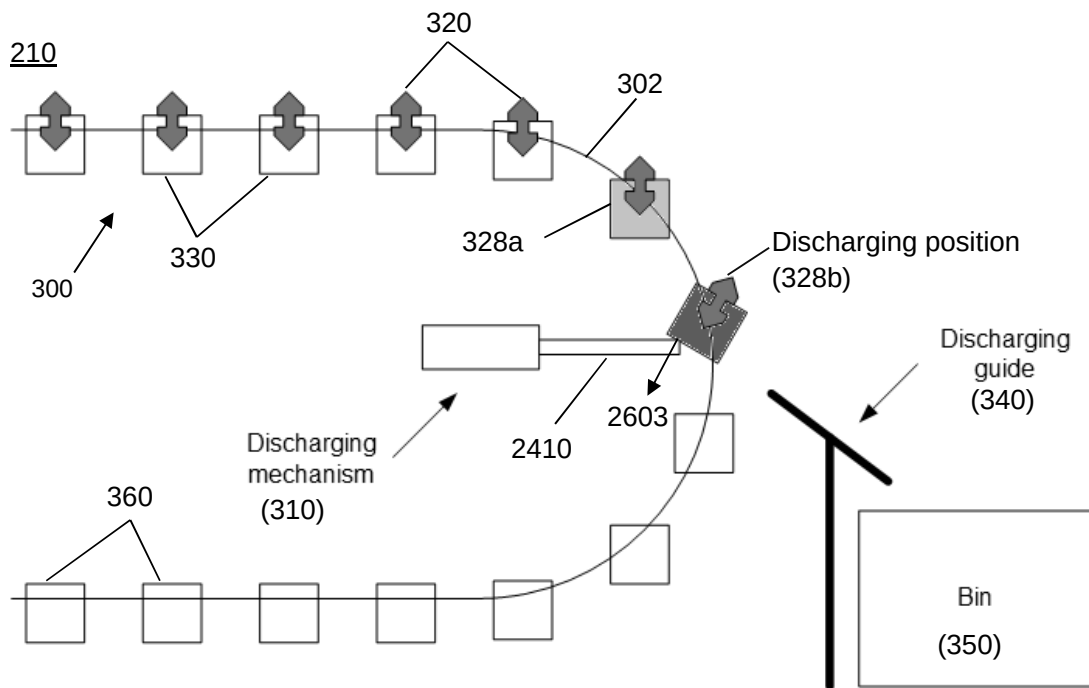


Figure 26E

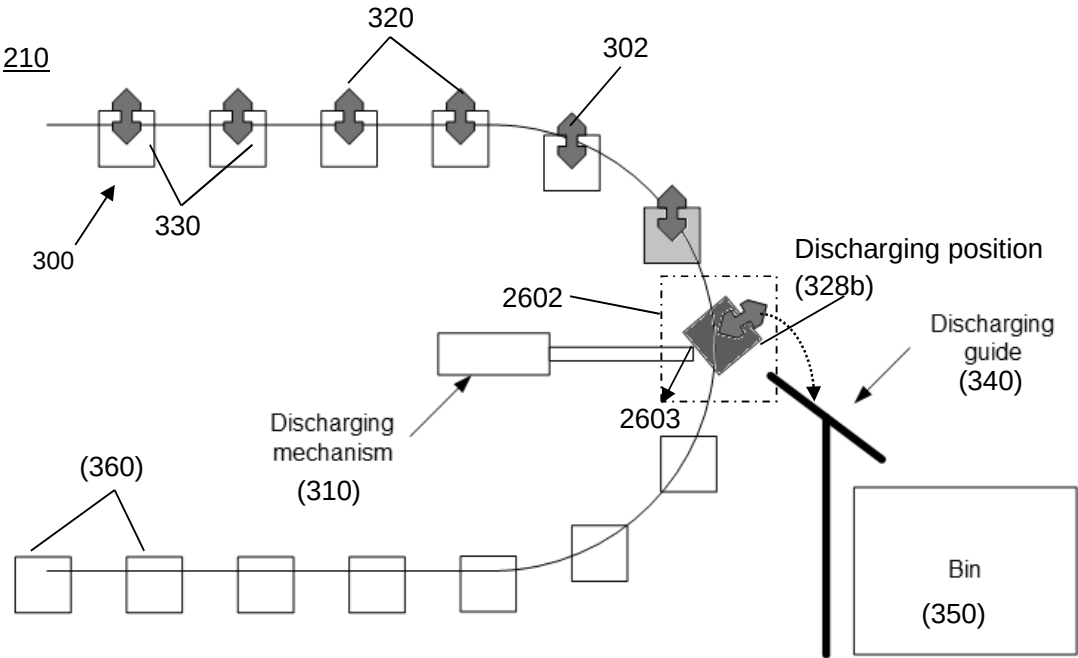


Figure 26F

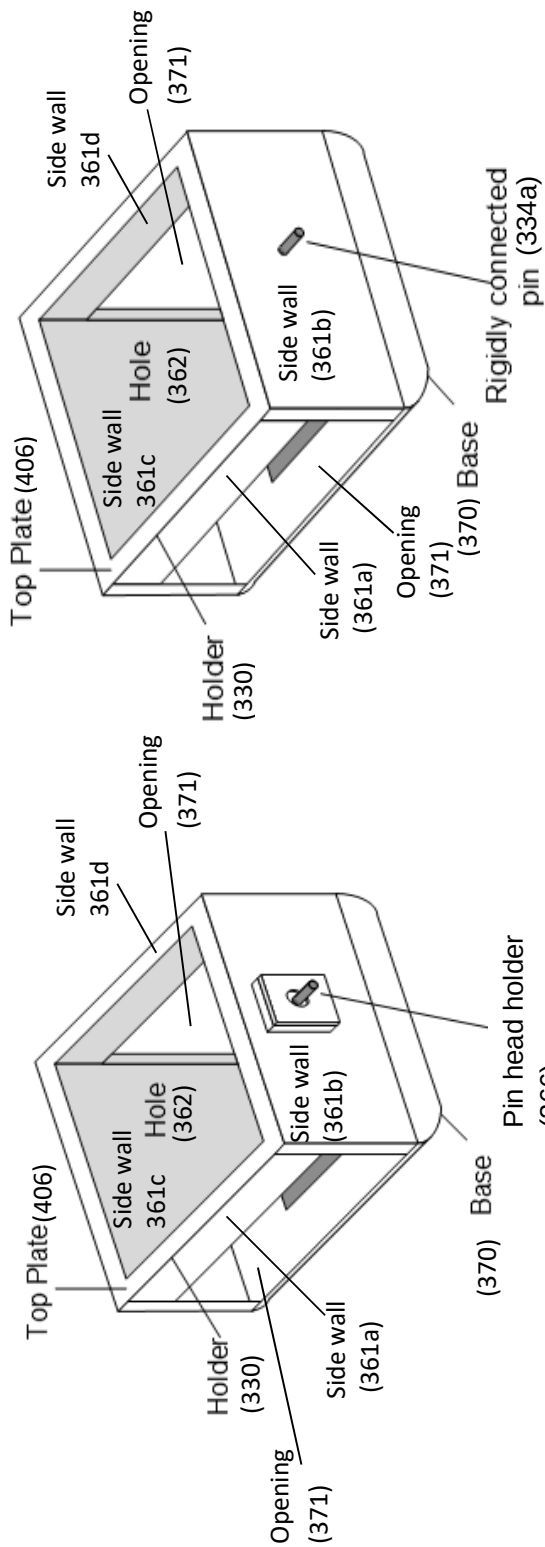


Figure 27A

Figure 27B

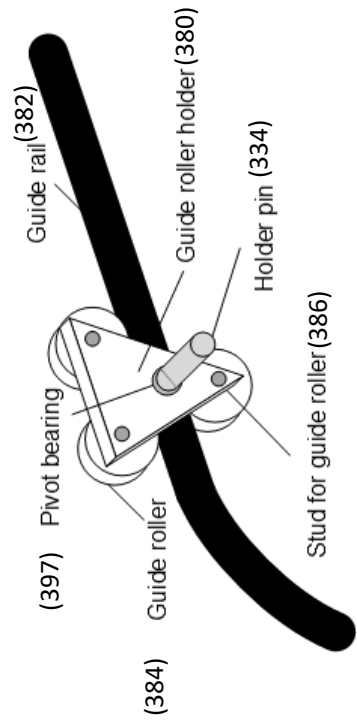


Figure 27C

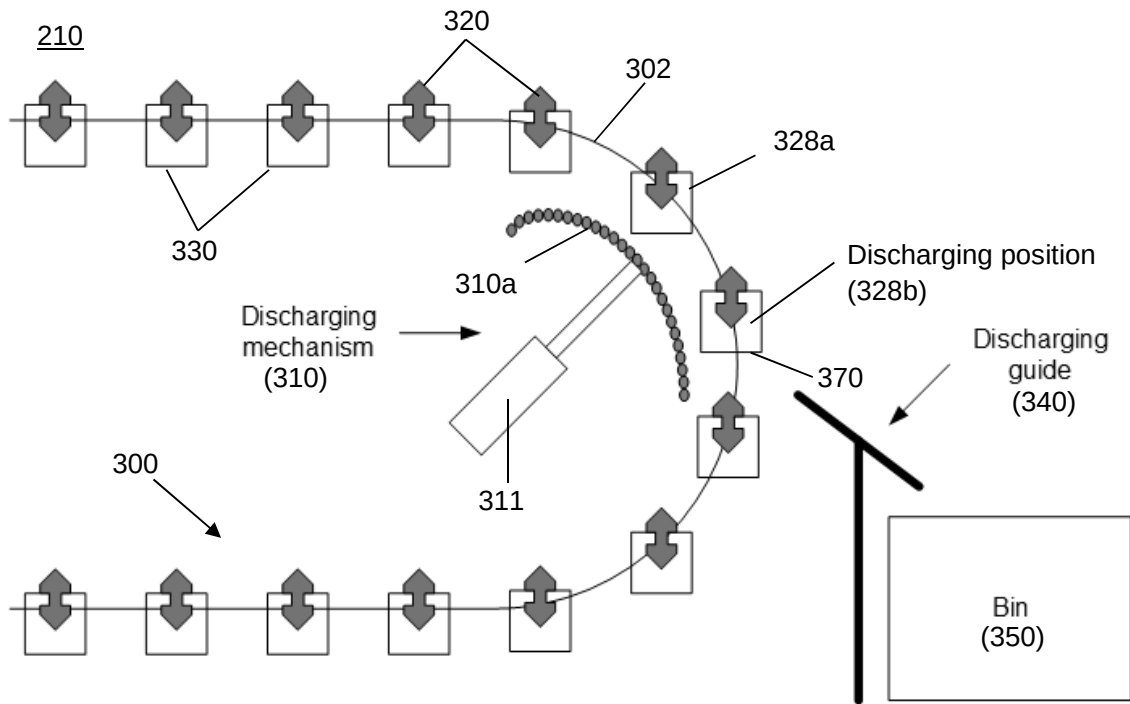


Figure 28A

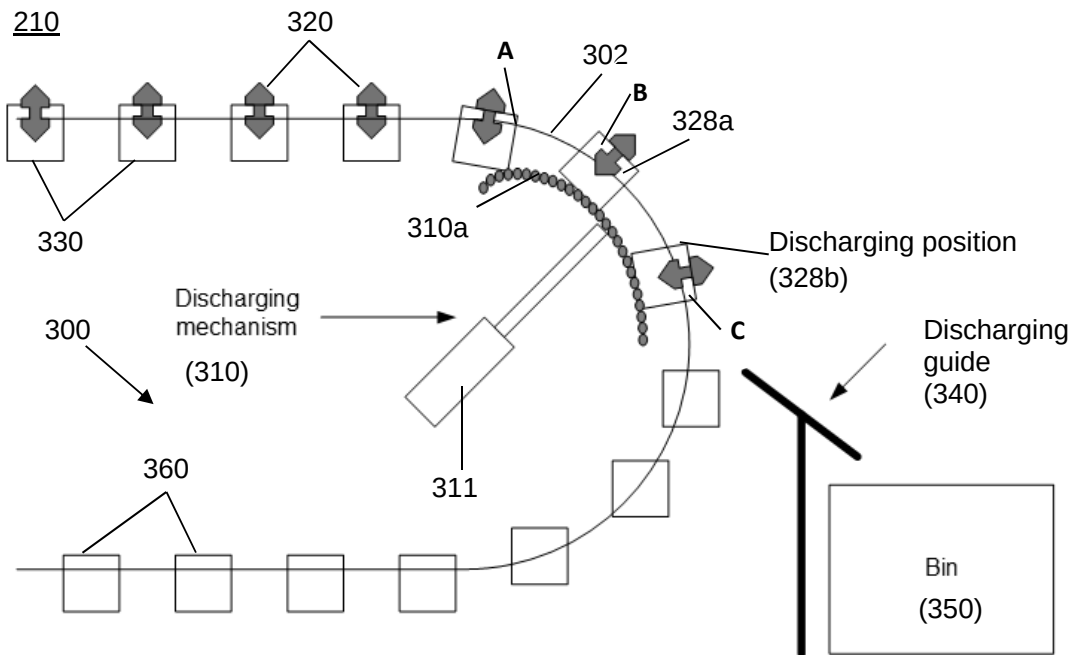


Figure 28B

210

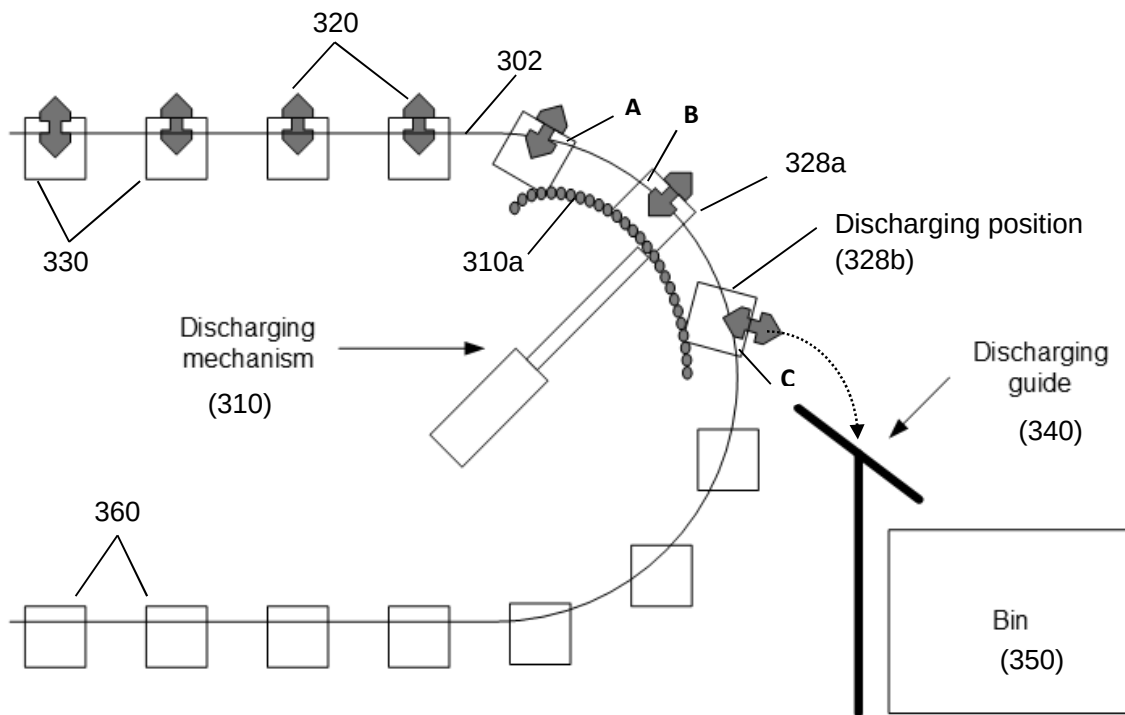


Figure 28C

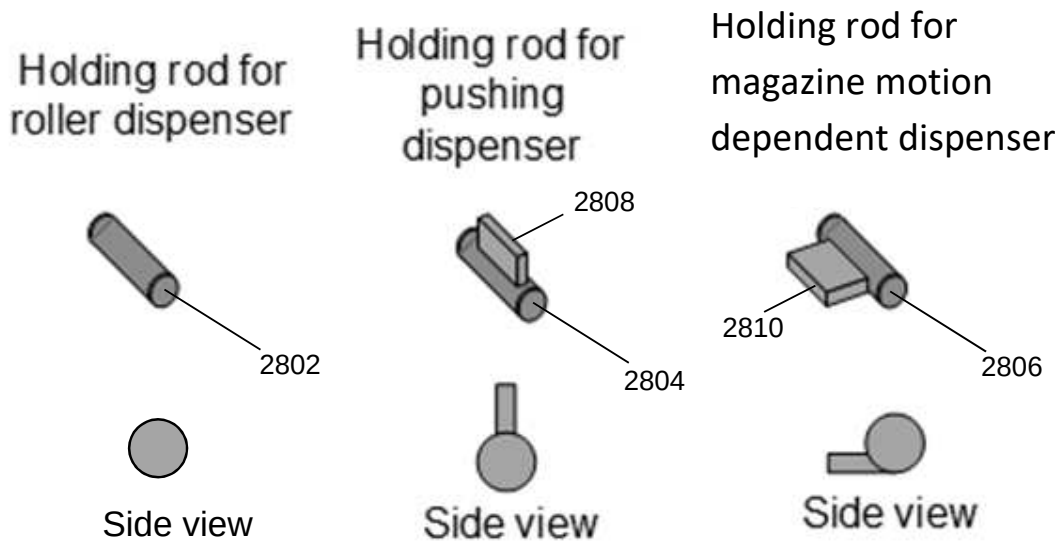


Figure 28D

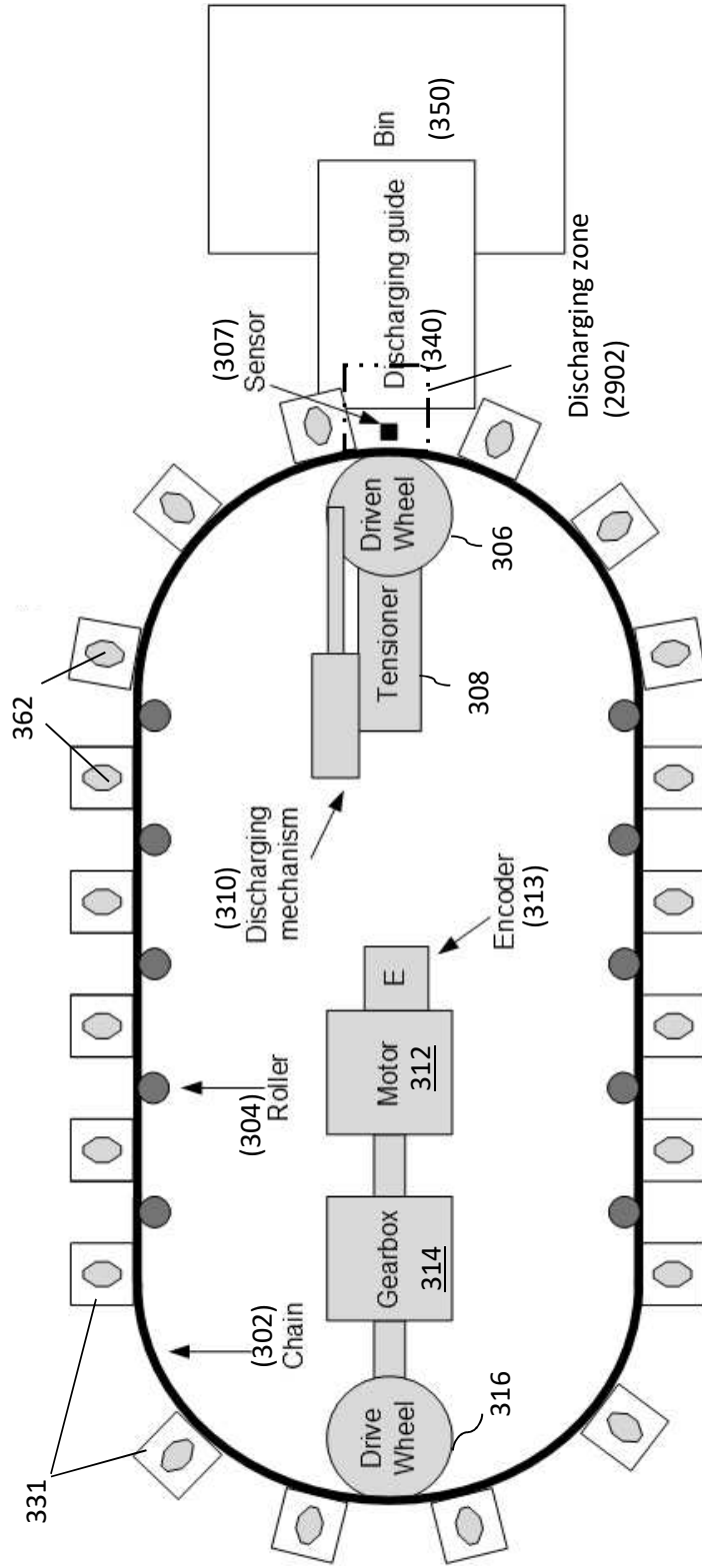


Figure 29A (Top View)

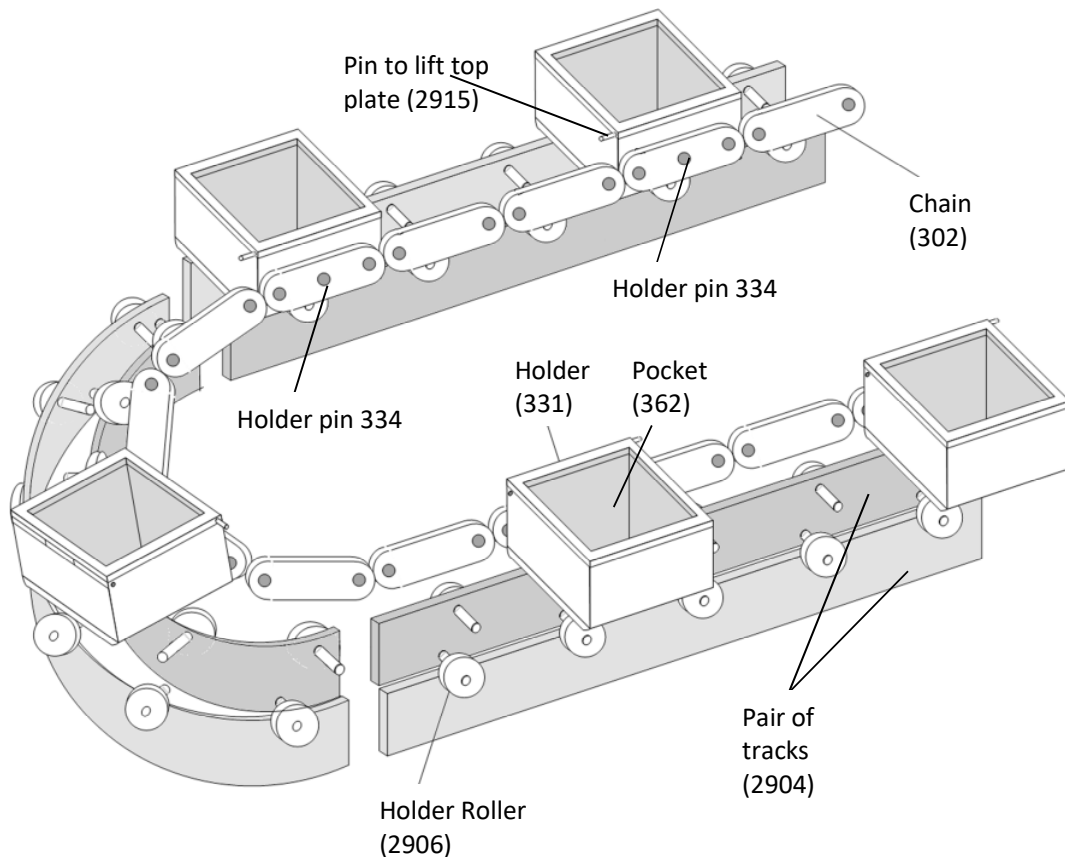


Figure 29B

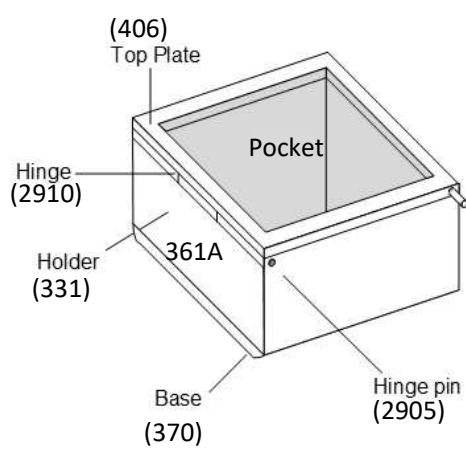


Figure 29C

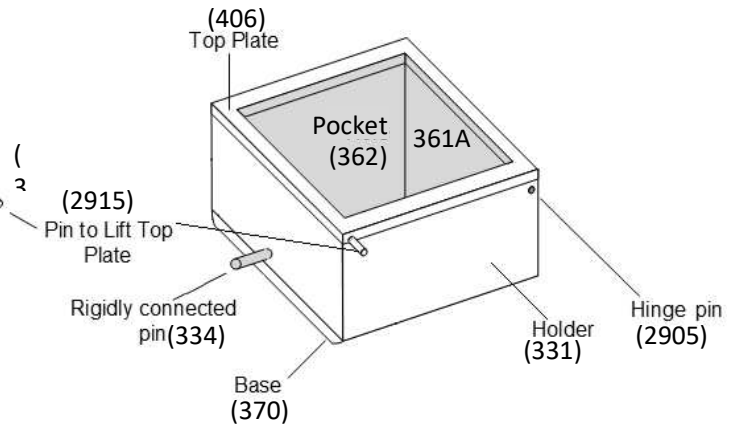
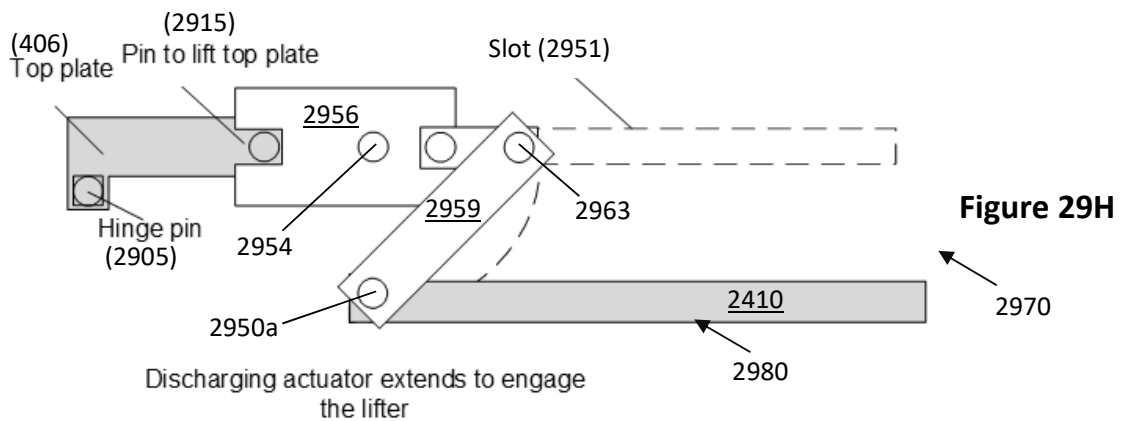
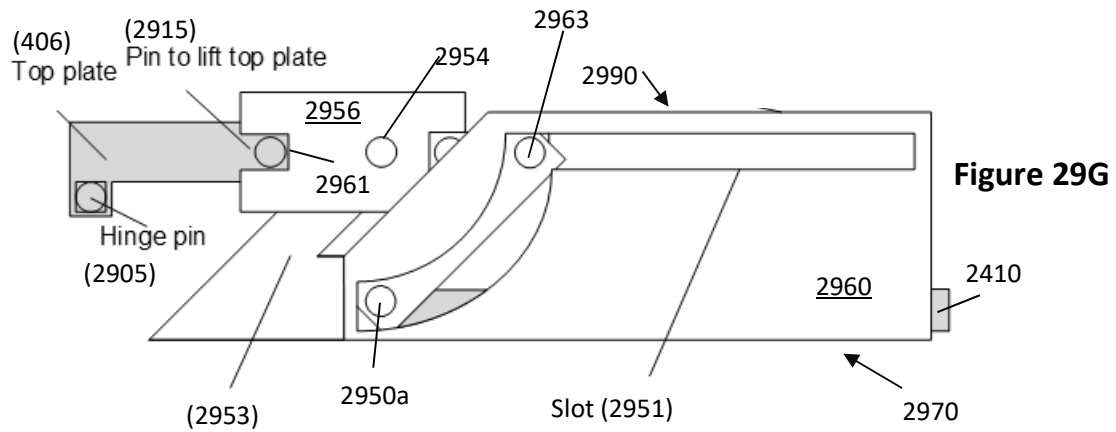
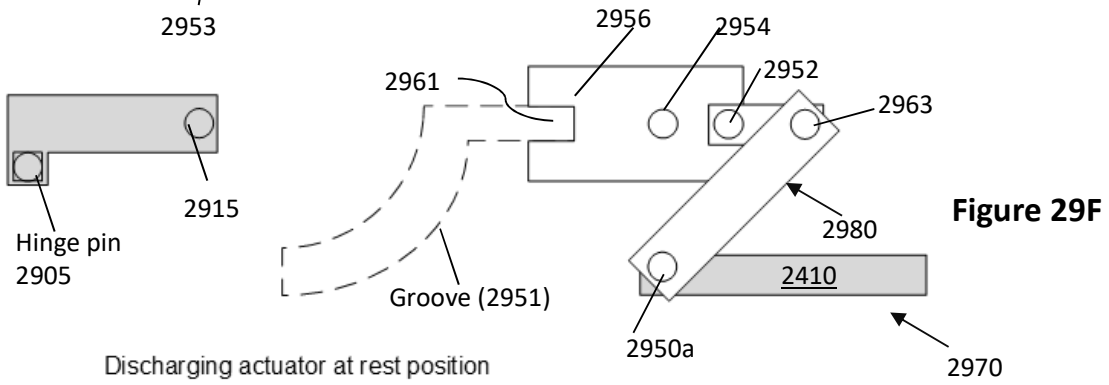
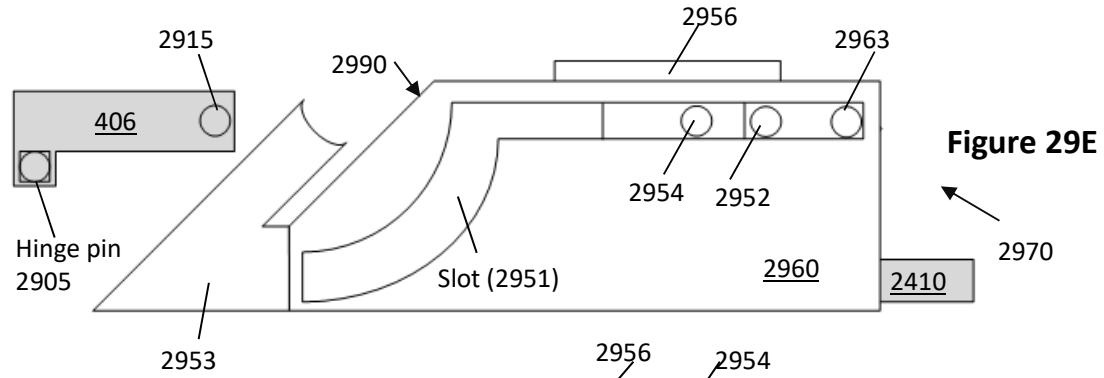
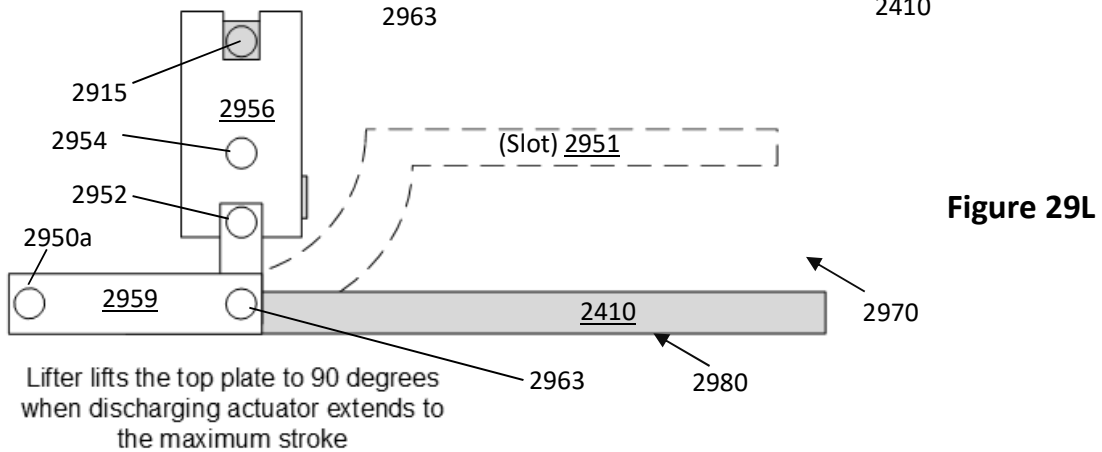
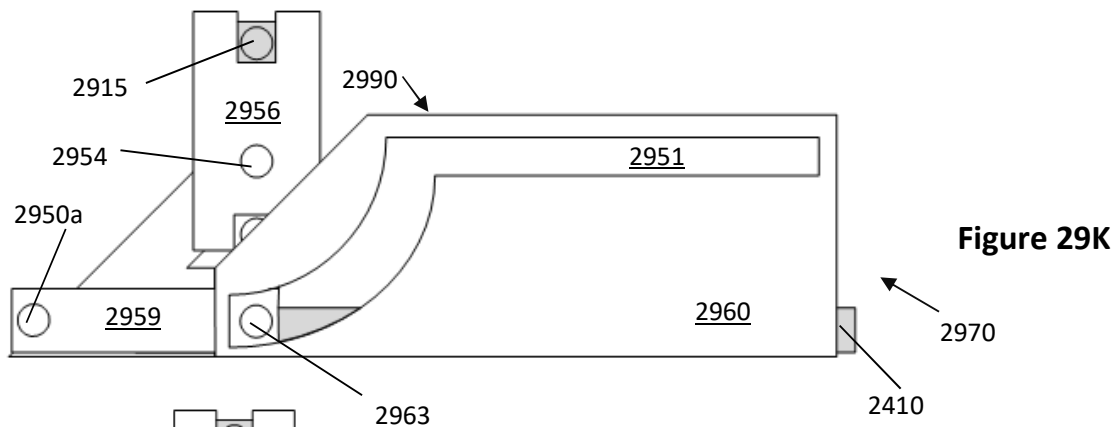
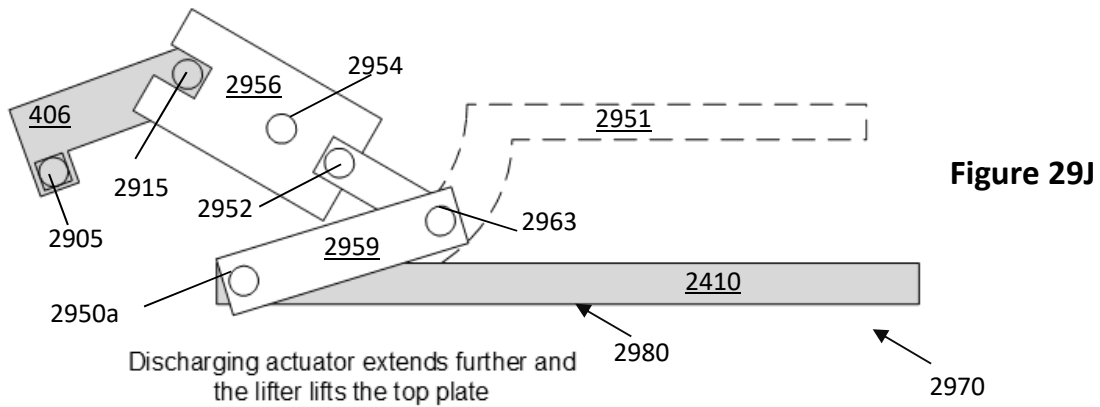
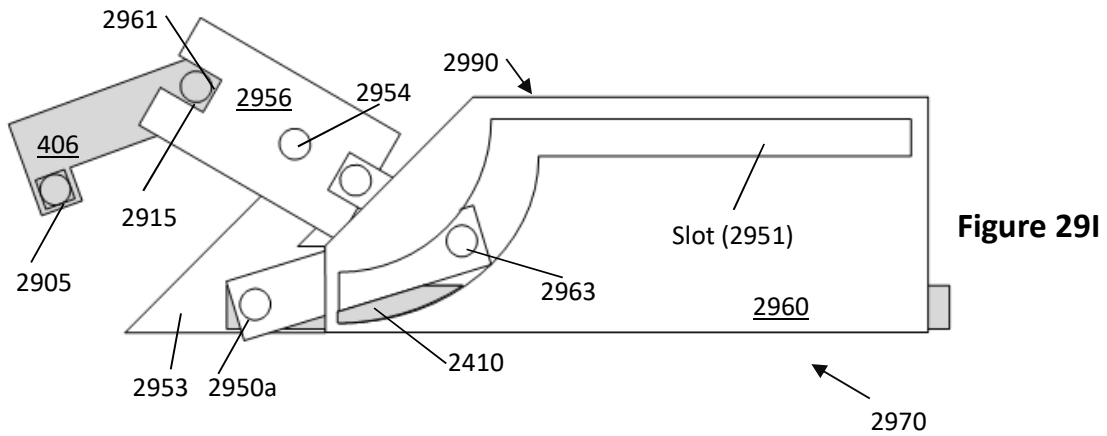


Figure 29D





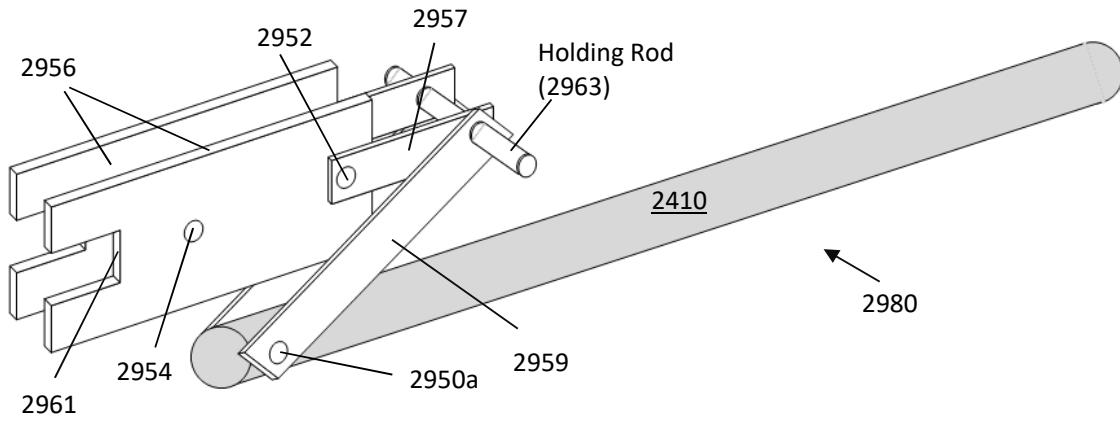


Figure 29M

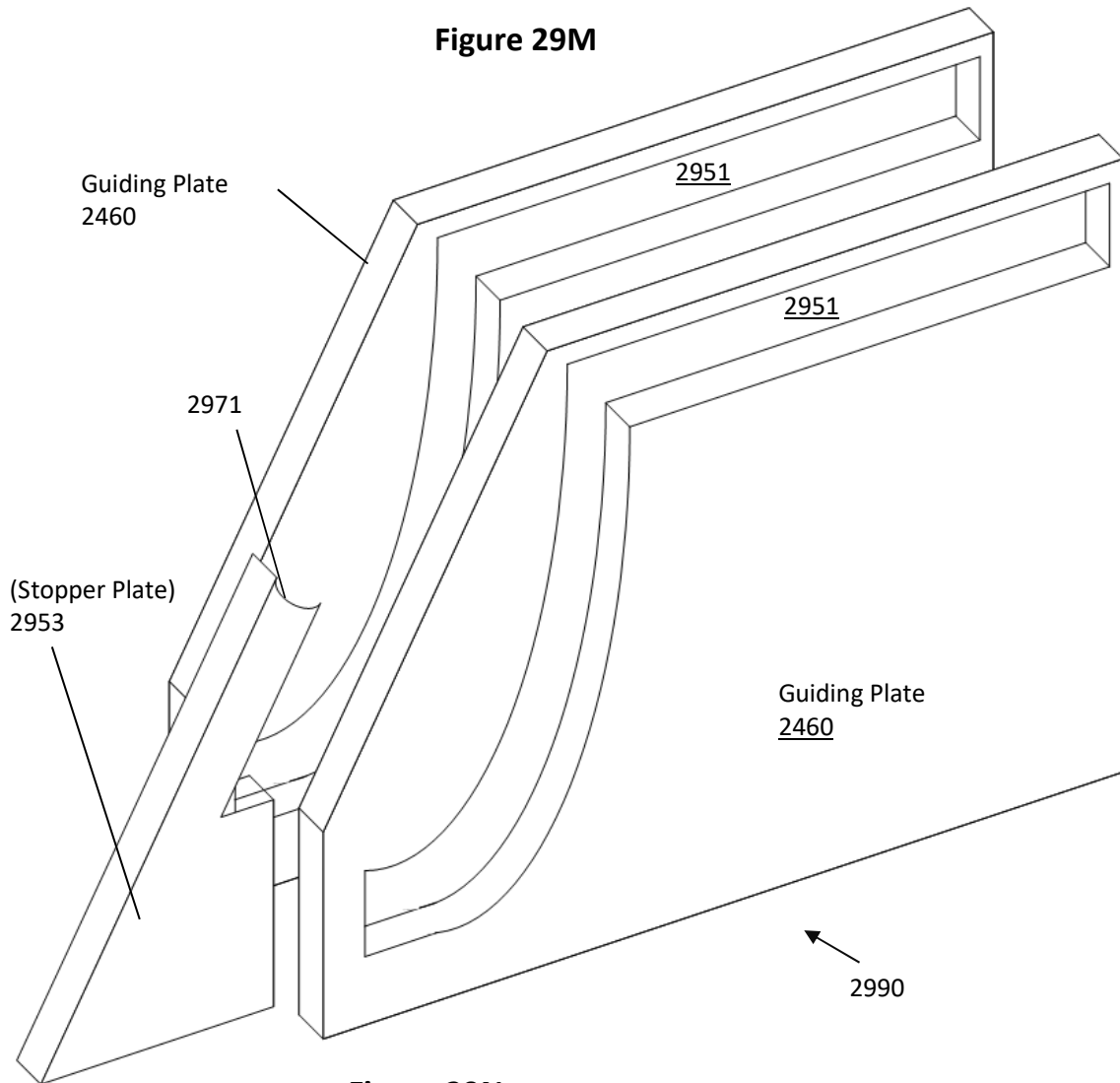
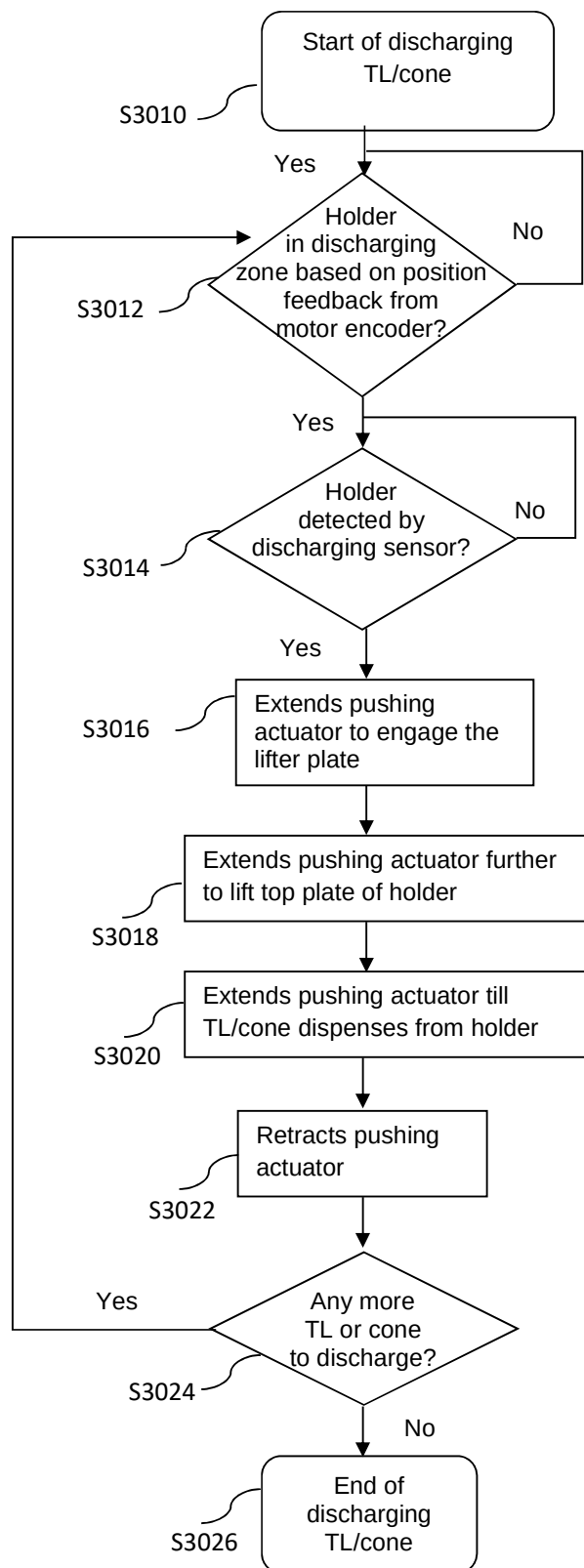


Figure 29N

**Figure 30A**

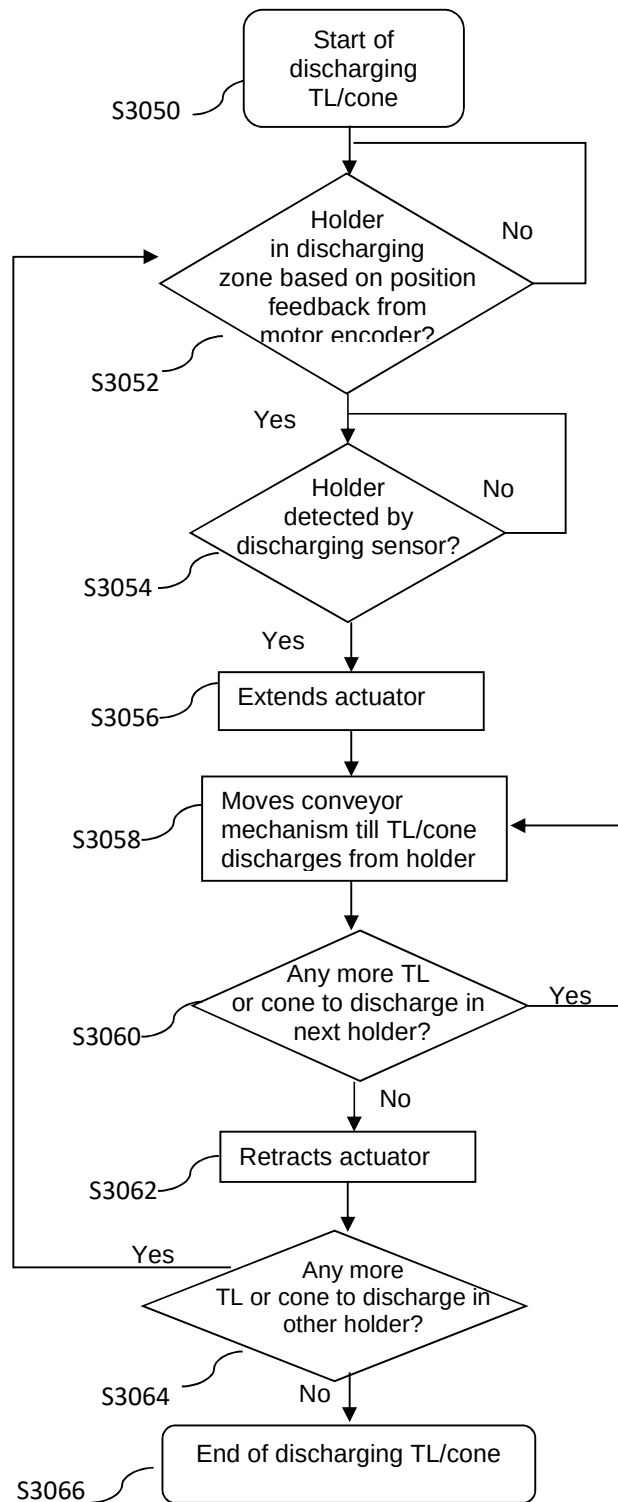


Figure 30B

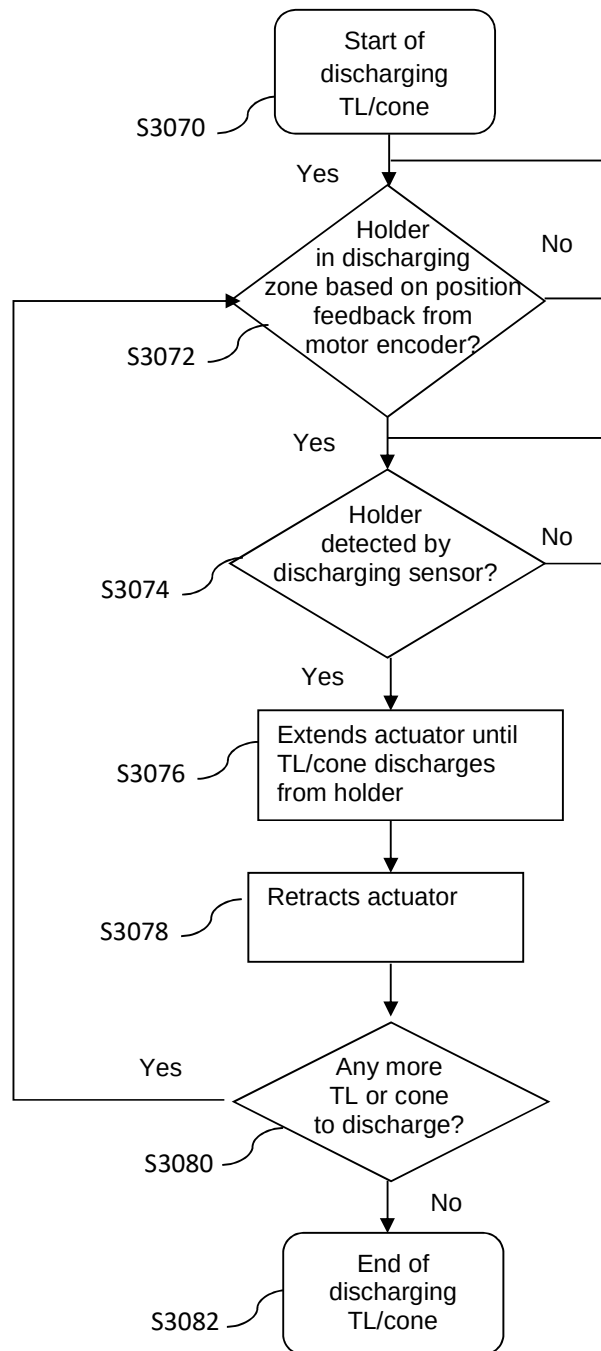


Figure 30C