

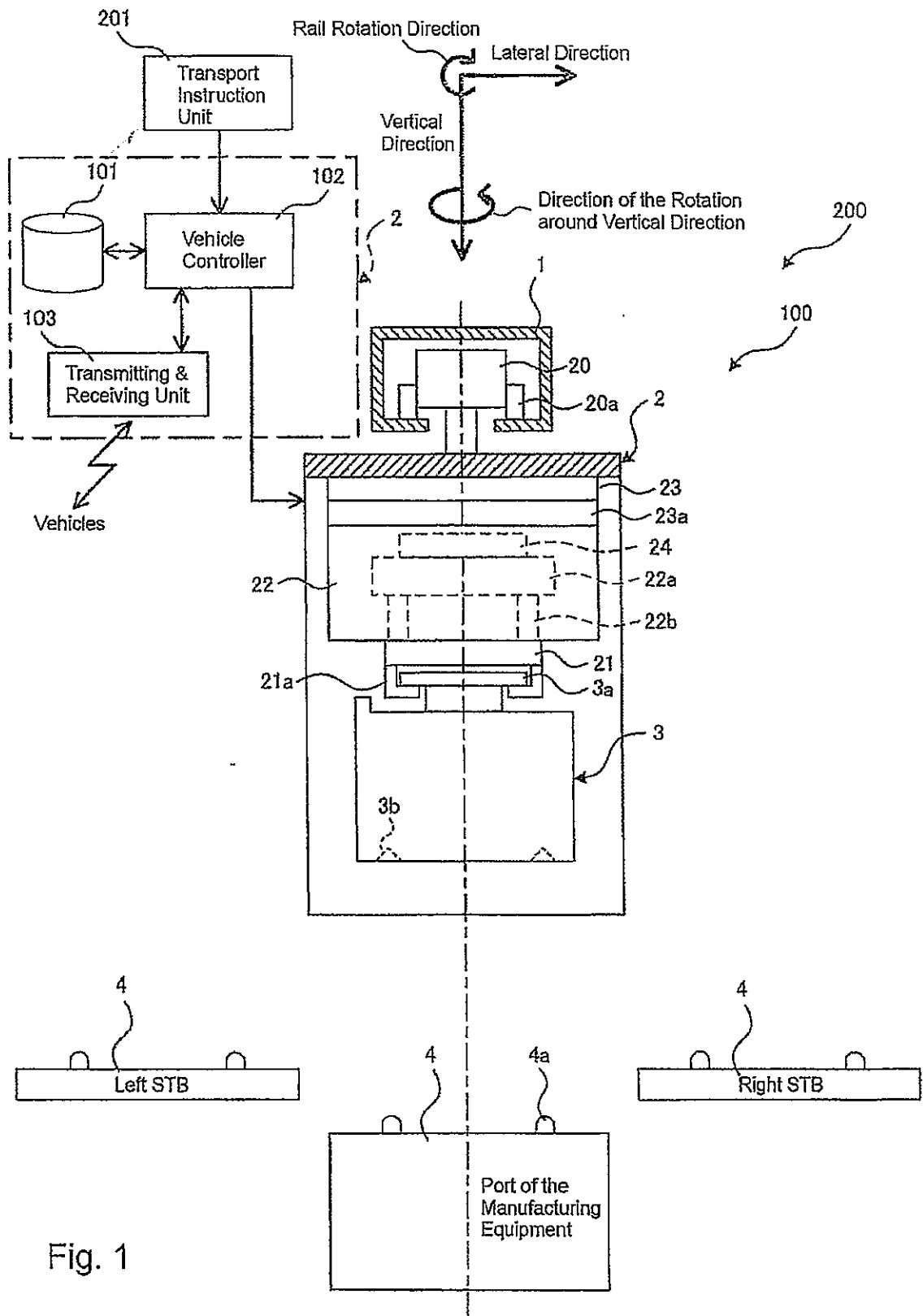


Fig. 1

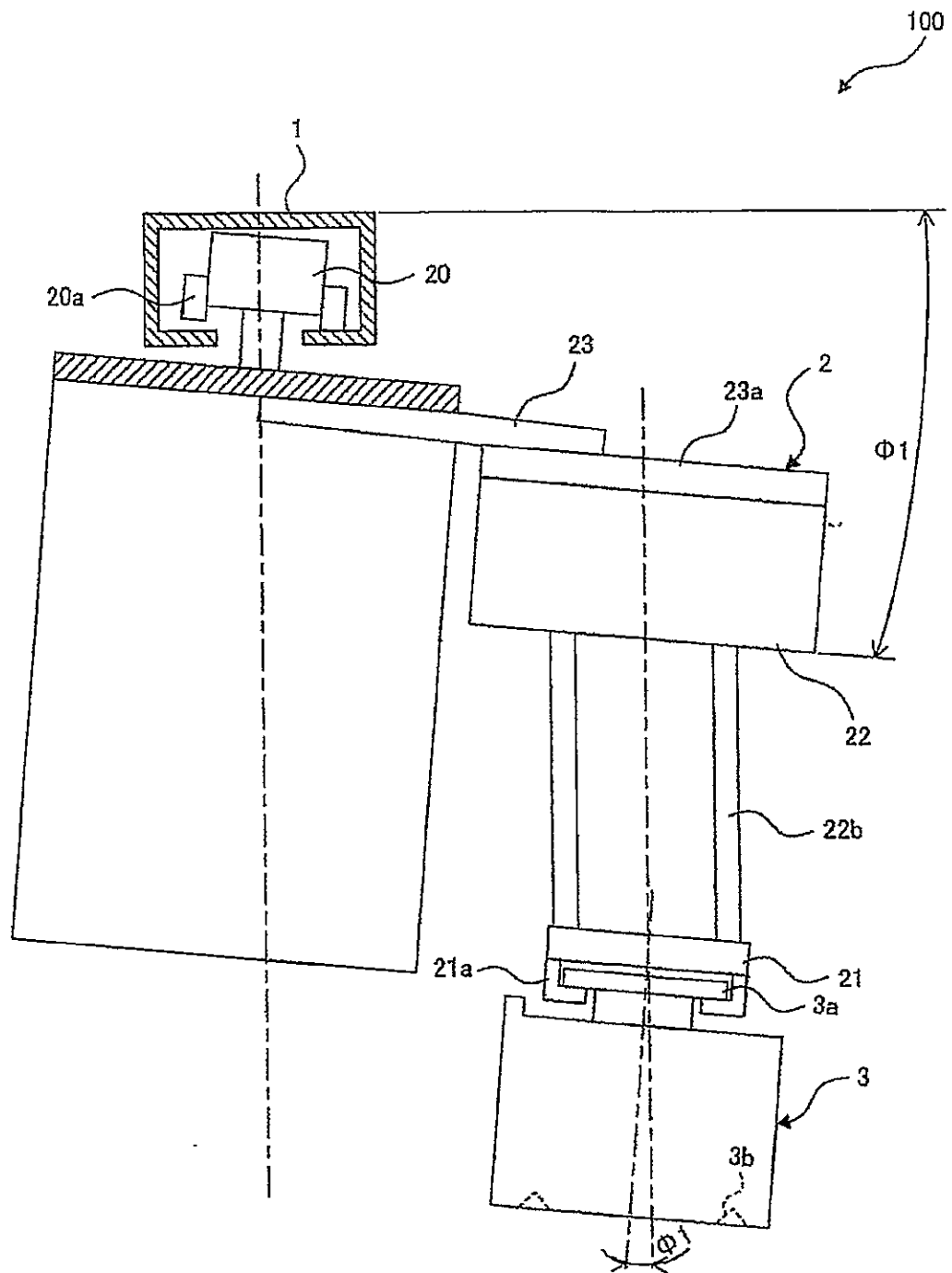


Fig. 2

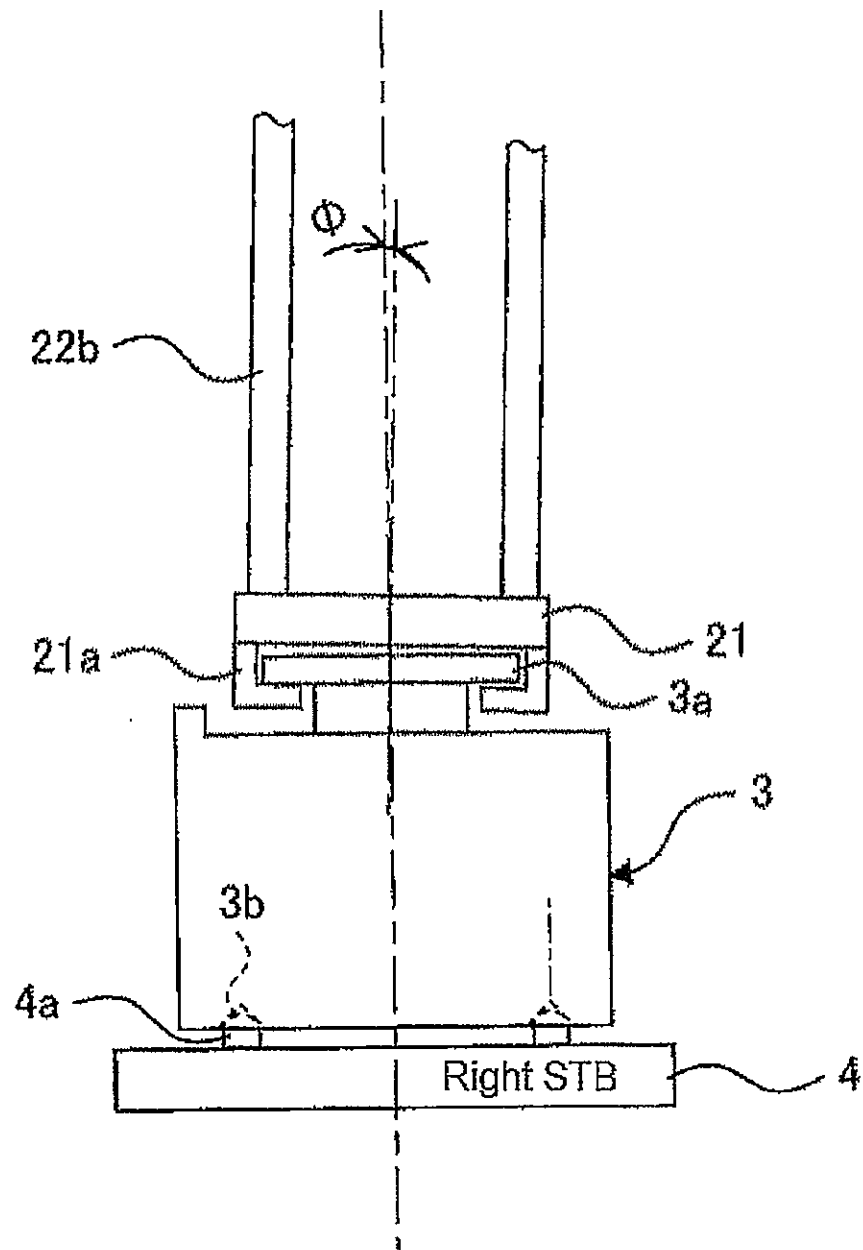


Fig. 3

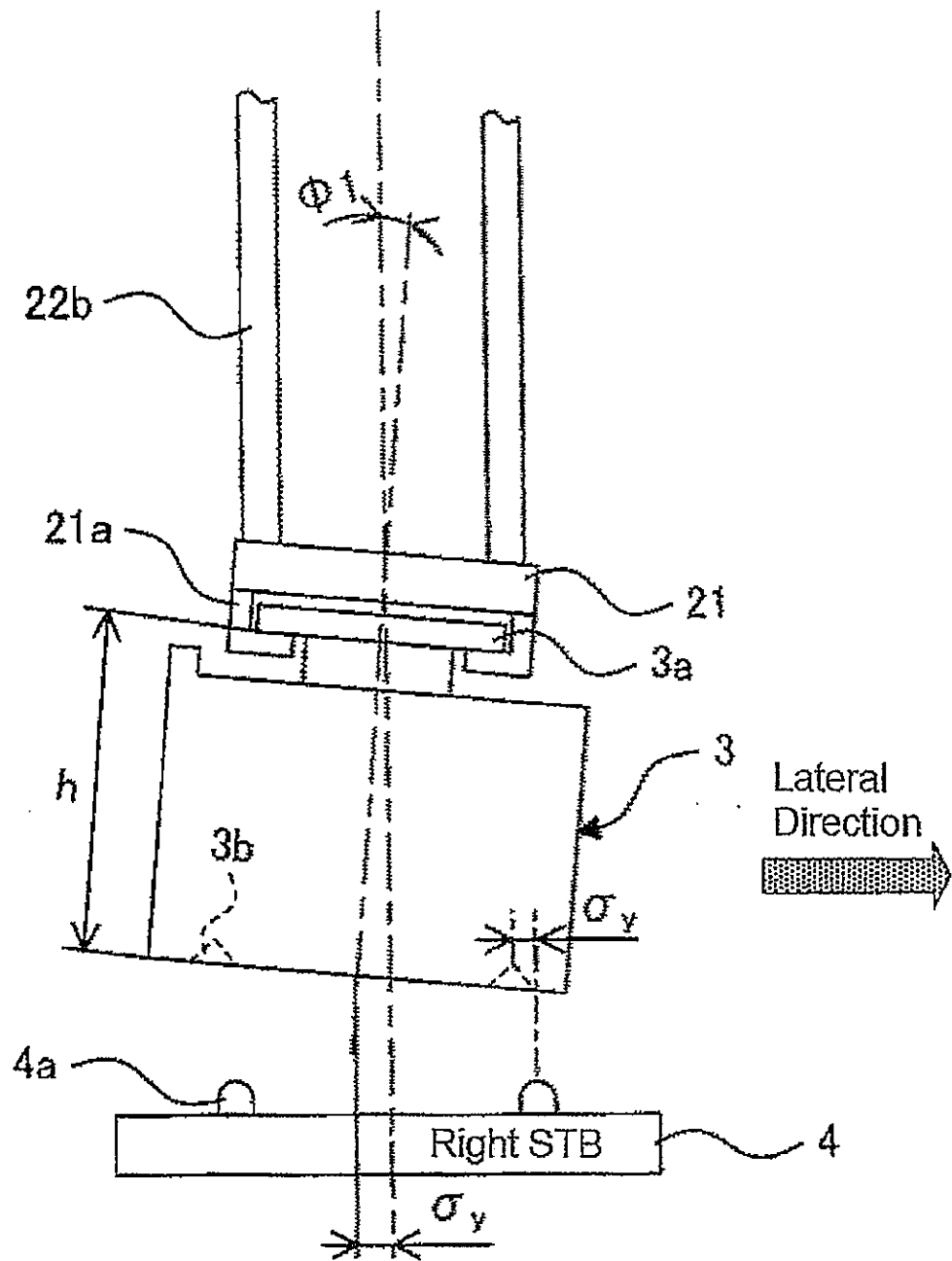
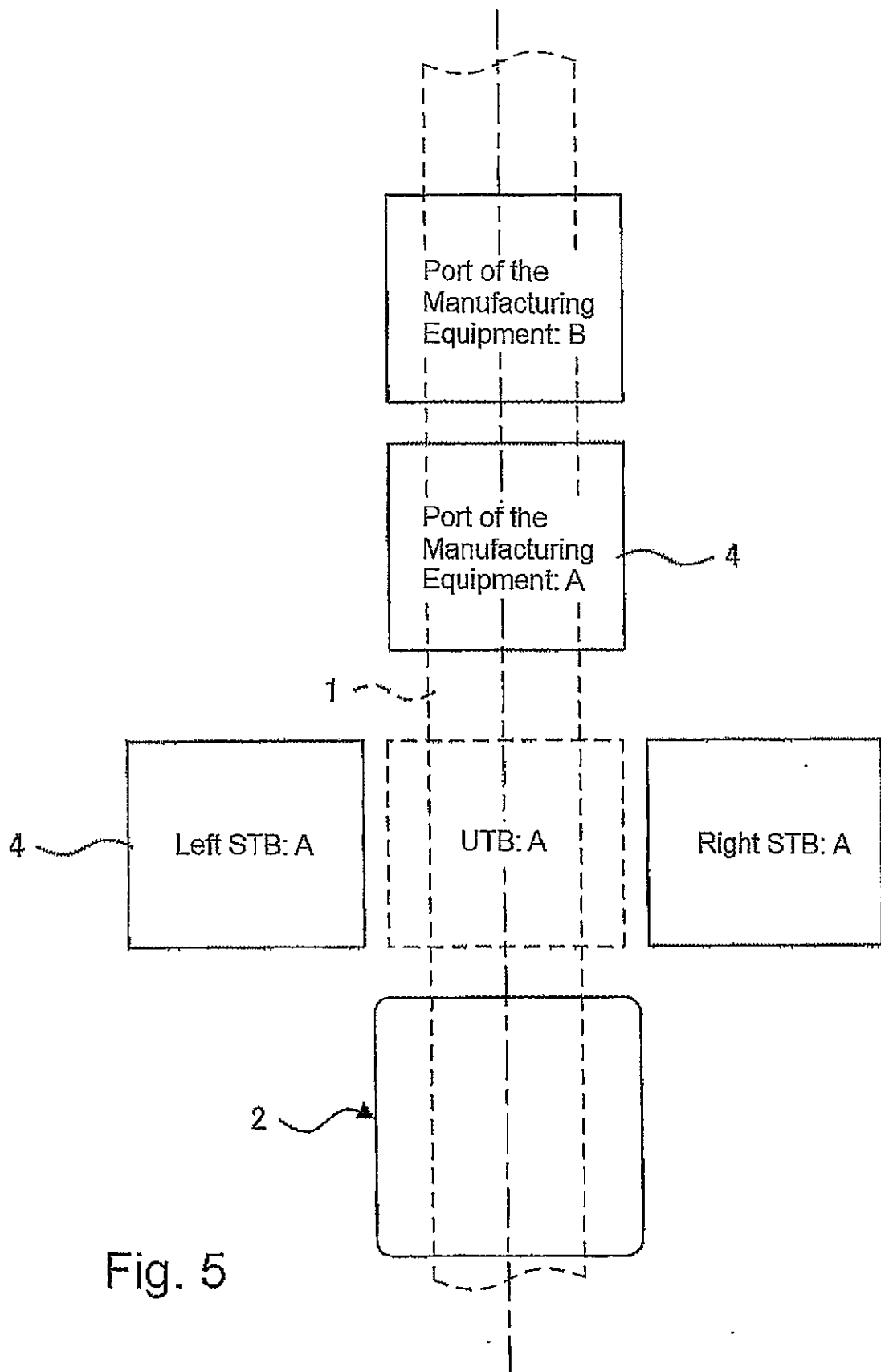


Fig. 4



	Placement Portion	Common Coordinate
Common Data	Port of the Manufacturing Equipment: A	$(X_{1A}, Y_{1A}, Z_{1A}, \Theta_{1A})$
	Port of the Manufacturing Equipment: B	$(X_{1B}, Y_{1B}, Z_{1B}, \Theta_{1B})$
	****	****
	UTB: A	$(X_{2A}, Y_{2A}, Z_{2A}, \Theta_{2A})$
	UTB: B	$(X_{2B}, Y_{2B}, Z_{2B}, \Theta_{2B})$
	****	****
	Right STB: A	$(X_{3A}, Y_{3A}, Z_{3A}, \Theta_{3A})$
	Right STB: B	$(X_{3B}, Y_{3B}, Z_{3B}, \Theta_{3B})$
	****	****
	Left STB: A	$(X_{4A}, Y_{4A}, Z_{4A}, \Theta_{4A})$
	Left STB: B	$(X_{4B}, Y_{4B}, Z_{4B}, \Theta_{4B})$
	****	****

Fig. 6

	Placement Portion	Presence of FOUN (Placing Action/ Holding Action)	Machine Difference Coordinate
Unique Data	Port of the Manufacturing Equipment	Absence	$(X_{111}, Y_{111}, Z_{111}, \Theta_{111})$
		Presence	$(X_{112}, Y_{112}, Z_{112}, \Theta_{112})$
	UTB	Absence	$(X_{211}, Y_{211}, Z_{211}, \Theta_{211})$
		Presence	$(X_{212}, Y_{212}, Z_{212}, \Theta_{212})$
	Right STB	Absence	$(X_{311}, Y_{311}, Z_{311}, \Theta_{311})$
		Presence	$(X_{312}, Y_{312}, Z_{312}, \Theta_{312})$
	Left STB	Absence	$(X_{411}, Y_{411}, Z_{411}, \Theta_{411})$
		Presence	$(X_{412}, Y_{412}, Z_{412}, \Theta_{412})$

Fig. 7

	Placement Portion	Holding Operation	Machine Difference Coordinate
		Placing Operation	
Unique Data	Port of the Manufacturing Equipment	FOUP: Absence	$(X_{111}, Y_{111}, Z_{111}, \Theta_{111})$
		Offset Amount	$(\sigma_{x1}, \sigma_{y1}, \sigma_{z1}, \sigma_{\theta1})$
	UTB	FOUP: Absence	$(X_{211}, Y_{211}, Z_{211}, \Theta_{211})$
		Offset Amount	$(\sigma_{x2}, \sigma_{y2}, \sigma_{z2}, \sigma_{\theta2})$
	Right STB	FOUP: Absence	$(X_{311}, Y_{311}, Z_{311}, \Theta_{311})$
		Offset Amount	$(\sigma_{x3}, \sigma_{y3}, \sigma_{z3}, \sigma_{\theta3})$
	Left STB	FOUP: Absence	$(X_{411}, Y_{411}, Z_{411}, \Theta_{411})$
		Offset Amount	$(\sigma_{x4}, \sigma_{y4}, \sigma_{z4}, \sigma_{\theta4})$

Fig. 8A

	Placement Portion	Placing Operation	Machine Difference Coordinate
		Holding Operation	
Unique Data	Port of the Manufacturing Equipment	FOUP: Presence	$(X_{112}, Y_{112}, Z_{112}, \Theta_{112})$
		Offset Amount	$(\sigma_{x1}, \sigma_{y1}, \sigma_{z1}, \sigma_{\theta1})$
	UTB	FOUP: Presence	$(X_{212}, Y_{212}, Z_{212}, \Theta_{212})$
		Offset Amount	$(\sigma_{x2}, \sigma_{y2}, \sigma_{z2}, \sigma_{\theta2})$
	Right STB	FOUP: Presence	$(X_{312}, Y_{312}, Z_{312}, \Theta_{312})$
		Offset Amount	$(\sigma_{x3}, \sigma_{y3}, \sigma_{z3}, \sigma_{\theta3})$
	Left STB	FOUP: Presence	$(X_{412}, Y_{412}, Z_{412}, \Theta_{412})$
		Offset Amount	$(\sigma_{x4}, \sigma_{y4}, \sigma_{z4}, \sigma_{\theta4})$

Fig. 8B

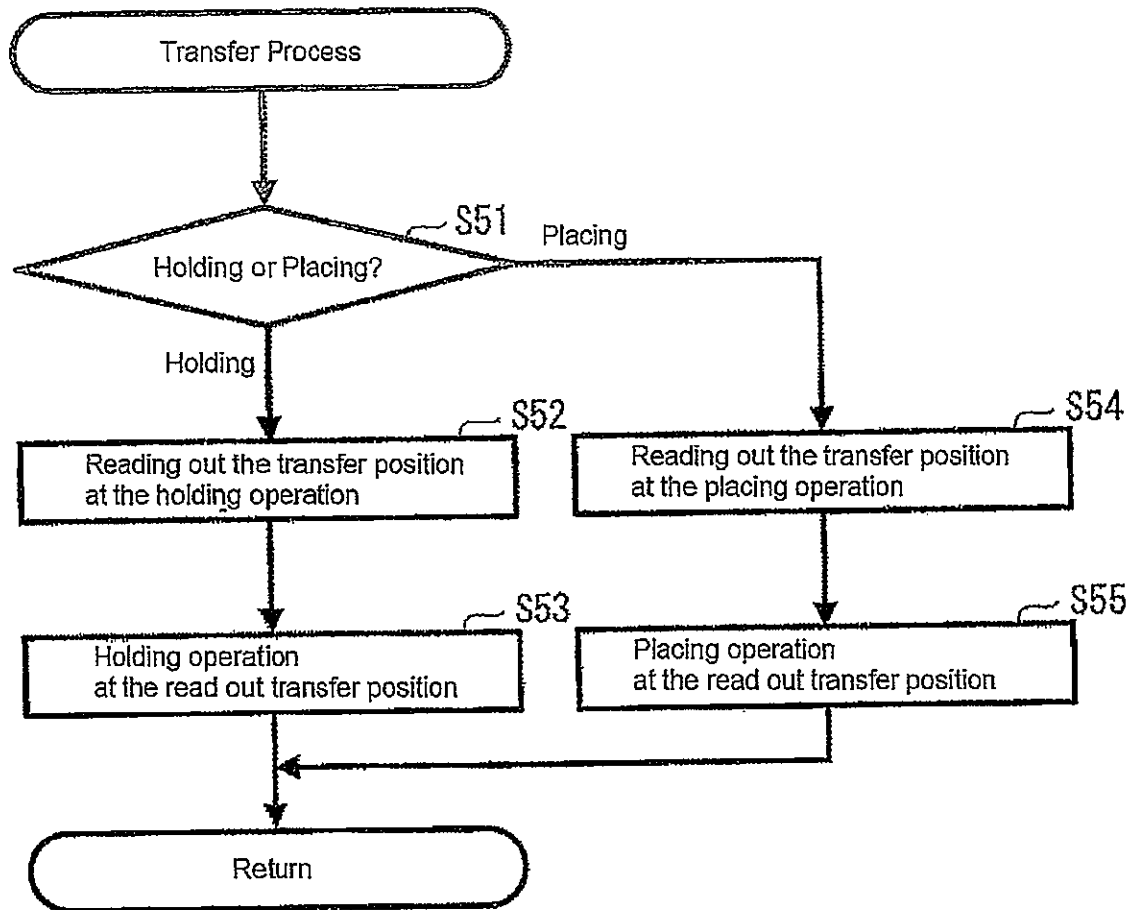


Fig. 9