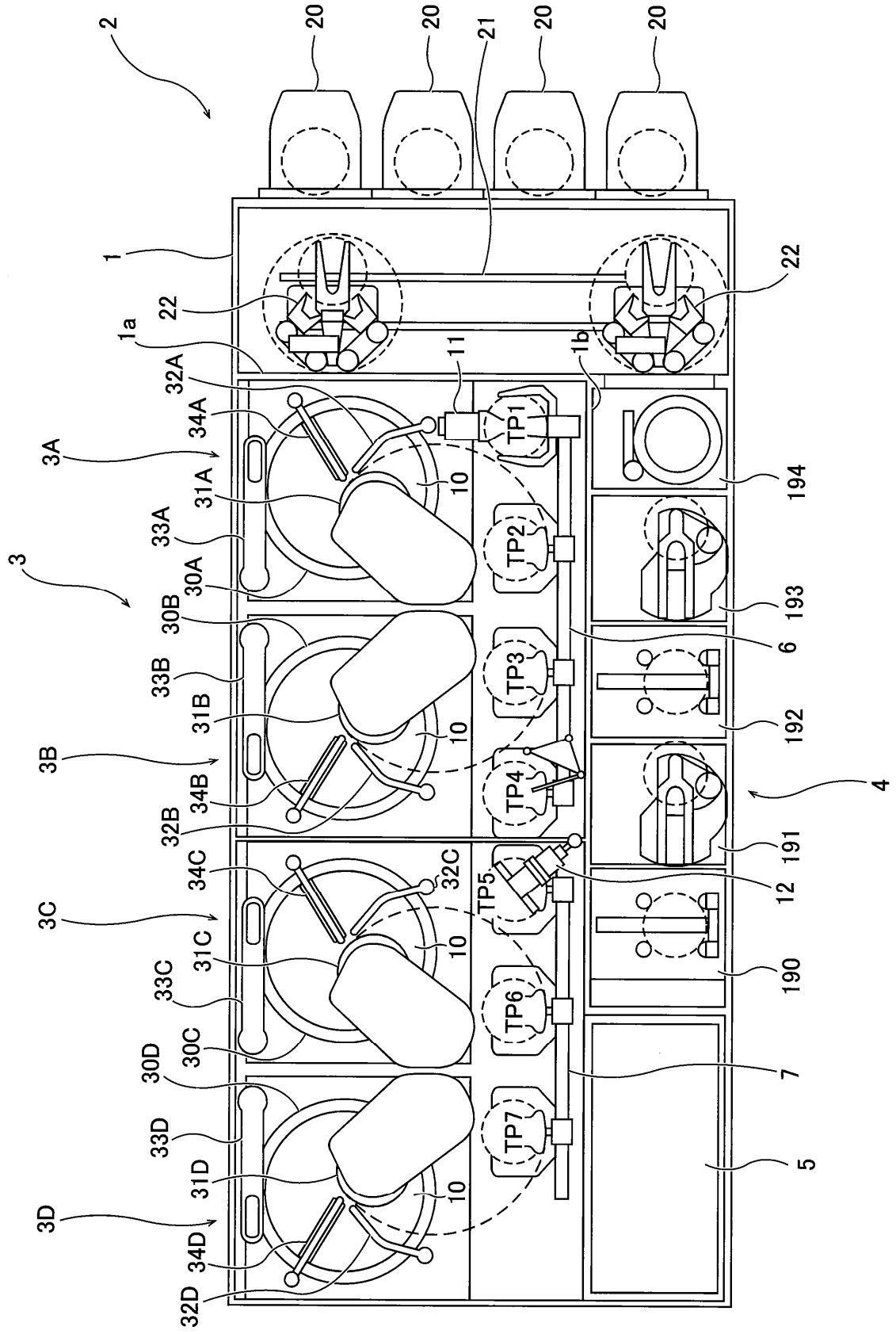


FIG.1



**FIG. 2**

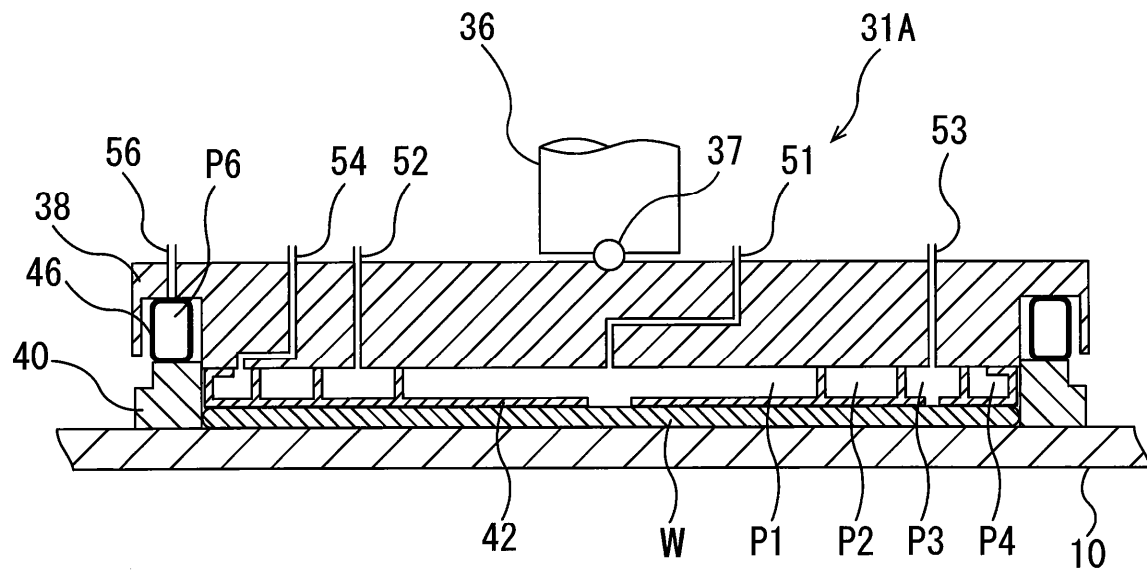


FIG. 3A

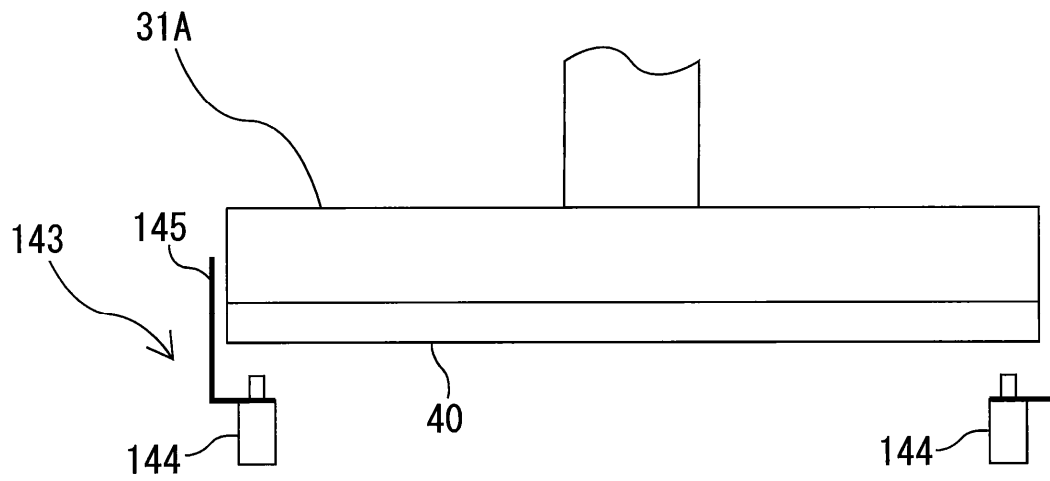
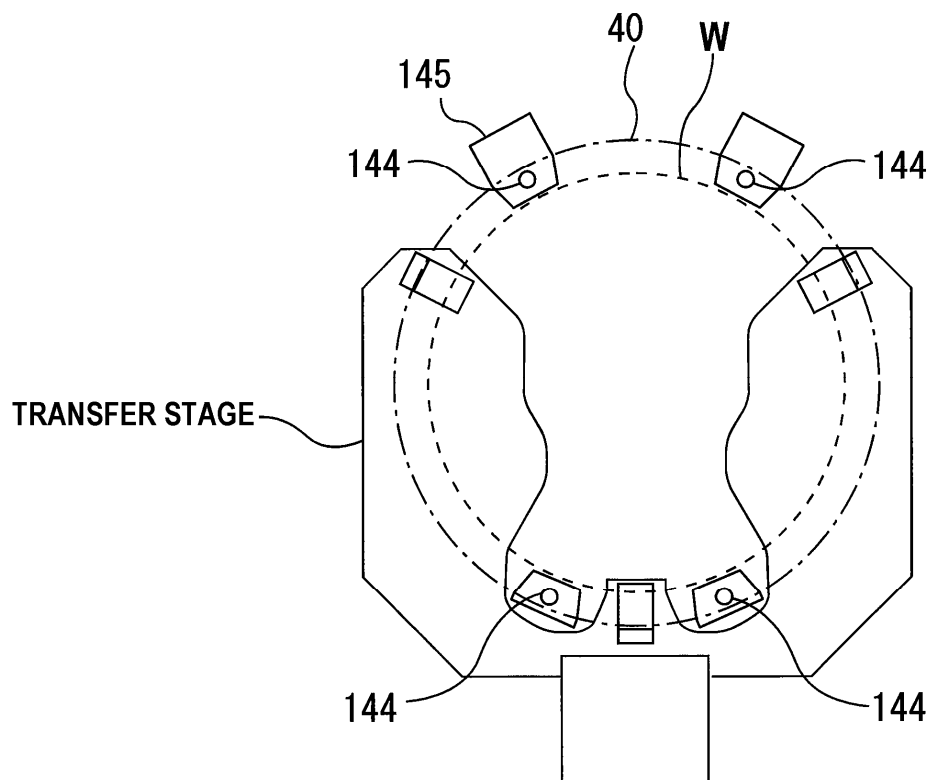
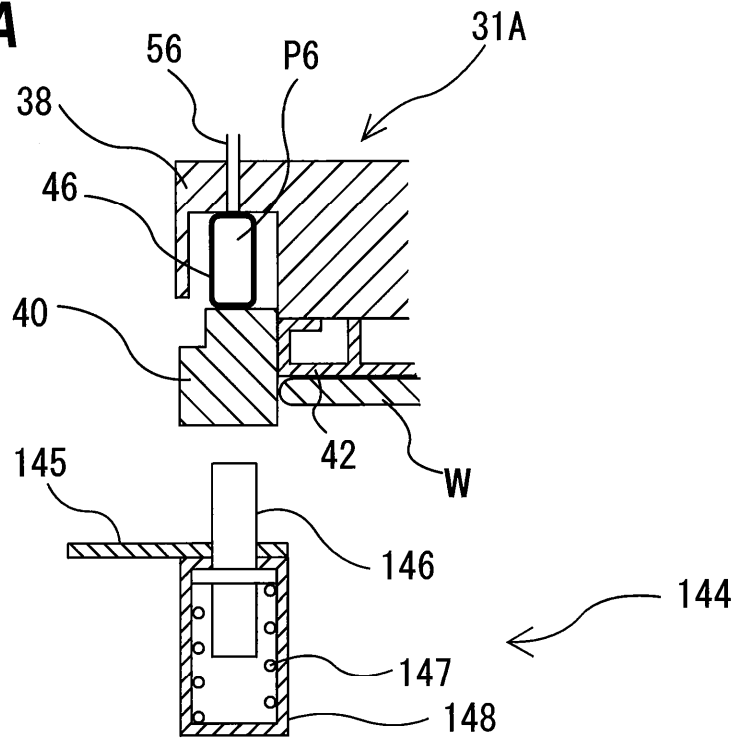


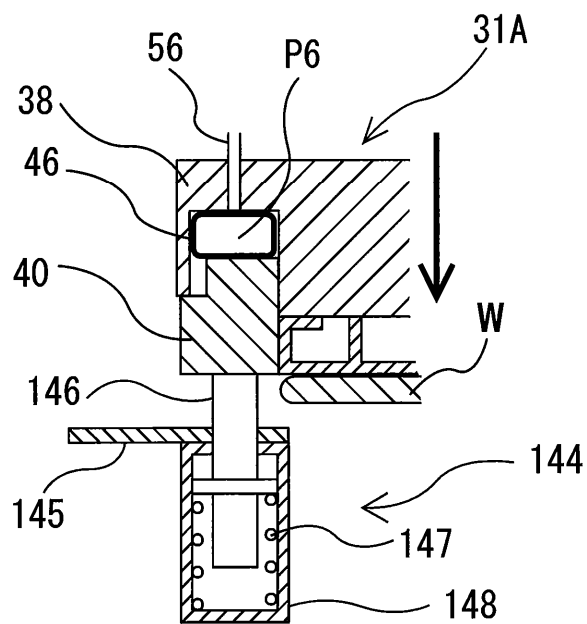
FIG. 3B



**FIG.4A**

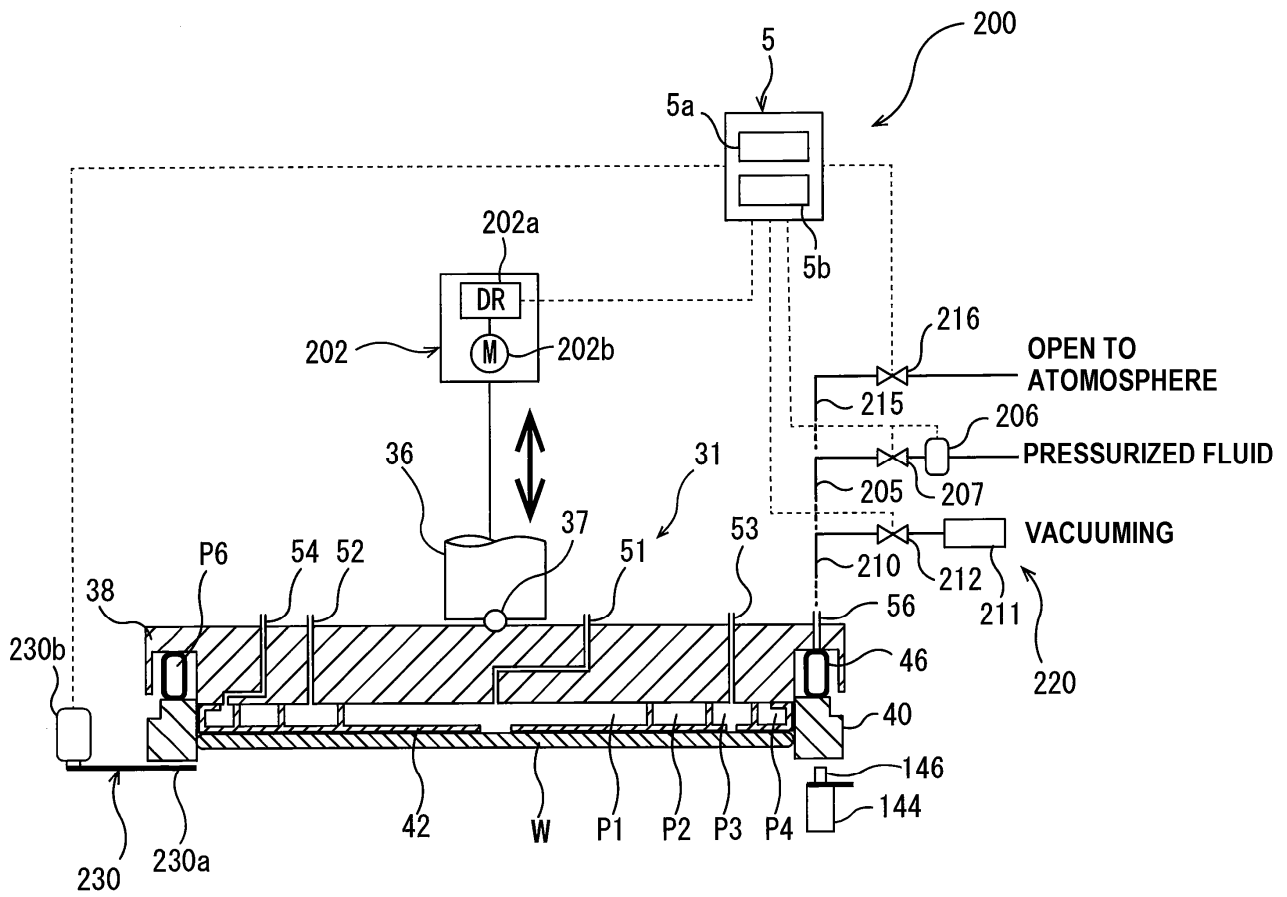


**FIG.4B**



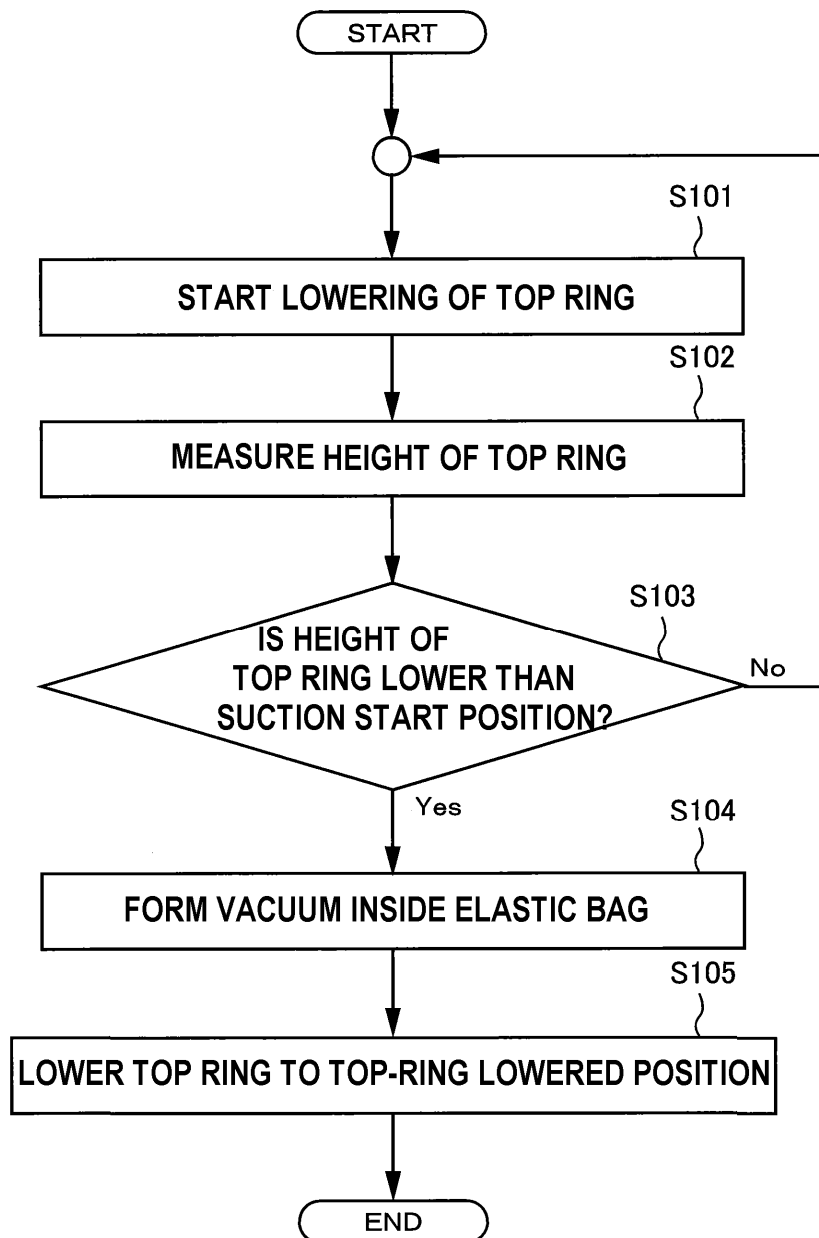
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FIG. 5

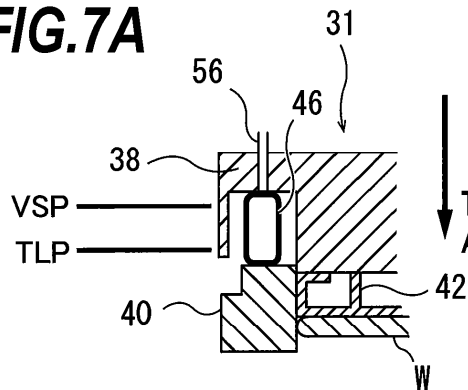


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FIG. 6

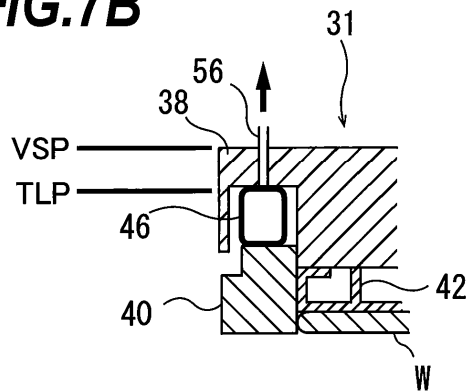


**FIG.7A**



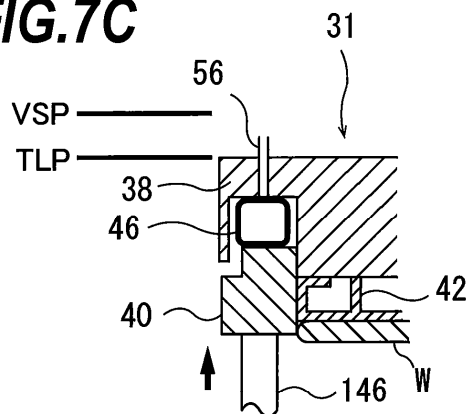
TOP RING IS ABOVE SUCTION START POSITION VSP  
AND TOP RING HAS STARTED TO LOWER

**FIG.7B**



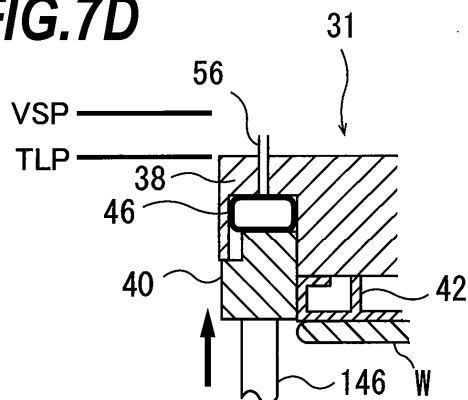
AFTER TOP RING HAS REACHED  
SUCTION START POSITION VSP,  
VACUUM PULLING HAS BEEN STARTED

**FIG.7C**



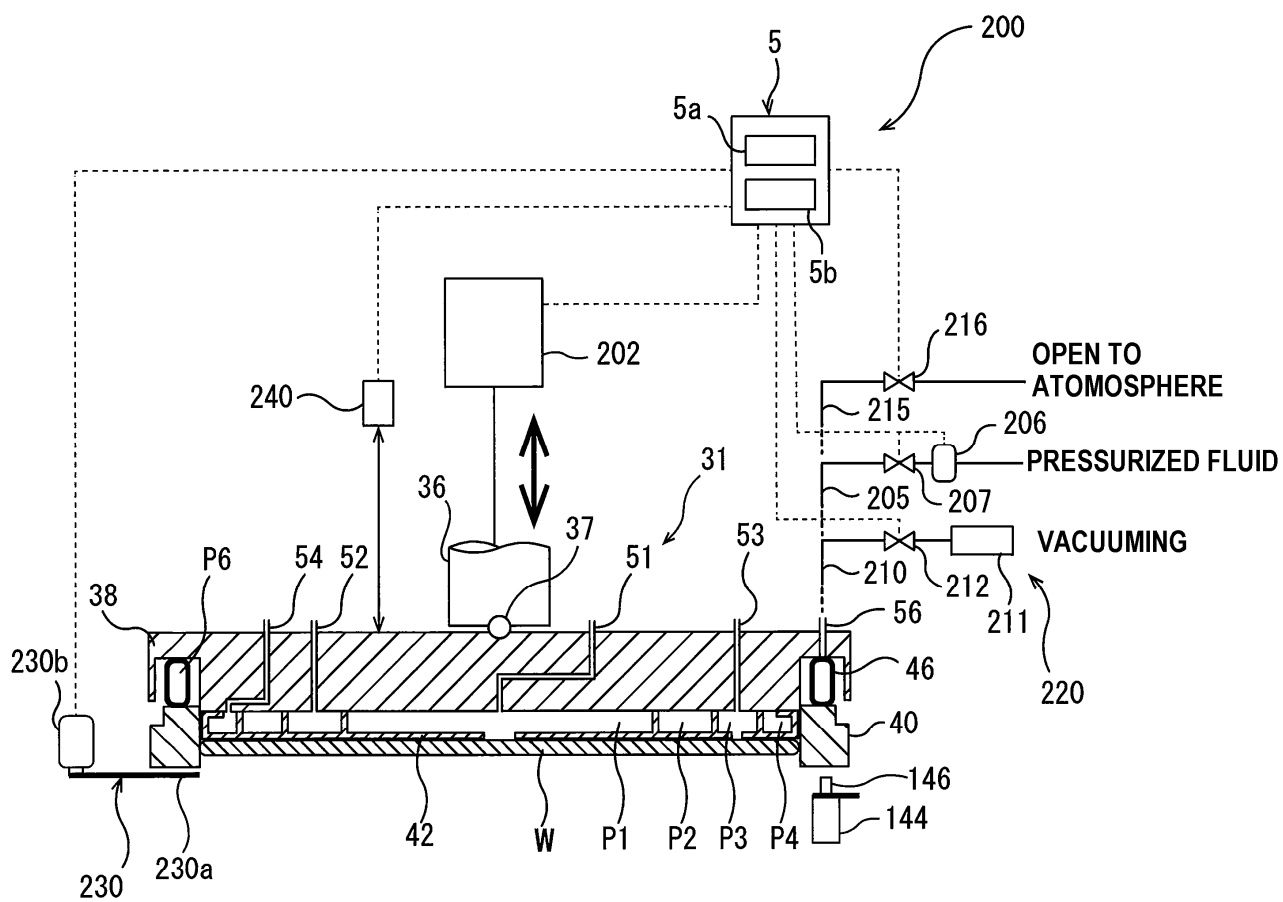
TOP RING HAS REACHED  
TOP-RING LOWERED POSITION TLP

**FIG.7D**



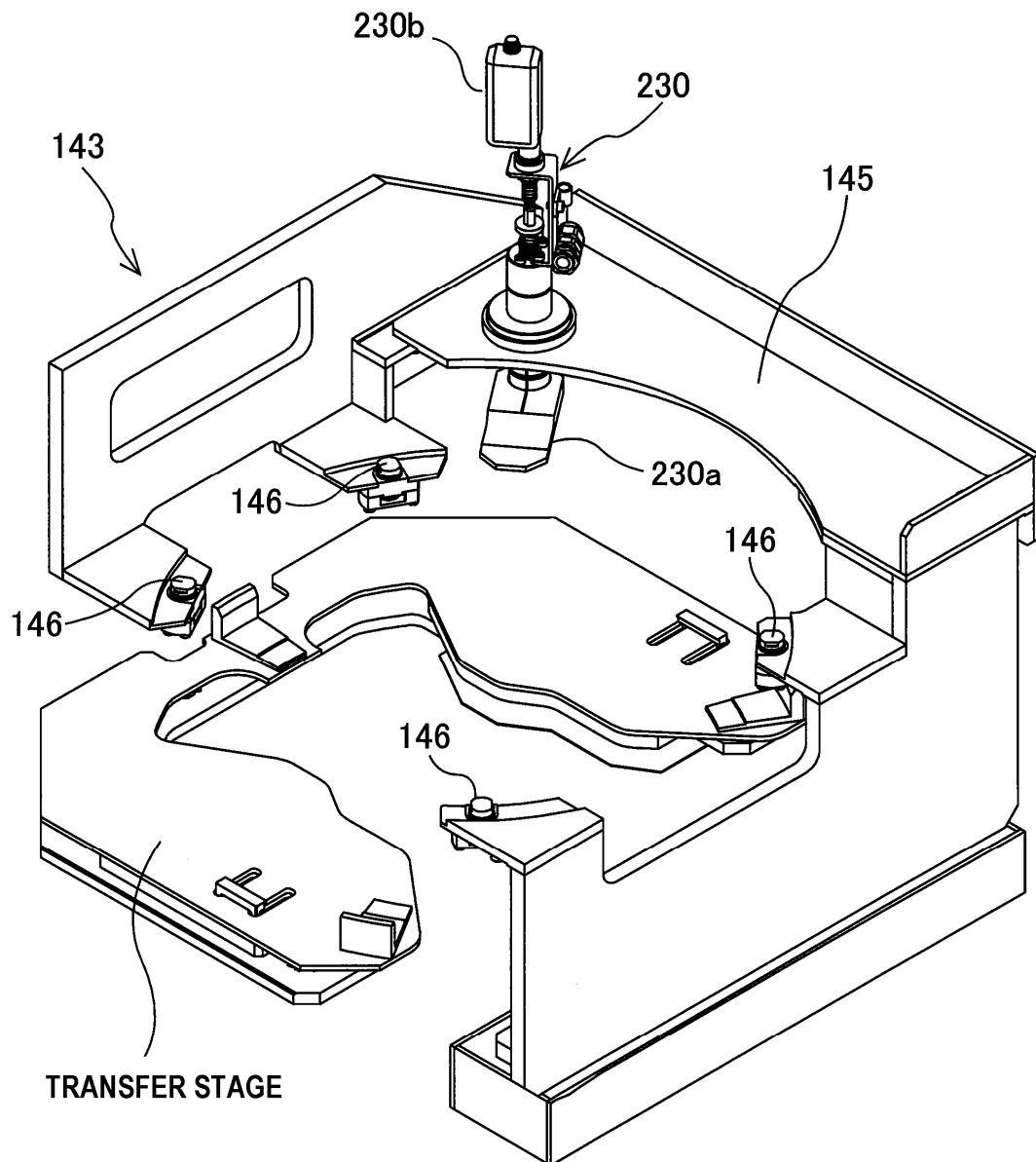
RETAINER RING IS PUSHED UP BY PUSH-UP PIN  
SO THAT RETAINER RING IS POSITIONED  
ABOVE WAFER

**FIG. 8**



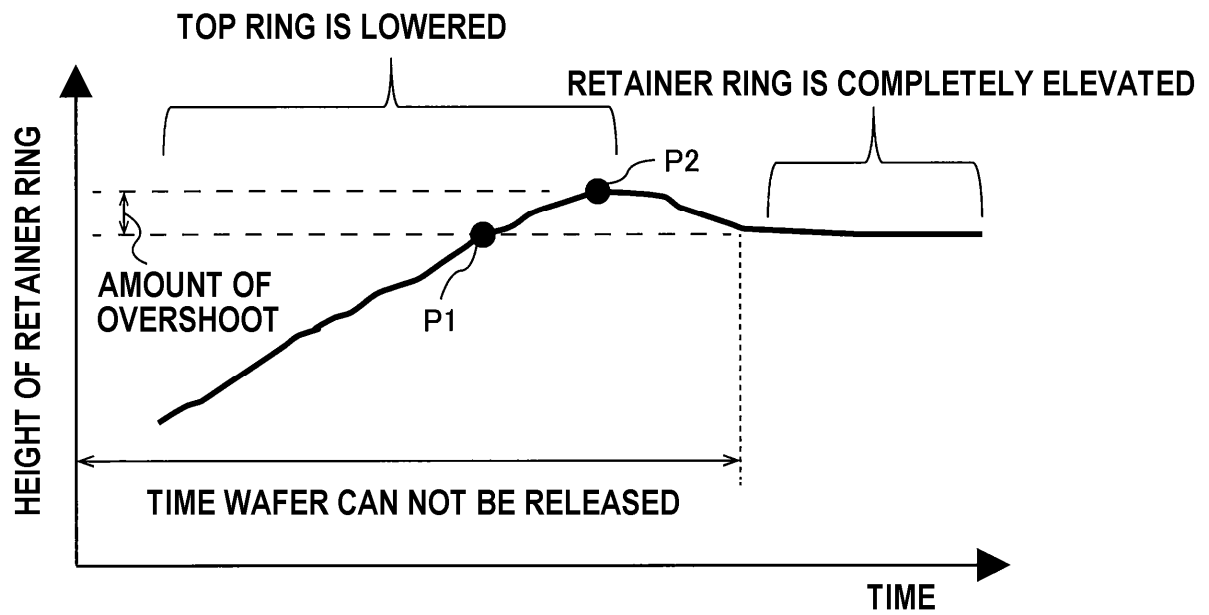
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**FIG. 9**



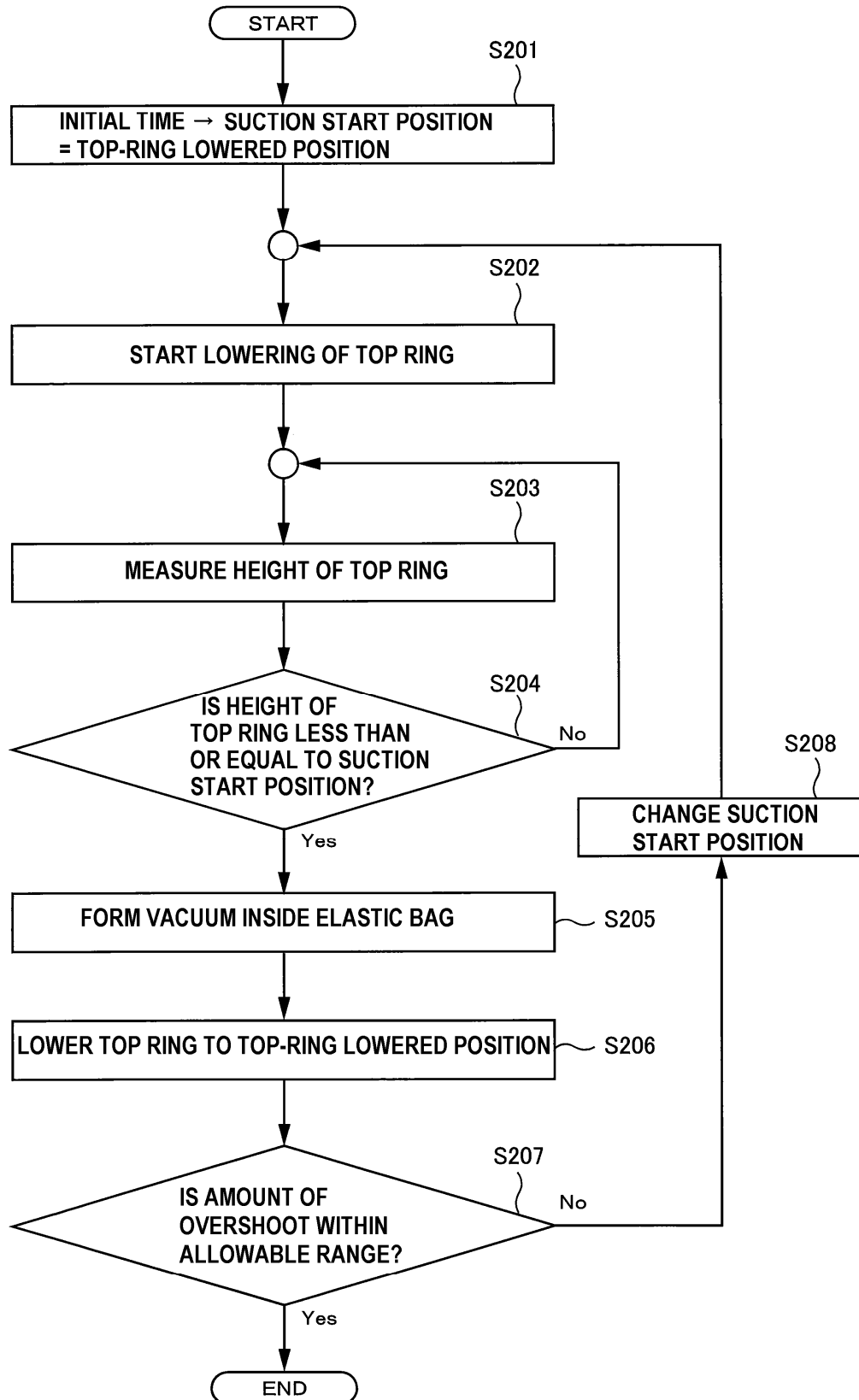
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FIG. 10



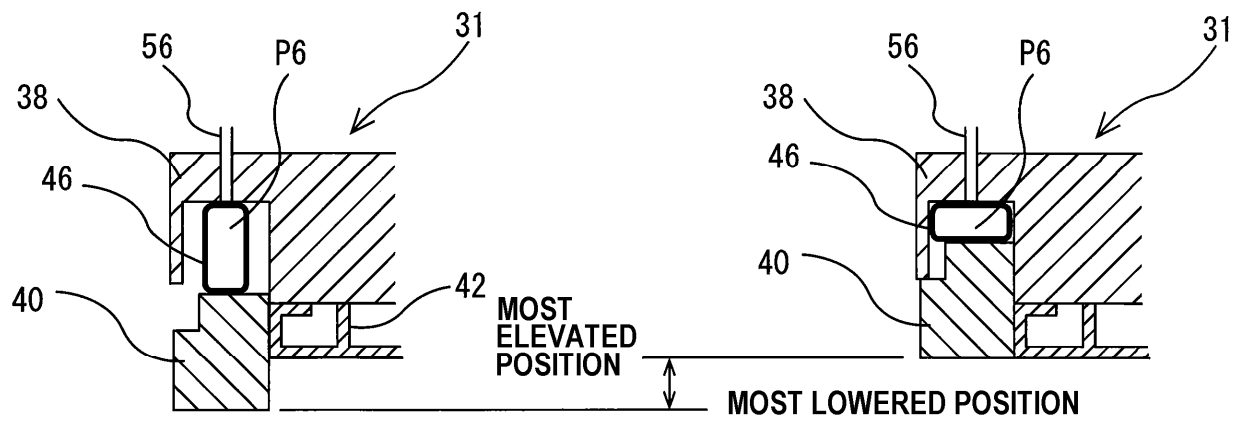
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FIG. 11



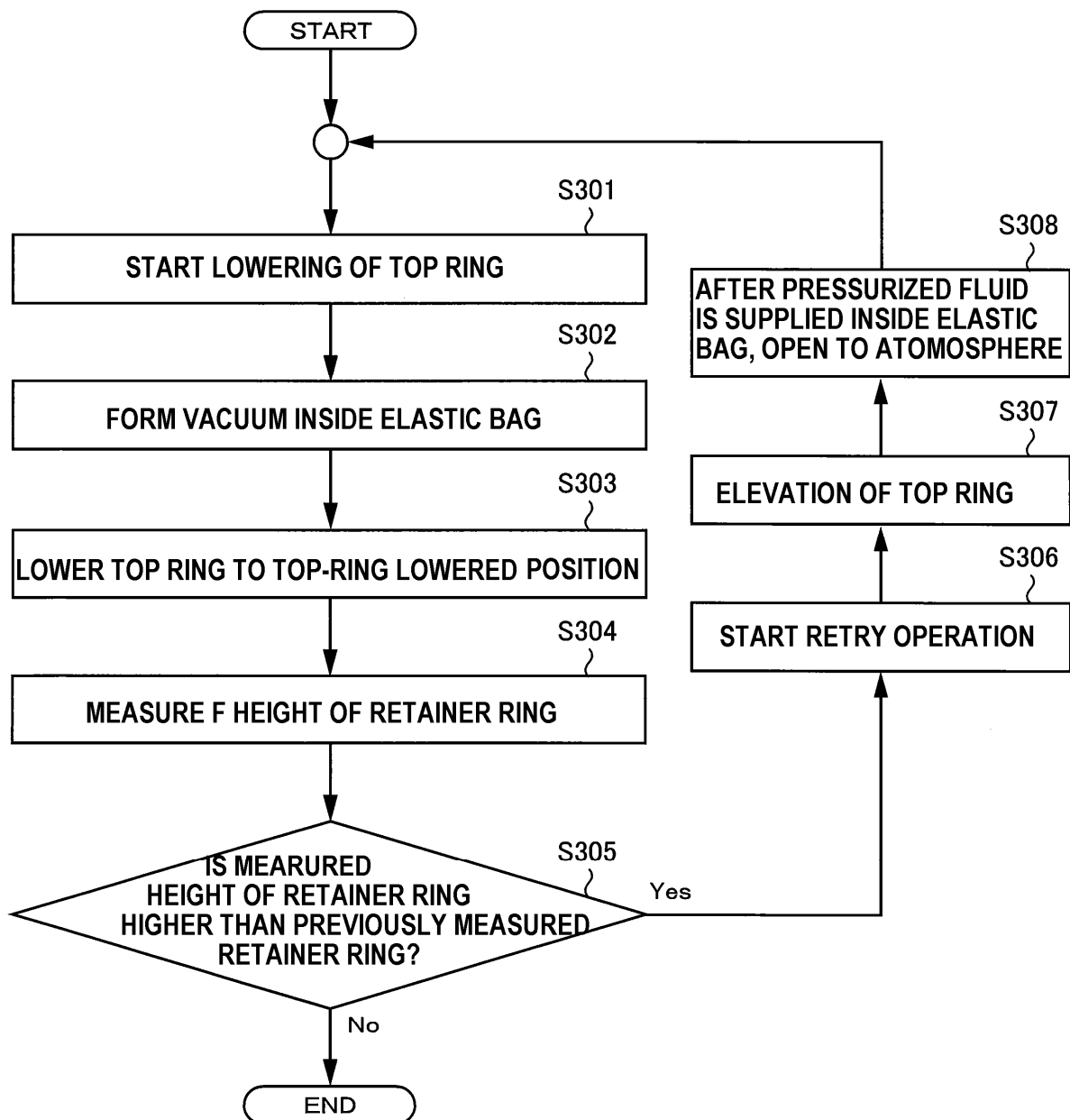
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FIG. 12



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FIG. 13



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FIG. 14

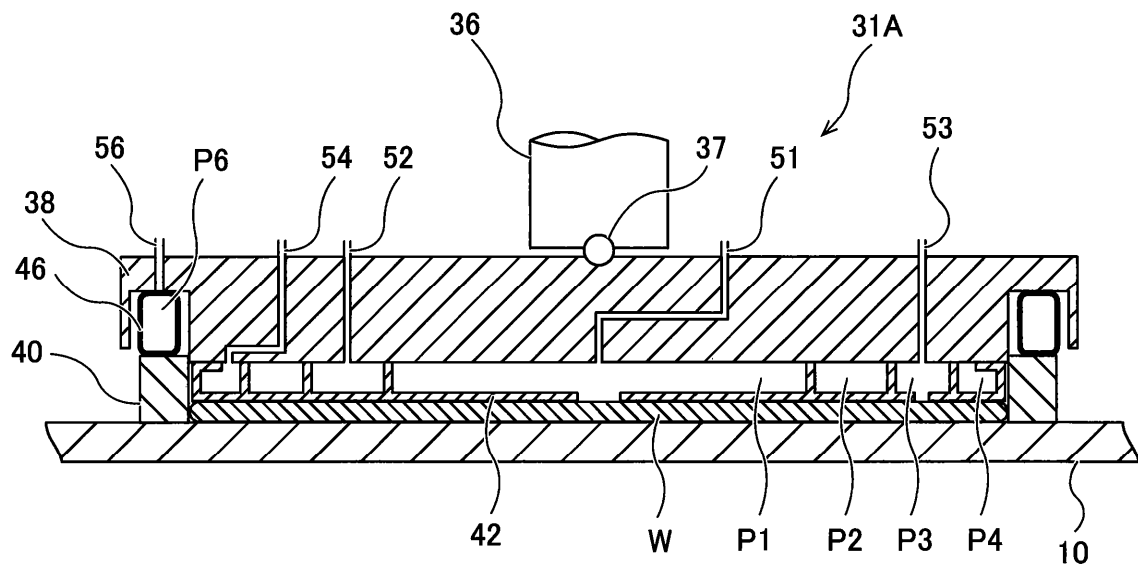


FIG.15A

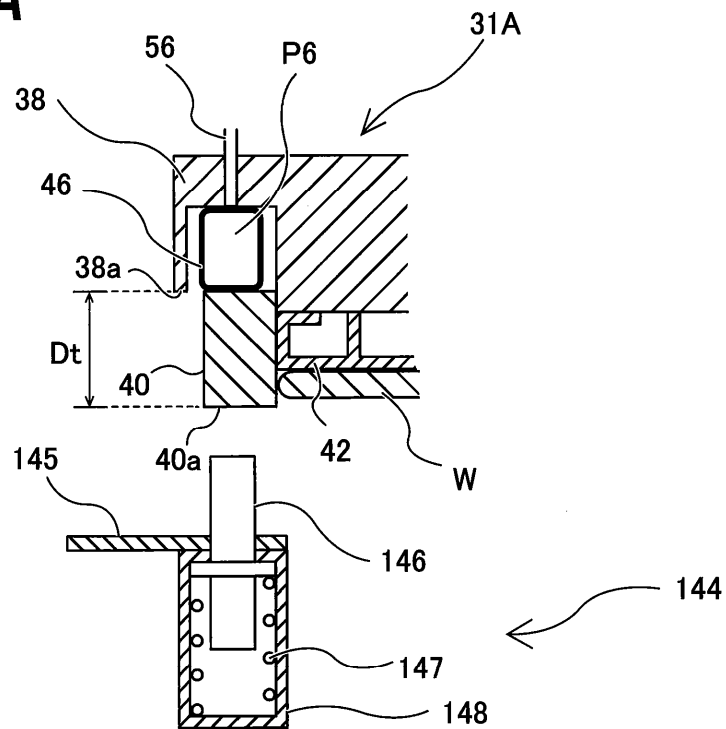
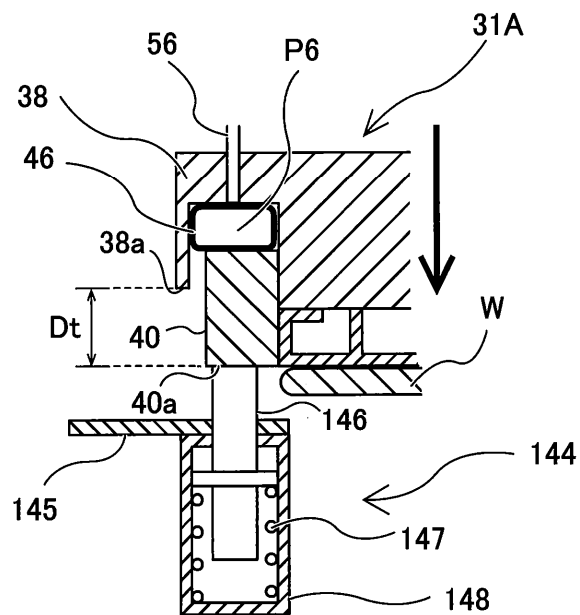
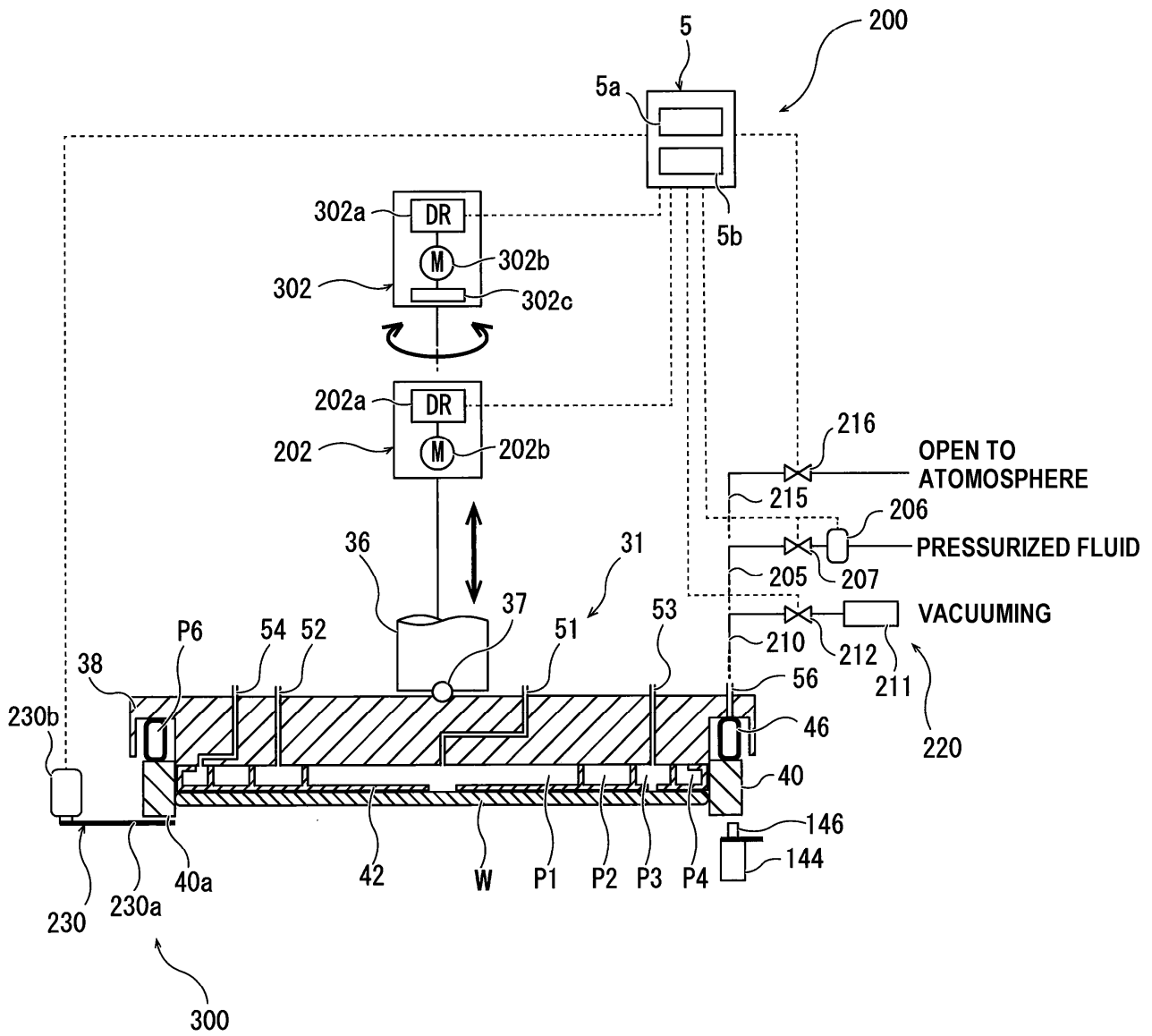


FIG.15B



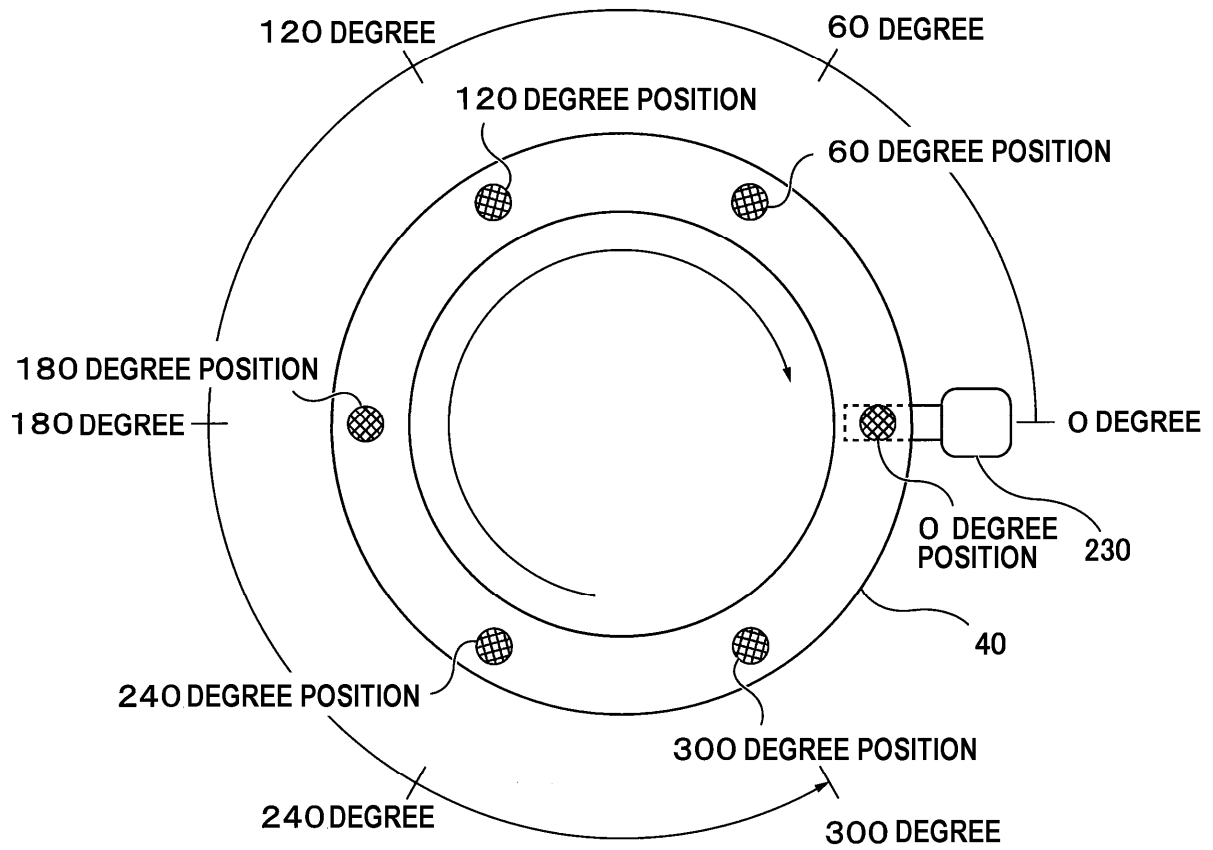
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FIG. 16



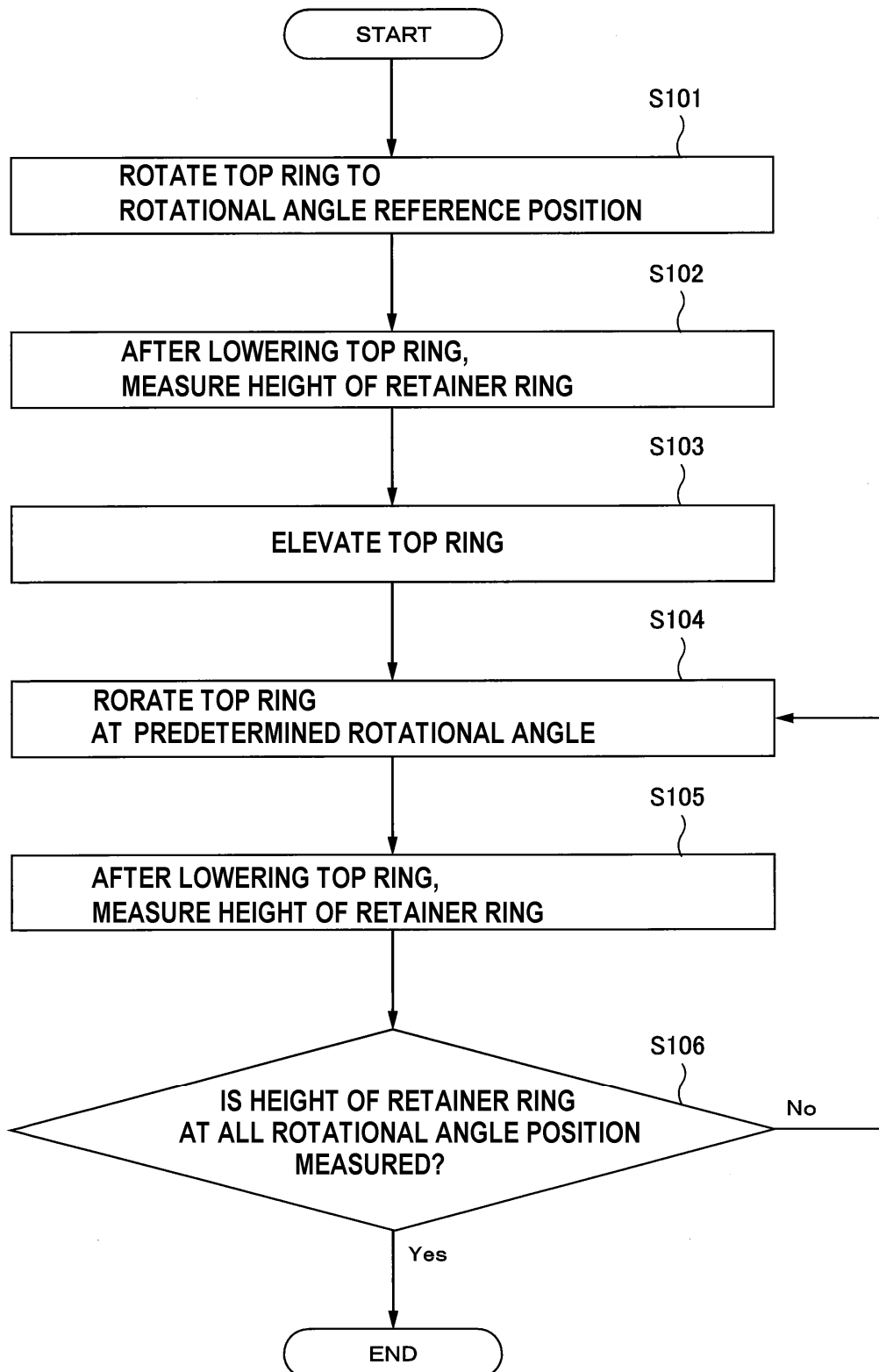
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FIG. 17



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FIG. 18



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FIG. 19

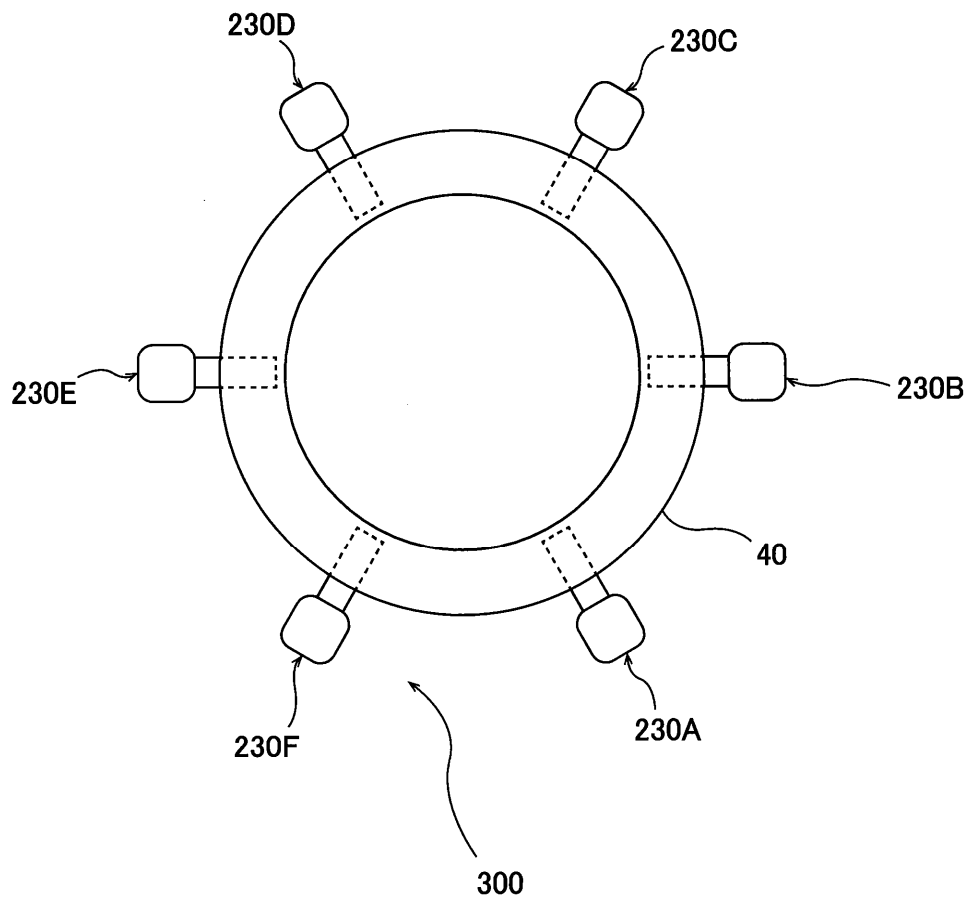


FIG. 20

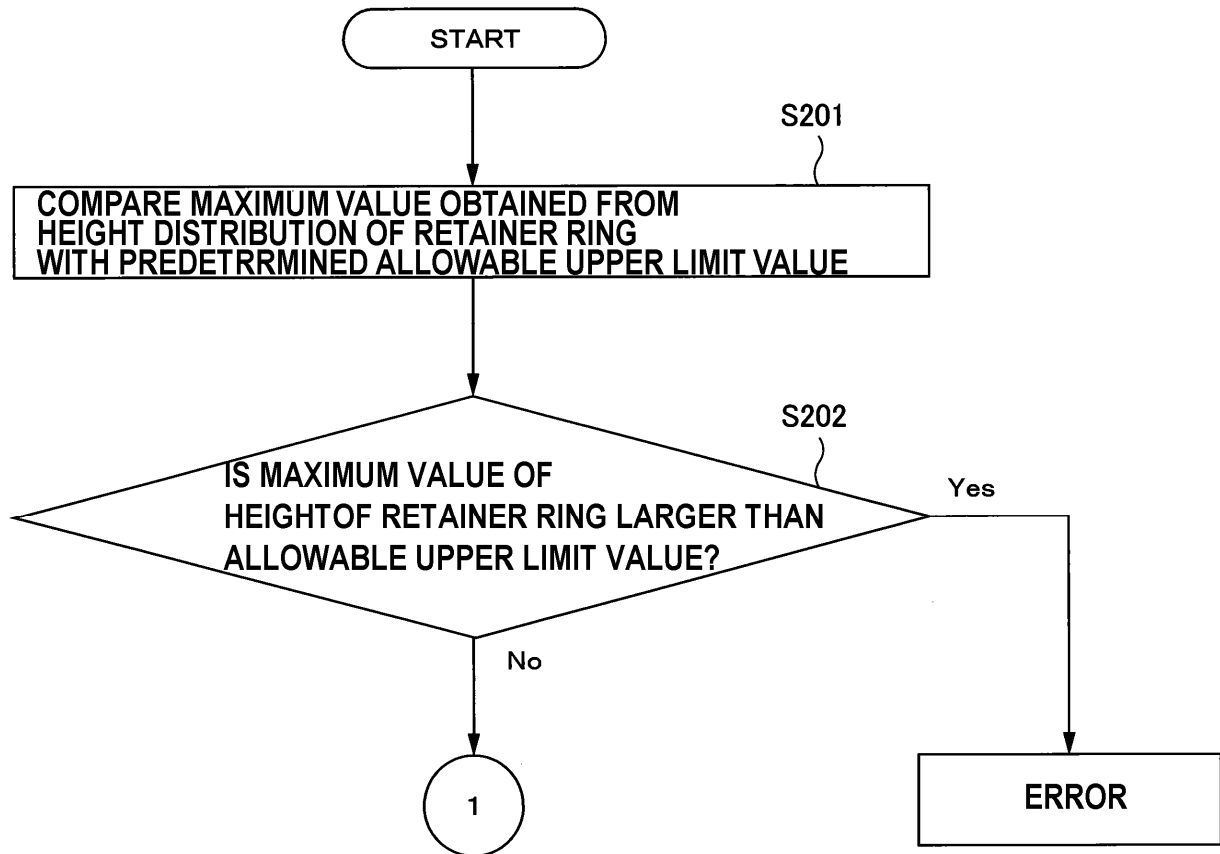


FIG. 21

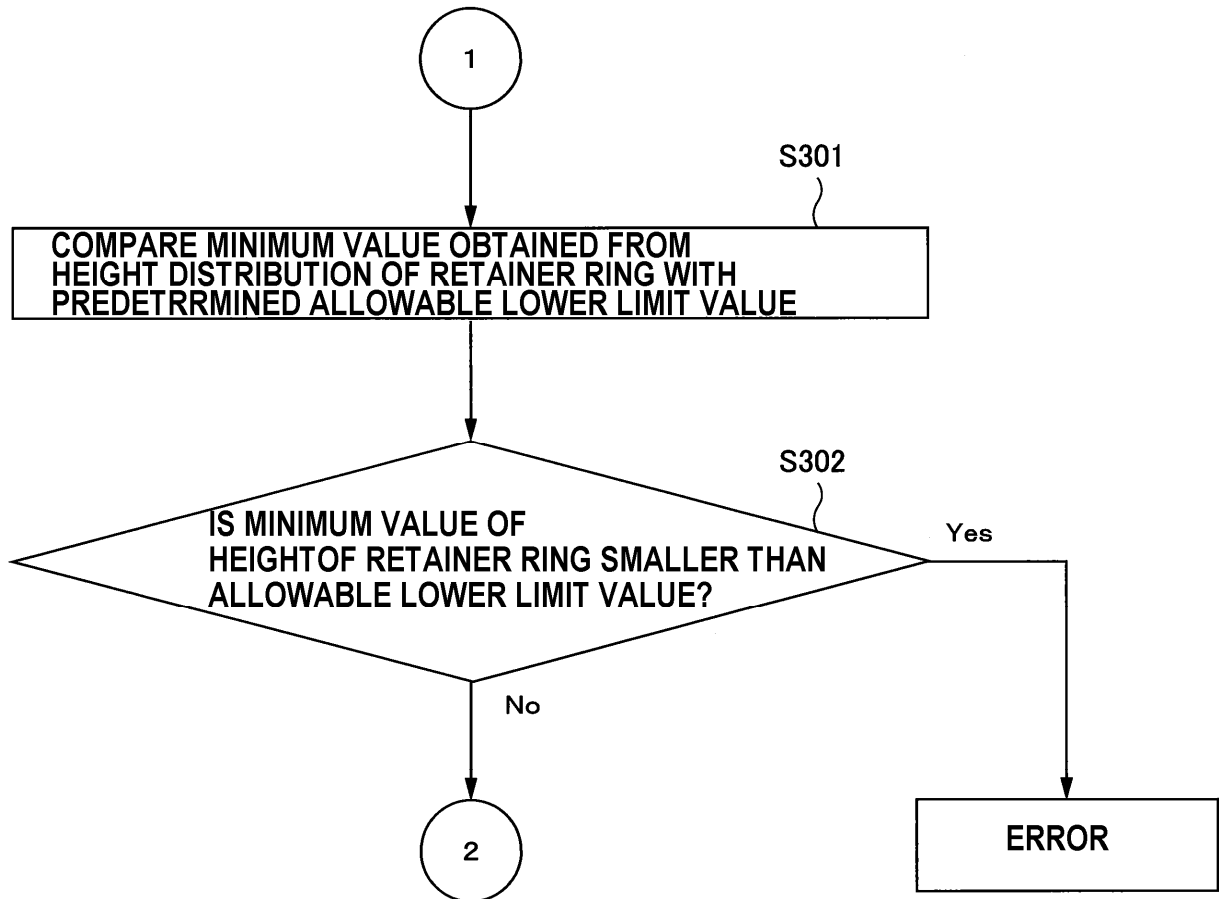


FIG. 22

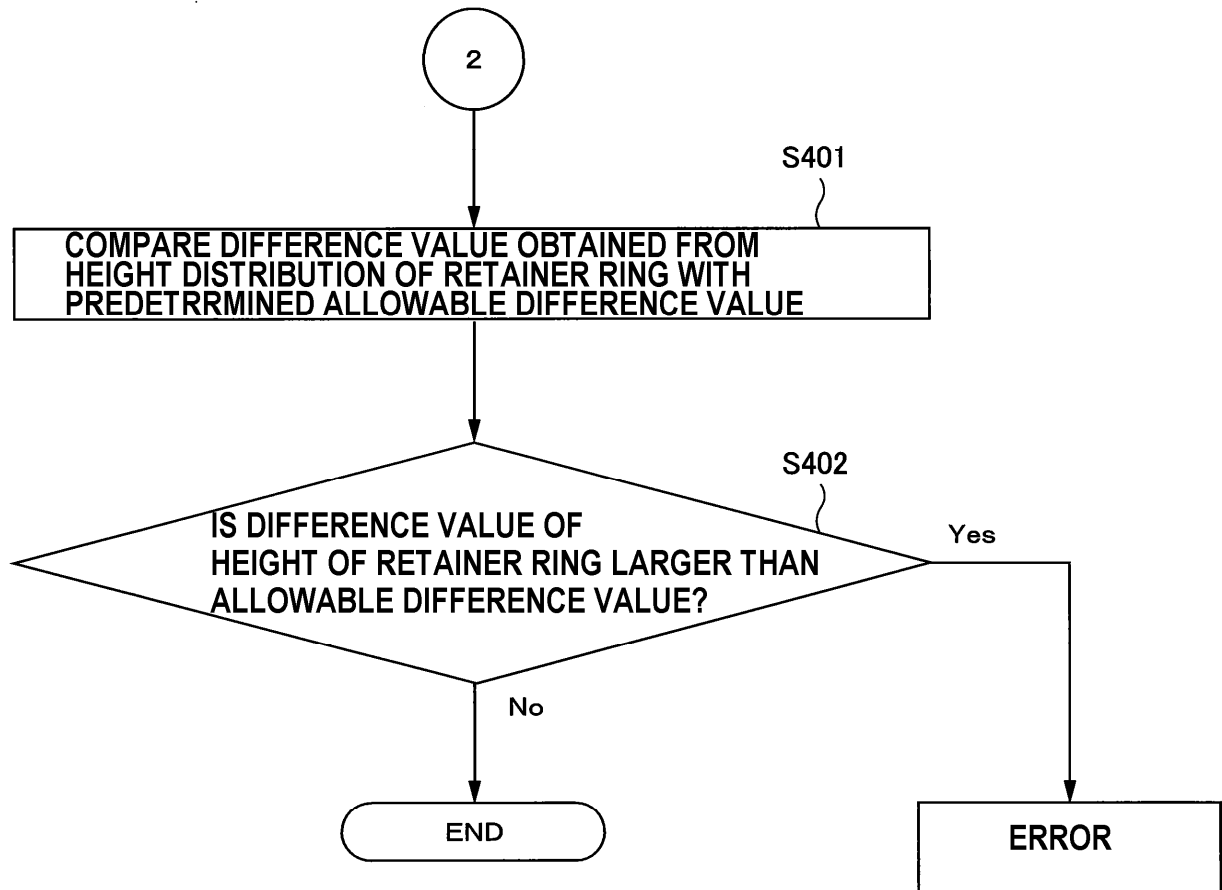
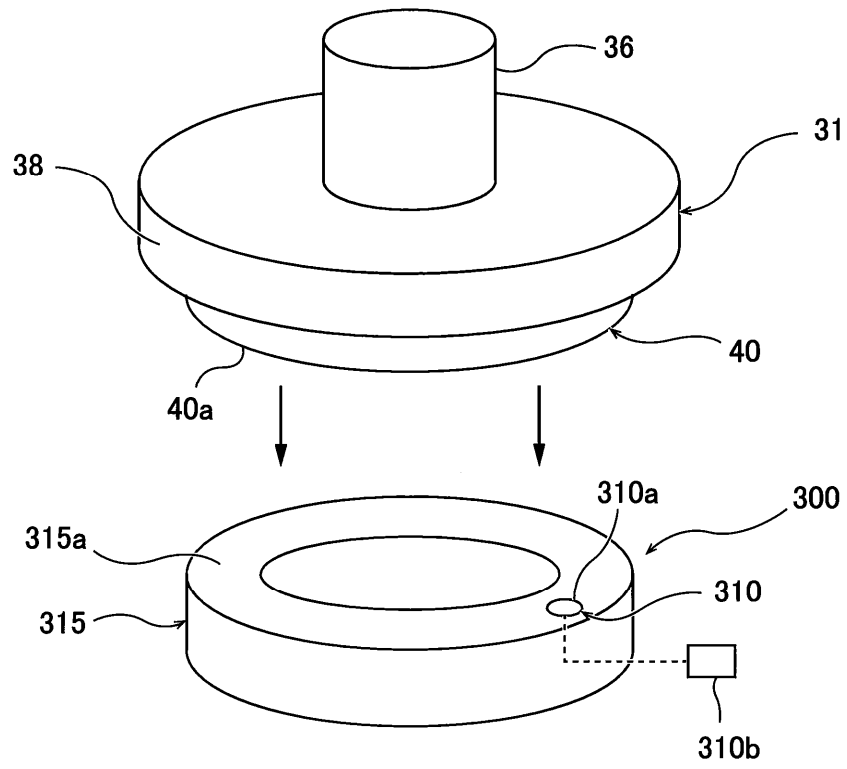
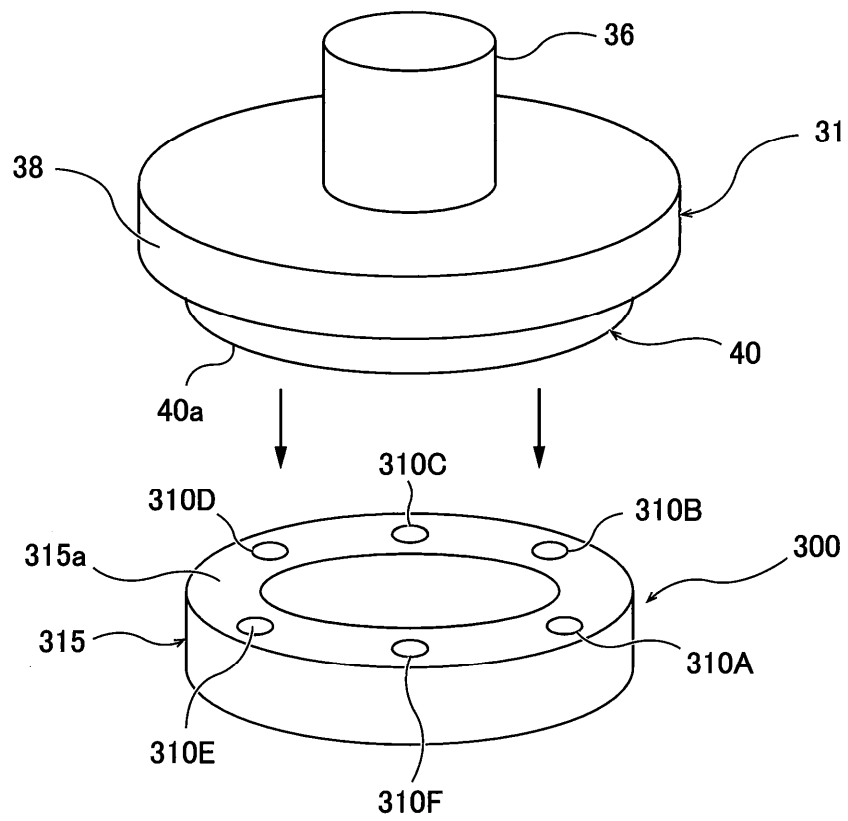


FIG. 23



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FIG. 24



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**FIG. 25**

