FIGURE 1A

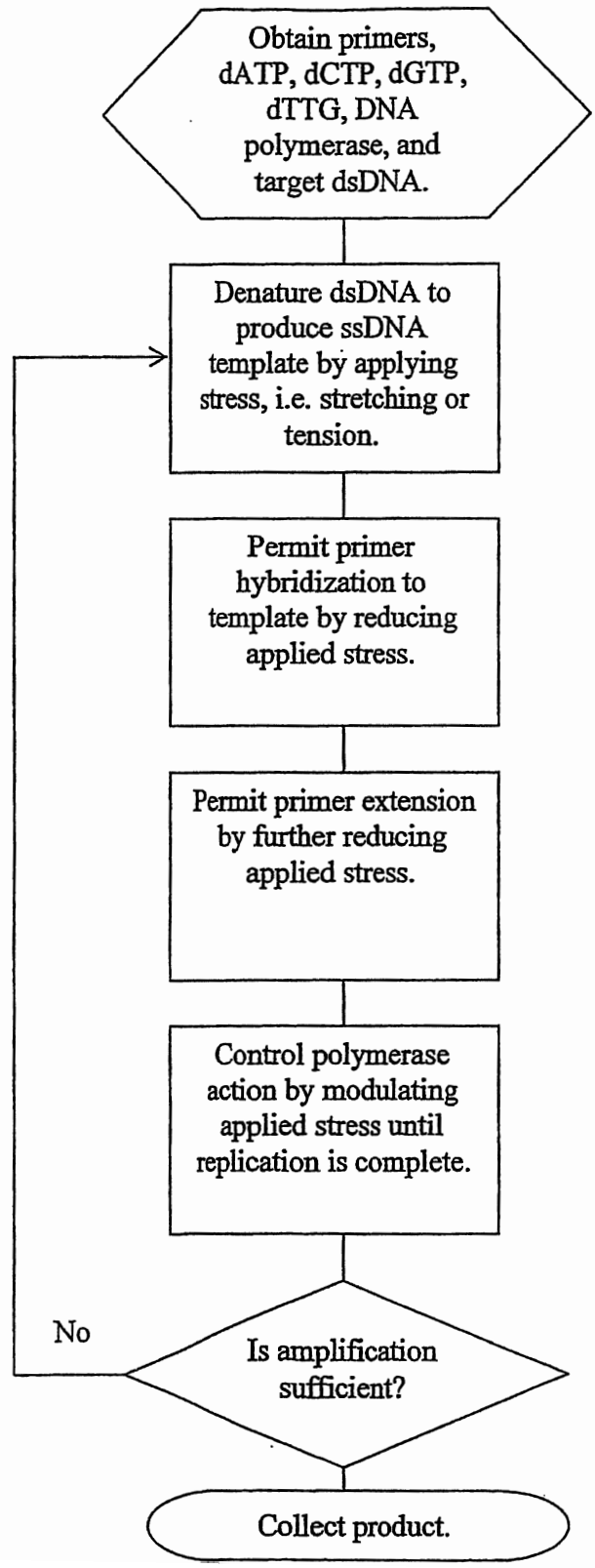

Obtain primers, dATP, dCTP, dGTP, dTTG, DNA polymerase, and target dsDNA.
Denature dsDNA to produce ssDNA template by applying stress, i.e. stretching or tension.
Permit primer hybridization to template by reducing applied stress.
Permit primer extension by further reducing applied stress.
Control polymerase action by modulating applied stress until replication is complete.
Is amplification sufficient?
No
Collect product.

FIGURE 1B

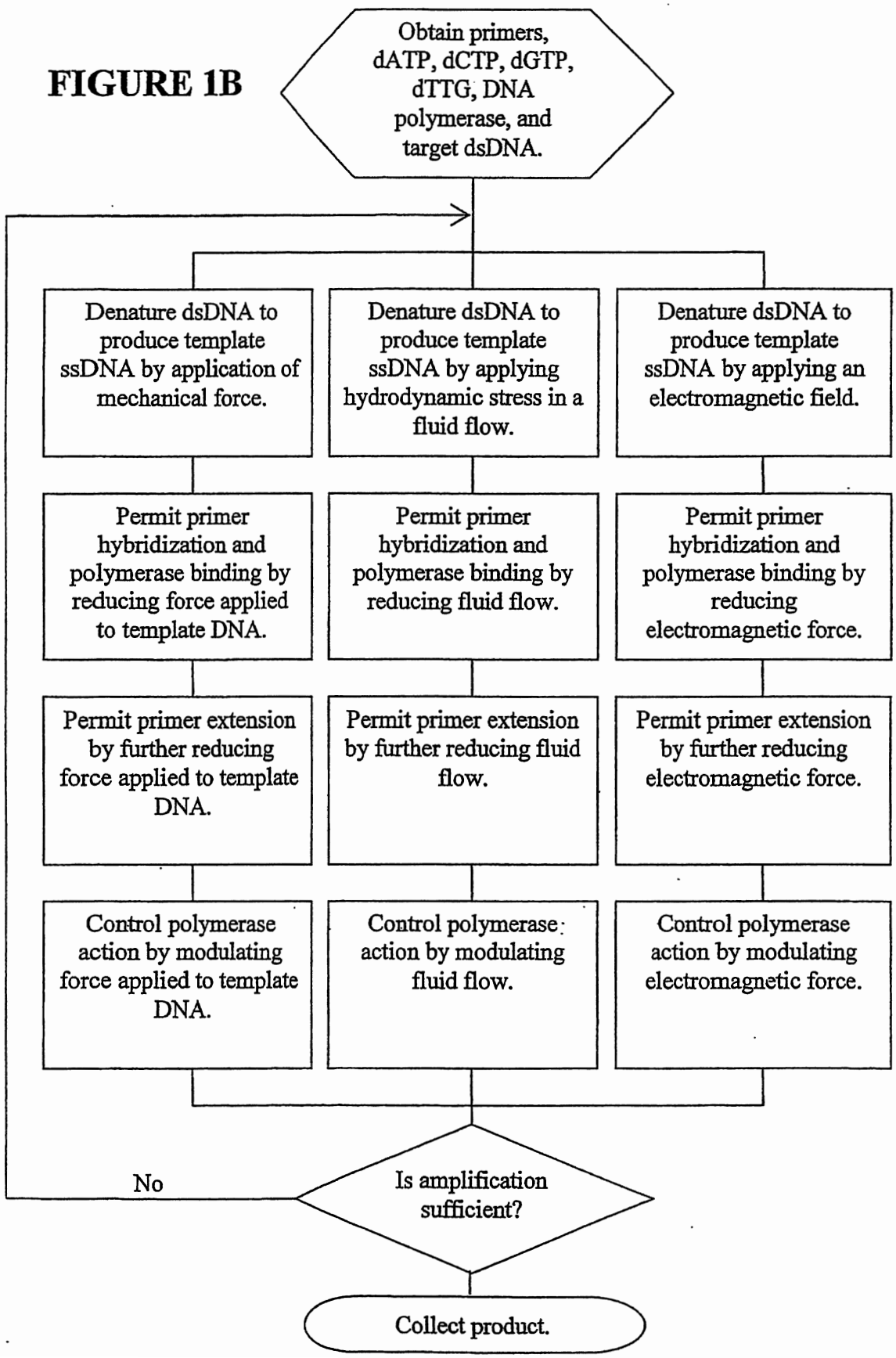

Obtain primers, dATP, dCTP, dGTP, dTTG, DNA polymerase, and target dsDNA.
Denature dsDNA to produce template ssDNA by application of mechanical force.
Denature dsDNA to produce template ssDNA by applying hydrodynamic stress in a fluid flow.
Denature dsDNA to produce template ssDNA by applying an electromagnetic field.
Permit primer hybridization and polymerase binding by reducing force applied to template DNA.
Permit primer hybridization and polymerase binding by reducing fluid flow.
Permit primer hybridization and polymerase binding by reducing electromagnetic force.
Permit primer extension by further reducing force applied to template DNA.
Permit primer extension by further reducing fluid flow.
Permit primer extension by further reducing electromagnetic force.
Control polymerase action by modulating force applied to template DNA.
Control polymerase action by modulating fluid flow.
Control polymerase action by modulating electromagnetic force.
No
Is amplification sufficient?
Collect product.

FIGURE 2A

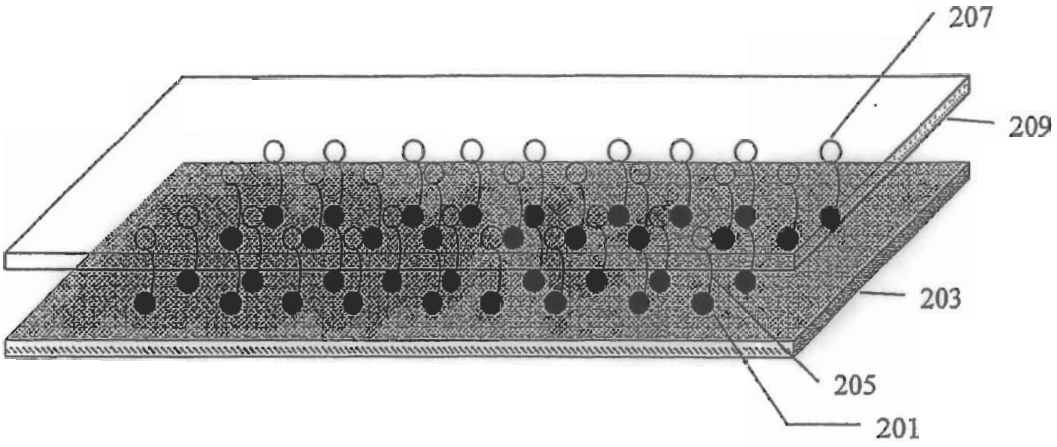


FIGURE 2B

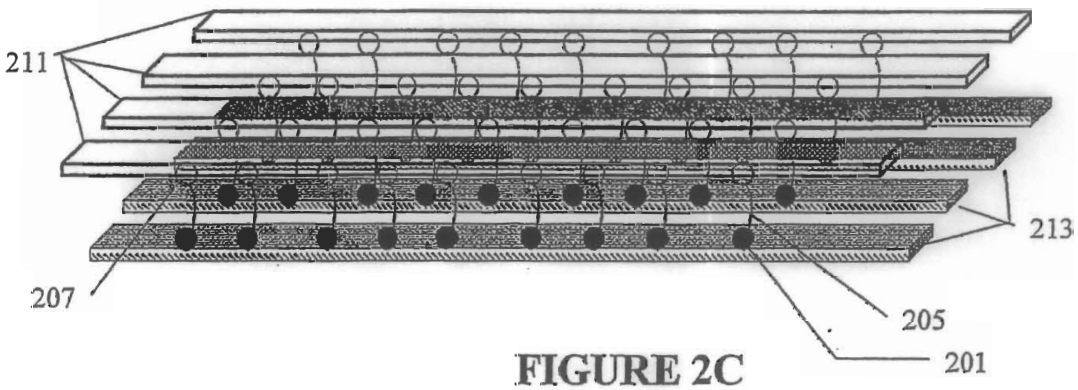


FIGURE 2C

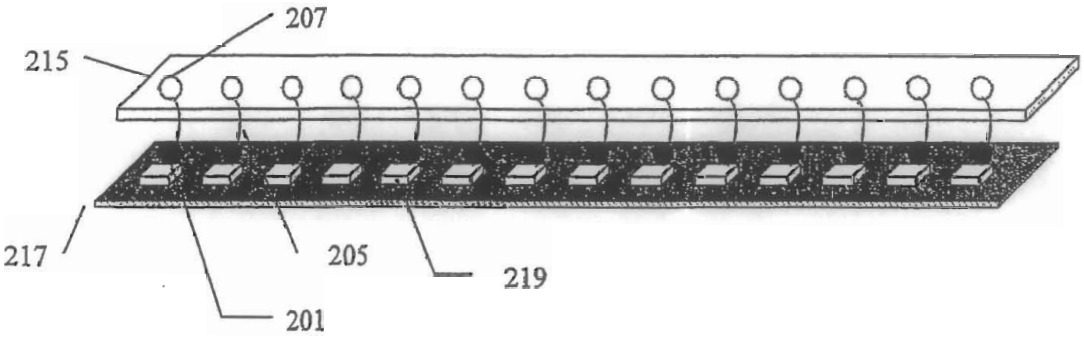


FIGURE 3A

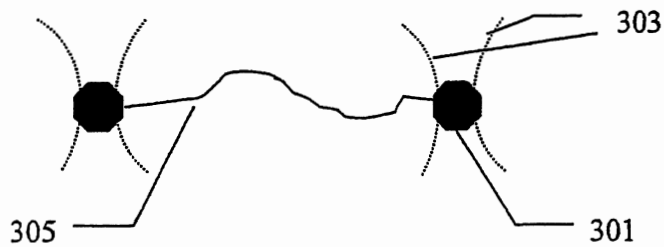


FIGURE 3B

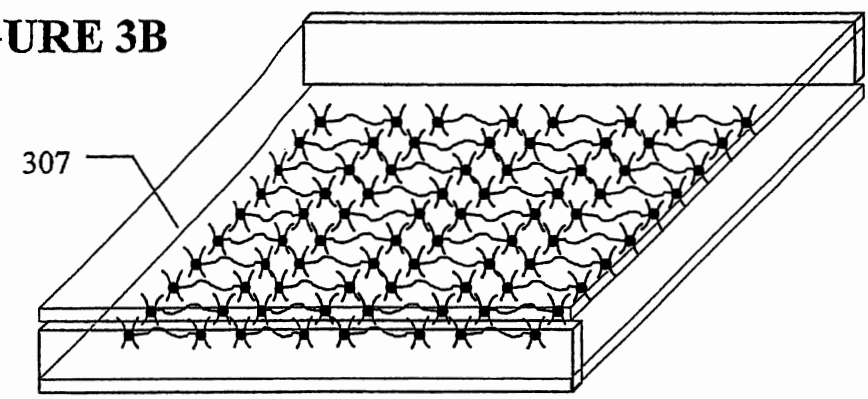


FIGURE 4

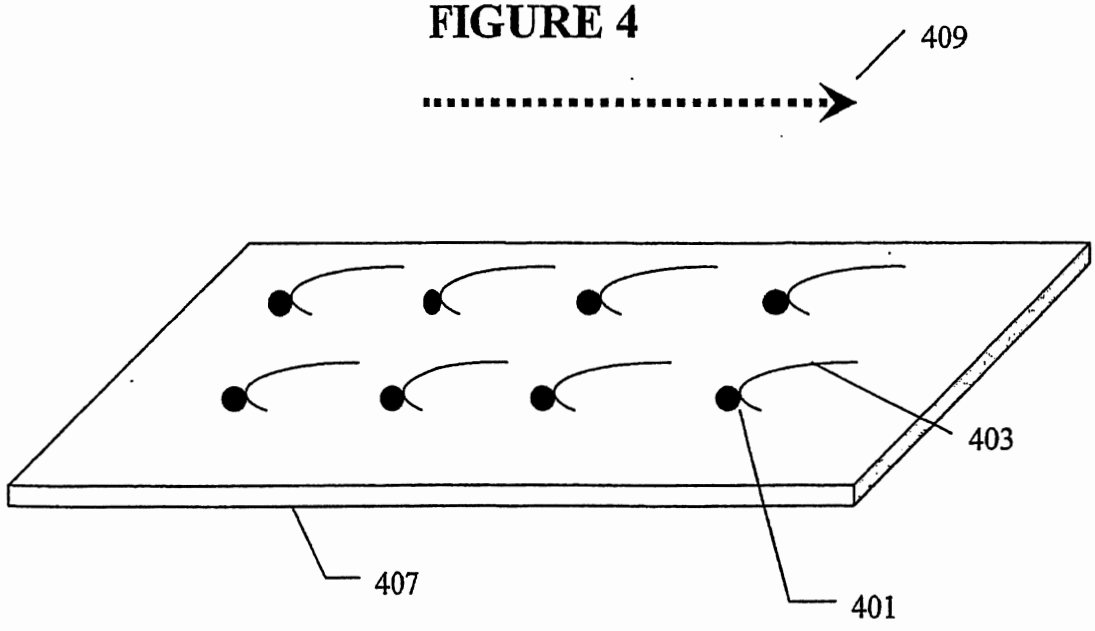


FIGURE 5A

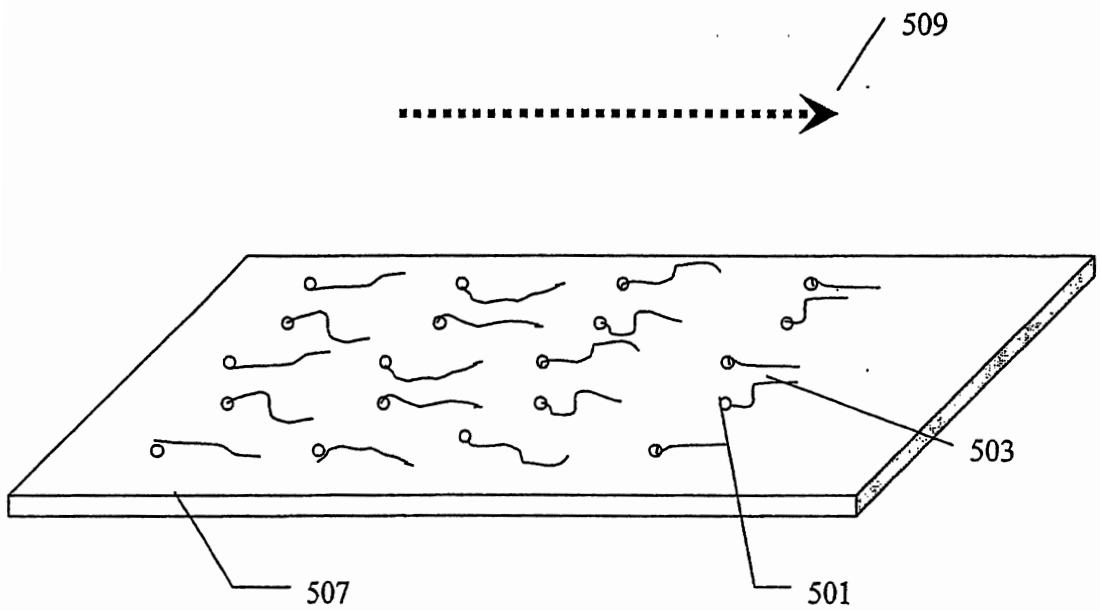


FIGURE 5B

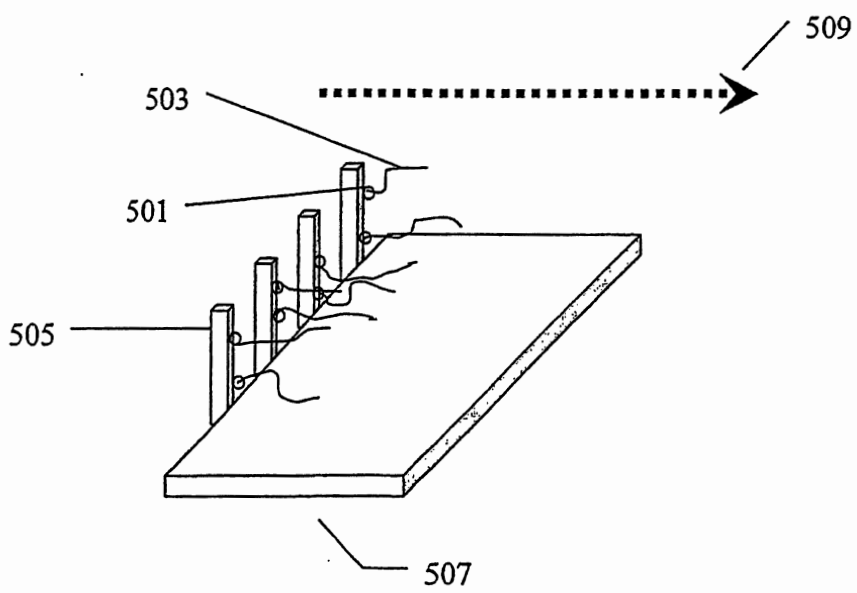


FIGURE 6A

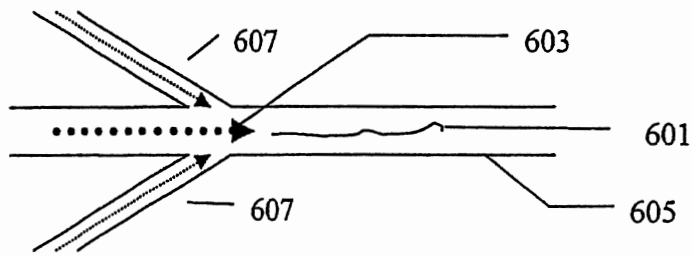
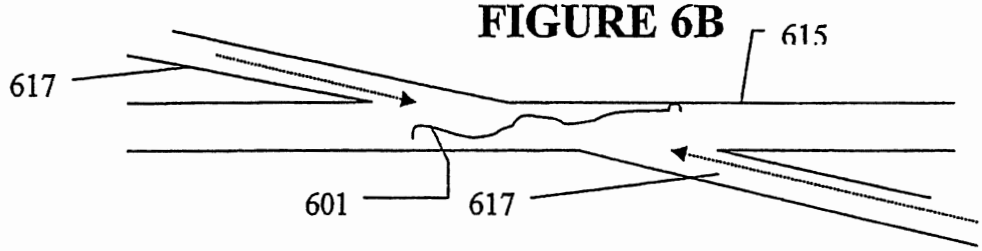


FIGURE 6B



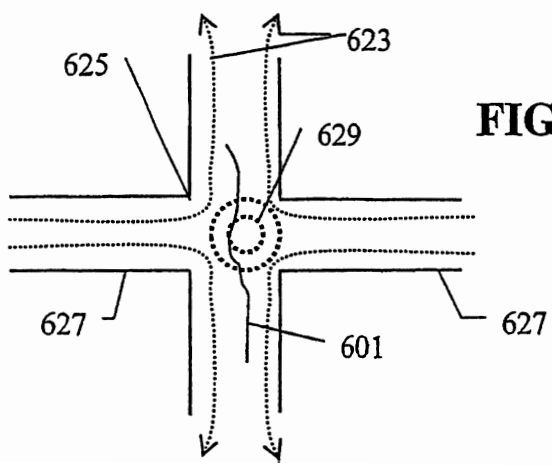


FIGURE 6C

FIGURE 7A

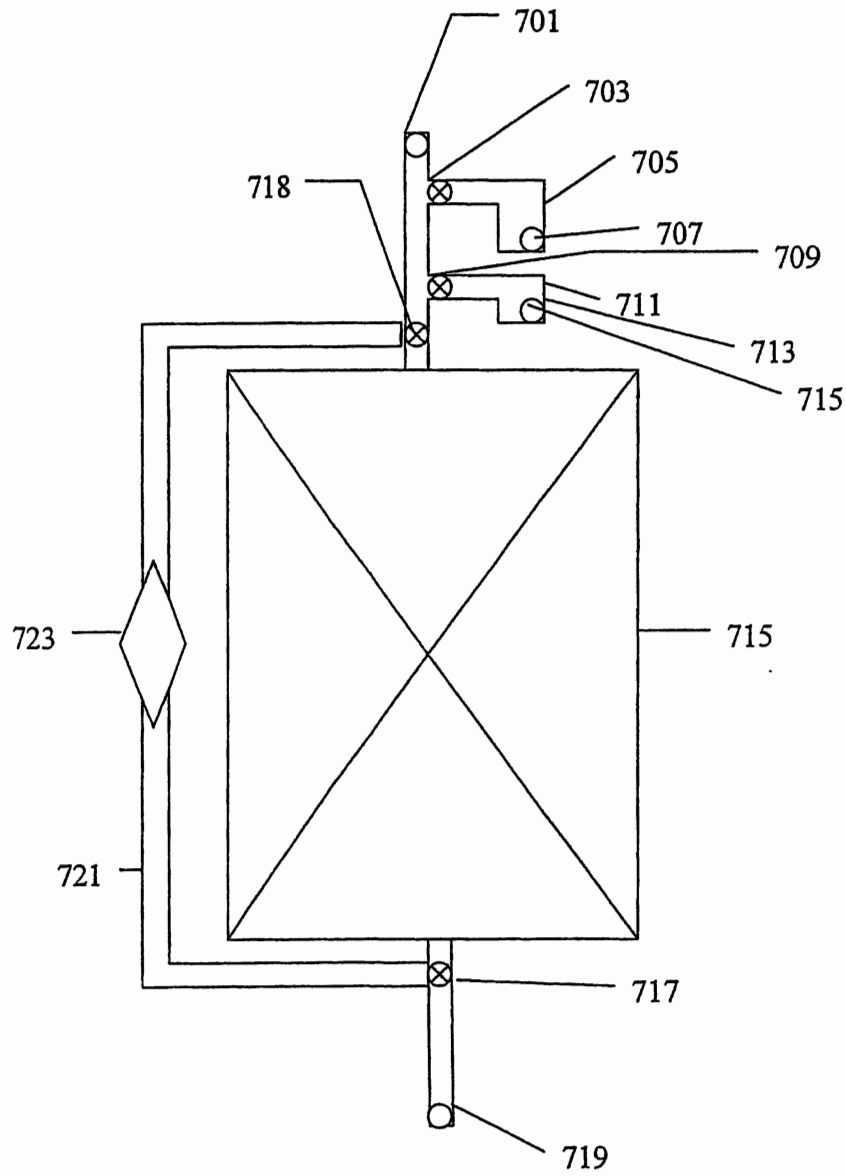


FIGURE 7B

