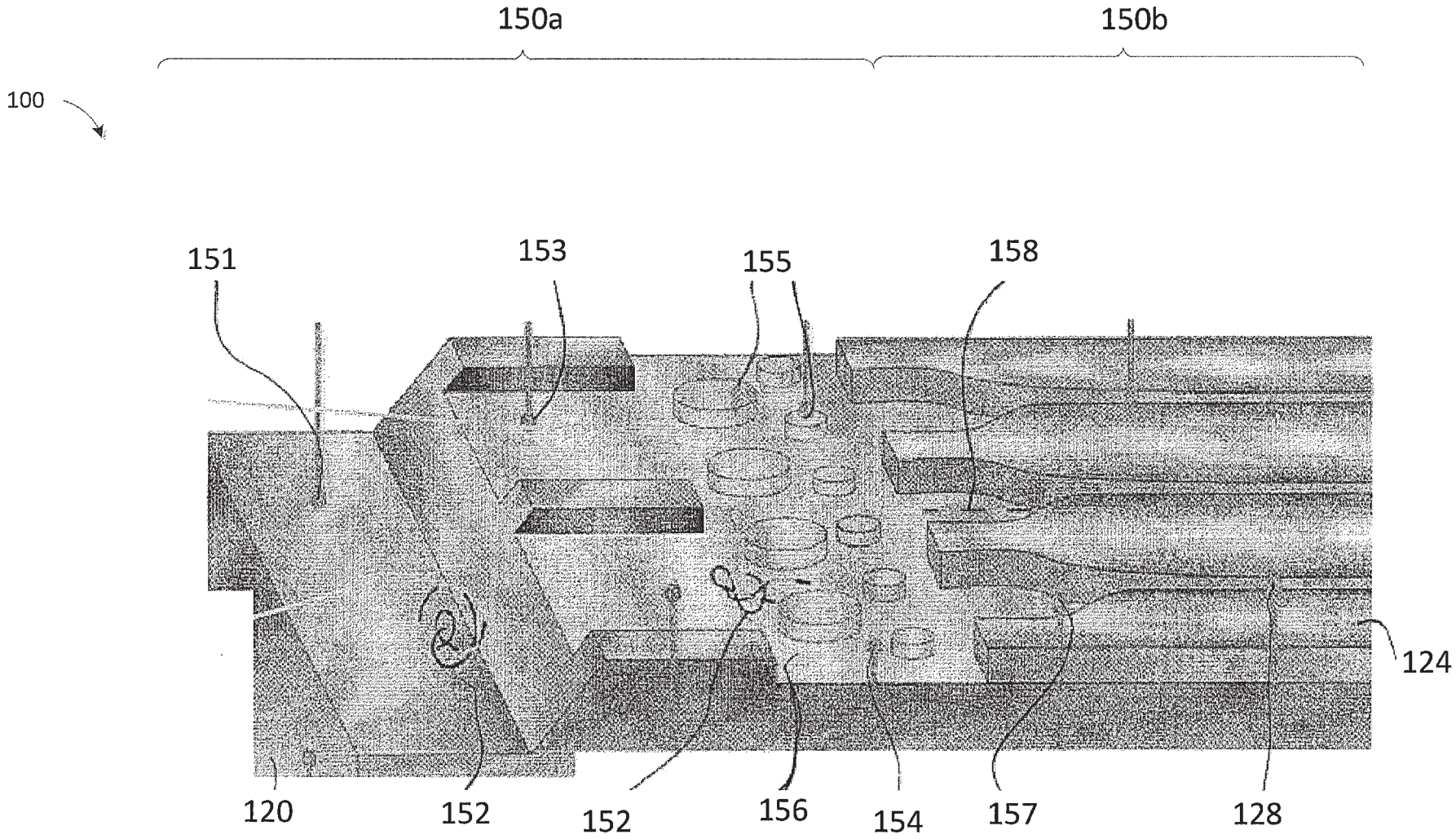

FIG. 1

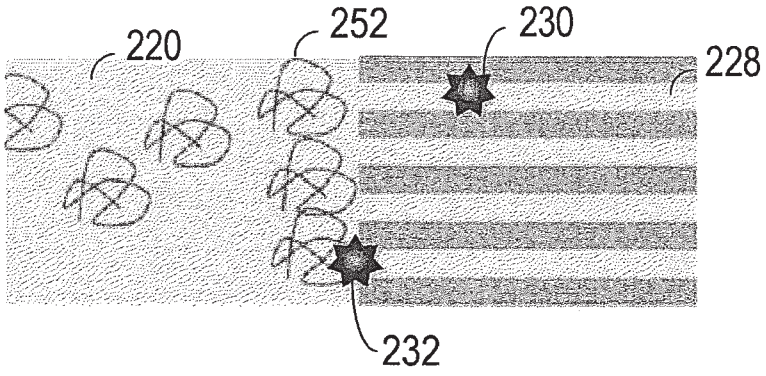

FIG. 2

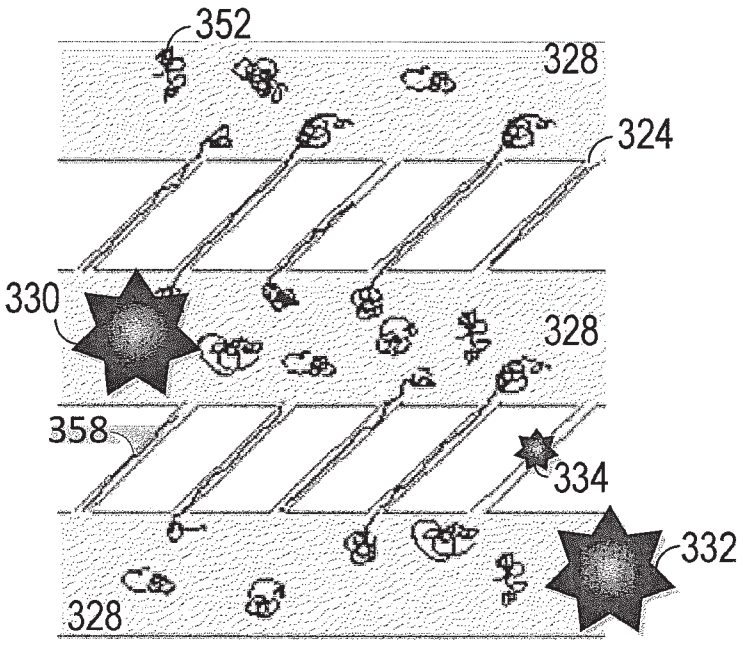

FIG. 3

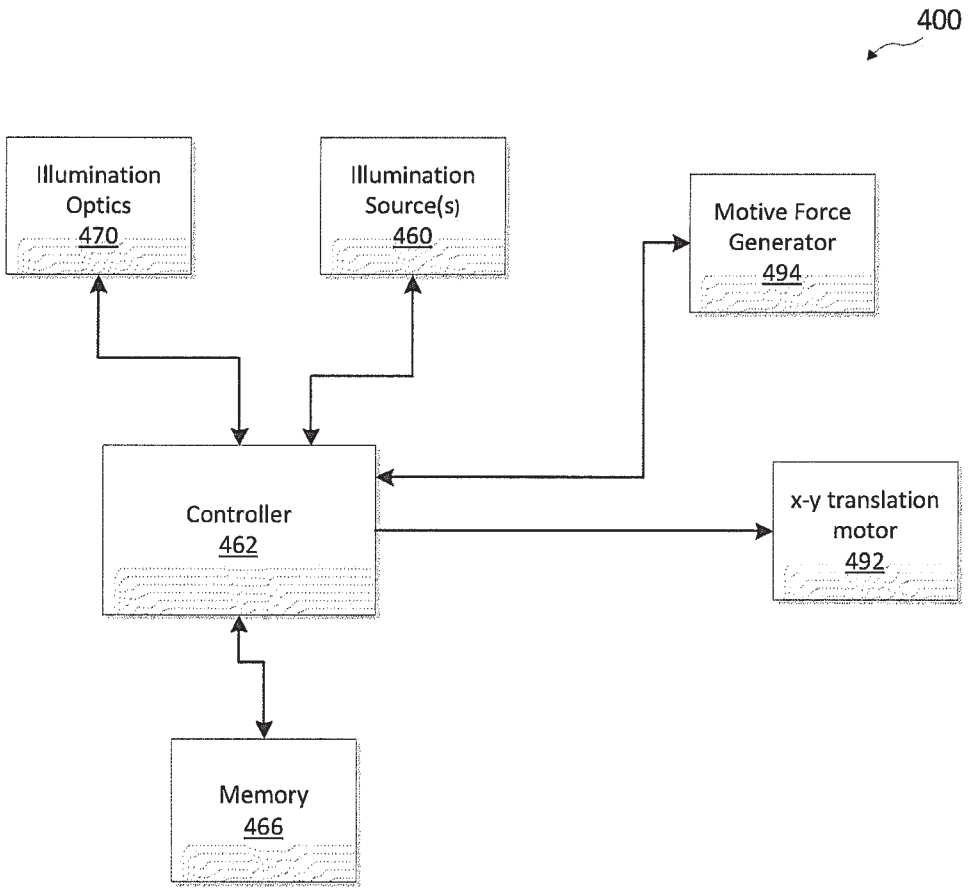
400
Illumination Optics 470
Illumination Source(s) 460
Motive Force Generator 494
Controller 462
x-y translation motor 492
Memory 466

FIG. 4

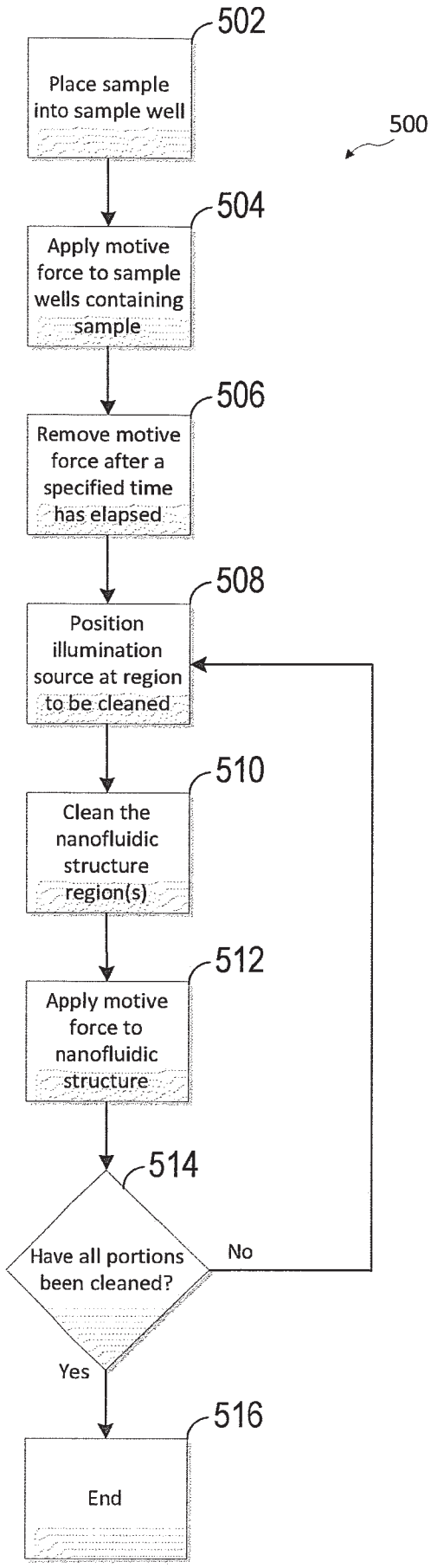
502
Place sample into sample well
500
504
Apply motive force to sample wells containing sample
506
Remove motive force after a specified time has elapsed
508
Position illumination source at region to be cleaned
510
Clean the nanofluidic structure region(s)
512
Apply motive force to nanofluidic structure
514
Have all portions been cleaned?
No
Yes
516
End

FIG. 5

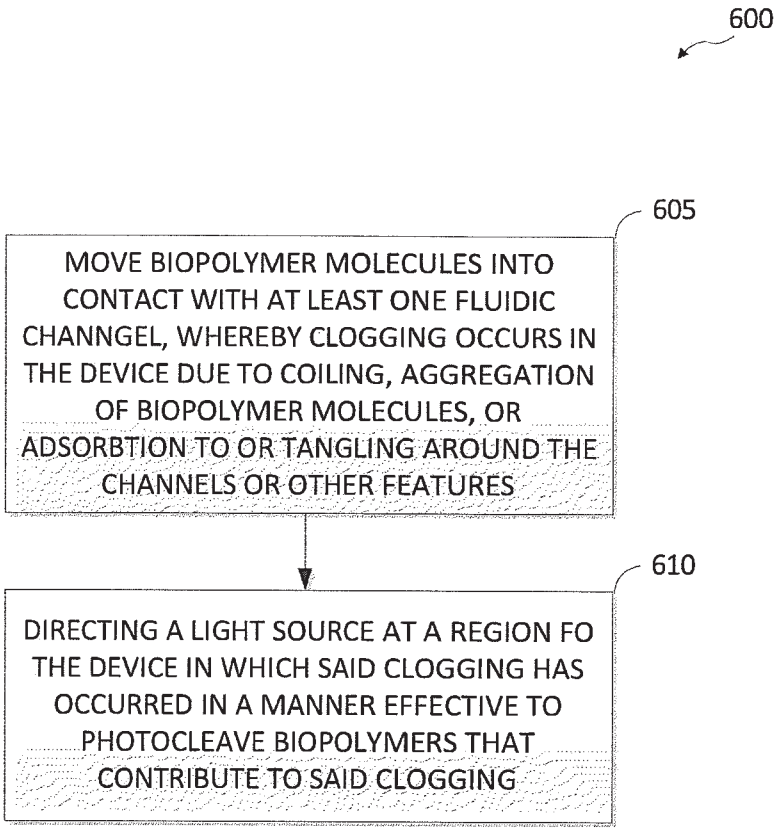
600
605
MOVE BIOPOLYMER MOLECULES INTO CONTACT WITH AT LEAST ONE FLUIDIC CHANNGEL, WHEREBY CLOGGING OCCURS IN THE DEVICE DUE TO COILING, AGGREGATION OF BIOPOLYMER MOLECULES, OR ADSORBTION TO OR TANGLING AROUND THE CHANNELS OR OTHER FEATURES
610
DIRECTING A LIGHT SOURCE AT A REGION FO THE DEVICE IN WHICH SAID CLOGGING HAS OCCURRED IN A MANNER EFFECTIVE TO PHOTOCLEAVE BIOPOLYMERS THAT CONTRIBUTE TO SAID CLOGGING

FIG. 6