FIG. 1

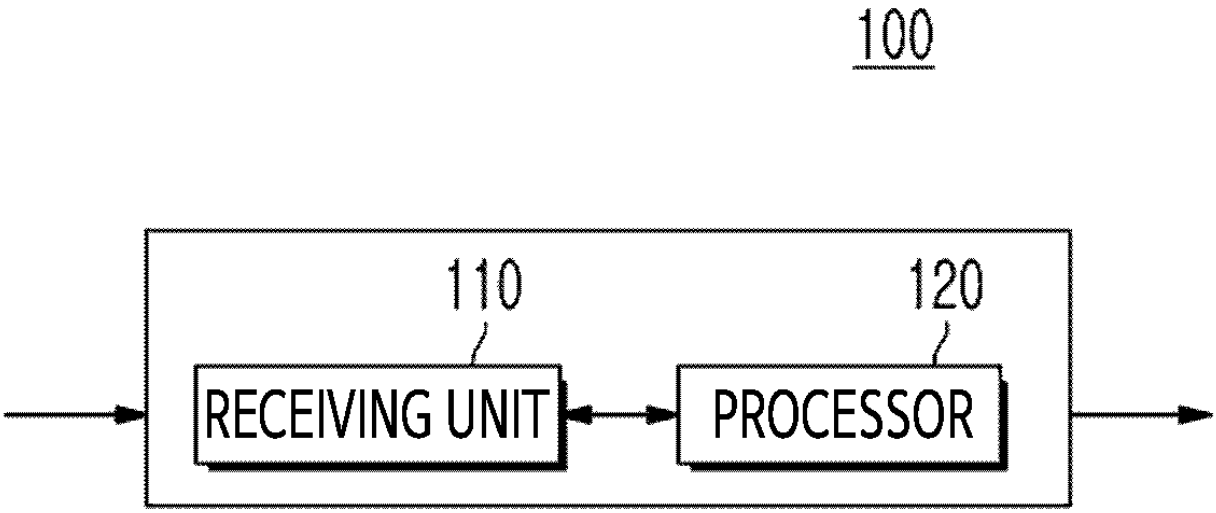


FIG. 2

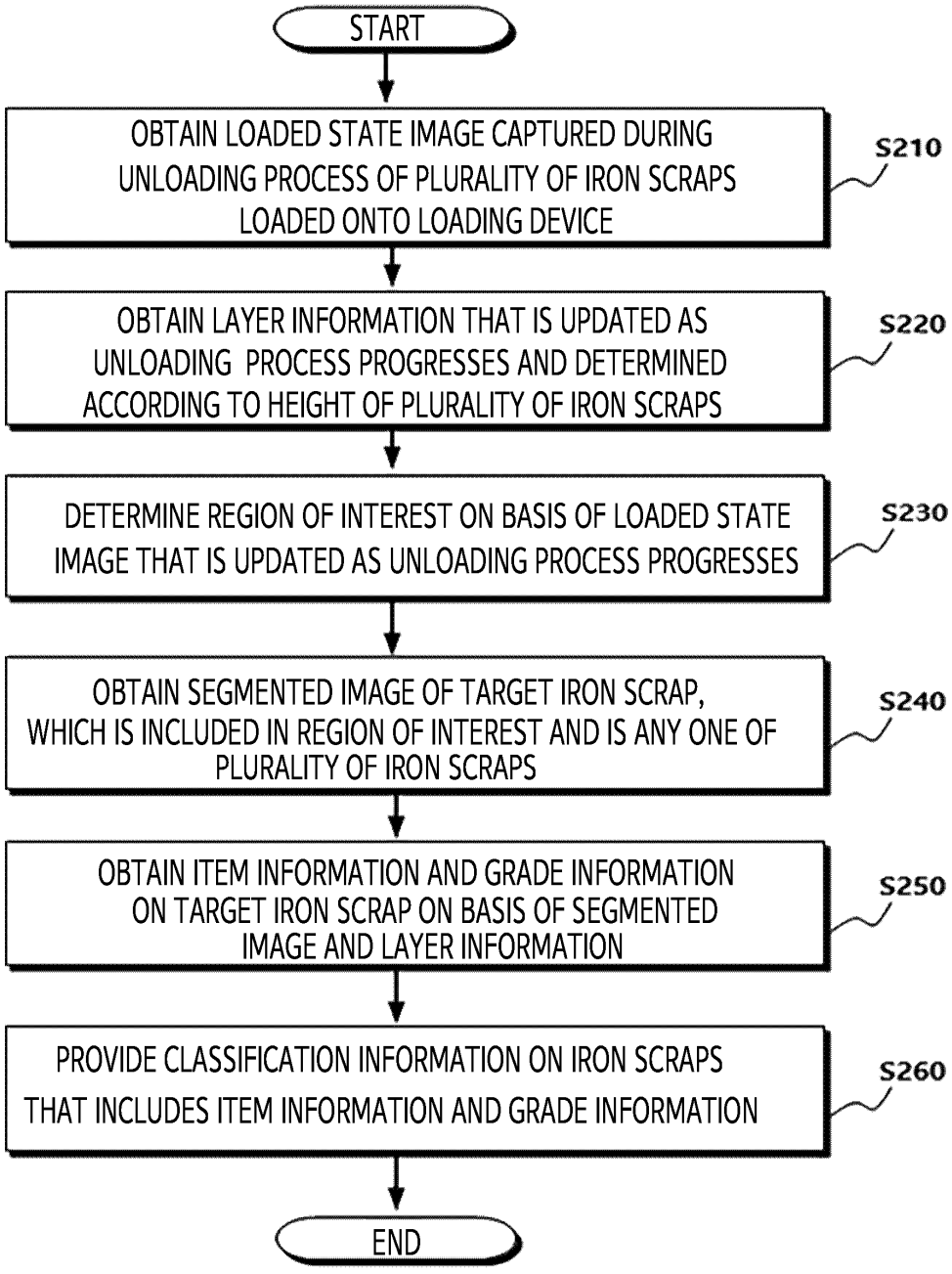
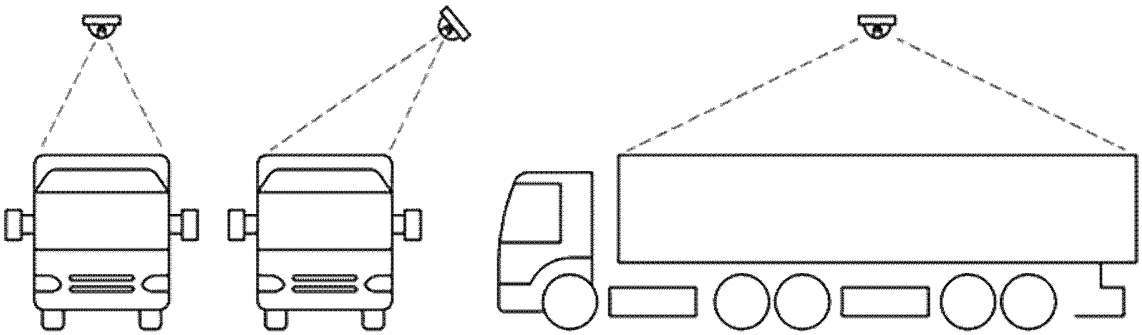
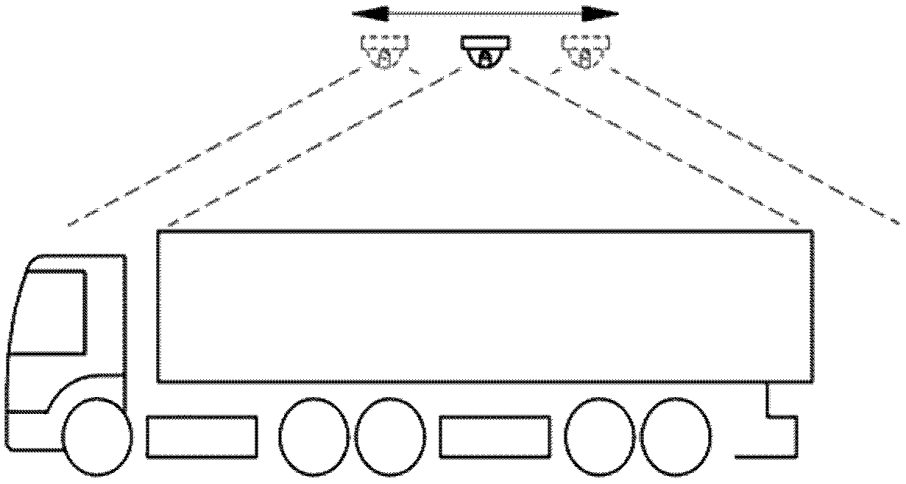

START
OBTAIN LOADED STATE IMAGE CAPTURED DURING UNLOADING PROCESS OF PLURALITY OF IRON SCRAPS LOADED ONTO LOADING DEVICE
S210
OBTAIN LAYER INFORMATION THAT IS UPDATED AS UNLOADING PROCESS PROGRESSES AND DETERMINED ACCORDING TO HEIGHT OF PLURALITY OF IRON SCRAPS
S220
DETERMINE REGION OF INTEREST ON BASIS OF LOADED STATE IMAGE THAT IS UPDATED AS UNLOADING PROCESS PROGRESSES
S230
OBTAIN SEGMENTED IMAGE OF TARGET IRON SCRAP, WHICH IS INCLUDED IN REGION OF INTEREST AND IS ANY ONE OF PLURALITY OF IRON SCRAPS
S240
OBTAIN ITEM INFORMATION AND GRADE INFORMATION ON TARGET IRON SCRAP ON BASIS OF SEGMENTED IMAGE AND LAYER INFORMATION
S250
PROVIDE CLASSIFICATION INFORMATION ON IRON SCRAPS THAT INCLUDES ITEM INFORMATION AND GRADE INFORMATION
S260
END

FIG. 3



⟨MONO TYPE METHOD⟩

FIG. 4



⟨STEREO TYPE METHOD⟩

FIG. 5

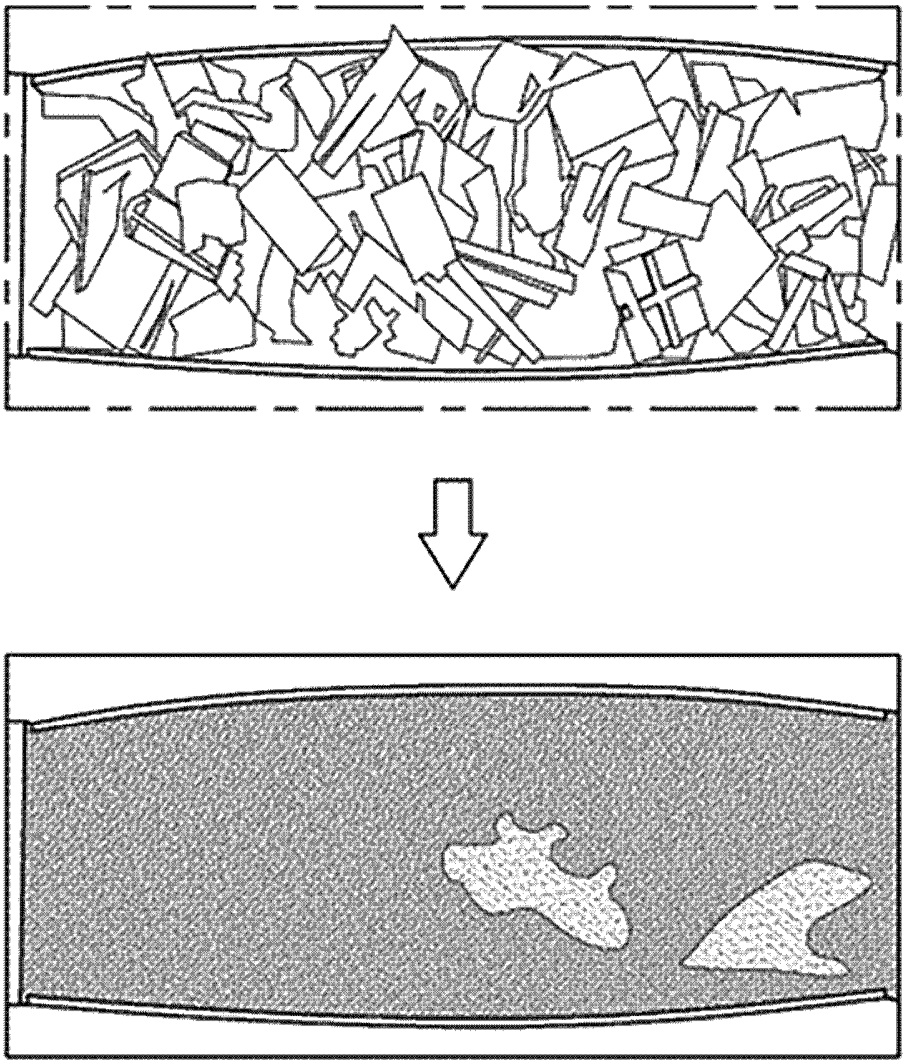


FIG. 6

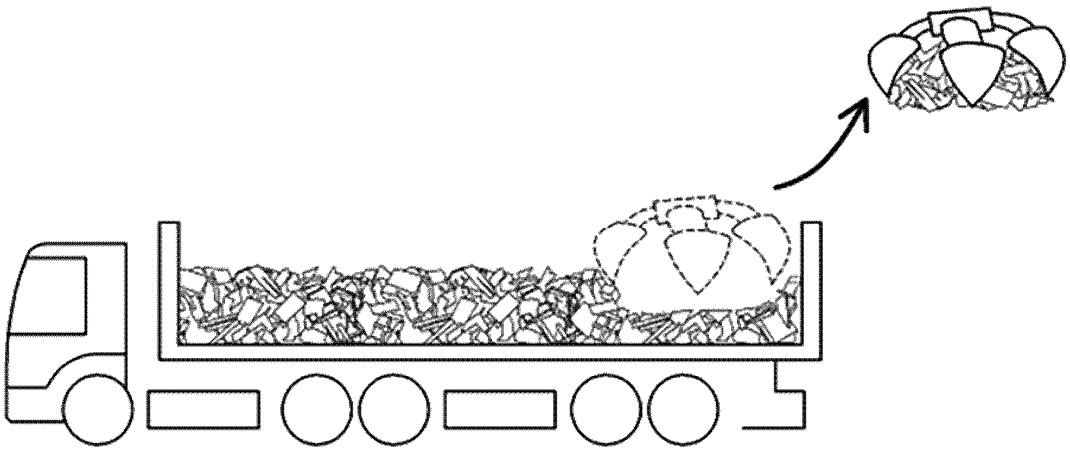


FIG. 7

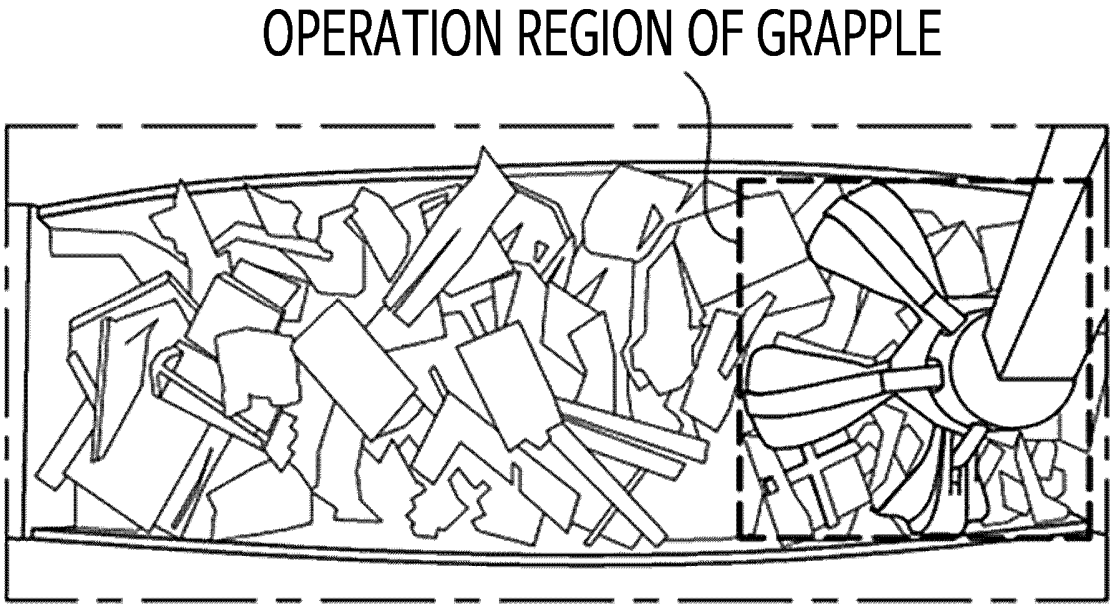
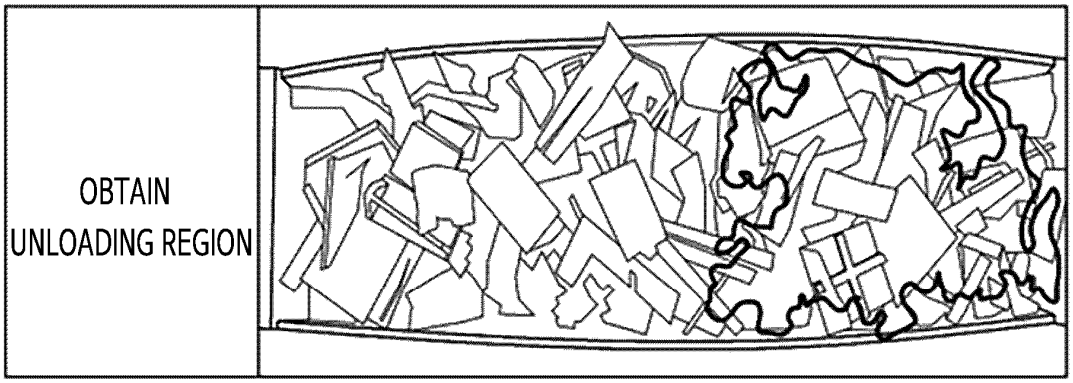


FIG. 8



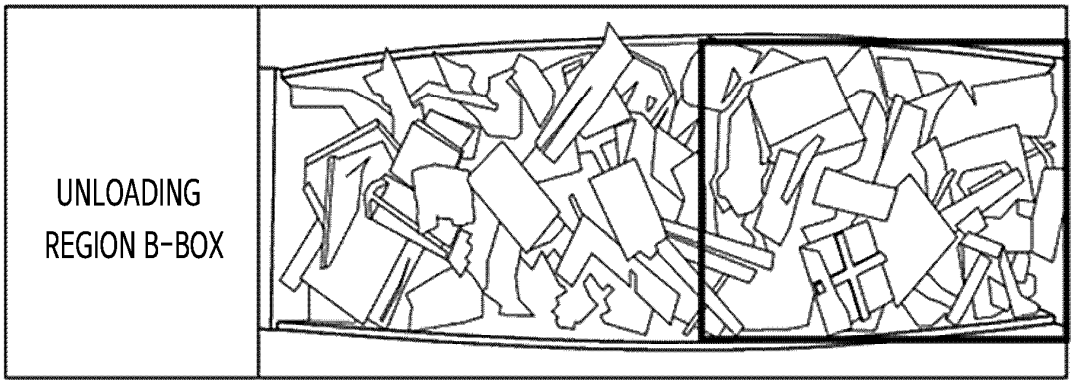


FIG. 9

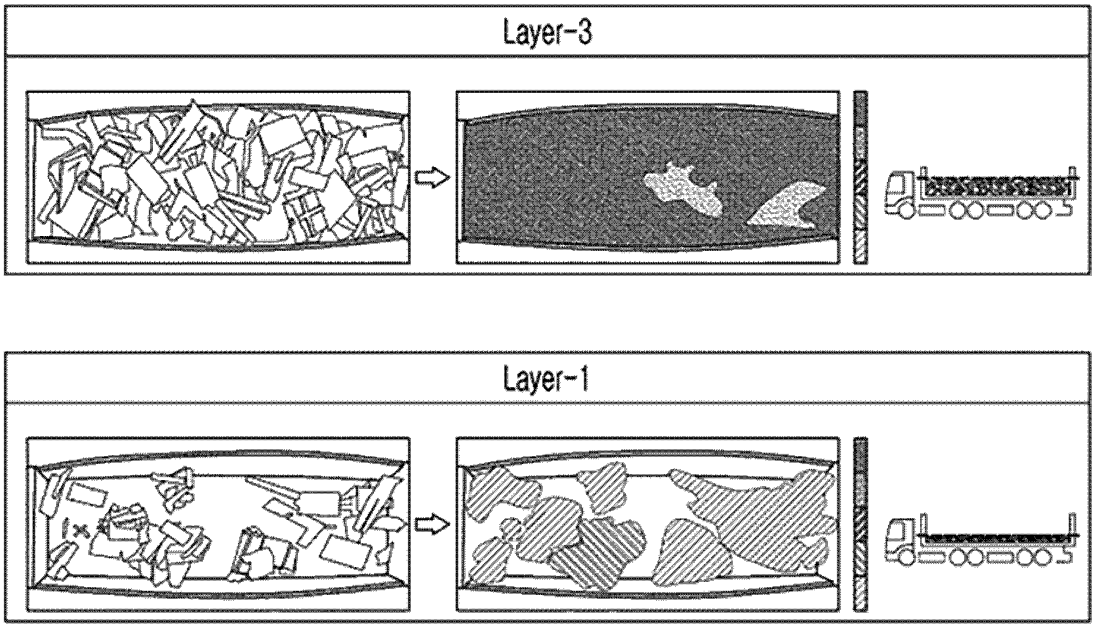


FIG. 10

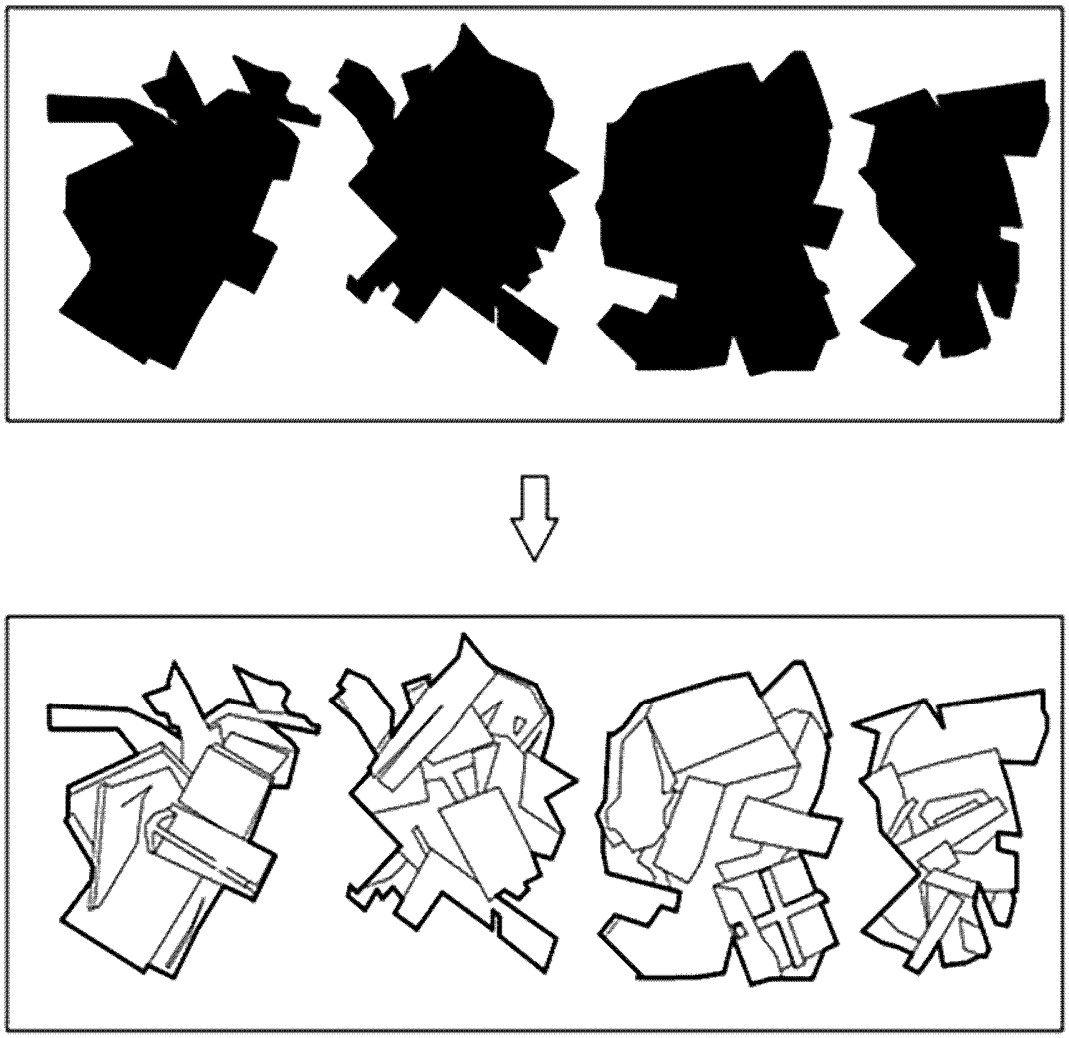


FIG. 11

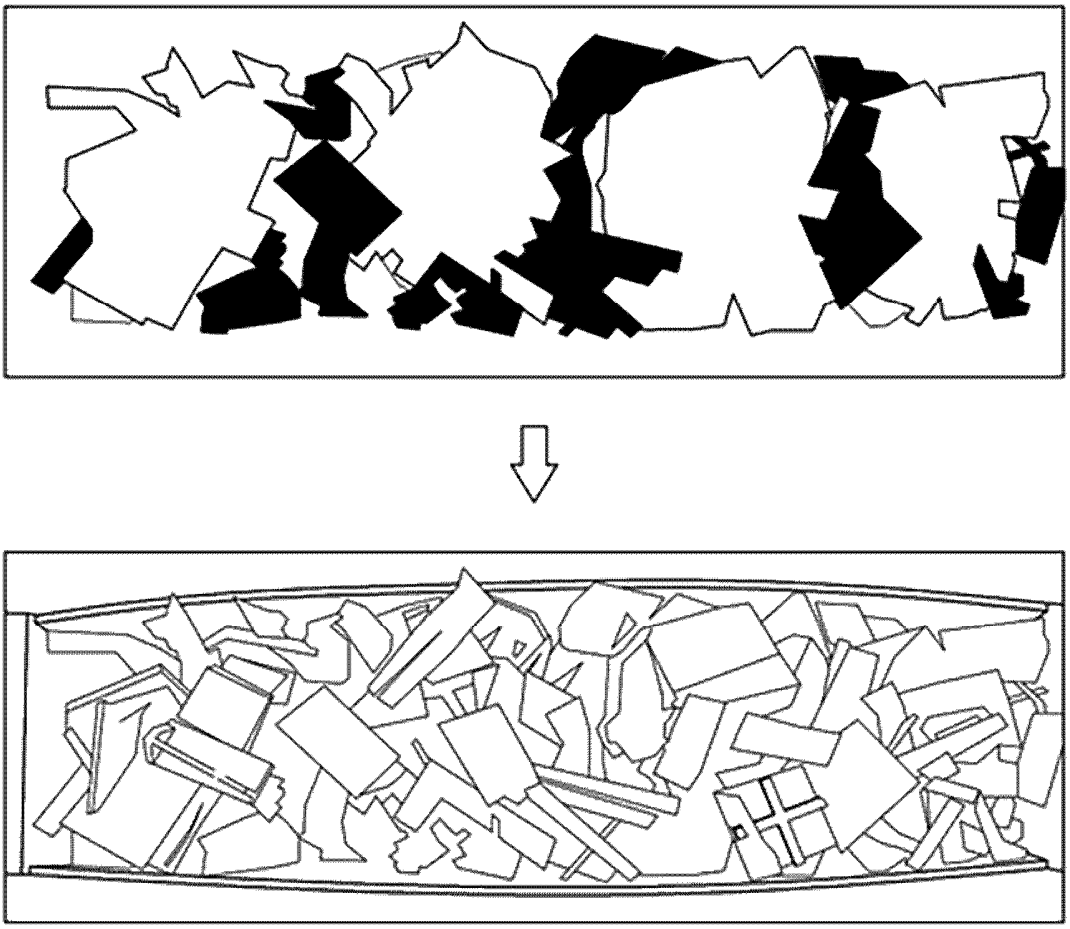
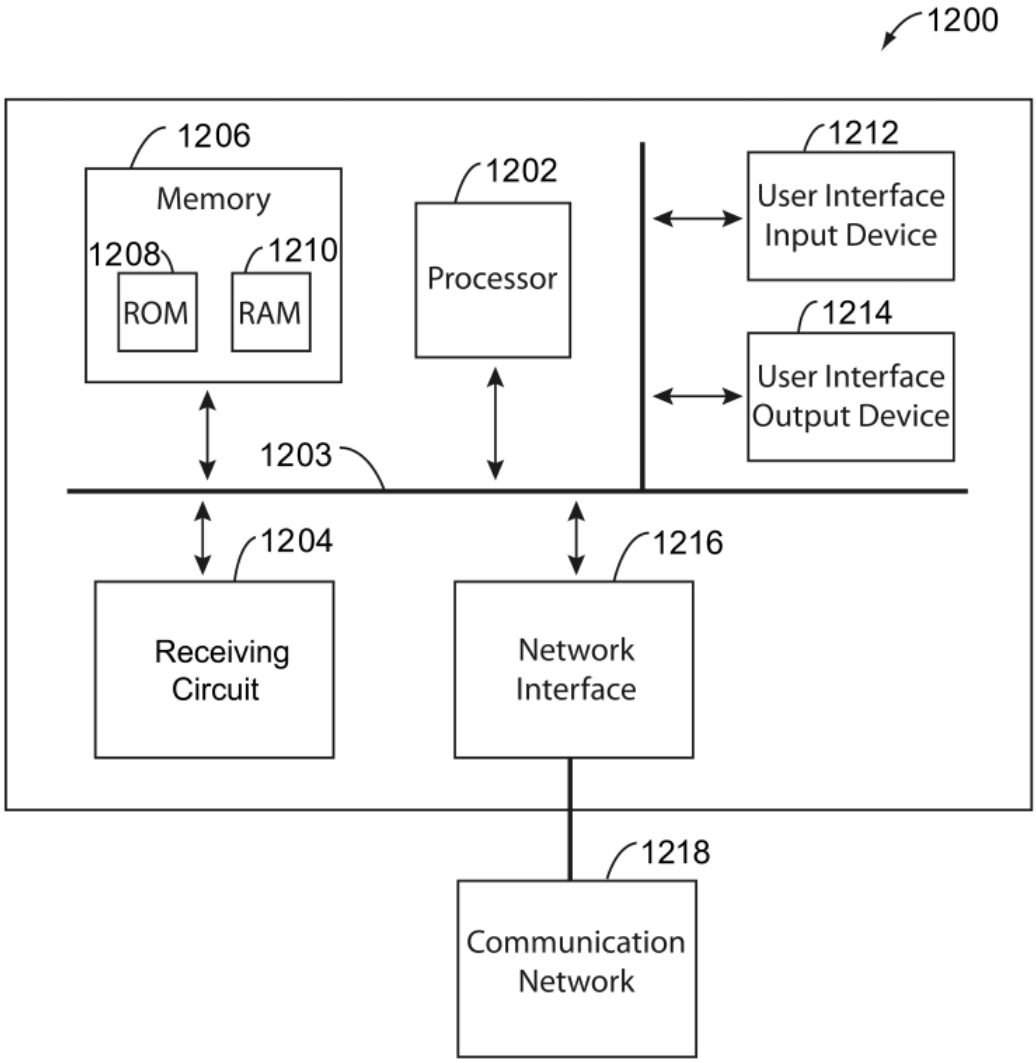


FIG. 12


1200
1206
Memory
1208
ROM
1210
RAM
1202
Processor
1212
User Interface Input Device
1214
User Interface Output Device
1203
1204
Receiving Circuit
1216
Network Interface
1218
Communication Network