

Multiplication machine

A machine made of paper that multiplies two factors by counting marbles

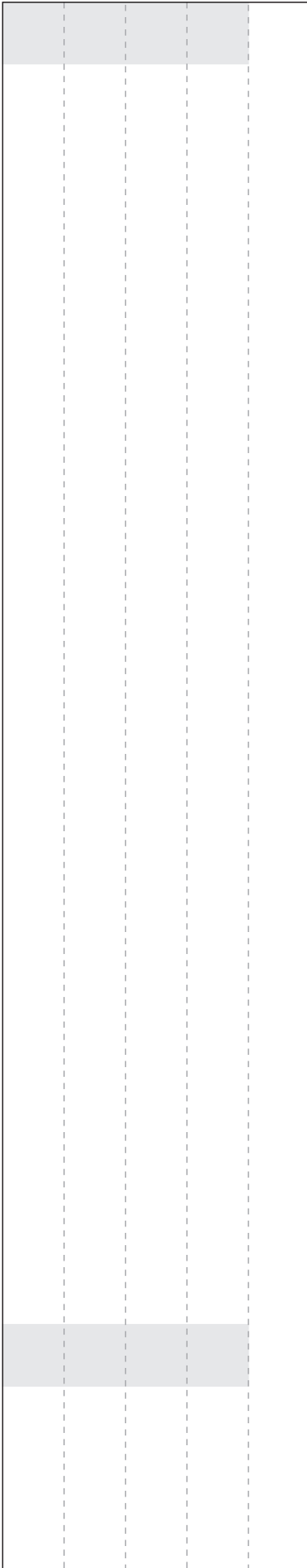
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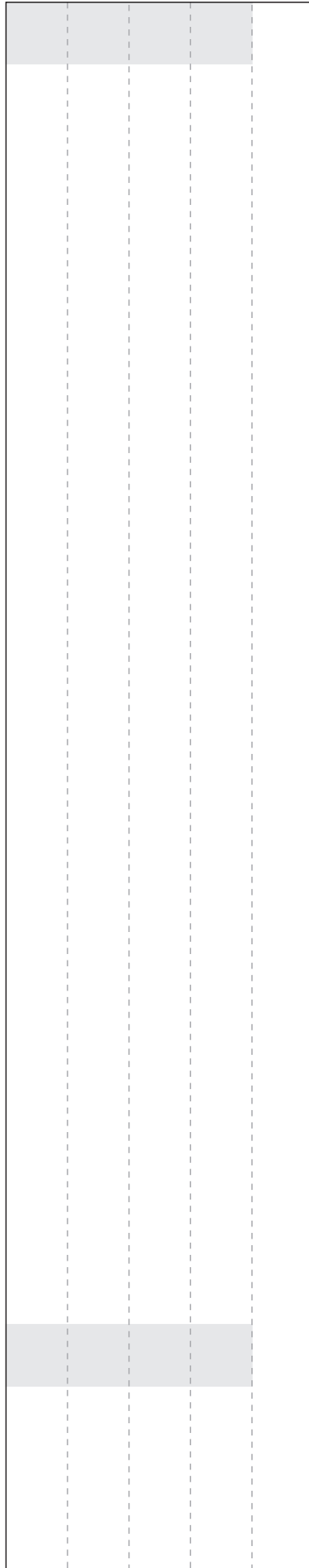
See digitprop.com/2013/05/multiplication-machine/ for more details and building instructions



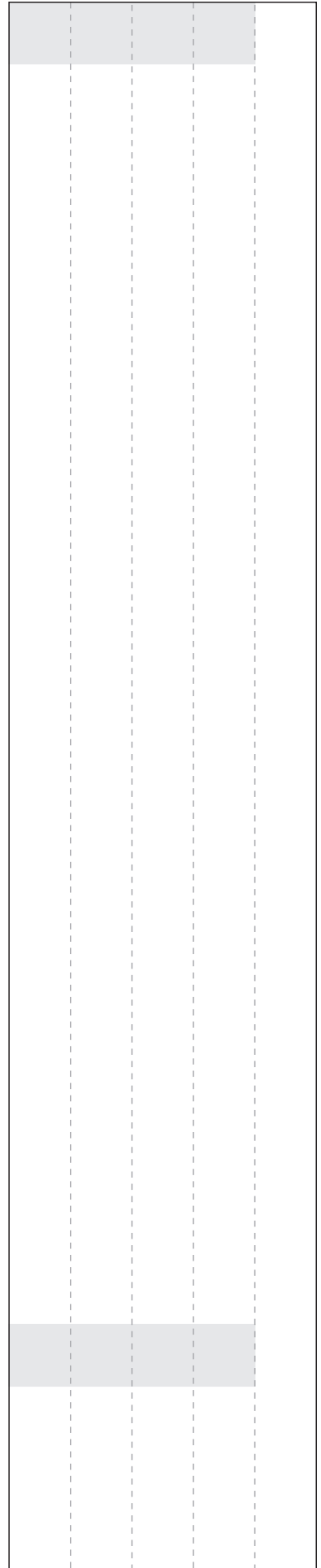
Vertical corner strut



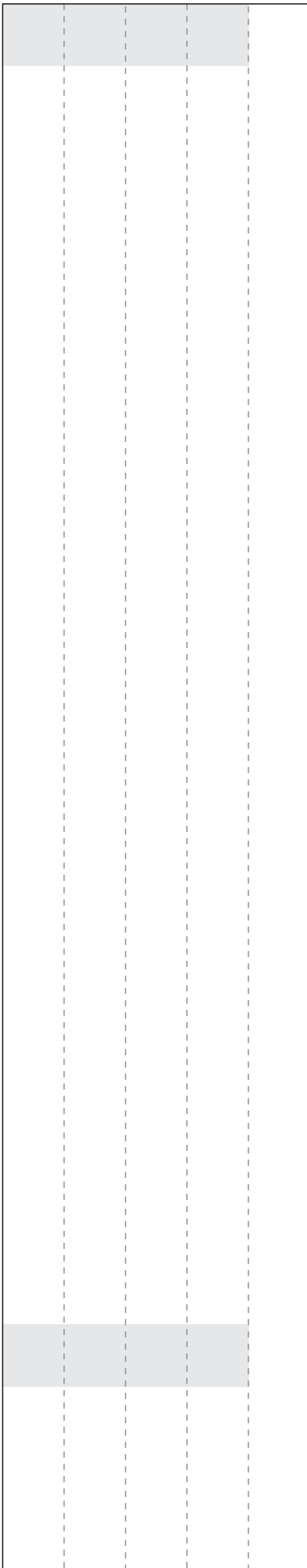
Vertical corner strut



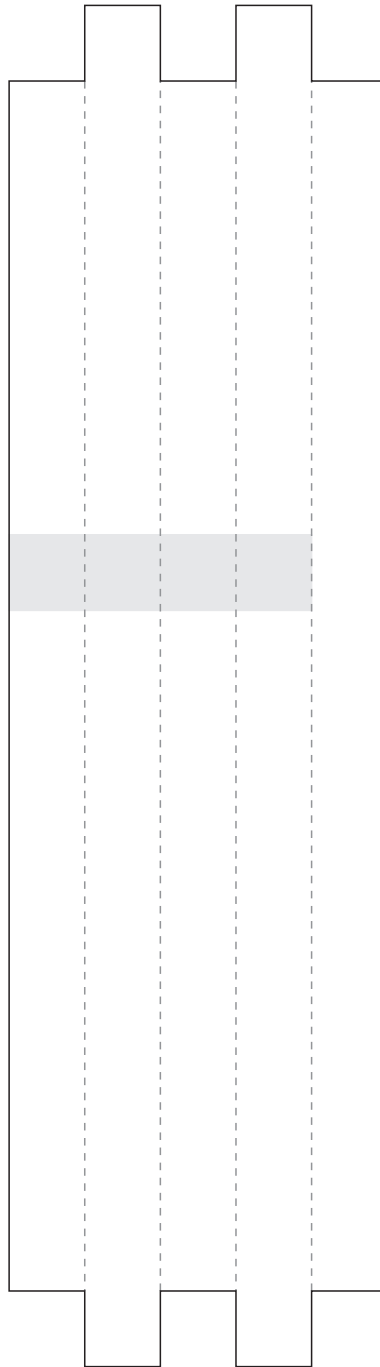
Vertical corner strut



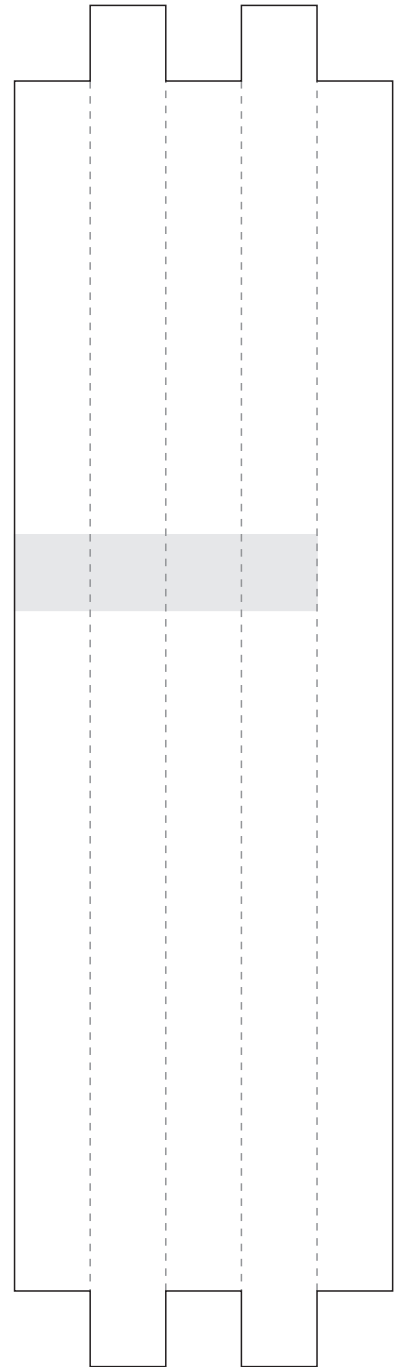
Vertical corner strut



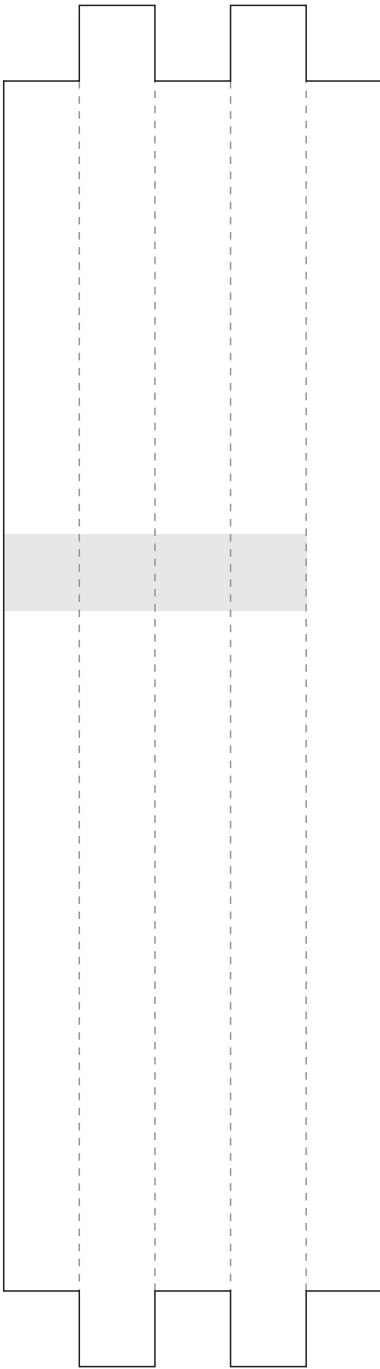
Horizontal rear and front struts



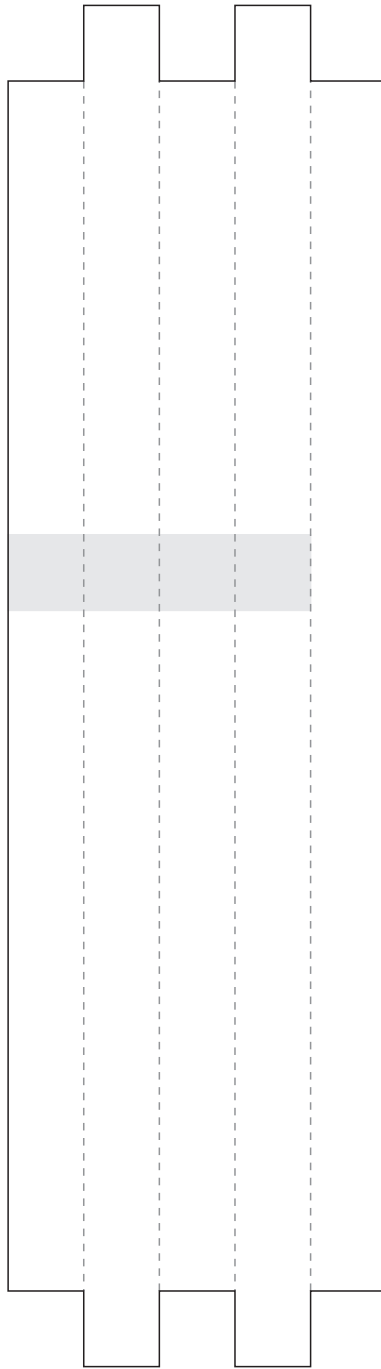
Horizontal rear and front struts



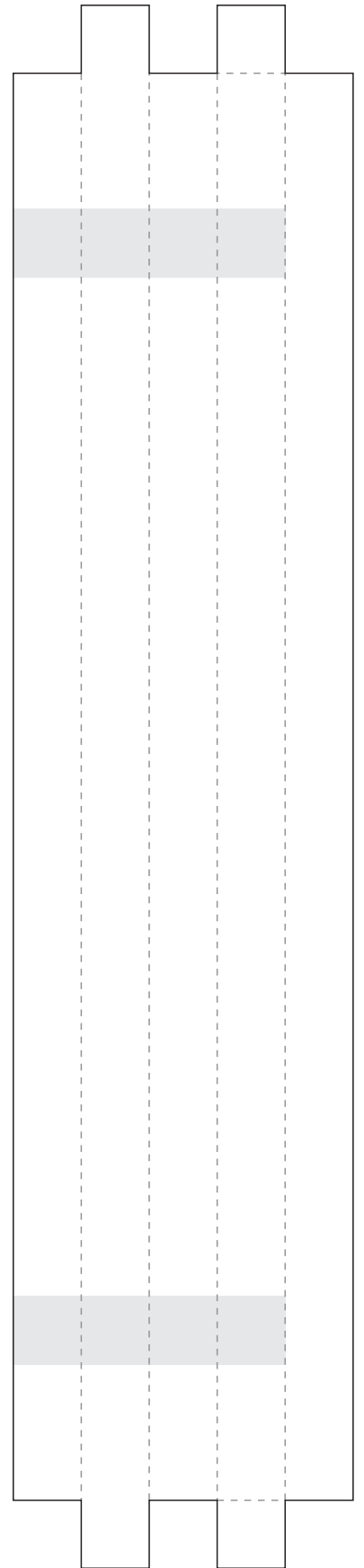
Horizontal rear and front struts

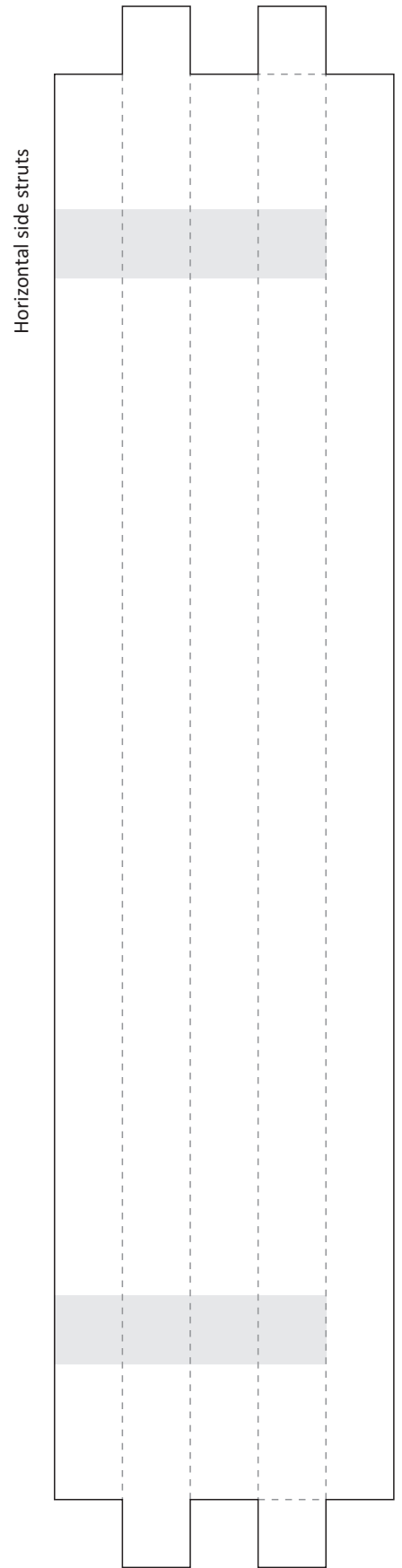
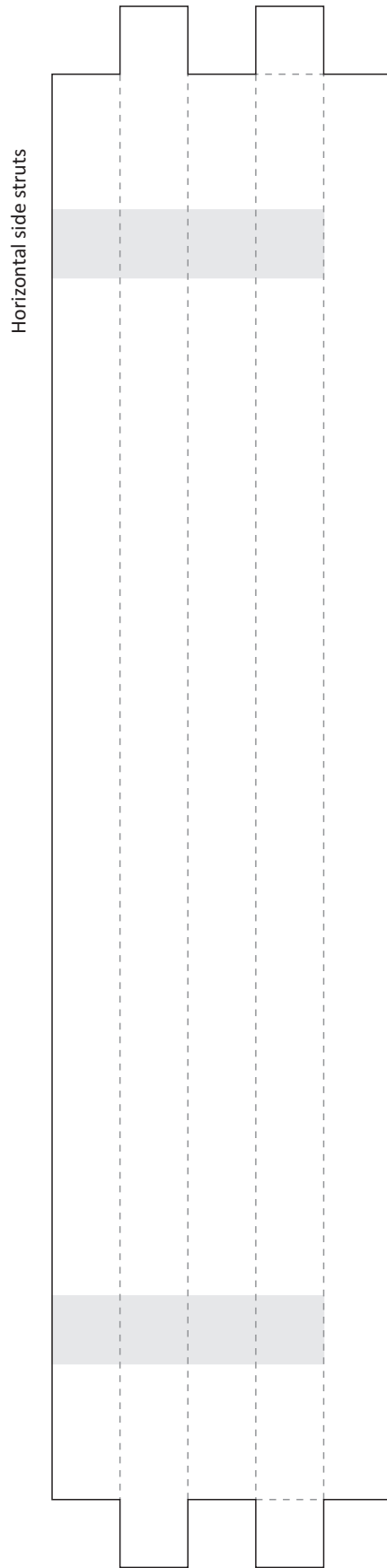
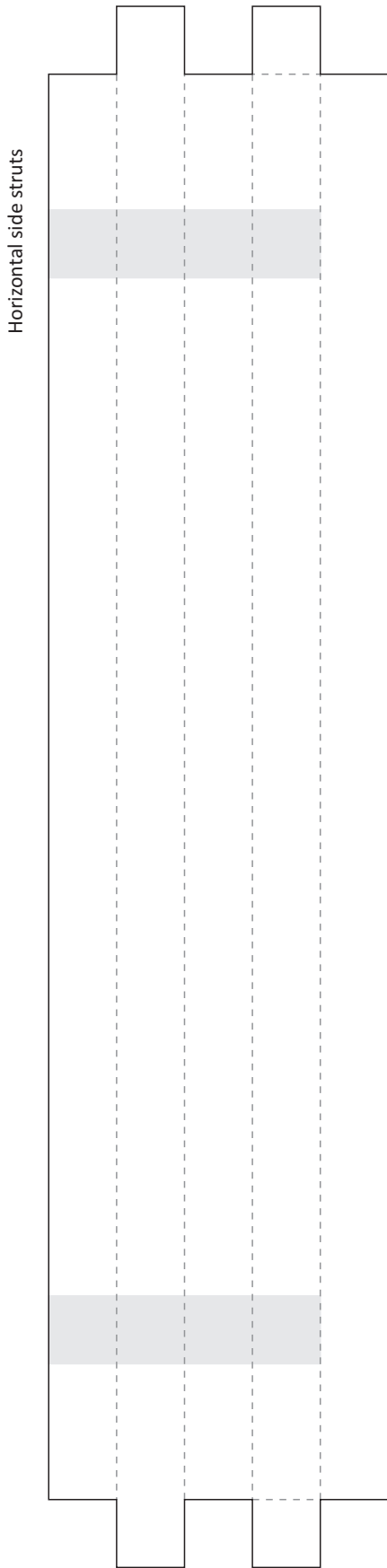


Horizontal rear and front struts

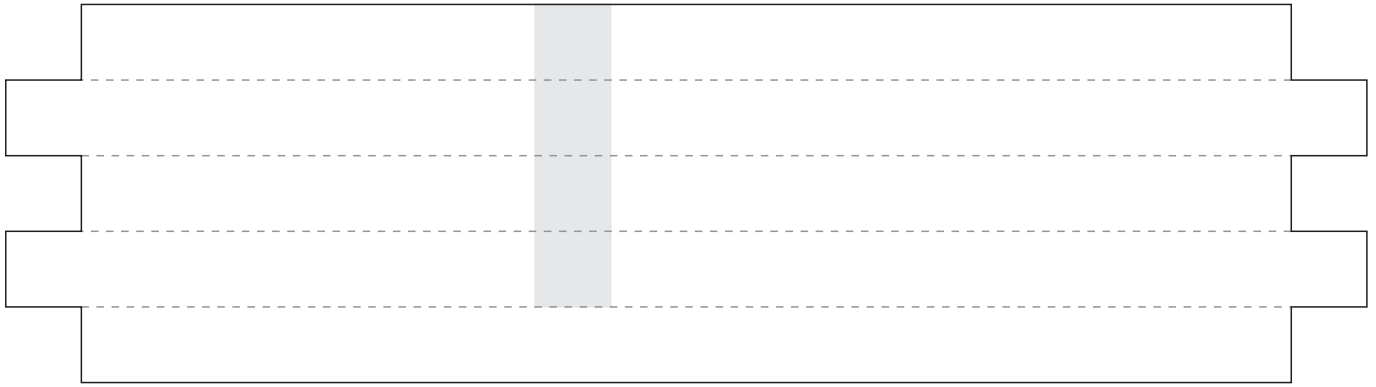


Horizontal side struts

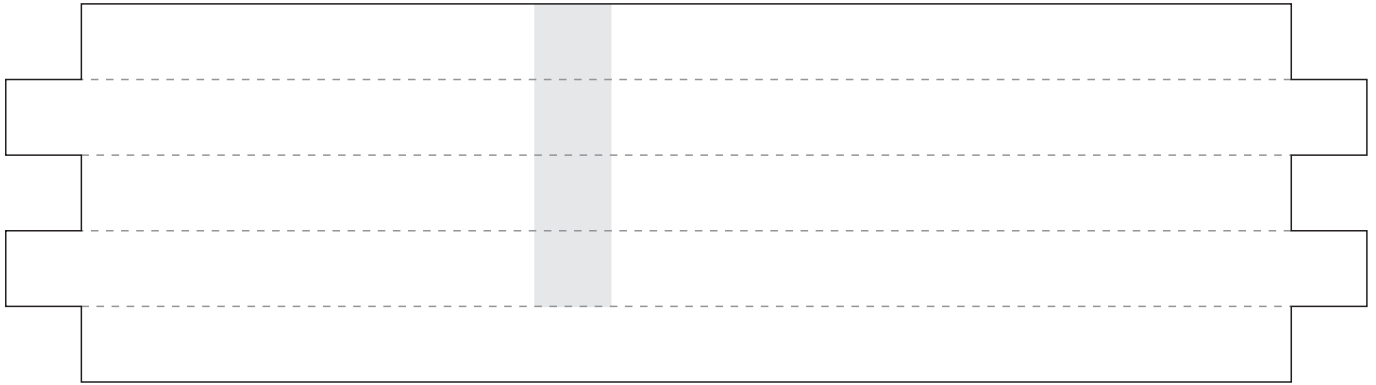




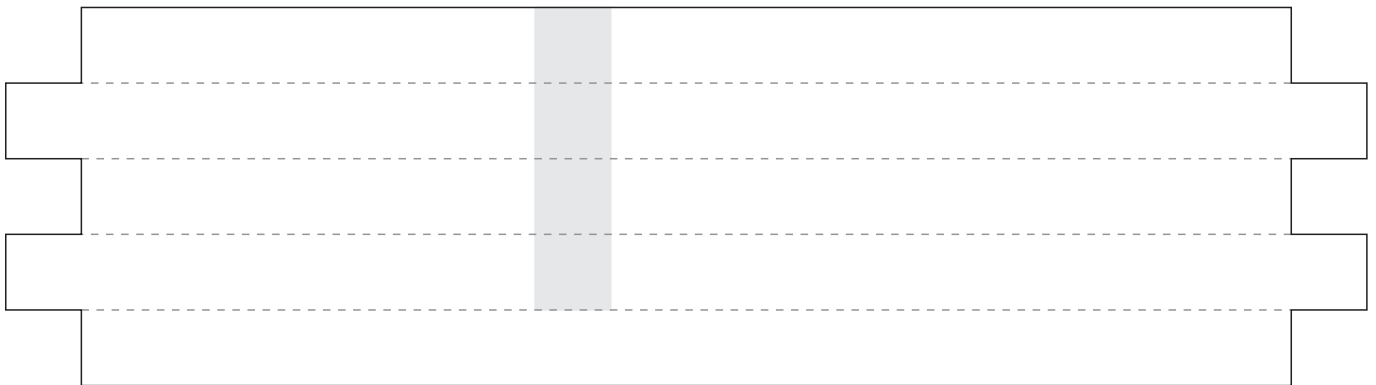
Horizontal inner struts



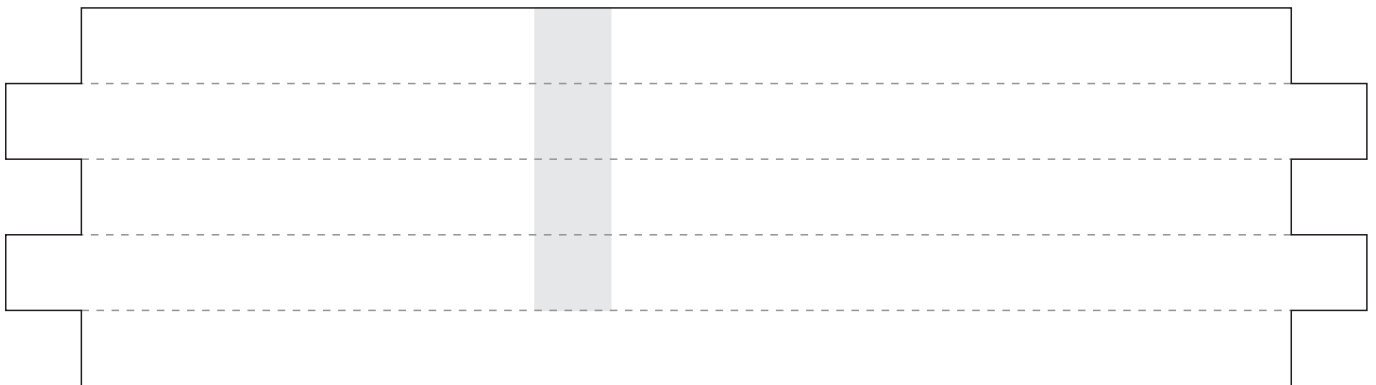
Horizontal inner struts



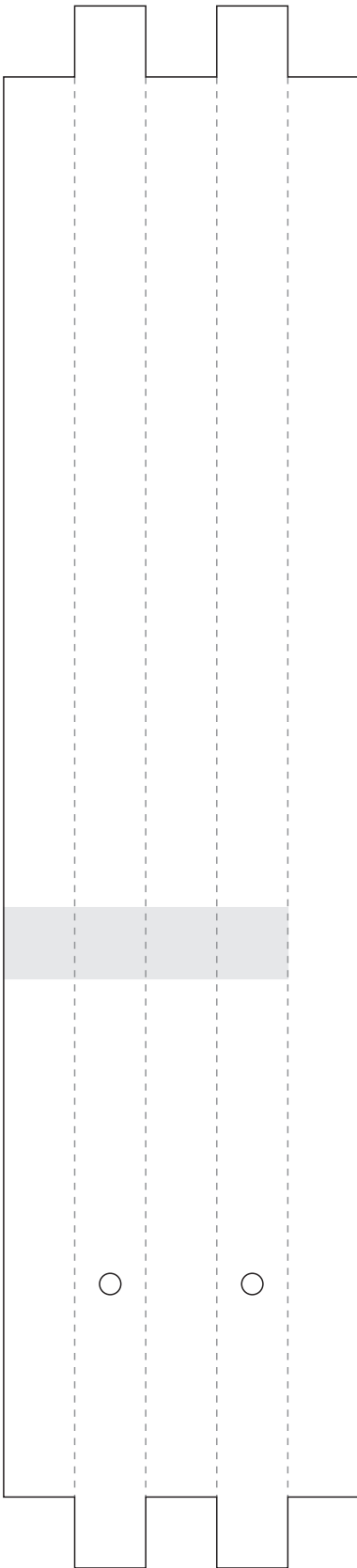
Horizontal inner struts



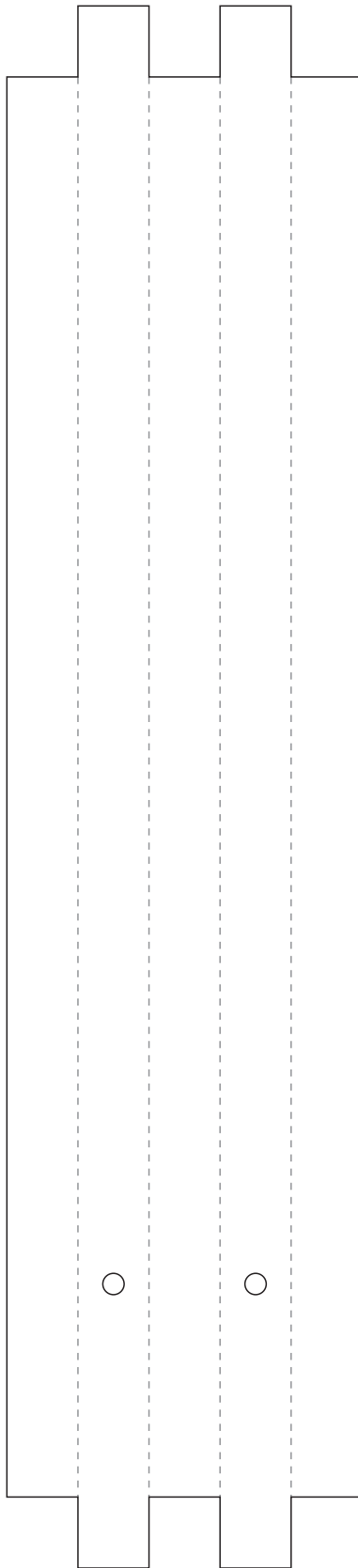
Horizontal inner struts



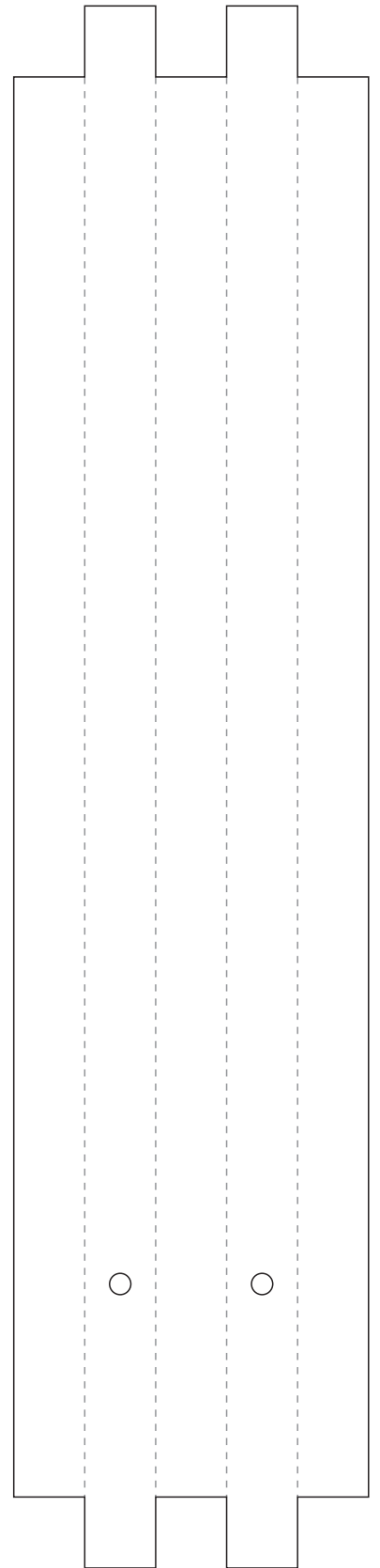
Back center strut with
hole for escapement



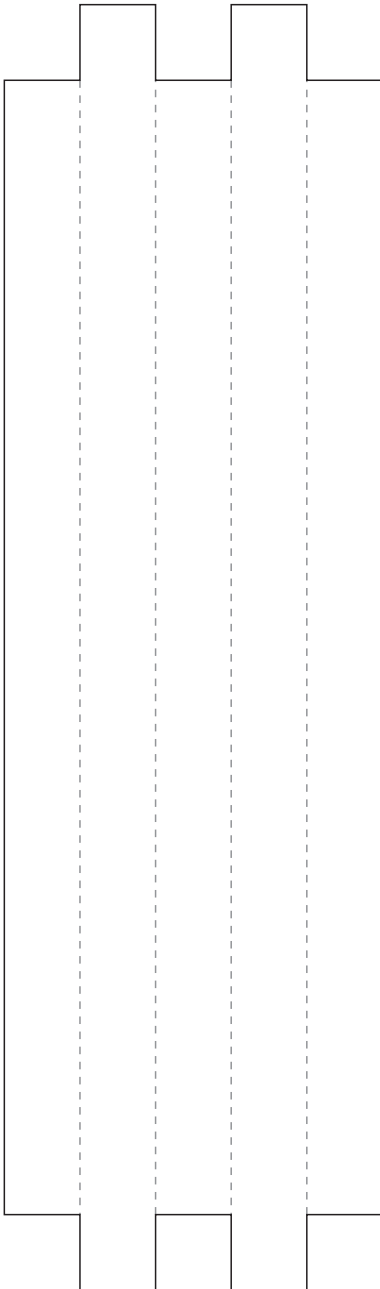
Back center strut with
hole for escapement



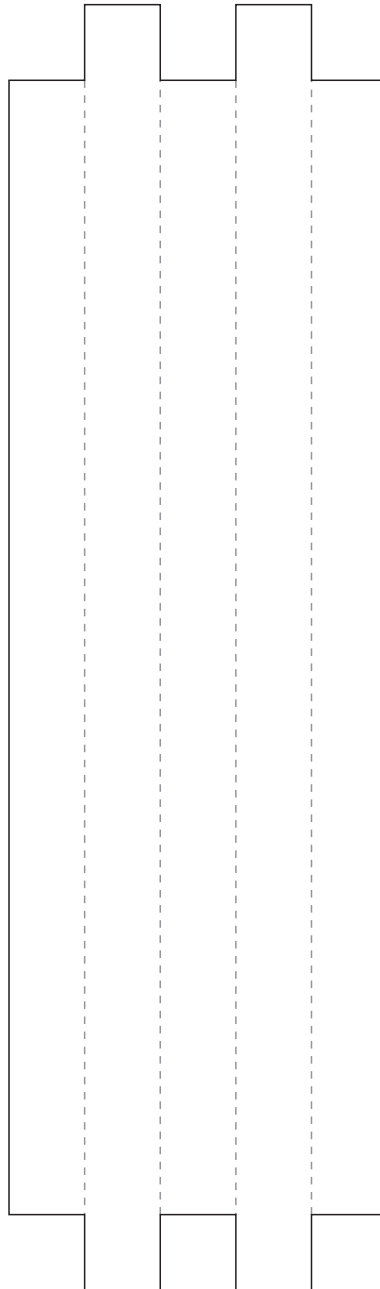
Front center strut with
hole for escapement



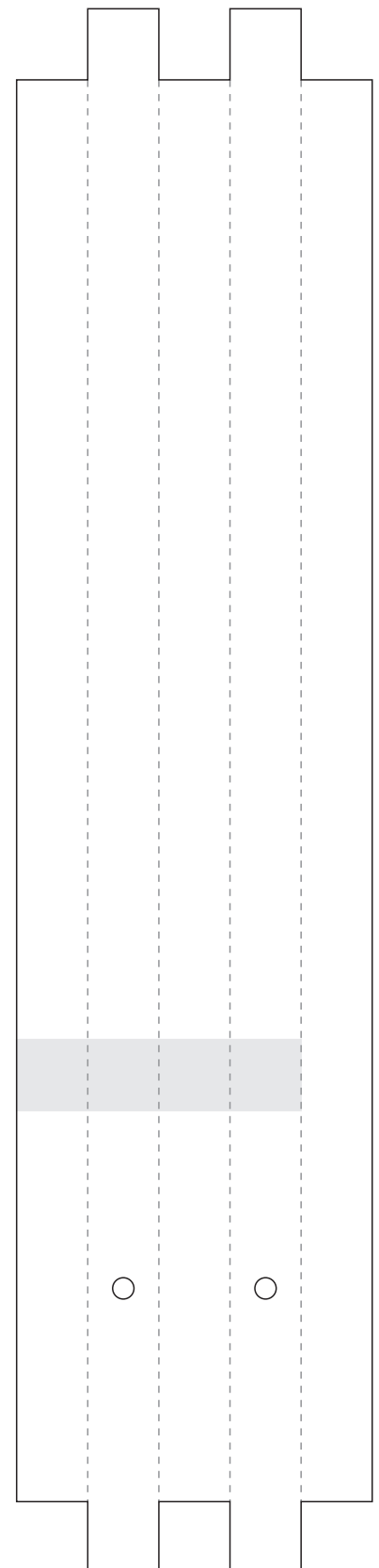
Horizontal strut for
adding unit



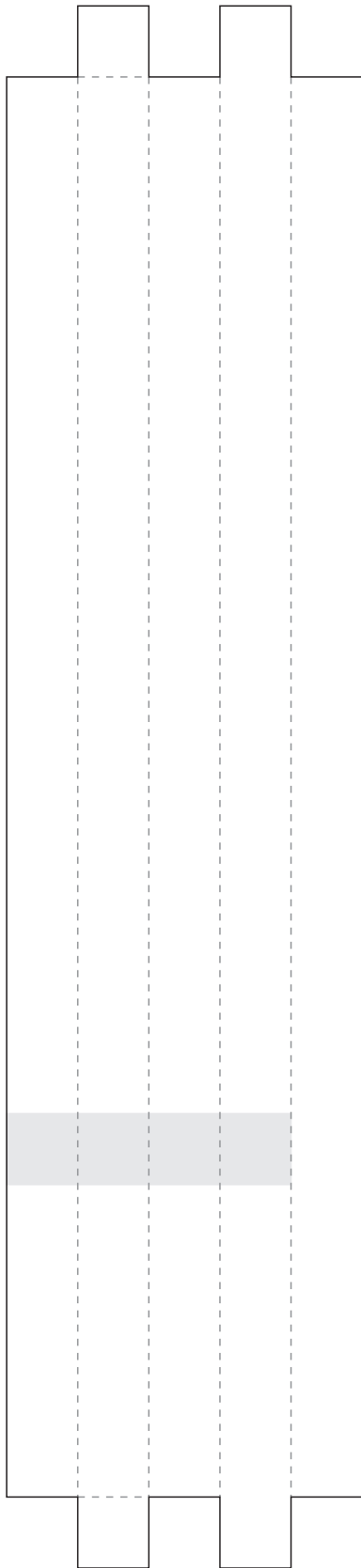
Horizontal strut for
adding unit



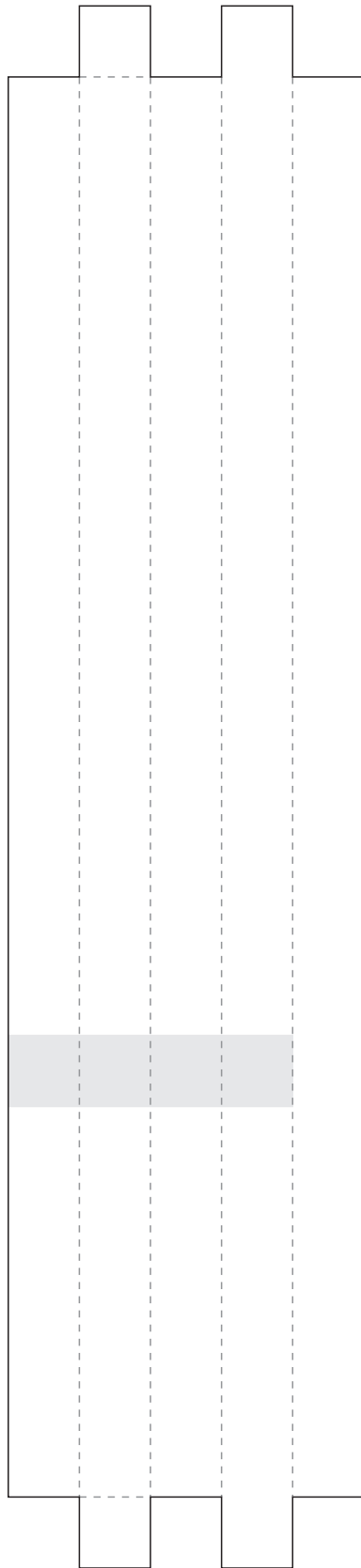
Front center strut with
hole for escapement



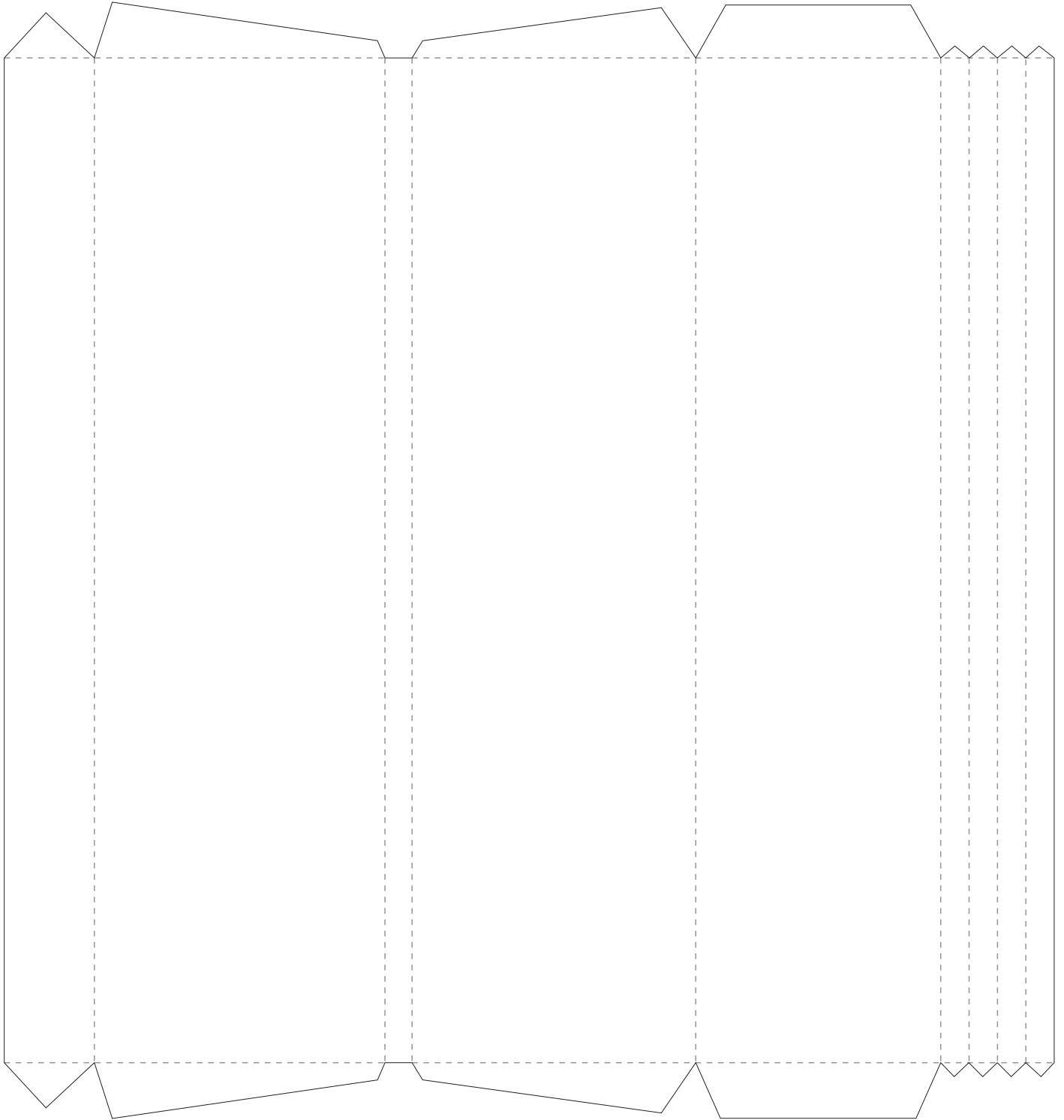
Vertical inner strut front



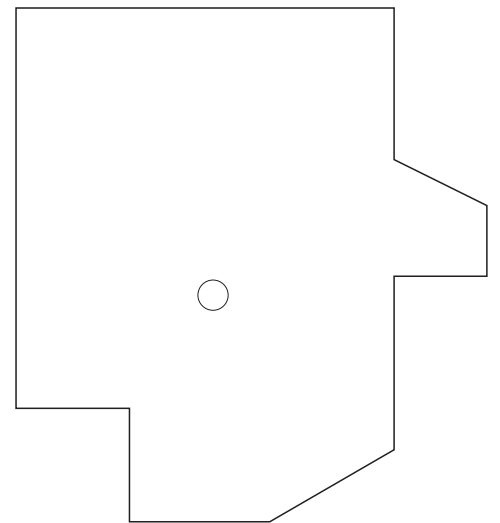
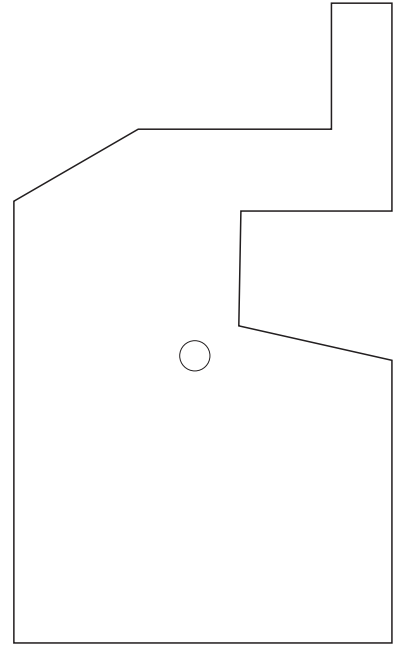
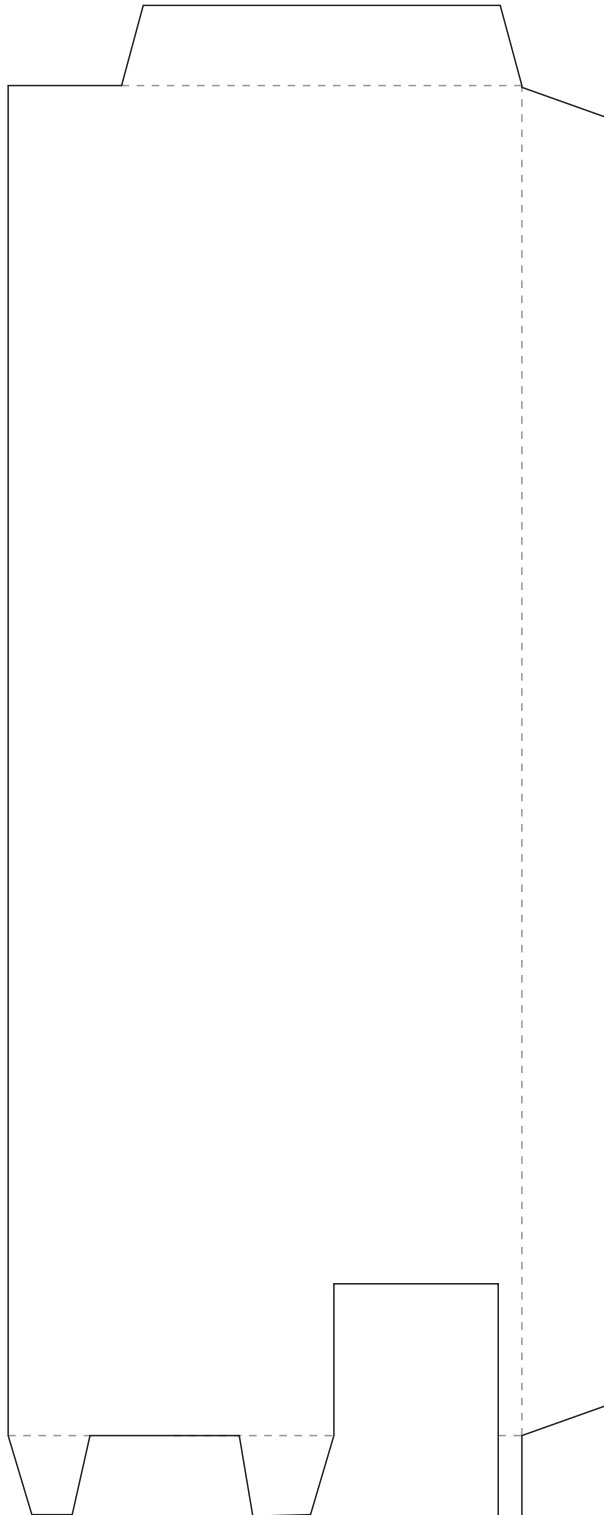
Vertical inner strut back



Adding unit frame

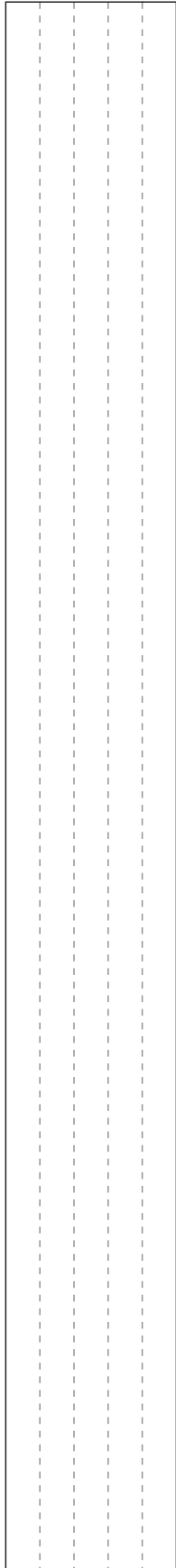
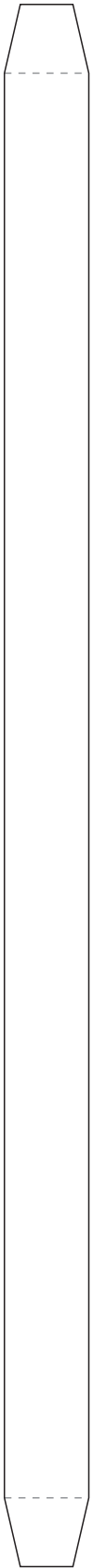


Adding unit frame

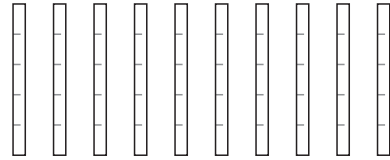


Adding unit bar

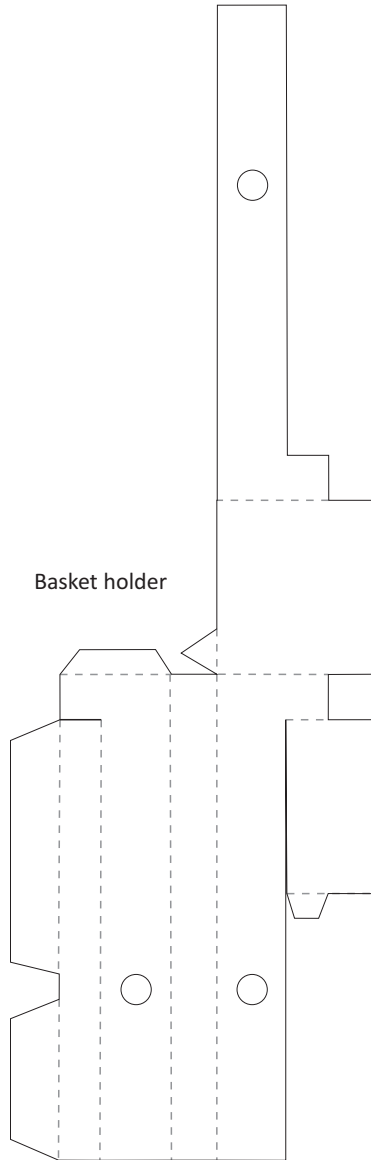
Bar reinforcement



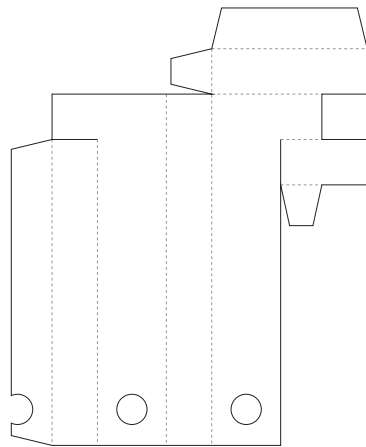
Spacers



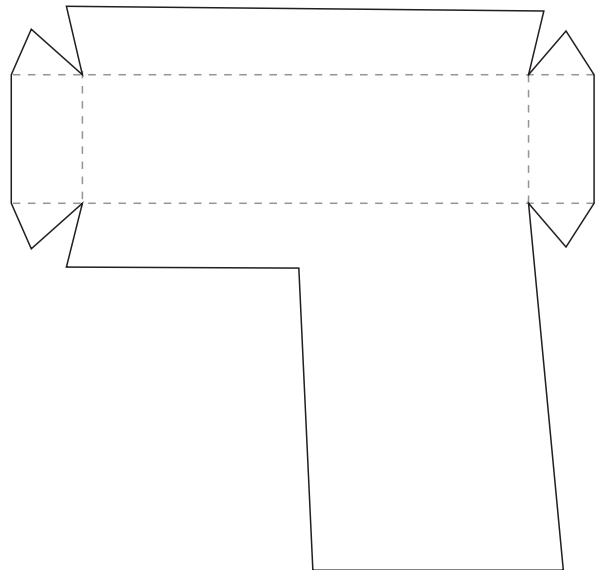
Basket holder



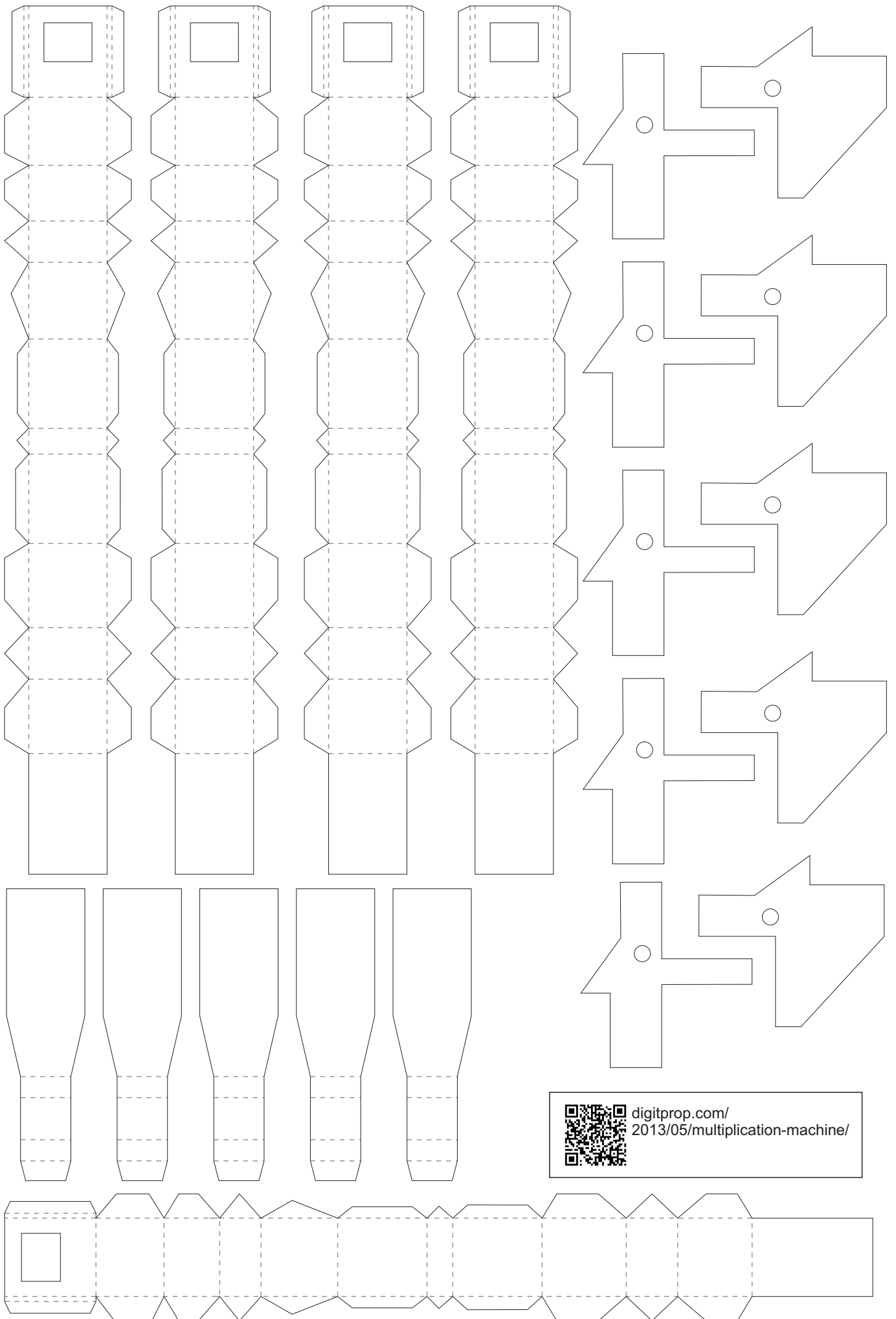
Bar holder



Basket

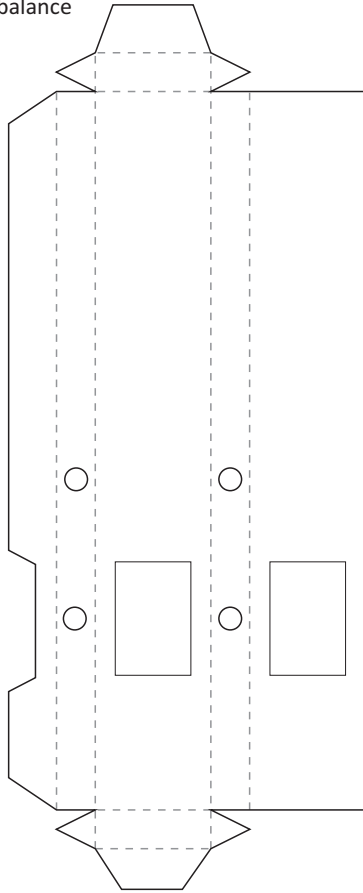


Rockers

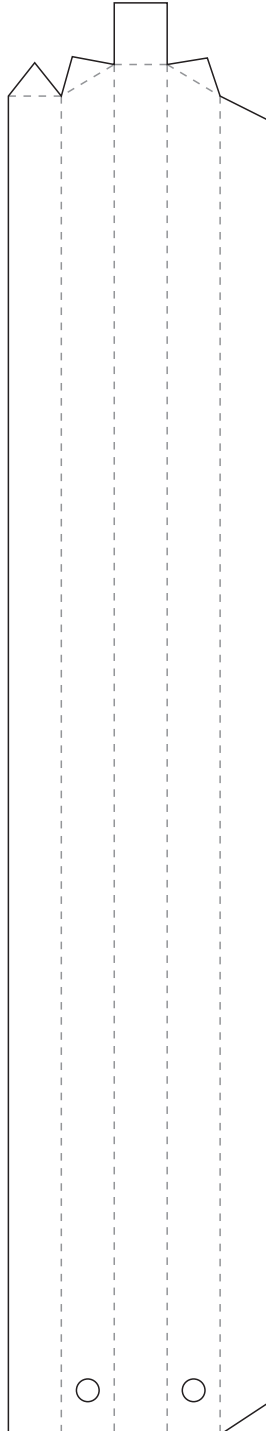


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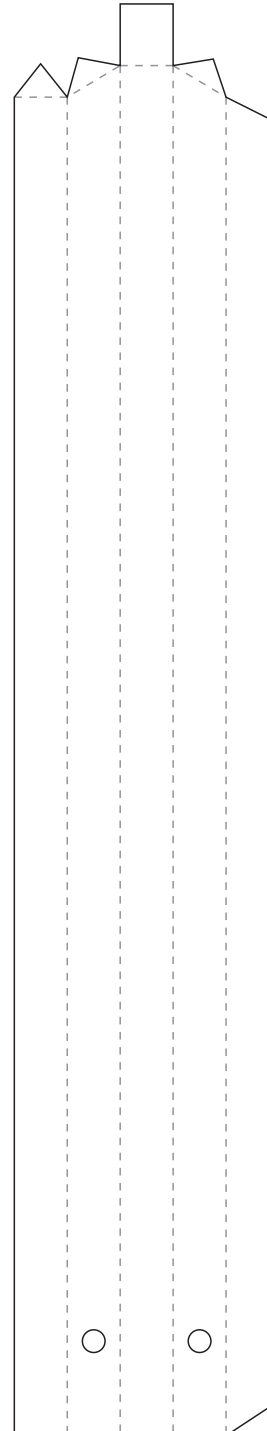
Front
escapement
balance



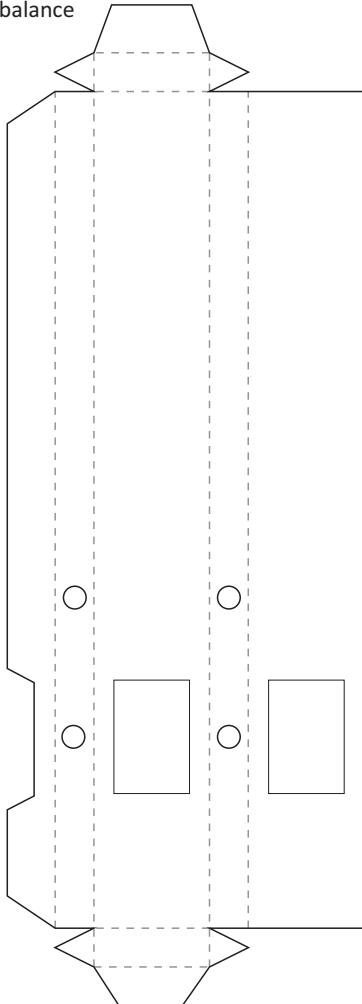
Back
escapement
piston



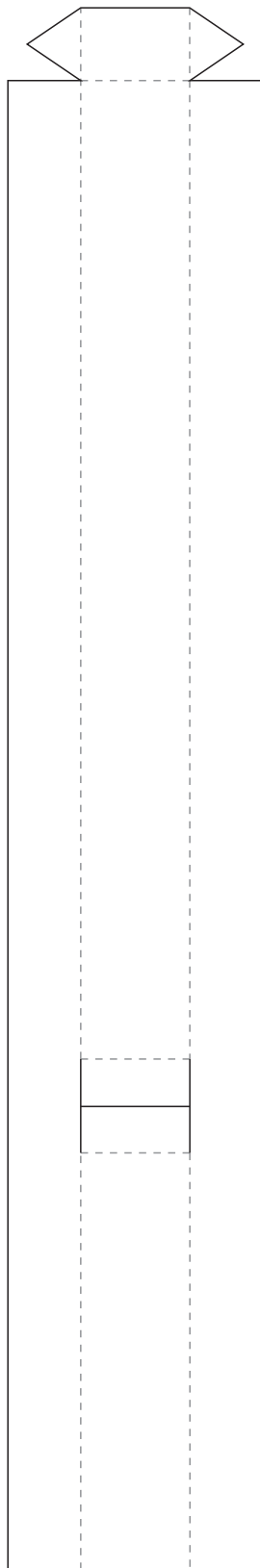
Front
escapement
piston



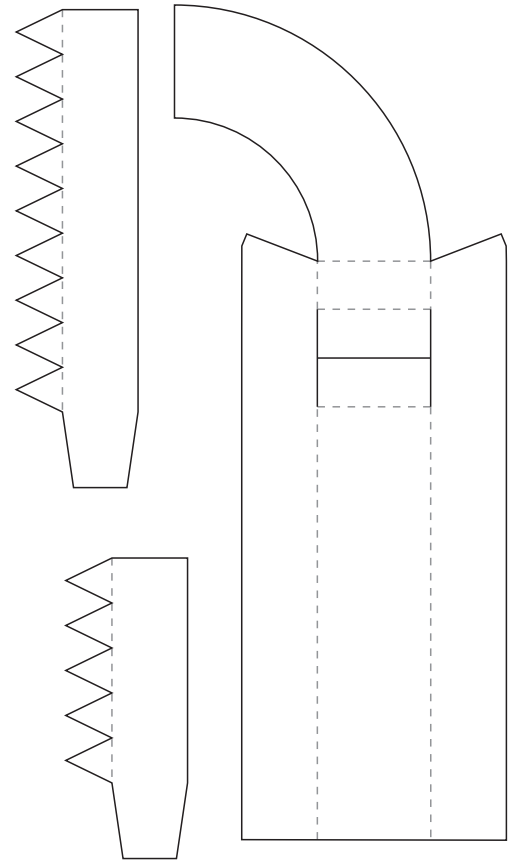
Back
escapement
balance



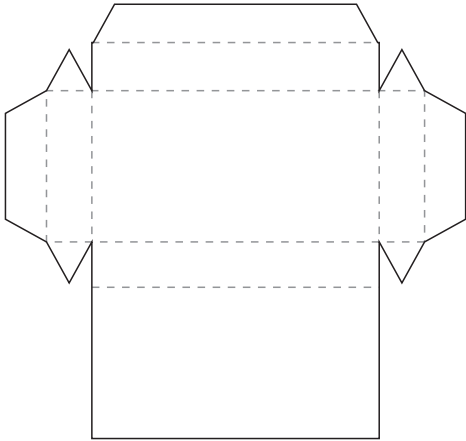
Escapement reservoir 1



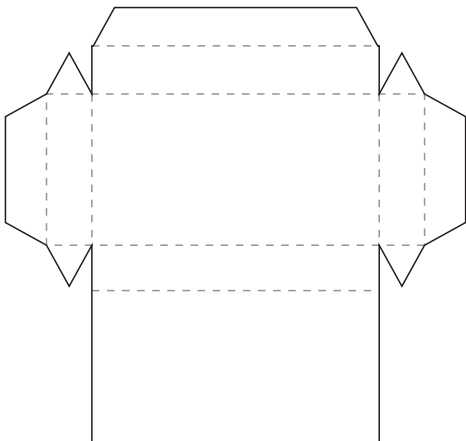
Escapement reservoir 2



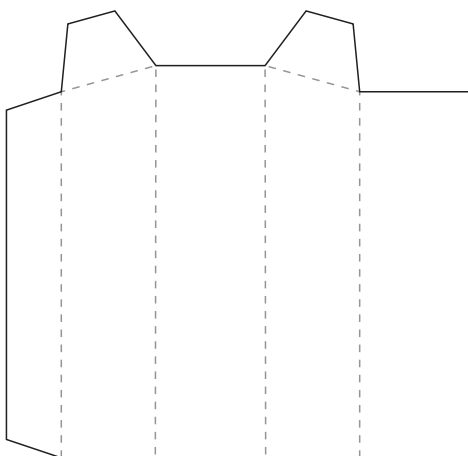
Spacer



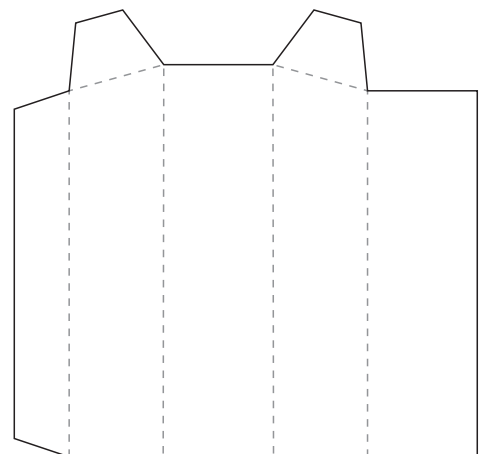
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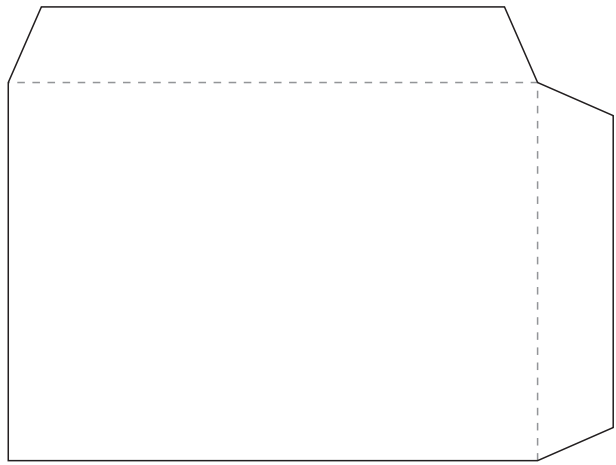
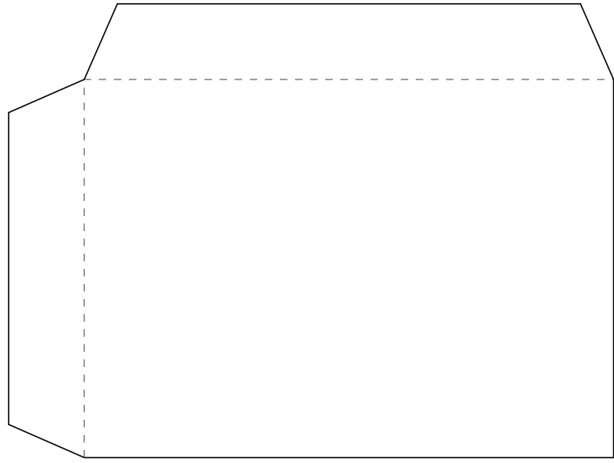
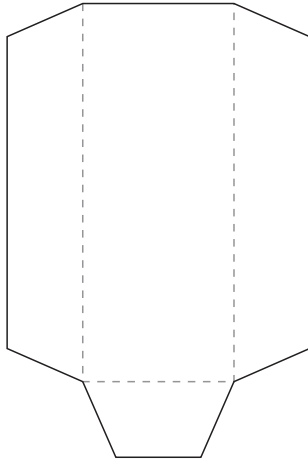
Escapement 1 piston guidance



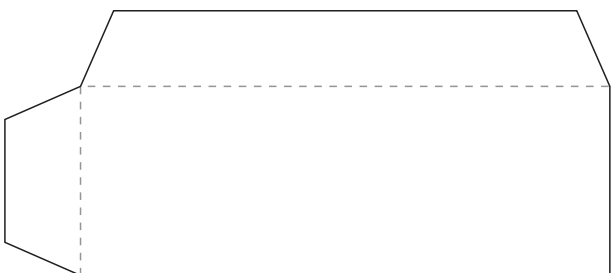
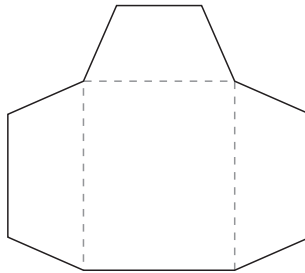
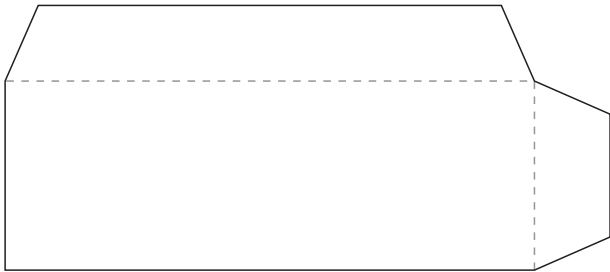
Escapement 2 piston guidance

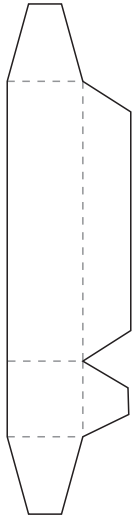


Back case



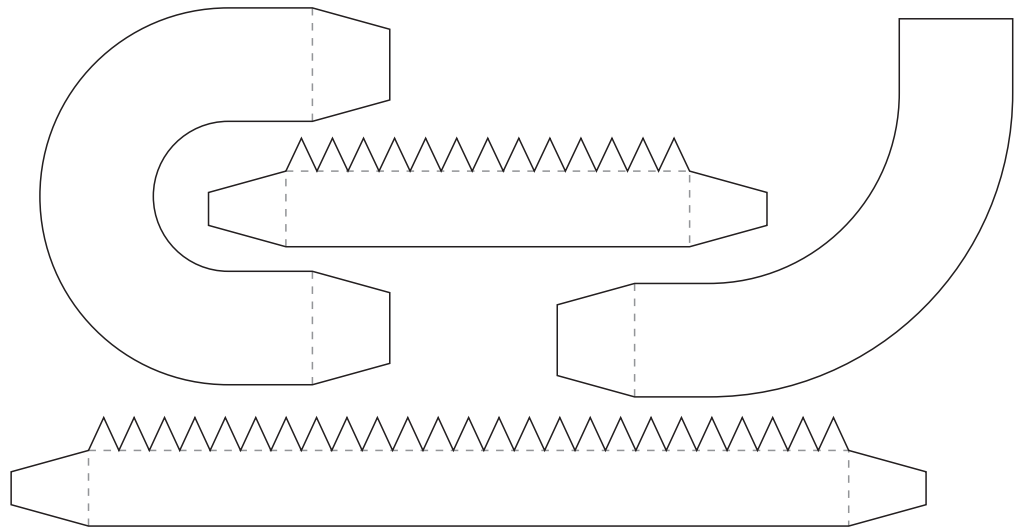
Front case



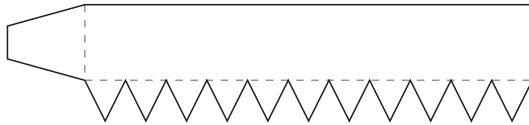
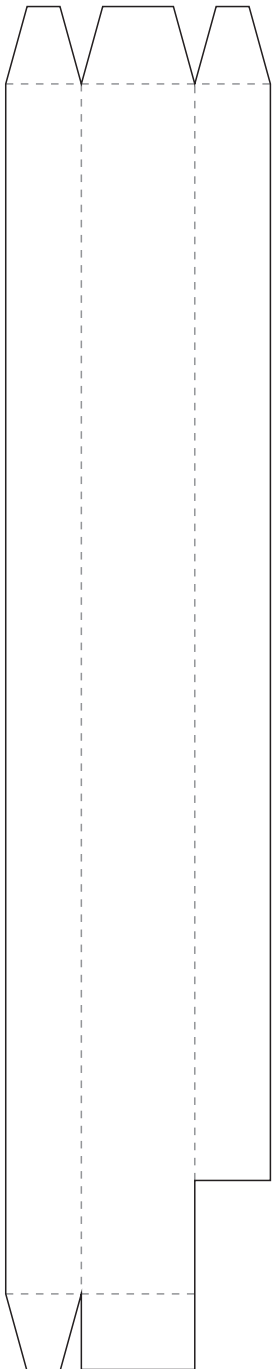


Conduit from chute to right

To adding unit

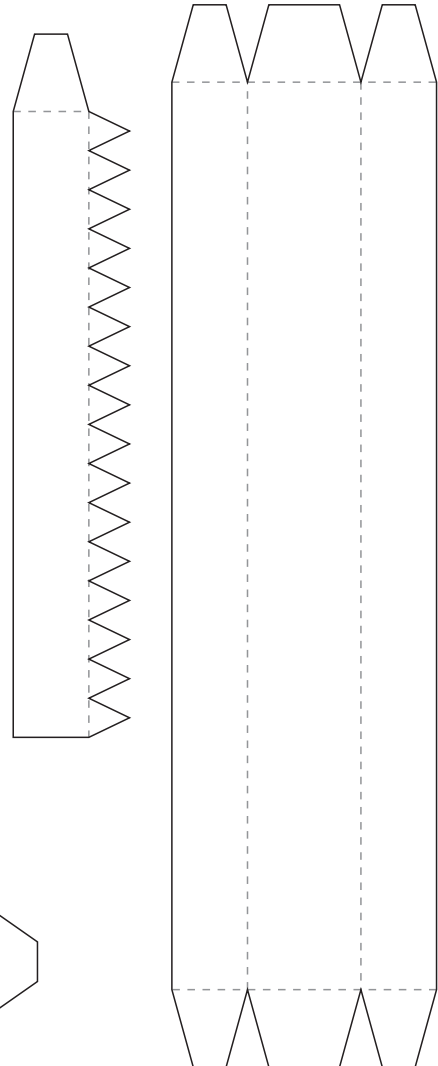
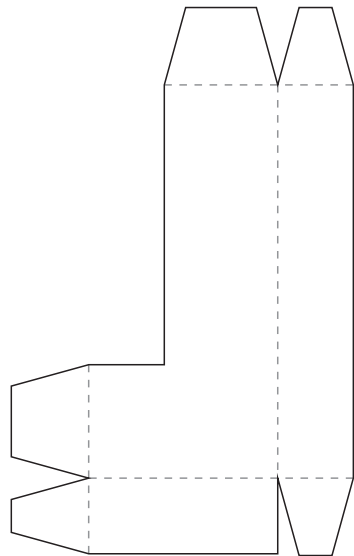


Connection between front reservoir and chute

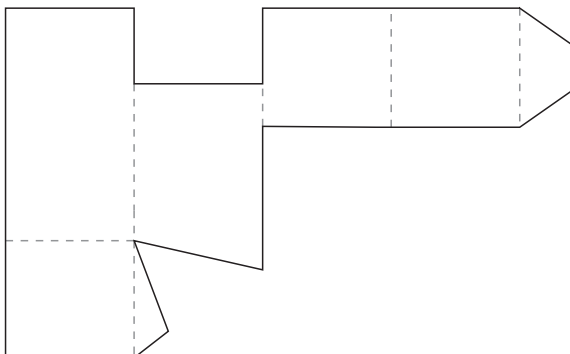


Connection between front reservoir and chute

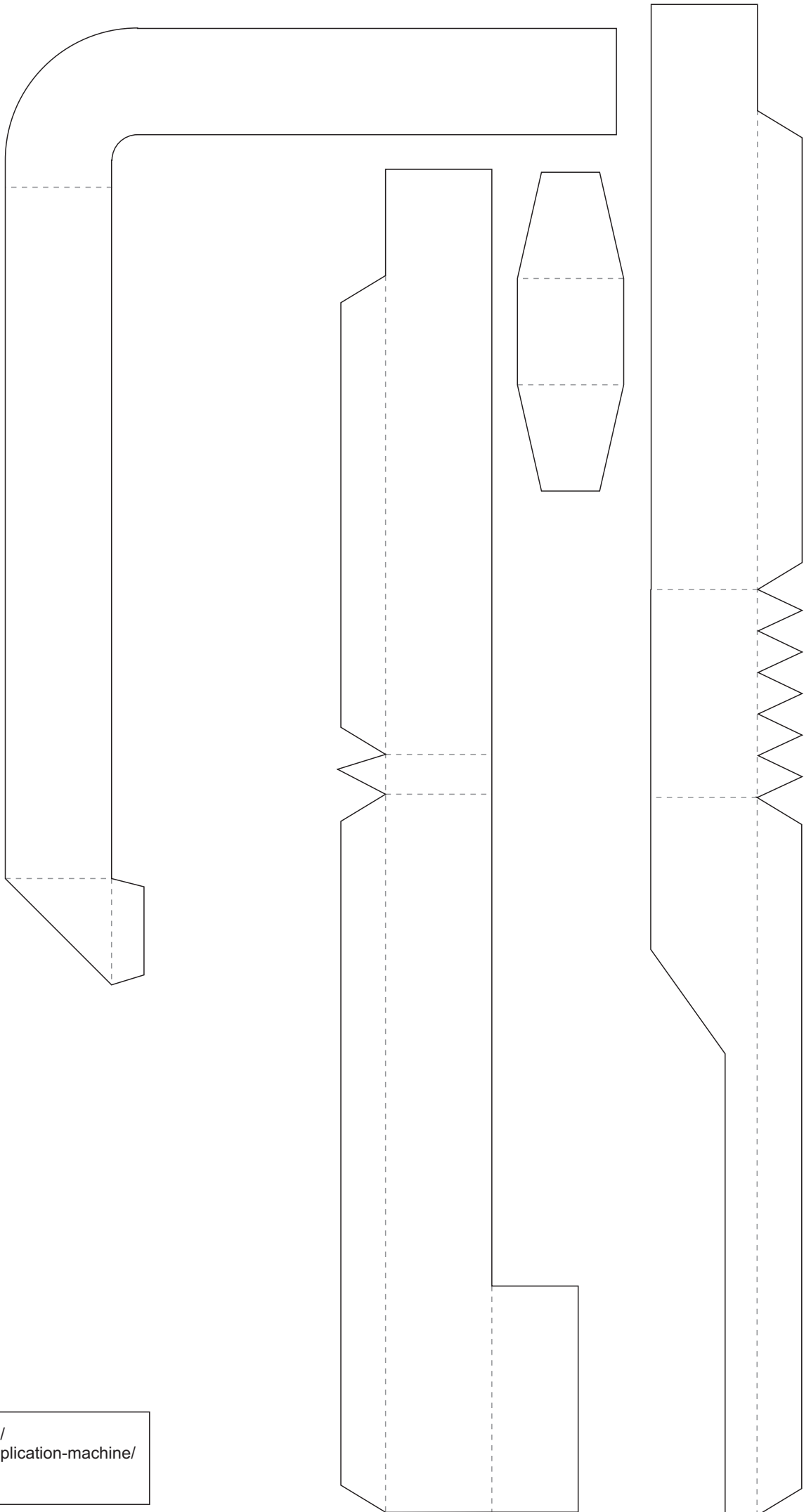
Conduit from reservoir to chute



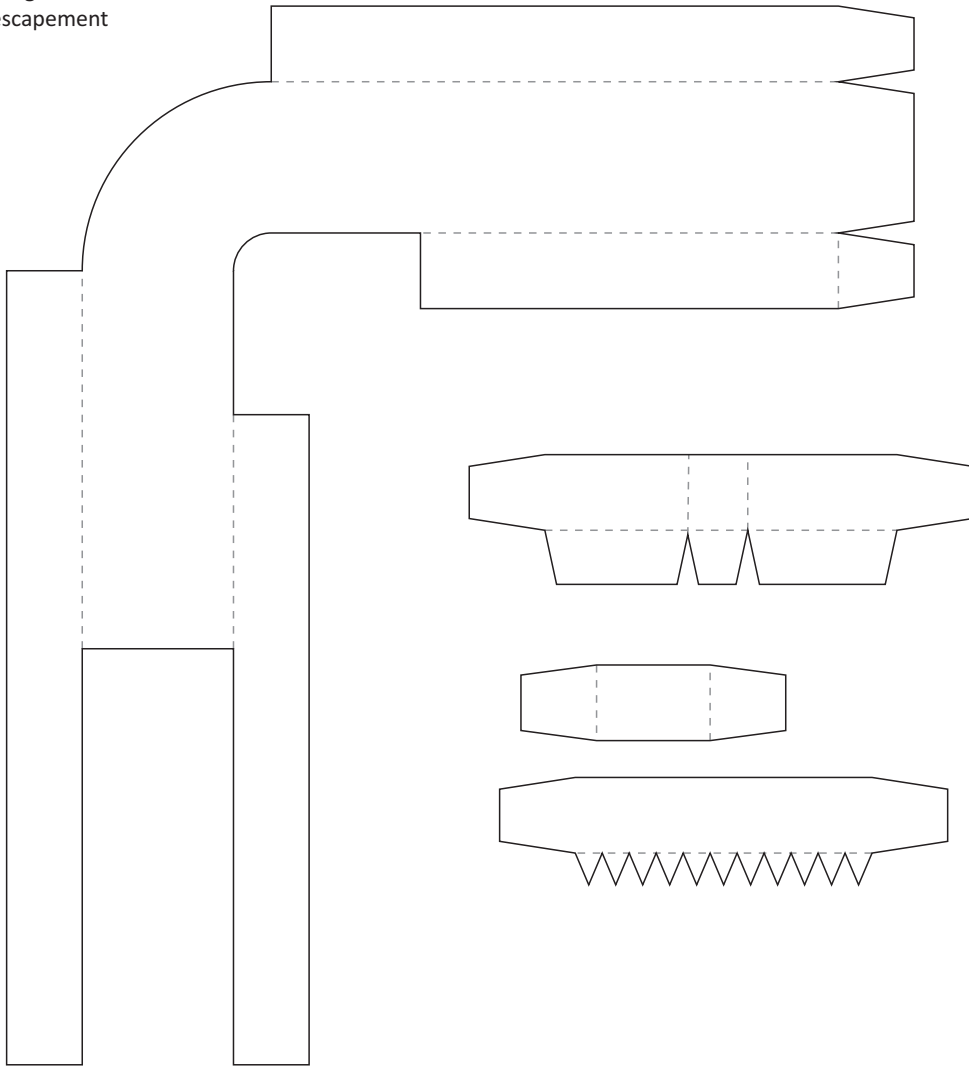
Chute



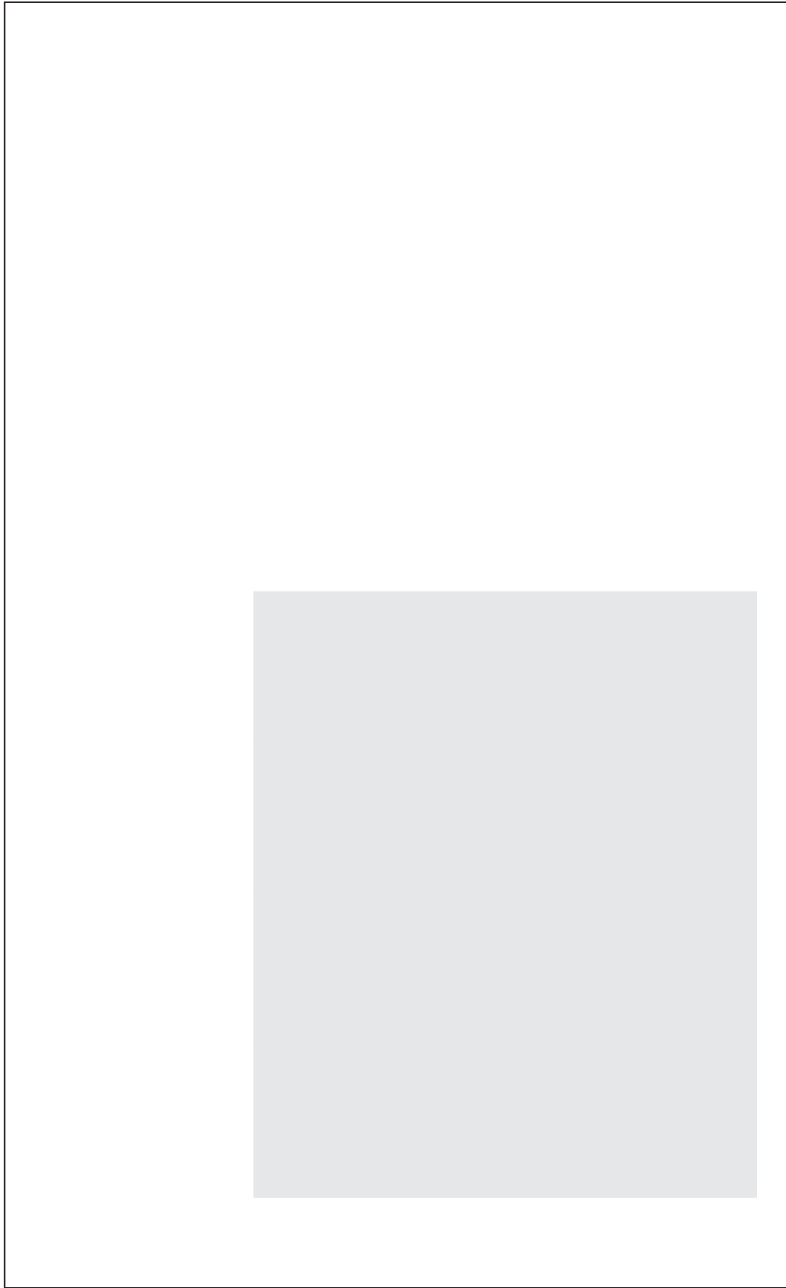
From adding unit
to front escapement



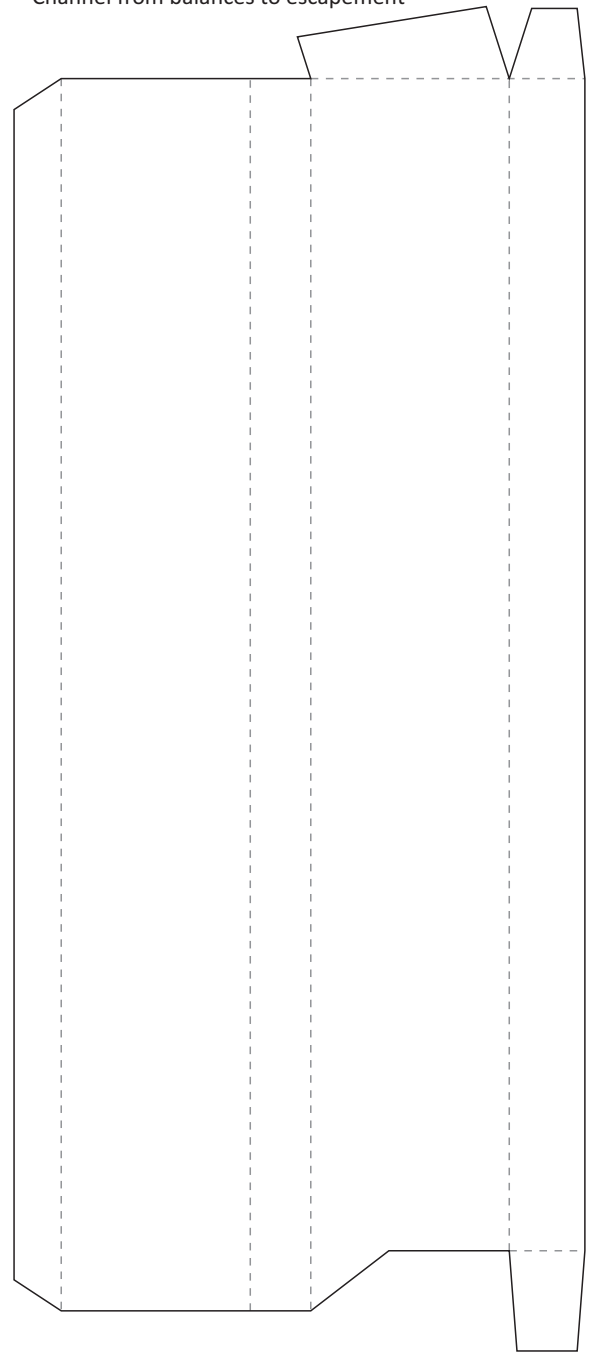
From adding unit
to back escapement



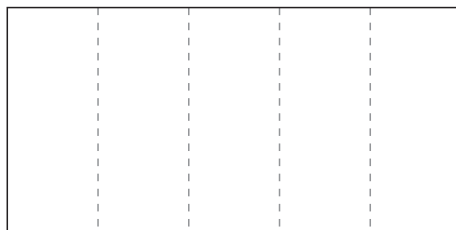
Top cover for reservoir



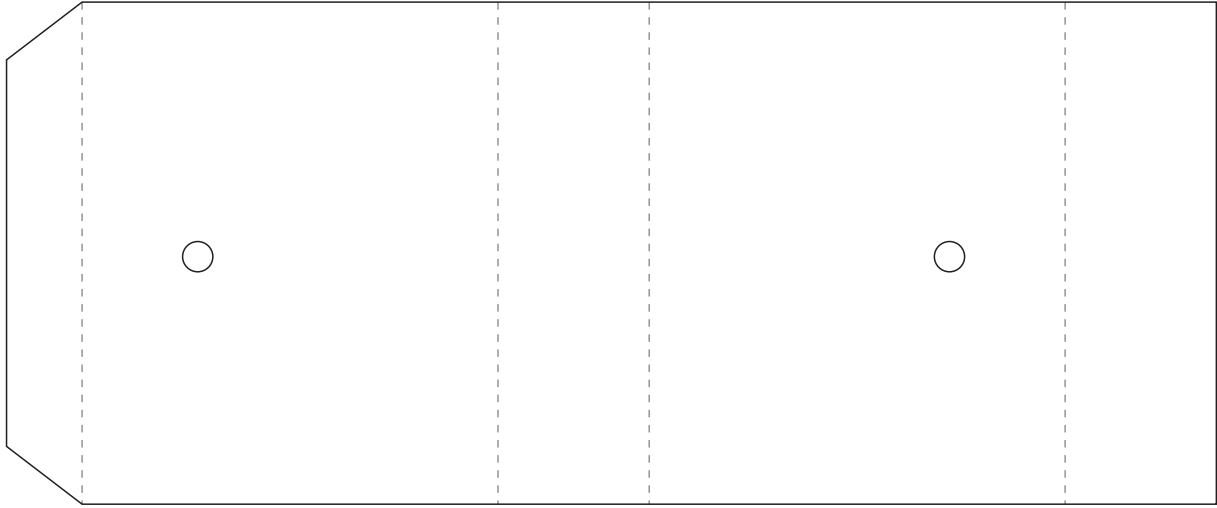
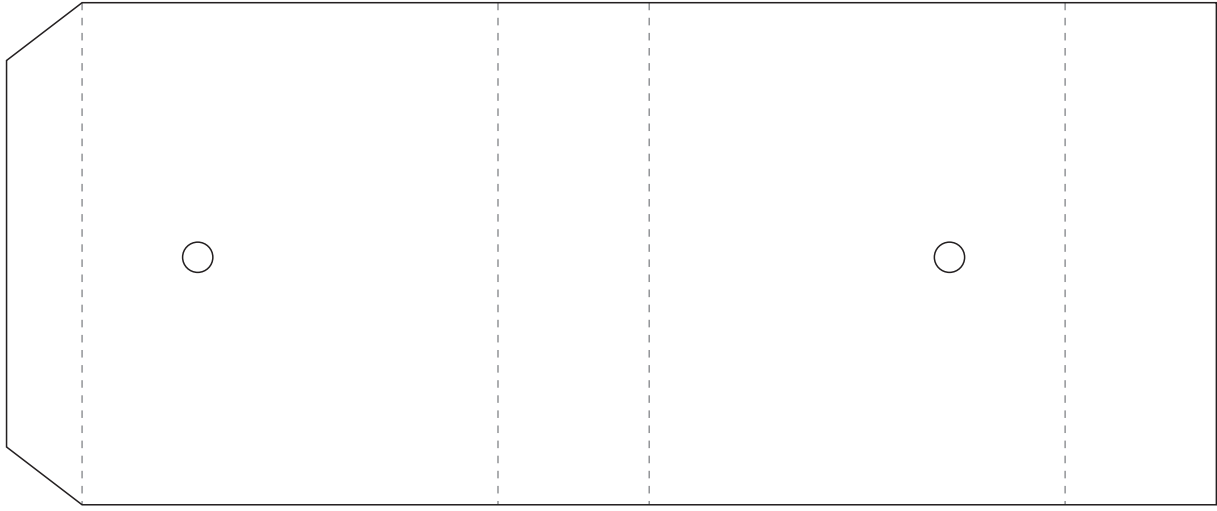
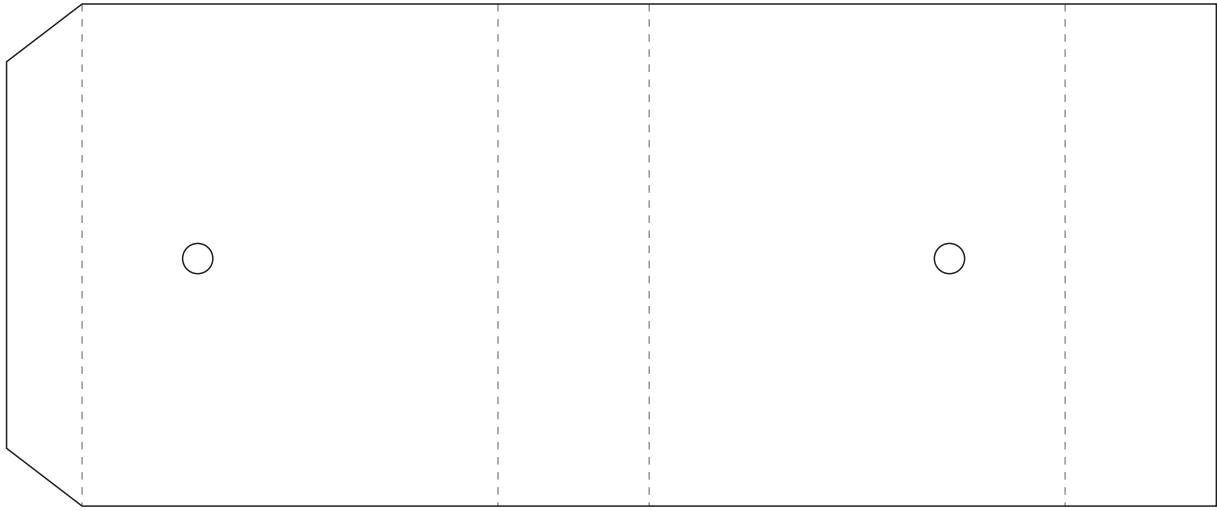
Channel from balances to escapement



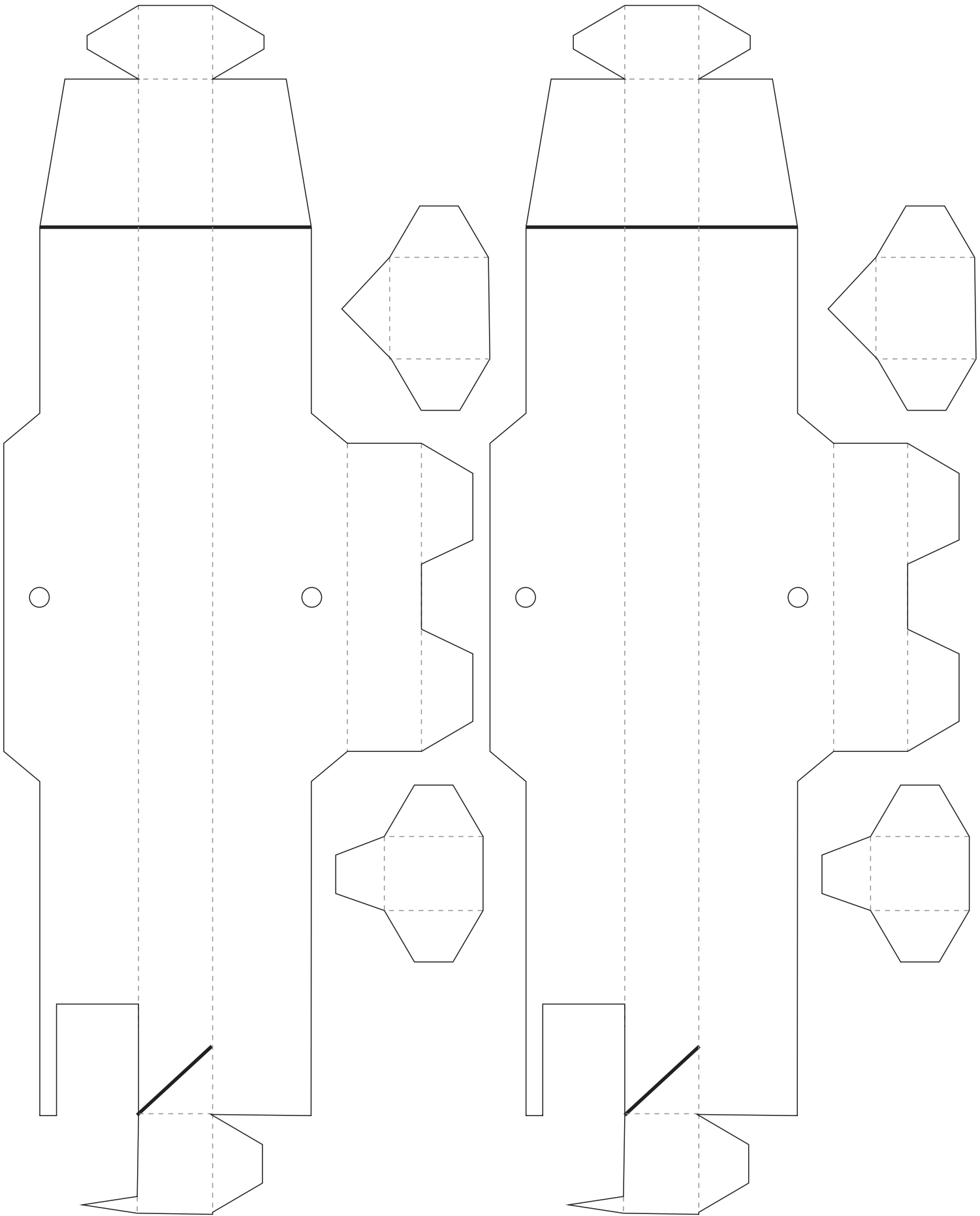
Spacer



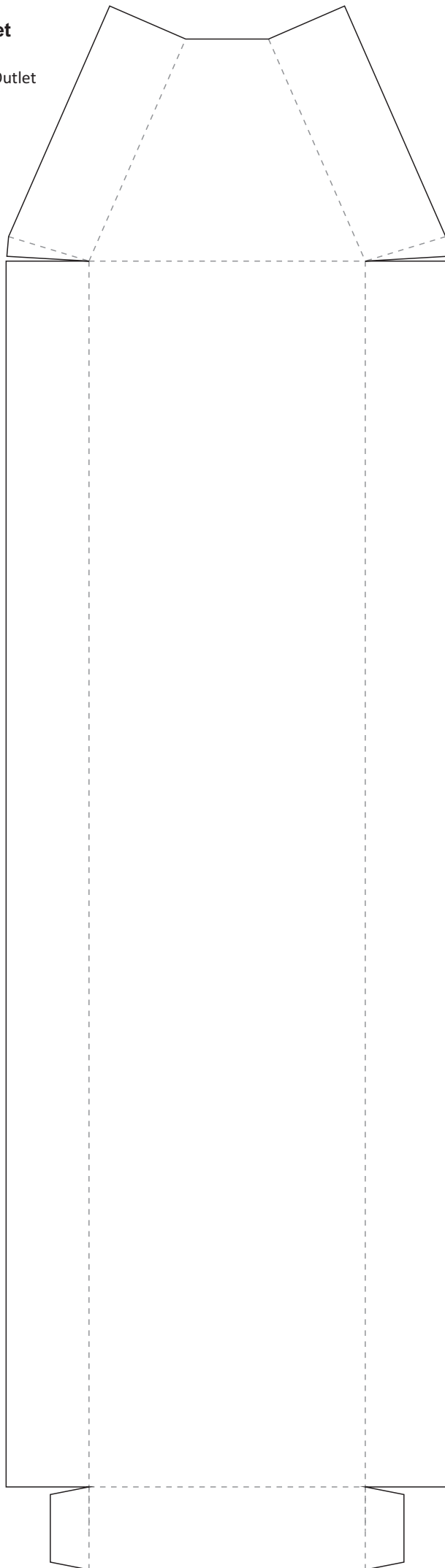
Reservoir balance chambers



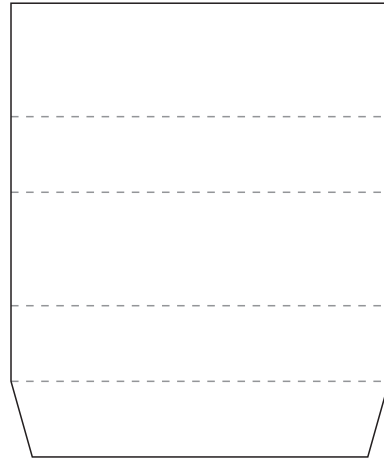
Reservoir balance units



Outlet



Back support



Front support

