Paper Bridge for Pennies

Using just a single sheet of paper $(8.5 \times 11 \text{ inches})$ and up to five paper clips, can you build a bridge that will span 20 cm and support the weight of 100 pennies? The area beneath the span must be free (so that boats can pass beneath it).

To test your bridge, place two books 20 cm apart, and set the bridge on the books, spanning the gap. Do not fasten the bridge to the book (nor to any other support).

Does your bridge hold as much weight as you expected it would?

If your bridge fails during testing, describe where and how it failed.

As you're building or testing your bridge, you will probably get ideas for ways to improve your design. Try them out!

When loading the bridge with pennies, does it matter if you spread them out evenly or put them all in the center? Why or why not?