Problem/Gap Statement: Create a durable, yet simple way to attach bike locks to bike frames.

The attachment is durable.
The attachment can withstand rainy and high temperature weather.
The attachment can last as long as the item which it is attaching.

The attachment is more convenient than that permanently attaching items to the bike frame.
The attachment does not interfere with pedaling the bicycle.
The attachment can fit a standard size bike frame.
The attachment does not interfere with storing the bicycle.
The attachment is light.

The attachment is aesthetically pleasing.
The attachment is style-neutral.
The attachment is small.
The attachment leaves spaces for multiple items to be attached to the bike frame.
! The attachment comes in different colors.

The attachment is compatible with U-locks.
! The attachment is compatible with chain locks.
! The attachment is compatible with cord locks.
! The attachment mechanism can be applied to handlebar accessories as well.

The attachment is installed easily.
The attachment can be installed with only one tool.
The attachment can be easily adjusted.
The attachment includes intuitive, simple instructions.
The attachment is made of easily replaceable parts which can be found at any bike shop.
The attachment can fit on any part of a bike frame.
The attachment is made of only a few parts.

The attachment is sturdy.
The attachment will remain secure when bicycle rides over rough terrain.
The attachment holds heavy items without wobbling.
The attachment does not slip when wet.

! The attachment can be locked to avoid theft of the attached item.

The attachment does not wear or damage the item which it is attaching.
The attachment does not wear or damage the bike frame.

Gathering the Needs

Due to social-distancing rules, I wasn't able to observe or interview users in person. So I made phone calls and video-chat calls to 5 colleagues to inquire about their bike lock attachments. I was able to ask what kind of attachments they use and see how easy or difficult it is for them to install and use these attachments.