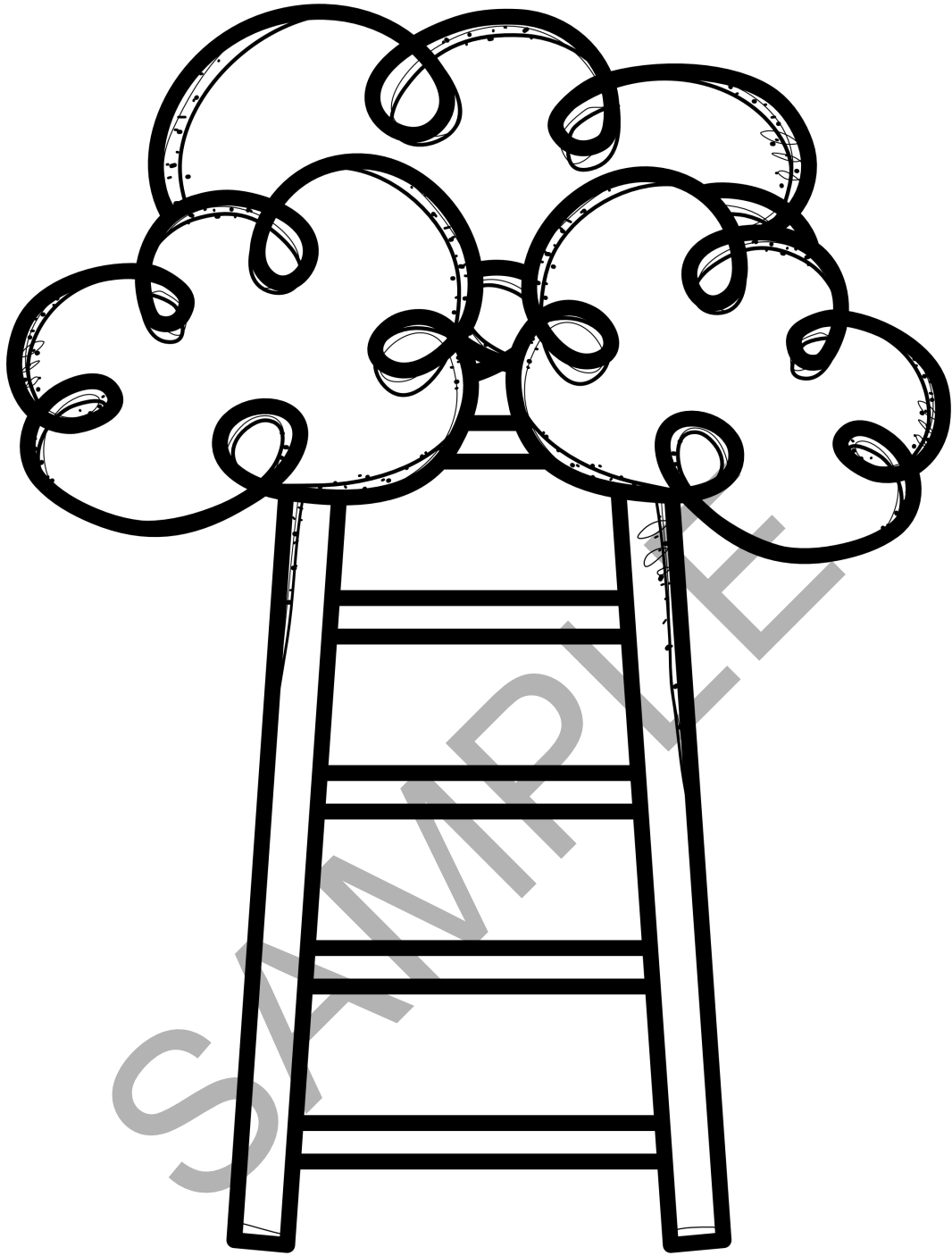
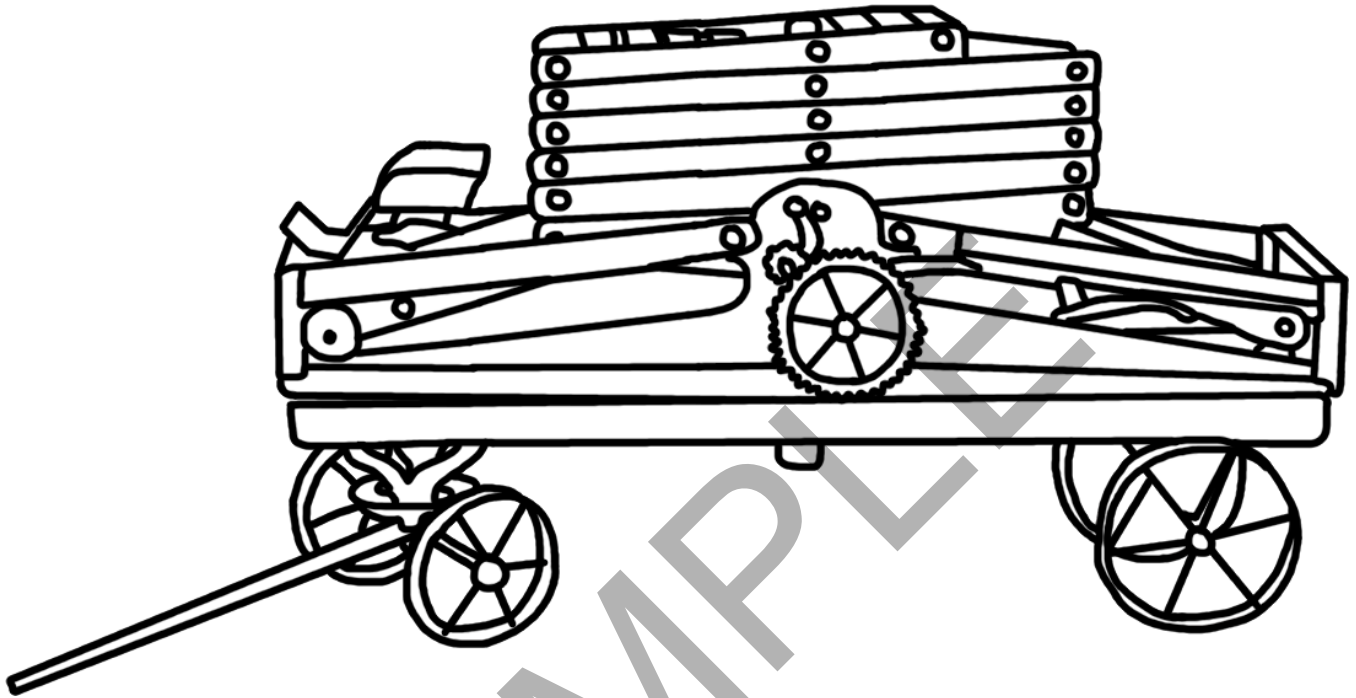


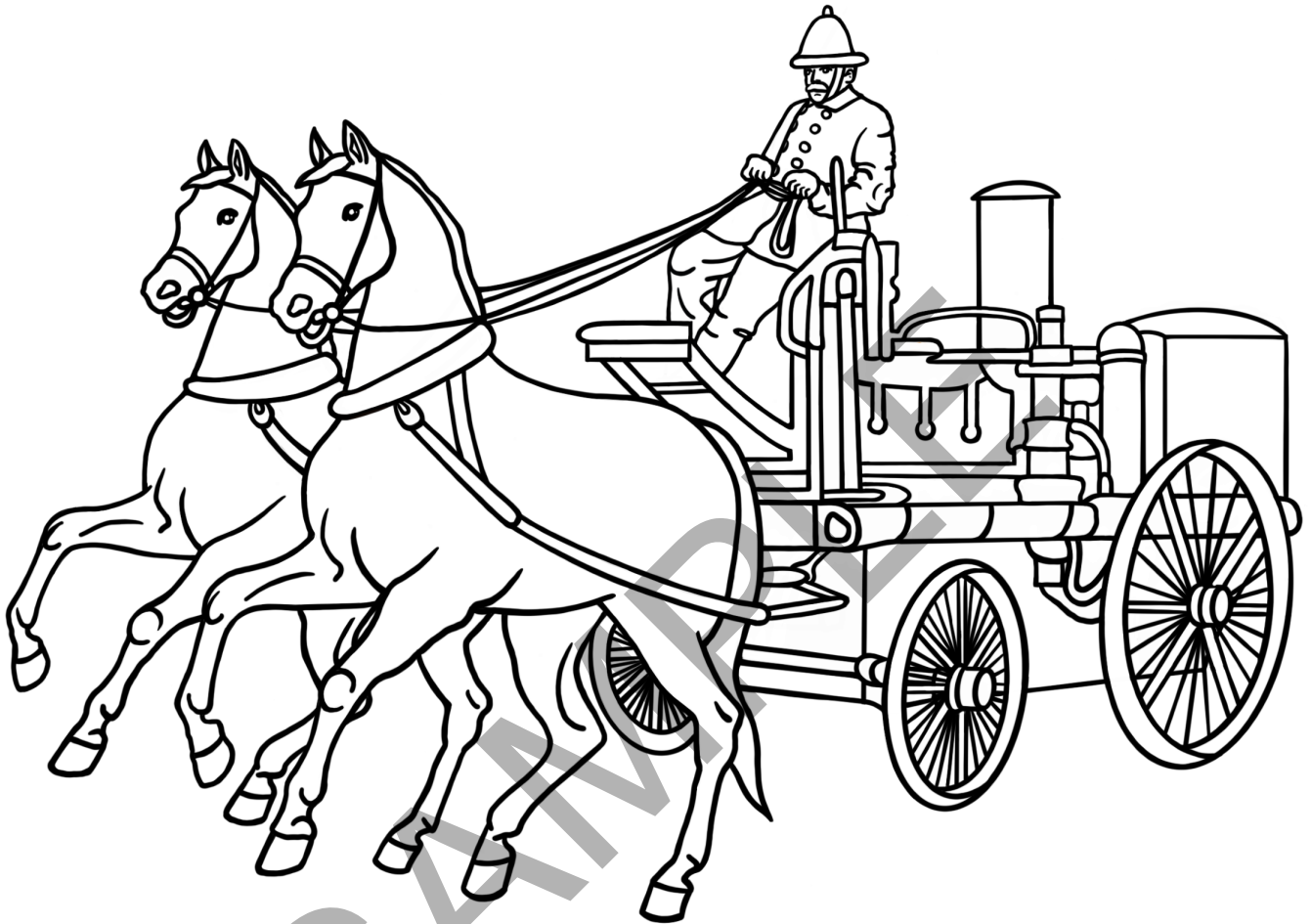
Firemen had trouble
reaching upper
stories of buildings
as buildings
grew taller.



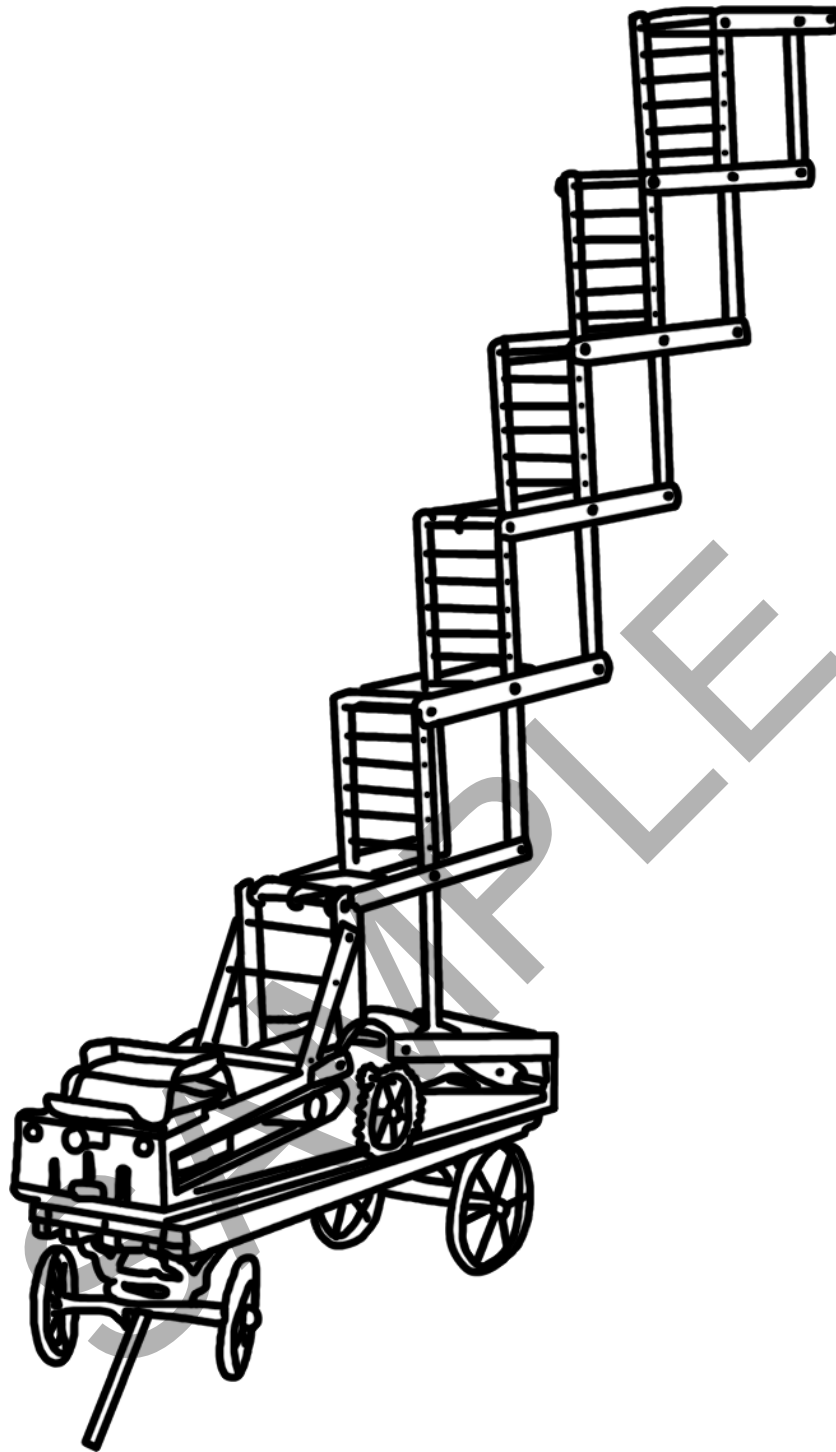
Ladders were big,
heavy, and took time
to put into place.



In 1878, Joseph
invented a folding
ladder that could
be . . .



permanently
attached to a
fire wagon.



Joseph's ladder was
made of metal and
had parallel steps.