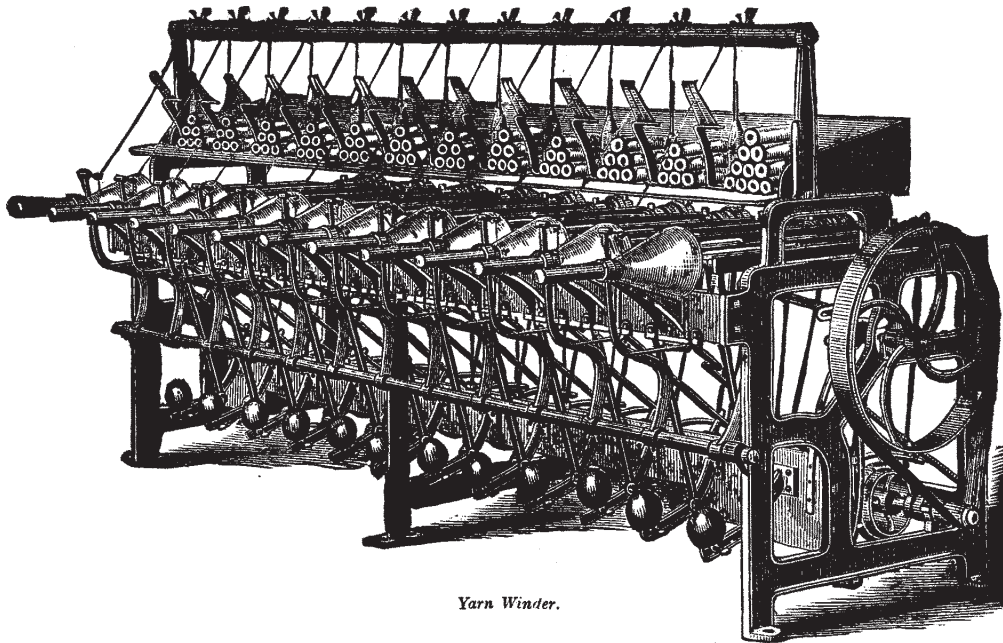


**Yarn Wind'er.** Fig. 2549 is Campbell & Clutes' yarn winder for spinning machines.

The yarn is condensed as it is wound on the cone of each bobbin by a glass faced cop-former which leaves the yarn smooth and perfect.

Each sliding bobbin spindle is supported by a sliding journal-box which is at all times close or adjacent to the

Fig. 2549.



Yarn Winder.

base of a bobbin on the spindle so as to prevent the bobbin from shaking and beating upon the cop-former.

Each sliding journal box, with the bobbin spindle and bobbin thereon, is pressed toward the cop former with an adjustable yielding force, by means of a weighted lever having the weight adjustable, so that any desired degree of condensation and solidity can be given to the yarn wound on the bobbin by simply setting the weight to a given point on the lever.