WEAVING.—No. XXVI.

DR. CARTWRIGHT'S loom (see Fig. 293, page 505) shows more than usual attention, for his patent is all of current interest. It was designed so as to avoid what is generally looked upon as the objections of the old rags. Fig. 232 represents the frame of the loom, in which the warp is worked by the weaving motion, and the weft by the shuttle motion. The above description of the machine is quite complete, and will be found in the preceding paper. The machine is worked by the hand as usual, and is, in all respects, a complete and perfect machine.

Mr. Horrocks therefore claimed as follows: (see Figs. 261 and 260) "1. A spiral wheel on shaft D; 2. The wheel with a single barrel: 3. The wheel with two barrels; 4. The wheel with three barrels; 5. The wheel with four barrels; 6. The wheel with five barrels; 7. The wheel with six barrels; and 8. The wheel with seven barrels."

Mr. Horrocks is not only a skilled weaver, but he is also a good mechanical engineer, and he has invented a new method of weaving which he has patented. His method is based upon the principle that the yarn should be wound around the wheel, and then passed through the shed. The yarn is then woven with the weft yarn, and the process is repeated until the desired length of fabric is obtained.

The loom is worked by the hand as usual, and is, in all respects, a complete and perfect machine.
number of permutations that may be made with 36 pieces, but such is not the case, for any two or more pegs in a musical box may be made to change places or permute with each other, but they would not, thereby, alter the tune.

Tappet motions are being superseded by small and compact shedding motions to which the Jacquard principle is applied. Some of these are very ingenious and perfect in their action.

The Jacquard machine was first applied to the power loom about the year 1830, and it has undergone numerous modifications to adapt it to particular purposes, such as double-lift Jacquards for double cloth weaving, and double action for rapidity of working.

The weft stop motion for stopping the loom when the weft thread breaks, and many of the minor parts of the loom, have undergone endless modifications, but are now so comparatively perfect as to leave little to desire.

At the present time the attention of inventors of improvements in looms appears to be to supplant the old tappet motions by substituting small shedding apparatus to which the Jacquard principle is applied. Various kinds of change boxes have been introduced, governed also by Jacquard apparatus. Many attempts have been made to apply, with advantage, saviours to power looms, and velvet weaving by power is also receiving great attention. To change the shuttle without stopping the loom in the event of the weft becoming exhausted or broken is also talked of.

Notwithstanding all the improvements that have been made it appears to be the opinion of many competent men that the power loom is not by any means what it should be, and it is still to undergo considerable changes before full advantage can be reaped from it.

To trace the history of the vast improvements that have been made during the past fifty years would be far beyond our limits. Inventions after inventions have been made and introduced which for a time have been of considerable importance, but have been quickly superseded by others of greater value. The variety and number of patents relating to weaving testify to this, for they are more numerous than those relating to any other art. Instead, therefore, of following the subject during this period from step to step, and describing different inventions now obsolete, the most recent and approved machines will be shown and the advantages they may possess over such that have preceded them.