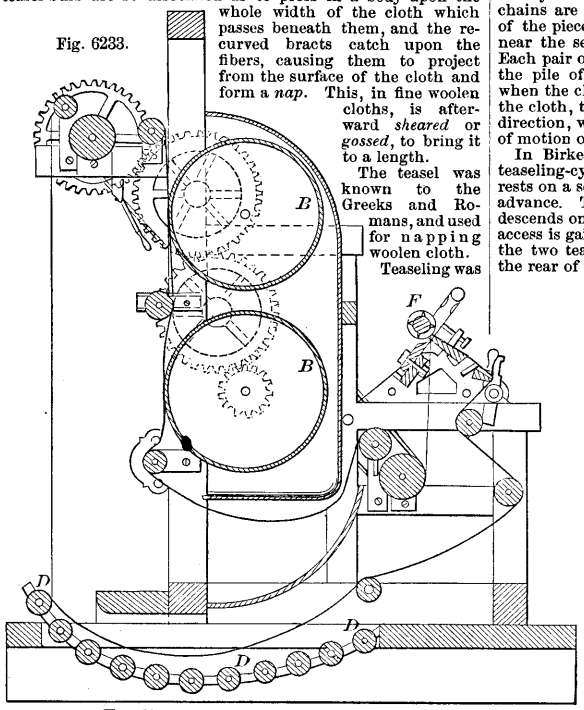
Teas'el-ing-ma-chine'. (*Woolen Manufacture.*) A machine in which woolen cloth is teaseled to raise a nap upon it, the ends of the fibers being exposed and laid in one direction, which forms the grain of the cloth.

The teasel (*Dipsacus fullonum*) has large burs with stiff, hooked awns, which are used in raising a nap on cloth. The teasel-burs are so associated as to press in a body upon the whole width of the cloth which passes beneath them, and the recurved bracts catch upon the fibers, causing them to project from the surface of the cloth and form a *nap*. This, in fine woolen cloths, is afterward *sheared* or *gossed*, to bring it to a length.

Fig. 6233.



Teaseling-Machine for Finishing Woolen Cloth.

The teasel was known to the Greeks and Romans, and used for napping woolen cloth. Teaseling was formerly done by hand; a number of teasel-heads being fixed in a small wooden frame with cross handles. The surface of the cloth was worked first in the direction of the warp and then in that of the weft, the cloth being damped. The teasel-heads were cleaned by children with small combs, and when the teasels became damp they were laid aside to dry.

In the *gig-mill* the teasels are arranged in long frames attached to a hollow rotating cylinder, and the cloth by means of rollers is moved in a direction opposite to that of the cylinder, superseding the hand method. See GIG-MILL.

Oldland's teaseling-machine, English patent, 1830, consists of a horizontal, revolving *teasel-frame*, furnished on its under side with teasels, wire-cards, brushes, or other materials used in dressing, or raising the pile of the cloth. The revolving teasels are put in motion by a band on the spindle; and as the cloth is brought under the teasels by conducting rollers, it is pressed up against them by supporters covered with elastic material. There are two teasel-frames in the breadth of the goods, and each of these has a motion from the middle of the goods to the selvage and back again, so that the operation on the cloth is not rectilinear, but by the end motion of the cloth the lines of action continually cross each other at fine angles.

Ferrabee's teaseling-machine, English patent, 1830, employs two series of teasels, each attached to an endless chain, which passes around two cylinders, by which it is put in motion, the pile being raised from the middle sloping to the sides. Two of the cylinders which support and give motion to the teasel-chains are placed with their axes extending along the middle of the piece of cloth, and the other two cylinders are placed near the selvages of the cloth with their axes parallel thereto. Each pair of cylinders is made to turn in a direction to raise the pile of the cloth from the middle toward the selvages, when the cloth is at rest; but when an end motion is given to the cloth, the line of action of the teasels assumes an angular direction, whose obliquity is determined by the respective rates of motion of the teasels and the cloth.

In Birkenshaw's machine (Fig. 6233), the axes of the two teaseling-cylinders *B B* are in one vertical plane. The cloth rests on a series of rollers *D D D*, allowing but not forcing its advance. The cloth, after passing over the upper feed-rollers, descends on a series of rollers and goes under a bridge *F*, where access is gained to it by the attendant as it runs in contact with the two teaseling-cylinders. A shearing-cylinder is placed in the rear of the lower teaseling-cylinder.