

amphibious animal, called the castor or beaver, frequent in Canada, and other provinces of North America. See BEAVER.

*HATS, Method of making.*—Hats, we have observed, are made either of wool, or hair of divers animals, particularly of the castor, hare, rabbit, camel, &c. The process is much the same in all; for which reason we shall content ourselves to instance in that of castors.

The skin of this animal is covered with two kinds of hair; the one long, stiff, glossy, and pretty thin set: this is what renders the skin, or fur, of so much value: the other is short, thick, and soft, which alone is used in hats.

To tear off one of these kinds of hair, and cut the other, the hatters, or rather the women employed for that purpose, make use of two knives, a large one, like a shoe-maker's knife, for the long hair; and a smaller, not unlike a vine-knife, wherewith they shave, or scrape off, the shorter hair.

When the hair is off, they mix the stuff: to one-third of dry castor putting two-thirds of *old coat*, i. e. of hair which has been worn some time by the savages, and card the whole with cards, like those used in the woollen manufactory, only finer; this done, they weigh it, and take more or less, according to the size or thickness of the hat intended. The stuff is now laid on the hurdle, which is a square table, parallel to the horizon, having longitudinal chinks cut through it; on this hurdle, with an instrument called a *boze*, much like that of a violin, but larger, whose string is worked with a little bow-stick, and thus made to play on the furs, they fly and mix together, the dust and filth at the same time passing through the chinks: this they reckon one of the most difficult operations in the whole, on account of the justness required in the hand to make the stuff fall precisely together, and that it may be every where of the same thickness. In lieu of a bow, some hatters make use of a sieve, or searce of hair, through which they pass the stuff.

After this manner they form gores, or two capades, of an oval form, ending in an acute angle at top; and with what stuff remains, they supply and strengthen them in places where they happen to be slenderer than ordinary; though it is to be remembered, that they designedly make them thicker in the brim, near the crown, than towards the circumference, or in the crown itself.

The capades thus finished, they go on to harden them into closer and more consistent flakes by pressing down a *hardening skin* or leather thereon; this done, they are carried to the *bason*, which is a sort of bench with an iron plate fitted therein, and a little fire underneath it; upon which laying one of the hardened capades, sprinkled over with water, and a sort of mould being applied thereon, the heat of the fire, with the water and pressing, imbeds the matter into a slight hairy sort of stuff, or felt; after which, turning up the edges all round the mould, they lay it by, and thus proceed to the other; this finished, the two next are joined together, so as to meet in an angle at the top, and only form one conical cap, after the manner of a *manica Hippocratis*, or flannel bag.

The hat thus basoned, they remove it to a large kind of receiver or trough, resembling a mill-hopper, going sloping or narrowing down from the edge or rim, to the bottom, which is a copper kettle, filled with water and grounds, kept hot for that purpose. On the descent or sloping side, called the *plank*, the basoned hat, being first dipped in the kettle, is laid, and here they proceed to work it, by rolling and unrolling it again and again, one part after another, first with the hand, and then with a little wooden roller, taking care to dip it from time to time, till at length, by this full-

HAT, a covering for the head, worn by the men throughout the western part of Europe.

Hats are chiefly made of hair, wool, &c. worked, filled, and fashioned to the figure of the head.

Hats are said to have been first seen about the year 1400, at which time they became of use for country wear, riding, &c. F. Daniel relates, that when Charles II. made his public entry into Rouen, in 1449, he had on a hat lined with red velvet, and surmounted with a plume, or tuft of feathers: he adds, that it is from this entry, or at least under this reign, that the use of hats and caps is to be dated, which henceforward began to take place of the chaperoons and hoods that had been worn before. In process of time, from the laity, the clergy also took this part of the habit, but it was looked on as a great abuse, and several regulations were published, forbidding any priest, or religious person, to appear abroad in a hat without coronets, and enjoining them to keep to the use of chaperoons, made of black cloth, with decent coronets; if they were poor, they were at least to have coronets fastened to their hats, and this upon penalty of suspension and excommunication. Indeed, the use of hats is said to have been of a longer standing among the ecclesiastics of Brittany, by two hundred years, and especially among the canons; but these were no other than a kind of caps, and from hence arose the square caps worn in colleges, &c.

Lobineau observes, that a bishop of Dol, in the twelfth century, zealous for good order, allowed the canons alone to wear such hats; enjoining, that if any other person come with them to church, divine service should immediately be suspended. Tom. i. p. 845.

Hats make a very considerable article in commerce: the finest, and those most-valued, are made of pure hair of an

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ing and thickening it four or five hours, it is reduced to the extent or dimensions of the hat intended. To secure the hands from being injured by this frequent rolling, &c. they usually guard them with a sort of thick gloves.

The hat thus wrought, they proceed to give it the proper form, which is done by laying the conical cap on a wooden block, of the intended size of the crown of the hat, and thus tying it round with a packthread, called a *commander*: after which, with a piece of iron or copper bent for that purpose, and called a *stamper*, they gradually beat or drive down the commander all round, till it has reached the bottom of the block, and thus is the crown formed; what remains at bottom, below the string, being the brim.

The hat being now set to dry, they proceed to *singe* it, by holding it over a flare of straw, or the like: then it is *pounced*, or rubbed over with pumice, to take off the coarser knap; then rubbed over afresh with seal-skin to lay the knap a little finer; and lastly, carded with a fine card to raise the fine cotton, with which the hat is afterwards to appear.

Things thus far advanced, the hat is set upon its block, and tied about with a packthread as before, to be dyed. The dyer's copper is usually very large, holding ten or twelve dozen of hats. The dye, or tincture, is made of logwood, verdigris, copperas, and alder-bark; to which some add galls and sumac.

In the manufacture of La Cote d'Or, says citizen Chauffier, (*Journal Polytechnique*, i. p. 160, &c.) the nut-gall is not used, and oak-bark has been substituted with advantage.

Here the hat is kept boiling for about three quarters of an hour; then taken out and set to cool, and then returned to the dye, and this for ten or twelve times successively. For the method of dyeing hats, see *DYEING of Hats*.

The dye being complete, the hat is returned to the hatter, who proceeds to dry it, by hanging it in the top or roof of a stove or oven, at the bottom of which is a charcoal fire; when dry, it is to be stiffened, which is done with melted glue or gum senegal, applied thereon by first smearing it, and beating it over with a brush, and then rubbing it with the hand. The next thing is to *steam* it on the *steaming basin*, which is a little hearth or fire-place, raised three feet high with an iron plate laid over it exactly covering the hearth; on this plate they first spread cloths, which being sprinkled over with water to secure the hat from burning, the hat is placed brim downwards thereon; when moderately hot, the workman strikes gently on the brim with the flat of his hand, to make the joinings incorporate and bind so as not to appear; turning it from time to time, this way and that way, and at last overturning and setting it in the crown.

When steamed sufficiently and dried, they put it again on the block, and brush and *iron* it on a table or bench for the purpose, called the *stall-board*; this they perform with a sort of irons like those commonly used in ironing linen, and heated like them, which being rubbed over and over each part of the hat, with the assistance of the brush, smoothes and gives it a gloss, which is the last operation; nothing now remaining but to clip the edges even with scissors, and sew a lining to the crown.

The several operations employed in hat-making, are separately described under the articles *FELTING*, *FULLING*, and *DYEING*, to which the reader is referred. The last operation, says Chauffier, (*ubi supra*), consists in lining the inner surface of the crown, as well as of the brim of the hat, with a glutinous substance, which in drying gives firmness to the work, and preserves its form. The usual composition is made of gum arabic, common gum, and Flanders glue, which are

dissolved together in a sufficient quantity of water, and brought to the requisite thickness by boiling. This preparation, simple and easy as it appears, is not indifferent with regard to the beauty and duration of the work. If it be too tenacious, it renders the stuff dry and brittle, and after some months use, a kind of greyish incrustation is formed on the surface, which alters the texture. "It appeared to me, (says Chauffier), that this effect was caused by the gum arabic which is added to the glue. I therefore sought among the plants of our own country for a simple preparation, which might be substituted instead of these natural and friable gums. The mucilaginous principle abounds in a great number of plants, and may be easily extracted by ebullition; and a gum may even be formed by evaporation, which preserves its suppleness and flexibility. These considerations induced me to recommend, instead of the usual preparation, a solution of glue in a decoction loaded with the mucilage of linseed oil. This preparation has been long used with economy in the manufactory, and with advantage in the excellence of the work. Since that time citizen Margueron having communicated to me his observations on the mucilage which may be extracted from the leaves of the horse-chestnut tree (*mafronier d'Inde*), and having ascertained how great a portion of mucous and adhesive matter these leaves afford, especially when the foliage is in its vigour; a strong decoction of these leaves has been used with much success to make the preparation with glue." Our author adds, that there are many other native plants which would be equally proper to afford factitious gums, and of which the use would be very advantageous.

**HATS, Laws relating to.** By 24 Geo. III. c. 51, all retailers of hats, commonly called felt or wool, stuff or beaver hats, or any leather or japanned hats, shall take out a licence from the stamp-offices, for which shall be paid within the bills, 40s., elsewhere 5s.; which licence shall be renewed annually, ten days before the end of the year. If any retailer shall sell any felt hats without a licence, he shall forfeit 50l.; and every person who shall sell any less quantity than one dozen of hats at one time to any one person, shall be deemed a retailer. Such person shall put over his door, or in the front of his house or shop, the words "dealer in hats by retail," on pain of forfeiting 40s.; and if an unlicensed person put up these words, he shall forfeit 50l. For every hat sold by a licensed retailer shall be paid the following duty: *viz.* if not exceeding the value of 4s., 3d.; above 4s. and not exceeding 7s., 6d.; from 7s. to 12s., 1s.; and above 12s., 2s. By 36 Geo. III. c. 125, all hats, previous to the delivery of them, shall be stamped on the lining; however, any licensed dealer may sell to any other of the same description any unstamped hats. The penalty for selling unstamped hats is 10l.; and for fixing stamped linings after they have been used, there is a penalty of 10l. and the same penalty also for receiving on sale, or wearing hats unstamped. Counterfeiting or forging of stamps is a capital felony. By 43 Geo. III. c. 68, for every hat, as above described, imported, shall be paid a duty of 1l. 1s., and on exportation shall be allowed a drawback of 10s. 6d. For the encouragement of the hat-manufacture, it is enacted by 24 Geo. III. c. 21. that no hare or coney skins shall be exported on the penalty of 500l. and forfeiture of the same; and every person assisting shall forfeit 40l. Dyeing such skins incurs a forfeiture of the same, and of 20l. For the further encouragement of the hat-manufacture, all goats' hair or Turkey goats' wool may be imported duty free.

HATS for women have been made in various forms, of silk, straw, shavings of wood, ivory, feathers, gold, and silver.

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HAT is also figuratively used for the dignity of a cardinal, or a promotion to that dignity. In this sense they say, to expect a hat; to claim, or have pretension to the hat, &c.

Pope Innocent IV. first made the hat the symbol or cognizance of the cardinals; enjoining them to wear a red hat, at all ceremonies and processions, as a token of being ready to spill their blood for Jesus Christ. See CARDINAL.