

FASHION AND THE BUST.

How Woman Has Varied Her Figure in the Past Four Centuries.

According to a man the proper place for a woman's waist is just where he can most conveniently put his arm around it.



According to anatomists a woman's waist occupies the six or eight inches of the torso lying north of the pelvis and south of the ribs. But the laws of anatomy to a woman are as elastic as that of Itunes, where fashion is at stake, and—

According to a woman the proper place for her waist is just where fashion says it must be, whether it be up under her armpits or down between her hips. Fashionably, its zone of limitation has slid here and there with as much instability as that of the Venezuelan boundary. It has been pushed up as high as the yoke line of a German peasant's gown, and it has been pressed down as low as the wodge-like end of a jointed wooden doll, while at sundry and passing seasons it has limited at any point between these latitudes, according to the decree of the reigning beauty, modiste or sovereign.

Its variations of girth have been as great as those of position. Woman has by turns tied herself about the middle with all the loose gracelessness of the proverbial meal-sack, and lashed and bound herself until she looked like an hourglass—two roundities joined by a thread.

History is mercifully silent concerning the first woman who thought her backbone "rigid," but when she the artificial shell was invented, the squeezing process was carried on with a vengeance. It was not, however, until Miss Elizabeth Tudor hid the sawn-wood of her neck with ruffles and stiffened them with yellow starch to tone down its lemon-like color, that the corset as an absolute disfiguring agent made its appearance. The thousand and one portraits which the Virgin Queen has bequeathed to posterity have made us all familiar with the extraordinary figure which she must have presented with her monstrous puffs and ruffs, farbelows and farthingales; with a yard or more of stiff, silk waist surmounted by an artificially high bosom, and with its slimness hideously accentuated by the mighty bulwarks built out on either side over the hips.

But for the excess of a fashion it is always well to look to the courtesiers. It is the plian time-server andidler who flung drowsily when aristocracy stubs its toe, or who snags out their clocks with cotton because a prince he heavy lovelock. So it happens that it is from the portraits of the great ladies of Elizabeth's day that one gets the most remarkable pictures of the Queen's waist. Look, for example, on the portrait of Lady Hunsdon which Steger has preserved. With every trace of true womanly curve destroyed, box-like and as graceful as a wasp, her waist resembles the penguin's pouch of a pincushion and stands as a marvellous example of what a woman can accomplish in the admirable art of self-disfigurement.

By a merciful dispensation of fate and fashion the expansive farthingale and ichneumon-like waist were modified during the next few score years. Going again to extremes, and led thereto by the merry monarch's Dutch wife, waists crept up and began to expand until they had all the measurements of a Holknap's fan. The waists of court beauties and village belles alike took on a "solidity" and "roundness" that meant a good, steady position for a swain's good right arm. The day of the slyph was over. Of such solid, middle-waisted figures were many of the brave wives who ruled the stately mansions on the James River plantations.

When the later Stuarts came to their own again, and when patches and pailat were both thickly applied, waists grew small once more, and women laced so tightly that the poor souls could scarcely breathe.

Under the touch of the French modiste the waist next expanded somewhat, and the Watteau and Marie Antoinette styles, with their flowing draperies and soft flous, came in.

The revival of the unhappy French Queen's costumes is, it seems, to come again, after the lapse of a century, and surely nothing more quaint yet charming than the French fashions of the latter part of the last century were ever devised, so that the impending Marie Antoinette fad may be welcomed without any masculine misgivings.

Sans-enloutism and the guillotine put a sudden and bloody end to Watteau pleats, soft Antoinette foulards and plump-waisted shepherdesses; and with the Incroyables and false, dissolute classicism of the new order, women's waists took a sudden leap upward. Then came the Josephine era, and once more France set the fashion. Except in rare cases, the outside world had fought shy of the bizarre extravagances of the Merveillesses, but it gave in generally and promptly to the dictum of the early Empire. The waist was left untrammelled, after the Greek models, and the women walked abroad in flowing, clinging gowns, and—if the truth must be told—with very little else. It was a time of beauty pretty nearly unadorned, and, next to the period

THE UPS AND DOWNS OF WOMEN'S WAISTS.

THE ELIZABETHAN PERIOD—DURING REIGN OF JOSEPHINE—EARLY PART OF THIS CENTURY.



of the coat-hardy, this was a time when the pretence to conceal by covering was of the flimsiest—as witness the Recambar and Louise pictures. With the classic costume came the classic almonessness—and where clothing ended and exposure began it would be hard to say. In modest England, even, dresses were gored in such a way as to display the shape of the limbs, and if this artifice was not sufficient, then their wearers dampened their robes to make them sit close.

But the waist line kept growing higher and higher, until nothing except the physical impossibility of passing the ceatun through the shoulders kept it from being put around the neck. Instead of the curves of outline falling "from swelling bust to tapering waist," they swept from the armpits to the feet, and when one looks at the woman of the Josephine days, with her abdominal breadth, and the woman of the Elizabethan era, with her abdominal waiflessness, it seems impossible to believe that the two could belong to the same race of beings.

A ludicrous compromise between the armpit waist of the French Renaissance of the classic drapery and the hard-lying hoops of the Georgian epoch prevailed in England for the first few years of the present century, but fortunately did not reach these shores. In this remarkable mixture, a magnificent example of which may be found in the fashion plate of a court ball dress of 1807, the waist is breast high and the old Elizabethan farthingale, instead of being built around the hips, is brought up until the poor creature shut up therein rests her elbows on its spreading tableland. The general effect is that of a woman imprisoned in a barrel.

When Victoria tripped to the English throne the waist line changed again. It sank a few inches, and as it sank, it grew decidedly slender, following, of course, that of the girlish sovereign. Following her girlishness, too, every woman dwindled to slim and natty proportions. The shoulders were sloped, the frocks made plain and short, the bust was confined, and every one was juvenile and willowy. For once England set an example which France followed, and our grandmothers will tell us that they did likewise. The slimsy, jimsy waist lasted for several years; through the period of Dolly Varden make-believe rusticity; through the affliction of the Eugenie hoops; through the bustle and Alexandra flump, and almost up to the present day. Its time of extreme slender-ness and length was about ten years ago, and though the modistes have of late been trying to pinch and confine and lengthen the female trunk, there is a healthy belief that perhaps the God-given lines are best.

SONG OF THE MATINEE HAT.

The whole civilized world is at this moment agitated by the question of the matinee hat. Men of the Anglo-Saxon race are trying to work up their courage to that point where they can order poor, weak woman to take off her hat. Whether she would do it is a very uncertain question, but man has not yet reached the point of telling her to do so. It is true that certain crude Western communities have issued edicts against the theatre hat, but maturer states shrink from such a course.

Probably as much genuine indignation is felt at the theatre hat as at the Armenian outrages. The man who pays two dollars for three hours' entertainment, a very sufficient price for the same, is compelled to content himself with a back view of a triumph of the milliner's art. He is not even solaced with a sight of the face which is under the hat, and which might possibly compensate for the loss of his theatrical entertainment. A word of acknowledgment must be spared for those new women who how take off their hats at American theatres. They are often looked down upon as strong-minded.

In England it is only the matinee hat which causes trouble, for in the evening the women sitting in the stalls have always been compelled to take off their hats and bonnets. But the Englishmen seem to be as indignant merely at the spilling of their matinees as our men at the loss of their evening's amusement. Englishmen are addicted both to matinees and to grumbling. This being the state of affairs, it was

surprising that Miss Kate James, a singer of light songs, has made a very great hit with one entitled, "The Matinee Hat." She appears at the Garrick Theatre in London in a musical comedy called, "Lord Tom Noddy."

Miss James comes on in a hat calculated to obscure the view of at least three persons. As she sings she flourishes this enormous structure in a way to hide everything behind her from half a dozen persons.

The song is full of humor and rallyery of a popular order. It strikes the audience as saying just the right thing on a burning

SCIENTISTS IN PETTICOATS.

Uncle Sam employs a great many scientists, and among them are several women who are regarded as experts in their several departments.

Miss Adelaide Hasse enjoys the distinction of ranking higher officially than any other woman in the Government employ.

She stands next to the chief in her department, and acts for him during his absence. While she was still a child she moved to Los Angeles, Cal. On being graduated from the high school there, she obtained the position of assistant librarian of the Los Angeles Public Library, and so distinguished herself there as an organizer and manager that in March, 1895, when it was first decided to establish a library of public documents in Washington, Miss Hasse was sent for to take the place of librarian.

Up to that time nobody knew how many public documents there were, except that there was a great accumulation of them piled up pell-mell somewhere in the depths of the Interior Department building.

"There was nothing for me to do," said the pretty librarian, "but to put on a big brown gingham apron and get down on the floor and go to work." She had no help, except simply a couple of laborers, who moved about the heavy volumes under her directions. There are now 1,500 volumes in the library, and there is room for 200,000. They are all arranged with wonderful method and exactness, and the catalogue is most complete. By its aid the smallest pamphlet can be found in a moment.

In a large, bright room in the annex of the Agricultural Building Miss Lillie Sullivan sits. She has two desks—one where she keeps her paints and pencils, and the other bearing a microscope of the latest pattern. Here are also such entomological treasures as the left hind leg of a flea, a wasp's "business end," a baby mite and a spider's head.

Miss Sullivan is a particularly sweet-looking little woman, with shy brown eyes and a charming smile. Her business in life is painting bugs. In order to paint them well she has to dissect and study them. It is said that there is no one in this country who can depict insects so accurately and so beautifully.

Miss Sullivan, who is a Washington girl, studied art and painted portraits until one day she saw a friend painting insects. She became at once infatuated with the study and began devoting herself to it. She has been in the Government service for nearly fourteen years.

One of her recent drawings is of a family of curious little mites that have been damaging the pineapple crop. "Isn't that baby mite just too fat and cunning for anything?" exclaimed Miss Sullivan, as she displayed her drawing in triumph to the Journal correspondent. She had some exquisite pictures of moths, too, just emerging from the cocoons.

Miss Alice Fletcher's life study has been ethnology. She took part in the opening of many Indian mounds from Florida to Maine. Then she took a daring resolve. She made up her mind that the real way to study Indians was to go and live among them. So she took up her abode among the Dakotas. This was nearly twenty years ago.

After being among the Dakotas and Omahas for some time, Miss Fletcher went to Washington to beg certain favors for them from Congress. She was successful, but was asked to see the reforms she advocated carried out personally. This she did, living among them altogether for fourteen years. She administered for them at one time a million and a half acres. She has helped to educate a great many of the children. One of her former proteges is Mr. La Fleche, one of the cleverest employes in the Indian Bureau. He is now preparing a work about his people.

Miss Thora Steinger makes mammals her study. She is an authority on the names by which these animals are known. Two of the best-known of the Government scientific women are away at present on official work. One of these is Miss Rathbun, of the Fish Commission, who is considered the greatest living expert on crabs. The other is Miss Caroline Stevenson, of the Ethnological Bureau, who is a profound student of American ethnology.



"MATINEE HAT"—The New Concert Hall Song in London.

topic. No doubt we shall have an opportunity of applauding it here before long.

While the song has been a success, it has not accomplished its purpose. Like Seabrook's song in "Tobacco," the public laughs when he says he wants the hottest thing on earth, but they don't care for it themselves. So with the hat song. The ladies laugh and applaud—and then wear the biggest hat they have. There can be no other explanation of it save the inherent obstinacy of lovely woman.

BIKE GIRLS AFLOAT.

A Sextuplet Bicycle Shell For Women Who Like a Dash of Novelty.

A fascinating invention and an equally odd fad have both taken possession of that portion of feminine society which loves



the bicycle. The invention is the sextuplet bicycle shell, and the bicycle fadists are forming clubs to ride in it.

The bicycle shell is totally unlike any form of bicycle boat or water cycle yet invented. Bicycle water craft have been generally built on the catamaran principle, with a paddle wheel or screw. They have been unwieldy affairs, which, while interesting as a novelty, have never made any headway in popular favor.

In building this new marine cycle, the inventor, Reuben H. Plass, of No. 505 Lafayette avenue, Brooklyn, N. Y., has striven to avoid the mistakes that have rendered others worthless. He has produced one that is practical.

The lines of a shell have been followed as closely as the presence of the driving mechanism would allow. This has necessitated a broader beam and more depth, but the general long, narrow and clean-cut effect that a shell has is preserved. These sharp lines enable the bicycle shell to forge through the water at a speed of twelve miles an hour. Bicycle boats heretofore have never been able to equal half this speed. In justice to the inventors, it should be said that their boats were never driven by more than one pair of legs, while this has six to furnish the power.

The query will naturally arise why Mr. Plass built a sextuplet bicycle shell especially for young women devotees of the wheel. The inventor states that the way he happened to do it was because a favorite niece made him promise that the first one should be built expressly for girl riders. With this end in view, Mr. Plass constructed an elliptical gear, so that every pound of pressure exerted by the fair rider's feet would tell to the most advantage. He also designed the boat as light as a proper observance of strength and rigidity would permit.

It is very simple in its mechanical equipment. The propeller, which is of bronze, has a high pitch which is equivalent to a high gear on a sextuplet that travels on land. The propeller shaft, which is of steel, extends almost to the bow. It is journaled between every rider to preserve its alignment. It also has a "thrust collar" of brass, just like an ocean liner. In the centre is a balance wheel that gives a steady motion. This wheel is not very large, on account of the limited space, but quite sufficient to store enough momentum to carry the propeller over the "centre."

The pedal shafts carry what is known as a "worm gear," which engages the driving shaft. This gear is arranged so that one revolution of the pedals causes five of the propeller, which is thus driven at quite a high rate of speed. To bring the sextuplet shell to a stop, or to move backward, Mr. Plass has invented a novel contrivance. Instead of back pedalling, as a bicycle rider is forced to do, the gear is shifted by a little lever which is affixed to the handle bar, much like a brake. Thus, while the revolutions of the pedals continue forward, the propeller shaft is reversed, and the screw behind is backing water as fast as six sturdy legs can drive it.

An even keel is maintained by two hollow, cigar-shaped cylinders six feet long, of aluminum, one on each side of the boat, held in place by outriggers. They are necessary because the seats for the girls are poised so far above what is termed by boatbuilders the metric centre of balance. These outrigger floats give a wide base, which is equivalent to a wide beam, and prevent capsizing.

The six young women mount it, as shown in the picture, and when the pedals begin to work, presto, the propeller revolves and they glide about on the water as gracefully as ever did the Defender. It can no longer be said that man is woman's superior on the wheel, for while we have had sextuplet machines for men on shore, no six men have ridden any bicycle in the water together, unless it has been off the river bank, and by mistake. It is another instance of the pre-eminence of the new woman, and she is very proud of it indeed.

The only peculiar feature of the craft is that the riders must mount one at a time. The sextuplet bicycle shell is brought up to the landing, and the bow coxswain, as she would be called if it were really and truly a craft, bestrides her seat. Next comes the stroke oar, and so on until the coxswain's seat is reached, and when she vaults airily into the saddle everything is in readiness for the pedals to turn.

The craft is steered, naturally, from the stern, the handle bars being so arranged as to act as a tiller, and the coxswain as she sits there can send the rest of the club to any place she likes.

The trials of the water bicycle have disproved another statement about the new woman. Unkind man has said that she could not steer a boat. Now, the sextuplet bicycle shell is surely a boat in its way.



THE NEW BICYCLE BOAT THAT CANNOT BE CAPSIZED.