1914

UA94/6/2/14 Domestic Science Notebook

Annie Reis
Western Kentucky University

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THE
ATLAS SCIENCE TABLET
FOR
Laboratory Notes and Drawings
IN
DOM. SCIENCE

School

Year

Pupil

Room

Instructor

Arranged by EMANUEL R. BOYER
(Revised Edition)

Manufactured and Published by
BECKLEY-CARDY COMPANY
312 West Randolph Street
CHICAGO
METHOD OF ORAL RECITATION.

The pupil should prepare on all the topics of the lesson by reference to as many different books as possible. When a topic is assigned him for recitation he should stand and say in a few simple sentences what he knows. Every sentence should be grammatically correct, and the thought of the teacher should be upon the language. If the pupil should speak incorrectly he should generally be stopped and allowed to correct himself, although it would be folly to introduce any grammatical discussions. The pupil will soon learn to feel uncomfortable over a slip of the tongue and will correct himself.

The pupil should generally strive to give something which the members of the class do not know. He should speak freely his own thoughts and in his own simple language.

For a short course the topics of the first column are considered sufficient. Those of the second column are for a longer course, and those of the third column are optional.

THE WRITTEN EXERCISE.

As soon as possible after the oral recitation the pupil should write on the page opposite the topics as much as he can remember of the recitation which he has given in class. This should be properly headed with subject and date.

Great care should be taken to paragraph and punctuate correctly. Errors in the oral recitation should not appear in the written exercises and should be avoided in the next oral recitation.

Marginal drawings add much to the beauty of this exercise, and the author recommends pen sketches of object and maps.

Do not allow the use of the language of any author in reciting. That would be plagiarism, which is as improper as any other form of stealing. To avoid this it is better not to take written notes while reading. Quotations may sometimes be used if the proper marks are used and the author mentioned. Poetical quotations are always useful. Drawings may be copied, but are better made from memory, and best of all drawn from the object.
1. Greek
2. Roman
3. German 3rd cen.
4. English
5. German (13th cen.)
6. Noble 11th-14th cen.
7. Franks
8. Spaniard.
MAN WITH SKIRT.
WOMAN WITH PANTS.
the peasants wore
the subdued colors.
The higher in rank
the more color worn

The amount of body exposed is determined by
different standards and morals.

Evolution of Dress.
Women were the first to wear clothes. (Clothes for men were in the way when hunting and fighting.) The simplest garment was a shawl which was just a straight four-cornered piece. It came up to the arm pits and gathered up to the shoulders and fastened there. A small shawl similar to this was put over the shoulders and fastened under the arms to form a sort of sleeve, which was called the sleeve tunic. The first skirt had no shape whatever. It was a shawl gathered in at
The waist and held in place by a girdle. At first it was left open on the left side, but later they sewed this up.

The chiton was the cheap Greek dress. It was a single piece of material sewed together like a sack opened at both ends. In height reaching from neck to feet and as wide as from arm to arm. It was held in at the waist by a girdle. The upper edges on the shoulders were held by a brooch. The arms were left bare and the folds of materials under the arms were gathered together and fastened by loop to form sleeves. The chiton was left open on the left side for dancing. For warmth the chiton was long enough so it could be doubled from the neck to the waist in the form of a jacket. If not long enough to do this a separate piece was used. It was usually linen.
plaid, first thrown over left
shoulder, leaving the shorter
end to hang to the front. The
longer end was brought around
the body under the right arm,
finally being held in position
by being thrown over left arm.
In the chiton the important
feature was to have a wide bor-
der at the feet. Bright colors
were always used.

The chiton and himation form-
ed the standard dress from 450
B.C. at an earlier date the hima-
tion covered a larger part of the
body, making the chiton an un-
der garment.

The nearness of the Greek towns
of southern Italy, the extensive
intercourse between Rome, Greece
and the east offered tempting
facilities to Roman ladies for
their supply of dresses. The re-
sult is that their dress does
not differ from any particulars
from the Greek.

The national dress for the
poorer women was a woolen skirt, held by straps over the shoulders. During the twelfth century the sleeves were tight at wrist and large at the shoulders.

One of the first changes in the Norman ladies dress was the appearance of lappets, on the underside of the sleeves near the wrist which were sometimes one yd long. Trains were much worn by these ladies and we occasionaly find them tied up in a knot.

The 13th century costume is noted for its simplicity and grace, due to its soft materials. The 14th century garment had a close fitting tunic reaching half way down, tight sleeves and neck cut low.

The muff as an article of dress belongs to Queen Elizabeth's period, by arranging the lace and delicate materials in close convolutions. A circular form was
First used, later a small opening was found in front. Sometimes it did not enclose the neck but rose high above the head.

The apron which is not an attribute of work but was an essential part of the costume. Queen Anne wore them made of lace. Small ruffles were noticeable in Queen Elizabeth's gowns.

The bodice was noticed in the 17th century. Also full sleeves which reached the elbow and were then drawn in by a cord.

The mid 17th gave the watered dress with its swelling skirts with clouds of lace and gay ribbons. Some think them the most beautiful.

In 1648 lace elbow ruffles were introduced. They may be determined the tipple feminine sleeve of the 18th century. Farbelowes were invented, these were narrow flounces, scalloped, hemmed on lace edged.

In 1606 a one sided effect was
much sought after in dress. Even
the skirts were one sided, being
very deep on right side and the
left a little shorter, either by be-
ing looped up or slashed up very
sharply. These gowns were made
of organdy or mull very scant,
with trail like trains and very
low in the neck.

In 1806 the short empire waist
and skirt began to be worn. The
skirts were not a full as those of
the past century but being more
graceful. Ruffles were worn very,
extensively, usually 4 or more
were on the skirt.

Toward the end of the 19th cen-
tury very full sleeves were worn.
Sometimes requiring one yd. of
material for each sleeve. With
these waists were worn skirts
flaring at the bottom.
<table>
<thead>
<tr>
<th>Year</th>
<th>Silhouette</th>
<th>Conv. &amp; Lines</th>
<th>Sleeves</th>
<th>Waist</th>
<th>Skirt Length</th>
<th>Dec. Conv.</th>
<th>Lines</th>
<th>Material</th>
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<td>1800</td>
<td>Close fitting</td>
<td>Normal</td>
<td>Normal</td>
<td>Medium</td>
<td>Full</td>
<td>The lower sleeve</td>
<td>Design</td>
<td>Full</td>
<td>Richly</td>
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<tr>
<td>1825</td>
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<td>Long</td>
<td>Medium</td>
<td>The upper sleeve</td>
<td>Quality</td>
<td>Accented</td>
<td>Face</td>
<td>Fish</td>
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<tr>
<td>1850</td>
<td>Close fitting</td>
<td>Normal</td>
<td>Normal</td>
<td>Waist</td>
<td>The lower sleeve</td>
<td>Design</td>
<td>Full shaped</td>
<td></td>
<td></td>
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<tr>
<td>1865</td>
<td>Close fitting</td>
<td>Long</td>
<td>Long</td>
<td>Decoration on</td>
<td>Skirt</td>
<td>Finished edge</td>
<td>Upper part</td>
<td>of lovely silk</td>
<td></td>
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<tr>
<td>1870</td>
<td>Pointed back</td>
<td>Long</td>
<td>Long</td>
<td>Upper part of</td>
<td>Sleeve</td>
<td>Was full</td>
<td>Design of</td>
<td>material</td>
<td></td>
</tr>
<tr>
<td>1880</td>
<td>Skirts were</td>
<td>Bell shaped</td>
<td>Close fitted</td>
<td>Upper sleeve</td>
<td>disguised</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1890</td>
<td>Loose waist</td>
<td>Normal</td>
<td>Long</td>
<td>Lower part of</td>
<td>Sleeve</td>
<td>Developed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1910</td>
<td>Loose high</td>
<td>Raglan High</td>
<td>Full</td>
<td>Waist</td>
<td>Full</td>
<td>Belt accented</td>
<td>Soft clinging</td>
<td>Mat- terials</td>
<td></td>
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</tbody>
</table>
IV. Costume design is the inventiveness of materials in harmony with the design of the human body.

Kinds of costume design:

a. Symbolic
1. Natural forces as rain, fire, wind and dew.
2. Institutional
   Spirit
3. Human emotion as mourning, love, pessimist and optimist.

b. Historic
1. Institutional
   a. Religious - priest and nun
   b. Service - butlers, coachman, police and soldiers
2. Occasions - weddings and commencement
3. National costumes - costumes of different nations
2. Things influencing costume design
   a. National Characteristics
      1. Germans for service
      2. Chinese
      b. National events
      c. Industrial conditions
      1. Scarcity of materials
      d. Ideals of society
      1. Athletic ideals
      2. Religious
      3. The aesthetic as the Greeks

V. Method of gaining an appreciation of costume design

1. Observation of
   a. People
   b. Exhibitions
      1. Shop windows
      2. Drawing models
      3. Paintings
      4. Study of statuary (Venus & etc.)
   c. Pictures in books and magazines

2. Sketching or tracing design
a. A commercial design
b. An original

3. Model on dress form
a. A commercial design
b. An original

The Language of Expression

Is line revealing.

1. The human figure, as being a series of curved lines, symmetrically arranged, having a vertical movement leading to the head as an accent.

2. Line reveals the costume which expresses

a. The general bodily proportions
b. The bodily divisions (That is by line we see the different divisions of the body)

The effect of constructive and decorative elements upon bodily proportions and divi...
DRESS FORMS.
Directions for dress forms

1. Draw light vertical line to represent the center.
2. Mark off length of one unit (one unit = the distance from diameter of top of neck to diameter of belt.
3. Mark off length of skirt 2½ units.
4. Make height of collar according to fashion, usually ½ of a unit.
5. Mark bust ½ unit.
6. Shoulder = ⅓ distance from bottom of collar to bust (⅔ unit).
7. Hips = ⅔ unit
8. Draw horizontal lines thru the marked off distances and indicate width of bust, shoulders and etc. as follows:
10. Shoulders ⅓ of a unit.
11. Hips ⅔ of a unit.
12. Bottom of skirt ⅔ of a unit.
15. Connect width points by straight, light lines, then curve the outline according to dress form noting carefully the curve under the arm.
16. At the base of the collar, draw a slight curve and at top of collar an ellipse.
17. Draw a curved line from one side of bust slightly below the middle on center line to opposite side of bust line.
18. Draw waist, hips and bottom of skirt the same.
19. The dips of bust, waist, hips and bottom of skirt are in center.
20. If sleeves are made let elbow come to waist line. Make lower arm ¾ of upper arm and base of sleeve ½ of collar.

Full back view

1. Proceed as in front with the exception of collar, bust
to the background. He paints rich materials especially red.

6. Reynolds - shows beautiful folds and materials.

7. Jules Guerin - a wonderful landscape painter. One could work out colors for a costume from his pictures.

8. Willabbee by Main - illustrates nursery rhyme.


10. Edmund Dulac and Arthur Rackham - show the beauty of lines and not in dark and light.

Designing of Materials:

1. Design a piece of material using one width of lines and equal spacing.

2. Even spacing, two lines on broad and one narrow.

3. Unequal spacing, two and lines equal.
4. Uneven spacing, two lines
two broad and one narrow.
5. Five lines three widths and
spaces two widths.
6. Five widths of lines and
three widths of spaces.
7. Copy a design in lines from
some of your clothing.
8. Copy a design in line from
a magazine.

**Plaids**

1. Use two horizontal and
three vertical lines of equal
width.
2. Use five horizontal and four
vertical lines of equal width.
3. Two horizontal and three
vertical lines of unequal
width.
4. Five horizontal and four
vertical lines of unequal
width.

**II. Mass or Notan (dark and
light) revealing**

1. Proportion of
   a. Human figure.
NOTAN.

QUALITY AND
MANIPULATION.
NOTAN.

CONTRAST.

ONE VALUE.
b. The costume.
1. The values in harmony in complexion, hair, and eyes.
2. The effect of constructive and decorative elements upon bodily proportion and divisions.

2. Quality of costume material expressed by Notan.
3. The design of costume material expressed by notan that is, the rhythmic arrangement of units in stripes, plaid, and all over patterns.

Cut and Mount:
1. A costume to illustrate the motion of hat, shoes and glove in contrast with the dress.
2. Entire costume in one value.
3. Costume showing motion developed by constructive elements.
4. Costume showing motifs developed by decorative elements.
5. Notions shown by quality and manipulation material by design and by the costume.

List of French Designers:

1. Jean Worth
2. Premet - Prēn māy
3. Poiret - Pwar-āy
4. Cheruit - Sheriīt
5. Paquin - Pā'cān
6. Doucet - Dow sāy
7. Callott - Cal tō
8. Bore Soes - Boo sûr
9. Robert - Rō bare
10. Grand - Jean - Grōn jōn
11. Bugnet - Beug nay
12. Bourniche - Bore-mēeshi
13. Grouet - Groue
14. Margaine - Sacroix - Mar ghāin
15. Sambin - Son vān
16. Georgette - Žov jette
17. Béchhoff - David - Béchhoff Dāveel
18. Bob - Marie - Bō marēel
19. Brandt - Brandt
20. Drecoll - Drē' coll
21. Groul André - Grou André
22. Halle - Hally
23. Hongard - Ongar
24. Lucille - Lucile
25. Rodier - Rodi "aj
26. Parry - Parry
27. Bulloz - Bullow
28. Von den Rondō
29. Redfern - Redfern
30. Weeks - Weeks

English Designers
1. Lewis Hay
2. Walter Crane
3. William Morris

German Designers
Gotti
Hauflman
### Analysis of Facts in Magazines

####_designtor

1. Worth
2. Worth
3. Panquamay

####Materials

- Voiles, crapes
- Silks, different cotton materials
- And cascade materials especially crapes.

####Design of costume

- Barrel or tonneau skirt
- Both long and short coats. Patent leather belts and shoes with black and white checked tops.

####Vogue

1. Lewis
2. Premet
3. Worth
4. Berv
5. Paquin
6. Jenny
7. Vanvin
8. Bernit
9. Chaneila

- Jersey cloth
- Georgette crate
- Kittens ear
- Pique serge
- Barrel skirts
- Short sport capes
- One piece frocks
- Dropories at sides of skirt
- Waists are both loose and close fitting
- Sleeves are very long and large.
No woman anywhere but desires to look well in the eyes of others; no one but would be glad to look better in the eyes of those she loves and best in the eyes of one who loves her.

This desire for beauty, being natural and universal, must have been put in all wisdom into the consideration of a woman's mind.

It was a blessed doctrine, that "God meant women to make the world beautiful as much as flowers, birds and butterflies."

It is said that public talking is the most influential of modern efforts. But a really beautiful woman leads and conquers without talking.

The essentials to our conception of ideal human beauty are:

1. A reverent spirit.
2. "Loving heart.
4. "Beautiful body."
Ruskin says: "The splendor and phantasy of dress were, in early days, studied for love of their true beauty and honorableness, and became one of the main helps to dignity of character and courtesy of bearing.

The essential qualities of the physique of a beautiful woman must be recognized before there can be true grace of vesture.

No clothing, however rich and elegant can make an ill shaped, weak, distorted body look beautiful. The most artistic dress is worse than lost on a figure lacking poise. But happily, no dress, however poor, can make a well proportioned, healthy body look mean or insignificant.

There is intrinsic elegance in the long lines of a costume. Fashions are designed in the interests of manufactures.
who wish to create a fresh demand for new goods. The present adequate supply must in some way be made unpopular and useless, that new fabrications may be required. Judging from their work, the designers of fashion plates are utterly ignorant of anatomy and art. Being so, why should their dictum be heeded upon a subject vital to physical beauty?

Having discovered what forms of clothing best answer one's purpose, what colours are most becoming, they may be repeated in different textures continually. It will thus be easy to make a summer dress in the winter or a winter dress in the summer, at one's convenience.

William Morris, the poet, and decorator, says: "Resist change for the sake of change. This is the very bane of all
The arts. If you do not, the care of dress becomes a frivolous waste of time."

The qualification of a woman by instinct, ease, freedom from self consciousness, vigour of body and mind, grace of motion, beauty of appearance and courtesy of bearing, depend in a large measure upon appropriate and attractive clothing.

Chapter II.

Hindrances to the Pursuit of Beauty.

The position of woman in all the world of the past has made her conservative and timorous even to move to a higher plane demands from her unwonted courage. It is not strange then that incentives toward improvement of physical form and vesture meet indifference, distrust and positive objections. A few of the most serious ones waged against any change to better dress might be frankly
Love of beauty is not the highest motive.
True, but it helps the highest mission.

I hate to be conspicuous.

It is not easy to be conspicuously elegant. Nothing is so glaring as the latest novelty.

There are no artistic dress-makers.

Use plain seamstresses till demand creates supply.

I don't know how.

It is never too late to learn.

I have no taste.

I hate to attract attention.

Be noticeably beautiful, and thus reward attention.

I can't sit up without a cost.

You have large muscles.

If they are weak from disuse, train them.

I am too busy to think about clothes.

You must.

I am too fat.
Reduce and conceal it. I am too thin.

Learn the contours of an ideal form, possess them or counterfeit them.

I have a bad figure. So much the worse for you. Make a good one by exercise or art.

So and so can, but I can't. Don't be cowardly, nothing is gained without cost.

Chapter III

Plain Words to Plain People.

Do you say, my plain friend that you have no beauty to begin with, and never can have? There is always something beautiful about everyone.

Maybe.

Beautiful skin.

A graceful neck.

Beautiful hair.

Pretty eyes.

Exquisite ear.
Well poised head.
Tapering arms.
Pretty legs and feet.
If one has any of these, it is something to be thankful for. While you value the one flower of your being, do not rest till you have more to bless your friends. The stunted tree with one perfect blossom is so far good; but how much better a wealth of blossoms, making the whole tree glorious!

It is true you may have any or all of these gifts and not be beautiful. These are details. If they are absent, you may still make yourself lovely. You may have the magnetism of glowing health and merry spirits or nicety of cleanliness, a daintiness of belongings, that can make you attractive to all you meet.

One may not have well
favoured features, but there may be a radiant personality that shall be like the joy of sunlight. Love transforms a homely face with a glow of angelic sweetness. Choose always and everywhere the best things. Let no day pass without seeing and loving something beautiful, reading a bit of poetry or hearing good music. So many faces show the tide marks of a worried life. Some one says, "Every depressing scene, every unreasonable loss of self control, leaves two wrinkles and eight grey hairs." Let the pure gladness in your heart then give it finished expression for others. Be God's angel of brightness and good cheer and so grow lovely.

The surest way to please is to forget one's self, and to think
only of others.

No beautiful nor worthy
thing is ever ours without
careful thought and persist-
ent effort. Inattention and
indifference never achieved
any good thing.

Chapter IV.

True Standards of Beauty.

There is no greater destroyer
of fairness and distinction
than vice. Pain or injury of
any part, mars the whole. The
adage: "Beauty is but
skin deep" is untrue. The beau-
ty of the skin is evidence of
good respiration and a sound
bony structure; beauty of com-
tenance means a sweet soul;
beauty of form means whole-
some activities; of labour or
beneficence. All of these are
more than surface qualities.

No woman can be ideally
beautiful without full glow-
ing health. But this is not
all; that perfect body should
be only the instrument for the use of a noble soul. It should express virtue and sweetness. Washington Irving says: "It is the divinity within that makes the divinity without." Inward grace, then outward beauty.

The use of intellect has a powerful effect upon the moulding and chiselling of the features. It makes the eye keener and brighter, the mouth sensitive and delicate.

Fashion is not beauty. Fashion is feeling, beauty is eternal, the same through all the ages, its essential qualities never changing.

We may gain lots by the study of statues. Searching for the best examples of the human figure, we may discover that manly beauty and womanly beauty differ essentially.
It will be seen from Fig. 1 that the type of manly proportion includes a comparatively large head, wide and mother square shoulders with a torso tapering to a contrasted pelvis.

From figure 2 it will be seen for a woman the head should be small, the shoulders slightly dropping, the torso full, and widest at the hips. While the
front line from the breast bone over the abdomen should show first a gentle and then a full outward curve.

There should be no inward curves in the front line. A well formed body is elliptical at the so called waist line and not round.

A woman's hips should be as broad as her shoulders.

Chapter V

Fair Endowments

An artist, when painting a picture of a person begins by.
giving the general sweep of
the whole and not taking
up the smaller things.

Grace of carriage is made
up of ease, balance and pre-
cision.

Some student of sculpture
has said: "To be queenly one
should be five ft. five in. tall
31 inches in bust, 26½ in. waist,
35 inches over the hips, 11½ inches
over the ball of the arm, 6½ in.
around wrist, while the hands
and feet should not be small."

While symmetrical propor-
tions of the trunk and its
graceful carriage are the
most impressive of all the
attributes of a beautiful wo-
man, there are others which
go to make up ideal comple-
teness.

A well shaped head.
Paperying limbs and fingers
Good lines from neck to
the shoulders and bosom.

Beautiful limbs that are
plump, round, soft, fresh
in colour, supple in action
and not unduly large.
A beautiful hand is not
necessarily small, but in
proportion to the body. It
should be as long as the
face and have slender taper

ing fingers.
The beauty of the feet con-
sists in their neatness and
shapeliness and not in
smallness nor shortness. The
length of the foot, to be in
proper proportion to the rest
of the body, is the limit of
the forearm measured from
the point of the wrist to the
point of the elbow. "Peas" under
the heels destroy the proper
balance of the body. Every
member, every organ has
to be readjusted to a new
and false position.

There is no more fascinating
quality than the colouring of
human beings. This like other
The mouth is the most significant instrument of expression. It is continually moulded by thought, sentiment and purpose.

A beautiful ear is about twice as long as it is broad; it is only slightly inclined backwards.

Marks of personal distinction are few. None are more definite than the daintiness of perfect cleanliness.

With all these natural charms given as parts of our essential structure, with the ability to retain and to increase their excellence, it is not strange that some have said: "Mark's first duty is the cultivation of beauty."

Chapter VI.

Muscular symmetry and fine condition of physical excellence.
condition is to be attained by training every muscle to elasticity and vigour. The ideal way to secure symmetry is to go to a gymnasmium with a woman in charge, who will prescribe proper general exercise and such as is suited to individual needs.

Excess fat should be gotten rid of by exercise. One year of good exercise will do more for a woman's good looks than all the cosmetics that were ever invented.

Learn to take long breaths. Frequent bathing is not only necessary to health and beauty but it is exhilarating, adding positively to the sum of human joyousness.

Proper food is very essential.

Chapter VII.
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<td>Sport materials</td>
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<td>Combinations of materials</td>
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<td>4. Sanvime</td>
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| Serves hats of lace and straw. |
| The one button fastening for coats. |
| Dresses a little longer. |
| quaint collars & tunics |
| simplicity for all. |
| Machine stitching on everything. |
| Beaded girdles, collars and bags. |

| Serge, satin, etc. |
| Voil |
| Crape de Chine |
| Georgette crochet |
| Chiffon |
| Kaki Kool |
| Toulard |

<p>| colors tend toward the bright and beautiful. |
| loosely fitted coats and fancy stitches as trimming. |
| Collars of the long cape order. |</p>
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<td>5. Sanvin</td>
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<tr>
<td>6. Paquin</td>
</tr>
<tr>
<td>7. Driscoll</td>
</tr>
<tr>
<td>8. Chervin</td>
</tr>
<tr>
<td>9. Calhott</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VIl Elite</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Worth</td>
</tr>
<tr>
<td>2. Calhott</td>
</tr>
<tr>
<td>3. Madame San Pongee</td>
</tr>
<tr>
<td>4. Beer</td>
</tr>
</tbody>
</table>

| Silk & woolen jersey, satin, tule, chiffon, serge |
| Tricotine, broadcloth, silver and gold lace |
| Revival of narrow skirts fitted bodices and trains for the evening dresses. Barrel skirts and sleeves |

| Skirts vary in length Bishop sleeves. Yokes shallow and very deep ones. Wide belts and girdles. |

The new Pernet collar. The round neck is good.
Practical

Trace a front and three quarter front view of a design in a current magazine and compare with the ideal dimensions. Compute measures and make chart showing the proportions characteristic of the magazine.
the natural body, it is best
to have none in the outer
dress.

If a woman is round
shouldered, the bulk of a tied
sash with bows and ends
will help to conceal the defect.

If the hips and lower
back are meager, a soft sash
wound once or twice around
will add fulness or success-
ive ruffles of crinoline may
be worn underneath.

The coat-like form is good
for its oneness of effect. It is
an admirable design for a
woman of fine proportions.

Beauty of form is destroyed
when fat accumulates. The
fat person should wear tex-
tures in harmony with
her size. Soft materials that
take large folds suggestive
of dignity and repose are
good. She may wear cloaks
that are not in any way
stiff. She should avoid fitted
fur garments.

The slender woman may
seek such material as shall
secure to them roundness
and breadth. Horizontal lines
and fluffiness are to be chosen.
All points, angles and
straight lines are to be avoided.
Riches, fluttering draperies
and flourishes will be be-
coming.

Chapter IX.
Art Principles Applied to
Costume.

Each woman has to learn
for herself what will make
her own body better in pro-
potion and finer in grace,
what will enhance her beau-
ty and what will express her
individuality.

Most people acquire beauty
by patient cultivation of taste.
The only way to attain the
knowledge that shall make
dress a beautiful thing, is by
a reverent study of art prin-

ciples and of such good models as the past may have left us.

Dress is a decoration. A well-designed costume is not dependent upon trimming.

Simplicity is the keynote of refinement of good taste of genuine culture. Provided the body is in fine proportion, the simpler the form of dress appears to be at first glance, the more elegant the result.

What is beautiful in dress must necessarily be healthful, comfortable, suitable and becoming. Besides these qualities it may be as simple, as picturesque, as lovely, as graceful, as magnificent as may be in keeping with the occasions on which it is worn.

Chapter 7

Beauty of Material.

Having a few chosen colours in mind, if one can wait for supplies till the season is partly or wholly past, advan-
Stage may be taken of lessened prices and something gained for the future.

Silks and velvets are enduring and beautiful each having its peculiarly good features. The richer the fabric, the simpler should be its treatment, that the charm of its texture may be retained. Velvet is desirable because of its rich color. Velveteen has a recognized value and is no longer considered a cheap imitation. It is very durable and is suited to a greater number of occasions.

One may get almost any effect in silk:

1. Brocades.
2. Failles.

Double fold heavy silk crepe is a charming material. Even cotton crepe is not to be despised. Linen velours or plush is
good especially for evening costs.

Chapter XI.

Beauty of Colours.

It is harmony of colour, grace of form and fitness to the personality of the weaver that makes a gown beautiful, not richness of material nor cost of ornament.

The most important quality of a dress is its colour. It is nothing to a weaver if not becoming. Such tints as best set off complexion hair and eyes are to be chosen.

Harmony of colour is usually more beautiful than contrast of colour. Beauty of colour is like the charms of music. A sweet concord should be sought unless one has great skill in the management of colour tone.

Chapter XII.

Accessories.

As a small head is a beautiful endowment, its size should
not be sensibly augmented by
the dressing of the hair. Those
who have a great wealth of
this possession should sacri-
\[fice an excess of it, rather
than overpower the effect of a
greater beauty.

If the face is large the hair
should not be dragged away
from it but allowed to encro-
ach upon its borders. Bangs
pretty in themselves, should
not be worn to conceal temples
that are still more beautiful.
It is a mistake to suppose that
hair piled on top of the head can
add to apparent height. To do so,
only puts the eyes in the wrong
position. The face is to be meas-
ured from an imaginary line
resting on its top and not from
the point where the hair joins
the skin. Eyes lower than
half the face gives a childish
look; higher than half makes
it masculine. If the back hair
appears slightly above the head
it gives a suggestion of added height, without disturbing propor-
tion.

The purpose of a hat is to shade the face. When the lower part of the face is too narrow, a broad bow under the chin helps to restore proper propor-
tion. If the face is too heavy below, the bonnet should be trimmed broadly above. Bonnet strings will make many a face look ten years younger.

Head gear whose lines culmi-
inate in a point at top, incre-
ase the grossness of a face al-
ready too heavy. A small bon-
net makes a large face look
still larger. The lines of a hat
or bonnet should bring into
prominence the best lines of a
face and lessen by proximity
those that are less happy. If
the eyes are round, the nose
inclined to a snub, the eye-
brows deeply arched, the mouth
small and round, these curve
should not be repeated in head-  
gear. The hair should be worn  
smoothly and capricious effects  
avoided.  

There is a distinction in the 
way the neck rises from the  
shoulders. It is a pity to sac-
ificie so fine a grace by cover-
ing it. There is reason to be-
lieve that it is more wholesome  
to leave it somewhat  
exposed. To hamper it is to  
mar the expression of the  
whole body. There can be no  
grace in a neck that has no  
room to move its gentle curves.  

There are many ways of  
dressing the necks that  
most agreeably set off the  
face. Even a scarlet, neck is  
better in folds of lace. The fi-

low is very attractive, neat  
and appropriate, even for trav-
elling and a thousand times  
more charming, than the  
hard, stiff, heating, unbec-

oming, linen collar.
Cloaks or loose-fitting coats when made of textures light in weight, worn by women of right proportions are very pleasing, from their simple lines and oneness of effect.

Caps are convenient additions to a wardrobe.

Gloves should be worn for warmth, should be soft, elastic and loose. A stiff hand looks larger than a flexible one, and lacks its beauty too; for motion is a higher grace than form. The hand that is squeezed looks like a fin, and its covering has entirely departed from the first principles of art in dress.

Shoes of the same or a slight darker shade of the colour of the dress are desirable and for indoor wear should be flexible as a glove, for the added grace and expression given to the whole figure.
instep is prettily clothed in a slipper trimmed with bows. A finely formed foot is set off by a sandal slipper with a small button on each band. A heavy, stiff shoe, that obliges its wearer to plant her foot solidly at every step, obscures its shape and harms its suppleness. A low shoe of patent leather, with cloth gaiters like the dress, is perhaps the most comfortable outdoor dress for the feet. A woman’s carriage depends very much on the shoes she wears. If they pinch her feet, she can give no evidence of repose. If they have pointed toes they sacrifice her elasticity; if they have high heels she cannot use the ball of her foot as it should be used; then, it is impossible for her to walk well. The sole of every shoe should be the shape of the naked foot when standing.
Yokes, sleeves, bodices, vests, waist bands, and girdles are accessories of the toilet that may be made up of ornamentation that shall not only be charming, but enduring, of holding fancy work for hours of leisure that will be full of fascination and if successful, be a pleasant possession for many years. Besides these there are pins, clasps, buckles, buttons, necklaces and bracelets.

Solid gold ornaments should be worn with great discrimination. Except in filagree or in a mass of delicate chains, gold is apt to be too bright and dense in colour.

Silver is too bright except with white dresses. Oxidized silver may be well worn withagrau. Ornaments of cut steel, though enduring and costly, are hard, stern and too coldly glittering.

Japanese bronze ornaments will harmonize with many
brown and green textures. Garnets and topaz may look cheap set as gems, but used in profusion are wonderfully enriching.

Chapter XIII

From youth to age.

Most of the matchless creations of ancient sculpture represent mature womanhood. The full grand stately curves of the Venus de Milo do not come earlier in life than 30 years. A living woman to resemble her must weigh 160 pounds or more.

Young girls are like the trees in spring, whose construction lines are too prominent. There is about them a wonderful charm of promise of expectation of tender colours and gentle lines, but their heads are large and their curves too meagre for full beauty. The chief attractions of youth, its innocence, vivacity and enthusiasm, are unattainable.
able at any other age. It is not necessary to undervalue the pleasantness of early life, but to emphasize the completeness of mature beauty. There is inherent excellence in all stages of human existence.

Young girls should wear dainty colours and delicate materials, muslins and light wools.

Matrons have a wide range of colour choice. Sept and Oct hues are for them, strong and glowing, rich and deep; the reds and russets, the yellows down through brown, the heliotrope, garnet and mulberry. Now is the time for magnificent brocades, never appropriate before, for jewels, sweeping trains and fine lace.

If the hair begins to be frosty, one should keep it in fine condition, be braun and brilliant, in harmony with the
autumn weather. One should be like a gorgeous leaf, ripening slowly and fading slowly, not shrivelled and cast down in the first bleak day. Autumn may be a long bright exhilarating season, with a golden Indian summer. When it is time to loosen holds on life, one man lingers in some quiet corner wearing the luminous tints of forest leaves in sheltered nooks which show a mosaic of withdrawn hues covered with a tender bloom. There is poetry, a mystery about these that speaks of experiences veiled by the past. Such colours are found on the wrong side of tapestries and brocades.

An old woman in white may be like a poem, with the snows of winter on her head, but wearing the promise of an eternal spring.
Chapter XIV

Models.

To cultivate taste we must study acknowledged standards. To learn what is best in costume we should know the best types.

The apparel worn by the women of ancient Greece had great beauty and probably will never be surpassed. It has always been the goal of allegory and therefore our notions of liberty is arrayed in it. Because it was a costume that grew out of the natural conditions and necessities of the people who wore it, it is all the more capable of teaching what is good in garment. The lines and folds are more refined and chaste than the drapery of any later period. All garments were made of rectangular pieces of cloth used just as they came from the loom. Its nobleness, simplicity and grace as shown
in statues and in vase pictures are unsurpassed. It was elegant, useful, healthful, comfortable, modest and dignified. These qualities should belong to modern dress, which need not be Greek in form to be Greek in spirit.

Chapter XV.

Hope for the Future.

From the light of story worlds to the pearly secrets of the deep, from blushing East to glowering West, all vision is gladdened by plentiful, unerring, unblenched, unspeakable beauty. The whole universe is its temple, and every fair form, fresh color and sweet sound in earth, air or sea make up the blessed ministration.

The time should hasten when all the women of this nation shall be physically beautiful and gracefully clothed.

The dress-designing artists
of the future will have graduated from art schools through courses of study in anatomy, physiology, hygiene in the art of design, in the science of colour and in the laws of form. They will be familiar with all examples of classic beauty and with all types of historic costume. They will be experts in the mechanical processes that determine whether good designs shall be successfully interpreted, the draping of vestures.

Excellent.

Then come J.S.

This book certainly shows that you had a reason for retarding at the midnight house. It shows hard earnest work.
1. Constructed elements include seams, folds, plaits and etc., which are a part of the dress and if taken away, destroy the dress.

2. Decorative elements include lace, embroidery, contrasting fabric and etc.

Constructive lines may become decorative by bias seam or bias stitched hem.

1. Vertical lines increase height.
2. Horizontal lines increase width.
3. Oblique lines give thickness.
4. A balanced arrangement is gotten by a combination of the above lines.

Practical Work:
Trace costumes illustrating
the following:

1. **Street costume having**
   *vertical constructive lines accentuated.*

2. **Street costume having**
   *vertical decorative lines accentuated.*

3. **Street costumes having**
   *horizontal constructive lines accentuated.*

4. **Street costume having**
   *the horizontal decorative lines accentuated.*

3. **The quality of costume material:**
   a. Kind of lines
      1. Definite as expressed in gingham linen and serge
      2. The indefinite such as voiles, chiffon, dace and soft silk

b. Determined by
   1. Process of construction
   2. Presence or absence of dressing
3. Weight.

6. The selection of material depends upon
1. The relation of the lines of the material to the lines of the body.
2. The relation of the lines of the material to the costume.

4. Design of costume material

a. The kind of lines.

1. Straight—expressed in stripes, plaid and diagonals.
2. Curved lines by dots, figures and flowers.
3. Combination of straight and curved lines.

b. The selection of material depends on

1. Relation of the design of material
to the bodily proportions.
2. Relation of the design of material to the costume.

List of Painters and Materials used

1. Jean Millet shows the coarse materials of the peasants. His pictures are always dominated by the person.

2. Edwin Abbey - uses beautiful material with quality sparkling with color. He generally paints soft materials as satin.

3. James McNeil Whistler - Paints in close harmonies. In one picture he shows 17 values of white.

4. John W. Alexander - He feels the beauty of material and expresses it.

5. Howard Pyle - Feels the relations of the material.
Immediate Helps.

Having learned what an ideal body is, that it is to be gained and preserved only by proper exercise, diet and bathing, it remains to consider how to put one's self in the way to attain it.

Healthy underwear should be immediately secured. The color of the underwear to be ideal, should be the color of the outer dress. White of course with white dresses.

A corset does not and cannot eliminate flesh. It simply crowds the fat into another place.

Chapter VIII

Grace of Design.

It is always to be remembered that folds with their ever charming shape and play of light and shadow are more beautiful than any thing else, except that perfection of form which is rarely
found, and which, if possessed, is prized by drapey.
The first thing to be considered when planning a dress is

1. Material.
2. Hue.

The woman who frankly acknowledges her infelicities and recognizes her attractive features will best succeed in obtaining an agreeable result. The characteristics of a beautiful woman are:

1. A long neck.
2. Sloping shoulders and not too wide.
3. A flat back.
4. A round chest.
5. Ample hips.

Anything that will change these should not be included in the dress plan.

According to the classic ideal, the dress from the shoulders to the heels was one. As there is no horizontal division in
LARGE IN IMPORTANCE THOUGH SMALL IN SIZE
WORK APRONS.
HOUSE DRESS.
STREET DRESS.
SPORT SUIT.
BATHING SUIT.
WAIST.
STOUT FIGURE.
SLENDER FIGURE
EVENING DRESSES.
"Beauty of Form and Grace of Vesture."

Chapter I.

The question was once asked, "For what do the majority of women most care? After a long discussion it was agreed that admiration and consequent love, were the objects dearest to a woman's heart; that the desire for display of natural gift or acquired possessions was only to gain admiration; that pride of intellect was indulged in the hope to wield influence, a power inseparable from the admiration of fellow beings; that disinterested souls who long to do good by self sacrificing devotion, are immediately dependent upon the welcome aspect of a gracious personality, winning at one admiration, trust and love. Then some one wound up by saying, "Woman's ambition is to be beautiful, for that secures inevitably both admiration and love."
THREE QUARTER VIEWS.
waist and hip curves. These curves slightly upward but not quite as much as front.

III. Three quarters front view.

1. Draw front view of dress form with straight lines as previously studied.

2. Measure 1/2 width of neck bust and waist, placing the points slightly below the line.

3. Connect these points with straight lines.

4. Draw a straight line from shoulder to bust, parallel with front line. This cuts off a small portion of the farther shoulder. This distance must be added to the near shoulder.

5. Connect bust and shoulder with straight lines, also base of collar and shoulder points.

6. Draw an ellipse representing an armhole between the shoulder and bust line on the near side.
7. Connect bottom of ellipse with waist line.
8. Drop line from waist center at belt to bottom of skirt.
9. Drop line from side of belt to bottom of skirt.
10. Find \( \frac{1}{2} \) of distance of hip extension and draw front line of skirt through this point. This cut off portion may or may not be added at back line of skirt on opposite side.
11. Draw bottom curve of skirt with the dip in the center.

**IV. Sleeves:***

1. Make ellipse where you think it should be.
2. From lower end of ellipse, draw lines slanting slightly outward to level of waist.
3. From top of ellipse, draw line following same direction.
4. At elbow slant these lines slightly in.
5. Mark off length of lower
The diameter of the ellipse must be at right angles to axis of sleeve.

1. On side of body near you, draw lines from shoulder to elbow front and back.

2. Draw as much of sleeve on further side as should show following the same lines as the other sleeve. That is the axis of sleeve perpendicular to diameter of ellipse.

V. Three quarter back view.

1. Draw 3/4 front view with straight lines.

2. Draw an oblique line slightly to one side of center, letting it extend a little farther from center at waist than at collar.

3. Extend this line up through the collar and draw curve of collar from one side to the other, letting the line curve in same way.

4. Draw bust and waist curve following directions of front.

5. Complete drawing following directions of front.
6. consult illustrative material for sleeves.

What might be included in costume design work.

I Ways of teaching costume design:

1. Putting emphasis on representation.

2. Emphasis on design. No. 1 is necessary in training the illustrator and no. 2 is for the designer or dress maker.

3. For the illustrator a knowledge of the technique, use of pencil, pen and ink, crayon and water colors is necessary.

4. For the education of the designer or dress maker — opportunity for work by designing and drawing materials so as to study the suitability of design, the texture, line and color is necessary.

5. The student should be familiar with the principles of design taught in art courses and costumes of all
periods from the Egyptians up to the present day.

6. The first part of a design course:
   a. A training in appreciation of good lines, spacing, dark and light and color.

7. There should be a study of historic costumes from books, paintings and etc.

8. Original work. There is nothing new but we want a new interpretation of the old.

9. The study of color by defining. Lady Duff-Sordon said by mixing red, yellow and blue in different degrees of intensity and value with inexpensive silk and when finished, each student would have from 75-100 colors with which to work.

a. A knowledge of color theory.

b. As Lady Duff-Sordon says to provide oneself
with a little color box for future use.

10. Examples of fine color are found in textiles, Japanese prints, oriental rugs, Indian blankets and old courtlets.

11. From these samples, combinations are made by matching colors.

12. This exercise is completed by making original color schemes, taking motives from nature, books and elsewhere.

13. Texture is considered last. The different textures may be studied by the actual sample and by pictures.

14. Combinations are made of textures and here color must be eliminated. It is difficult to separate texture and color.

15. The great purpose of costume design course is to teach the following.
a. Appreciation
b. Discrimination
c. To develop taste of the student.

Costume Design

I. Design

Design is the harmonious relation of parts. These parts may appear to the eye, ear or any of the other senses. The harmonious relation of different notes is a design. This relation in visual arts is expressed in line, mass and color.

1. The principles of design are proportion, rhythm, symmetry and subordination.

a. Proportion is the comparative relation of various dimensions. The comparison of your dimensions must always be present.
1. Rhythm is the regular occurrence of a unit or a group of units. (This may or may not be present.)
2. Symmetry applies to parts where even balance is made.
3. Subordination is to form a complete group, the parts are attached or related to a single dominating element which determines the character of the whole. (This is second in importance.)

2. Costume includes dress and accessories.
   a. Dress is a covering for the body.
   b. Fashion is the prevailing style.

II. Origin of Dress.
   1. Reasons why man wore
no dress.

a. Climate did not require dress.
b. The body was covered with hair just like animals and they did not need clothes.

2. Reasons for adoption of dress:

a. First motive was as an ornament:
   1. Vanity
      a. Cause by a desire to appear as well as others.
      b. Natural craving to express what ever artistic impulse there is in you.
   2. Vanity has brought progress by imitation.

b. Second motive was for protection.
Man's first occupation was hunting.
and he naturally adopted the skins for the protection from injury and the weather. They would take fibers of plants and trees and beat it into cloth. Later, they learned to cultivate plants which they could spin and weave. They used leather and do at present time as a protection against wind. Fire was also used to satisfy the claims of modesty. Modesty is acute self-consciousness due to appearing unusual.

I'd say that modesty among different people is a strange one. In some races, we find men only clothed and others we find only women.
b. The Mohammedans considered themselves well dressed if their faces were covered.
c. Chinese considered themselves well clothed if their feet were covered.
d. The summatos considered themselves immodest if their knees were uncovered.
e. In central Asia the finger tips must be covered.
f. In the Phil. I. clothing is not worn but must be tattooed.
g. On the islands of the Carribbean the women are not allowed out of the house without a girdle.
3. Stages of primitive adornment:

a. Painting
b. Scarification
c. Tattooing
d. Shaping of various parts of the body, as the Chinese do their feet

Some tribes flatten
Their heads at an early age.
e. Ear and nose rings.
f. Beads, shells, necklaces, bracelets, belts and etc.
g. Fibers made into clothing.
h. Larger pieces of clothing draped around body.
i. Long girdles.

4. Results

a. Civilization is measured to-day by the kind of clothing worn. Clothing is a standard.
b. The position of woman has risen with the amount of clothing worn and she is judged thus.
c. There has been an increase in moral sense.
d. A moral code has developed that has
buttered mankind.

I. The ascent of man has established moral laws that are now sacred to us.

II. Aesthetic ideals are developed and expressed in clothing by:

1. Strict ideals of morality
2. More complex clothing system
3. An ever increasing regard to knowing that which is most worthwhile in life

III. 19. Dress is determined by:

1. Climate
   a. Form
      a. Shaped and draped pieces
   b. Fabric
   c. Color

2. Occupation
   a. Class distinctions

3. Finance

4. Morals
b. Climate
   a. Form
   The draped dresses were worn by the Greeks, Romans, Chinese, Japanese etc. By draped we mean not cut and fitted but thrown over the body and pinned. Shaped pieces were worn by the people in cold climate.

b. Fabric
   The kind of material determines the design.

c. Color
   The people of north wore dark colors and the people of the south wore the bright colors.

b. Occupation
   a. Class distinction
   The royals wore the bright colors while
SELECTED LIST OF PHYSICAL CONSTANTS—CONTINUED.

Pressure of one atmosphere = 1.033 Kg. per sq. cm.
1 liter of air at 0° C. and at standard pressure weighs 1.293 g.
1 cu. in. = 0.31 grains
1 Dyne at New York = 0.00102 g.
1 Erg = 0.00102 gram-centimeters.
1 Foot-pound = 0.13825 kilogram-meters.
1 Foot-poundal = 421390 ergs.
1 Kilogram-meter = 7.23308 foot-pounds.
1 Horse power (H. P.) = 33000 ft-lbs. per minute.
1 " = 7.452 x 10 ergs per minute.
Length of seconds pendulum at New York = 99.317 cm.
Velocity of sound in air at 0° C. = 332 m. per second.
" " " brass at 0° C. = 3318 m. per second.
" " " iron at 0° C. = 5127 m.

Ohm's Law, \( C = \frac{E}{R} \). \( W = C \times E \). \( \frac{CE}{76} = H.P. \).
Current strength for cells in series, \( C = \frac{E}{nR+r} \).
" " " multiple arc, \( C = \frac{E}{nR + r} \).

Resistance of wire, chemically pure, one meter long, one mm. in diameter, at 0° C. (Jenkins). Also relative resistance (Ayrton).

<table>
<thead>
<tr>
<th>RESISTANCE</th>
<th>REL. RESISTANCE</th>
</tr>
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<tbody>
<tr>
<td>Silver, hard drawn</td>
<td>0.01937 ohms.</td>
</tr>
<tr>
<td>Copper</td>
<td>0.02104 &quot;</td>
</tr>
<tr>
<td>Platinum</td>
<td>0.11660 &quot;</td>
</tr>
<tr>
<td>Iron</td>
<td>0.12510 &quot;</td>
</tr>
<tr>
<td>German-silver</td>
<td>0.36950 &quot;</td>
</tr>
</tbody>
</table>

\( 1° \text{ C.} = \frac{9}{5} \text{ of } 1° \text{ F.} \)
\( 1° \text{ F.} = \frac{5}{9} \text{ of } 1° \text{ C.} \)
\( C° = \frac{5}{9} (F° - 32) \).
\( F° = \frac{9}{5} C° + 32 \)

<table>
<thead>
<tr>
<th>SPECIFIC HEAT.</th>
<th>SPECIFIC GRAVITY.</th>
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<tr>
<td>Alcohol, ethyl (0°-50°)</td>
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<tr>
<td>Air</td>
<td>0.2374</td>
</tr>
<tr>
<td>Aluminum</td>
<td>0.2122</td>
</tr>
<tr>
<td>Brass, hard (0°-100°)</td>
<td>0.0858</td>
</tr>
<tr>
<td>Copper (0°-100°)</td>
<td>0.0949</td>
</tr>
<tr>
<td>Ice</td>
<td>0.504</td>
</tr>
<tr>
<td>Iron (0°-100°)</td>
<td>0.1098</td>
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<tr>
<td>Lead (10°-45°)</td>
<td>0.0315</td>
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<tr>
<td>Mercury (0°-40°)</td>
<td>0.0333</td>
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<tr>
<td>Zinc</td>
<td>0.0935</td>
</tr>
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</table>

Coefficient of expansion of brass, = 0.000019.
" " " iron, = 0.000012.

A ratio is the relation between two values expressed by division, as the ratio of 3 to 2 = \( \frac{3}{2} \).

A proportion is an equality of ratios, as \( \frac{3}{5} = \frac{15}{25} \) and is usually written thus: 3:5:15:25.

Values are said to be inversely proportional when the greater is to the less as some factor in the less is to a similar factor in the greater.

NOTE.—The above constants are taken mainly from " Kohlrausch."

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