of science. An annual report is to be made, and scientific papers may be published from time to time in the name of the society, after they have obtained the approval of a committee of scientists to be designated by the directors.

It is also intended to establish a museum at Sitka in which a large portion of the material to be collected by the society can be preserved. It is doubtful if any of our Territories possesses greater geographical and ethnographical interest than Alaska, and we trust that the Alaskan Society of Sitka will make the best use of its opportunities, and collect material which will be invaluable for scientific purposes.

So little is generally known in the United States concerning the meteorology of Alaska, that it will be of interest to read the summary of the report of the Signal Service officer stationed at Sitka, for the month of September last. The highest barometer for the month was 30.38, and the lowest 29.26. The monthly range of the barometer was 1.12. The mean temperature was 57°, the highest point reached being 60°.5 and the lowest 36°.5. The least daily range of temperature was 5°.5, and the mean daily range 11°.6. The mean daily dew-point was 45.5, and the mean daily relative humidity 80.7. The total movement of the wind during the month was 6,030 miles, the highest velocity reached being 46. The total precipitation for the month was 10.57 inches, and on 20 days .01 of an inch or more of rain fell. The number of clear days during the month was 5, of fair days 8, and of cloudy days 17. On three days light frost occurred.

HEALTH MATTERS.

The Corset.

DR. ROBERT L. DICKINSON, lecturer on obstetrics at the Long Island College Hospital, has prepared a very elaborate paper on the corset, discussing from a scientific standpoint the questions of pressure and displacement caused by it. This paper was read before the Brooklyn Pathological Society, where it excited great interest and discussion. It has been published in full, with seventeen figures, all of which were drawn by the author of the paper, illustrating the effects of corset-pressure on the chest and abdomen and their contained organs, in the *New York Medical Journal* of Nov. 5. Dr. Dickinson says: "Ridicule, argument, and invective have been freely expended upon the artificial small waist since the days of Martial and Galen. Yet the habit of corset-wearing has received little systematic study, and men's opinions are widely at variance. We frequently meet with the statement that corset-wearing works great injury; we discover a catalogue of five and ninety different diseases and disorders due to tight lacing; we find Bouvier, who has written the elaborate and interesting history of this article of dress, vigorously asserting that 'the modern corset, moderately tightened, is without appreciable influence on the health of the healthy woman:' and we encounter all shades of opinion between these extremes. But unsupported assertion is poor evidence, although a general impression must carry some weight. To obtain clear perceptions of the action of the corset, I have endeavored to measure the amount of pressure it exerts, to ascertain the distribution of the pressure, and to determine the displacements resulting therefrom, studying the subject with as little bias as possible, stating bald facts, and rarely expressing opinions."

The first tests which Dr. Dickinson applied were to determine the external pressure by the manometer; and as a result he gives a table of the various pressures within the body, as that of the blood and of the expiratory force of the lungs, when compared with the pressure exerted by the corset.

In reference to the words 'tight' and 'loose' as applied to corsets, the author says these words need to be defined. They lack precision, but are necessary. We cannot determine any limit of contraction in inches as the dividing-line, since in certain cases an inch and a half lessening of waist-measure with one woman will cause more pressure and more distress than five inches in another. The guide must be the patient's sensations, when we can trust her testimony, and signs that are readily appreciated, such as the restricted respiration and movement, evident discomfort when the corset is first hooked, flushing of the face in a warm room, and the indentations in the skin after removal of the corset. Appearance goes for nothing: a large bust and wide hips or shoulders give an impression of slenderness in the waist which may be entirely deceitful. The least pressure he has estimated from a corset is twenty-one pounds: the greatest pressure is eighty-eight pounds. Within the half-minute that follows any exertion, such as rising, lying down, turning over, or straining, the mercury in the manometer rises from a half-inch to an inch and a half, then gradually falls to its steady level. On taking off a corset, one often observes that if the circumference of the waist is taken at once, and again a few minutes later, an increase of about an inch will have occurred. Six inches difference between the circumference of the waist over the corset and the waist with the corset removed is the greatest difference which he has measured. Five and a half and five he has met with once each. In the woman who wears no corsets the many layers of bands about the waist, on which heavy skirts drag, are sufficient to cause considerable constriction, as Dr. Mosher states. The thoracic cavity suffers less diminution in size and alteration in shape from corset-wearing than the abdominal. The principal constricting effect is exerted below the fifth rib. The inferior edge of the lung is compressed, and its ability to distend the lower part of the pleural cavity seriously crippled. Compensation in part is effected by the tendency of the corset, when firmly adjusted, to raise the shoulders, forcing the upper lobes to do the breathing, as Sibson has proved, raising the thoracic, or five upper ribs, widening the interspaces (also a constant condition in the female), and in this way expanding the highest part of the conical thoracic cavity. Freer play of the apices in women who wear corsets would lead one to expect consolidation at these points to be relatively less frequent than in men, while affections at the base should be more commonly met with. An increased tendency to emphysema of the upper lobes might also be anticipated.

The author raises this interesting question, May the peculiar character of the respiration in women be attributed to the use of corsets? Two observers who are especially qualified to testify have stated the case very forcibly. Sibson says, "In the adult female the form of the chest and abdomen and the respiratory movements are often undoubtedly modified by tight lacing. The form of the chest and the respiratory movements do not differ perceptibly in girls and boys below the age of ten. Although the form of the chest remains nearly the same until the age of twelve, the abdominal movement is then somewhat less, and the thoracic somewhat greater, in girls than boys. At this age and earlier, stays are worn, and, though they do not compress the body materially, yet they restrain the free expansion of the lower ribs during free exercise. After the age of fourteen the form of the chest and the respiratory movements differ materially in females and males. I think it probable that in females, even if they wore no stays, the thoracic respiration would be relatively greater, and the diaphragmatic less, than in man; but this is only surmise. Delicate men," he says further, "approximate to the female thoracic breathing; vigorous women, to the male abdominal breathing; and long-distance runners have the least thoracic breathing of all men (in the quiescent condition). The diaphragm would seem, therefore, to be a muscle capable of developing to meet increased demands as much as any other that the athlete strengthens."

Walshe says, "The agricultural woman, who knows not stays, breathes more like a man than the town female. Besides, during sleep the conditions of pectoral and ventral action of the female are much less strikingly different from those in the male than in the waking state: the waist is relieved for a time from constriction. And, further, the male and female dog breathe almost exactly alike, as do the horse and mare: the action is abdominal and lower costal."

Dr. Dickinson calls attention to the observations of Dr. Mays of Philadelphia, who has recently studied the respiratory movements of Indian girls in the Lincoln Institution, and whose results have been referred to in *Science*. These girls had always worn loose clothing. They ranged between ten and twenty years of age. Tracings from their costal and abdominal respiratory movements showed a very close analogy to those of the civilized male, and that, "so far as the Indian is concerned, the abdominal is the original type of respiration in both male and female, and that the costal type in

the civilized female is developed through the constricting influence of dress around the abdomen. This is markedly shown in the greater prominence of the costal movements in those girls who were either one-half or three-fourths white, and who were hence dominated to a greater or less extent by the influence of civilized blood. . . . It is also evident that the costal type of respiration in the civilized female is not due to the influence of gestation."

Long-continued compression, by the corset, of the wall of the abdomen in the epigastric and hypochondriac regions, gradually brings about a thinning of its adipose layer. Below the ring of constriction the fat accumulates. The woman who abhors 'a stomach' yet adopts the most effective means of cultivating one. Flabby, old, or obese persons are especially prone to pile up panniculus adiposus below the navel. Many stout young men in good condition have been examined, and not one has been found in whom this tendency is evident. On the contrary, the fatty layer above the umbilicus is usually thicker than that below it. These men wear suspenders. In eleven healthy women below thirty who have been in the habit of wearing corsets (of varying degrees of tightness) the fat below the navel has always been found to be more than twice as thick as that above, while one to three is no uncommon ratio. That this is not normal is proved by the fact that in two teachers of gymnastics measured for me by Dr. Mosher the fatty layer was thicker above. With a corset that is 'quite tight,' but not so tight as the patient "could bear it, as in a new dress or at a ball," the displacement of the uterus is a third of an inch. The distance seems insignificant, and may only be considered of importance in view of the following facts: 1st, That this is almost the deepest position to which the structures can be forced by straining down; 2d, That the long-continued action of the depressing force is exerted during the period of growth; 3d, In view of the results likely to ensue in case of weakened and enfeebled supports, in case of increased size and weight of the uterus (normally present during menstruation), and in case of incipient displacement; it naturally follows, 4th, That this forcing downward is sufficient to render the uterine supports tense (be they ligament, 'column,' or pelvic surroundings *in toto*), and that in their taut condition any extra or added stress, like deep breathing, or exertion, or bending, might well be enough to each time slightly overstrain these stretched supports. Slowly and steadily as this force acts, yielding must in time occur. In fact, Engel states that in every one of thirty autopsies in which evidences of tight lacing were found, prolapsus of the uterus was present in some degree, except where adhesions had prevented it. Will not this account in part for the uterine troubles of women supposed to be due to many of their sendentary occupations, such as sewing-machine work? The man bending forward relaxes his abdominal wall, and enormously lowers his intra-abdominal pressure by so doing (Schatz), but the corseted female, who writes or sews, produces the opposite effect. The earlier corsets are worn, the more the liver would be affected, since it is proportionately much larger in the child than in the adult. Previous to puberty its weight may be as much as one-thirtieth, or even one-twentieth, of that of the entire body: in the adult it averages one-fortieth. "The practice of tight lacing," says Murchison, "may cause displacements and malformations of the liver, which may simulate enlargement, and which are of considerable importance in diagnosis. Tight lacing may act on the liver in three ways, — according to the situation, the tightness, and the duration of the constricting cause. (*a*) The liver may be displaced upward or downward, according as the pressure is applied below or above. The precise situation where the pressure is applied will vary with the prevailing fashion of dress; but most commonly in this country the displacement is downward, and this may be to such an extent that the lower margin reaches the ilium, and the liver appears to fill up the whole of the right side and front of the abdomen. [Frerichs and other writers speak of this amount of change in location]. (*b*) In consequence of lateral compression the liver may be elongated in its vertical diameter so that a larger portion of it is brought into apposition with the abdominal and thoracic walls. This is a very common result of tight lacing. (*c*) When the pressure is exerted by a tight cord, it may produce deep fissures in the substance of the liver, as the result of which, portions of the organ may be more or less detached, and may even be felt as movable tumors through the abdominal parietes. Apparent enlargements of the liver from tight lacing are far more common than is generally believed."

If, from the testimony of these five observers, — Braun, Corbin, Engel, Frerichs, and Murchison, — the extreme mobility of the liver has been proved, although we grant that these extremes result from tight lacing, are we not justified in believing that even a loosely adjusted corset must definitely displace so mobile an organ? The difference between the loosest corset and the tightest is less than might be imagined. Dr. Dickinson has not been able to double the pressure on requesting a patient to lace her loose corset to the utmost she could bear.

Engel found the stomach displaced in the following remarkable manner. It was shoved to the left. Its long axis, from a horizontal or oblique direction, was changed to a vertical, so that the lesser curvature ran down directly to the left of the spinal column. The pyloric end was depressed as far as the fourth lumbar vertebra. Constriction not unlike the liver-furrow was occasionally met with, but without pathological changes in the walls. The pancreas may be dragged down to a perpendicular position on the face of the vertebral column, reaching down to the promontory. These were extreme cases, of course.

A few of the most palpable changes brought about by corset-pressure have thus been briefly described. There are many others as much more important as they are more subtle and difficult of proof, such as the disturbances of abdominal circulation, the effect on digestion, the limitation of exercise, and the slowly increasing action on the general health.

The conclusions reached by the author of this interesting paper, are: 1. The maximum pressure at any one point was 1.625 pound to the square inch. This was during inspiration. The maximum in quiet breathing was over the sixth and seventh cartilages, and was 0.625 of a pound. 2. The estimated total pressure of the corset varies between thirty and eighty pounds, — in a loose corset about thirty-five pounds, in a tight corset sixty-five pounds. 3. Within half a minute after hooking the corset, such an adjustment occurs that a distinct fall in pressure results. 4. The circumference of the waist is no criterion of tightness. The difference between the waist-measure with and without corsets gives no direct clew either to the number of pounds pressure or to the diminution in vital capacity. Relaxation and habit seem to affect these factors largely. 5. The capacity for expansion of the chest was found to be restricted one-fifth when the corset was on. 6. The thoracic character of the breathing in women is largely due to corset-wearing. 7. The thoracic cavity is less affected by the corset than the abdominal. 8. The abdominal wall is thinned and weakened by the pressure of stays. 9. The liver suffers more direct pressure, and is more frequently displaced, than any other organ. 10. The pelvic floor is bulged downward by tight lacing one-third of an inch (0.9 cm).

BOOK-REVIEWS.

The Study of History in American Colleges and Universities. By HERBERT B. ADAMS, Ph.D. Washington, Government. 8°.

The Study of History in England and Scotland. By PAUL FREDERICQ. Baltimore, Johns Hopkins University. 8°.

BY a pleasant coincidence these two volumes reach us together, and they have a great and reciprocal interest. When Dr. Adams comes to look over the present series of his Studies, we believe that he will find it the most interesting, and perhaps the most valuable, of all. It will be remembered, that, after half of the series had been devoted to studies of local government, a pleasant essay on a recondite subject in the political history of the United States was introduced, and that this was followed by Dr. Adams's own contribution on the literature of charities. The present paper, which is translated from the French by Miss Henrietta Leonard, is the report on the study of history in England and Scotland, which was prepared by Professor Fredericq at the invitation of the Belgian minister of public instruction. The report is very complete, and the author seems to have spared no pains to gather all the information available. Courses of study and examination-papers have been drawn upon *ad libitum*.