ters" for a long time to come. The new volume in the Book-Lovers' Library is "Foreign Visitors in England, and What They have thought of Us," which makes the ninth in this series.

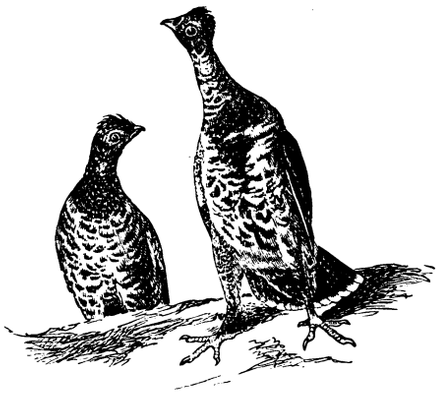
— The new *Atlantic* index is rapidly approaching completion.

— Houghton, Mifflin, & Co. have just issued Henry S. Dana's "History of Woodstock, Vermont."

— Lee & Shepard have just published "Essays, Religious, Social, Political," by David Atwood Wasson. The book includes an autobiographic sketch, and a biography of Mr. Wasson, by his friend and contemporary, O. B. Frothingham.

— "Franklin's Works," published by subscription at five dollars a volume, are now quoted at ten dollars each, or one hundred dollars for the set. Remarking on this, the *Critic* says, "What a pity it is, by the way, that the Putnams issued so small an edition! To think that only 600 out of 60,000,000 of free-born antimonopoly Americans can own a copy of Franklin's complete works!" We trust some day Messrs. Putnam will see their way clear to publish an abridged edition.

— G. P. Putnam's Sons have in preparation a translation, by Miss Ruth Putnam and Mr. Alexander Arbuthnot, of the "Histoire de la



From "B.C. 1887." *Longmans, Green, & Co.*

THE CANADIAN GROUSE (DENDRAGAPUS CANADENSIS).

Participation de la France à l'Établissement des États-Unis d'Amèrique," by Henri Doniol. The edition will probably be a limited one. They have also in press a work by Theodore Roosevelt, on the early history of our Western territory, entitled "The Winning of the West and South-west, from the Alleghenies to the Mississippi." This is expected to be complete in two volumes, the first of which will cover the period 1769–83; that is, to the close of the Revolution.

— William Wood & Co. have recently inaugurated a new and original plan for furnishing the most recent, the most advanced, and the most authoritative writings of prominent instructors and practitioners of medical science throughout the world. They have issued the first of *Wood's Medical and Surgical Monographs*, containing three articles, — "The Pedigree of Disease," by Jonathan Hutchison; "Common Diseases of the Skin," by Robert M. Simon; and "Varieties and Treatment of Bronchitis," by Dr. Ferrand. They propose to issue one of these monographs per month, covering the details of experiments and methods which have led to the latest discoveries and newest practice. The translations from foreign languages will be intrusted to experts on the subject as well as good linguists. All that is being learned and done throughout the world will thus month by month be reported in the best manner. The first issue is one of 259 pages, and this will be the average size.

— Houghton, Mifflin, & Co. will soon publish "Home Gymnastics for the Well and the Sick," containing directions how to preserve and increase health, also how to overcome conditions of ill health by simple movements of the body, adapted to all ages and both sexes, edited by Dr. E. Angerstein, superintendent of the gymnasiums of the city of Berlin, and G. Eckler, head teacher of the Royal Institution for Educating Teachers of Gymnastics, translated from the eighth German edition by Mr. Berthold Schlesinger, a well-known business-man of Boston, and amply furnished with illustrations.

— The supplement has become an important feature of *Harper's Weekly*. "American Men-of-War," by Lieut. J. D. Jerrold Kelley, U.S.N., with twenty-seven illustrations, forms the supplement to the issue of Feb. 9: that to the Feb. 16 number is devoted to an illustrated description of Omaha, Neb.

— All teachers of modern languages feel the need of varying the reading-matter used in their elementary classes. Not only do they themselves tire of going over familiar ground, but their pupils are apt to conceive a certain contempt for a language which they see represented year after year by the same two or three time-honored productions. D. C. Heath & Co. are issuing a series of texts, selected from the best writers, in inexpensive editions. To the twenty German and French texts of their list, they have just added, by purchase of C. H. Kilborn, "The Story of Ali Baba and the Forty Thieves;" "Der Zwerg Nase: Marchen von Wilhelm Hauff;" "Chamisso's Peter Schlemihl;" "Heine's Die Harzreise;" "Choix D'extraits de Daudet;" "Souvestre's Confessions d'un Ouvrier." They will add to the above this week "Jeanne D'Arc," edited by Barrère.

— Thomas L. James, postmaster-general in Garfield's cabinet, will contribute his first magazine article to the March *Scribner*, entitled "The Railway Mail Service." Thomas A. Janvier ("Ivory Black") will tell a bunch of Mexican folk-tales and superstitions collected by him during his many trips in that country. Gilberto Cano, "the best waiter at the Café Anglais," in the City of Mexico, told him many of these strange stories. The city of Treves, in Germany, founded 2004 years before Christ, and later for a century capital of the Roman Empire, will be described by Professor W. B. Scott of Princeton, who has recently made a careful study of its antiquities. Henry James will contribute the end paper, "An Animated Conversation" on international topics between Americans and Englishmen who meet in a London hotel. The paper is in dialogue form.

— In *The Home Journal* of Feb. 6 is given a selection of the poems of the late George Perry, who for many years was literary editor of that journal.

LETTERS TO THE EDITOR.

***Correspondents are requested to be as brief as possible. The writer's name is in all cases required as proof of good faith.*

Twenty copies of the number containing his communication will be furnished free to any correspondent on request.

The editor will be glad to publish any queries consonant with the character of the journal.

O'Reilly's "Greenland."

MR. PILLING'S "Bibliography of the Eskimo Language" has received a bit of undeserved criticism, which I am very glad to be able to correct. An unsigned review in the *Athenæum* (Aug. 4, 1888), which is, on the whole, quite fair, and even complimentary, finds fault with Mr. Pilling for including in his bibliography O'Reilly's "Greenland," "though that work is now generally understood to have been a literary mystification." This interested me, as I had consulted the work in question, which purports to be an account of the writer's visit to Greenland in 1817, and had inserted the title in some bibliographical work of my own, not yet published.

The fact of its being a "literary mystification" did not appear to be "generally understood" in America, whatever might be the case in England. On the other hand, there appear to me to be strong internal evidence that the writer had made a visit to Greenland, and that the undoubted rubbish with which the book is filled was merely due to the ignorance and conceit of the author.

I accordingly put myself in communication with the editor of the *Athenæum*, and after a while received, in reply to my inquiries as to the history of the book, a memorandum from the reviewer, — who, however, declined to reveal his name, — as follows: —

"The person who wrote 'O'Reilly's' work on Greenland is not known. The author had probably made a voyage on board a whaler, but the greater part of the volume is simply imagination. In the *Quarterly Review* for 1818, p. 209, it is eviscerated, and the small portion which is 'not absolute nonsense' pronounced 'either fiction or downright falsehood.'"

This seemed conclusive, but I naturally turned for further corroboration to the passage in the *Quarterly Review* referred to.

Judge of my surprise when I found, on the preceding page (p. 208), the following passage, which the *Athenæum* reviewer, had evidently neglected to read when he declared that the person who wrote the book was not known: —

"Our first impression, on taking up the volume, was, that, as the subject of the Arctic regions had become one of the fashionable topics of the day . . . some hanger-on of Paternoster Row had contrived, with the help of Egede, Fabricius, and the interminable Cyclopædia of Dr. Rees, to hash up a fictitious voyage to Davis's Strait, in order to gratify the eager appetite of the public, and at the same time to 'put money in his purse.' Recollecting, however, that the log-book of the ship 'Thomas,' of Hull, in which this voyage is stated to have been made, was within our reach, we turned to it, and found that *Bernard O'Reilly, Esq., was not, as we suspected, a phantom conjured up for the occasion, but that there actually was a person of this name, in the capacity of surgeon, on board that ship*" [the Italics are mine].

The process of "evisceration" referred to by the *Athenæum* reviewer then begins with great ferocity — too great, it seems to me, even for such a ridiculous book as it is. This, however, only proves, what is easily seen from reading the book, that it is quite worthless from a scientific point of view, and evidently the work of what we should call a "crank" nowadays, not that it is not the work of the man whose name appears on the titlepage.

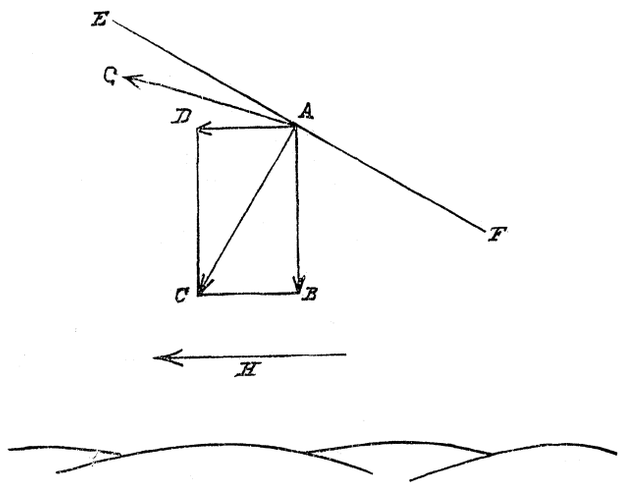
If the *Athenæum* reviewer has no further evidence to submit in regard to the authorship of the book, I do not see how we can doubt that the book is genuine, even though it is not authentic (which is quite another matter), and that it was perfectly proper to insert the title in a bibliography of such extended scope as Mr. Pilling's work. In fact, it would have been a mistake for Mr. Pilling to omit the book from his list, in spite of all its glaring absurdities.

JOHN MURDOCH.

Smithsonian Institution, Feb. 18.

The Soaring of Birds.

OWING to the remoteness of my present situation, I have but just seen the query of Mr. Kent. The point which he makes is a good one. I see also that I made a slight misstatement in my previous article. In the first place, as before remarked, we have the force AB due to the weight of the bird, and the force AD due to the



excess of velocity of the wind over the velocity of the bird. These two forces may be combined into the resultant AC. This resultant is resisted by the force CA, due to the resistance of the air acting on the wings of the bird as he wheels in circles about the point A. The force CA is therefore proportional to a function of the velocity with which the bird moves in describing these circles. The greater the velocity of the bird, the greater the force. Now, this velocity which he is capable of attaining with regard to the wind is dependent solely on the absolute velocity of the wind with regard to the earth, and can never be more than twice as great; i.e., when he is moving with the velocity of the wind and in the opposite direction.

Now let the velocity of the wind be x, and the excess of its velocity over the mean linear velocity of the bird (with respect to the earth) in the same direction as the wind be a, then the mean linear velocity of the bird with regard to the earth will be $x-a$. We will suppose that the velocity of the wind is such that $CA=AC$: the bird will therefore continue to revolve about the point A, which will consequently be its mean position. It must, of course, be remembered, that, while these forces are in equilibrium, the bird is slowly drifting over the earth's surface in the same direction as the wind. Its mean position would therefore describe a horizontal line with respect to the earth.

Now suppose the velocity of the wind (x) to increase, while its excess over that of the bird (a) remains the same: AC will therefore remain constant. But the velocity of the bird with regard to the earth ($x-a$), and also his absolute velocity with respect to the surrounding air, have increased, and therefore CA has increased also. Accordingly, the bird will be carried above and to the right of the point A. In the mean time the bird is drifting rapidly towards the left, in the direction of the wind: he will therefore describe a path lying in the same general direction as the line AG, *Q. E. D.*

W. H. PICKERING.

Los Angeles, Cal., Feb. 11.

A RECENT number of *Science* (xii. p. 267) gives an account of a paper by Mr. G. K. Gilbert, containing a theory of the soaring of birds, which traces this phenomenon to the advantage gained by the bird in gliding to and fro between contiguous horizontal layers of a horizontal wind, moving at different rates. The theory presented is said to have been anticipated by Lord Rayleigh (*Nature*, xxvii. p. 534); but it seems to me to rest upon what is, apparently at any rate, quite a different assumption from that which Lord Rayleigh made.

Mr. Gilbert imagines a bird gliding to windward in the lower of two contiguous layers, and traces the changes which his relative velocity will undergo if he first pass into the upper layer, then turn in it, then move to leeward, passing into the lower layer, and finally complete a cycle by turning to windward. He concludes, that, after the completion of the cycle, the bird's velocity will have increased by twice the velocity of the upper layer relative to the lower, frictional resistance being left out of account. This result he obtains by assuming, that, after turning, the bird's velocity, relative to the medium in which he turns, will be the same as before; in other words, that during the turn his velocity relative to the earth will change by an amount equal to twice the velocity, relative to the earth, of the medium in which the turn is made; the change being an increment in the turn to windward, and a decrement in the turn to leeward. Of course, in accounting for the phenomenon of soaring, some assumption must be made as to the bird's power of regulating the magnitude and direction of the force exerted upon him by the wind. But it should be a reasonable one, and, if not evidently so, should be justified. Mr. Gilbert's assumption does not seem evidently reasonable, and yet he does not even refer to its having been made.

In another recent number of *Science* (xiii. p. 31), Professor Pickering has shown that in a uniform horizontal wind the phenomenon of soaring is quite consistent with the law of the conservation of energy, provided frictional resistance is not too great, but he does not show how it may be accomplished. Lord Rayleigh, on the other hand, has stated that a uniform horizontal wind certainly cannot help us to explain this phenomenon. With so emphatic a statement from so high an authority, one is fearful of rushing in where angels fear to tread in attempting an explanation on this hypothesis. Nevertheless I venture to submit to your readers the following considerations, showing, I think, how soaring may occur in a horizontal wind which has no differential motion.

The force exerted by a horizontal wind on a bird may clearly be inclined upwards; for the wind, striking the lower surface of the wing, is deflected downwards, and must therefore have been acted upon by the wing with a downward force. The wind must therefore have exerted on the wing an upward force. What the exact direction and magnitude of this upward force will be, will depend upon the velocity of the wind relative to the bird, the wing area, and the ingenuity of the bird in adjusting its wings. With a strong wind and a wing area large relatively to the mass of the bird, it