

ridge-pole of a rather steep roof; 2°, the tracing must exhibit the serration effect for at least one hour, and must have in that hour not less than two downward motions of the pencil at least .050 of an inch below the general trace of the pressure at the time.

GAN.

Sept. 10.

'Communistic leanings.'

In your reports of papers read at the Buffalo meeting of the American association for the advancement of science, you refer, in the following terms (*Science*, Sept. 3, p. 219), to a paper read by me before the section of political economy and statistics: "The theory of rent and its practical bearings was discussed by Edward T. Peters of Washington, and with such communistic leanings as to meet little approval."

This language is calculated to convey to the reader's mind an entirely erroneous idea of the paper referred to. That it is not based upon knowledge will appear from the fact that the title quoted is one which I submitted when my paper was only in part written, and for which I afterwards substituted a title better suited to the narrower ground to which, on the score of time, I found it necessary to confine myself. That title, as may be seen by referring to the programme of proceedings for Aug. 24, was 'Errors in the Ricardian theory of rent.' In the treatment of this subject I was not conscious of any 'leanings' except a leaning to scientific truth, my paper being simply an attempt to determine whether certain propositions embraced in the Ricardian doctrine logically flow from the assumptions upon which the doctrine is supposed to be founded, and also to compare them with certain very conspicuous economic phenomena, in order to ascertain how far the theory agrees with the facts of experience.

I will not ask space for a statement of my views on the general subject in question; but it would interest me to know whether *Science*, which may be supposed to appreciate the significance of words, and to use them responsibly, — which, moreover, has of late done itself honor by the breadth of its hospitality to various shades of economic thought, — would stigmatize as 'communistic' the proposal of John Stuart Mill "to intercept by taxation for the benefit of the state the unearned increase in the rent of land;" whether it would apply a like epithet to the proposal of Dr. Adolph Wagner, the distinguished professor of political economy in the University of Berlin, "that municipalities [I quote from 'Land and its rent,' by President Walker] should purchase all town property, in order to realize therefrom the progressive increase of values;" or, finally, whether the character of an opinion, and the epithets fitted to describe it, depend entirely on the degree of prominence of the person from whom it emanates.

I observe, in the first paragraph of your report of the proceedings of Section I, the statement that the section had, at the Buffalo meeting, "been comparatively free from the attacks of socialistic and economic cranks, to which it is especially subject." I trust it will always be successful in keeping off 'cranks' of every description; but I quite as earnestly hope that no sickly fear of giving audience to unpopular opinions will induce it to set up a narrow philistine standard of economic orthodoxy, and brand as 'communists' or 'cranks' all who fail to conform to it. The 'approval' of a body conducted upon such principles could be readily dispensed with.

Political economy, as Prof. H. C. Adams, in one of the excellent economic papers recently published in *Science*, has well said, might be appropriately defined as the science which 'treats of industrial society.' Its especial province is, therefore, in a large degree, the arena of clashing interests; and unless Section I of the American association proposes, as a section of 'economic science,' to enact the play of Hamlet with the part of Hamlet left out, it must always, from the very nature of its functions, be 'especially subject' to the introduction of disturbing social questions, and must often hear views advanced which, however sound in themselves, and however disinterestedly scientific in their origin and spirit, will meet but 'little approval' from the men or classes whose interests or prejudices they may happen to antagonize.

E. T. PETERS.

Washington, D.C., Sept. 9.

An electric log.

In May, 1882, I sailed from Marseilles for the Piræus on the steamship *Ava*; Capt. Aug. Bretel, of the Compagnie des messageries maritimes, commanding. A short time after going aboard, I noticed a small rope running through the saloon over the cabin doors to the after skylight, and thence along the side of the ship to the stern, where it was made fast. The next day I saw the captain and the first officer looking at a curious instrument, which looked something like an aerometer, except that the cups revolved in a vertical position. This instrument was fastened to the rope which I have mentioned, and thrown overboard, the captain meanwhile watching the revolutions of the wheel through a powerful field-glass. As it did not seem to work satisfactorily, it was hauled in; and I noticed that the captain, in making some repairs to the rope, used a stick of Chatterton's compound. This led me to believe that there was a copper conductor in it, and that electricity in some form was being employed. There was no opportunity at that time to make inquiries; but a few days later the captain kindly permitted me to see the instrument, which he called a 'loch-moulinet,' or 'electrical-mill-log.' After throwing it again into the water, he took me forward and showed me the earth connection, which was soldered fast to one of the iron beams of the ship. Thence the wire went through the chart-room to the wheel-house, where there was a telephone. This electric log, it seems, was the joint invention of Capt. G. Fleuriat and Bretel, and was so arranged, that, when connected with the cable, it formed part of an electric circuit, which was opened and closed with every revolution of the copper shaft to which the four cups or hemispheres were attached. The number of revolutions made by the shaft in a given time was of course dependent upon the speed with which the cups were dragged through the water; in other words, regulated by the rate of motion at which the ship was moving. A table had been prepared by the inventors, showing the number of knots per hour corresponding to the number of revolutions of the shaft in a half-minute. On placing the log and telephone, so arranged that it could be switched, in circuit, every revolution of the shaft, and consequent closing of the circuit, caused a click, plainly audible to any one listening at the telephone. The log having been allowed to run out to such a distance as to be practically free from the influence of the screw, I listened