adjustable short steel guard reaching forward over the saw's circumference, put there for the purpose of arresting any piece that might be hurled from the saw. He wants to see the object upon which he is working and he realizes that his watchfulness is the best safeguard. A jointer guard to which an American woodworker will not object has yet to be invented. A good table, true and sharp knives, and a light adjustable side gauge are sufficient protection to him. The danger lies rather in the desire to replace the skilled workmen by unskilled labor, and a first preventive against accidents on high-speed machinery should be legal prohibition against employing unskilled persons on them.

Nevertheless, this work cannot fail to be highly appreciated by the manufacturers of France, factory superintendents, and employers' liability insurance companies. It is worthy to rank with the *Atlas de Mulhouse* and the bulletins of the Association des Industriels de France contre les accidents. It will give employers valuable information which, if followed out, will aid in reducing the number of accidents to the men behind the machine.

JULIUS MOERSCH.

ST. PAUL, MINNESOTA.

Le developpement économique de la Russie. Par J. MACHAT. Paris: Librairie Armand Colin, 1902. 8vo, pp. xvi + 311.

RUSSIA has within the last decade sprung into prominence as an industrial country and a field for foreign investors. To satisfy the interest of the western public in her natural resources and economic opportunities, the Russian government published a volume of statistics and descriptive matter in French for distribution at the Paris exposition of 1900. The information contained in that volume forms the basis of the work of the French author; this has been supplemented by a few other official publications and magazine articles in French, German and English. Of the authors perused should be mentioned Professor Schulze Gaevernitz, who is familiar with the Russian language, has lived in Russia and is recognized as a thorough student of Russian conditions. To the student who reads German and French Mr. Machat's book offers nothing that is not as easily accessible in the sources from which he has borrowed. There is no attempt to scrutinize the official material given to the public by the Russian ministry of

Finance; as *e. g.*, where the Russian budget is said to have shown for over ten years an excess of incomes over expenditures (p. 20). The general tone is accordingly quite optimistic. That "Russian mills cannot be killed by overproduction" (p. 17) sounds peculiar in the presence of an industrial crisis which has swept out of existence many a foreign investment. The book must have been in press at the time the crisis broke out; to meet the situation, the author has added a little note (p. 311), mentioning the fact with the following comment:

In a book intended to give a general view of the economic development of Russia and her future prospects, the author has not thought it necessary to take account of an accident, by the way of a rather local character. Similar crises are common today, of which Germany has recently given proof; they can delay, they cannot stop the progress which is in the very nature of things. Their causes and effects cannot be justly appreciated until many years are over.

The crisis is described as local because it primarily affected the iron and the coal industry. Still from the place occupied by coal and iron in the economics of modern nations, it might be argued even *a priori* that a crisis in those two industries could not fail to involve the entire industrial system. In fact, it brought in its train a banking crisis, which resulted in a series of financial failures and a general depression of trade in Russia. It would seem that some reference to the crisis might not be irrelevant at least when it is shown that the production of iron ore more than doubled within six years (p. 36), that the production of pig iron nearly trebled (p. 182) and that of steel increased by 400 per cent. since 1890 (p. 190), or that the production of coal nearly trebled within the same period (p. 45). It is just possible that the present crisis may have some causal connection with what might upon a thorough analysis prove an artificial over-production, fostered by over-speculation. This at least is the ground taken by the Russian Minister of Finance, in a communication which appeared in the *Vestnik Finansov*.

Still this is a good little book for one who seeks a general acquaintance with Russian industrial conditions. The information is as accurate as its sources, but has the inestimable advantage of being worked up by a Frenchman; and a Frenchman is always true to the rule laid down by Voltaire: "All kinds of literature are good except the tedious." The book is anything but tedious. It has style in it, it is an attractive presentation of a subject at times dry. The author knows how to bring out the salient points, using facts as illustrative

of his propositions and thus impressing both facts and comment upon the mind of the reader.

The book is divided into seventeen chapters, dealing with metals and minerals (III), coal and oil (IV), forests (V), the fisheries and hunting (VI), farming, more especially stock raising, the production of breadstuffs, sugar beet, flax, hemp, cotton, etc., and Russia's place in the grain market of the world (VII to X), the iron industry (XI), the textile industry (XII), copper, chemical products, beet sugar, alcohol, liquors and leather (XIII), transportation (XIV and XV), foreign trade (XVI) and the tariff (XVII).

The author dwells upon the development of a rural proletariat within the village community. The undeveloped state of transportation is discussed and the interesting fact is brought out that the great fairs at Nizhni-Novgorod and Irbit are steadily declining with the extension of the railway system. In their stead local markets for particular products are growing in number and importance. The development of the Russian cotton mills, fostered by the Russian tariff, is portrayed in detail; the consumption of cotton in manufacturing establishments appears to have doubled within the last ten years; to-day Russia holds second rank as a producer of cotton prints; many foreign manufactures have been entirely driven from her markets by domestic products.

The point of view is that of a Frenchman concerned for the interests of his country in the growing Russian trade and commerce. The author clearly shows that France has but a meager share in the Russian foreign trade, the bulk being controlled by Germany and England. The United States are ahead of France in the markets of her ally. In other words, the Franco-Russian alliance is devoid of a lasting economic foundation, whereas there is a close mutual economic interdependence between Russia and Germany. The fact is suggestive of the future international relations between the great powers on the continent of Europe.

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Educated Working Women. (Essays on the Economic Position of Women Workers in the Middle Classes.) By CLARA E. COLLET, M. A., Fellow of University College. London: P. S. King & Son, 1902. 12mo, pp. vi + 143.

CLARA E. COLLET, the English writer on the problems of woman, might be regarded by some of the radicals as a reactionary in that she