to stop the industry's decline. Reorganization, with
the establishment of new plants in distressed areas, did
much to relieve the situation and was of the utmost
importance in meeting the sudden increase in demand
during the recent war. Recommendations to bring plant
up to date, provide additional furnace capacity and rolling
mills, and modernize iron foundries were made in
1945 by the Federation and the Joint Iron Council as a
means of increasing production and overcoming the
serious shortage of labour. Although it is difficult to
differentiate between the iron and steel industry and the
metal and engineering trades, the former is essentially
concerned with the manufacture of steel ingots, plates,
and castings and the production of iron castings. The
initial process is the production of pig-iron from the
smelting of iron ore, and a description is given of the
working of a blast furnace. The various processes used
in the manufacture of steel—the Bessemer, the open-
hearth, the crucible, and the electric-arc furnace—are
also described, and attention is drawn to the health
hazards involved. The physical demands of the industry
are heavy and are not improved by the environmental
conditions under which some of the work has to be
performed. Recommendations made in 1947 by the
Joint Advisory Committee included: (1) provision of
better amenities and more comfortable and healthy
working conditions; (2) improvement in the appearance
of iron foundries; and (3) improvement in atmospheric
conditions by prevention or removal of dust, smoke, and
fumes.
Compared with other industries the accident risk is
significantly high, particularly in respect of accidents
due to handling goods, to gassing, and to molten metal or
corrosive substances. Certain industrial diseases are
especially frequent in the iron and steel industry. In
1937 the industry was responsible for 82% of cases of
industrial cataract and 100% of cases of nickel-carbonyl
poisoning notified, while tenosynovitis of the wrist,
"beat hand", "beat knee", and "beat elbow", which
are predominantly diseases of miners, are found to a
moderate extent in heavy metal workers. Carbon
monoxide gassing is a constant source of danger in
blast furnaces, and the smelting of metals may also
produce the hazards of carbon dioxide, sulphur dioxide,
hydrogen sulphide, and, occasionally, arsenious oxide
poisoning. Steel dressing and the cleaning of castings
with hand tools produces a dust of silica particles from
the sand in the moulds, and, until a harmless substitute
is found for making moulds, the risk of silicosis will
continue. Sand blasting used to constitute the chief
silicosis hazard, but this has been greatly reduced by
replacement of the sand by steel shot. There is an
increased liability in the industry to respiratory and
rheumatic diseases, due probably to the environmental
factors of rapid changes of temperature and exposure to
weather, and to the heavy nature of the work, as well as to
the irritant matter inhaled in the form of dust and fumes.
Many occupations in this industry show significantly
high death rates from cancer of the lungs and respiratory
passages, and the author suggests that the frequent
breathing of hot air and gases may, in itself, be harmful
and capable of producing tissue changes.

A. Lloyd Potter.

Correction.—Dr. Buckell writes: "I am very sorry an error has got through all our checking. In my paper on
'The Toxicity of Methyl Iodide' [July, No. 3, Vol. 7] line 43 (first column) page 123 should read '0·15-0·22 grams
per kg. body weight.' "