

machines. In the introduction to the second edition of *The Exposition of 1851* Babbage added, "On one or two points I differed entirely from the opinion of those to whom its management was confided. The questions of *the site of the building* and of *affixing prices to articles exhibited* were the most important."

Chapter VIII is wholly devoted to prices and a description of how Babbage saw a free market operating. On page 93 we have, as one of several examples, the following:

"Different prices for the same article are often demanded by retail tradesmen according to the supposed position of the purchaser. Fish, for example, which varies much in price and is at times very cheap will seldom be found charged to the household bill much below the average price. . . ." Babbage was widely known to the public for his forthright views, and although this was written fourteen years before 1865, it is just the sort of thing which would become stuck in the public's mind.

If it is Babbage, the figure was the same age as Murchison and Herschel and yet, of the three, is clearly the youngest. In a photograph of Babbage, reproduced in *Irascible Genius; A Life of Charles Babbage* (London, 1964) by Maboth Moseley, he looks younger than he was. This picture also shows the texture of his hair and the marked indentation at the parting shown in the cartoon. Finally, the figure in the cartoon looks somewhat impatient and irascible.

Let me be the first to state that I am not wholly convinced of my own solutions. It is in the nature of the problem that I could not arrive satisfactorily at the solution merely by elimination of alternative candidates because of the general paucity of my knowledge. Rather, I have tried to make sensible guesses and justify them to the best of my means.

Note
We also said that a mention of the Stodare trick appeared beneath the cartoon. For good measure Dr Green appends the following information:

The Stodare trick mentioned in the caption is one of two named after Colonel Stodare, the stage name of John English (1831-66). In the *Encyclopaedia Britannica* for 1910 there is a reference to a trick as follows:

"The sword and basket trick was common in India many years ago. In one form it consisted in inverting an empty basket over a child upon the ground. After the child had secreted himself between the basket bottom and a belt concealed by a curtain painted to look like the actual wicker bottom, a sword was thrust through both sides of the basket, the child screaming and squeezing upon the sword a blood-coloured liquid from a sponge. When the performer upset the basket the child could not be seen; but another child, similarly costumed, suddenly appeared among the spectators, having been supported by a pair of stirrups under the cloak of a confederate among the bystanders."

Chess Problems

THE most familiar form of chess to most people is the serious and competitive game, the world of match play, tournaments and grand masters. There exists, however, a different form of chess, the quieter branch of problems and studies where the chief aim is generally that of amusement only.

One type of chess problem is to present a situation which appears on the surface to be quite easy to solve but which in practice does not turn out to be so simple. For example, a problem requiring a 'mate in one' probably gives the impression of being insultingly simple, yet examples of this type of problem do exist where the solution is not immediately obvious. Problems 1 and 2 below are both mates in one and may not delay most solvers long from their Christmas turkeys, but it is important to be quite sure that the sole correct solution has been found for each problem.

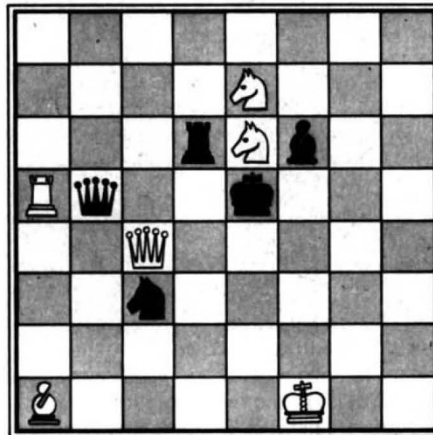
Problem 3 is based on an idea demonstrated by Sam Loyd over a hundred years ago. It is a mate in two, which may give certain alternating impressions during the course of solving it:

first, 'impossible'; second, 'trivial'; third, 'impossible' once again, before the real point of the problem is spotted.

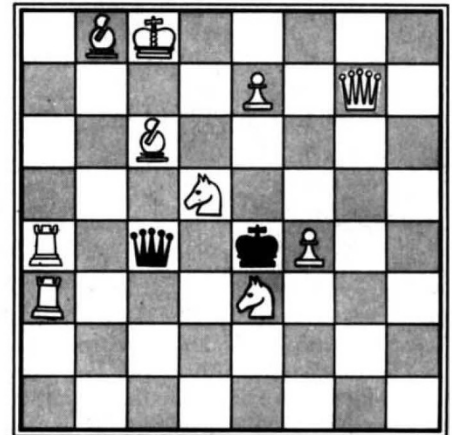
There is a tradition amongst problemists that a problem position must be a 'legal' one. In other words, it must be a position that could, theoretically, be reached from the starting position of a game of chess (unless it is specifically stated to be a "fairy chess" problem). This has given rise to some puzzles where moves have to be worked out in a retrograde fashion in order to determine that only a single sequence of moves could have been 'legally' played immediately leading up to the position in hand. Problem 4 is an adaptation of an old idea showing that only one 'legal' move is possible as White's immediately preceding move to the position in the diagram. But a modicum of retrograde analysis is necessary to demonstrate that the solution is a unique one, and it is worth noting that the line-up of Black pawns on the queen's rook file is a relevant feature of the problem.

J. P.

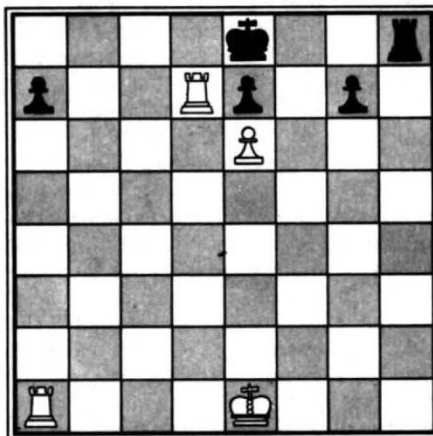
(Solutions will be found on page 438 of this issue.)



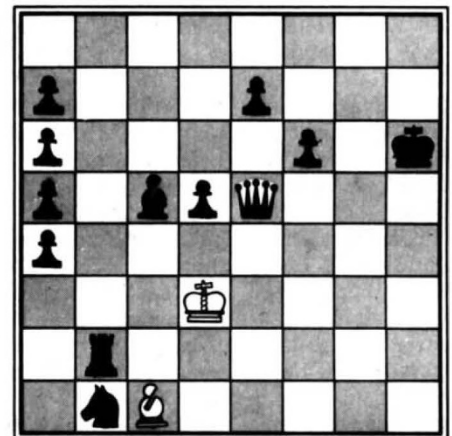
1 White mates in one move.



2 White mates in one move.



3 White mates in two moves.



4 What must White's last move have been?