FOR THE CHILDREN
## Puzzles for the Winter Fireside
By PROFESSOR HOFFMAN

THE solving of puzzles is essentially a winter pastime. In summer there are too many counter attractions; but when the shortest day has come to its gloomy close, when the frost is nipping and the wind howling out of doors, when Pop-in-Taw (or its latest rival) has lost the power to amuse, "What shall we do to-night?" becomes a question of serious import. Under such circumstances a few clever puzzles fill up time very pleasantly. The following selection of "nuts to crack" will be found just the thing for such an occasion.

THE HANDCUFF PUZZLE.

This is a puzzle for two people, preferably a lad and a lass.

Two pieces of cord or stout string, each about four feet long, are needed. One of these forms the "handcuffs" for the lady. In other words, one end is to be tied round her right wrist and the other round her left wrist, leaving a yard or so hanging down between. The other piece of cord is to be passed within this hanging portion, and tied in the
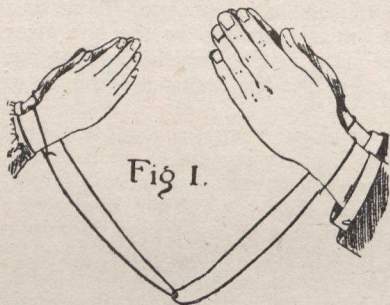
Fig 1.

same way round the wrists of the gentleman, as in Fig. 1. The tying should not be so tight as to cause discomfort, but must be so close that the hand cannot possibly be drawn out of the handcuff. Slip-knots must of course be avoided.

The problem is to get free of each other without loosening the knots or cutting the string, the "handcuffs" still remaining on the wrists.

For our next two items the reader must have recourse to a toy dealer, but the articles will not involve any extravagant outlay, their cost being sixpence each. There is in these two cases no royal road to success, which can only be gained by patience and perseverance.

THE PEG AND BALL PUZZLE.

This is a little glass-covered box, as depicted in Fig. 2. From one end of it, inside, project three pegs, each of a different colour. At liberty within
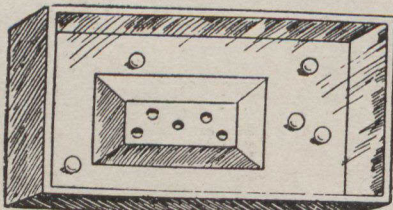

Fig. 2.
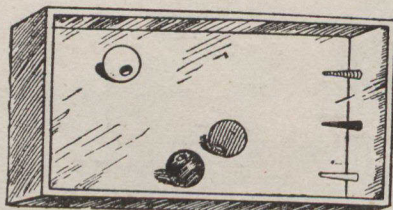
the box are three little balls, coloured like the pegs, and each having a hole in it. The puzzle is to impale all three balls, each on the peg of its own colour.

THE WILD OATS PUZZLE.

This (Fig. 3) is a similar box, enclosing five

Fig. 3.

little balls. The central portion is a raised slab of

wood, with sloping edges. In this central portion are five shallow depressions, the "homes" for the balls, which, however, as a rule, decline to stay at home, but roam about; hence the name of the puzzle. It is easy enough to get one or two of them into position, but when you endeavour to get the rest "home" those first captured again start on their travels.

Many persons, however, scorn puzzles of mere dexterity, demanding something of a more intellectual kind. To such may be recommended the following:—

PUZZLE WITH COUNTERS.

With a handful of card counters a number of excellent puzzles can be worked. The following are examples:—

No. 1.—With nine counters. Required, so to arrange them that they shall form ten different straight lines of three each.
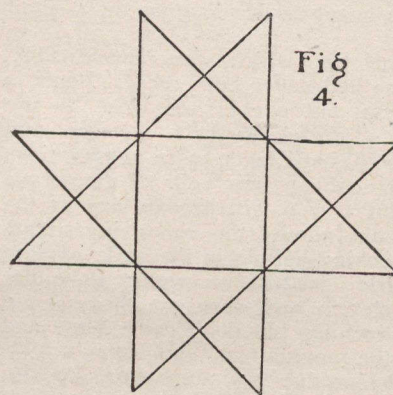

Fig 4.

No. 2—This is rather more difficult. You are required to arrange ten counters in such manner that they shall form five rows, with four in each row.

No. 3.—Draw upon a piece of paper an enlarged representation of the annexed diagram (Fig. 4). You are then to place on seven of its angles, seven counters, in manner following. Each counter must be drawn from a vacant point along one of the lines to another vacant point, and there left. You must then take another counter and start from another vacant point, proceeding in the same way till seven of the points are covered.

No. 4.—If the reader has ever played draughts, he will know what is meant by "crowning"—viz., placing one man on the top of another. In the present instance, after placing ten counters in a row, he is required to crown five of them by picking up one counter at a time, passing it over two others, and crowning the one next in order, till five of them have been thus covered. A counter already crowned reckons as two counters.

No. 5.—In this case, the first step is to draw a diagram consisting of ten squares side by side, as shown in Fig. 5, and to place, in the eight squares
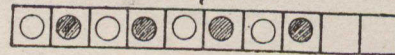

Fig. 5.

Fig. 6.

to the left, white and red counters alternately, leaving the last two squares vacant.

The puzzle is two-fold; first, in four moves only, moving two counters at a time (without altering their relative positions), to get the four of each colour grouped together without any interval (as shown in Fig. 6), and then, by reversing the process, to work them back again into their original positions.

No. 6.—The problem in this case is to place eight counters on eight of the squares of a chess-board in such manner that neither vertically, horizontally, nor diagonally, shall there be two counters in the same row.

ANSWERS IN NEXT WEEK'S ISSUE.