

September. The bricks for the furnace were manufactured on the spot, and the iron-work turned out at the Company's own forge. The concentrates are run from the vanner house by tram line on to the top of the furnace. They show between 15 and 90 per cent of pyrites. At present the percentage is rather low. The concentrates are dried on the top of the furnace, and then dumped in at the top end of a 60-foot hearth, growing gradually hotter towards one end. As the ore is worked forward and the heat increases, the antimony, arsenic and sulphur are gradually eliminated. The success of the experiment consists in the gradual and perfect elimination of these elements. Great care has to be taken not to dissipate the gold in fumes. As Mr. McArthur says, perfect roasting is the most difficult operation in the chlorination process. The ore when discharged from the furnace is tipped out on to the cooling floor. It is then loosely packed into leaching vats, so as to permit the chlorine gas to permeate throughout the whole mass. When full of this gas the tanks are plugged up and left to stand for half a day to three days. The affinity of chlorine for gold forms the compound chloride of gold. Leaching consists in the washing out of the dissolved gold, which runs out into precipitation tanks. When these are filled with gold-water sulphate of iron is added, and the gold is precipitated in the form of a brown powder. The precipitate requires from one to three days to settle. The water is drawn off from the top, and the gold precipitation vats are cleared out once or twice a month, and the gold precipitated is melted down into ordinary bar gold. The process in use at the Robinson Mine is that known as the Plattner process, and is in use in California. Mr. Butters says he has added nothing during his 10 years' experience to the chemistry of the process. Chlorination is a very complex operation, and needs the utmost care and intelligence, failure being the usual result of attempting to carry it on by mechanical rule of thumb. There are altogether three chlorination processes, the Newbery-Vautin, the Pollok, and the Plattner, the latter being the basis of the other two. At Mount Morgan, in Queensland, there is the largest chlorination process in the world, they use 40 lb. of sulphuric acid to produce chlorine gas for each ton of ore operated upon, whilst at the Robinson only 12½ lb. is required for the treatment of one ton. The cost of the sulphuric acid, which has to be imported, will put the Pollok and the Newbery-Vautin processes out of competition with the Plattner process. Mr. Butters, who has been in every gold-producing country in the world, except Australia, says he never saw a market before where people had to advertise their tailings and concentrates. Sharp competition among buyers has made this unnecessary. Here the market is stocked with these materials, and as there are no buyers, his opinion is that it is a place with a great future before it, and accordingly he has come to stay.

It is impossible to go through life without taking cold, but that is no reason a cough or cold should be neglected. A perfect remedy will be found in the popular medicine, Oxford Cough Syrup.

**DRAUGHTS-CHECKERS**

All communications to this department should be addressed *directly* to the Checker Editor, W. Forsyth 38 Grafton Street.

**JAMES BALLY**, Six Mile Brook, Pictou Co.—Please excuse delay in writing you. Will try to communicate with you soon.

**A. S. McKIE**, Sydney, C. B.—Why have we not heard from you of late? We are beginning to think you have forgotten us. Cannot you send something that will be of interest?

**NEWS.**

The next Barker-Reed match will probably take place in Providence, R. I., for \$500 a side.—*Providence Journal*.

Wyllie's total score at Newcastle was 250 wins, 1 loss and 17 draws. Since returning to England from Australia he has played 1,313 games. Of these he won 1,143, lost 10 and drew 160.

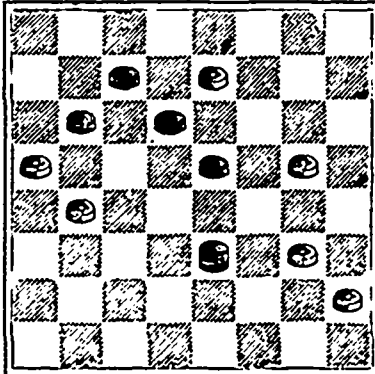
**SOLUTION.**

**PROBLEM 249.**—The position was:—black men 10, 11, 21; white men 18, 19, King 22; white to play and win. This remarkable little problem can only be won as follows:—

22	17	18	9	9	6	2	7
21	—25	25	—30	21	—17		
17	21	21	25	6	2	white	
10	—14	30	—21	17	—14,	wins.	

**PROBLEM 251.**

An end game from Denver's Barker-Reed match book.  
Black men—6, 9, 10, 15, king 23



White men—7, 13, 16, 17, 24, 28.  
Black (Barker) to play and draw. This end game was suggested by Freeman as a way in which Reed might have won the fifth game in the match, but Barker discovered a neat draw which we invite our readers to find.

**GAME 127.—"DUNDEE"**

This is the last game played in the recent Barker-Reed match. Reed had the blacks and, of course moved first.

12	—16	11	—15	12	—19	24	—31
24	20	20	11	17	13	22	17
8	—12	7	—16	5	—9	31	—22
28	24	24	20	30	26	25	4
a	—9	—14	b	—15	—19	4	—8
2	—7						
b	—22	17	20	11	27	23	23
19							
3	—8	8	—15	1	—19	—24	Reed
c	—26	22	23	16	31	27	resigned

**VAR. I.**

8	—12	31	27	19	—24	22	17
23	16	1	—5	32	27	w.	wins.
12	—19	27	23	24	—31	(Barker)	

\* Barker is said to have had this "loaded" six months before the match, having won it off Freeman. It is stated to be the only game that Reed lost with any pleasure, Barker having gone away with the brilliant stroke after the match was virtually settled. The contestants immediately shook hands and the match ended.

Notes from Denver's match book.  
a—This move is taken to prevent the strong 23 18 move which Wyllie played against Bryden. Mr. F. Dunne, however, has shown it to be only a draw.

b—Both Bryden and Ferrie adopted this move in their match.

c—Bryden played 25 22 against Ferrie which resulted in a draw.

d—Setting the trap.

e—An absolute loss but the most natural move and one that reflects no discredit on either Reed or Freeman. 16—19 draws.

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