lies, and as I understand the theories of those who ascert that they were mode by faulting, the rock and the quarts were solid at first, but the one has been rubbed down to clay and the other to sand. How this could be done under pressure without equeezing the sandy quartz into the clay has not been explained. These theorists assert that there are rolled pebbles in the clay and that the rolling has been done by the faulting. How could the clay be subbed up in this manner in the presence of sandy quarta without mingling the two?

The subject of vein formation is one of great interest, and a large number of papers, books and articles are written upon it every year. In most of these writings, and I think in all of them that refer to fissures, a rubbing movement of the walls is assumed as a fact. It is so little questioned that even men who believe that the fissure was an open one with walls standing apart refer the clays and slickensides in them to the action of these walls,

which according to their conception were not in contact!

In surface geology, faulting is proved by the discovery that a given member of the strata is displaced vertically along a certain line compared to its position on the other side of the line. When we turn to veins we are met by the remarkable fact that as a rule faults of this kind are not marked by the presence of veins, and that the veins in which rubbing motion is supposed to have taken place, do not show this displacement, and yet faulting and rubbing of vein walls are written of as if they were fundamental axioms and of the most common occurrence.

It seems to me that it is high time to examine these fundamental ideas and ascertain what they are based on. What is the proof that vein walls have rubbed each other? If we are to eliminate crude and hasty assumptions from the theory of veins, can we continue to ascribe strictions, slick-ensides and clays to rubbing? If this is the true explanation there must be some evidence to support it, for these phenomena are probably the most common of all the appearances found in mines. I ask these questions in good faith. Among your resders there are a large number of acute observers, deeply interested in this subject and engaged daily in the study of veins of all kinds. If any one of them can point to evidences which establish, either conclusively or reasonably, the fact of motion of one vein wall upon another, he will confer a greater benefit upon geology than any student of vein phenomena in the last thirty years can pride himself upon. Of course, I refer to the internal evidences of veius. It is possible that smooth walls, clays and slickensides are formed in some other way than by faulting and rubbing, and the question I would like to ask of your readers is this: Disregarding these phenomena that I object to, is there any other proof of movement in the walls of the veins they are familiar with?

Talking of patent medicines—you know the old prejudice. And the doctors—some of them are between you and us. They would like you to think that what a cured thousands won't cure you. You'd believe in patent medicines if they didn't profess to cure everything—and so, b-tween the experiments of doctors, and the experiments of patent medicines that are sood only because there's money in the "stuff.' you lose faith in exerpthing.

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7

SOLUTION.

PROBLEM 280 .-- The position was: black men 3, 13, kings 15, 26; white man 21, kings 1, 8 12; white to move and black to win.

1 6 15—11 10 14 26—23 6 10 19—15 8 4 23—19 14 9 *18—14

*Here Mr. W. C. Belden, who undertook to correct Mr. Wylie's play, leaves it as a black win. We believe that there is a black win there but! think none but an expert caa find it, and also that, for the benefit of amateurs, he should have given the further figures showing the wia.

Game No. 171.—"Dundee."

Played between W. Forsyth (blacks) and S. Granville (whites). 12-16 6- 9 12-26 -26 24 20 17 13 31 15 9 14 8-12 24-- 6 -31 26 - 22a-22 18 25 22 20 16 9 5 -19 -18 10-19 16-14. 23 22 17 17 16 3 11 12 9-14 -12 -19 8-12--16 32 27 16 11 25 22 8 11 -12 19-16-20 - 8 8--23 29 25 20 16 3 8 7 2 9. 20-24 -14 3- 8 6. - 9 24 20 13 6 18 g 5-14 19-24 - 9 27 24 28 19 21 17

-15

15.

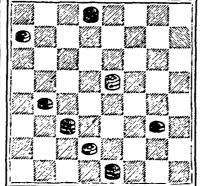
26

DRAUGHTS-CHECKERS a This allows the game to run into a regular "Bristol" opening.

* This brings us to the position below which we present as

PROBLEM No. 282.

Black men 17, 24, kings 22, 31.



White men 5, 26, kings 2, 15. White to play and draw.

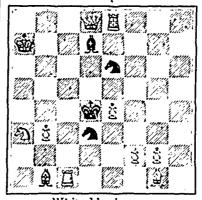
All communications to this department -27 must be addressed directly to the Che
7 Editor, Mr.W. Forsyth, 36 Grafton St.

CHESS.

ERROR.

11 15 In printing Problem No. 116 a 27-31 black knight was left out which 30 26 should have been on black's KKt3, -24 9-13 *13-17 without which mate is impossible.-23 17 14 drawn. Editor.

PROBLEM No. 118. By A. Don. Black 4 pieces.



White 11 pieces. White to p'ay and mate in two moves.

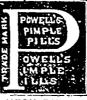
The following game was played in the recent match between Mesers. Lipschuts and Showalter, the former winning the match with a score of 7 to 1, and 7 draws :

RUY-LOPEZ.

While. Black. Showalter. Lipschutz. 1 P to K4 P to K4 Kt to QB3 P to Q3 2 Kt to KB3 3 B to Q K 5 4 P to Qt B to Q2 5 B tks Kt B tks B 6 Kt to B3 P to B3 : lastles Kt to K2 8 P tks P QP takes P 9 Q to K2 10 B to K3 Kt to K'3 Q to Q2 11 KR to Q sq Q to B2 12 P to QR3 P to QR3 13 Kt to Q2 B to K2 14 Kt to B4 Castles. KR 15 Kt toR5 Q to K3 B to Q eq 16 Kt to Q5 17 Q to B4 R to K sq K to R sq 18 Q to K13 19 Kt tks Kt P Q to B sq Ř tks Kt 20 Kt tks B 21 P to QB4 R to Q Kt sq Q to Kt2? 22 Q to B2 23 P to Q K:4 Kt to B sq 24 R to Q3 Kt to K3 25 QR to Q sq 26 P to B3 P to KR3? \bar{R} to $K\,\epsilon q$ 27 Kt to B3 K to R2 28 Q to B2 Kt to B sq 29 Q to R4 30 Kt to Q5 Q to B sq B to R5 31 QR to Q2 32 B tks RP!! R to Kt2? Kt to K.3 33 Kttks P ch P tks Kt 34 Q to R5 35 B to Kt5 ch Kt to R sq K to Kt2 36 Q to R6 ch 37 Q tks P ch K to B2 K to Kt sq 38 R to OS R to K13 39 Rtks Q And Black resigne.

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