(a) The line of defence adopted by Black in the pre-ent game was first brought into notice by the Chicago

(b) Probably his best move, as it brings the K rook

(r) A curious inpans; Q Kt to K 2 would make everything safe, as illack in that case could not safely leave bis Kt to be taken.

(d) Cutting off the sacape of the Whi e King to K 2, and also threatening mate in three moves.

- (Hobe Democrat.

### SOLUTIONS.

Solution of Problem No. 356.

	White.	
,	P to O 3	

l. Any

Solution of Problem for Young Players No. 384. White.

1. R to Q B 2

1 Any

PLOPLEMS FOR YOUNG PLAYERS No. 355. A position occurring in a game played recently at the

White.

Pawrant K R 7

ned QR4 White to play and draw the game.

# **British American**

MONTREAL. Incorporated by Letters Patent.

Capital \$100,000.

# General Engravers & Printers

Bank Notes, Bonds, Postage, Bill & Law Stamps. Revenue Stamps,

Bills of Exchange,

DRAFTS, DEPOSIT RECEIPTS. Promissory Notes, &c., &c.,

Rescuted in the Bost Style of Steel Plate Engraving. Portraits a Specialty.

G. B. BURLAND, President & Nanager,

THIS PAPER MAY BE FOUND ON FILE AT GEO. P. ROWELL & CO'S NEWSPAPER Advertising Bureau (10 SPRUCE STREET), WHILE AD-FREITS NEW YORK, MAY be made for it in NEW YORK,

# The Scientific Canadian

MECHANICS' MAGAZINE

PATENT OFFICE RECORD

A MONTHLY JOURNAL

Devoted to the advancement and diffusion of Practical Science, and the Education of Mechanics.

THE ONLY SCIENTIFIC AND MECHANICAL PAPER PUBLISHED BY

THE BURLAND LITHOGRAPHIC CO.

OFFICES OF PUBLICATION,

5 and 7 Bleury Street, Montreal.

G. B. BURLAND General Manager.

TERMS: One copy, one year, including postage....\$2.00 One copy, six months, including postage ... 1.10 Subscriptions to be paid in ADVANCE.

The following are our advertising rates: - For one The following are our advertising rates:—ror one monthly insertion, 10 cts. per line; for three months, 9 cts. per line; For six months, 8 cts. per line; For one year, 7 cts. per line; one page of Illustration, including one column description, \$30; half-page of Illustration, including half column description, \$20; quarter-page of Illustration, including quarter column description, \$10.

10 per cent. off on cosh payments.

# Montreal Post-Office Time-Table

 		<b>DECEMBER</b> , 1881.		
DRL	VERY.	MAILS.	CLOS	ING.
А. М.	Р. М.	ONT. & WESTERN PROVINCES.	А. М.	Р. М.
8 9 00		(A) Ottawa by Railway	8 15	8 00
0 0 10	••••	(A) Province of Ontario, Manitoha & B. Columbia	8 15	8 00
	1	Ottawa River Route up to Carillon	1	
1		QUE. & EASTERN PROVINCES.		
1		Onehen These Planes Par		
	5 35	duebed, Taree Rivers, her- thier, Sorel, per steamer, Quebeo, Three Rivers, Ber- thier, &c., by Q. M. O. &		
		thier, &c., by Q. M. O. &		1 50
8 00 8 00		O. Railway		8 00
""		Three Rivers, Arthubaska	İ	0.60
	12 50	Three Rivers, Arthabaska & Riviere du Loup R. R. Occidental Railway Main Line to Ottoma		8 00
9 20		Do St. Jerome and St.	/ 1/0	·····
	5 (g)	Lin Branches Do St. Jerome & St.	· · · · · ·	4 30
11 30		Do St. Jerome & St. Janvier St. Remi, Hemmingford &		
8 00	12 45	Lapraine Ashway		2 15
1		Conticooke, &c	6 00	2 15 8
10 OK		St. Johns, Stanbridge & St.	• ~	- O 1/41
10 00	·	St. Johns. Vermont June.	1 (00)	••••
9 (x	ļ	South Eastern Railways		2 15
8.04	# 	(B) New Brunswick, Nova Scotia & P. E. I		
	:	Newfoundland, forwarded		
	(	despatch is try the Packet leaving Halifax on the		
		7th and 21st November		8 %
		LOCAL MAILS.	:	
9.43	s!	Valleyfield, Valois & Dor-	:	
11 3M	) 	Valleyfield, Valois & Dor- val. Beaubarnois Route	6 00	4 34
1130	<u>.</u>	Boucherville, Contrecuent, Verennes & Vercheres		: 1.40
3.04		Core St. Antome and Notre		
9.00	⊬ <b>5-3</b> 0 ⊬	Hentington	· 왕(() ' 6(()	2 15 3
10 0	3 38		6 00	2.00
10.38	g.,	Lagrantie Looggenil. New Glasgow, St. Sophic.	7 00 6 00	2 13
10.0	*	by Occidental Rullway	:	1
30 %	·	Branch. Longue Pointe aux-		4 3
F 3	: 32 30 f	Trem. & Charlemagne	로 (20	2.00
11 36	) ):	St. Conegonde	6 00	9.1
1	1.30	St. Conegonde. St. Lambert. St. Laurent. St. Martin & St. Eustache		, <b></b> .
11 30	5 30	i abidence wert (St. Hebri		*
10 00	); 	Sault an Recollect & Pont		
10 (4	0.52	Vinu (also Bongie) St. Jean Baptiste Village,	1	:
	•	Mile Ent & Cotesu St.	7 (d) 11 45	3 3
		UNITED STATES	. 1 1 763) :	}
H 9 40		Buston & New England	1	
3 8 44	į	States, except Maine New York and Southern	- 7 or	5.4
-10 X	) 101.30	Island Pond, Portland &	6.00	
ì	!	Maine. (A) Western & Pacific		2 30
3 8 40	1	States States	8 15	ين ج
	G	REAT BRITAIN, do.	ŧ.	i
By Ca	madian	Line on Thursday	: :	7 14
lly Ca	BAdist	Line for Germany on Thurs		7 (0
By Cu	mard o Sur	n Monday pplementary, 13th and 27th		5 2
Dec Be Pa	ember.	om New York for England.		21
i on t	Vedues	day		2 1.
man	y, Wes	g American Packet to Ger- inesday tar Line on 16th and 38th		2 .
Dec	nite S ember	tar Line on 16th and 38th		9 1
(A)	Postal	Car Brice Drive till R 15 am	40	15 p.m
(8)		Do 9.00 p.m.		
				_

Mails leave for Lake Superior and Bruce Mines. &c.

Mails for places on Lake Superior will leave Windsor on Mondays, Wednesdays and Fridays. Mails for Bruce Mines, Garden River, Little Current, &c., will leave Parry Sound on Tuesdays.

### Mails leave New York by Steamer:

Bahamas, 8th and 21st December. Bermuda, 1st, 15th and 29th December.

Cuba, 10th December, Cuba and Porto Bico, 3rd, 17th and 22nd December,

Cuba, Porto Rico & Mexico, 3rd, 15th & 24th Dec. Cuba and Mexico, 8th and 29th December.

Cuba and Mexico, 8th and 29th December.
Curaços and Venezuela, 10th & 24th December.
Jamaica and West Indies.
Jamaica and the U.S. of Columbia (except Panama).
13th and 30th December.
For Hayti direct, 6th, 17th and 28th December.
Hayti, 8t. Domingo and Turks Island, 13th Dec.
Hayti and Maracaiba.
Porto Rico, 19th December.
Sautiago and Cienfuegos, Cuba, 6th December.
South Pacific and Central American Ports, 16th, 20th and 30th December.

20th and 30th December. " Brazil and the Argentine Republic, 5th and 21th

December.
"Windward Islands, 10th and 28th December Greytown, Nicaragua, 16th December.

Mails leave San Francisco:

## For Australia and Sandwich Islands, 17th December For China and Japan, 3rd and 21st December Cadbury's cocoa essence.

PURE, SOLUBLE, REFRESHING.

It is often asked, "Why does my doctor recommend Cadbury's Cocoa Essence!" The reason is that being absolutely genuine, and concentrated by the removal of the superfluous fat, it contains FOUR TIMES the AMOUNT of NITROGENOUS or FLESH-FORMING CONSTITUENTS than the average of other Cocoas which are mixed with sugar and starch.

CANADIAN DEPOT: 34, RADEGONDE ST., MONTREAL. Beware of imitations, which are often pushed by Shopkeepers for the sake of extra profit.

### DOMINION OF CANADA.

# CANADIAN PACIFIC RAILWAY COMPANY.

Incorporated by Letters Fatent under the Great Seal of the Dominion of Capada.

Five per Cent. First Mortgage Land Grant Fifly Year Gold Bonds.

Total Authorized Issue -**\$25,000,000** 

Accepted by the tovernment of tanada as security for the completion of the contract, between the

Covernment and the Company - - -Now Ukered to the Public -\$10,000,000

Principal and interest payable in gold coin of the present standard weight and fineness, -the Principal in Montreal, Canada, and the Interest on 1st April and 1st October, at the option of the holder, either in Montreal or New York; or in London, England, at the rate of 4s. 11d. Sterling for each dollar.

Bonds in denominations of \$1,000 and \$500 each. Principal payable in October, 1931, unless previously tendered in payments of lands and thereby cancelled; or, redeemed by the Trustees, out of the proceeds of sales of land, either by purchase at the current nanket prices, or by drawings, at ten per cent. premium.

## TRUSTEES FOR THE BONDHOLDERS.

CHAS. F. SMITHERS, Esq., President of the Bank of Montreal.

Hos. JOHN HAMILTON, President of the Merchants' Bank of Concoda.

SAMUEL THORNE, Esq., Merchant, of New York.

The Bonds are secured by a Morigage Dred of Trust to the said Trusters, which confers upon them, under the express authority of the Charter, an ple-powers for entercing payment of the Bonds, Principal and Interest, and effective means for securing to the Bondho ders the entire net proceeds of the lands. Before its execution the Deed was submitted to the Government, which has since recepted the \$5,000,000 - to be hild by it as security for the completion of the centract in accordance with the provisions of the Charter.

The Mortgege, thus created, constitutes a first charge upon the entire Land Grant of the Company, amounting to 25,000,000 seres of the finest farming lands, situated in what is known as the "The Fertile Belt" of the Canadian North-West, which is now admitted to be the largest tract of uniformly rich land suitable for growing the best quality of wheat, &c., to be found on the Continent of America, and the Company may locate its entire Land Grent exclusively in this tract, rejecting all sections unfit for settlement.

The Bonds will be accepted by the Company in payment for lands at 110 and accrued interest.

By the Mortgage Deed the Company expressly undertakes to pay the interest on the Bonds, semi-annually. when it becomes due, and the principal at matmity. The net proceeds of all Land Sales must be handed over to the Trustees to be held by them, in the first place to secure the perturbance of the Company's obligation to pay the Interest on the Bonds, and, so long as that obligation is punctually performed, to be applied to the purchase of Bonds for cancellation, provided the price does not exceed 110 per cent, and account interest; but if the Bonds cannot be bought at or under that price, then the Trustees are authorized and required to designate by lot, from time to time, as funds accumulate in their bands, the bonds that shall be presented for payment and cancellation

This Contract provides that the whole issue of Land Grant Bonds shall, in the first instance, be deposited with the Government, and that the proceeds of all sales thereof shall also be deposited with the Government, and only be paid to the Company as construction proceeds. The interest, at four per cent, per annum, upon the amount renaining in the hands of the Government is, by the Decd of Trust, expressly pledged for the payment of the interest on the Bonds, and cannot be applied to any other purpose.

It will be seen by reference to the accompanying official statement, made by the President of the Company that the Directors are aiming to have the line of Railway to the Pacific Ocean comple ed and open for traffic, without availing themselves of their right under the Charlet to issue Mortgage Bonds on the Road; and that they fully expect that all the sudditional capital required to complete the contract, and equip the line, can be obtained by the issue of Common and Preferred Stock. In that case, the only fixed charge on the revenue of the Company will be the interest on these Land Grant Bonds, taking precedence of any Dividend on both Common and Preferred Stock.

These Bonds will be taken by the Receiver General on deposit from insurance companies under the Act 40.

Provision is made for the Registration of the Bonds at Mootrest, New York and London.

Copies of the Act of Incorporation of the Company may be inspected, and copies of the Mortgage Deed of Trust, the President's Statement and the Prosectus may be obtained at the offices of any of the undersigned.

served to advance the price at any time without notice. Applications for the Bonds may be addressed to :-

THE BANK OF MONTREAL, Montreal,

Its Branches in Canada, and its Agencies, U.S., and at 9 Birchin Lane, London, England.

J. S. KENNEDY & Co.,

63 William Street, New York, or

f W. f WATSON~&~A.~LANG,

Agents of the Bank of Montreal,

59 Wall Street, New York.

Montreal, 25th November, 1881.