

the marihuana problem. According to Mr S. Hausman of New South Wales University, the drug in Australia is almost a drug on the market—the going price in Sydney appears to be between \$A25 and \$A30 an ounce, but bulk supplies are cheap, with consumers increasingly looking towards overseas supplies on the grounds of supposed quality. Mr Simon Hasleton of the University of Sydney reported at the symposium the results of surveys among university students which, among other things, demonstrate the now familiar if slight correlation between marihuana use and academic success, that roughly half of those who try marihuana never touch it again and that the incidence of regular marihuana consumption among university students appears to be about 7 per cent. Mr Hasleton thinks that there are in due course likely to be changes in the law, if only because of the difficulty of empanelling juries which do not include marihuana users.

in the testing of drugs, for use both in man and animals and most of these were the result of the 1950 and 1956 Diseases of Animals and Therapeutic Substances Acts which lay down mandatory tests for the standardization of sera, vaccines or drugs.

The white paper lists more than thirty cases of irregularities where licensees have gone beyond the authority granted by their licence, but no prosecutions resulted. The white paper states that the inspectorate set up under the act concluded that in none of the cases brought to its attention has there been any deliberate intention of evading the requirements of the act. In the course of the year the thirteen inspectors, nine of whom are based in London, made 3,650 visits, mostly without previous notice, to registered laboratories. In addition 203 visits were made to premises not included on the register.

The immediate reaction of the anti-vivisection societies to the 1971 figures was a howl of protest at the increase of

27,000 experiments on the 1970 figures. The National Anti-vivisection Society protested to the Home Office, drawing the department's attention to the Early Day Motion which has been placed before the House of Commons and signed by 137 members of parliament. The motion calls for a research institute to collate information about alternative research methods to vivisection—cell culture for example (see *Nature*, 234, 318; 1971). The society hopes that if the motion attracts sufficient attention the Select Committee on Science and Technology might launch an inquiry into vivisection; its recommendation would then be put to the House. The society feels that it is making substantial progress towards reducing vivisection now that an appreciable number of MPs are taking up its case, and is further cheered by progress in the international front—the United Nations Social and Economic Council recently recognized the international association of anti-vivisection societies.

VIVISECTION

Experiments Increase

MORE than five million experiments were performed on living animals during 1971, according to a white paper published last week by the Home Office. In total, 5,607,435 experiments were performed, 4.8 million of them without anaesthetics. Of the remainder, 0.5 million were carried out under anaesthetic but the animals were not killed before the anaesthetic wore off, and 11,000 were carried out to illustrate lectures.

Under the 1876 Cruelty to Animals Act experiments on cats, dogs, horses, asses or mules all require special certificates, and the returns reveal that 13,695 cats, 17,830 dogs and 549 equidae were the subjects of experiments last year.

The five million experiments were performed by 10,199 licensees in 596 registered establishments, but 5,439 of those who held licences during the year did not perform any experiments. More than one million of the experiments were carried out on behalf of the government or the Medical Research Council.

The white paper states that most of the experiments carried out without anaesthetic (these made up 86 per cent of all experiments undertaken) consisted of inoculations, external applications or stimuli, modifications in diet or environment, or administration of a pharmaceutical or biological product, followed in each case by observation of any effects. More than 400,000 animals were used in research on cancer, 250,000 for the purpose of public health or the diagnosis of disease. A further 1.3 million animals were used

Advancing by Draws

THE three games of the Spassky-Fischer match played last week have all ended in draws. Spassky has been unable to reduce the three point deficit in the match and is now trailing by 6½ to 9½ points. Every draw brings Fischer's score closer to the winning total of 12½ points.

The fourteenth game failed to show either player at his best. Some motiveless moves by Fischer (playing white in a Queen's gambit declined) culminated in an oversight which cost him a pawn. A few moves later, however, Spassky made a complementary error and the resulting rook and pawn ending was drawn.

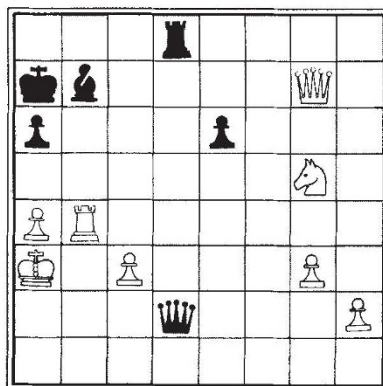
The fifteenth game was a most exciting one with both players striving hard for a win. Fischer chose a variation

of the Sicilian defence leading to cut and thrust play, and both sides, unusually, castled on the Queen's wing. Fischer sacrificed his King's knight's pawn for active pressure, and the game was evenly balanced until Spassky rashly took a second pawn on the 29th move in a desperate effort to win. The counter action by Fischer was swift and he must have missed winning by only a very small margin.

The diagram shows the position in the fifteenth game after white's 40th move. By playing 40... R-Q2 Fischer could have relinquished white's threat of mate and freed his pieces for the final attack. The move actually played precluded this possibility and Fischer had to be content with a perpetual check.

The sixteenth game was an accurately played but rather uninteresting draw. Spassky seemed well prepared for Fischer's exchange variation of the Ruy Lopez and never had any disadvantage in position.—J.P.

SPASSKY
WHITE



BLACK
FISCHER

White: Spassky, Sicilian Defence,		Black: Fischer Najdorf variation	
White	Black	White	Black
1 P-K4	P-QB4	23 P-K5	PxP
2 N-KB3	P-Q3	24 PxP	B-KR1
3 P-Q4	PxP	25 N-B3	R-Q1
4 NxP	N-KB3	26 RxR ch	RxR
5 N-QB3	P-OR3	27 N-KN5	BxP
6 B-KN5	P-K3	28 Oxp	R-Q2
7 P-B4	B-K2	29 QxR	BxN
8 Q-B3	O-B2	30 PxB1	Q-N3 ch
9 0-0-0	QN-Q2	31 K-B1	Q-R4
10 B-Q3	P-N4	32 Q-R8 ch	K-R2
11 KR-K1	B-N2	33 P-QR4	N-O6 ch
12 Q-N3	0-0-0	34 BxN	RxB
13 BxN	NxB	35 K-B2	R-Q4
14 Oxp	QR-B1	36 R-K4	R-Q1
15 Q-N3	P-N5	37 O-N7	Q-KB4
16 N-R4	KR-N1	38 K-N3	O-Q4 ch
17 Q-B2	N-Q2	29 QxR	Q-Q7
18 K-N1	K-N1	40 R-ON4	Q-B8 ch
19 P-B3	N-B4	41 R-N2	Q-R8 ch
20 B-B2	PxP	42 R-R2	Q-B8 ch
21 NxBP	B-KB3	43 R-N2	Q-R8 ch
22 P-KN3	P-KR4		

Agreed drawn