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54 Instructional chess game.

57 An instructional chess game comprises a square playing board (1) of laminated construction having sixty-four individual playing squares (2) each of which is formed centrally with a substantially square opening surrounded by a corresponding "black" or "white" liner (4), the upper layer (3) of the board (1) preferably being of natural wood. The base (26, 38) of each of at least some of a conventional number of playing pieces will not fit any lined opening of the board (1) if said piece is facing in a direction that is not allowed by the traditional rules of chess and each playing piece (23, 28) is animated in such a way that, upon manipulation of its head (17), a spring loaded arm member (20) will cause a weapon (24) to strike a neighbouring and opposing playing piece or such manipulation will cause a projectile (31) to be fired by the sudden release of a spring-loaded and pivoted lever (34) after movement thereof to a cocked or firing position by a progressive displacement and sudden release cam (33). A video chess game is also described during which a substantially conventional chess board is visually represented and similarly represented playing pieces are shown to attack one another by striking each other or by launching projectiles, laser beams or the like at one another, the attacked and visually represented playing pieces collapsing/disintegrating before finally vanishing and being replaced by the attacking playing pieces with suitable sound effects.

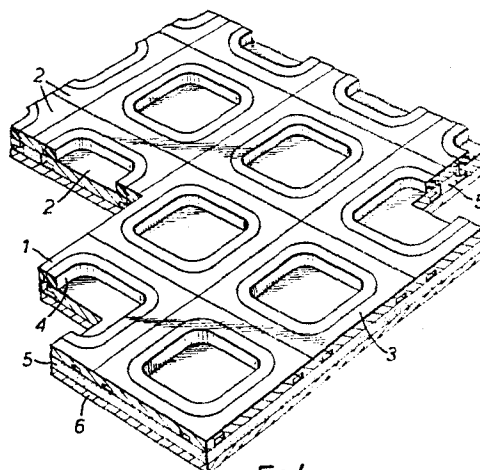


Fig. 1.

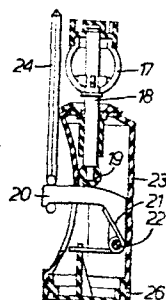


Fig. 7.

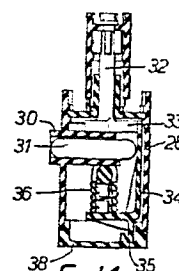


Fig. 14.

1 INSTRUCTIONAL CHESS GAME

 This invention relates to the game of chess and seeks to provide improvements of a kind which do not change the basic appearance of the chess board, the
5 basic appearance of the playing pieces or the rules of the game that have been known since antiquity. An object of the invention is to increase the visual interest of the game and to enable it to be more easily understood by young children and other learners of the
10 game so that they will more quickly be able to play and enjoy chess than is usually possible when instruction is carried out employing only a conventional chess board and chess pieces.

 The invention seeks to fulfill its objects by
15 adding to the basically conventional way of playing the game an enhanced sense of excitement by incorporating into the playing pieces animation more or less corresponding to that which would have been expected in real life from knights, rooks/castles, kings, queens,
20 bishops and pawns in early days when wars, and chess is a "war game", were more stylised and leaders, such as kings, and natural modes of transport, such as horses, were of paramount importance.

 Under present circumstances, employing
25 conventional chess boards and playing pieces, players of the game must already have a knowledge of the rules and an ability to visualise the range and direction of influence of each playing piece. Thus, when playing chess with conventional game apparatus, the imagination
30 of both players is of considerable importance in providing the excitement, pleasure and satisfaction in planning and implementing the various moves where different playing pieces "take" one another. The ability to visualise the danger of pieces being "taken"
35 and the circumstances in which other pieces can do that "taking", sometimes from relatively remote squares on the playing board, is not easily developed by all

- 1 learners of the game, and particularly young children,
when employing the relatively stationary and inactive
playing pieces which form parts of conventional chess
sets. Learners of the game, and especially young
5 children, need more visual input from the playing pieces
than is present in conventional chess sets to enable
them quickly and easily to appreciate the relative
importance of different playing pieces and the way in
which, during a game, those playing pieces are used.
- 10 The danger, and this is again particularly true of young
children, is that a child or other person learning the
game will become confused and bored by the relatively
inactive playing pieces before becoming sufficiently
advanced in a knowledge of conventional chess and will
15 mentally reject the game as being slow, boring,
uninteresting and/or excessively intellectual whereas,
if only the interest of the child or other learner could
be maintained throughout the initial but relatively
short period during which the allowed moves of the
20 various pieces are being learnt, the child or other
learner will soon find the game to be one of absorbing
variety and interest and will, in most cases, become a
lifelong chess player who will derive enjoyment and
benefit from the game for many years to come.
- 25 Features of the invention include providing the
various chess pieces with animation effects such as the
ability to launch projectiles, to swing swords, axes or
other old fashioned weapons with a view to pieces which
are to be "taken", in accordance with the conventional
30 rules for playing chess, being physically struck by the
projectiles or by the weapons wielded by the "taking"
pieces. The translation of the mental concept of one
inactive piece attacking and "taking" another inactive
piece into a visual action during which the attacking
35 piece physically launches a projectile at, or directly
strikes, the piece which is to be "taken" largely takes
away the intellectual aura of the game that tends to

1 prevent many children and other persons from taking up
this most enjoyable and mentally developing passtime.
Young children are interested and amused by the physical
attacks which the various pieces make upon one another
5 and it is well known that a child who is interested and
amused by a lesson will learn what is being taught by
that lesson with little, if any, difficulty and without
exerting any resistance to learning.

A further object of the invention is to assist a
10 child or other learner of the game in remembering the
various moves of which different playing pieces are
capable in accordance with the rules. To this end, a
chess set constructed in accordance with the invention
has an interdependent relationship between the bases of
15 its playing pieces and the "squares" of the playing
board. For instance, the base of a bishop will not fit
any square of the playing board unless the bishop is
facing along, or in a direction parallel to, one of the
two diagonals of the board whereas the base of a
20 rook/castle will not fit any square unless it is facing
in a direction parallel to one of the edges of the
board. A knight will not fit any square of the playing
board unless it is so positioned that, when activated to
wield a weapon as discussed above, that weapon will
25 strike a piece at the opposite corner of a rectangle of
six squares. The physical relationship between the
bases of the playing pieces and the squares of the
co-operating board thus quickly ensures that even a
young child or slow learner will relatively quickly
30 absorb the conventional rules which do not allow bishops
to move in directions parallel to the board edges,
rooks/castles to move along diagonals of the board or in
directions parallel to diagonals and the rule by which a
knight can only move to the opposite corner of a
35 rectangle of six squares.

In view of the current and world-wide popularity
of video games, that is to say, games in which both

1 action and sound are produced by a domestic television
set or the like from a circuitry pack under the control
of one or more (usually two) players, the invention also
envisages the production of a "video" version. Video
5 chess games are already known but do not exhibit the
instructional features which the present invention
seeks to promote. It is proposed that a video chess
game in accordance with the invention would show a board
carrying representations of the traditional pieces,
10 those pieces being movable only in accordance with the
conventional rules of the game of chess. A player would
be able to choose the representational piece which
he/she wished to move and, if no opposing piece was to
be "taken" could move the piece in question to an
15 unoccupied square of the representational board. If, on
the other hand, an opposing piece was to be attacked and
taken, before actually moving to the already occupied
square, the attacking piece would fire a
representational projectile, fire a representational
20 laser gun or the like, or wield a weapon such as an axe,
sword or lance, and the attacked piece would collapse,
disintegrate and/or explode and finally vanish with a
suitably satisfying explosive or electronic noise which
could vary from piece to piece. Eventually, the
25 attacking piece would disappear from the square which it
occupied when initiating the attack and re-appear in the
square previously occupied by the "taken" and
"destroyed" piece. As in known video chess games, the
circuitry pack would be programmed in such a way that
30 each representational playing piece shown on the
television receiver or the like, in the use of the video
game, would be able to move only to those squares
allowed by the traditional rules of the game of chess.
This feature does not prevent a learner player from
35 making an unwise move, but automatically prevents the
making of an unallowable move.

1 United States Patent Specification No. 3627324
discloses a chess set in which some of the playing
pieces have bases which co-operate with the playing
board in allowing them to adopt only certain directional
5 dispositions on the board when occupying any square,
such pieces also carrying a designation indicating the
permissible direction or directions in which the pieces
can be moved from one square to another in accordance
with the traditional rules of the game of chess.

10 However, such a chess set, whilst being of undoubted
assistance to a learner of the game, does not include
the aggressive animation of the playing pieces which is
provided in accordance with the present invention and
which is of major importance in dispelling the
15 intellectual aura of the game for older learners and
providing visual interest for younger learners.
Generally speaking, it is only in indoor game apparatus
of the kind which seeks to reproduce, as far as
possible, an outdoor game such as football, basketball
20 or the like in which the playing pieces are constructed
to project, by simulating kicking or throwing,
projectiles, simulating footballs, basketballs or the
like, towards one another, British Patent Specification
No. 1299619 being a good example disclosing such game
25 apparatus. It will immediately be realised, however,
that game apparatus of this kind is in no way analagous
to the aggressively animated playing pieces that are
provided in a chess set constructed in accordance with
the present invention.

30 According to one aspect of the invention, there
is provided a chess set comprising an eight-by-eight
square playing board and two sets of visually distinct
playing pieces each comprising eight pawns, two knights,
two bishops, two rooks/castles, one queen and one king,
35 characterised in that each playing piece is animated in
such a way as to be operable by a player to cause it
physically to attack an opposing playing piece that is

1 to be taken during a move of the game, and
characterised in that the bases of the playing pieces
and the squares of the board have an interdependent
co-operating relationship which is such that at least
5 the knights, bishops, rooks/castles, queens and kings
will not establish the co-operating relationship with
any squares of the board when facing in a direction that
is unallowable in accordance with the traditional rules
of the game of chess.

10 For a better understanding of the invention, and
to show how the same may be carried into effect,
reference will now be made, by way of example, to the
accompanying drawings, in which:-

Figure 1 is a partially cut away perspective view
15 of one corner of a playing board of a set in accordance
with the invention,

Figure 2 is a sectional elevation illustrating
the incorporation of the playing board into a box which
will hold the playing pieces of the chess set,

20 Figure 3 is a perspective view illustrating
further constructional features of the box,

Figure 4 is a sectional side elevation of a pawn
playing piece of the chess set,

25 Figure 5 is an underneath plan view of the base
of the pawn of Figure 4,

Figure 6 is a side elevation corresponding to
Figure 4 and 5,

Figure 7 is a sectional elevation of a king
playing piece,

30 Figure 8 is an underneath plan view of the base
of the king playing piece,

Figure 9 is a side elevation corresponding to
Figures 7 and 8,

35 Figure 10 is a similar view to Figure 9 but shows
the king playing piece in an attacking attitude as
operated by a player,

1 Figure 11 is a sectional elevation of a queen playing piece,

 Figure 12 is an underneath plan view of the base of the queen playing piece,

5 Figure 13 is a side elevation corresponding to Figures 11 and 12,

 Figure 14 is a sectional elevation of a rook/castle playing piece,

 Figure 15 is an underneath plan view
10 corresponding to Figure 14,

 Figure 16 is a sectional side elevation of a bishop playing piece,

 Figure 17 is an underneath plan view corresponding to Figure 16,

15 Figure 18 is a sectional view of an upper region of a playing piece illustrating part of the operation of a projectile launcher or cannon of the queen, rook/castle and bishop playing pieces,

 Figure 19 is a sectional elevation of a lower
20 portion of a playing piece illustrating further details of the projectile launcher or cannon and its operation,

 Figure 20 corresponds to Figure 19 but illustrates an alternative construction,

 Figure 21 is a sectional side elevation
25 illustrating a knight playing piece,

 Figure 22 is a side elevation showing the knight playing piece in an attacking attitude,

 Figure 23 is a part-sectional elevation showing a region of the playing board upon which stands a
30 rook/castle, a knight and a bishop,

 Figure 24 is a part-sectional elevation showing a region of the playing board upon which stands a queen, a king and a pawn, and

 Figure 25 is a perspective view illustrating an
35 alternative playing board construction.

 Referring to the accompanying drawings, and firstly to Figure 1 thereof, a playing board 1 is square

1 and comprises sixty-four smaller playing squares 2
arranged in an eight-by-eight relationship and with
alternate squares in both directions that are parallel
to outer edges of the board finished in contrasting
5 colours that may conventionally, but not essentially, be
black and white. In fact, the board that is illustrated
in Figure 1 has a laminated construction comprising
three layers preferably, but not essentially, include
good quality wood veneers. An upper layer 3 of the
10 complete board may be formed from a single veneer
through which are cut sixty-four square openings, having
rounded corners, each such opening receiving a liner 4
that hides the otherwise exposed cut edges of the
corresponding opening. The liners 4 may be made from a
15 synthetic plastics material and alternate liners are
given contrasting colours in both directions that are
parallel to the outer edges of the board, these colours
conventionally, but not absolutely essentially, being
black and white. Contrasting wood colours could be used
20 as an alternative and, if preferred, the liners 4 could
be formed from wood instead of a synthetic plastics
material.

The board, that is illustrated in Figure 1 is
made by firstly cutting the square upper layer 3 from a
25 selected good quality veneer wood panel or, if
preferred, the upper layer 3 can be made in sixty-four
separate pieces for assembly to give two alternate
contrasting wood colours in both directions that are
parallel to the edges of the board 1. A bottom or
30 supporting layer 6 is then cut exactly to the required
square size, being formed from plywood or any other
solid material of sufficient rigidity that is suitable
for the purpose. A second or intermediate layer 5 is
accurately cut to the required square size and may be
35 formed from cardboard, plywood or a rigid grade of
expanded polystyrene, the layer 5 being of the same
thickness as the upper layer 3. The previously

1 mentioned sixty-four square openings, having rounded
corners, are initially formed in the upper layer 3 by
producing die cuts through part of the thickness of that
layer 3. The further manufacture of the board 1 is
5 accomplished by making die cuts to remove the sixty-four
pieces from the upper layer 3 that correspond to the
sixty-four openings therethrough, glueing them to the
bottom panel 6 in corresponding openings formed in the
second layer 5 and glueing the whole assembly of layers
10 3, 5 and 6 together plus the liners 4 and the pieces
that have been excised from the playing squares 2 of the
upper layer 3 and transferred into openings in the
second layer 5. A system of die cut grooves of which
some can be seen in Figure 1 of the drawings assists in
15 maintaining all of the component parts in their
appointed positions during a curing step in a curing
press which step hardens the glue by which said parts
are connected to one another. When the board 1 is to
fit a framework to form part of a box for the playing
20 pieces, no finishing of the board edges is required but,
in other cases, the board edges may be covered with
veneer or timber mouldings as would be expected in a
high quality chess board. If, as is preferred, the
upper layer 3 is formed from a single piece of good
25 quality natural or veneered wood, the upper surface of
the board gives a pleasing undisturbed continuity of
wood grain appearance, the sixty-four openings in the
upper layer 3 being edged by the appropriately
alternately coloured liners 4.

30 Figure 25 of the drawings illustrates an
alternative form of playing board 7 that is less
expensive to produce than is the playing board 1. The
board 7 of Figure 25 comprises a vacuum formed and
appropriately colour printed plastics sheet 8 which
35 sheet 8 is secured by an adhesive to the surface of a
substantially rigid supporting panel 9 formed from
cardboard, plywood or other suitable rigid material. In

1 order to prevent deformation of the plastics sheet 8 by
accidental crushing, the lattice of open spaces between
that sheet 8 and the supporting panel 9 may be filled
with either a latticed intermediate panel or by strips
5 of, for example, polystyrene or cardboard which fill the
otherwise open spaces and provide adequate resistance to
normal crushing and flattening forces.

Other forms of playing board are possible such
as, for example, a unitary moulded construction in which
10 the traditional black and white playing squares are
printed onto the upper surface of the panel prior to, or
after, the moulding of the sixty-four openings therein
that correspond to the sixty-four playing squares of the
board.

15 Turning now to Figures 2 and 3 of the drawings,
it can be seen that the previously described playing
board 1 may form the upper surface or lid of a box 10
that is arranged to contain all thirty-two of the
playing pieces. In addition to the lid or cover
20 afforded by the playing board 1, the box 10 comprises
opposed side walls 11, a bottom 12, end walls 13 (one of
which is removable) and a divider 14 which co-operates
with vertical slots in the side walls 11 to separate the
interior of the box 10 into two different compartments,
25 one for the "black" playing pieces and one for the
"white" playing pieces. The edges of the playing board
1 that affords the lid of the box 10 and the edges of
the box bottom 12 co-operate with horizontal grooves in
the walls 11 and 13, the playing board 1 being slidably
30 removable, after displacement of the appropriate end
wall 13, to obtain access to both compartments of the
box 10.

Figures 4, 5, 6 and 24 illustrate details of the
construction and appearance of a pawn playing piece 15.
35 The pawn wields an axe 16 as would be appropriate for a
foot soldier but other old fashioned weapons may be
substituted, if preferred. The head 17 of the pawn

1 wears a simple helmet and is carried by an upwardly and
downwardly moveable shaft 18 having an abutment 19 at
its lower end which abutment bears against an arm member
20 that carries the axe 16. The arm member 20 is
5 turnable about a pivot 22 and bears against one arm of a
spring 21. Upon pressing downwardly on the head 17 of
the pawn 15, the abutment 19 will turn the arm member 20
in an anti-clockwise direction (as seen in Fig. 4) about
the pivot 22 against the action of the spring 21, thus
10 causing the axe 16 to strike downwardly against any
playing piece occupying the adjoining playing square 2
faced by the pawn 15.

Figures 7, 8, 9, 10 and 24 show a king playing
piece 23 whose construction and operation is very
15 similar indeed to that of the pawn 15 but, in the case
of the king 23, the arm member 20 carries a sword 24 or
other superior hand weapon that is appropriate to the
leader of the "black" or "white" playing pieces. Figure
10 of the drawings shows the king 23 in an attacking
20 attitude, the head 17 of the king having been depressed
by the finger of a player to cause the sword 24 to
strike an opposing playing piece occupying any adjoining
square faced by the king.

Figures 5 and 8 of the drawings are underneath
25 plan views of the pawn 15 and the king 23, respectively.
It can be seen in Figure 5 that the pawn 15 has a square
base 25 whereas Figure 8 shows that the king 23 has an
octagonal base 26. The pawn 15 faces one of the corners
of the square base 25 and it will be apparent that said
30 square base 25 will only fit in the recess of one of the
playing squares 2 of the board 1 with said pawn facing
towards one of the corners of that square 2. Since,
according to the rules of chess, a pawn can only take an
opposing piece by moving one square diagonally forwards,
35 it will immediately be apparent that the base 25 of the
illustrated pawn 15 will only fit in an opening in one
of the playing squares 2 in one of four different

1 positions. Two of those positions are ones in which the
pawn 15 faces diagonally forwards and a learner of the
game will immediately recognise that the appropriate
position for taking an opposing piece is one in which
5 the pawn 15, and thus its axe 16, faces the piece that
is to be taken in a diagonally adjoining square 2. It
is very basic to the game of chess that pawns advance
from one side of the board to the other, where they can
be promoted to either a queen or a knight, and it will
10 be a very slow learner indeed who will not almost
immediately appreciate that the pawns 15 should never
face diagonally rearwards. The octagonal base 26 of the
king 23 enables that king 23 to fit the opening of any
one of the playing squares 2 in an attitude in which it
15 can face any chosen one of the eight (or less if it is
at an edge or corner of the board) immediately adjoining
playing squares 2.

Each queen playing piece 27 (Figs. 11, 12, 13 and
24), each rook/castle playing piece 28 (Figs. 14, 15 and
20 23) and each bishop playing piece 29 (Figs. 16, 17 and
23) can, according to the rules of chess, attack any
opposing piece that is at any distance therefrom on the
board 1, provided only that no other piece intervenes in
a direct straight line between the attacking piece and
25 the opposing playing piece. Queens may move any
distance in any direction in a straight line,
rooks/castles may move any distance in a straight line
that is parallel to one of the edges of the board 1 and
bishops can move any distance in a straight line along a
30 diagonal of the board 1 or in a direction that is
parallel to one of the two diagonals of the board. This
being the case, it is not appropriate for these playing
pieces directly to strike opposing pieces that are to be
taken and, instead, each of them comprises a projectile
35 launcher or cannon 30 in the form of a horizontally
disposed tube of circular cross section whose delivery
end projects from the front of the playing piece in

1 question. Each cannon 30 is arranged to fire a
cylindrical projectile 31 (Figs. 11 and 14) having
rounded ends, it being desirable that the projectiles 31
should be reversible and, for safety reasons, that they
5 should be light in weight and should have no sharp
points nor edges. The projectiles 31 can readily and
inexpensively be produced from synthetic plastics
materials.

In the examples that are being described, the
10 projectiles 31 are "fired" by springs and reference is
additionally made, in this connection to Figures 18 and
19 of the drawings. The head of each playing piece 27,
28 and 29 is rotatable about a substantially vertical
axis afforded by a corresponding shaft 32, each such
15 shaft 32 carrying, at its lowermost end and internally
of the playing piece concerned, a horizontally disposed
cam 33 whose shape can be seen best in Figure 18. Upon
using the head of one of the playing pieces 27, 28 or 29
to rotate the shaft 32 and thus the cam 33, said cam
20 will turn a L-shaped lever 34 about a horizontal pivot
35, that is defined beneath its lower horizontal limb by
the co-operation of a rib and a recess in the base of
the playing piece body, against the action of a helical
compression spring 36 (Figs. 11 and 14) or a leaf spring
25 37 (Figs. 16 and 19). The springs 36 and 37 bear
downwardly upon the upper surfaces of the lower
horizontal limbs of the L-shaped levers 34 and thus tend
to turn those levers in anti-clockwise directions about
the corresponding pivots 35 as seen in Figs. 11, 14, 16
30 and 19 of the drawings. When compressing the spring 36
or 37 by rotating the head of the corresponding piece, a
player will simultaneously insert one of the projectiles
31 into the cannon 30 so that a "ready to fire" or
cocked position approximately as illustrated in Figs.
35 11, 14 and 18 of the drawings is reached. Upon turning
the cam 33 angularly a few degrees further in a
clockwise direction as seen in Figure 18, the curved

1 edge of the cam will lose contact with the upright limb
of the L-shaped lever 34 so that the spring 36 or 37
will snap the lever 34 to substantially the position
shown in Figure 19, its upright limb causing the
5 lightweight projectile 31 that had occupied the cannon
30 to be projected horizontally from the mouth of that
cannon for a sufficient distance to strike an opposing
playing piece even if that playing piece should be at
the opposite corner of the playing board from the
10 position of the attacking piece and thus at the greatest
possible distance therefrom that would ever be required.

All that is necessary to cause the same playing piece
to fire another projectile 31 is to re-load the cannon
30 and to rotate the head of the playing piece through a
15 little less than 360 degrees about the vertical axis of
the shaft 32 thus regaining substantially the position
shown in Figures 11, 14 and 18.

If desired, each bishop 29, rook/castle 28 and
queen 27 may be provided with its own individual
20 projectile 31, the latter being connected to the
interior of the corresponding cannon 30 by a piece of
light cord, string or the like having a length a little
greater than the maximum distance which the projectile
31 will have to travel to reach its target. This
25 substantially eliminates the likelihood of loss of the
projectiles 31 and still further reduces the already
very small danger of injury being caused thereby.

Since the queen 27 can move in any straight
direction from any playing square 2 which it occupies,
30 it has the same octagonal base 26 as does the king 23.
The rook/castle 28, on the other hand, can move only in
directions that are parallel to the edges of the playing
board 1 and accordingly has a square base 38 which is so
orientated with respect to the front of the rook/castle
35 28 (i.e. the side thereof from which the delivery end or
mouth of the cannon 30 projects) that said front will
essentially face in a direction parallel to one of the

1 edges of the playing board 1 when the base 38 fits in
the opening of any playing square 2.

The bishop 16 can move only along diagonals of
the playing board 1 or in directions parallel to either
5 diagonal and accordingly has a square base 39 which is
so orientated with respect to the "front" of the bishop
29 (again the side of the bishop 29 from which the
delivery end or mouth of the corresponding cannon 30
projects) that, when said base 39 is fitted in the
10 opening of any one of the playing squares 2, the bishop
29 will essentially be facing in a direction that is at
45 degrees to any edge of the square playing board 1.

Figure 20 of the drawings illustrates an
alternative to the use of the leaf spring 37 shown in
15 Figures 16 and 19. In Fig. 20, a resilient wire spring
40 has its opposite ends fixed in two anchorages 41 that
extend horizontally inside the front half of the playing
piece body. The ends of the wire spring 40 which are
received in the anchorages 41 merge into aligned
20 horizontal coils 42 and the opposite ends of these two
coils are integrally connected by a loop which bears
downwardly against the free end of the substantially
horizontal limb of the lever 34 thus acting in the same
way as the springs 36 and 37 in tending to turn the
25 lever 34 in an anti-clockwise direction about its pivot
(not visible in Figure 20) to fire one of the
projectiles 31 when the lever 34 is suddenly released by
the cam 33.

Figures 21, 22 and 23 of the drawings illustrate
30 an equestrian knight playing piece 43 which playing
piece 43 is again of the kind whose animation is
arranged to enable the knight directly to strike an
opposing playing piece which it is to take. It will be
remembered that the rules of chess allow a knight to
35 move only to the diagonally opposite corner of any
rectangle of six playing squares 2 whether or not there
are any other playing pieces between the knight and the

1 opposing piece that is to be taken. The knight 43
wields an axe 44 and a shield 45, these parts 44 and 45
being members of an asymmetrical lazy tongs device which
5 shown in Figure 21 to the striking or attacking position
shown in Figure 22 by using finger pressure to push the
head of the knight downwardly towards the body of the
horse. To this end, the top and front of the horse
portion of the equestrian knight 43 afford a guideway
10 into which a slider 46 formed with an elongate slot 47
is downwardly movable, the upper end of the slider 46
carrying the head of the helmeted knight 43. The lower
end of the slider 46 carries a lug 48 and a helical
tension spring 49 is stretched between that lug 48 and
15 an anchorage pin 50 in an upper rear portion of the body
of the horse. A stop pin 51 extends transversely
through the slot 47 in the slider 46 and prevents
movements of that slider 46 beyond positions at which
the pin 51 bears against one or other end of the slot
20 47. The stop pin 51 also acts as a pivot pin of the
lazy tongs device and it will be seen from Figures 21
and 22 of the drawings that said device comprises pairs
of crossed links 52 that are successively pivotally
interconnected at their upper ends and at their lower
25 ends and at the points at which they cross one another.
The axe 44 is an extension of the outermost link of this
device and the greater part of the shield 45 affords a
further link thereof. When the finger of a player
presses downwardly upon the head of the knight, the
30 slider 46 moves downwardly into the body of the horse,
against the action of the helical tension spring 49
until, eventually, the stop pin 51 reaches the upper end
of the slot 47. This downward movement of the slider 46
essentially causes progressive unfolding of the lazy
35 tongs device until substantially the attacking
disposition shown in Figure 22 of the drawings is
reached. The dimensions of the lazy tongs device are

1 such that at least the blade of the axe 4 will strike an
opposing playing piece at the opposite corner of a
rectangle of six playing squares towards which opposite
corner the knight is facing and the asymmetric
5 configuration of the lazy tongs device is such that it
will arch over the tops of any other playing pieces that
may intervene between the knight 43 and the opposing
playing piece that is being attacked. As soon as the
downward finger pressure on the head of the knight is
10 withdrawn, the spring 49 automatically restores the
position shown in Figures 21 and 23 in which position
the lazy tongs device is folded up to regain the
appearance of the axe 44 and the shield 45 being
protectively held by the armoured and helmeted
15 equestrian knight 43. The knight 43 has a base 53 which
is so shaped that, when it fits into the opening of one
of the playing squares 2, it will face towards the
opposite corner of a rectangle of six of those squares
2. It is, of course, up to the player to direct the
20 knight 43 towards the required playing square 2 but the
configuration of the base 53 prevents the knight from
occupying a position in which it is facing, for example,
in a direction parallel to one of the edges of the board
1 or a direction at 45 degrees to any edge of the board
25 1. The base 53 is of octagonal shape, but is not a
regular octagon, having eight sides that are equidistant
from the centre of the octagon. Assuming that the
equestrian knight 43 faces due north, that is to say,
that the blade of the axe 44 is due north from the body
30 of the knight 43 when in the unfolded attacking position
shown in Figure 22, imaginary lines that extend
perpendicularly from the eight octagon sides to its
centre will be distributed around that centre, as
follows, considered in a clockwise direction as seen in
35 plan view. An imaginary due north datum line will be at
0 degrees to due north and the first perpendicular will
be at 26.57 degrees, the second will be at 79.7 degrees,

1 the third will be at 116.57 degrees, the fourth will be
at 169.7 degrees, the fifth will be at 206.56 degrees,
the sixth will be at 260 degrees, the seventh will be at
296.56 degrees, and the eighth will be at 349.7 degrees.

5 As can be seen in Figure 24, in particular, of
the drawings, the various playing pieces may carry
decorative motifs in desired positions such as, purely
for example, at the fronts of the queens 27, kings 23
and pawns 15 but it is emphasised that the decorative
10 motifs shown in the drawing are purely by way of example
and that alternative decorations may, if desired, be
adopted or the playing pieces in question may be left
entirely plain. Purely for example, decorative motifs
may be applied at the backs and the fronts of the
15 various playing pieces and each knight 43 may have such
motifs applied to both sides of its shield 45 for
display when that shield is folded into the
non-attacking or rest position (Figure 21). It has
already been remarked that a basic procedure in the game
20 of chess is to advance pawns towards the opposite sides
of the board where they may be promoted to queens or
knights. In fact, it is within the rules of the game to
promote them to any pieces other than pawns, but, in
practice, only promotions to queens or knights are ever
25 made. In view of the animated nature of the various
pieces, it would be desirable in any chess set produced
in accordance with the invention to provide both the
black and the white sides with at least one extra knight
and, preferably, at least two extra queens, these pieces
30 only being employed when pawn promotions are made and
the initial queen and knights are still in play (i.e.
not "taken"). Thus, a pawn which is promoted to, for
example, an additional queen, merely is removed from the
board and one of the extra queens is substituted. In
35 view of the animation of the playing pieces, this
procedure is considered to be superior to procedures
such as substituting already "taken" and inverted

1 rooks/castles for promoted pawns. Advantageously, but
not essentially, the playing board 1 of a chess set in
accordance with the invention has the openings in its
individual playing squares 2 of such a size that they
5 are substantially 25mm in both breadth and width and are
approximately 3 to 4mm in depth.

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CLAIMS

1. A chess set comprising an eight-by-eight square playing board (1) and two sets of visually distinct playing pieces each comprising eight pawns (15), two knights (43), two bishops (29), two rooks/castles (28), one queen (27) and one king (23), characterised in that each playing piece is animated in such a way as to be operable by a player to cause it physically to attack an opposing playing piece that is to be taken during a move of the game, and characterised in that the bases (26, 38, 39) of the playing pieces and the squares (2) of the board (1) have an interdependent co-operating relationship which is such that the bases (28, 38, 39) of at least the knights (43), bishops (29), rooks/castles (28), queens (27) and kings (23) will not establish the co-operating relationship with any playing squares (2) of the board (1) when facing in a direction that is unallowable in accordance with the traditional rules of the game of chess.

2. A chess set according to claim 1, characterised in that the interdependent co-operating relationship between the playing squares (2) of the board (1) and the bases (26, 38, 39) of the playing pieces comprises substantially identical profiled openings in the playing squares (2) and profiled bases (26, 38, 39) on the playing pieces which bases will only fit the openings when the playing pieces are facing in pre-determined directions on the board (1).

3. A chess set according to claim 2, characterised in that the profiled openings in the playing squares (2) of the board (1) are square or substantially square in shape.

4. A chess set according to any preceding claim, characterised in that the animation of the pawns (15), knights (43) and kings (23) is such that they are operable to cause a held weapon (16, 24, 44) physically

to strike a playing piece occupying any playing square that is allowably attackable in accordance with the traditional rules of the game of chess.

5 5. A chess set according to any preceding claim, characterised in that the animation of the bishops (29), rooks/castles (28) and queens (27) is such that they are operable to launch projectiles (31) with the object of physically striking opposing playing pieces that are to be taken by the attacking pieces in accordance with the
10 traditional rules of the game of chess.

 6. A chess set according to any preceding claim, characterised in that the animation of each playing piece is operable, to cause that piece physically to attack an opposing playing piece, by manipulation of a
15 head (17) of the attacking playing piece.

 7. A chess set according to claim 6 when read as appendent to claim 4, wherein the heads (17) of the pawns (15), knights (43) and kings (23) are depressable downwardly into the bodies thereof to cause levers
20 provided with arm members (20) to move representational weapons (16, 24) carried by those arm members (20) into attacking/striking attitudes.

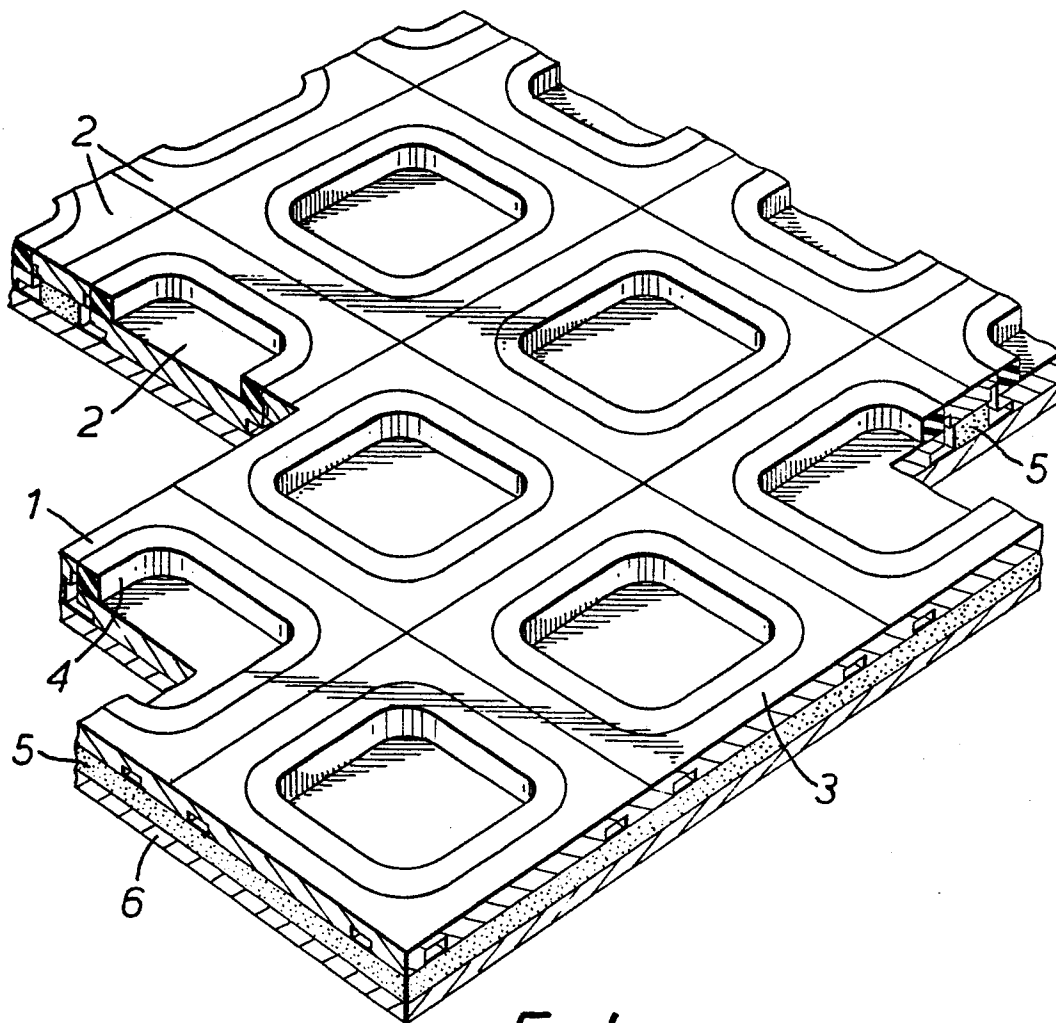
 8. A chess set according to claim 6 when read as appendent to claim 5, wherein the heads of the bishops
25 (29), rooks/castles (28) and queens (27) are manually rotatable, relative to the bodies thereof, to cause a cam (33) to move a lever (34), against the action of a spring (36, 37, 40), with a progressive loading and sudden release action, the construction being such that,
30 upon the sudden release of the lever (34), its spring loading will cause a projectile (31) bearing against the lever (34) to be ejected/fired with sufficient force to reach from one corner of the playing board (1) to the other.

35 9. A chess set according to any preceding claim, wherein the playing board (1) is of a laminated formation comprising an upper layer (3) having an upper

surface formed from natural wood.

10. A video chess game which, in use, provides a visual representation of an eight-by-eight square playing board and two sets of visually distinct playing pieces each comprising eight pawns, two knights, two bishops, two rooks/castles, one queen and one king, characterised in that, during the playing of a chess game, a visual representation is given of an attacking playing piece physically striking, or launching a projectile or laser beam against, an opposing playing piece that is to be taken, said playing piece that is to be taken being shown to collapse, disintegrate or explode before finally vanishing and being replaced in position by the attacking playing piece.

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*FIG. 1.*

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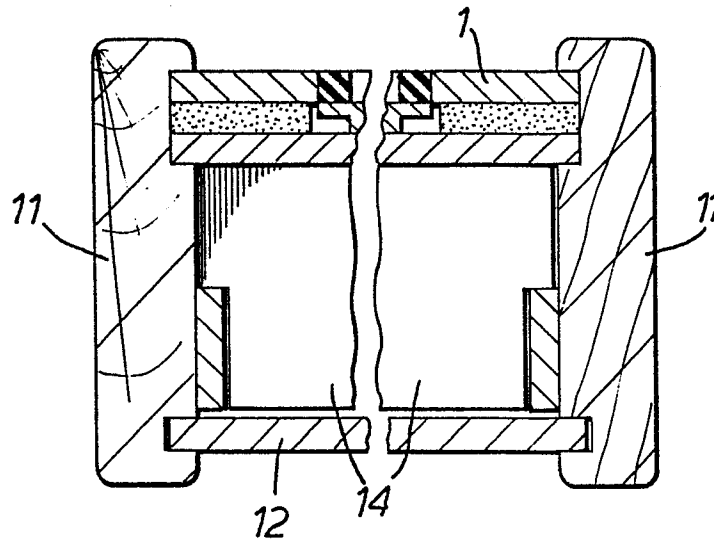


FIG. 2.

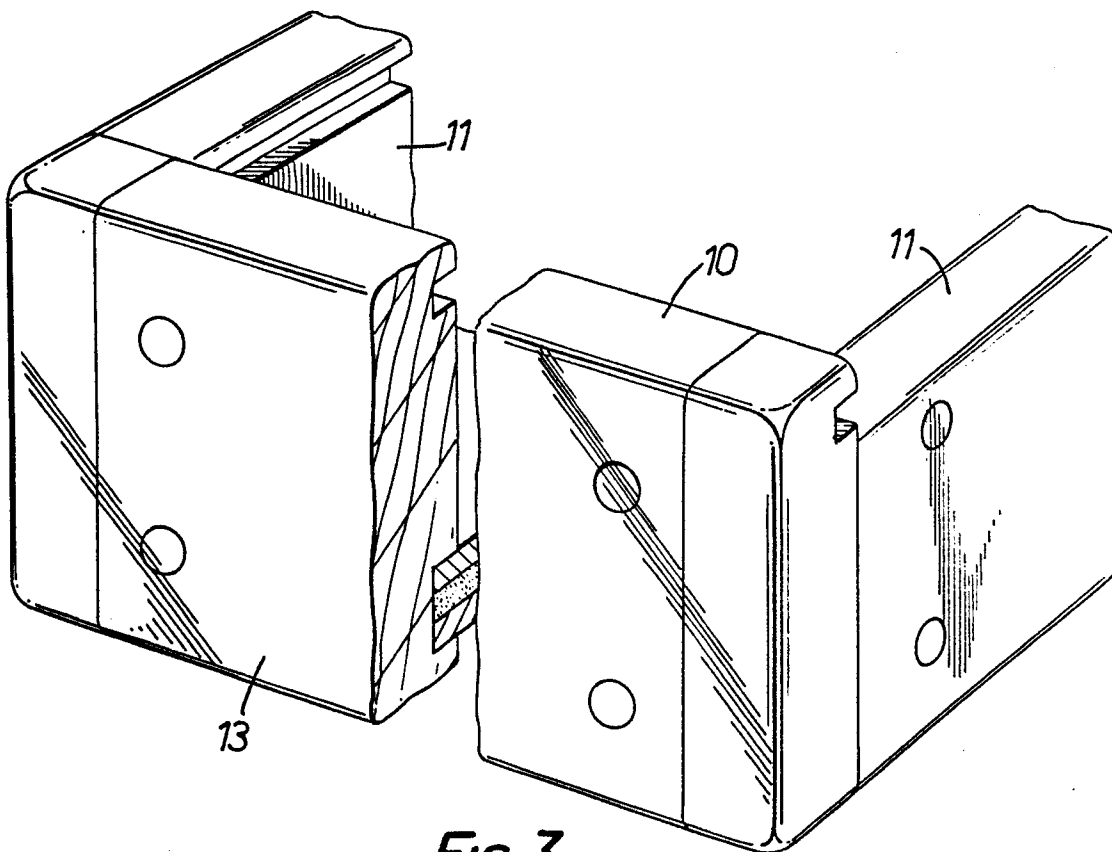


FIG. 3.

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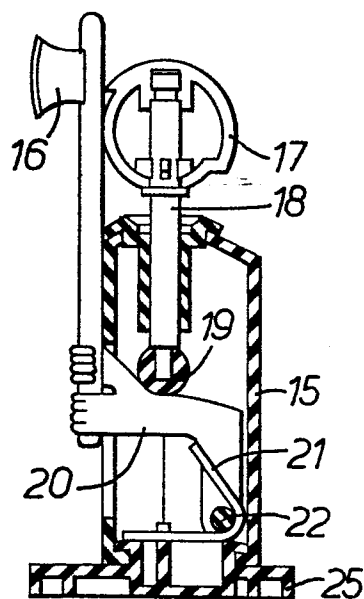


FIG. 4.

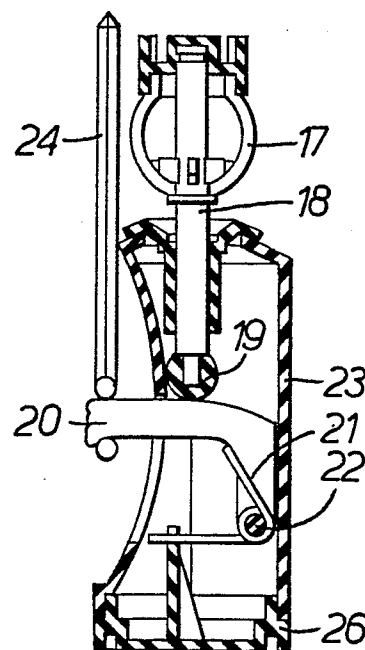


FIG. 7.

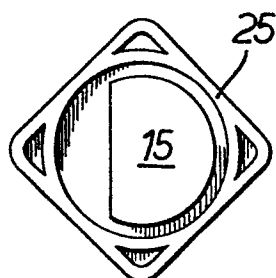


FIG. 5.

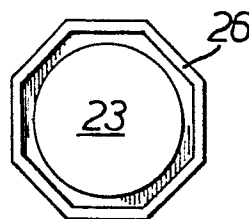


FIG. 8.

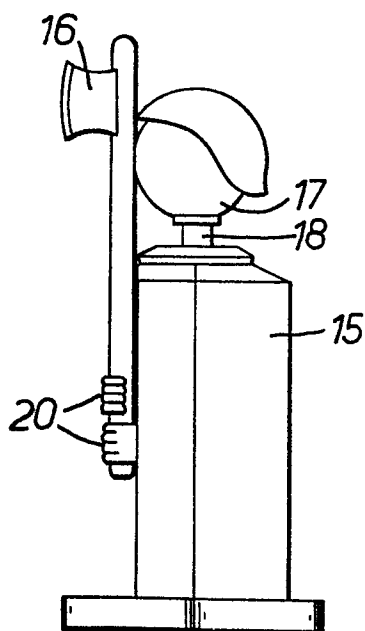


FIG. 6.

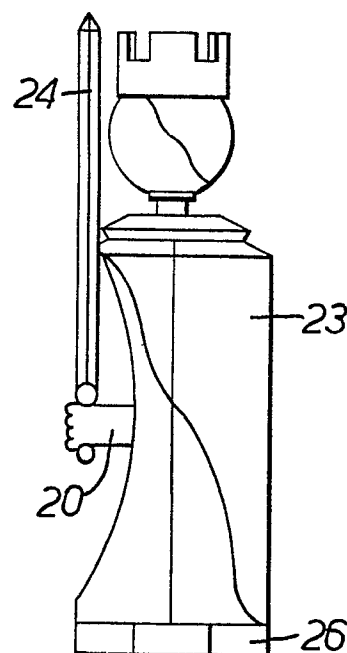


FIG. 9.

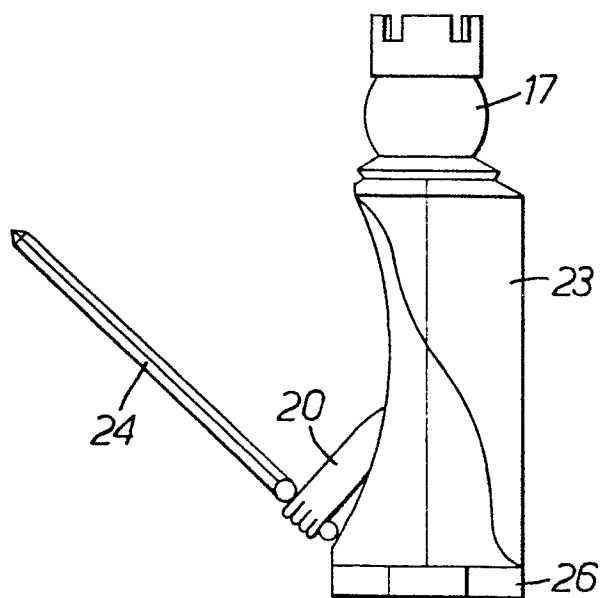


Fig. 10.

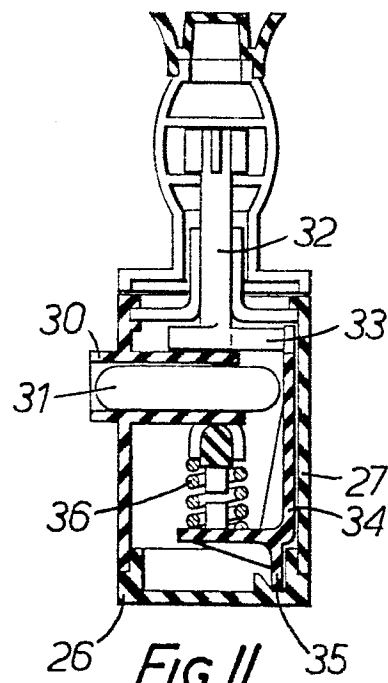


Fig. 11.

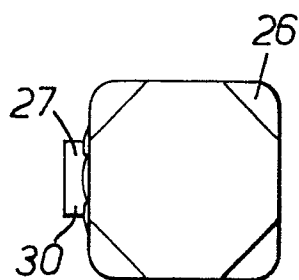


Fig. 12.

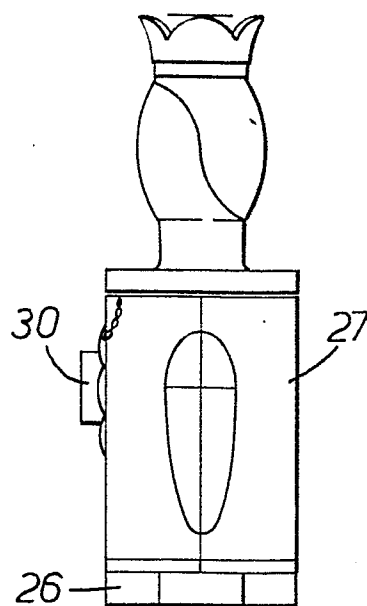
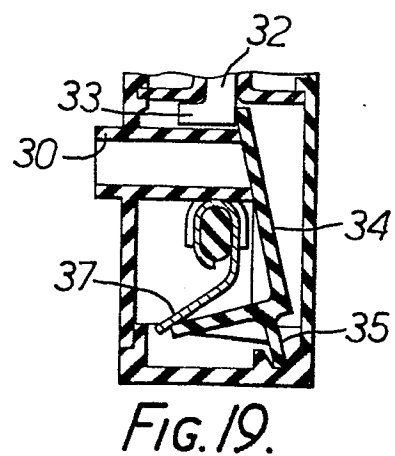
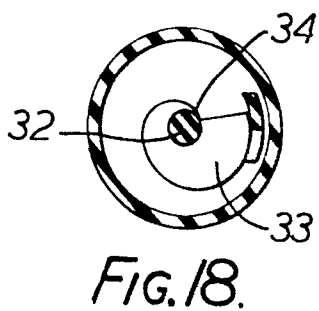
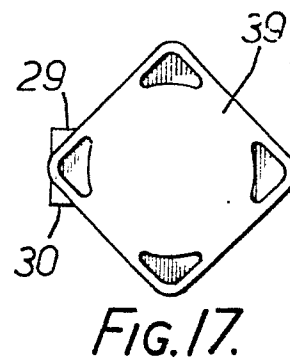
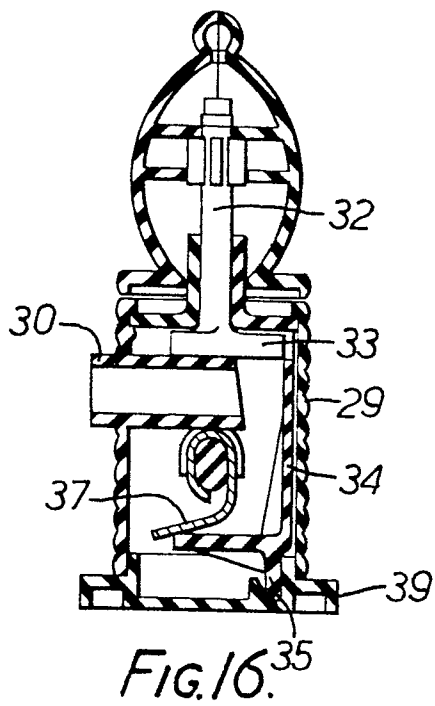
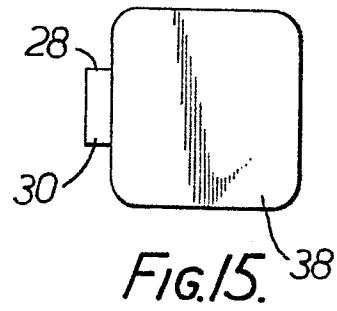
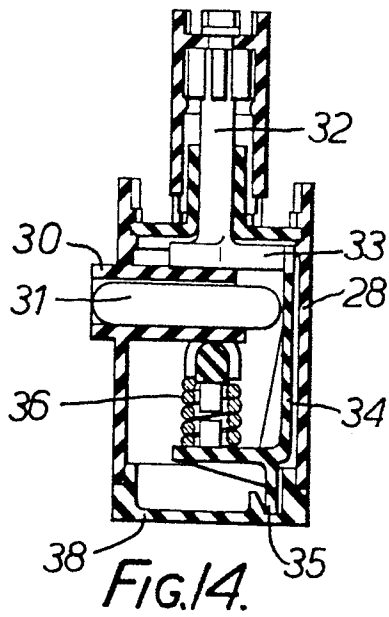


Fig. 13.

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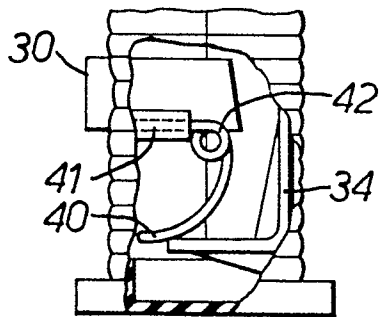


Fig. 20.

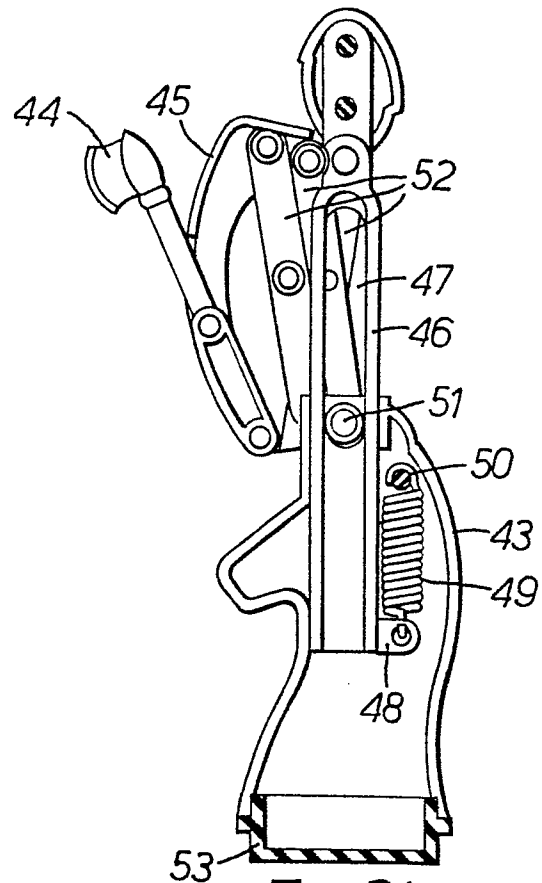


Fig. 21.

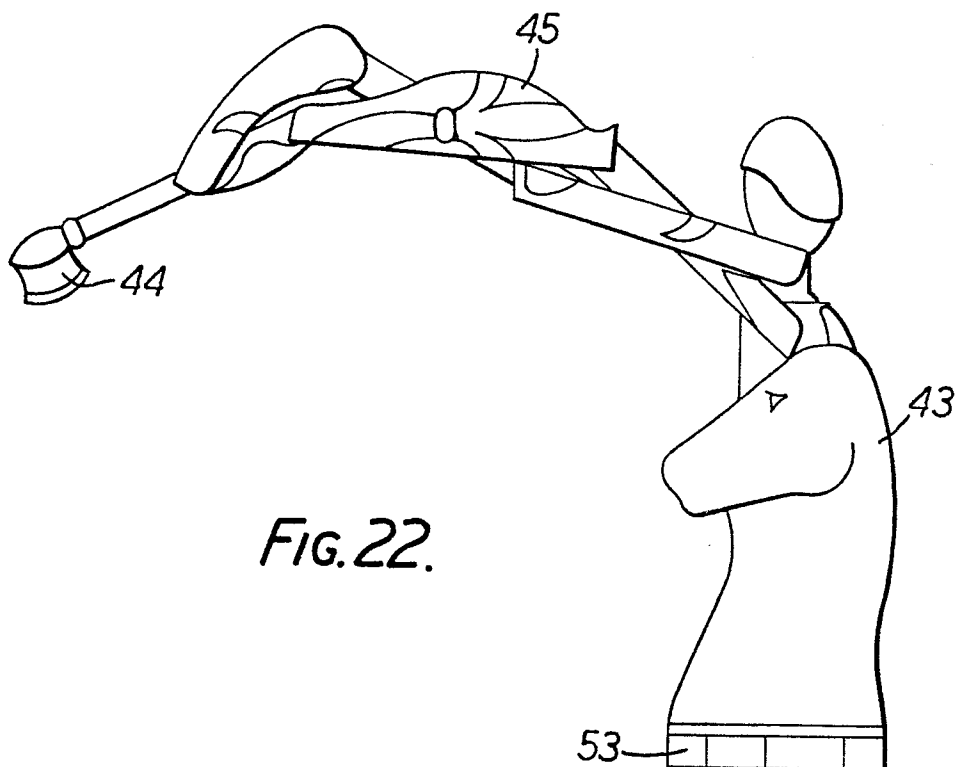


Fig. 22.

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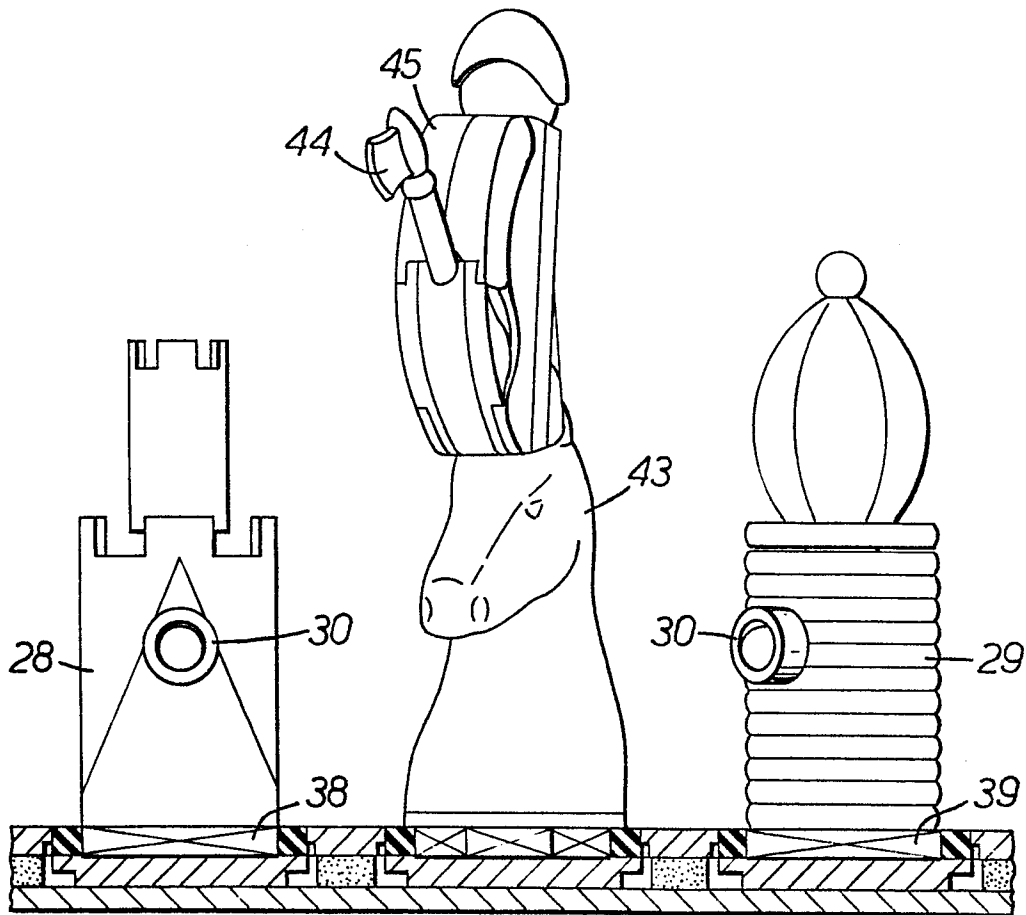


FIG. 23.

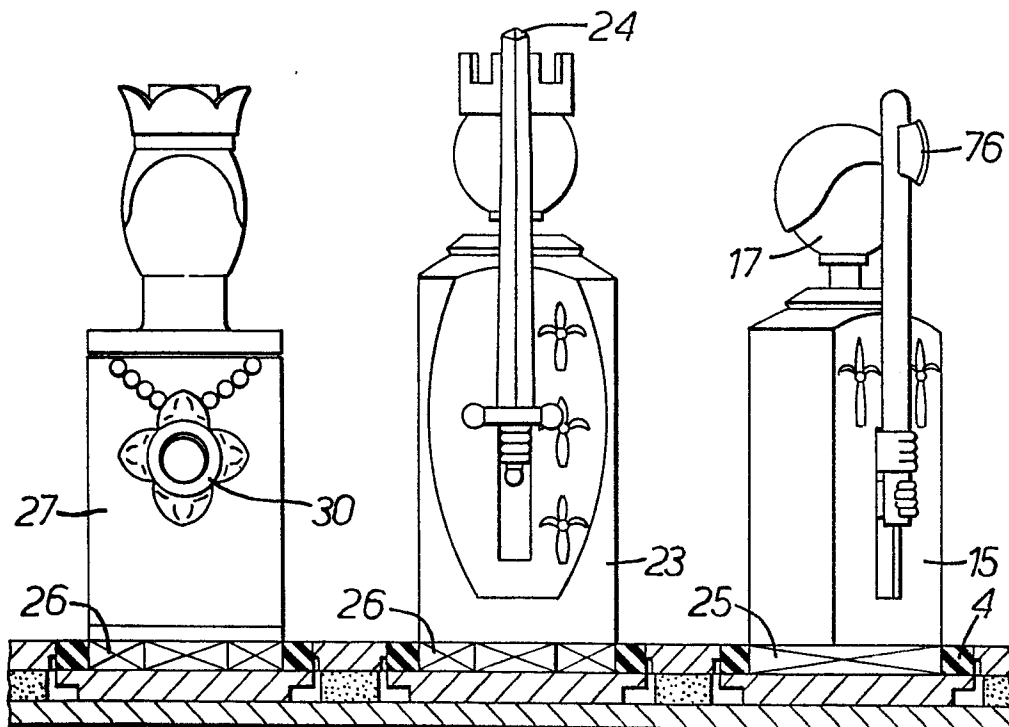
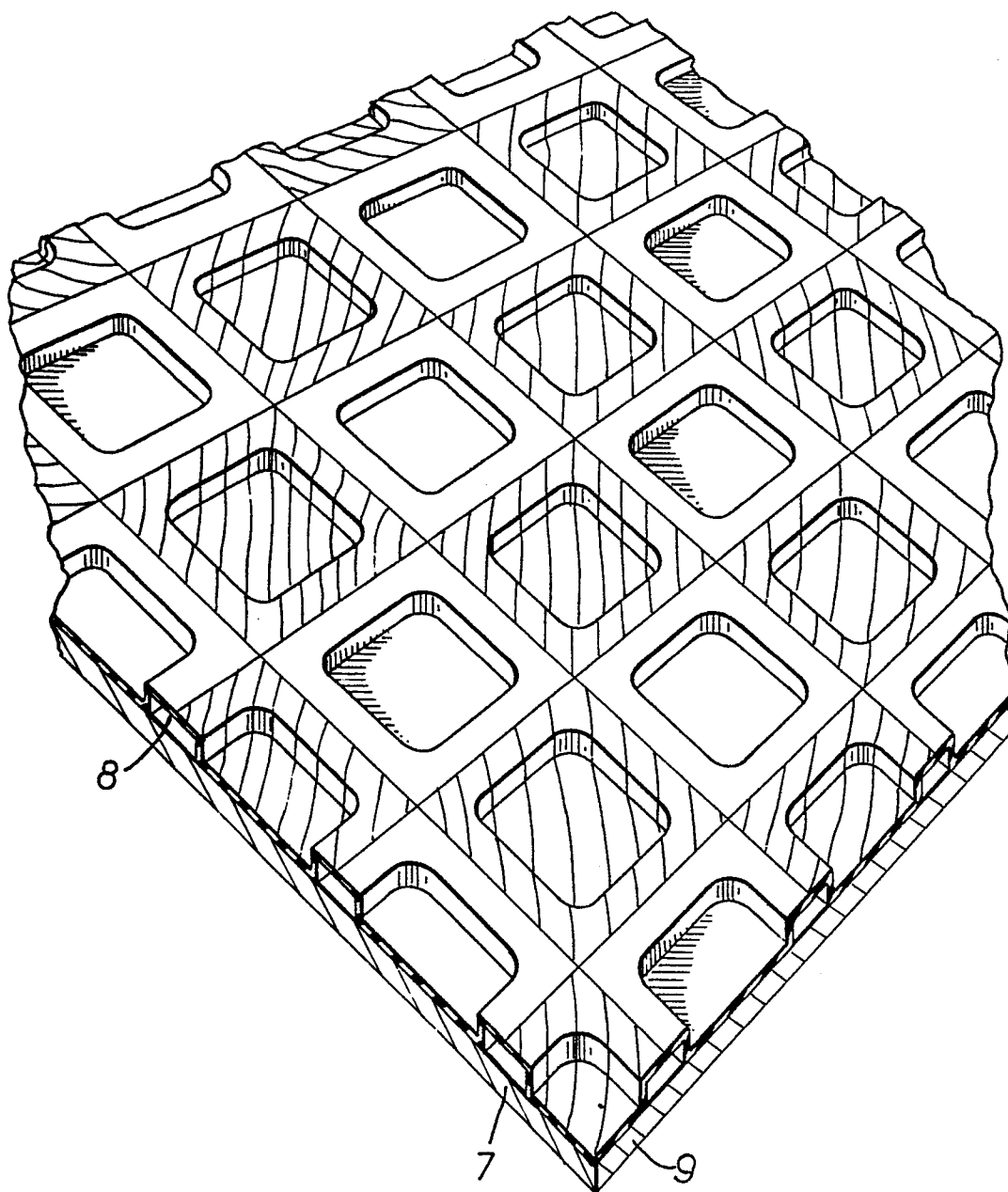


FIG. 24.

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*FIG. 25.*