BINDING IMPLEMENT AND FILE

[Technical Field]

[0001]

The present invention relates to a binding implement for binding objects to be bound such as, for example, a document and storage holder, the object having a plurality of binding holes in its one side edge portion, and to a file provided with the binding implement.

[Background Art]

[0002]

As such a binding implement and file, a filing implement has been conventionally known which includes: a base member having a long groove extending in a predetermined direction; binding legs which are inserted into the base member through through-holes provided in the long groove and have plasticity; sliding members which slide on the base member in a predetermined direction and clamp the binding legs in the long groove in accordance with a sliding position thereof; holding units for holding the binding legs in the long groove, with the binding legs folded, when the binding legs are clamped by sliding of the sliding members. When an object to be bound is bound in the filing implement, the binding legs are inserted into binding

holes of the object to be bound, and then inserted into the base member through the through-holes, the sliding members are slid in one direction, and thus the binding legs are clamped and held in the long groove. Additionally, when removing the bound object, which is bound in the filing implement, the desired bound object is removed in a manner of sliding the sliding members in the other direction, canceling a state where the base member holds the binding legs, removing the base member, and thus, canceling a state where the binding legs are inserted into the binding holes of the bound object (see, for example, Patent Document 1).

[0003]

Additionally, a filing implement has been known which binds an object to be bound such as a paper sheet with binding holes so that the object can be removed, the filing implement including: a first binding plate arranged on one side of a base plate; a second binding plate which is connected to the other side of the base plate through a hinge and turnably arranged in a direction that a free end thereof separates from the first binding plate; binding pipes which extend from the second binding plate to the first binding plate and can penetrate through the binding holes of the object to be bound; an engaging member which is provided on the first binding plate and with which

top ends of the binding pipes are disengagably engaged; and an auxiliary implement which is detachably attached to either the first binding plate or the second binding plate, and in which the auxiliary implement has rod portions capable of being inserted into the binding pipes from one end side, and a portion for preventing a bound object from coming out, the portion being provided on the other end sides of the rod portions. When an object to be bound is bound in the filing implement, a state where the object to be bound is bound is held in a manner of first disengaging the top ends of the binding pipes with the engaging member, inserting the binding pipes into the binding holes of the object to be bound, and re-engaging the engaging member with the tops ends of the binding pipes (see, for example, Patent Document 2).

[0004]

Further, a binding implement has been known, the binding implement including: a binding member in which a front wall portion and a back wall portion are continuously provided via a spine wall portion and an approximately U-shaped cross section thereof is formed; and an engaging plate detachably attached to the binding member, wherein the back wall portion and the spine wall portion are turnably connected to each other via a hinge, pipe-shaped insertion portions, which can be inserted

into binding holes of an object to be bound, are provided on the back wall portion, a holding mechanism for holding a state, where the engaging plate is attached, is provided on the front wall portion, and engaging portions engagable with the insertion portions are provided on the engaging plate. When an object to be bound is bound in the binding implement, a state where the object to be bound is bound is held in a manner of first canceling a state, where the front wall portion holds the engaging plate, at first, removing the engaging plate from the binding member, inserting the insertion portions into the binding holes of the object to be bound, attaching the engaging plate to the front wall portion, holding the engaging plate with the holding mechanism, and further, engaging the engaging portions of the engaging plate with the insertion portions (see, for example, Patent Document 3).

[Patent Document 1] Japanese Laid-Open Patent Publication No. 2007-8127 (pp. 3-9, Figs. 1, 3 and 8)

[Patent Document 2] Japanese Laid-Open Patent Publication No. 2007-203518 (pp. 3-5, Fig. 2)

[Patent Document 3] Japanese Registered Design Publication No. 1232821 (pp. 1-2)

[Disclosure of the Invention]

[Problems to be Solved by the Invention]

[0005]

However, in a constitution disclosed in Patent Document 1, in binding an object to be bound and taking out a bound object, each binding leg is required to be inserted into each binding hole of the object to be bound and pulled out from a through-hole of a base member of a bound object, and further, sliding members are required to be slid. Accordingly, there may be a possibility that operation is complicated, binding and taking out takes time and the object to be bound and the bound object cannot be easily bound and taken out.

[0006]

Additionally, in a constitution disclosed in Patent Document 2 and a constitution disclosed in Patent Document 3, in binding an object to be bound and taking out a bound object, each binding pipe or each insertion portion is required to be inserted into a binding hole of the object to bound and pulled out from a bound object, and top ends of the binding pipes are required to be engaged/disengaged with an engaging member or the insertion portions are required to be engaged/disengaged with engaging portions. Accordingly, there may be a possibility that each operation is complicated, binding an object to be bound and taking out a bound object takes time, and the object to be bound and the bound object cannot be easily bound and

taken out.

[0007]

The present invention has been made in view of the above-described problems, and provides a file in which objects to be bound can be easily bound and from which bound objects can be easily taken out.

[Means for Solving the Problems]

[0008]

The present invention provides a binding implement for binding an object to be bound having a plurality of binding holes in its one side edge portion, the binding implement including a binding implement body and binding members attached to the binding implement body, wherein in the binding implement body, a front wall portion and a back wall portion, in which through-holes are provided respectively, are continuously provided via a spine wall portion, and an approximately U-shaped cross section thereof is formed; the binding member has a first binding member and a second binding member, each of the first and second binding members has a frame portion, which has one end connected to the front wall portion via a first hinge portion and has plasticity, and an insertion portion which is connected to the other end of the frame portion and can be inserted into the through-holes and the binding hole, and the insertion portion

is connected to the other insertion portion via a second hinge portion; and the binding member can vary between a standing state, where the other end sides of the frame portions separate from the binding implement body and tilt in relation to the front wall portion and the insertion portions are not inserted into the through-holes, and a fallen state, where the frame portions are approximately parallel with the front wall portion and the respective insertion portions are inserted into the through-holes.

[0009]

Additionally, there is provided a file body in which a front cover, a spine cover and a back cover are continuously provided in this order, and the binding implement provided on the file body.

[Effect of the Invention]

[0010]

A binding member can be easily switched to a standing state or fallen state and an object to be bound can be easily bound and a bound object can be easily taken out according to the present invention, because a frame portion connected to a front wall portion via a first hinge portion each has plasticity, an insertion portion of a first binding member and an insertion portion of a second binding member are connected to each other

via a second hinge portion, and thus the binding member tries to return to either the standing state or fallen state where the frame portions, which bend when the binding member is in a state between the standing state and the fallen state, do not bend.

[Best Mode for Carrying Out the Invention]

[0011]

Hereinafter, a constitution of a first embodiment of the present invention will be described in detail with reference to Figs. 1 to 7.

[0012]

In a file 1 shown in Fig. 1, objects to be stored (not shown) such as, for example, a document and storage holder are bound, the object having a plurality of binding holes in its one side edge portion.

[0013]

The file 1 includes a file body 5 in which an approximately rectangular front cover 2, an approximately slender rectangular spine cover 3 and an approximately rectangular back cover 4 are integrally continuously provided in this order. A binding implement 8 is provided on the back cover 4, the binding implement 8 having a binding implement body 6 joined to the back cover 4 and two binding members 7 integrally connected to the binding

implement body 6.

[0014]

The file body 5 is formed of, for example, synthetic resin, paper, or the like, in an approximately rectangular shape. Three folding lines 11a, 11b and 11c are disposed, the folding line 11a forms a border between the front cover 2 and the spine cover 3, and the folding line 11b forms a border between the spine cover 3 and the back cover 4. Moreover, the binding implement body 6 is provided between the folding lines 11b and 11c on the back cover 4. The file body 5 can be folded at the folding lines 11a, 11b and 11c. The file 1 is stored in a storing body (not shown) such as, for example, a desk or rack in a state where normally, the binding implement 8 side of the file body 5 is put inside and the front cover 2 and back cover 4 folded at the folding lines 11a and 11b so as to face each other.

[0015]

The binding implement body 6 is formed of, for example, synthetic resin. As shown in Figs. 1 to 3, in the binding implement body 6, a front wall portion 12 and back wall portion 13 approximately parallel with each other are integrally continuously provided via a spine wall portion 14 approximately perpendicular to the front wall portion 12 and back wall portion 13, and a cross section of the body 6 is formed in an approximately

U-shape. Moreover, in the binding implement body 6, the back wall portion 13 is joined to the back cover 4.

[0016]

Additionally, in the binding implement body 6, terminal wall portions 15a and 15b are provided at both ends of the front wall portion 12, back wall portion 13 and spine wall portion 14 in their longitudinal directions, the terminal wall portions 15a and 15b being connected to the front wall portion 12, back wall portion 13 and spine wall portion 14, respectively, and facing each other.

[0017]

The binding implement body 6 is formed in the shape of a box which is constituted by the front wall portion 12, back wall portion 13, spine wall portion 14 and terminal wall portions 15 and 15b and has one opening portion 16 opened in a direction of facing the spine wall portion 14.

[0018]

Two approximately rectangular through-holes 17a, 17a are formed in the front wall portion 12, separating at a predetermined distance. Through-holes 17b, 17b are formed in the back wall portion 13, the holes 17b, 17b being located on extending lines of the through-holes 17a, 17a of the front wall portion 12.

[0019]

Additionally, a flange portion 18 is formed at the end on the opening portion 16 side in the vicinity of the through-hole 17a in the front wall portion 12 in its width direction. Further, an approximately rectangular notch portion 19 is formed at the approximate center of the end on the opening portion 16 side of the front wall portion 12 in the width direction.

[0020]

Each binding member 7 is formed of, for example, synthetic resin, and has a pair of first and second binding members 21 and 22.

[0021]

Rectangular plate-shaped frame portions 23 having plasticity are provided in the first binding member 21 and second binding member 22, respectively. One end of the frame portion 23 is connected to the front wall portion 12, and a rectangular plate-shaped insertion portion 24 is connected integrally with the other end thereof so as to be approximately orthogonal to the frame portion 23. The insertion portion 24 can be inserted into the through-holes 17a and 17b and the binding hole of the object to be bound.

[0022]

A rectangular plate-shaped operating member 25 is

connected integrally with each second binding member 22, on an outer face side of the second binding member 22, at a connection part of the frame portion 23 and the insertion portion 24, and connects the two binding members 7 to each other.

[0023]

Additionally, an operating portion 26 formed as an arc is provided at the approximate center of the end of the operating member 25 in its width direction and at a place facing the notch portion 19 in a fallen state of the binding member 7.

[0024]

As shown in Fig. 4, one end, which is opposite from the insertion portion 24, of each frame portion 23 of the first and second binding members 21 and 22 is connected integrally with the front wall portion 12 of the binding implement body 6 via a first hinge portion 27. Each frame portion 23 is turnable, in relation to the binding implement body 6, on the first hinge portion 27. Additionally, the insertion portion 24 is connected to the other end of each frame portion 23. Further, top ends, each which is opposite from the end on the frame portion 23 side of the insertion portion 24, of the pair of insertion portions 24 of the first and second binding members 21 and 22 are integrally connected to each other via a second hinge portion 28. Each insertion portion 24 is turnable on the second hinge

portion 28 so that proximal portions on the frame portion 23 sides come into contact with and separate from each other. The insertion portions 24 can be inserted into the through-holes 17a and 17b in a state approximately parallel with each other. Furthermore, the operating member 25 is integrally connected to the second binding members 22 via third hinge portions 29.

[0025]

The binding member 7 can vary between a standing state, where as shown in Fig. 2, the insertion portion 24 side of each frame portion 23 of the first and second binding members 21 and 22 separates from and tilts in relation to the front wall portion 12, and the insertion portions 24 of the first and second binding members 21 and 22 form an approximate V-shape and are not inserted into the through-holes 17a and 17b, and a fallen state, where as shown in Fig. 3, each frame portion 23 is approximately parallel with the front wall portion 12 and the back wall portion 13, and the insertion portions 24 of the first and second binding members 21 and 22 are approximately parallel with each other and inserted into the through-holes 17a and 17b.

[0026]

An engaging portion 30, which is formed in a recessed shape, is provided on three faces on an outer face side except

a face, which faces the other insertion portion 24 in the fallen state, in the vicinity of the top end, which is opposite from each frame portion 23, of each insertion portion 24 of the first and second binding members 21 and 22.

[0027]

Additionally, a portion to be engaged 31 engagable with the engaging portion 30 is formed, on the front wall portion 12 side of a peripheral edge of the through-hole 17b of the back wall portion 13, in a projected shape in relation to the back wall portion 13 side of the peripheral edge of the through-hole 17b. The engaging portion 30 and the portion to be engaged 31 do not engage with each other normally when the insertion portion 24 is only inserted into the through-hole 17b, however, they engage with each other when for example, outer force such as weights of objects to be bound is applied to the insertion portion 24 and the engaging portion 30 moves toward the side of the portion to be engaged 31.

[0028]

Next, operation of the first embodiment will be described.

[0029]

When an object to be bound is bound in the file 1, first, the file body 5 folded at the folding lines 11a and 11b is unfolded by opening the front cover 2 and the back cover 4.

[0030]

In the binding implement 8, in which the binding members 7 are in the fallen state, fingers are hooked on the operating portion 26 of the operating member 25, the operating member 25 is pulled up so as to separate from the front wall portion 12, and the binding members 7 are set to the standing state.

[0031]

A side edge portion on the binding hole side of the object to be bound is inserted into the spine wall portion 14 from the opening portion 16 of the binding implement body 6. Here, both ends of the side edge portion of the object to be bound are placed along the terminal wall portions 15a and 15b, and the object to be bound is inserted along the terminal wall portions 15a and 15b.

[0032]

The operating member 25 is pushed down to the front wall portion 12 side with the side edge portion on the binding hole side of the object to be bound inserted into the binding implement body 6, and the binding members 7 are set to the fallen state. When the binding members 7 are in the fallen state, each insertion portion 24 is inserted into the through-hole 17a, the binding hole of the object to be bound and the through-hole 17b, and holds a state where the object to be bound is kept bound as

shown in Fig. 5.

[0033]

Additionally, when a bound object is taken out from the file 1, fingers are hooked on the operating portion 26 of the operating member 25, the operating member 25 is pulled up so as to separate from the front wall portion 12, and the binding members 7 are set to the standing state. Since the binding members 7 are set to the standing state, the state is canceled where insertion portions 24 are inserted into the through-hole 17a, the binding hole of the bound object and the through-hole 17b.

[0034]

The bound object can be freely taken out after the cancellation of insertion of the insertion portions 24 in the binding holes, and thus, a desired bound object can be taken out.

[0035]

In the above-described file 1, each frame portion 23 connected to the front wall portion 12 via the first hinge portion 27 has plasticity, on the other hand, the insertion portion 24 connected to each frame portion 23 has plasticity extremely lower than that of the frame portion 23, the insertion portions 24 of the first and second binding members 21 and 22 are connected

to each other via the second hinge portion 28, and thus, the frame portions 23 are bent when the binding member 7 is in a state between the standing state and the fallen state by outer force.

[0036]

That is, assuming that the insertion portions 24 of the first and second binding members 21 and 22 are not connected to each other, top ends of the insertion portions 24 of the first and second binding members 21 and 22 can move along a circle as shown in Fig. 6(a), the circle having a center at the first hinge portion 27 and a radius corresponding to a line segment extending from the first hinge portion 27 to the second hinge portion 28, and being shown by a two-dot chain line. However, since the insertion portions 24 of the first and second binding members 21 and 22 are connected via the second hinge portion 28, the insertion portion 24 is prevented from moving along the circle shown by the two-dot chain line when the first binding member 21 and second binding member 22, respectively, are in the state between the standing state and the fallen state as shown in Fig. 6(b). When the first binding member 21 and second binding member 22, respectively, receive outer force causing them to move between the standing state and the fallen state, each top end of the insertion portions 24 of the first

and second binding members 21 and 22 is forcibly moved out of the circle shown by the two-dot chain line between the standing state and the fallen state. Thus, stress is concentrated to each frame portion 23 having plasticity, and the frame portion 23 is bent.

[0037]

The bent frame portion 23 tries to snap back from a bent state to a non-bent state. Accordingly, the binding member 7 is easily switched to either the standing state or the fallen state, where the frame portions 23 are not bent, by bending of the frame portions 23 between the standing state and the fallen state. Since switching is easily made between the standing state and the fallen state, an object to be bound can be easily bound and a bound object can be easily taken out.

[0038]

Additionally, since the binding member 7 is more easily stabilized in the standing state or fallen state, in which the frame portions 23 are not bent, compared with a state where the frame portions 23 are bent between the standing state and the fallen state, the binding member 7 is easily held in the standing state or fallen state when outer force is not applied. Accordingly, a state can be held where the binding members 7 are set to the fallen state and objects to be bound are kept

bound.

[0039]

The first hinge portion 27 is further made as a thin hinge formed integrally with the front wall portion 12 and the frame portion 23. The second hinge portion 28 is made as a thin hinge formed integrally with the insertion portions 24 of the first and second binding members 21 and 22. The third hinge portion 29 is made as a thin hinge formed integrally with the operating member 25 and the frame portion 23. Thus, since the whole binding implement 8 can be formed of the same material such as, for example, synthetic resin, the binding implement 8 can be easily manufactured.

[0040]

The folding line 11c is provided on the back cover 4, the back cover 4 is easily bent outward at the folding line 11c, and thus, one side portion, in which a plurality of binding holes are formed, of an object to be bound is folded at the back wall portion 13 with the object bound in the binding implement body 6 joined to the back cover 4. Therefore, objects to be bound can be easily read.

[0041]

Only by pulling up or pushing down the operating member 25, to which the two binding members 7 are respectively connected,

in relation to the binding implement body 6 by one-touch operation, the two binding members 7 can be switched to the standing state or fallen state together. Therefore, operability can be improved and an object to be bound can be easily bound and a bound object can be easily taken out.

[0042]

Additionally, the operating portion 26 is provided in the operating member 25, the notch portion 19 is provided in the front wall portion 12, and thus, a user can easily hook his (her) fingers on the operating portion 26 and can easily operate the operating member 25 in switching the binding implement from a fallen state to a standing state. Therefore, the binding member 7 can be easily switched from the fallen state to the standing state.

[0043]

Since in the binding implement body 6, the terminal wall portions 15a and 15b connected to the front wall portion 12, back wall portion 13 and spine wall portion 14, respectively, are provided at both ends of the front wall portion 12, back wall portion 13 and spine wall portion 14 in their longitudinal directions, when an object to be bound is inserted into the binding implement body 6, binding holes of the object to be bound can be placed at a position, where the insertion portions

24 can be inserted into the binding holes, by placing both ends of a side edge portion on the binding holes side of the object to be bound along the terminal wall portions 15a and 15b. Therefore, an object to be bound is difficult to shift in position, and can be smoothly bound.

[0044]

Additionally, even if the terminal wall portions 15a and 15b of the file body 5 are vertically directed with the insertion portions 24 inserted into the binding holes of the object to be bound, the object to be bound is difficult to move vertically by the terminal wall portions 15a and 15b, enlargement of binding holes of an object to be bound and damage of the binding implement 8 due to movement of the object to be bound can be prevented.

[0045]

The insertion portion 24 is only inserted into the through-holes 17a and 17b as shown in Fig. 5 in a normal state where the binding member 7 is only switched to the fallen state.

[0046]

Here, as shown in Fig. 7(a), when the weights of objects to be bound, which are bound in the file 1 and shown by two-dot chain lines, are applied from the spine wall portion 14 to the opening portion 16 in a state where, for example, the file 1 is tilted so that the spine wall portion 14 is located at the

upper side, the engaging portions 30 located at a face on the opening portion 16 side of the insertion portion 24 are engaged with the portions to be engaged 31 of the peripheral edge of the through-hole 17b by the weights of the objects to be bound.

[0047]

Additionally, as shown in Fig. 7(b), when the weights of objects to be bound, which are bound in the file 1 and shown by two-dot chain lines, are applied from the first binding member 21 to the second binding member 22, that is, from the terminal wall portion 15a to the terminal wall portion 15b, in a state where, for example, the file 1 is tilted so that the terminal wall portion 15a is located at the upper side, the engaging portions 30 on the terminal wall portion 15b side of the insertion portions 24 of the second binding member 22 are engaged with the portions to be engaged 31 of the peripheral edge of the through-hole 17b by the weights of the objects to be bound.

[0048]

Additionally, as shown in Fig. 7(c), when the weights of objects to be bound, which are bound in the file 1 and shown by two-dot chain lines, are applied from the second binding member 22 to the first binding member 21, that is, from the terminal wall portion 15b to the terminal wall portion 15a, in a state where, for example, the file 1 is tilted so that

the terminal wall portion 15b is located at the upper side, the engaging portions 30 on the terminal wall portion 15a side of the insertion portions 24 of the first binding member 21 are engaged with the portions to be engaged 31 of the peripheral edge of the through-hole 17b by the weights of the objects to be bound.

[0049]

Since the engaging portion 30 is thus formed in the vicinity of the top end, which is opposite from the frame portion 23, of the insertion portion 24, the insertion portion 24 moves by the weights of objects to be bound, etc., with the insertion portion 24 inserted into the through-hole 17b. Thus, the engaging portion 30 is engagable with the peripheral edge of the through-hole 17b and the insertion portion 24 can be held in an inserted state. Accordingly, weights of objects to be bound or other outer force, etc., can be prevented from canceling the inserted state of the insertion portions 24. Additionally, damage of the binding implement body 6 and binding members 7 due to cancellation of the inserted state can be prevented.

[0050]

Further, since the portion to be engaged 31 is formed on the front wall portion 12 side of the peripheral edge of the through-hole 17b, the engaging portion 30 can be more firmly

engaged. Therefore, a retaining force of an inserted state can be improved and the inserted state can be made more difficult to cancel.

[0051]

Moreover, the binding implement 8 is provided on the file body 5 of the file 1 in the above embodiment, however, it may be singly used without being provided on the file body 5.

[0052]

In the file 1, the binding implement body 6 is provided on the back cover 4, however, it may be provided at any place on the file body 5.

[0053]

Additionally, although the binding implement body 6 is provided on the file body 5 by joining, any method may be applicable so long as the binding implement body 6 can be fixed to the file body 5.

[0054]

In the file body 5, although the front cover 2, back cover 4 and spine cover 3 are integrally formed and partitioned by the folding lines 11a and 11b, they may be constituted by different sheet bodies, respectively, and the respective sheet bodies may be connected. Additionally, it is preferable to provide the folding line 11c on the back cover 4, because the

operability can be improved. However, it is allowable not to provide the folding line 11c.

[0055]

In the binding implement 8, although the binding implement body 6 and the binding members 7 are integrally formed, they may be separately formed and connected to each other. Additionally, the binding implement body 6 and the binding member 7 may be formed of different materials, respectively, in the case of being separately formed.

[0056]

It is preferable to provide the terminal wall portions 15a and 15b in the binding implement body 6, because an object to be bound is difficult to shift in position and can be smoothly bound in being bound. However, it is allowable not to provide the terminal wall portions 15a and 15b.

[0057]

The through-holes 17a and 17b are formed in an approximate rectangular shape. However, so long as the shape of the insertion portion 24 is insertable into binding holes of an object to be bound, the through-holes 17 and 17b may be formed in, for example, a circular shape.

[0058]

Although the two binding members 7 are provided, the number

thereof can be properly set so long as binding member(s) can hold objects to be bound in the fallen state. Additionally, the number of through-holes 17a and 17b can be set in accordance with the number of binding members 7.

[0059]

Additionally, it is preferable to provide the operating member 25 on the binding members 7, because the operability can be improved. However, it is allowable not provide the operating member 25. Additionally, in the case of providing the operating member 25, the operating member 25 may be connected to not each second binding member 22 but each first binding member 21 of a plurality of the binding members 7. Further, although the operating member 25 is integrally connected to the first binding members 21 or second binding members 22, it may be separately formed.

[0060]

Additionally, it is preferable to provide the operating portion 26 in the operating member 25 and provide the notch portion 19 at a portion, where the notch portion 19 faces the operating portion 26, of the front wall portion 12 in the fallen state, because the binding member 7 can be easily switched from the fallen state to the standing state. However, neither the operating portion 26 nor the notch portion 19 may be provided.

[0061]

In the first and second binding members 21 and 22, the frame portion 23 and the insertion portion 24 are approximately perpendicularly connected to each other. However, so long as the insertion portion 24 is insertable into the through-holes 17a and 17b and binding holes of an object to be bound in the fallen state, any constitution may be applicable.

[0062]

Additionally, in the first and second binding members 21 and 22, although the frame portion 23 and the insertion portion 24 are integrally formed, they may be separately formed and may be connected to each other.

[0063]

The frame portion 23 can be properly formed of not only synthetic resin but a material having plasticity. Additionally, the shape of the frame portion 23 is not limited to the rectangular plate shape, and can be properly set.

[0064]

Additionally, the shape of the insertion portion 24 is not limited to the rectangular plate shape, and can be properly formed to, for example, a rod shape, so long as the insertion portion 24 is insertable into the through-holes 17a and 17b and binding holes of an object to be bound.

[0065]

It is preferable to form the first hinge portion 27 integrally with the frame portion 23 and the front wall portion 12 with use of synthetic resin and form the second hinge portion 28 integrally with the insertion portions 24 of the first and second binding members 21 and 22 with use of synthetic resin, because the whole binding implement 8 can be integrally formed of the same material and easily manufactured. However, other members each serving as a hinge, for example, may be attached in place of the first hinge portion 27 and the second hinge portion 28 so that the frame portion 23 and the insertion portion 24 can be more accurately turned.

[0066]

Although the recessed engaging portion 30 is provided in the vicinity of the top end, which is opposite from the frame portion 23, of the insertion portion 24, it is allowable not to provide the engaging portion 30. In the case of providing the engaging portion 30, the engaging portion 30 may be formed on not the three outer side faces of each of the insertion portions 24, which are approximately parallel with each other in the fallen state, but on only one or two of the three outer side faces.

[0067]

Further, it is preferable to form the portion to be engaged 31 at the peripheral edge of the through-hole 17b, because the engaging portion 30 can be easily engaged with the peripheral edge of the through-hole 17b. However, it is allowable not to form the portion to be engaged 31.

[0068]

Next, a second embodiment will be described with reference to Figs. 8(a) and 8(b). Moreover, the same symbols are attached to the same components as those of the above embodiment, and description thereof will be omitted.

[0069]

As shown in Figs. 8(a) and 8(b), each frame portion 23 of the first and second binding members 21 and 22 is formed by two rectangular plate-shaped frame bodies 33a and 33b.

[0070]

One end of the frame body 33a is connected to the front wall portion 12 via the first hinge portion 27, and the other end thereof is connected to the insertion portion 24.

[0071]

Additionally, one end of the frame body 33b is connected to the front wall portion 12 via a fourth hinge portion 32, the other end thereof is connected to the frame body 33a via a fifth hinge portion 34, and the frame body 33b can be turned,

in relation to the frame body 33a, on the fifth hinge portion 34. Further, a sixth hinge portion 35 is provided in the frame body 33b. In this constitution, when the first binding member 21 and second binding member 22, respectively, receive outer force causing the binding member 7 to switch from the standing state to the fallen state, the frame body 33a is first bent by concentration of stress between the other end of the frame body 33a and the fifth hinge portion 34. When the first binding member 21 and second binding member 22 receive a larger outer force, the stress concentrated between the other end of the frame body 33a and the fifth hinge portion 34 is transmitted to a portion, between the first hinge portion 27 and the fifth hinge portion 34, of the frame body 33a and the frame body 33b. When the binding member 7 is switched to the fallen state, the frame body 33b is folded, toward the frame body 33a, at the sixth hinge portion 35.

[0072]

Since the frame portion 23 is thus constituted by the two frame bodies 33a and 33b, larger outer force is required when the binding member 7 is switched from the standing state to the fallen state. That is, larger outer force is required also when the binding member 7 is switched from the fallen state to the standing state. Accordingly, the standing state and

the fallen state can be more stably held, and therefore, an object to be bound can be more reliably bound.

[0073]

Moreover, although the frame portion 23 is constituted so as to form by the two frame bodies 33a and 33b in the second embodiment, the number of frame bodies 33 is not limited to two and can be properly set. Further, the number of frame bodies 33 of the frame portion 23 of the first binding member 21 may be different from that of frame portion 23 of the second binding member 22.

[0074]

Additionally, in the constitution that the frame portion 23 is formed by the plurality of frame bodies 33, the end of at least one of the frame bodies 33 may be connected to the front wall portion 12, and the insertion portion 24 may be connected to any of the frame bodies 33.

[Brief Description of the Drawings]

[0075]

Fig. 1 is a perspective view showing a file of a first embodiment of the present invention.

Fig. 2 is a partial perspective view of a binding implement of the file thereof.

Fig. 3 is a partial perspective view of the binding

implement of the file thereof.

Fig. 4 is a plan view of the binding implement of the file thereof.

Fig. 5 is a partial cross-sectional view of a state where the binding implement of the file thereof is in a fallen state.

Fig. 6(a) is a partial plan view of a state where the binding implement of the file thereof is in a standing state, and Fig. 6(b) is a partial plan view of a state where the binding implement of the file thereof is in a state between the standing state and the fallen state.

Figs. 7(a) to 7(c) are partial cross sectional views each showing engagement of engaging portions of the file.

Fig. 8(a) is a partial perspective view showing a file of a second embodiment of the present invention, and Fig. 8(b) is a partial plan view showing the file of the second embodiment of the present invention.

[Description of the Symbols]

[0076]

1: File

2: Front cover

3: Spine cover

4: Back cover

5: File body

6: Binding implement body

7: Binding member

8: Binding implement

12: Front wall portion

13: Back wall portion

14: Spine wall portion

15a: Terminal wall portion

15b: Terminal wall portion

16: Opening portion

17a: Through-hole

17b: Through-hole

21: First binding member

22: Second binding member

23: Frame portion

24: Insertion portion

27: First hinge portion

28: Second hinge portion

30: Engaging portion

What is claimed is:

1. A binding implement for binding an object to be bound having a plurality of binding holes in its one side edge portion, the binding implement comprising:

a binding implement body; and

binding members attached to the binding implement body,

wherein in the binding implement body, a front wall portion and a back wall portion, in which through-holes are provided respectively, are continuously provided via a spine wall portion, and an approximately U-shaped cross section thereof is formed,

the binding member has a first binding member and a second binding member, each of the first and second binding members has a frame portion, which has one end connected to the front wall portion via a first hinge portion and has plasticity, and an insertion portion which is connected to the other end of the frame portion and can be inserted into the through-holes and the binding hole, and the insertion portion is connected to the other insertion portion via a second hinge portion, and

the binding member can vary between a standing state, where the other end sides of the frame portions separate from the binding implement body and tilt in relation to the front wall portion and the insertion portions are not inserted into the through-holes, and a fallen state, where the frame portions

are approximately parallel with the front wall portion and the respective insertion portions are inserted into the through-holes.

2. The binding implement according to claim 1,

wherein in the binding implement body, terminal wall portions being connected to the front wall portion, back wall portion and spine wall portion, respectively, are provided at both ends of the front wall portion, back wall portion and spine wall portion in their longitudinal directions, and

the binding implement body is formed in the shape of a box which is constituted by the front wall portion, back wall portion, spine wall portion and terminal wall portions, and has one opening portion.

3. The binding implement according to claim 1 or 2,

wherein the insertion portion has an engaging portion, which is formed in a recessed shape, in the vicinity of the top end opposite from the frame portion, and

the engaging portion can be engaged with a peripheral edge of the through-hole with the insertion portion inserted into the through-holes.

4. A file comprising:

a file body in which a front cover, a spine cover and a back cover are continuously provided in this order; and

the binding implement according to any of claims 1 to 3 provided on the file body.