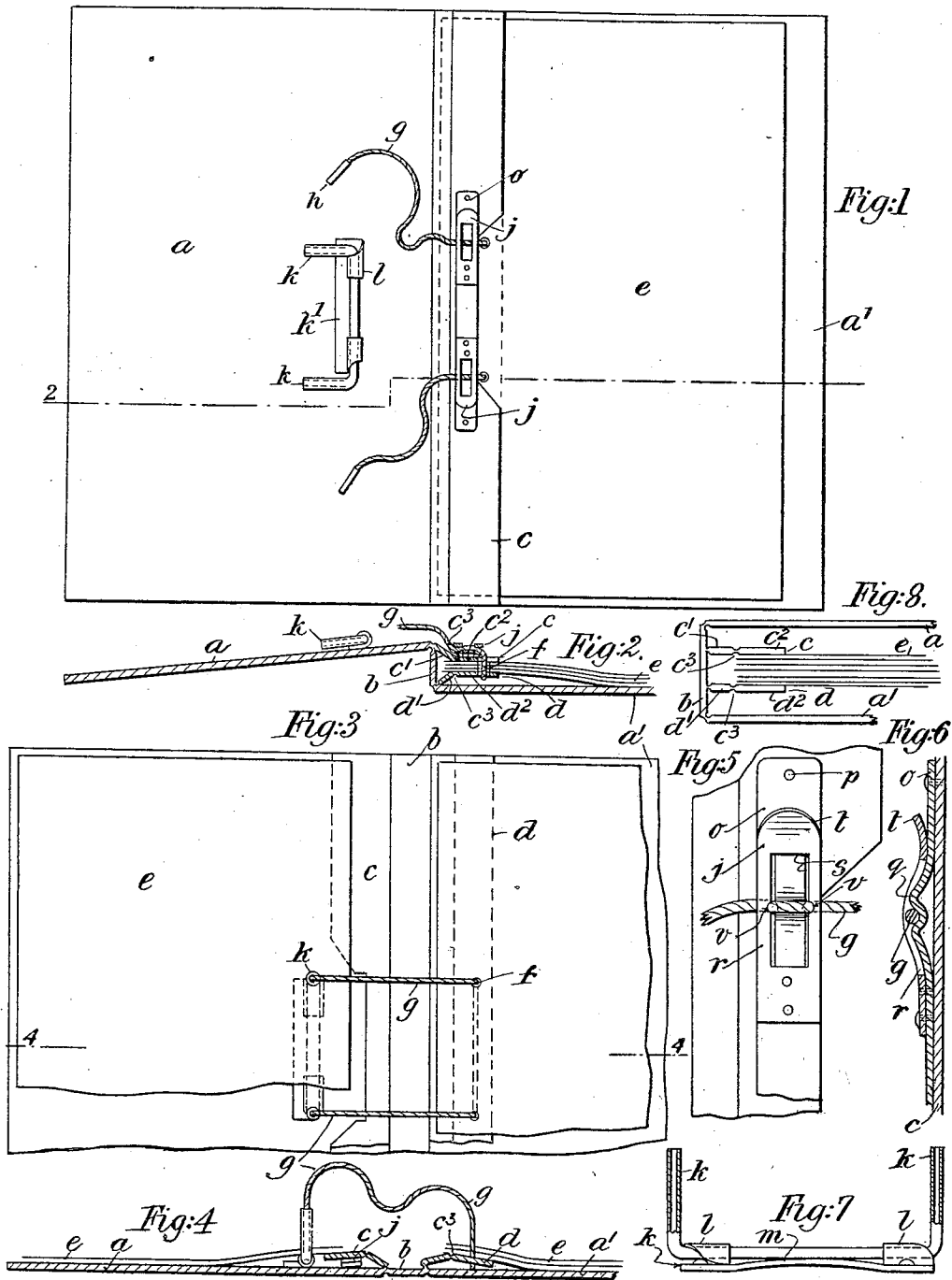


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 BINDER FOR LOOSE SHEETS.
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1,042,735.

Patented Oct. 29, 1912.



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UNITED STATES PATENT OFFICE.

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BINDER FOR LOOSE SHEETS.

1,042,735.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ROBERT HENRY WHITEHEAD, a subject of the King of England, residing at Whitley Bay, in the county of Northumberland, in England, have invented a certain new and useful Improvement in Binders for Loose Sheets, of which the following is a specification.

This invention comprises improvements in binders for letters, invoices and other loose sheets of paper and relates to that class of binder which includes covers to which may be attached stubs between which the sheets are placed and held by a binding member which passes through the sheets and through one of the stubs where such are provided and the ends of which are fastened by a spring clip on the second stub or its equivalent and where provision is made for the insertion or removal of a paper by means of receivers attached to one of the covers or otherwise. Binders are also known in which the binding member is a circular cord on which the sheets are filed the said cord being terminated by two metallic tags adapted for insertion in round socket holes in the receivers, the said receivers being tubes either separate or integral of the well-known U-shape.

The invention consists primarily in the use of hinged sockets with circular socket holes for the reception of the ends of the flexible cord the said sockets being attached to one of the covers of the binder and movable thereon to any desired angle under the control of a spring, the whole device being for the purposes of binding and transferring papers and contained within the said covers.

The invention further consists in the certain details of construction, and in the arrangement and combination of parts constituting the improved binder, all as hereinafter fully described and specifically pointed out in the appended claims with reference to the accompanying drawings, which show embodiments of the invention and in which—

Figure 1 is a plan view of the binder in open condition provided with stubs and loose sheets inserted therebetween; Fig. 2 is a section on the line 2—2 of Fig. 1. Fig. 3 is a fragmentary plan view of an open binder showing parts in different positions from Fig. 1. Fig. 4 is a section on the line 4—4 of Fig. 3. Fig. 5 is a plan view of a spring clip constituting part of the file. Fig. 6 is a section on the line 6—6 of Fig. 5;

Fig. 7 is a sectional detail view of sockets hereinafter described, and Fig. 8 is a sectional detail view showing a modified form of stubs.

The covers $a a^1$ of the binder are made of stiff board or paper, and are joined together in book form, one or both of the joinings of the back b to the cover or covers $a a^1$ being flexible to allow a certain amount of expansion between the covers. The back b presents a substantially flat surface on the outside which may be used for index data or the like. At the two points where the covers $a a^1$ are joined to the back b two stubs $c d$ approximately the width of the back b and made of stiff board, paper or metal, are pasted or otherwise fastened to the covers $a a^1$. Each of the said stubs is in two rigid parts $c^1 c^2$, $d^1 d^2$ hinged together as at c^3 or the parts c^1 next to the cover may be flexible and the outer parts d^1 firm, the loose sheets e being inserted and placed between the two outer portions of the stubs in order to facilitate the insertion and withdrawal of papers and to allow of the stubs gripping with flat surfaces over a few or a large number of sheets. In a modification shown in Fig. 8 the stubs are attached to the back b in which case they are best placed at about one quarter of the width from each edge of the back and this being done with the width of the flexible portion of the stub or the corresponding rigid part c^1 next to the back may be reduced. If this arrangement be made then when a few papers are inserted they will lie close to the back member of the binder when more are added they will lie a little farther away but when still more are added they will again lie close to the back member. In some cases one of the stubs c or d only may be fastened and the other remain loose. In one stub for example d are two holes f through which are passed the ends of a flexible metallic or other binding cord g from the outside, said cord being suitably fastened to the stub. The binding-cord is provided at each end with a tapered metallic tag h . On the outside of the other narrow stub c are fixed two spring clips j or other fastening devices for holding the cord, and secured near the center of the cover a in the position corresponding to the clips j is a plate k^1 carrying two hinged sockets k of suitable length preferably formed integral as shown in Fig. 7, and adapted to receive the tags h on the binding cord. The

said sockets are preferably carried in bearings or brackets *l* and are under the action of a spring *m*, so that they can stand firmly in a vertical position as in Figs. 3 and 4 or remain stationary in the horizontal position as in Figs. 1 and 2, or stand in any intermediate position suitable to the convenience of the user thereof. Holes are made in the sheets to be filed for passage of the binding cord *g*. The sockets *k*, the gripping part of the clips, and the holes in the stub and in the loose sheets are all the same distance apart.

A suitable form of clip *j* is shown in Figs. 5 and 6 consisting of a base plate *o* the middle portion of which is arched longitudinally with a bend *q* in the crown of the arch forming a depression for the reception of the cord *g* which is held therein by a spring cover plate *r* perforated above the said depression as at *s*. Lateral recesses *v* are made at each end of the depression *q* and in the contiguous parts of the cover-plate. The depression and the four recesses thus made allow the cover-plate to lie flush with the arch of the base-plate when the cord is inserted, this insertion being effected by slipping the cord between the curved end *t* of the plate *r* and the base-plate *o*, and then forcing into the said depression.

The clip may be secured to the stub *c* as by rivets *p*.

In using the binder, the ends of the cord *g* are passed through the holes *f* in the stub *d* from the outside, then through the loose sheets *e*. The stub *c* is then placed on the edge of the loose paper and each cord is drawn tightly through its corresponding clip *j*. When it is required to take out a sheet from between others the cord is drawn out of the clips and the tags *h* on the ends of the cord are pushed into the sockets *k* which have been turned into the vertical position shown in Fig. 4. The sheets above the one to be removed are slipped along the cord and pushed down over the sockets and the tags withdrawn therefrom. The required sheet can then be easily taken off the cord.

In some cases the stubs may be dispensed with, the cord passing through the sheets from one cover of the binder direct to the socket or sockets on the other cover.

What I claim as my invention and desire to secure by Letters Patent of the United States is:—

1. A binder for loose sheets comprising in combination two covers and a back member connecting same in book form, a flexible binding cord in operative connection with one of said covers, tags terminating the ends of said cord, a cord fastening device in operative connection with the other of said covers, sockets hinged to the inside of said last mentioned cover to receive said tags, and a spring adapted to hold said sockets in

different angular positions, substantially as described.

2. A binder for loose sheets comprising in combination two covers and a back member connecting same in book form, a flexible binding cord of circular cross-section in operative connection with one of said covers, tags of circular cross-section terminating the ends of said binding cord, a cord-fastening device in operative connection with the other of said covers, sockets of circular cross-section hinged to the inside of said last mentioned cover to receive said tags, and a spring adapted to hold said sockets in different angular positions, substantially as described.

3. A binder for loose sheets comprising in combination two covers and a back member connecting same in book form, spaced stubs between said covers, a flexible binding cord attached to one of said stubs, tags terminating the ends of said cord, a cord fastening device attached to the other of said stubs, sockets hinged to the inside of one of said covers to receive tags, and a spring adapted to hold said sockets in different angular positions, substantially as described.

4. A binder for loose sheets comprising in combination two covers and a back member connecting same in book form, spaced stubs between said covers, a flexible binding cord of circular cross-section attached to one of said stubs, tags of circular cross-section terminating the ends of said binding cord, a cord fastening device attached to the other of said stubs, sockets of circular cross-section hinged to the inside of one of said covers to receive said tags, and a spring adapted to hold said sockets in different angular positions, substantially as described.

5. A binder for loose sheets comprising in combination two covers and a back member connecting same in book form, a flexible binding cord in operative connection with one of said covers, tags terminating the ends of said cord, a cord fastening device in operative connection with the other of said covers, comprising a spring clip having a longitudinally curved and raised base plate provided with a depression for reception of said binding cord, and a resilient cover plate perforated opposite said depression, and sockets hinged to the inside of said last mentioned cover to receive the tags aforesaid, substantially as described.

6. A binder for loose sheets comprising in combination two covers and a back member connecting same in book form, spaced stubs between said covers, a flexible binding cord of circular cross-section attached to one of said stubs, tags of circular cross-section terminating the ends of said binding cord, a cord fastening device attached to the other of said stubs comprising a spring clip having a longitudinally curved and raised base

5 plate provided with a depression for reception of said binding cord, a resilient cover plate perforated opposite said depression and provided with lateral recesses in the edges of the perforation, and sockets hinged to the inside of one of said covers to receive the tags aforesaid, substantially as described.

0 7. A binder for loose sheets comprising in combination two covers and a back member connecting same in book form, spaced stubs between said covers, a flexible binding cord of circular cross-section attached to one of said stubs, tags of circular cross-section terminating the ends of said binding cord, a cord fastening device attached to the other of said stubs comprising a spring clip hav-

ing a longitudinally curved and raised base plate provided with a depression for reception of said binding cord, a resilient cover plate perforated opposite said depression, sockets hinged to the inside of one of said covers to receive the tags aforesaid, and a spring adapted to hold said sockets in different angular positions, substantially as described. 25

In witness whereof I have signed this specification in the presence of two witnesses.

ROBERT HENRY WHITEHEAD.

Witnesses:

EDGAR FREDERICK SCHAFER,
S. FORD.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."