

(No Model.)

2 Sheets—Sheet 1.

C. H. STOELTING.
DETACHABLE ARCH FILE.

No. 538,605.

Patented Apr. 30, 1895.

Fig. 1.

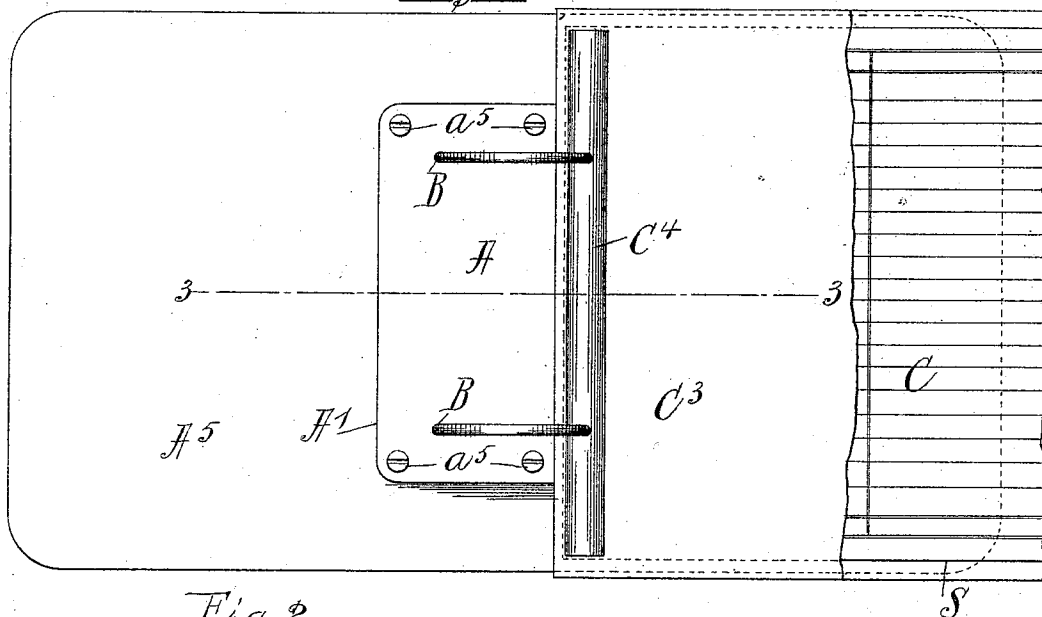


Fig. 2.

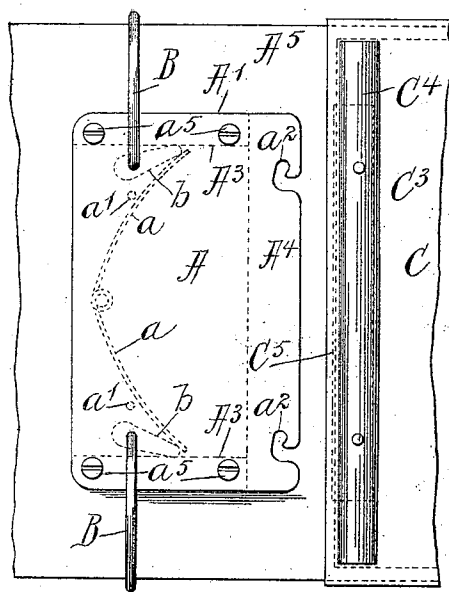


Fig. 3.

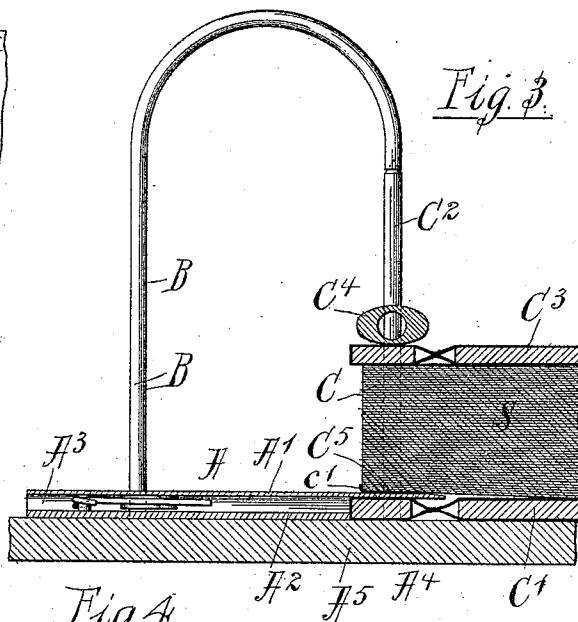
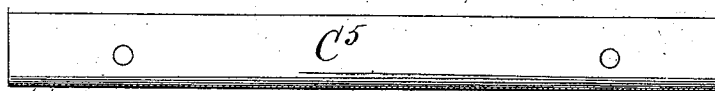


Fig. 4.



Witnesses:—

Jno. W. Adams
Louis M. F. Whitehead.

Inventor:—

Christian H. Stoelting
by: Dayton R. Brown
his Attorneys.

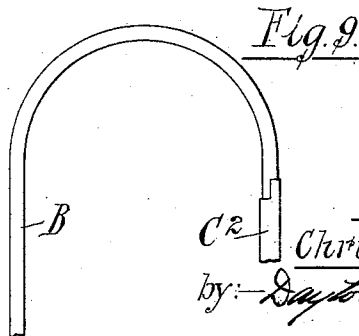
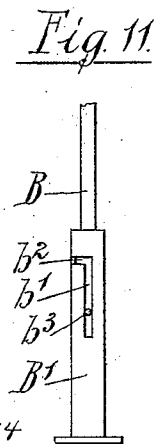
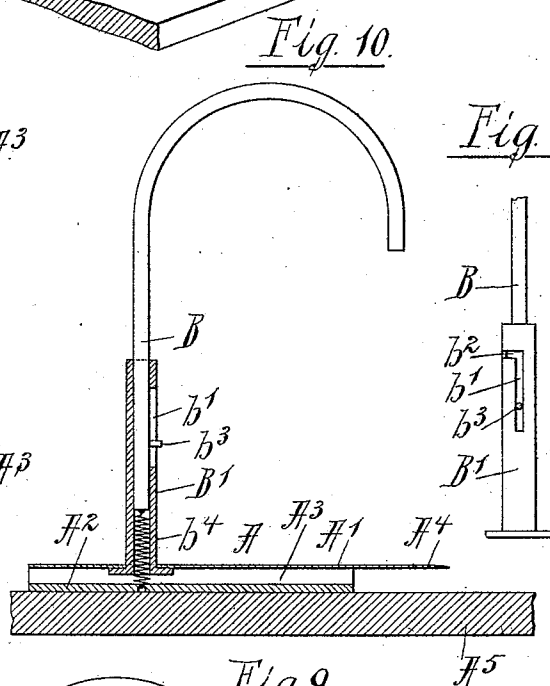
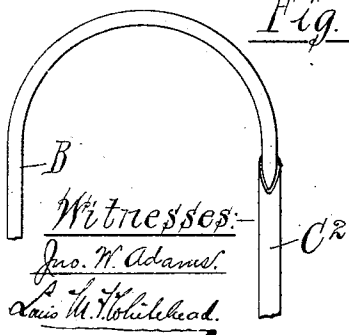
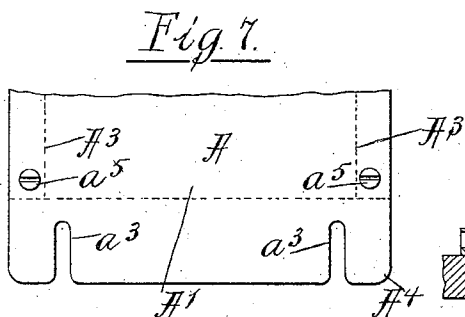
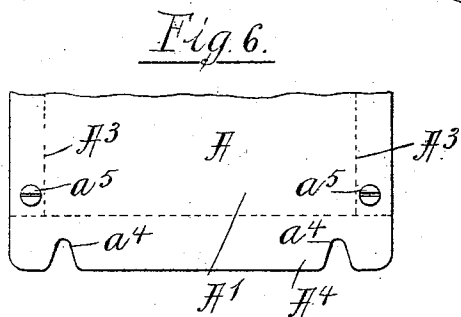
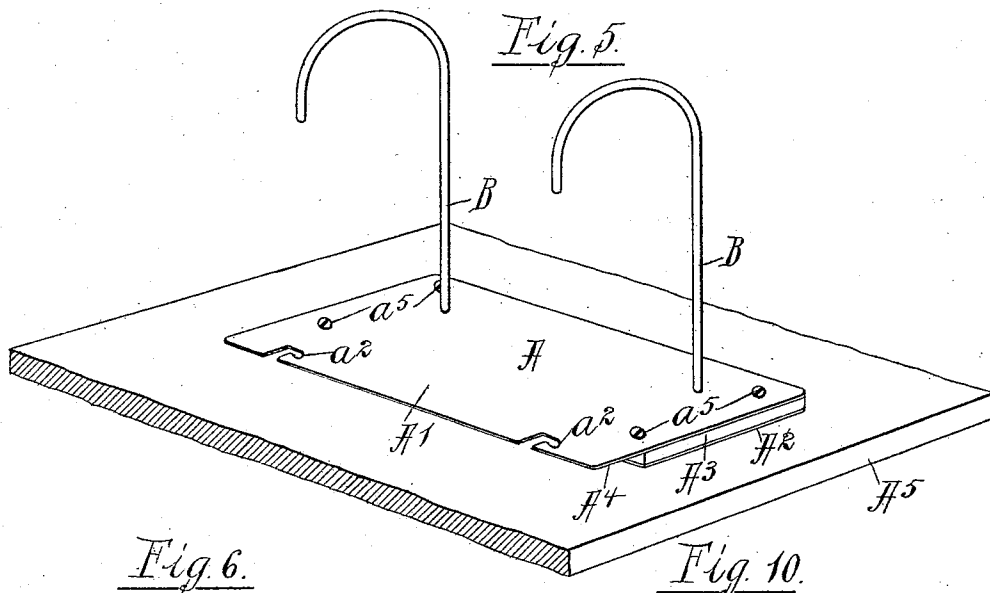
(No Model.)

2 Sheets—Sheet 2.

C. H. STOELTING.
DETACHABLE ARCH FILE.

No. 538,605.

Patented Apr. 30, 1895.



Witnesses:

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Inventor:—
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UNITED STATES PATENT OFFICE.

CHRISTIAN H. STOELTING, OF CHICAGO, ILLINOIS, ASSIGNOR TO WILLIAM
A. VAWTER, OF SAME PLACE.

DETACHABLE ARCH-FILE.

SPECIFICATION forming part of Letters Patent No. 538,605, dated April 30, 1895.

Application filed April 16, 1894. Serial No. 507,643. (No model.)

To all whom it may concern:

Be it known that I, CHRISTIAN H. STOELTING, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Detachable Arch-Files; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The object of this invention is to provide devices for use in connection with temporary binders for loose sheets, by means of which said sheets may be rearranged and one or any number of sheets inserted or removed at any point in the temporary volume, as desired.

Temporary binders, of the class in connection with which my improvements are intended to be used, comprise two parallel filing wires upon which the sheets are filed or "strung," and two cross-bars or plates connecting the wires; one of said bars being rigidly attached to the wires and holding the same in rigid position relative to each other, and the other bar or plate being movably mounted on the wires and being provided with or attached to some form of locking device by means of which it may be clamped to the wires in any position desired.

In its broad aspect my improved transfer device for use with such temporary binders, comprises a base upon which two arched filing wires are movably mounted in such manner that their straight or shank portions are constantly maintained in fixed parallel relation to each other at a distance apart equal to the distance between the filing wires of the said temporary binders, while at the same time either the arches as a whole, or the arched portion thereof, are capable of movement relatively to the base, so that when the device is brought into operative relation to the temporary binder the free ends of the arches will normally engage or stand in close lineal proximity to the ends of the filing wires of the temporary binder, but may be disengaged or separated therefrom, when desired, without disturbing the relation between the temporary binder and the base of the transfer device;

the relation between the transfer device and the temporary binder being maintained during said operation by means of suitable detachable interlocking parts or connections between the base of the transfer device and the temporary binder.

My invention consists in the matters hereinafter set forth and particularly pointed out in the appended claims, and will be readily understood from the following description of a construction embodying it in one form, taken in connection with the accompanying drawings illustrative thereof, in which—

Figure 1 is a plan view of a transfer device of the nature referred to, showing a temporary binder in operative relation thereto. Fig. 2 is a similar view with the arched transfer-wires thrown back away from the filing-wires of the temporary binder. Fig. 3 is a sectional side elevation taken on line 3 3 of Fig. 1. Fig. 4 is the detail of a guide-strip. Fig. 5 is a perspective view of the device shown in Fig. 1. Figs. 6, 7, 8, 9, 10, and 11 show modified forms of various details.

A designates the base of the transfer device, consisting in this instance, of a hollow casing having upper and lower walls A' and A², separated at their ends by filling pieces A³, and provided, as herein shown, with opposite apertures within which arched filing wires B are rotatively mounted with their straight or shank portions arranged parallel from the base. Suitable devices are provided within the base A for limiting and controlling the rotary movement of the wires B, consisting in this instance of radial arms b rigidly attached to the wires and engaged at their outer ends by the free ends of a suitable spring a. The filling pieces A³ act as stops to limit the outward movement of the arms b and wires B, while suitable stop pins a' serve to limit their inward movement in such manner that when the arms b are pressed by the spring a against the stops a' the arched portion of the wires as well as the shanks thereof will be parallel to each other. Obviously, however, any other suitable devices for limiting and controlling the movement of the wires B, either independently, as herein shown, or conjunctively, as is often the case in devices of this charac-

ter, may be provided without affecting the important features of my invention.

C designates a temporary binder of a usual construction, comprising in this instance a lower sheet support or cover C', to which parallel filing wires C² are rigidly attached at their lower ends at a distance apart equal to the distance between the wires B of the transfer device. An upper cross-bar or cover C³ is perforated to slide freely on said filing wires C² and is provided with a suitable locking device C⁴ by which it may be clamped in any desired position on said wires; the locking device shown in this instance being that set forth in the patent to Copeland and Chatterton, No. 448,411, dated March 17, 1891, although any other locking devices may be employed. Any number of loose sheets S are adapted to be filed or "strung" upon the filing wires C² between the covers C' and C³, and the whole forms, when the upper cover is clamped down in place, a temporary volume adapted to be handled in the same manner as an ordinary book.

As one convenient and desirable means for temporarily and detachably engaging the base A of the transfer device with the temporary volume in such manner as to bring the free ends of the transfer arches B when in their closed or parallel position, directly above and in close proximity to or engagement with the free upper ends of the filing wires C², an overhanging ledge A⁴ is formed or provided on the base A directly beneath the free ends of the arches B, said ledge being adapted to be thrust between the lower cover C' of the temporary volume and the loose sheets S thereof. Such ledge is in this instance formed by the projecting edge of the upper plate A' of the base A and is cut or provided with suitable marginal slots a² which receive the filing wires C² and serve to guide the same beneath the ends of the arches B. Various forms of slots may be used for this purpose. In Fig. 2 I have shown a bayonet slot the ends of which are directly beneath the free ends of the wires B, and in engaging which the temporary volume is first thrust directly toward the base A until the cover C' passes beneath the ledge A⁴ and the wires C² enter the mouths of the slots a², and is then moved laterally to bring the wires C² into engagement with the ends of the arches B. The slots in the ledge A⁴ may, however, be merely straight slots extending perpendicularly inward from the edge of the ledge, as shown at a³ in Fig. 7, or may even be mere V-shaped notches, as shown at a⁴ in Fig. 6 or may be otherwise variously constructed so long as their principal function of receiving the wires C² and guiding the same beneath the arches B and of holding the temporary binder from lateral movement with relation to the base A, when the parts are brought into operative relation, is provided for. A base plate A⁵, to which the base A is rigidly secured by screws a⁵, serves also in this instance to aid in locat-

ing the temporary binder with respect to the transfer device; the temporary volume resting securely on said base plate and the lower cover C' thereof being made of such thickness as to be compressed or pinched between the ledge A⁴ and the base A⁵ with a considerable degree of friction.

For the purpose of securing an easily detachable but positive engagement between the upper ends of the wires C² and the free ends of the arches B, the latter are herein shown hollowed out at their ends to receive the ends of the wires C² which are pointed for this purpose. In this case the natural spring or resilience of the wires B will permit the same to be lifted off of the wires C² when it is desired to swing the arches apart, or to separate the binder from the transfer device. Any other convenient or suitable form of connecting the ends of the filing wires to the if desired, as for instance, I have shown in transfer arches may, however, be provided, Fig. 8 a construction in which the filing wires C² are made hollow and are cut off on an angle at their upper ends, while the ends of the arches B are pointed to enter the hollows of the beveled ends so formed.

In Fig. 9 I have shown a still further modification in which the ends of the arches and filing wires are rabbeted so as to break joints when brought into engagement with each other. In general it will be obvious that so far as this detail of construction is concerned all the modifications are intended to provide a connection between the arched transfer wires and the filing wires which will be practically continuous and as smooth as possible when such parts are brought into engagement and at the same time will be capable of being readily disconnected when it is desired to separate the parts.

In case the resilience of the arches is not sufficient to permit the disengagement of the ends thereof from the filing wires C², said arches B may be connected with the base by means which will permit a bodily upward and downward movement of said arches. Such a device is illustrated in Fig. 10. Here the shanks of the arches B are mounted to slide longitudinally within tubular sleeves B' rigidly secured in the base A and which are provided with vertical slots b' opening at their ends into transverse slots b². Pins b³ projecting from the wires B engage said slots and control the movement of the arches, and a tension spring b⁴, secured to the lower ends of the wires B and to the casing within the sleeves b', tends to draw said wires downwardly as far as possible. When the arches are lifted up against the tension of the springs b⁴ until the pins b³ engage the slots b², they may be swung apart as before; but when turned back into a position parallel with each other, the pins b³ will be brought directly above the slots b² and the springs b⁴ will draw the arches down until their free ends engage with the upper ends of the filing wires C² of

the temporary binder, in the manner before described.

In order to prevent the mutilation of the edges of the lower sheets S by the ledge A⁴ when the lower cover C' is thrust beneath the same, I have in this instance provided a metallic guard-strip C⁵ positioned between the cover C' and the lowermost of the sheets S in such manner as to lie between the ledge and the lowermost sheet when the parts are brought into engagement. Said strip is in this instance secured by being perforated to slide freely on the wires C² and is provided with an upturned outer edge c' projecting slightly beyond the rear edges of the leaves S, and by reason of which the strip is forced upward by the ledge when the cover C' is passed beneath the latter.

With the construction thus described it will be obvious that whenever it is desired to rearrange the loose sheets secured in a temporary binder, or to insert or remove one or more sheets at any point thereof, it will only be necessary to bring the temporary binder into operative relation with the transfer device, as for instance, in the present example, by thrusting the lower cover C' beneath the ledge A⁴ and bringing the wires C² directly beneath and in engagement with the free ends of the arches B. The locking device C⁴ being then released, the cover C³, together with as many of the loose sheets S as may be desired, may be thrown over on to the shanks of the arches B. When the sheets have been separated at the proper point the arches B may be swung apart in the manner usual upon files employing such arches, whereupon the upper ends of the wires C² will obviously be left free to receive or permit the removal of any number of sheets as desired. The arches B may then be swung back into their parallel position, and into engagement with the filing wires C². The sheets and cover upon the shanks of the arches may be returned to their position in the volume, and said cover clamped down to complete the volume, as before. Obviously a repetition of this manipulation will enable the sheets to be redistributed, or their number increased or diminished to any desired extent. When such manipulations have been completed the temporary volume may again be separated from the transfer device and will be in condition to be handled in the same manner as an ordinary book, or as other temporary volumes of the same general character.

It will be understood that while the devices herein shown for effecting a temporary and detachable connection by which the temporary binder and the arched filing wires are maintained in operative relation with respect to each other, are convenient and approved constructions which in themselves involve features of novelty and are hereinafter claimed, any manner of device by which said connection may be effected will be included within the spirit of my broad invention. Furthermore, while temporary binders of the na-

ture referred to may be sold in connection with improved transfer devices as a complete article, the transfer device is adapted to be made up as a separate article of manufacture and sale, to be used in connection with any style of temporary binders to which it may be found adapted.

I claim as my invention—

1. A transfer device for use with a temporary binder separate therefrom, the same consisting of a base, arched transfer wires movably mounted at one end on said base, and means for detachably securing the base in operative relation to the binder, substantially as and for the purpose specified.

2. As a new article of manufacture, the device for transferring loose sheets in a temporary binder separate from said transfer device, the same consisting of a suitable base, of arched transfer wires secured at one end to said base, and means thereon for preventing lateral movement of the separate binder when the latter is positioned in operative relation to the wires of the transfer device, substantially as and for the purpose specified.

3. The combination of a loose sheet binder, with a separate transfer device, the latter comprising a supporting base, arched transfer wires movably secured at one of their ends to said base, recesses or projections in or on the base adapted to engage corresponding projections or recesses on said binder when the latter is in operative relation with the transfer device, substantially as and for the purpose set forth.

4. The combination with a base and arched transfer wires movably mounted thereon, of parallel file wires detachably connected to said base, with their free ends engaging the free ends of said arched wires, said file wires being mounted upon a loose sheet support, substantially as described.

5. In combination with a temporary binder embodying parallel filing wires secured to a base upon which the filed sheets are supported, a transfer comprising a suitable base, movable arched wire or wires secured to said base having their free ends adapted to engage the free ends of the file wires, and means for preventing lateral movement when the transfer and the binder are placed in operative relations, substantially as and for the purpose set forth.

6. In combination with a temporary binder embodying parallel filing wires secured to a base upon which the filed sheets are supported, of a transfer comprising a suitable base, movable arched wires secured to said base having their free ends adapted to engage the free ends of the file wires, means for preventing vertical movement of the file wires and the base to which they are secured when the transfer and the binder are placed in operative relations, substantially as and for the purpose set forth.

7. In combination with a temporary binder comprising a support for the loose sheets and

parallel filing wires secured thereto, of a base, arched wires movably secured thereto, and a ledge projecting from said base adapted to be engaged with the upper surface of said support when the free ends of the file wires are in engagement with the free ends of the arched wires, substantially as and for the purpose specified.

8. In combination with a loose sheet file comprising parallel file wires mounted on a support for the sheets, of a transfer device comprising a base, arched wires the free ends thereof being adapted for engagement with said file wires, a projecting ledge adapted to engage the sheet support of the file to prevent vertical displacement of the latter, and male and female engaging devices for preventing lateral displacement, substantially as described.

9. The combination of a base, arched wires movably mounted thereon, of a ledge projecting from said base, a plate or support for the filed leaves, parallel filing wires rigidly secured to the support or plate, the latter being adapted to be slipped beneath said ledge, and marginal slots or recesses in said ledge to receive the filing wires, substantially as described.

10. In combination with a loose sheet file comprising parallel file wires mounted on a support for the sheets, and with the transfer device described comprising arched wires movably secured to a base and having a ledge projecting from said base adapted to engage the support for the sheets when the file and

the arched wires are in operative engagement, of a metallic strip being positioned on file wires between the support and the filed sheets, substantially as and for the purpose described.

11. The combination with a base, and arched wires movably mounted thereon, of a projecting ledge secured to said base, a plate or support for the sheets to be filed, parallel filing wires mounted on said plate or support, which latter is adapted to slip beneath said ledge, marginal slots in said ledge to receive the filing wires, and a metallic guide strip having an upwardly bent edge loosely positioned on the filing wires between the connecting plate and the sheets or leaves filed thereon, whereby the ledge is prevented from mutilating the edge of said filed sheets when the file and arched wires are brought into operative relation, substantially as specified.

12. In a temporary file, the combination of a support for the leaves to be filed, file wires secured to the support, a locking device movably adjustable on the file wires, and a metallic guide strip loosely mounted upon the file wires and having its rear margin upturned, substantially as described.

In testimony that I claim the foregoing as my invention I affix my signature in presence of two witnesses.

CHRISTIAN H. STOELTING.

Witnesses:

TAYLOR E. BROWN,
ALBERT H. GRAVES.