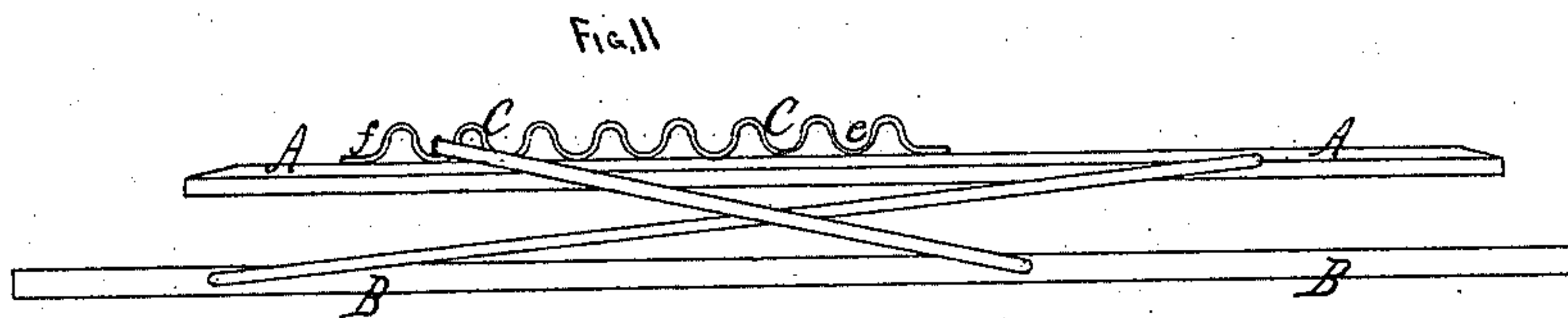
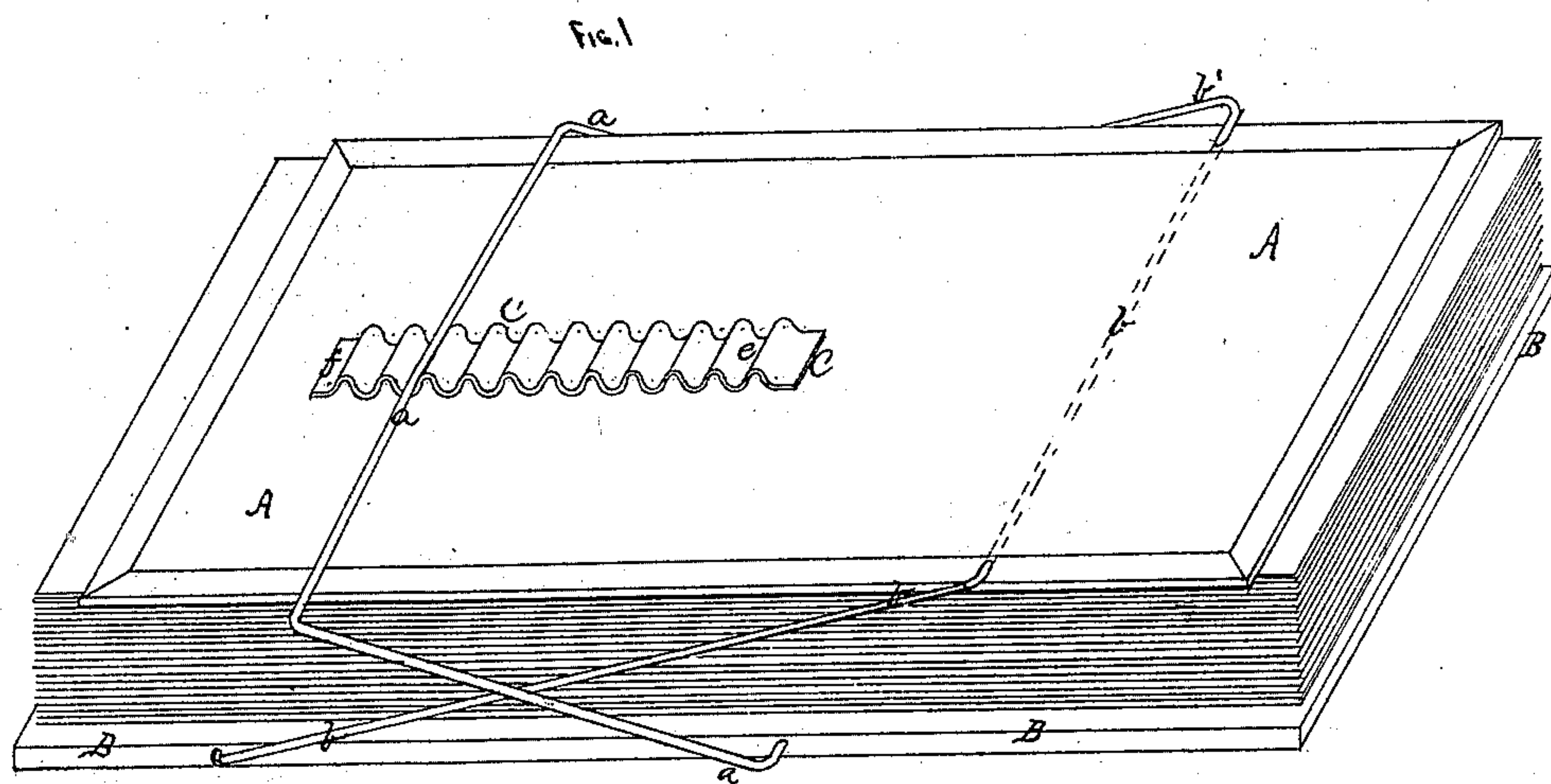


A. J. MARSHALL.
Bill and Letter Files

No. 134,554.

Patented Jan. 7, 1873.



WITNESSES

J. R. Drake.
C. H. Woodward.

A. J. Marshall.

INVENTOR, BY

Burke Fraser & Co.
attys.

UNITED STATES PATENT OFFICE.

ADONIRAM J. MARSHALL, OF NORTH BUFFALO, NEW YORK.

IMPROVEMENT IN BILL AND LETTER FILES.

Specification forming part of Letters Patent No. 134,554, dated January 7, 1873.

To all whom it may concern:

Be it known that I, ADONIRAM JUDSON MARSHALL, of North Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Bill and Letter Files, of which the following is a specification:

Nature and Object of the Invention.

This invention relates to letter-files where the folded bills, letters, &c., are held between two leaves or clamps; and consists in the method of clamping the two together by an arrangement of wires and catches without the use of springs, as hereinafter described.

General Description.

In the drawing, Figure 1 is a perspective view; and Fig. 2 is a side elevation.

A B are the upper and lower boards or clamps made in the usual manner, between which the bills or other papers are to be held. These clamps are connected together by bent wires *a b*, which cross each other, and whose lower ends are pivoted to the edge or side of the lower clamp B in such a manner that they will work loosely and allow the upper board to be raised or lowered, as desired. The wire *b* passes upward diagonally, then across and through the upper clamp A, and then downward and back, and is finally pivoted to the lower clamp opposite its starting-point. The other wire, *a*, is pivoted to the lower clamp B near its center, and also passes upward diag-

onally in the opposite direction from the wire *b*, as shown, and, crossing it, passes loosely over the outside of the upper clamp A, and catches in one of the grooves or recesses in a piece of corrugated sheet metal, C, attached to the top of the leaf A for that purpose.

By this arrangement of the wires a number of papers may be held by the same tension from the lowest to the highest point.

When the file is full the wire *c* will catch in the lower groove *e*, but when comparatively empty it will catch at *f* and at intermediate points, according to the number of papers filed.

A greater or less tension is had by merely moving the wire *a* forward or back in the recesses of the catch C. The wire *b* is self-adjusting.

The wires perform the same work as a spring or springs, but are much simpler and are less liable to get out of order.

What I claim as my invention is—

The arrangement of the clamping-wires *a b* and the corrugated or recessed catch C, in combination with the clamping leaves or boards A B, for the purpose hereinbefore specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

A. J. MARSHALL.

Witnesses:

J. R. DRAKE,

C. N. WOODWARD.