

(No Model.)

G. J. HOLBROOK.  
ÆOLIAN HARP.

No. 493,773.

Patented Mar. 21, 1893.

Fig. 1

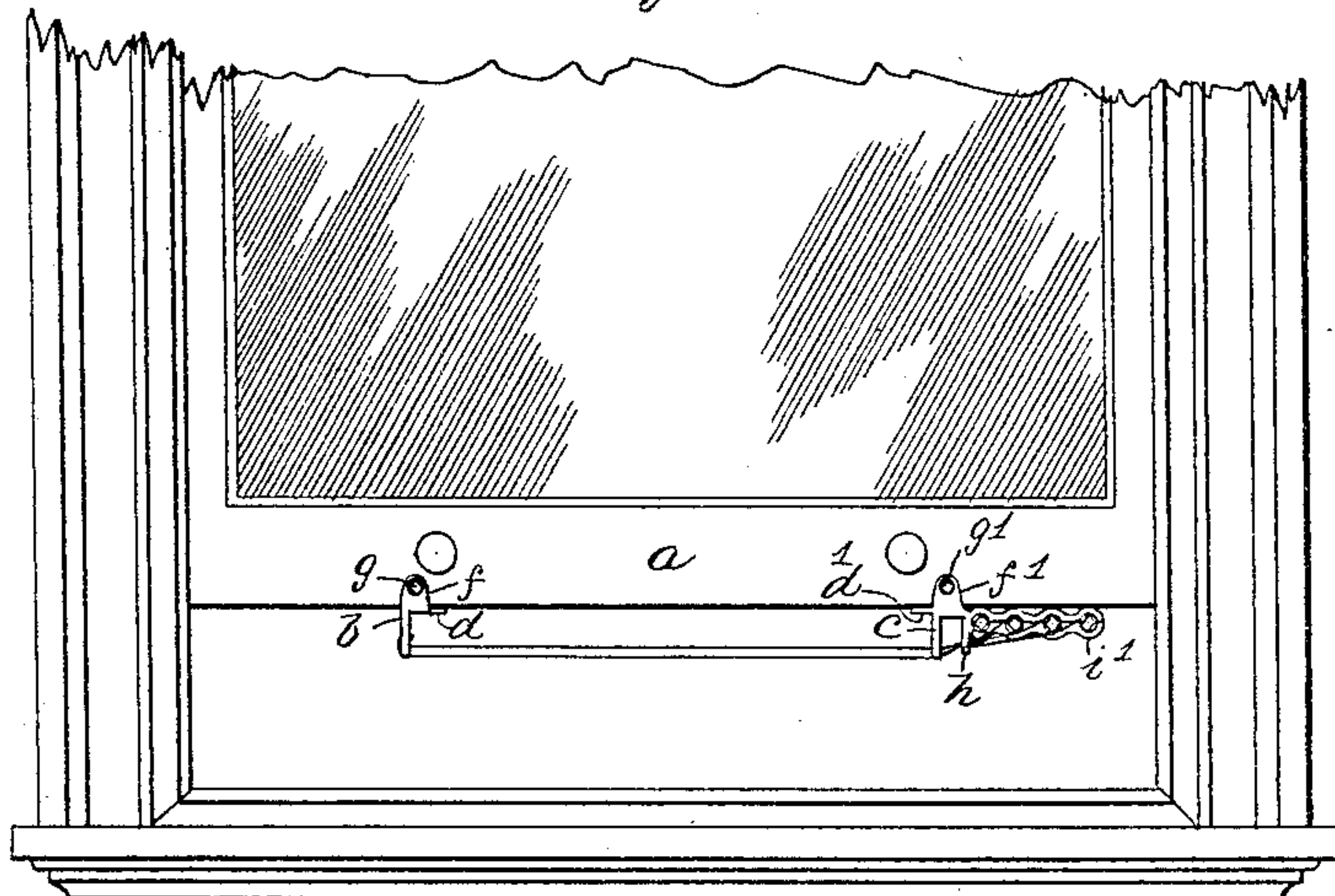


Fig. 2

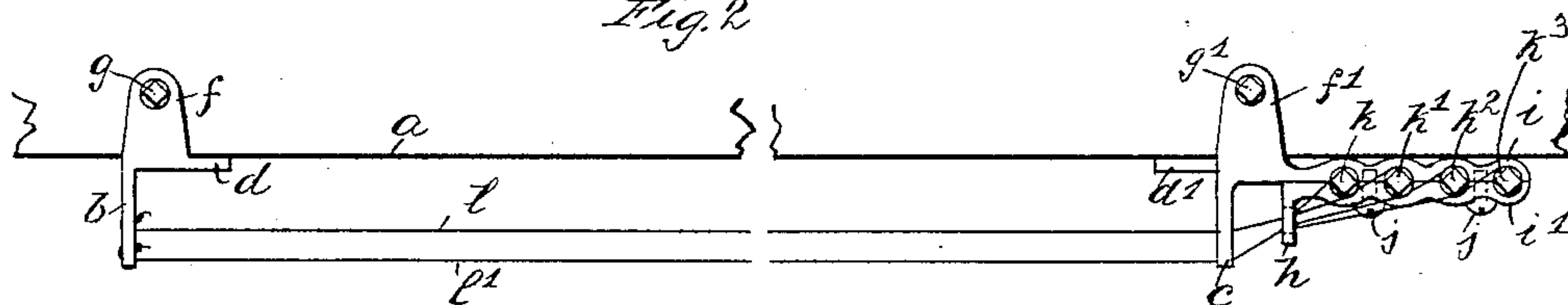
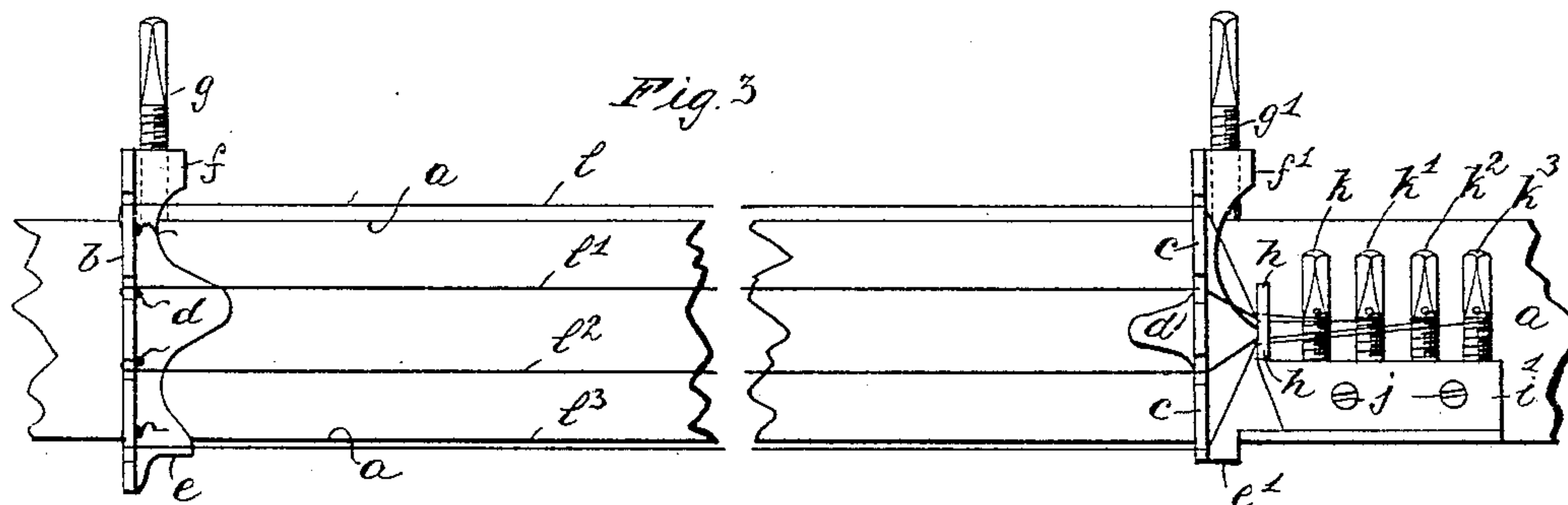


Fig. 3



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## ÆOLIAN HARP.

SPECIFICATION forming part of Letters Patent No. 493,773, dated March 21, 1893.

Application filed June 14, 1892. Serial No. 436,666. (No model.)

*To all whom it may concern:*

Be it known that I, GILES J. HOLBROOK, of Jersey City, county of Hudson, and State of New Jersey, have invented a new and useful  
5 Improvement in Æolian Harps, of which the following is a specification.

The object of my improvement is to construct an æolian harp in which each bridge is provided with a device (as a clamp) whereby  
10 it may be secured to a variety of structures in a variety of positions to suit the user. As for example, as hereinafter described, the harp can be constructed for operation by simply clamping the bridges to the window-sash and  
15 stretching the strings between them.

In the accompanying drawings, Figure 1 shows a window with my invention applied. Fig. 2 shows on a larger scale, the lower portion of the sash with the harp applied in side  
20 view. Fig. 3 is an inverted plan view of the same.

*a* is the lower portion of the sash.

*b* and *c* are respectively, the string supports or bridges notched, as usual, at the edges.

25 *d* is a plate at right angles with the bridge *b* and adapted to rest against the bottom of the sash.

*e* is an ear extending from the plate *d* up on the one side of the sash and adapted to rest  
30 as one member of the clamp against the side of the sash.

*f* is an ear extending from the plate *d* up on the other side of the sash and provided with a screw-threaded hole to receive the screw *g*,  
35 the end of which is adapted to bear against that side of the sash and constitute the other member of the clamp.

Corresponding members are connected with the bridge *c* and are lettered, respectively, *d'*,  
40 *e'*, *f'* and *g'*. With the clamp *c* are also connected the following parts:

*h* is a member having an eye opposite the middle of the bridge *c*.

*i* and *i'* are two plates clamped together by

the screws *j* so as to clamp between them the 45 keys *k*, *k'*, *k<sup>2</sup>*, *k<sup>3</sup>*, one for each of the strings. By this arrangement of the keys between the plates *i* and *i'* held together by the clamping screws *j*, the proper amount of friction can  
50 be applied to the keys to maintain the tension although the parts be all of metal. The strings *l*, *l'*, *l<sup>2</sup>* and *l<sup>3</sup>* are fastened to the bridge *b* at one end and extend over the bridge *c*, thence together through the eye of the member *h* and  
55 thence one passes and is secured to each of the keys.

The parts *b*, *d*, *e* and *f* may all be cast in one piece. The parts *c*, *d'*, *e'*, *f'* and *i* may  
60 all be cast in one piece. The parts *h* and *i'* may be cast in one piece.

Although I have shown the bridges as clamped to the window-sash, I do not limit myself to such application of them since the construction is intended to enable the user to  
65 apply them in any manner which suits his fancy and change them from one object to another as his fancy changes.

I claim—

1. As an article of manufacture, an æolian harp bridge provided with a clamp adapted  
70 to secure it, substantially as described.

2. As an article of manufacture, an æolian harp bridge provided with a clamp adapted to secure it and also provided with a key for  
75 each of the strings, substantially as described.

3. In combination, the two bridges of an æolian harp each provided with a clamping device adapted to secure the same to a window sash in an inverted position, substantially  
80 as described.

4. In combination, the bridge piece *c*, the clamping device connected therewith, the key clamping plates *i* and *i'* and the keys held thereby, substantially as described.

G. J. HOLBROOK.

Witnesses:

FRED L. KEMPER,  
J. E. GREER.