

No. 719,977.

PATENTED FEB. 3, 1903.

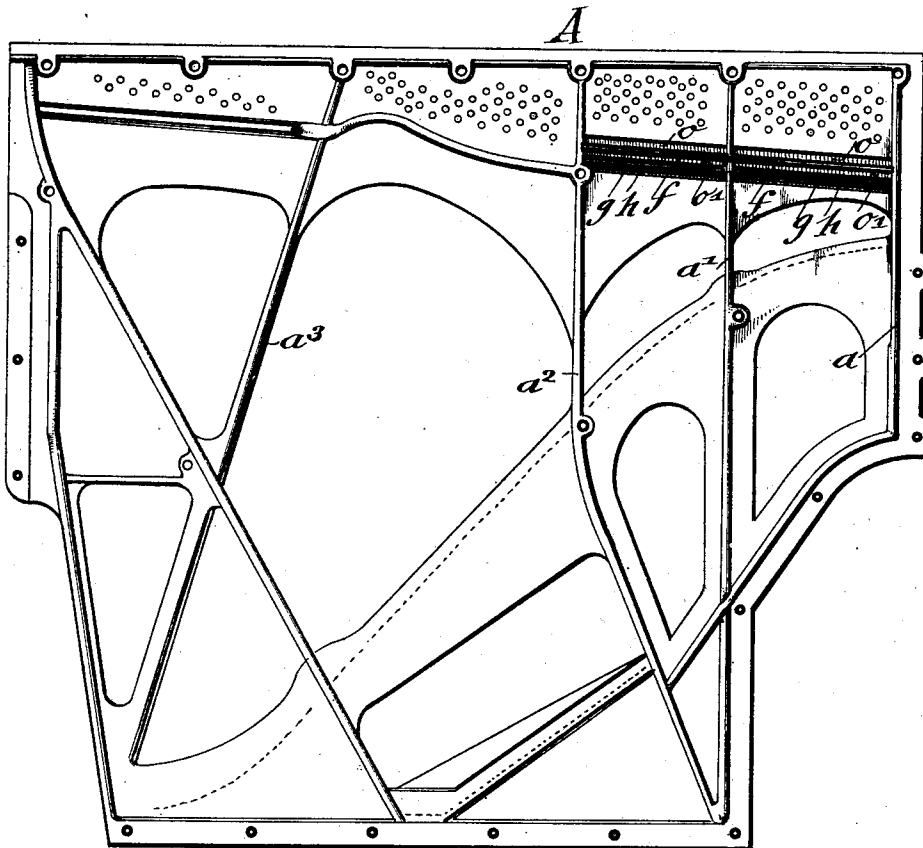
H. ZIEGLER.  
UPRIGHT PIANO.

APPLICATION FILED JUNE 10, 1902.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1.



WITNESSES:  
*Conrad Zimmer*  
*E. Bradway*

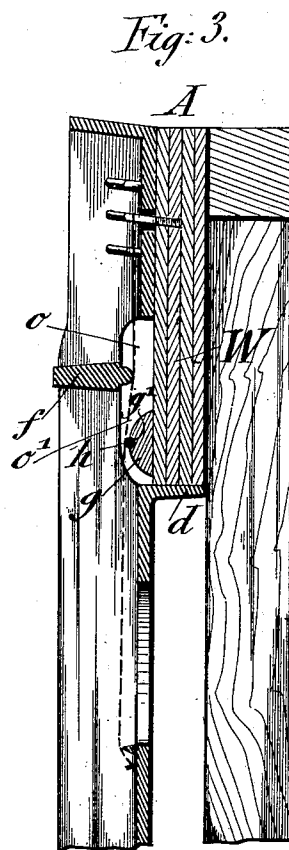
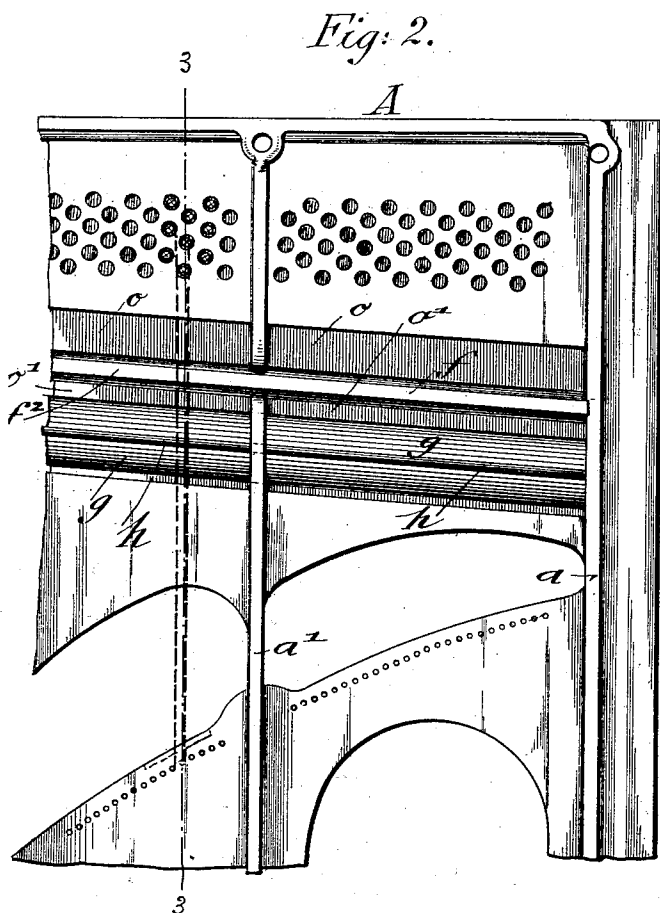
INVENTOR  
*Henry Ziegler*  
BY *James Hiles*  
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2 SHEETS—SHEET 2.



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# UNITED STATES PATENT OFFICE.

HENRY ZIEGLER, OF NEW YORK, N. Y.

## UPRIGHT PIANO.

SPECIFICATION forming part of Letters Patent No. 719,977, dated February 3, 1903.

Application filed June 10, 1902. Serial No. 111,013. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY ZIEGLER, a citizen of the United States, residing in New York, borough of Manhattan, and State of New York, have invented certain new and useful Improvements in Upright Pianos, of which the following is a specification.

In the Letters Patent which were granted to me for improvements in upright pianos on November 21, 1893, No. 509,111, the string-frame, the capo-tasto bars for the treble and middle strings of the piano were made integral with the string-frame, so that a better support for the strings was thereby obtained. The object of the present improvement is to retain the feature of making the capo-tasto bars integral with the string-frame, but to have the scale-rib rest on a wooden support instead of being cast integral with the string-frame, as in my former patent, and wholly isolated from contact with the string-frame. For this purpose my improved construction consists of an upright piano in which the string-frame is provided with the usual brace-ribs and capo-tasto bars made integral therewith and extending from one brace-rib to the other, but in which the scale-rib is supported in a wooden bridge suitably separated from the metallic string-frame on the wrest-plank, said wrest-plank abutting against a flange on the lower side of the string-frame adjacent to the scale-rib, as will be fully described hereinafter and finally pointed out in the claims.

In the accompanying drawings, Figure 1 is a front elevation of my improved string-frame for upright pianos. Fig. 2 is a front elevation of the upper right-hand or treble corner of the wrest-plank portion drawn on a larger scale and showing my improvement; and Fig. 3 is a vertical transverse section on line 3-3, Fig. 2. Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents a string-frame for upright pianos, which is made of cast-steel or other suitable metal. The string-frame is provided with a number of strengthening brace-ribs  $a$ ,  $a'$ ,  $a^2$ ,  $a^3$ , &c., which extend from the hitch-pin portion to the wrest-plank portion of the frame, as shown clearly in Fig. 1.

The string-frame A is provided between the side rib  $a$  and the strengthening brace-ribs  $a'$

and  $a^2$  with capo-tasto bars  $f$ , which extend across the brace-ribs, said capo-tasto bars being cast integrally with the string-frame, as shown clearly in Fig. 3. They are separated from the adjacent portion of the string-frame by openings  $o$ ,  $o'$ , which are arranged parallel, or approximately so, with the capo-tasto bars at each side of the same. Below the lower edge of the string-frame, adjacent the capo-tasto bars, is arranged a strengthening-flange  $d$ , against which the lower end of the wrest-plank W abuts, said wrest-plank being extended downwardly below the capo-tasto bars to the strengthening-flange  $d$ , as clearly shown in Fig. 3. On the wrest-plank is supported adjacent to the strengthening-flange  $d$  and entirely isolated from the metallic string-frame a wooden bridge  $g$ , which is provided with a groove  $g'$  in its apex, said groove supporting a metallic scale-rib  $h$ . This scale-rib is located in the opening  $o'$  and at such a height that the strings can be stretched from the hitch-pins over the scale-rib  $h$  and below the rounded-off ends of the capo-tasto bars to the tuning-pins, as shown in Fig. 3. By extending the wrest-plank W below the openings  $o$ ,  $o'$  into abutting contact with the strengthening-flange  $d$  and supporting the wooden bridge of the scale-rib  $h$  on the wrest-plank free from contact with the string-frame the scale-rib is supported on wood and not on metal, as in the prior patent before referred to, so that the vibrations of the strings are transmitted from the scale-rib to the wooden bridge and wrest-plank, whereby a mellow quality of tone or wood timbre is obtained. In place of the wooden bridge the wrest-plank can be provided with a raised portion, or agraffes may be used in place of the scale-rib or any other means for supporting the strings at this point.

The drawings show the capo-tasto bars arranged only in the treble portion of the string-frame; but it is obvious that the capo-tasto bars, as well as the wooden bridge for the scale-ribs, may also be used for the middle and base strings.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In an upright piano, the combination, with a string-frame having openings in the

wrest-plank portion, of capo-tasto bars formed integral with said frame and disposed over said openings, a wrest-plank suitably supported on said frame and extending across  
5 said openings, and non-metallic bridges supported on said wrest-plank wholly isolated from said string-frame, substantially as set forth.

2. In an upright piano, the combination,  
10 with a metallic string-frame having openings in the wrest-plank portion thereof, of capo-tasto bars extending longitudinally over said openings and formed integral with the string-frame, a supporting-rib on the rear of said

frame at the lower edges of the bottom openings, a wrest-plank supported on said rib, and a wooden bridge secured directly to said  
wrest-plank in the lower openings and disposed out of contact with the metallic string-frame, substantially as set forth. 15

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses. 20

HENRY ZIEGLER.

Witnesses:

PAUL GOEPEL,  
C. BRADWAY.