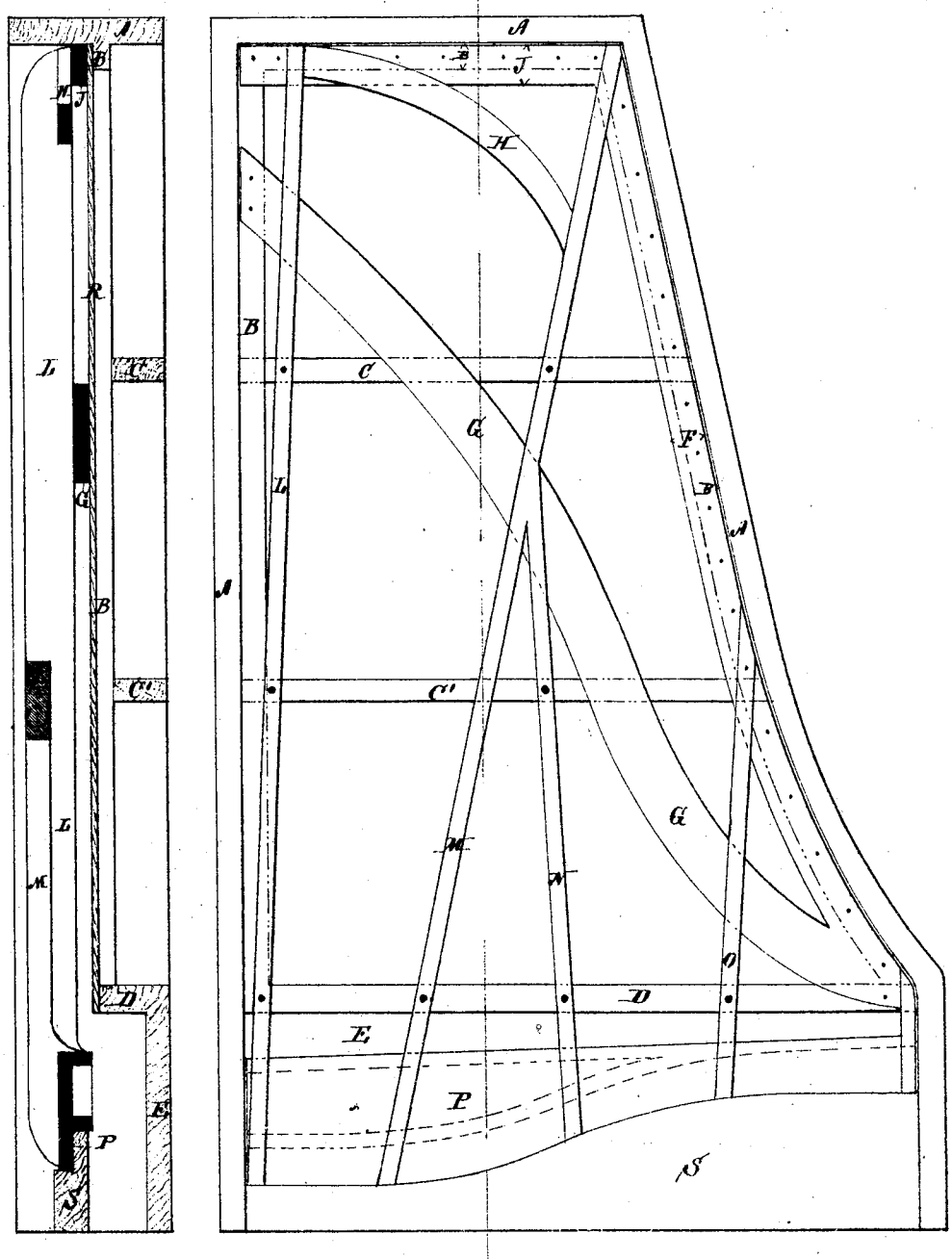
GEORGE STECK.

Improvement in Grand Pianos.

No. 116,109. Patented June 20, 1871.

Fig. I.



Witnesses.

Henry E. Roeder

J. S. Brown

Inventor.

George Steck

AM. PHOTO-LITHOGRAPHIC CO. N.Y. (OSBORNE'S PROCESS.)

UNITED STATES PATENT OFFICE.

GEORGE STECK, OF NEW YORK, N. Y.

IMPROVEMENT IN GRAND PIANOS.

Specification forming part of Letters Patent No. 116,109, dated June 20, 1871.

To all whom it may concern:

Be it known that I, GEORGE STECK, of the city, county, and State of New York, have invented an Improvement in Grand Piano-Fortes; and I hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing making part of this specification—

Figure 1 being a top view of the frame of a grand piano-forte constructed with my improvement; Fig. 2, a vertical section thereof in a plane indicated by the line *x x*, Fig. 1.

Like letters designate corresponding parts in both figures.

The object of this invention is to construct and arrange the iron frame and wooden case of the instrument so as to offer the least possible obstruction to the resonance of the sound from the strings and sounding-board. For this purpose the materials of the frame and the case are disposed as much as possible at the sides and ends, and as little as possible in the middle. I have succeeded to a great extent in effecting this desirable purpose by the construction and arrangement shown in the accompanying drawing. The principal feature of my invention consists in forming an entirely open space in the iron frame back of the curved brace or bridge G, between it and the border parts F J of the frame, as shown.

Only the longitudinal braces L M O and the bridge H extend over this space, and they are above it and between the strings, so that they do not obstruct the sounds. The frame also is so formed and proportioned that the bridge G shall extend diagonally across the frame, as near the middle as possible, so as to give equal strength to all parts of the frame and use the least metal. All transverse braces are thus dispensed with. The wooden case A fits closely around the iron frame; and, in furtherance of the object aimed at in the formation of the frame, only two cross-timbers, C C′, are required in the case under the frame, and those are quite thin. Thus both above and below the sounding-board R there is but little to obstruct the sound, and consequently the instrument has extraordinary power, fullness, and clearness of tone, and it is capable of being heard distinctly at an unusual distance.

What I claim as my invention, and desire to secure by Letters Patent, is—

The improved grand piano-forte iron frame, as herein described, having the entire space back of the bridge G and between it and the border parts F J of the frame open and free for the transmission of sound, and arranged in connection with the wooden case, substantially as herein specified.

GEORGE STECK.

Witnesses:
HENRY E. ROEDER,
J. S. BROWN.