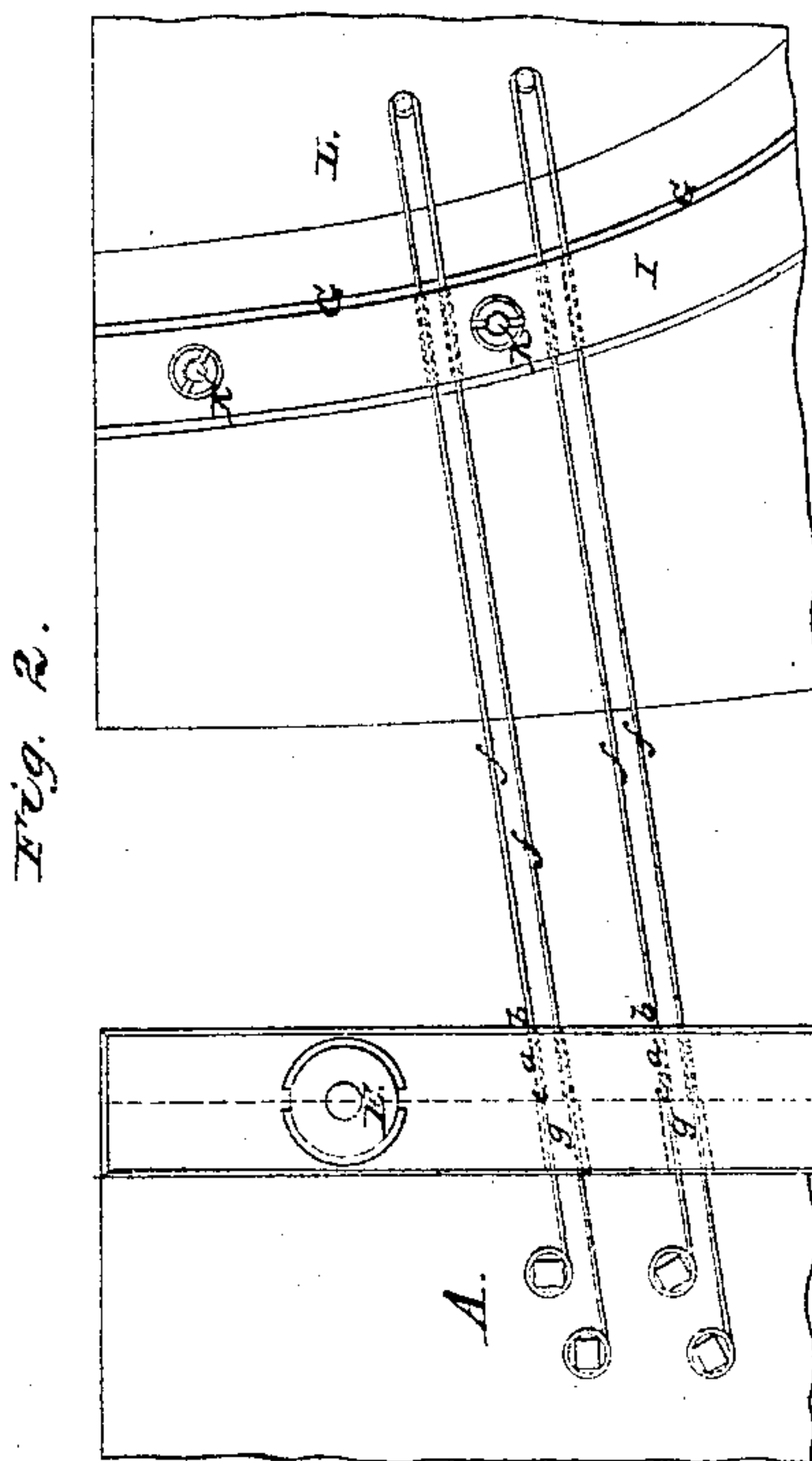
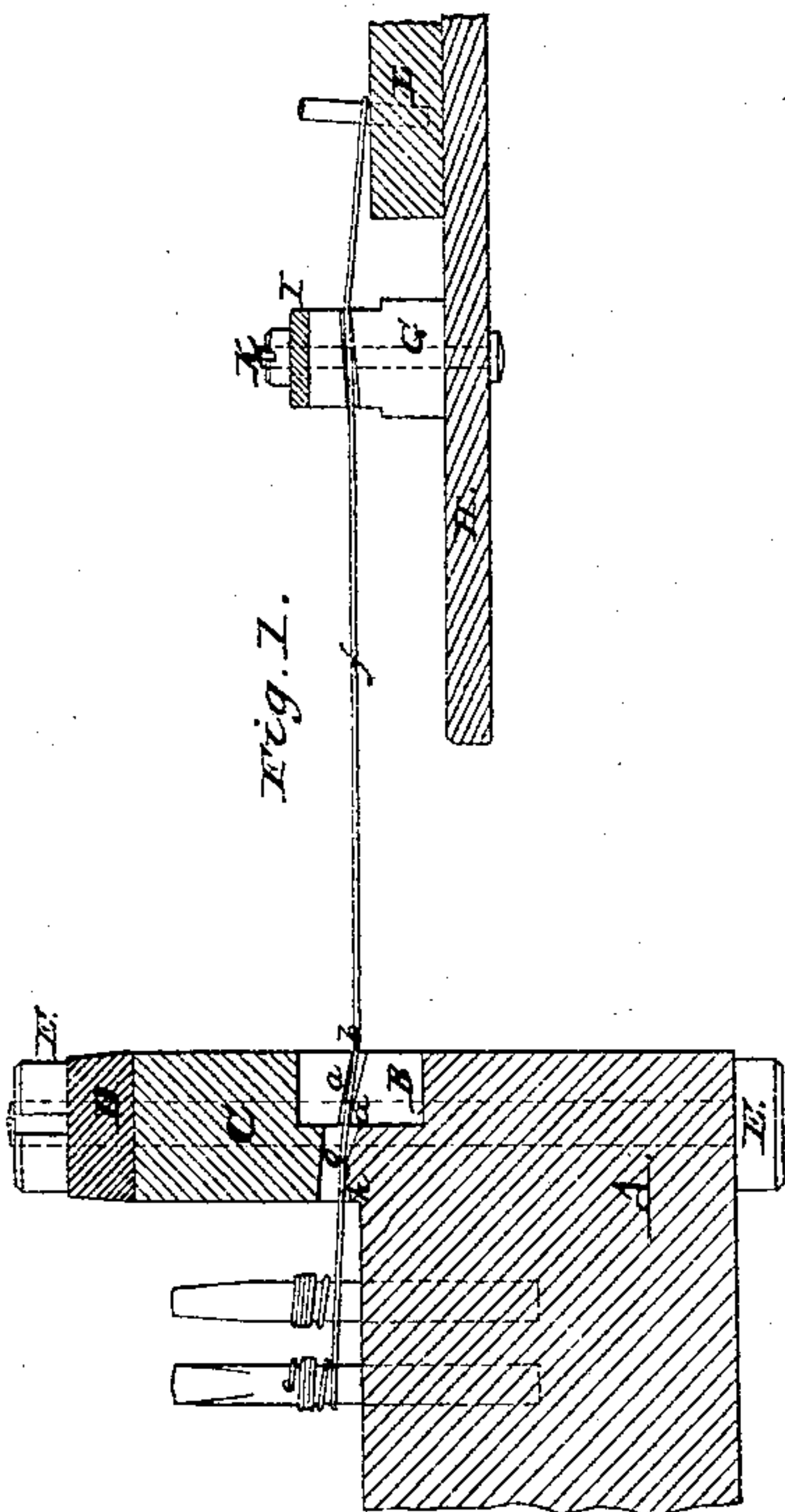
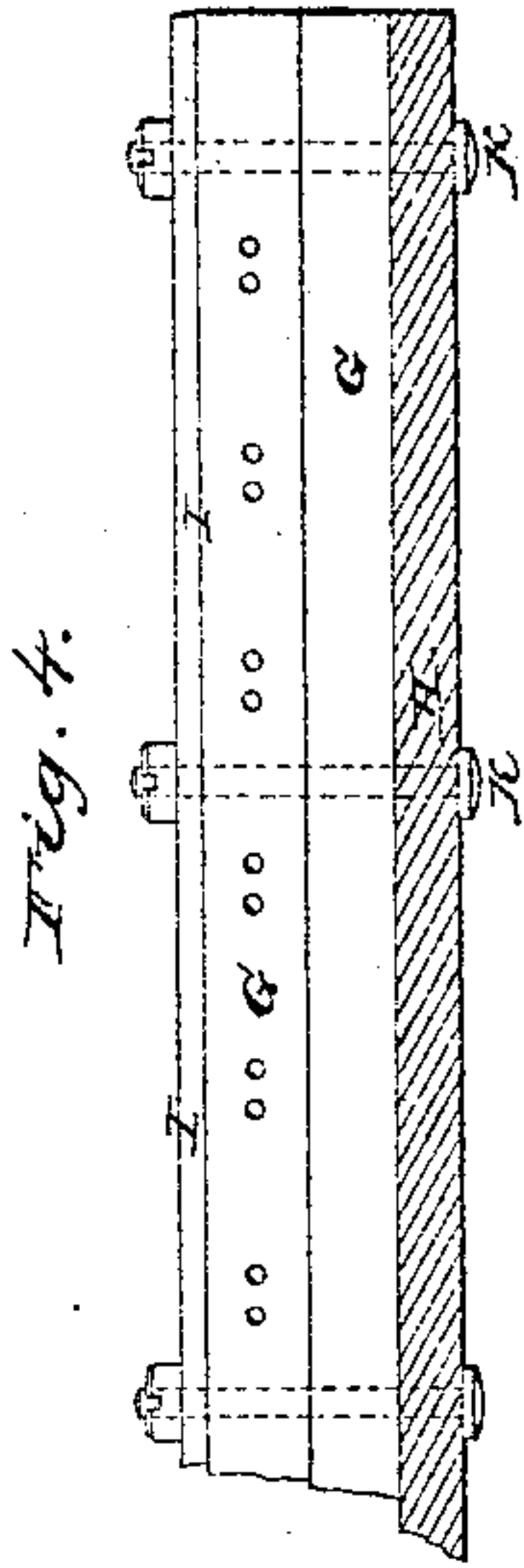
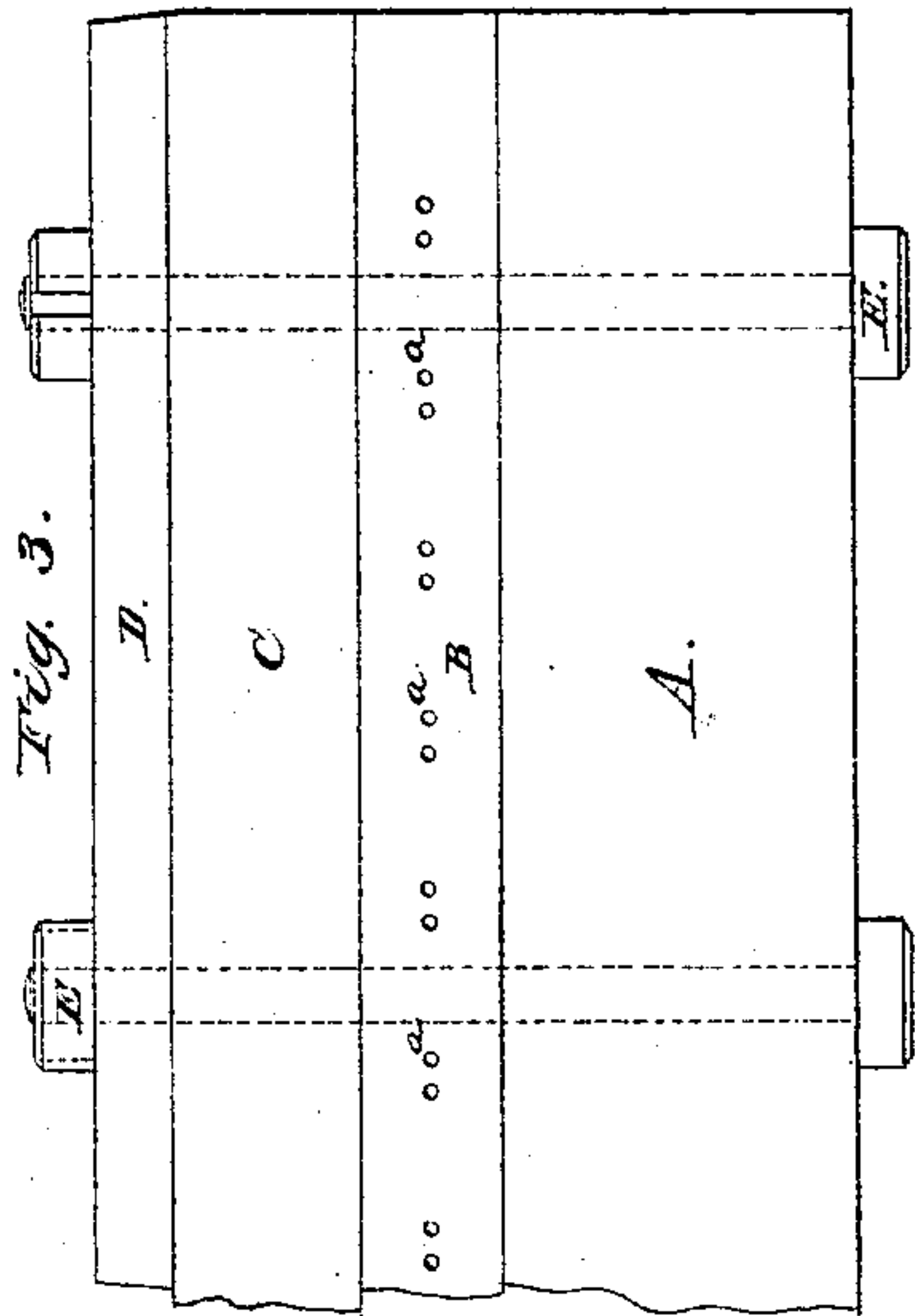


G. Vogt

Stringing Pianos,

N^o 23,130.

Patented Mar 1, 1859.



Witnesses:
M. R. Padden
Charles Rogers

Inventor:
George Vogt

UNITED STATES PATENT OFFICE.

GEORGE VOGT, OF PHILADELPHIA, PENNSYLVANIA.

PIANOFORTE.

Specification of Letters Patent No. 23,130, dated March 1, 1859.

To all whom it may concern:

Be it known that I, GEORGE VOGT, of the city of Philadelphia and State of Pennsylvania, have invented new and useful Improvements in Pianofortes; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing and to the figures and letters of reference marked thereon.

My invention relates to a newly contrived manner of resting the strings, obviating the impediments to the direct vibration of the strings, which heretofore existed in the construction of pianos, and consists: in the employment of an improved rest, (the construction of which is hereafter fully described) consisting in a combination of ivory, wood and metal, and through which the strings pass in a manner avoiding the side-bearing produced by receiving them against the side of a pin (as in the general system of manufacture), and which allows the strings a free, undisturbed vibration in equal directions, producing that desirable purity and strength of tone, which will remain clear and pure, when forced even with the utmost capacity of the instrument. As a concurrent in the important features arrived at by the employment of this peculiarly constructed rest, I further contrived an improved bridge, differing likewise in a similar manner from the general mode of construction of the same;—the string, when reaching the bridge of the ordinary construction, is received against opposite sides of two pins, thus diverting its straight line and forming the side bearings above alluded to, by which the direct up and down vibration is reversed into a side motion, resulting in an injurious rotary vibration, which, the more it is enforced, becomes the more impure. This disturbing influence I have not only obviated in my improved bridge, but the nature of the same also allows a reduced inclination of the strings toward the pin block, thereby greatly favoring the vibrations of the sound board by exerting less depressing influence on the same.

In order to enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation.

On reference to the drawing, which forms a part of this specification, and in which the same letters of reference allude to similar parts throughout the several views: Figure 1

is a sectional elevation of the parts containing my improvements, Fig. 2 is a plan of the same, Fig. 3 is a front elevation of my improved rest, Fig. 4 is a front elevation of my improved bridge.

On the front of the tuning block A and along its upper side I secure a bar of ivory B, (composed of any convenient number of pieces, which are joined so as to present an unbroken surface) and over this I place a wooden cap piece C of about twice the thickness of B, behind which it reaches down so as to meet the tuning block A. A strong metal bar D covers the cap piece C, imparting solidity to the arrangement, the whole being firmly united by a series of bolts E.

The strings *f, f*, pass through holes *a, a*, in the bar B, these holes being carefully drilled of such diameter as to avoid any further contact of the strings with the bar B than is caused at the points *b, c* by the slight elevation of the holes toward the wrest-pins, the string bearing with its upper side at *b* and crossing the hole *a* diagonally, resting on the under side of the same at *c*. The lower part of cap piece C, forming a back to bar B, is provided with perforations *g* which coincide with the holes *a, a*, and at their top and sides allow a free passage for the strings, while their bottom side is so shaped, as to form another bearing for the string at *h*, leaving however a slight space between it and *c*, (as shown at Fig. 1). This bearing *h* serves to destroy all false, impeding vibration between it and the wrest pins, and relieves the points *b* and *c* from the direct pressure of the tension of the string.

G is an ivory bridge, resting on the sound-board H in the usual manner and covered by the metal bar I, both being united and secured to the sound board by means of bolts K, K. The bridge G is provided with holes for the reception of the strings, said holes being in their relative size, and in their obliquity toward the pin block L similar to those in the bar B.

The ends arrived at by the above described construction and combination of the parts alluded to are various and important, and first of these stands the removal of all impediment to disturb the direct vibration of the strings, as all the bearing points of the latter are brought in a line with the direction of the vibrations imparted by the hammer. The removal of all contact of the

strings with either wood or metal, as regards the points exerting influence on the sound, obviates both the peculiar dullness of sound imparted by the former as well as the easily
5 detected and offensively shrill sound produced by contact with the latter, while the employment of the described construction of ivory bearing points in their stead gives that clear, full tone, so peculiar to this substance.
10 Another important feature is the employment of the cap piece C and metal bars D and I in combination with the ivory bar B and bridge G, as the solidity and body thus given to both the rest and bridge very effectively
15 destroys the knocking sensation produced by the striking of the hammer in the general construction of pianos, which in those is the more perceivable, the more powerful their tone is forced. The slight
20 variation from a straight line, which with my improvements is required of the strings at their extremities, has on one side the effect of greatly reducing the depressing influence exerted upon the sounding board by the tension
25 of the strings, which sounding board is consequently more free in its vibrations, while at the other end the avoiding of any

sudden bend not only greatly facilitates the yielding of the strings to the motion of the wrest-pin in tuning, but from the same
30 reason also serves to insure a longer keeping of tune, the liability to breakage of strings being moreover greatly reduced.

Having now described the nature of my invention I wish it to be understood, that I
35 do not broadly claim the employment of ivory in the construction of my improved rest and bridge, neither do I claim in itself the passing of the strings through perforations in the wrest or bridge, as such has been
40 done before in various kinds of string instruments; but

What I claim and desire to secure by Letters Patent is:

The employment of the herein described
45 wrest and bridge, either separately or combined, when the same are constructed and operating substantially in the manner and for the purpose set forth.

GEORGE VOGT.

Witnesses:

WM. KADDE,
THEODORE BERGNER.