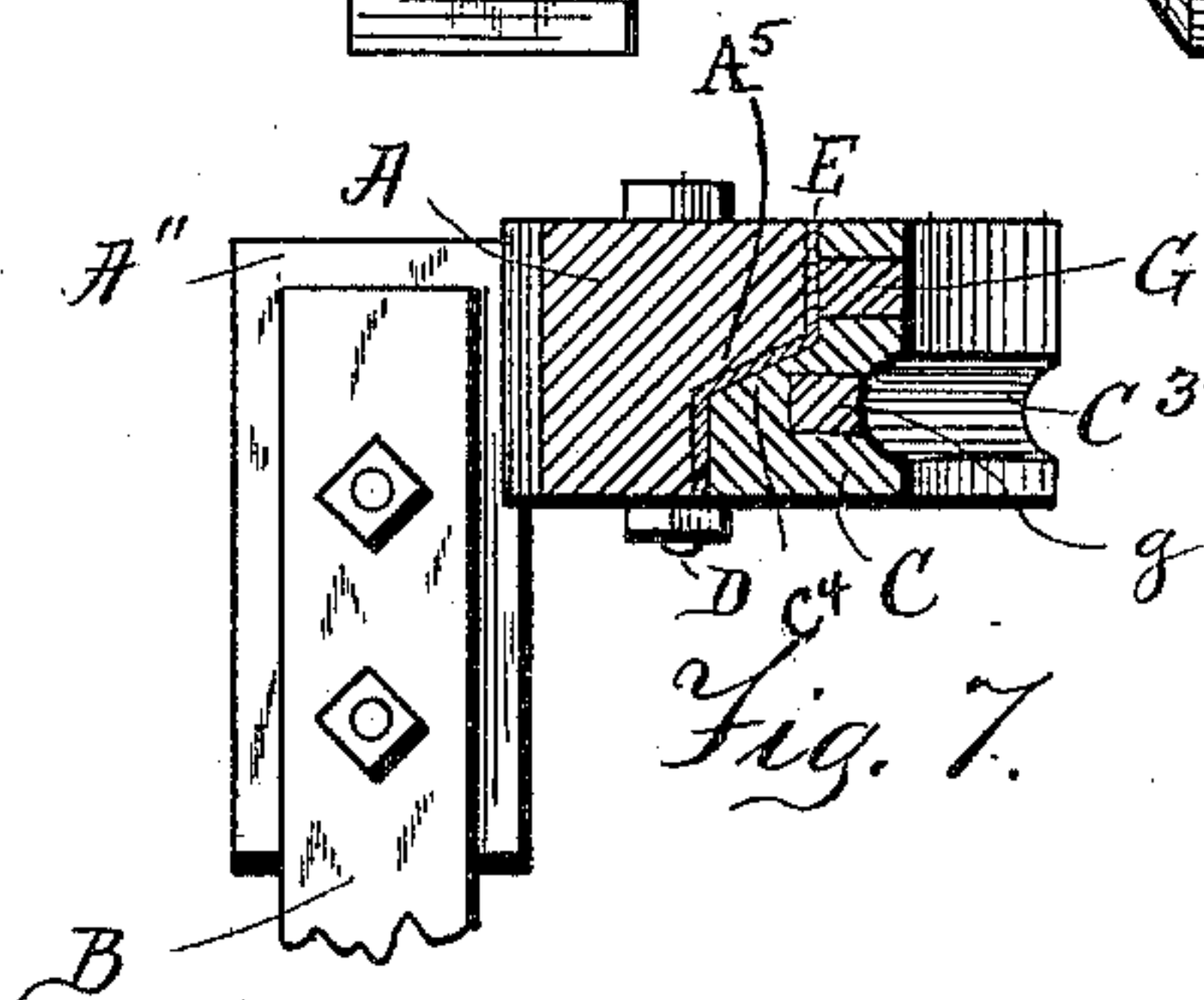
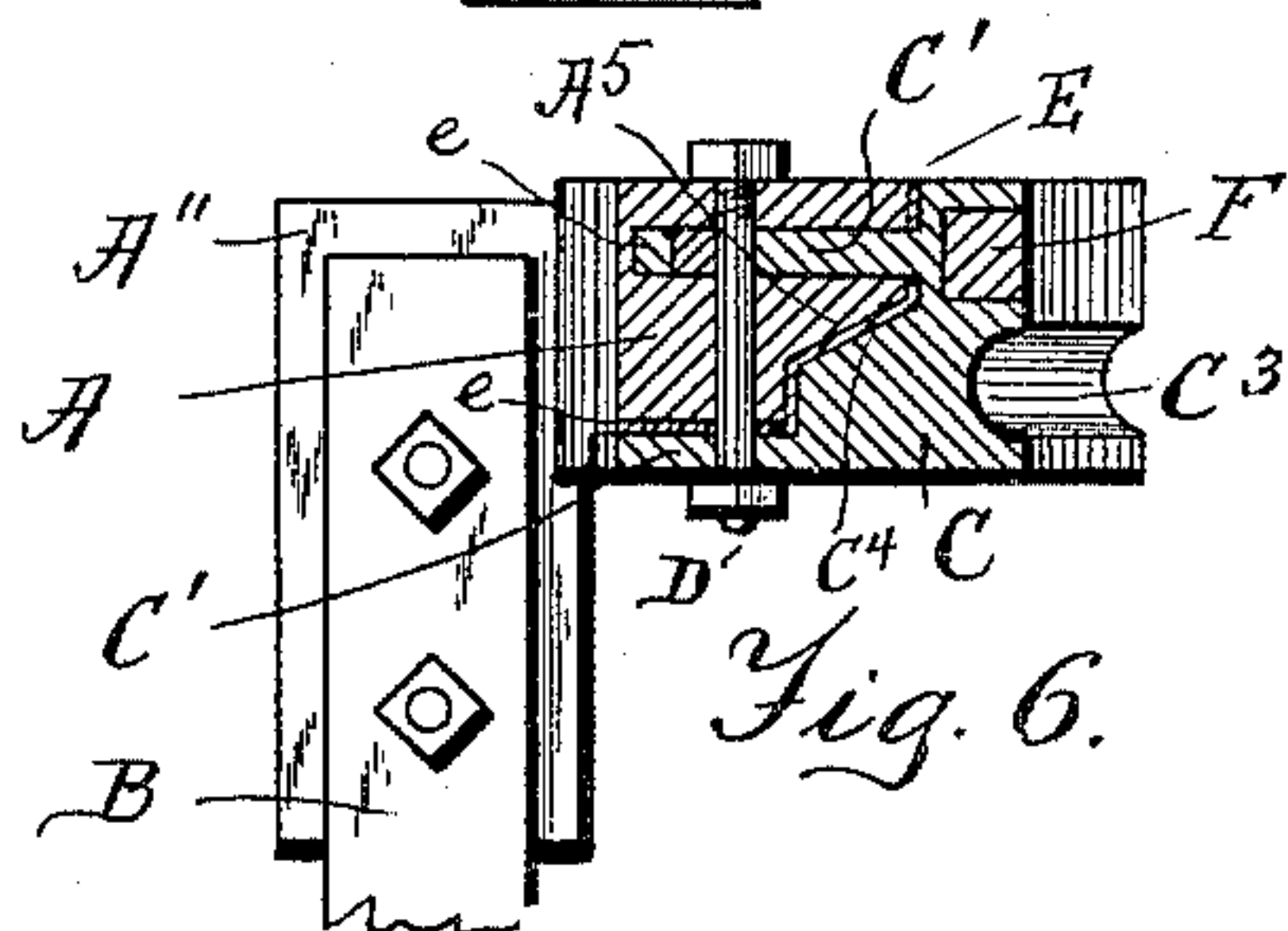
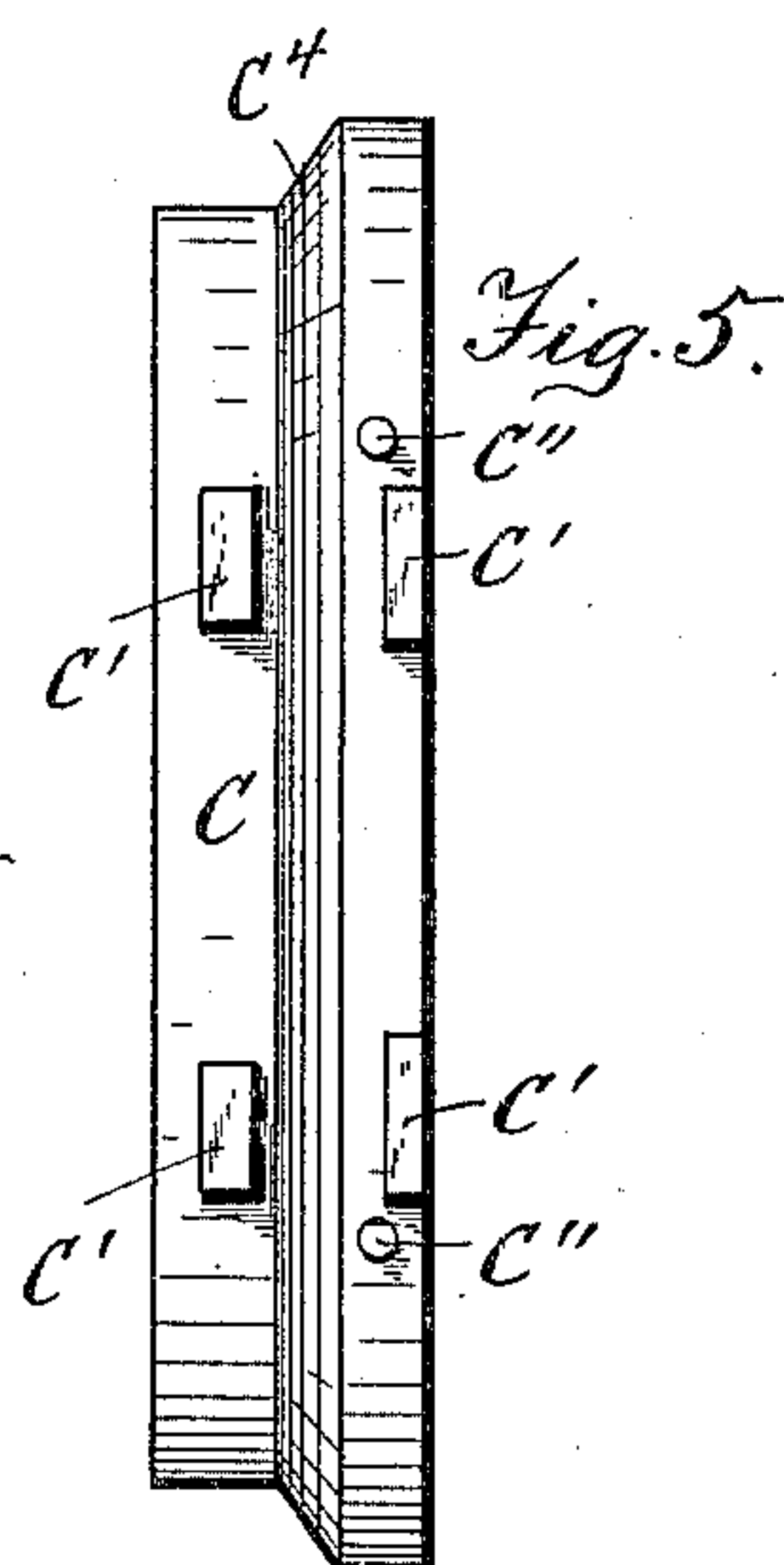
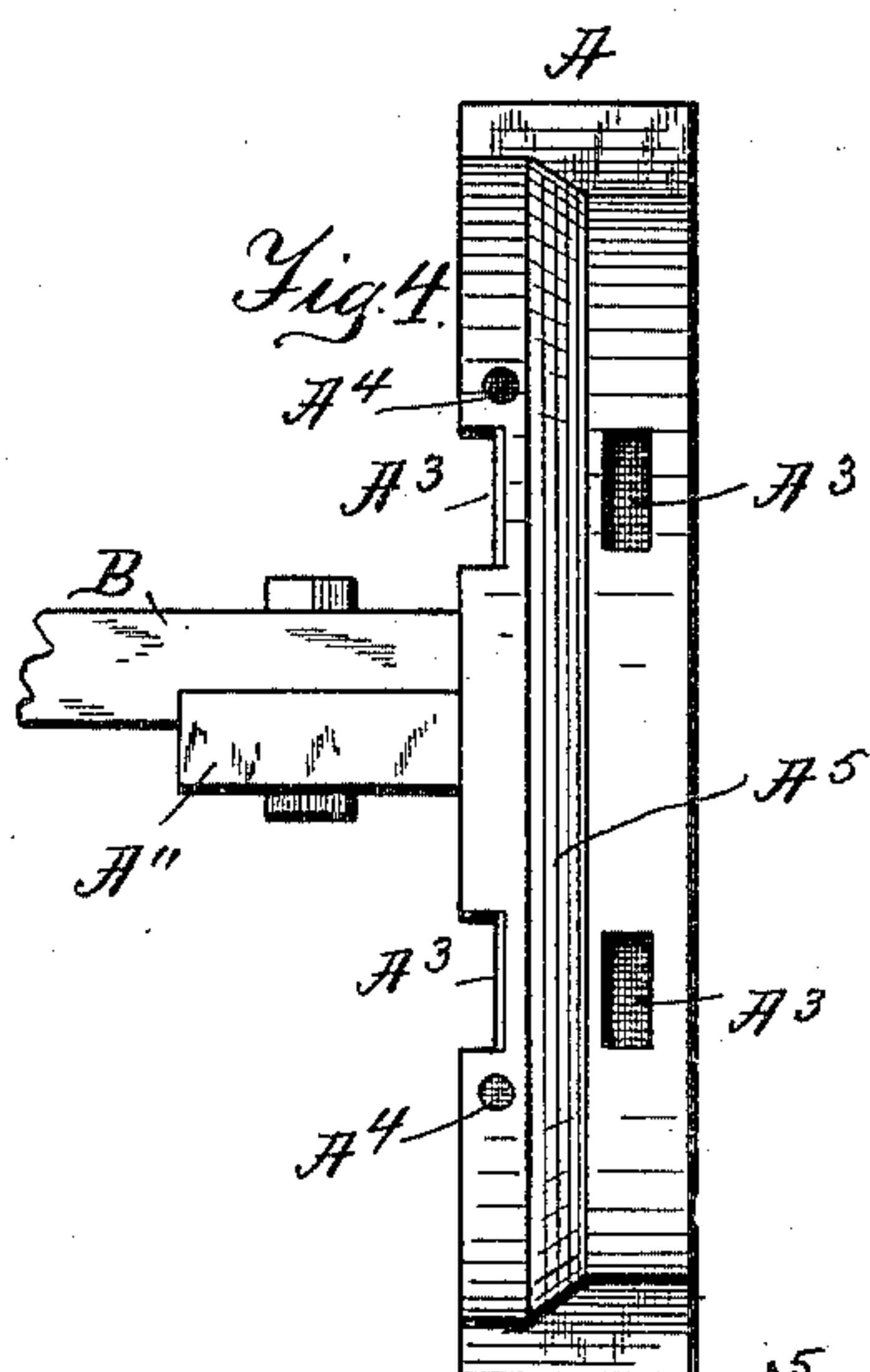
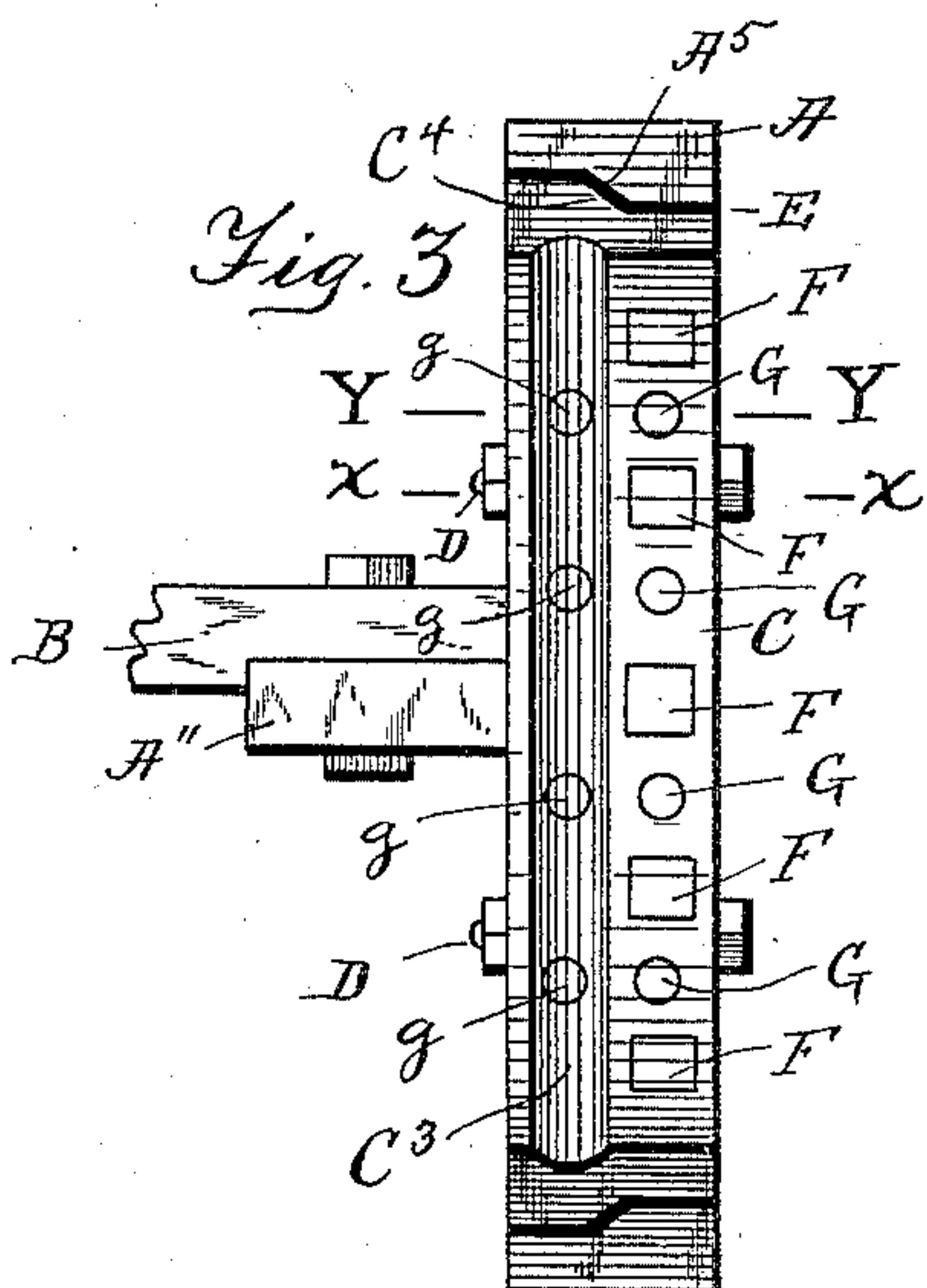
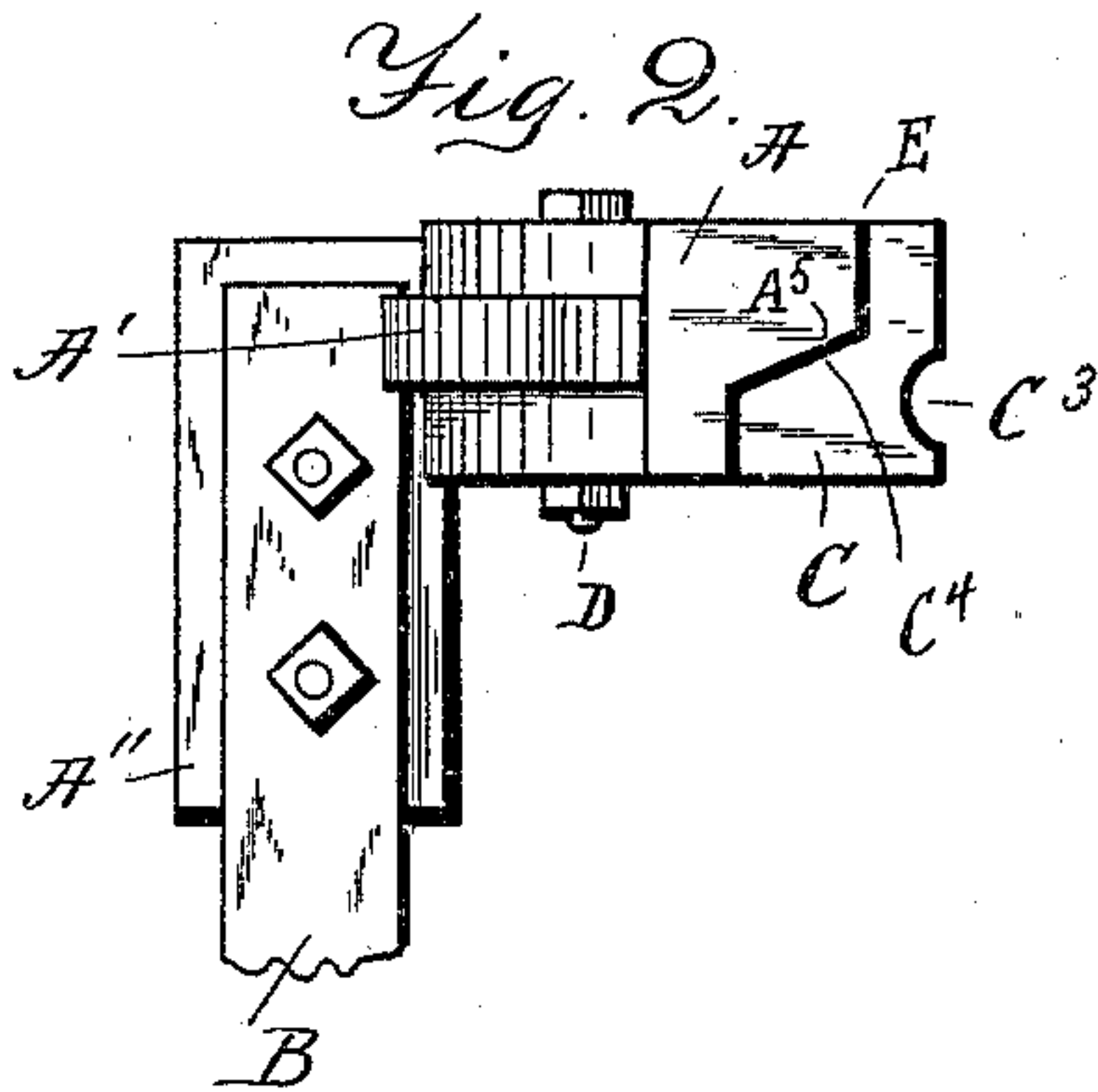
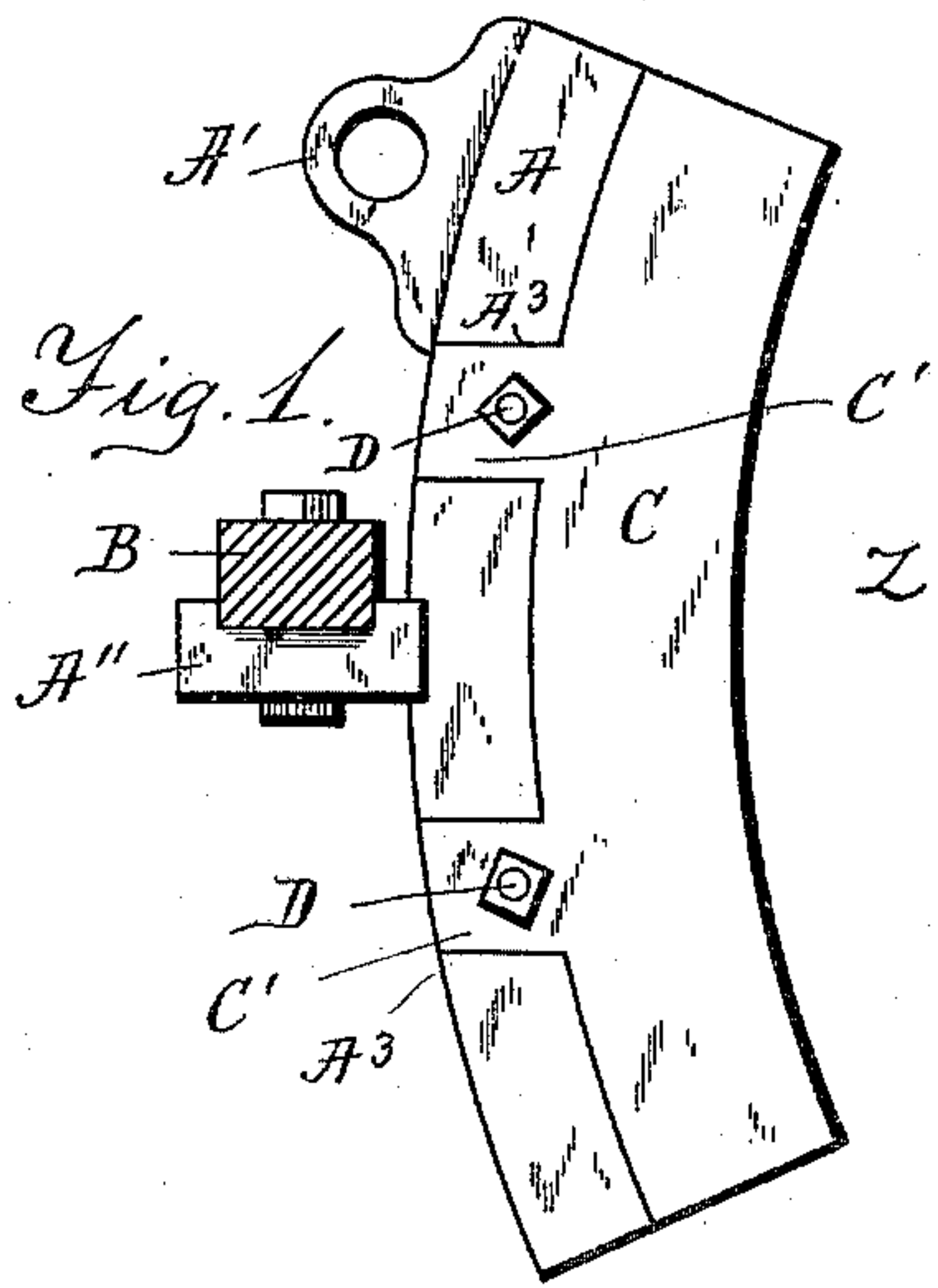


(No Model.)

D. N. COOK.
BRAKE SHOE.

No. 466,655.

Patented Jan. 5, 1892.



WITNESSES
Alvin A. Perkins
George F. Piper

INVENTOR
David N. Cook
by *Alban Judrien*
his ATTY.

UNITED STATES PATENT OFFICE.

DAVID N. COOK, OF SALEM, MASSACHUSETTS.

BRAKE-SHOE.

SPECIFICATION forming part of Letters Patent No. 466,655, dated January 5, 1892.

Application filed March 28, 1891. Serial No. 386,769. (No model.)

To all whom it may concern:

Be it known that I, DAVID N. COOK, a citizen of the United States, and a resident of Salem, in the county of Essex and State of Massachusetts, have invented new and useful Improvements in Car-Wheel Brakes, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention relates to improvements in car-wheel brakes, and it is carried out as follows, reference being had to the accompanying drawings, wherein—

Figure 1 represents a side elevation of the improved brake. Fig. 2 represents a top plan thereof. Fig. 3 represents an end view as seen from Z in Fig. 1. Fig. 4 represents a similar view showing the brake-shoe removed. Fig. 5 represents an end view of the brake-shoe. Fig. 6 represents a cross-section on the line X X, shown in Fig. 3; and Fig. 7 represents a cross-section on the line Y Y, also shown in Fig. 3.

Similar letters refer to similar parts wherever they occur on the different parts of the drawings.

A is the brake-head, having a perforated ear A', from which it is hung from the truck, as usual. The said brake-head has an ear or bracket A'', to which the cross-beam B is bolted, said beam being secured in its opposite end to a similar brake-head, as is common in devices of this kind.

C is the brake-shoe, which is detachably secured to the brake-head by means of upper and lower pairs of parallel ears C' C' on said shoe going through corresponding recesses or perforations A³ A³ in the brake-head, as shown.

D D are upper and lower fastening-bolts going through the ears C' C' and brake-head A, by means of which the latter is rigidly secured to the brake-shoe, as shown.

In practice I prefer to provide the shoe C with steady pins or projections C'' C'', adapted to fit into corresponding recesses A⁴ A⁴ in the brake-head for the purpose of still further securing said shoe and head together, so as to prevent wear and rattling when in use.

C³ is the flange-groove on the interior curved portion by the shoe C, adapted to receive the wheel-flange when the brake is put on. For the purpose of obtaining a sufficient amount of stock on the brake-shoe back of the flange-

groove C³, I make at the rear of said shoe a bevel C⁴, adapted to fit against a corresponding bevel-surface A⁵ on the interior of the brake-head A, as shown, and by this arrangement I am able to lighten the shoe, as well as to obtain a strong, durable, and rigid connection between it and its brake-head.

For the purpose of preventing rattling of the shoe I prefer to interpose between it and the brake-head a rubber or other elastic or yielding packing E, as shown in the drawings. Packings e e may also be to advantage located between the ears C' C' on the shoe C and the recesses A³ A³ on the brake-head, as shown in Fig. 6.

For the purpose of increasing the wear-resisting property of the brake-shoe I insert in recesses in its face a series of forged metal plugs F F, preferably made of steel or wrought-iron, as shown in Figs. 3 and 6; and for the purpose of increasing the grip or frictional resistance of the shoe against the car-wheel I insert in recesses in the face of the said shoe a series of wooden plugs G G G, as shown in Figs. 3 and 7. I also prefer to insert in a similar manner a series of wooden plugs g g g in the grooved portion C³ of the brake-shoe, as shown in Figs. 3 and 7. By this construction, as shown and described, the shoe C, when it becomes worn, may easily be removed and a new one put in its place on the brake-head, leaving the latter in its original condition, and I am thus able to repair the brake from time to time as it becomes worn simply by removing the detachable brake-shoe and replacing it with a new one at a very small expense as compared with the cost of an entire brake-head.

By my construction great rigidity is obtained between the head and its shoe, and shaking and rattling are prevented between said parts. The wear-resisting property of the shoe is materially increased, as is also the gripping or frictional qualities.

Having thus fully described the nature, construction, and operation of my invention, I wish to secure by Letters Patent, and claim—

1. The combination, with a brake-head A, having the upper and lower recesses A³, of a detachable brake-shoe having upper and lower pairs of parallel ears C', engaging the upper and lower recesses of the brake-head, and up-

per and lower fastening-bolts D, passing transversely through the brake-head and the ears to rigidly attach the brake-shoe to the brake-head, substantially as described.

5 2. The brake-head having a beveled face combined with a detachable brake-shoe having a corresponding beveled back, and means for securing said parts together, substantially as herein set forth and described.

10 3. The brake-head having a beveled face combined with a detachable brake-shoe and an elastic packing interposed between said beveled surfaces, substantially as and for the purpose set forth.

15 4. The herein-described brake-shoe, having a groove C³ arranged beside the plane surface,

which acts on the tread of the wheel, said plane surface and groove each being provided with inserted wrought-metal and wooden plugs alternating with each other for resisting wear and increasing the grip action of the plane surface and groove, substantially as described.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 26th day of March, A. D. 1891.

DAVID N. COOK.

Witnesses:

ALBAN ANDRÉN,
ALICE A. PERKINS.