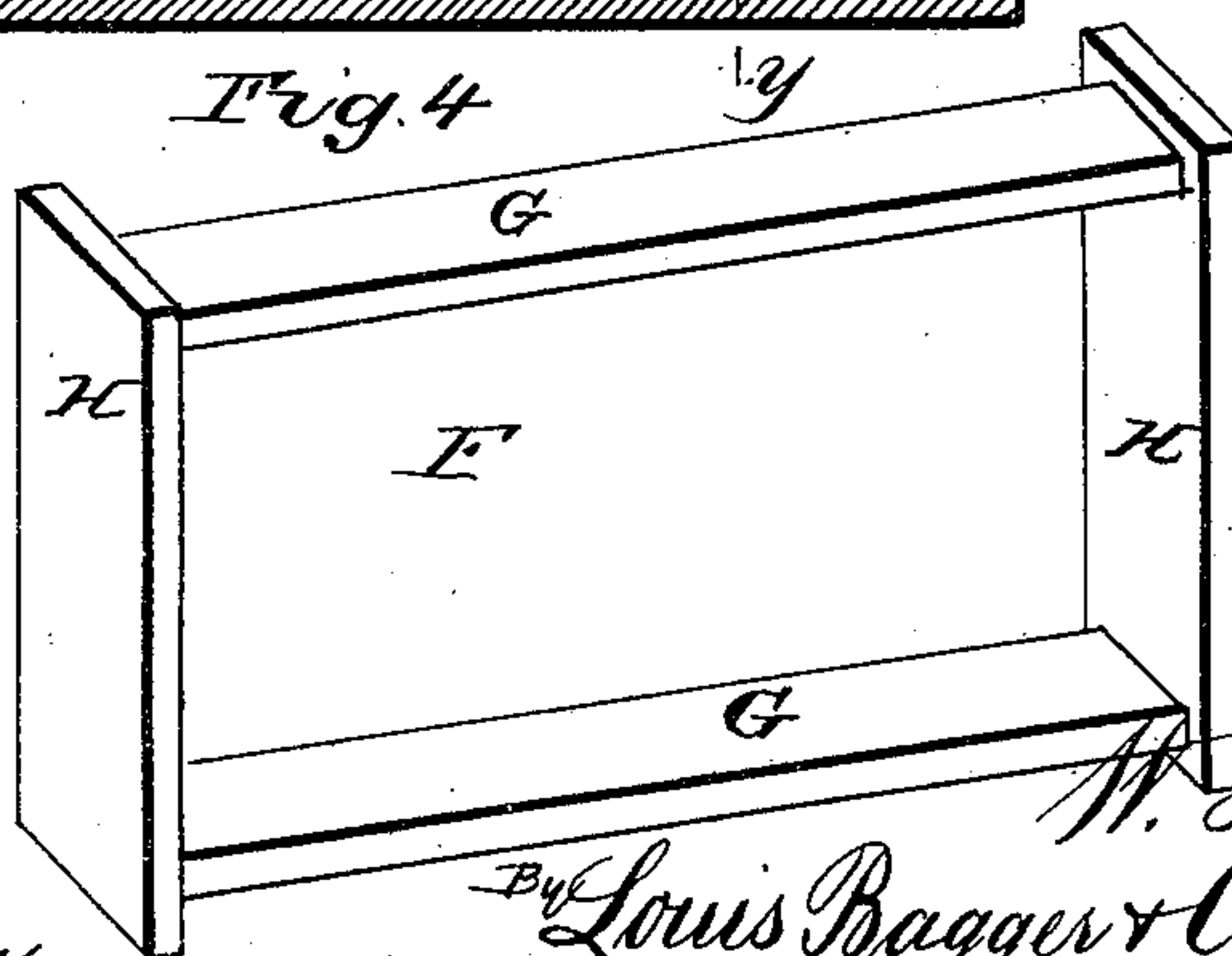
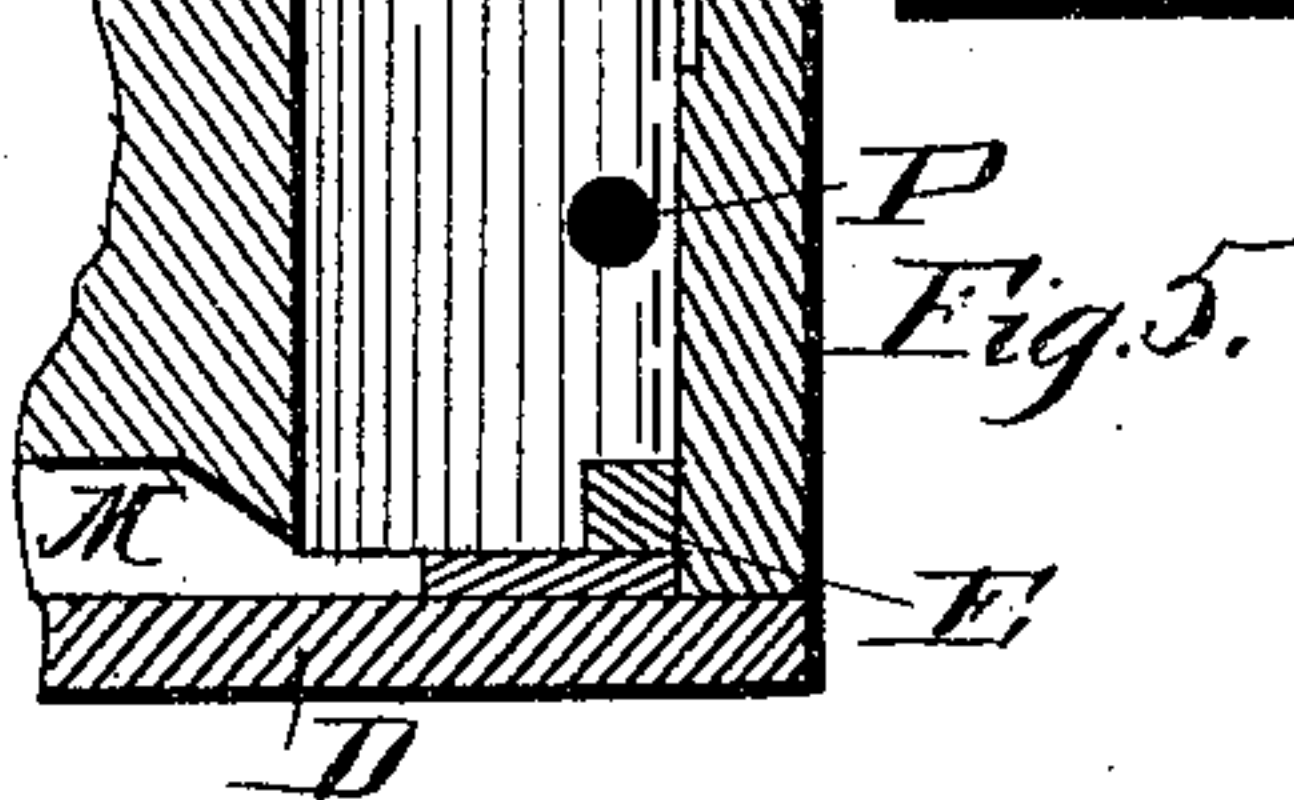
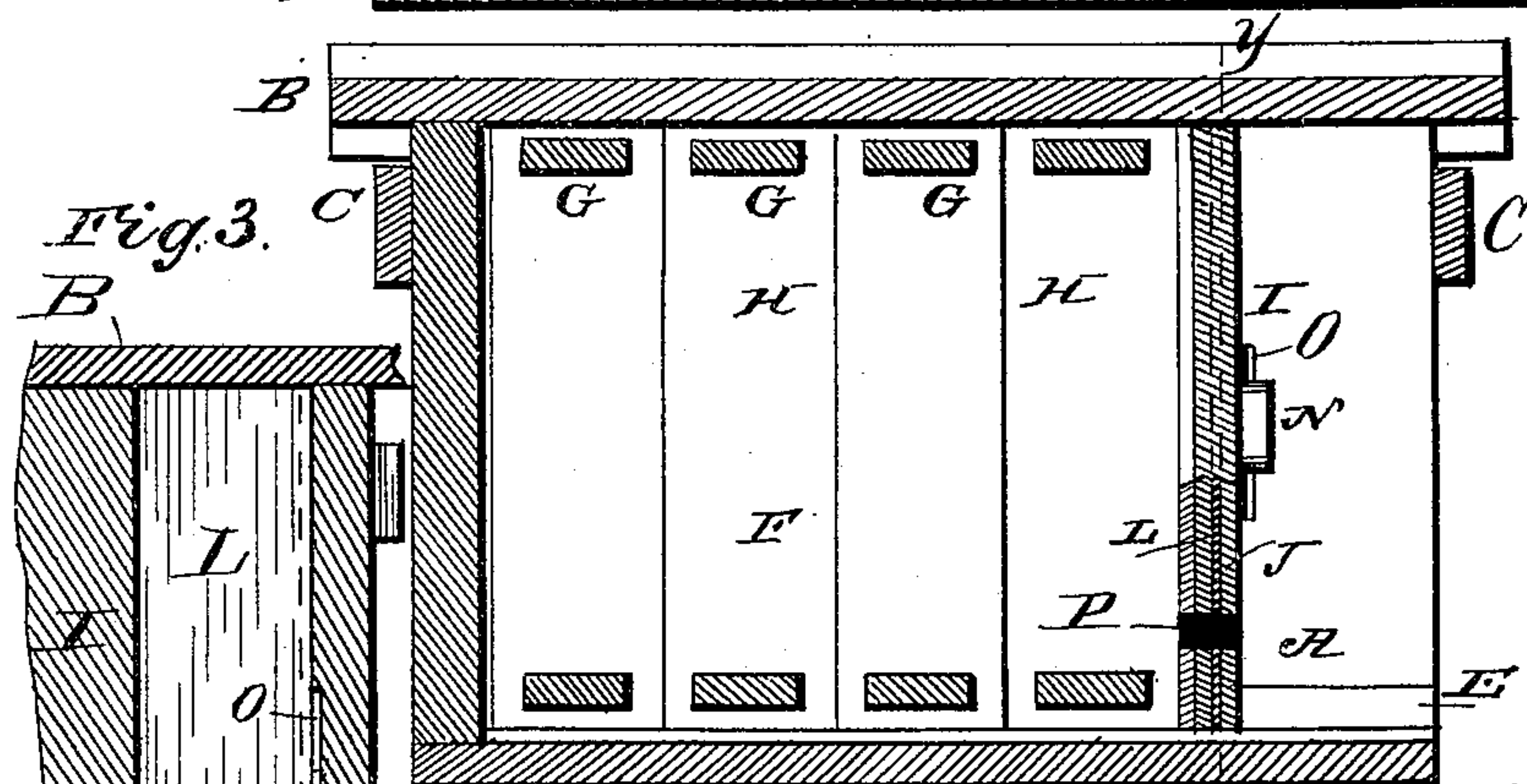
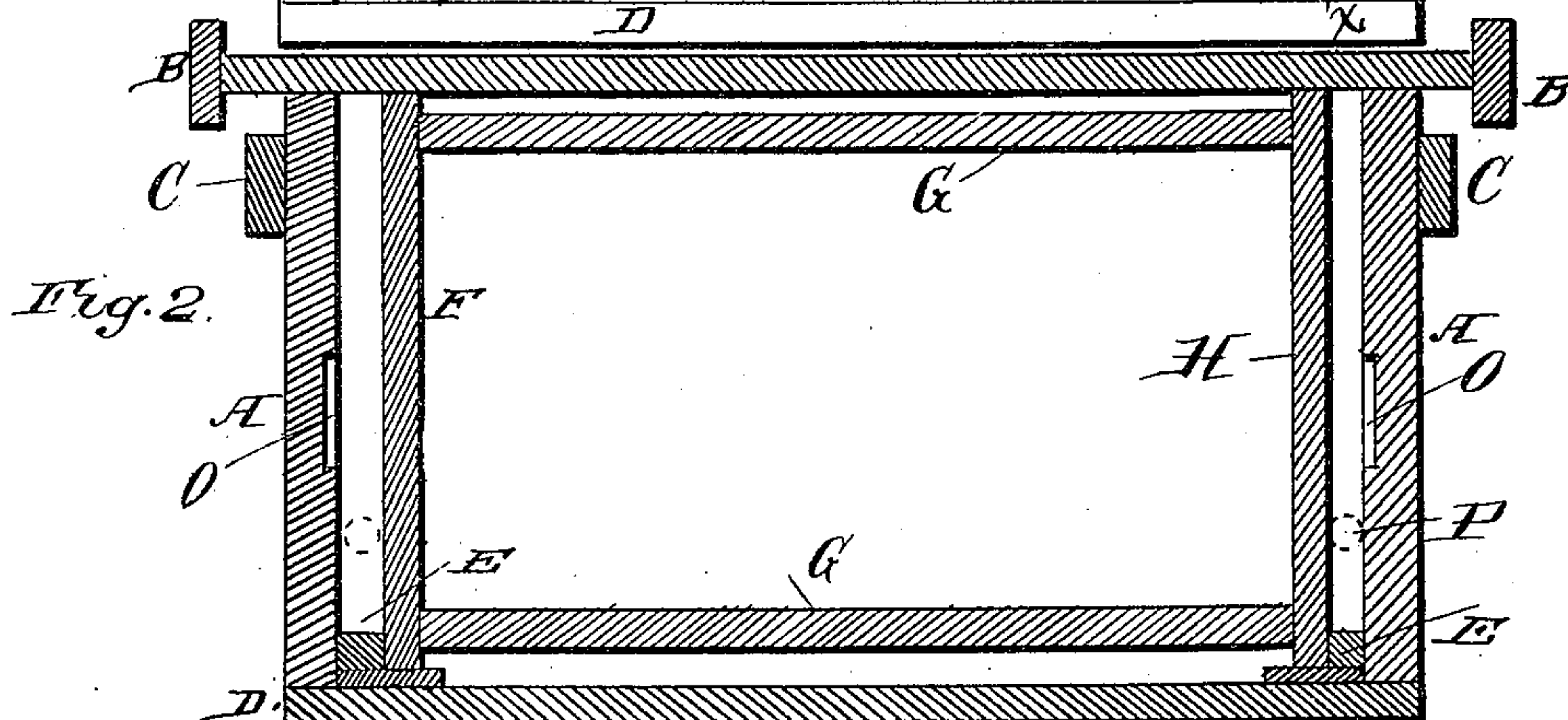
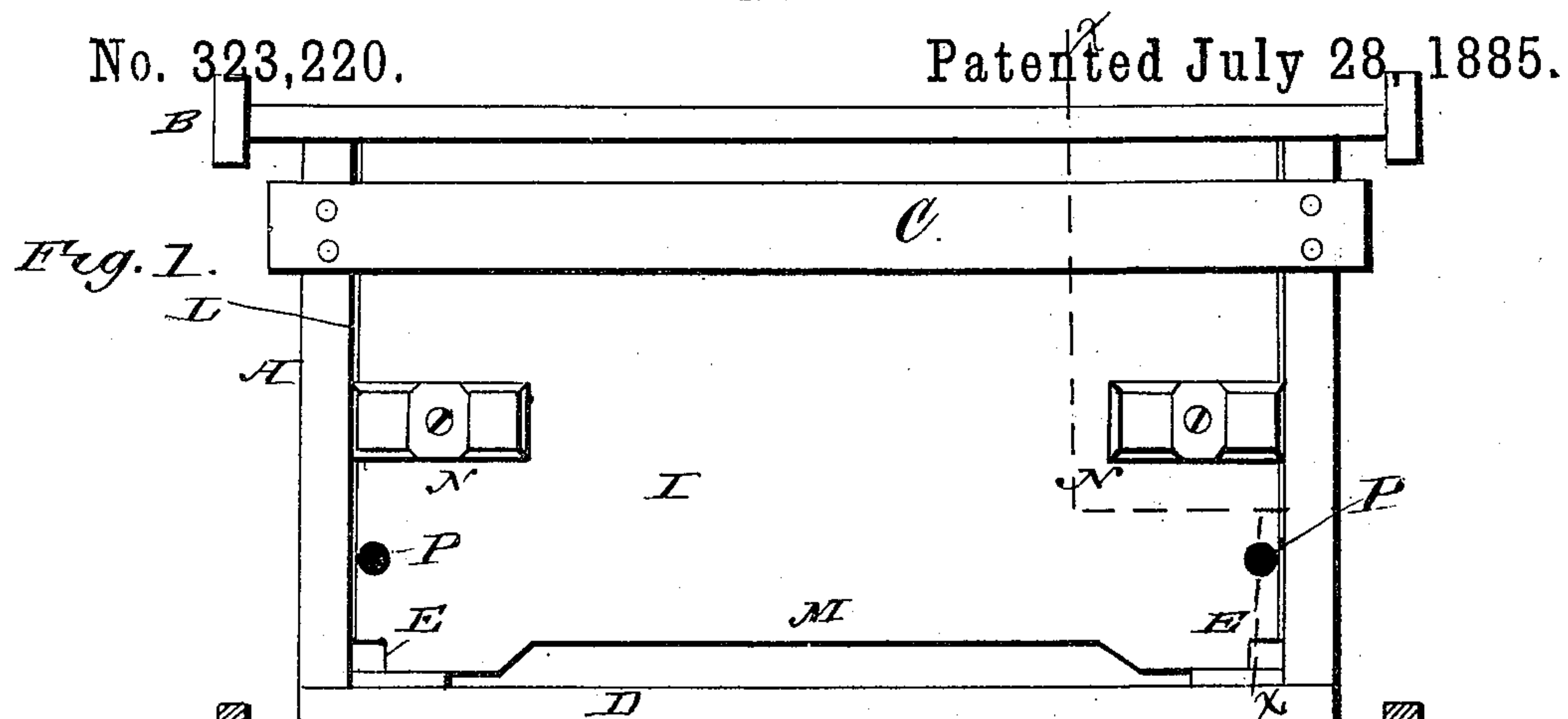


W. H. SHIRLEY.  
BEE HIVE.

Patented July 28, 1885.



WITNESSES:

Med. L. Dietrich.  
H. W. C. C. C.

INVENTOR.

W. H. Shirley  
By Louis Ragger & Co. ATTORNEYS.



# UNITED STATES PATENT OFFICE.

WILLIS HERBERT SHIRLEY, OF GLENWOOD, MICHIGAN.

## BEE-HIVE.

SPECIFICATION forming part of Letters Patent No. 323,220, dated July 28, 1885.

Application filed July 12, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIS H. SHIRLEY, a citizen of the United States, and a resident of Glenwood, in the county of Cass and State of Michigan, have invented certain new and useful Improvements in Bee-Hives; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a front view of my improved bee-hive. Fig. 2 is a longitudinal vertical sectional view of the same. Fig. 3 is a transverse vertical sectional view taken on the line *xx* in Fig. 1. Fig. 4 is a perspective view of one of the comb-frames detached; and Fig. 5 is a vertical sectional detail view taken on line *yy*, Fig. 3.

The same letters refer to the same parts in all the figures.

This invention relates to bee-hives; and it has for its object to provide an improved hive-box which shall possess superior advantages in point of simplicity of construction, ease of management, and in which any desired number of frames may be used with equal advantages.

To this end the invention consists in the improved construction and arrangement of parts, which will be hereinafter fully described, and particularly pointed out in the claim.

In the drawings hereto annexed, A designates the hive-box, which in this case is shown to represent the brood-chamber, although the same construction may be used in the honey-box, and which consists of a single rectangular box having an overhanging removable roof, B, and provided with suitable strengthening-cleats, C. The bottom D of the box A is provided at its inner edges with shoulder-cleats E E, for the double purpose of supporting the comb-frames F F and keeping the latter a short distance from the sides of the hive. Of the comb-frames any desired number may be used, from a single one to such a number as shall completely fill the hive-box. The comb-frames are of the construction clearly shown in Fig. 4 of the drawings, by reference to which it will be seen that they consist of rectangular

frames, the upper and lower sides of which, G G, are somewhat narrower than the ends H H, for the purpose of admitting the bees into said frames.

I designates the detachable front of the hive-box. The construction of this will be readily understood by reference to the drawings, where it will be seen that it is provided at each end with a groove, J, in which is seated a strip, L, of sheet metal, for the purpose of preventing the said front piece from warping, and which projects slightly beyond the edge of the said front piece, preventing the bees from gluing the said edges to the sides of the box and thus prevent its ready removal. The lower edge of the front I is cut away, as at M, so as to form a bee-entrance. The ends of the said front piece are provided with turn-buttons N N, adapted to engage any one of a series of slots, O, formed in the inner sides of the hive-box, for the purpose of securing the said front piece and the frames contained in the hive-box in position.

Two perforations, P P, are made in the front piece in the ends of the same, which perforations will afford an exit for the bees which, by the removal and subsequent reinsertion of the front piece, may have passed into the spaces between the ends of the comb-frames and the sides of the box while the front piece was removed, and which, but for these perforations, would remain confined in the said spaces, being cut off from passing into the comb-frames by reason of the end pieces of the said frames forming one continuous wall.

The operation of this invention will be readily understood from the foregoing description, taken in connection with the drawings hereto annexed.

It is evident that any number of comb-frames may be used that may be accommodated in the hive-box. The said comb-frames are packed securely together by means of the front piece, and the cut-away part of the lower edge of the latter forms the bee-entrance. It will be seen that the cleats in the inner side of the hive-box will keep the ends of the frames a short distance from the sides of the said box; and, the ends of the frames being close together, the bees will be prevented from getting into the narrow spaces between the ends of the comb-frames and the sides of the box, this being for

the double purpose of promoting ventilation and preventing the bees from gluing the ends of the front piece to the sides of the box, which would render the removal of said piece  
5 difficult. The bees when they pass into the hive-box will readily find their way into the comb-frames, and the latter may be reversed when desired, their upper and lower sides being of like construction.

10 Owing to the construction of this hive-box, it may be easily manipulated in the apiary, and it is simple, convenient, and durable.

Having thus described my invention, what I claim, and desire to secure by Letters Patent  
15 of the United States, is—

The combination of the bee-hive box having

cleats at the sides and comb frames arranged between the cleats, whereby spaces between the sides of the box and the closely-adjointing side pieces of the comb-frames are formed, 20 with the adjustable front piece having apertures P at its end, registering with the spaces between the sides of the box and the comb-frames, as and for the purpose shown and set forth.

25 In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

WILLIS HERBERT SHIRLEY.

Witnesses:

WILLIAM LINCOLN DREW,  
EDITH EUDORA SHIRLEY.