

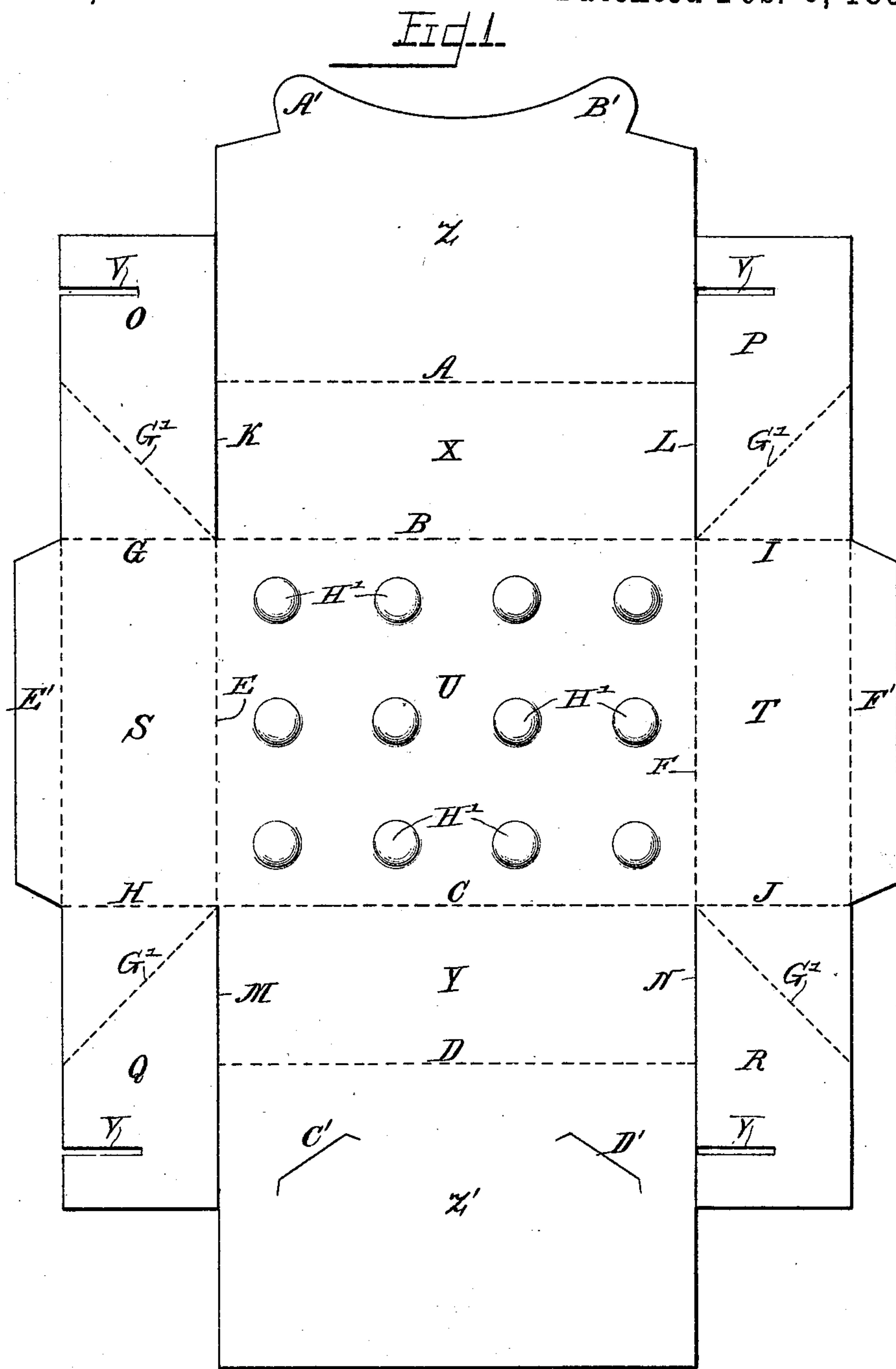
(No Model.)

4 Sheets—Sheet 1.

J. G. REBER & J. L. SEFTON.
PAPER BOX.

No. 514,032.

Patented Feb. 6, 1894.



Witnesses:
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Wm. J. Fleming

Inventors
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John L. Sefton
by Edward Rector
their Attorney

(No Model.)

4 Sheets—Sheet 2.

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Fig 2.

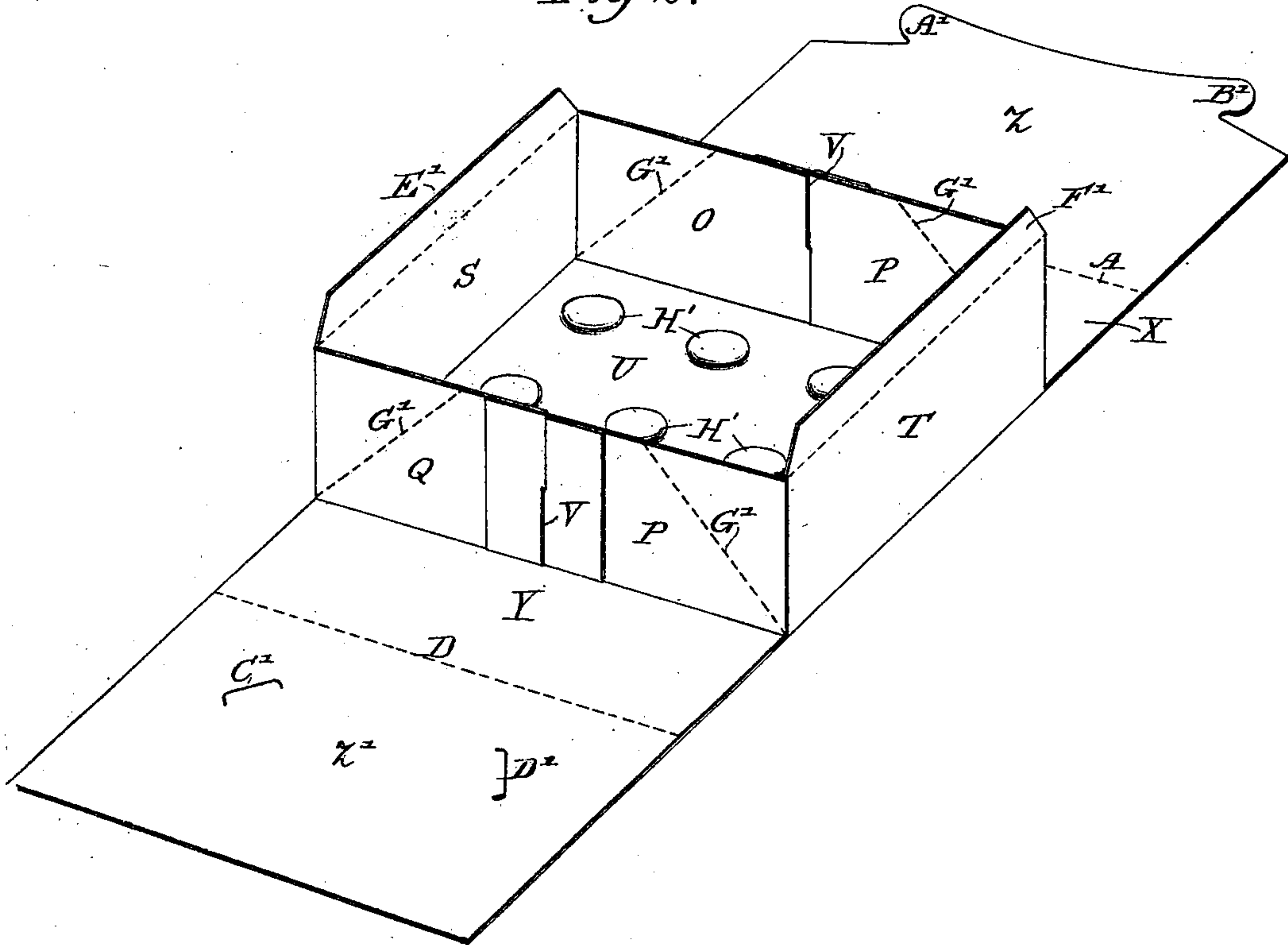
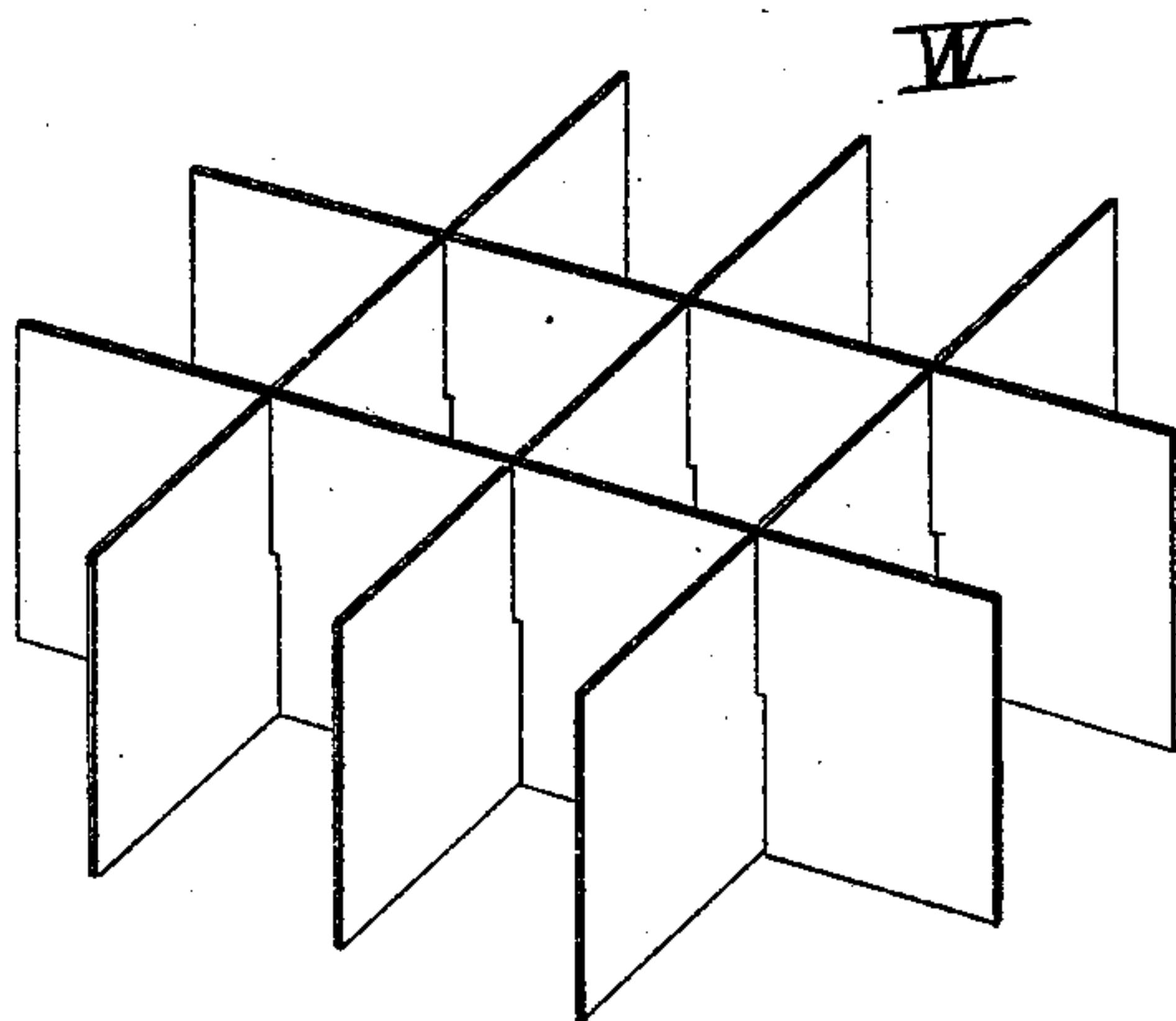


Fig 3.



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Fig 4.

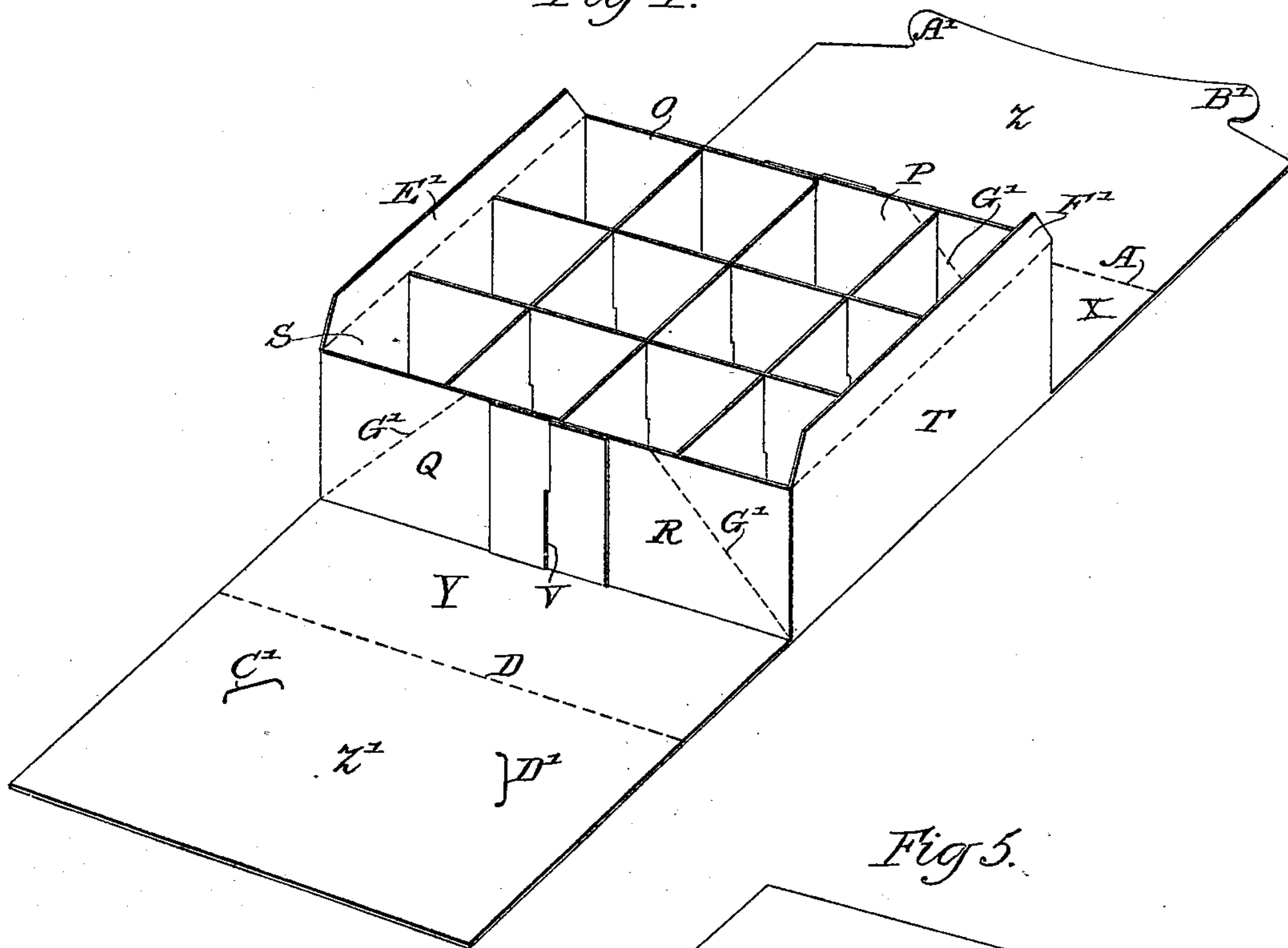


Fig 5.

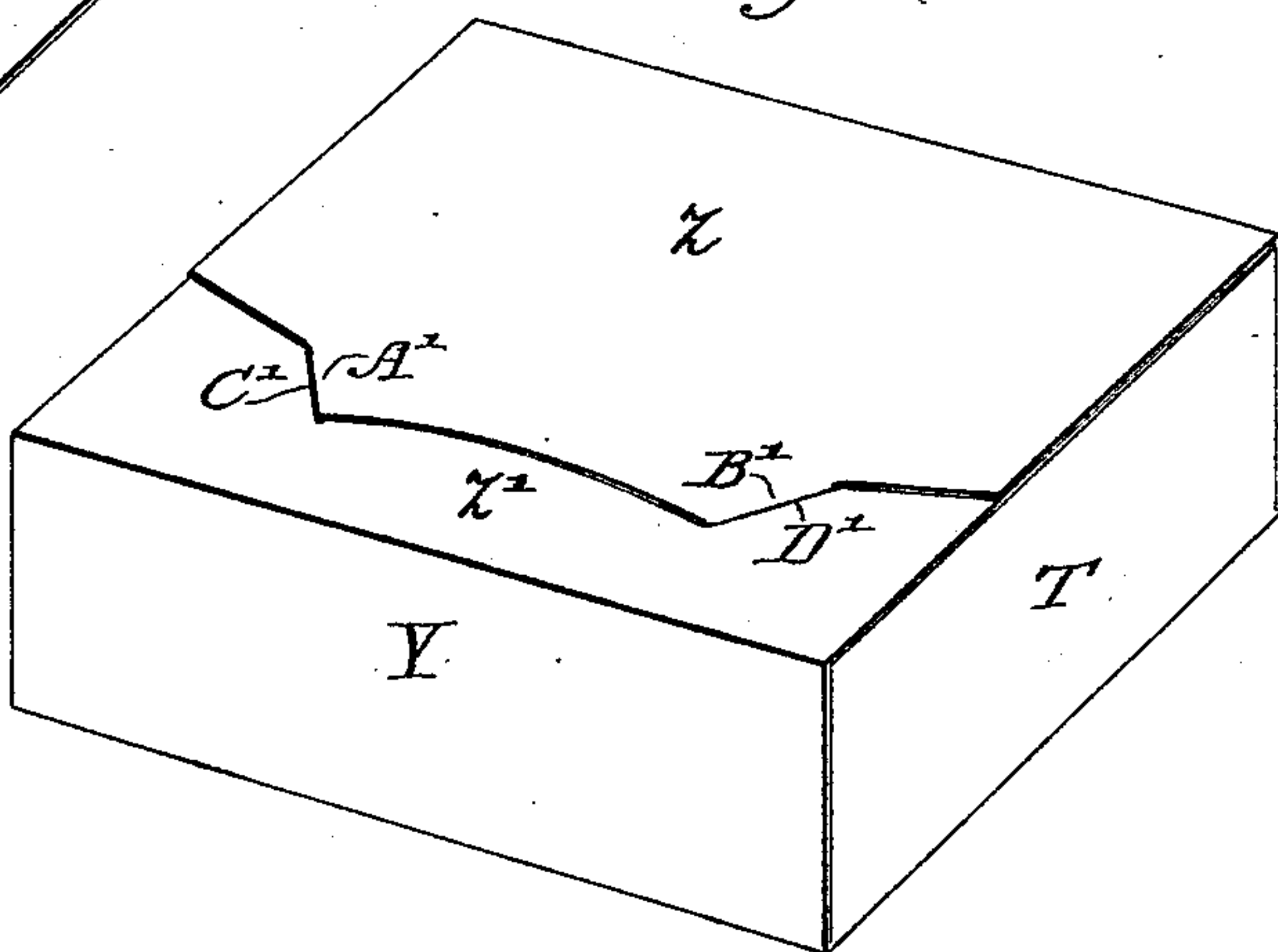
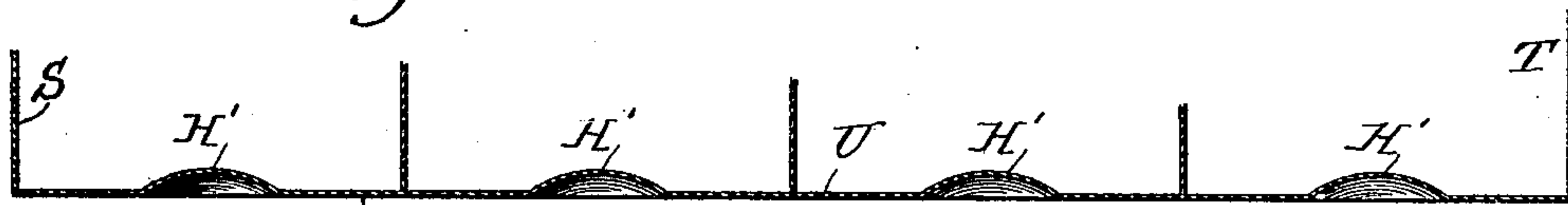


Fig 6.



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(No Model.)

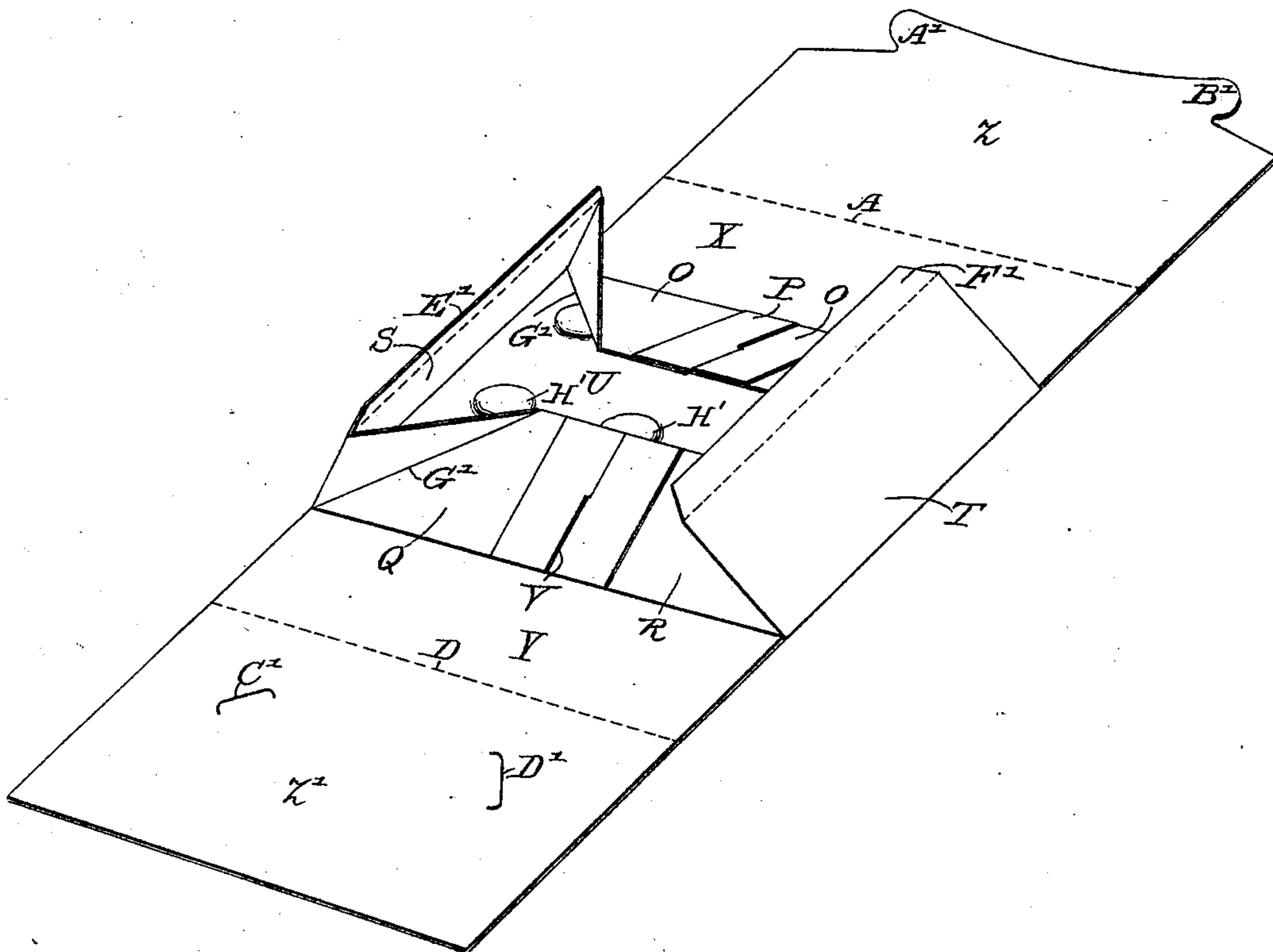
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Fig 7.



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UNITED STATES PATENT OFFICE.

JOHN G. REBER AND JOHN L. SEFTON, OF CHICAGO, ILLINOIS.

PAPER BOX.

SPECIFICATION forming part of Letters Patent No. 514,032, dated February 6, 1894.

Application filed April 19, 1892. Serial No. 429,725. (No model.)

To all whom it may concern:

Be it known that we, JOHN G. REBER and JOHN L. SEFTON, citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Paper Boxes, of which the following is a description, reference being had to the accompanying drawings, forming part of this specification.

Our invention relates more particularly to paper boxes designed for use as egg cases, suitable partitions being fitted into them to form the cells for the reception of the eggs, but our box of novel construction may be used for other purposes.

In the accompanying drawings Figure 1 is a plan view of one form of blank from which our boxes may be folded; Fig. 2 a perspective view of a partly formed box folded from said blank; Fig. 3 a perspective view of a set of partitions adapted to be fitted into the box shown in Fig. 2; Fig. 4 a perspective view of the box with the partitions fitted into it; Fig. 5 a perspective view of the closed box; Fig. 6 an enlarged cross-section of the bottom of the case through one of the rows of cushions; and Fig. 7 a perspective view of the case partly folded into shape for shipment.

The same letters of reference are used to indicate identical parts in all the figures.

As shown in Fig. 1 the blank is creased on the dotted lines A, B, C, D, E, F, G, H, I and J, and cut upon the solid lines K, L, M and N. In folding it into box form, the side portions S T and the flaps O, P, Q and R projecting therefrom are first bent upward to vertical position, hinging on the creases E F. Then the flaps O, P, Q and R are bent at right angles across the middle portion of the blank, the flaps O P extending along the crease B and overlapping each other, and the flaps Q R overlapping each other along the crease C. The overlapping ends of the flaps O P may be fastened together in any suitable manner, as may also the ends of the flaps Q R. In the present instance we have shown the flaps furnished with slits V by which their ends may be locked together as seen in Fig. 2.

To form an egg case of the box shown in Fig. 2 a set of partitions or cells W, such as shown in Fig. 3, is fitted into the box, as shown in Fig. 4. To close this box or case the ends

of the blank are bent upward to vertical position along the creases B C, the portions X Y forming the outer side walls of the box while the flaps O P and Q R form the inner side walls. The flaps Z Z' are then bent down over the top of the box to form its cover. They may be fastened together to hold the cover in place by any suitable means, such as the tongues A' B' on the flap Z and co-operating slits C' D' in the flap Z', Fig. 5.

For the purpose of closing the open slit which would otherwise be left between the upper edges of the end walls S T and the cover of the box, the blank is preferably provided with the narrow side flaps E' F', and in such case these flaps are folded inward and downward to horizontal position before the flaps Z Z' are bent down to close the box.

Heretofore, in egg cases of this general character the bottom of the case or box has been left perfectly flat and smooth, and the eggs have rested directly on this bottom. Considerable care has had to be exercised both in putting the eggs into the cases and in handling the cases after they were filled, to prevent breakage of the eggs. If the empty case were placed upon the store counter or like flat surface and the eggs dropped into the cells they were quite liable to strike hard enough to break. So, if a filled case were carelessly dropped or pitched upon a counter or table, the eggs resting upon its flat bottom were liable to be broken, the bottom of the case affording little or no protection to them. We propose to overcome these difficulties and protect the eggs from breakage by providing a cushion H', Fig. 1, 2 and 6, upon the upper surface of the bottom of the case immediately beneath each egg cell. These cushions we form directly in the blank from which the box is folded, by compressing it between suitable dies, either at the same operation by which the blank is creased and cut, or by a separate operation, as desired. The cushions shown in the drawings, Figs. 1 and 6, are formed by compressing the blank between an upper plate having a concave recess or die opposite the position of each egg cell, and a lower plate having coincident convex dies fitting into the concave ones. By strongly compressing the blank between these dies the permanent convex cushions are

formed in its bottom portion, one in position for each cell. In placing the eggs in a case provided with such cushions they drop upon the yielding spring cushions and are yield-
 5 ingly supported by them above the plane of the bottom of the box. If the filled case be carelessly pitched or dropped upon a counter or table the cushions relieve the eggs of the jar and lessen the liability of breakage. So,
 10 too, if a considerable number of the filled cases be packed one upon another in a large shipping case or box the cushions in the bottom of each box will hold its eggs above the cover of the box below, and lessen the danger
 15 of the eggs in the different boxes jarring against each other.

In order to pack boxes and cases of this character compactly, for shipment from the manufacturer to the jobber or user, it is desirable that they be folded or unfolded into
 20 substantially flat form. The case herein illustrated and described may be packed flat by removing the partitions W (which may be readily pressed out flat) and then unfolding
 25 the box to the form of the flat blank shown in Fig. 1. The side strips of this blank may then be folded over upon the middle portion, hinging on the creases E, F, to enable the blanks to be placed in a narrow package. I
 30 have, however, illustrated a method of folding and compressing the box shown in Fig. 2 into substantially flat condition without unfolding it to the form shown in Fig. 1. As
 35 seen in the latter figure, each of the flaps O, P, Q and R is provided with a diagonal crease G'. These creases permit the side and end walls of the box to be bent inward toward its middle as shown in Fig. 7, and then pressed
 40 down flat upon the bottom portion U of the blank, the end walls hinging on the creases E, F, and the side walls on the creases G, H, I and J and folding upon themselves along the diagonal creases G'. The end flaps Z, Z'
 45 may then be folded down flat upon the above parts, hinging on the creases A, D, and the box thus be brought into a very small compass. When the box is unfolded the side and end walls readily resume their upright
 50 positions and it is only necessary to insert the partitions to put the case in condition for use.

Having thus fully described our invention, we claim—

1. The herein described closed box, composed of the bottom portion U, the side and
 55 end walls X, Y and S, T bent upward from said bottom portion along the lines B, C, E, F, a cover flap, as Z, hinged upon one of the side walls X, Y, and the flaps O, P, Q, R hinging upon the end walls S, T along the lines G, H, I, J and
 60 bent transversely across the box and overlapping each other along the lines B, C, to form the inner side walls of the box, and provided with the diagonal creases G' along which they may be bent upon themselves and pressed
 65 down upon the bottom portion of the box in the manner and for the purpose set forth.

2. The herein described closed box, com-

posed of the bottom portion U, the side and end walls X, Y and S, T bent upward from said bottom portions along the lines B, C, E, F, a
 70 cover flap, as Z, hinged upon one of the side walls X, Y, and the flaps O, P, Q, R hinging upon the end walls S, T along the lines G, H, I, J and bent transversely across the box along the lines B, C and overlapping each other and
 75 interlocked by means of the slits V, to form the inner side walls of the box, and provided with the diagonal creases G' along which they may be bent upon themselves and pressed
 80 down upon the bottom portion of the box in the manner and for the purpose set forth.

3. The herein described closed box, composed of the bottom portion U, the side and end walls X, Y and S, T bent upward from
 85 said bottom portion along the lines B, C, E, F, the flaps E', F' hinging on the end walls S, T, the cover flaps Z, Z' hinging upon the side walls X, Y along the lines A, D, and the flaps O, P, Q, R hinging upon the end walls S, T
 90 along the lines G, H, I, J and bent transversely across the box along the lines B, C and overlapped and interlocked with each other by means of the slits V, to form the inner side
 95 walls of the box, and provided with the diagonal creases G' along which they may be bent upon themselves and pressed down upon the bottom portion of the box in the manner and
 for the purpose specified.

4. The herein described blank for forming a closed box, consisting of the bottom portion
 100 U, the end portions S, T separated therefrom by the two parallel creases E, F, the side walls X, Y separated from the bottom U by the two parallel creases B, C, a cover flap, as Z, separated by a crease, as A, from one of the side
 105 walls X, Y and adapted to hinge upon said walls along the line of said crease, and the flaps O, P, Q, R separated from the side walls X, Y by the cuts K, L, M, N and from the end walls S, T by the creases G, H, I, J, and adapted
 110 to be folded transversely across the middle portion of the blank and overlap each other along the lines B, C, to form the inner side walls of the box, and provided with the diagonal-creases G' along which they may be bent
 115 upon themselves and pressed down upon the bottom portion of the box in the manner and for the purpose specified.

5. The herein described blank for forming a closed box, consisting of the bottom portion
 120 U, the end portions S, T separated therefrom by the two parallel creases E, F, the side walls X, Y separated from the bottom portion U by the two parallel creases B, C, the cover flaps Z, Z' separated from the side walls X, Y by
 125 the creases A, D, and the slitted flaps O, P, Q, R separated from the body of the blank by the cuts K, L, M, N and creases G, H, I, J, and adapted to be bent transversely across the middle portion of the blank and overlapped
 130 and interlocked with each other along the lines B, C, to form the inner side walls of the box, and provided with the diagonal creases G' along which they may be bent upon them-

selves and pressed down upon the bottom portion of the box in the manner and for the purpose set forth.

5 6. An egg-case composed of a closed box
folded from a single blank and consisting of
the bottom portion U, the end walls S T and
the side walls X Y bent upwardly therefrom
along the lines E F and B C, a cover flap, as
Z, hinging upon one of the side walls X Y,
10 and the flaps O P Q R hinging upon the end
walls S T and folded transversely across the
blank along the lines B C, and the partitions
W fitted into the box to form the separate
egg-cells, the bottom portion U of the box
15 having the upwardly projecting cushions H'
adapted to support the eggs above the bot-
tom of the case in the manner and for the
purpose specified.

20 7. The herein described egg-case blank con-
sisting of the bottom portion U, the end por-

tions S T separated therefrom by the two par-
allel creases E F, the side walls X Y separated
from the bottom portion U by the two paral-
lel creases B C, the cover flaps Z Z' adapted
to hinge along the lines A D, and the flaps O 25
P Q R separated from the body of the blank
by the cuts K L M N and creases G H I J and
adapted to be folded transversely across the
middle portion of the blank along the lines B
C, the bottom portion U of the blank having 30
the upwardly projecting cushions H' pressed
into it and adapted to support the eggs above
the bottom of the case, substantially as de-
scribed.

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