

No. 629,506.

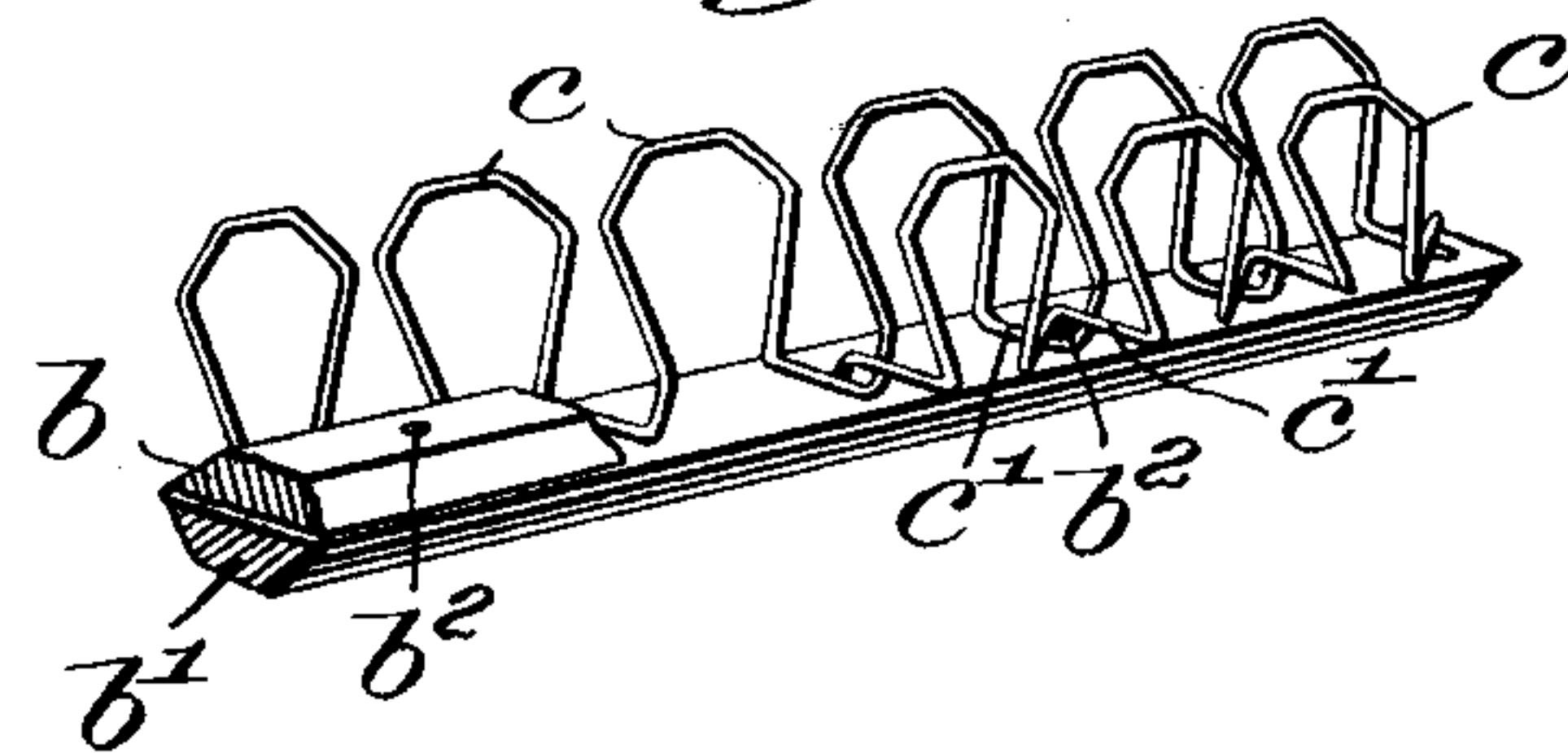
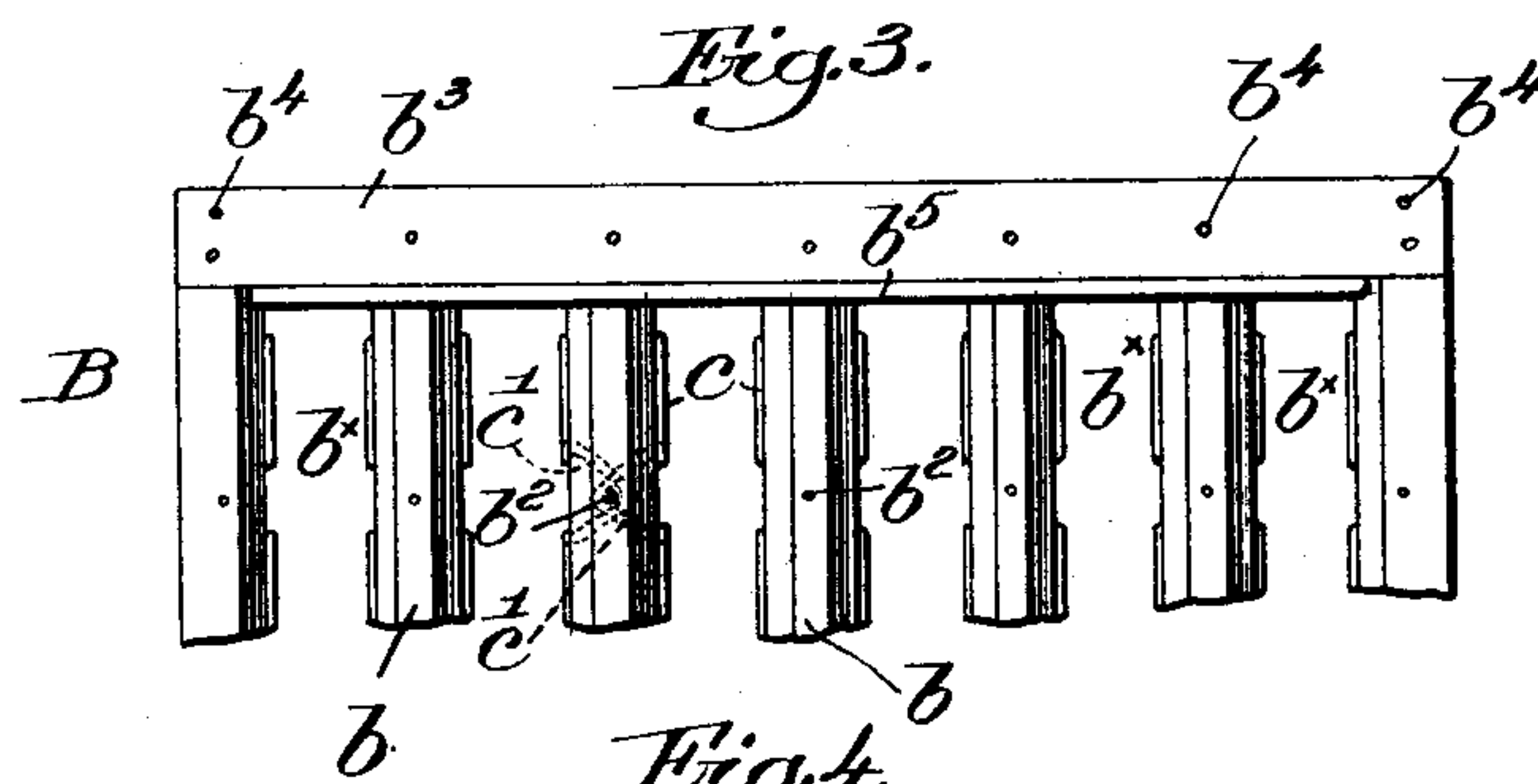
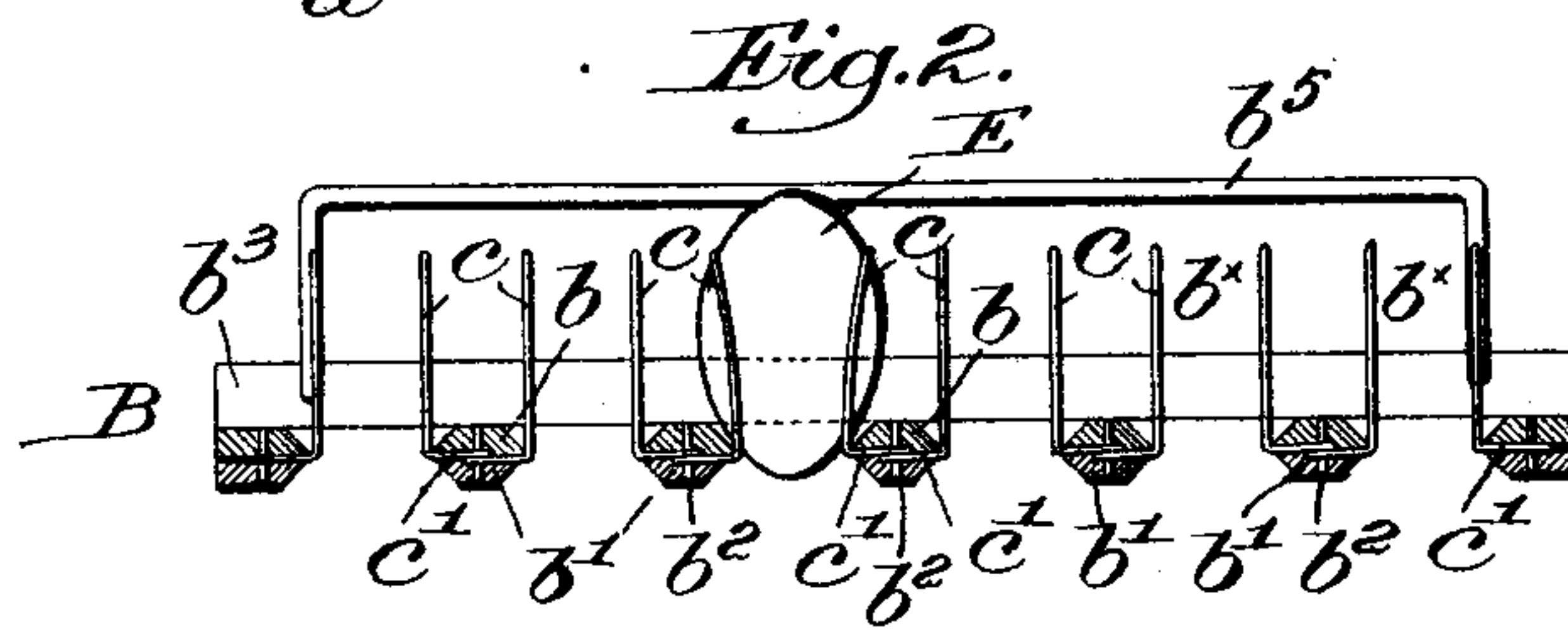
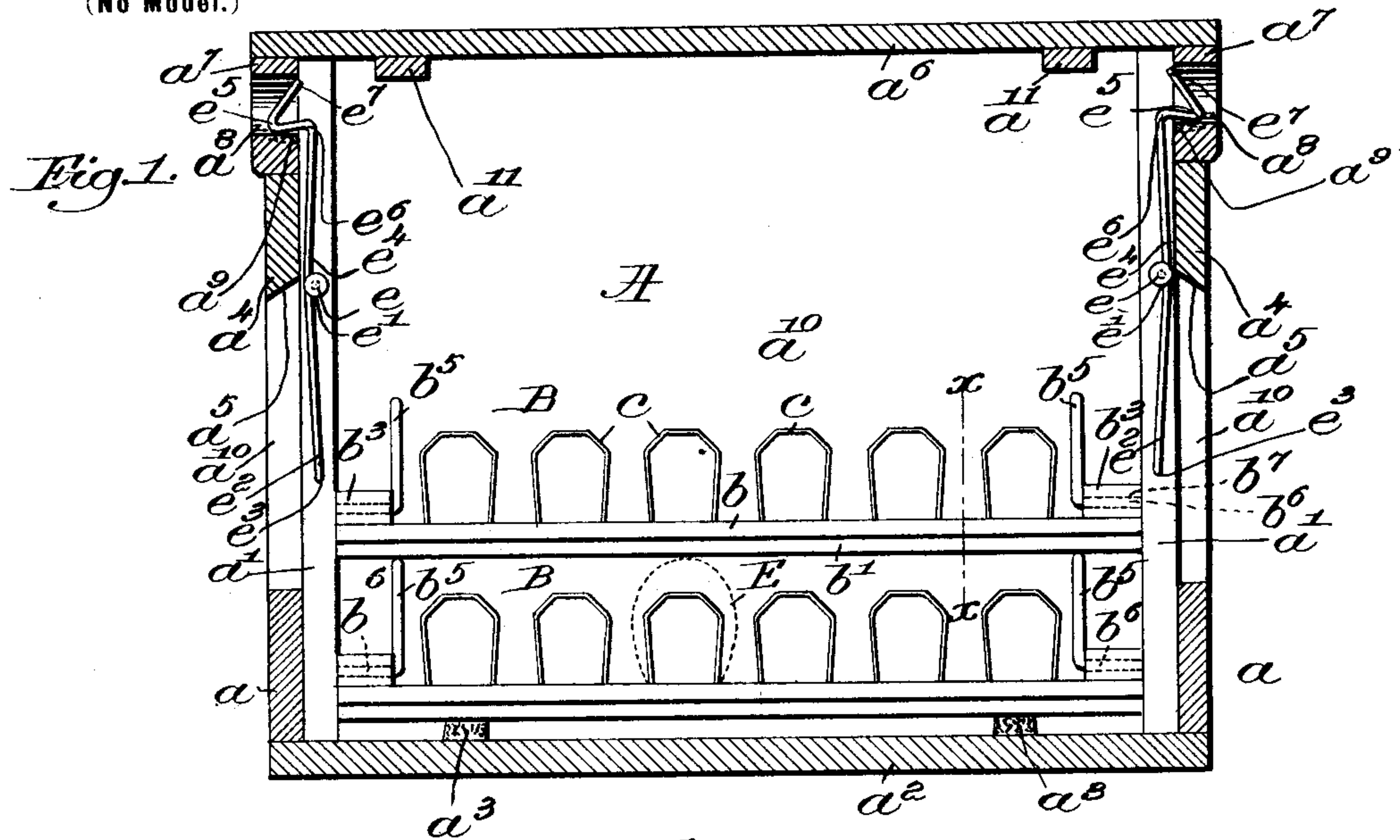
Patented July 25, 1899.

S. H. HOUGHTON.

EGG CARRIER.

(Application filed Nov. 15, 1897.)

(No Model.)



Witnesses:

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UNITED STATES PATENT OFFICE.

SAMUEL H. HOUGHTON, OF HARVARD, MASSACHUSETTS.

EGG-CARRIER.

SPECIFICATION forming part of Letters Patent No. 629,506, dated July 25, 1899.

Application filed November 15, 1897. Serial No. 658,512. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL H. HOUGHTON, of Harvard, county of Worcester, State of Massachusetts, have invented an Improvement in Egg-Carriers, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object the improvement of egg-carriers of the class illustrated in United States Letters Patent No. 429,854, granted to me under date of June 10, 1890. In perfecting this carrier my attention has been directed particularly to the arrangement of parts in such a manner as to secure greater compactness of structure and consequent reduction of weight and expense, permitting also more speedy assemblage of parts.

Further improvements will be disclosed in the support of the egg-carrying loops, contributing increased resiliency and durability, while presenting the eggs in a position which permits them to be removed from the frames with greater facility than heretofore.

The various features of my invention will be fully illustrated and described in the accompanying drawings and specification and set forth in the claims.

In the drawings, Figure 1 is a vertical longitudinal sectional view of an egg-carrier in the construction whereof my improvements have been embodied. Fig. 2 is a transverse vertical section of one of the trays, taken on the line $x x$, Fig. 1. Fig. 3 is a plan view of an end portion of one of the trays. Fig. 4 is a view in perspective of one of the base-bars of a tray, partly in section and partly broken away; and Fig. 5 is a detail of the preferred form of reinforcing means for the catch-seat.

In the preferred embodiment of my invention selected for description and illustrated in the drawings a box-like structure A is shown, containing a number of superimposed egg-carrying frames or trays B, of which two are shown in place in the instance illustrated, the general relation and function of the box and frames resembling that of corresponding parts in the egg-carrier disclosed in my patent above mentioned, but differing from the latter in certain features to be fully set forth hereinafter.

An important improvement will be found

in the novel manner of supporting the egg-carrying loops, which no longer are arranged transversely with respect to the clamping means by which they are held in place upon the bottom of the tray, but in parallelism therewith, and they are provided with feet to enter under the clamping means, these feet being offset from the plane in which the free portions of the loops in any given row are formed, preferably a number of loops being bent up from a continuous piece of wire for the sake of cheapness in construction.

In my former construction the loops had their tops curved, respectively, out of the general plane of the row for the purpose of embracing each egg and holding it firmly; but this purpose I find can be served more effectually by bending each loop to present a polygon, having, preferably, five sides or regions with each of which the egg supported can contact, so that the egg is carried with the maximum of safety, and the tops of the loops may be left in the general plane of the row.

The trays B may be formed in any manner which will afford a suitable support for the parallel rows of loops c and for the cleats, bars, or similar clamping members or means b , under which the feet c' are held; but for the sake of lightness and cleanliness the bottom of the tray is formed, preferably, as a frame, the members b' whereof I have shown as separated bars, the lower edges of which are beveled, preferably as shown, and present suitable upper surfaces, flat in the instance illustrated, to receive the feet c' of the rows of loops arranged in parallelism thereon. Upon the feet of the rows of loops the clamping means are placed and fastened to the supporting members by any suitable means, as the clenched nails b^2 , which afford the necessary strength with cheapness, each nail being driven, preferably, between the overlapping feet-loops (see Fig. 4) formed by the connected adjacent feet c' , inwardly directed from the rows of carrier-loops supported on opposite sides of the bottom member and its cooperating clamping means, each compound member thus formed carrying usually and preferably two rows of loops, the rows on opposite sides receiving, respectively, adjacent surfaces of different rows of eggs.

It will be noted that by forming the car-

rier-loops with offset feet to be clamped between the bottom member and the cleat, with the carrier-loops extended upward in a plane parallel with the compound bar, I have obviated the necessity for notching the bars to maintain the loops in upright position, so that the loops in my improved construction being free from their very base are not subject to the diminution of resiliency, which resulted in the old construction from constant bending across the sharp walls of the notches. To provide further for this freedom of the loops and to permit insertion of the eggs to a greater depth between the bars, the upper edges of the clamping members *b* may be and preferably are beveled, and the advantage of such a construction will be readily appreciated after examination of Fig. 2, in which the egg *E* is held by the loops *c* out of possibility of contact with the clamping means *b*, yet well down between the individual members. The provision of such a bevel is novel so far as I am aware, and in a standard-carrier usually having a stack of five trays double the length of those illustrated the saving in height, and consequently in material needed and space occupied, is very considerable.

As one convenient means for connecting the bottom bars or loop-supporting members I have illustrated strips *b*³, connecting the members, preferably at their ends, and attached thereto by any convenient means, as the clenched nails *b*⁴. Suitable means may also be provided to separate the trays in the boxes, to support one over the other, and to enable the trays to be removed readily from the crate or box, and for all these functions it will be noted that the simple risers *b*⁵ suffice, their attachment to the tray being readily accomplished in a convenient and permanent manner by inserting the offset feet *b*⁶ into the frame members *b*³, which preferably are pierced to form receiving-sockets, as at *b*⁷, Fig. 1.

Before proceeding to describe the box or crate, which is illustrated as an example of the style of structure within which a number of trays or egg-carrying units may be assembled most conveniently for purposes of transportation, I wish to call attention, with emphasis, to the capability newly presented as the result of constructing the elements of the egg-carrying trays in parallelism—viz., the opportunity yielded for removal of the eggs a row at a time by inserting one or more fingers of the hands at each end of the row, respectively, and approaching the hands carefully but rapidly. The fingers will travel freely along in the unobstructed space *b*^x between the adjacent bars, and the eggs will be collected between the palms of the hands, the operator having no disaster to fear from obstruction of his fingers by transverse loops or bars.

In general construction the box *A* may be

and preferably is of the form selected for illustration by reason of the satisfaction it has given in use, transverse cleats *a* being used to brace the vertical end members *a*¹, sides *a*¹⁰, and bottom *a*², upon which latter I provide, preferably, cushions *a*³, of cork, to afford a resilient support to the trays. Additional transverse cleats *a*⁴ should be provided and when beveled inwardly and upwardly, as indicated at *a*⁵, will be found to serve conveniently as handles, since it is better to place no undue strain upon the top *a*⁶, which for ordinary purposes is held with all due firmness, preferably with its cross members *a*⁷ seated closely upon the cleats *a*⁴ by means of a novel form of spring-catch constituting an important feature of my invention. To afford a convenient support for this catch and one the position whereof insures shelter from injury, I have in this instance illustrated the vertical end pieces *a*¹ as slightly separated at each end, the inner face only of that farthest from the observer appearing in the drawings. To this face the catch is shown as attached loosely by suitable means, in this instance a nail *e*, about which the intermediate portion or shank of the catch is formed into a coil *e*¹, one shank portion *e*² of the catch extending downwardly for some little distance and being suitably secured from rotation, simply effected in the instance illustrated by driving an offset portion *e*³ into the end piece *a*¹. Above the coil another portion *e*⁴ extends freely and is given a contour suitable for engagement with a cooperating portion of the top. For this purpose a hole or recess *a*⁸ will be found one simple and effective expedient, presenting as a seat its lower surface, against which presses the offset *e*⁵ downwardly when it is formed, as I prefer to have it, with a decided downward cant relatively to its bend *e*⁶ from the upper shank portion *e*⁴. The end *e*⁷ may be bent backwardly out of the way of the finger or thumb of the operator, for the insertion of which thumb, &c., the hole *a*⁸ leaves opportunity in the construction shown, though other means may be utilized, I having adopted this for the sake of convenience and to avoid the necessity for any top apertures. A reinforcing-wire or its equivalent may be found desirable to protect the seat, and one form of this I have shown at *a*⁹ as a staple (see Fig. 5) driven into the inner face of the cross-piece *a*⁷ just below the hole *a*⁸, the bridge portion of the staple receiving the catch.

Having described my invention thus fully, it will be understood that change from the details of construction illustrated may be made in many directions without departing from the spirit of my invention, and accordingly I do not limit myself to such details.

Having fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. As an article of manufacture, egg-carrying means comprising a continuous length of wire bent to form a series of egg-carrying loops, connected by a series of feet-loops offset from the plane of said egg-carrying loops.

2. A compound egg-supporting member, comprising a bar or support, an egg-carrying member consisting of a wire bent to form a series of loops in a single plane connected at their bases by integral offsets from said plane, forming feet the limbs of each loop being separated from each other; and an elongated cleat or clamping member; said egg-carrying member being arranged in parallelism with said support and clamping member, having its feet clamped therebetween and its loops extended therefrom.

3. In an egg-carrier, a plurality of horizontally-divided egg-supporting members; opposing series of resilient egg-carrying loops formed from a continuous piece of wire and having feet or offsets to enter between the parts of said members, the latter having their adjacent upper edges beveled, and said egg-carrying loops being free to flex from their very bases.

4. A compound egg-supporting member, comprising a bar or support; a plurality of series of egg-carrying loops, each series being formed with offset or feet loops seated on said support; the egg-carrying loops of said respective series being presented on opposite sides of said bar, a cleat or elongated clamping member extended along said support over said feet-loops; and means to fasten said cleat

to said support, with said feet-loops secured therebetween.

5. A compound egg-supporting member, comprising a bar or support; a plurality of series of egg-carrying loops, each series being formed with offset or feet loops seated on said support; the egg-carrying loops of said respective series being presented on opposite sides of said bar; a cleat or elongated clamping member extended along said support over said feet-loops; and means to fasten said cleat to said support, with said feet-loops secured therebetween, said fastening means and the respective series of feet-loops being arranged to interlock.

6. An egg-carrier comprising parallel egg-carrying members including series of continuous integrally-formed egg-carrying loops; transverse end members connecting said egg-carrying members and having horizontal sockets; and risers, one for each of said end members, said risers consisting respectively of an integral piece of wire bent to present a horizontal body extended in parallelism with its end member, legs intermediate said body and end member, and feet to enter said sockets and fasten said riser to said end member.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

SAMUEL H. HOUGHTON.

Witnesses:

JOHN L. KENNISON,
GEORGE J. BURNS.