

No. 705,389.

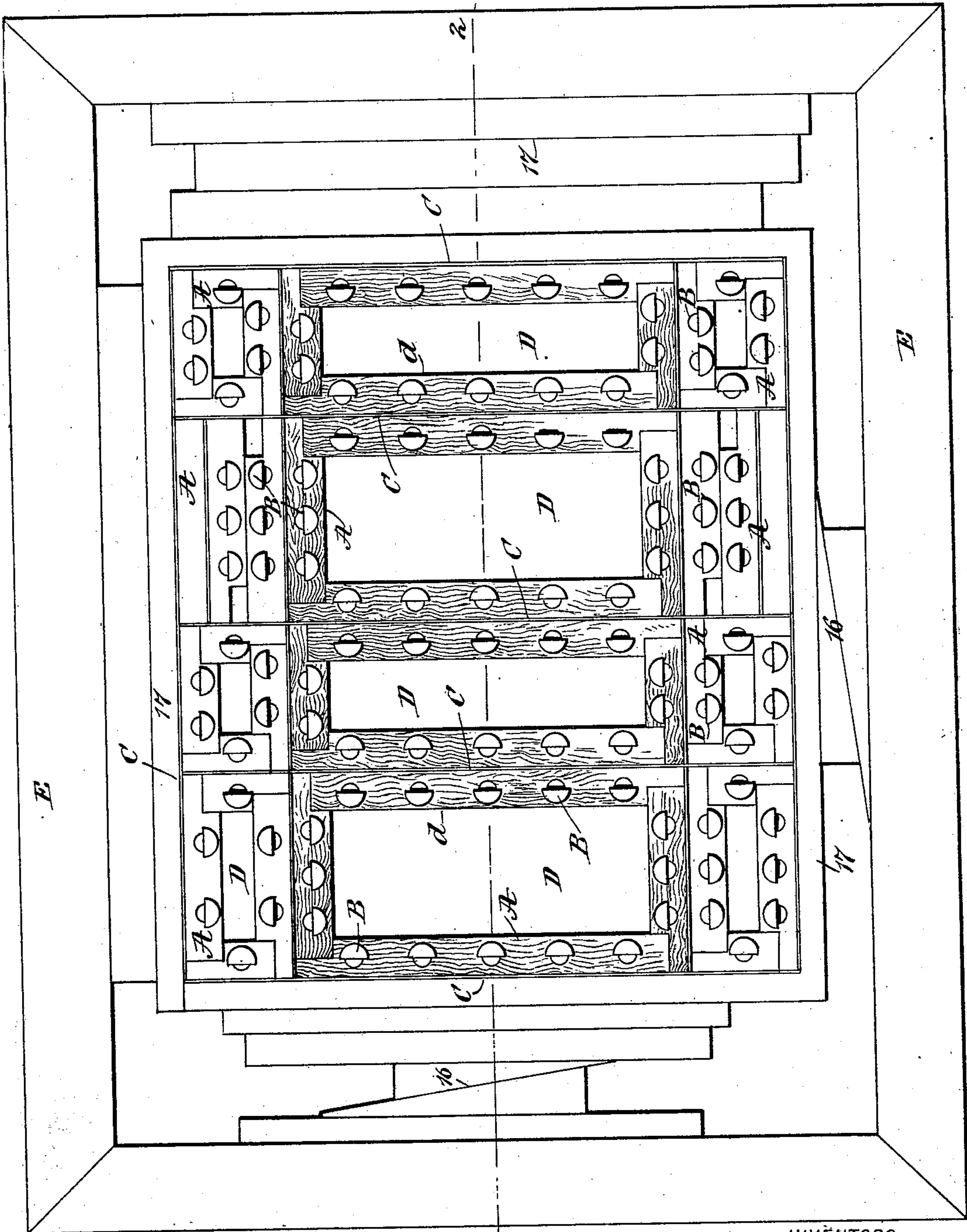
Patented July 22, 1902.

J. T. CRAW & F. SCHLEY.
FURNITURE FOR FORMING PAPER BOX BLANKS.

(Application filed Jan. 17, 1902.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES:

William P. Goebel
John A. Ken

Fig. 1.

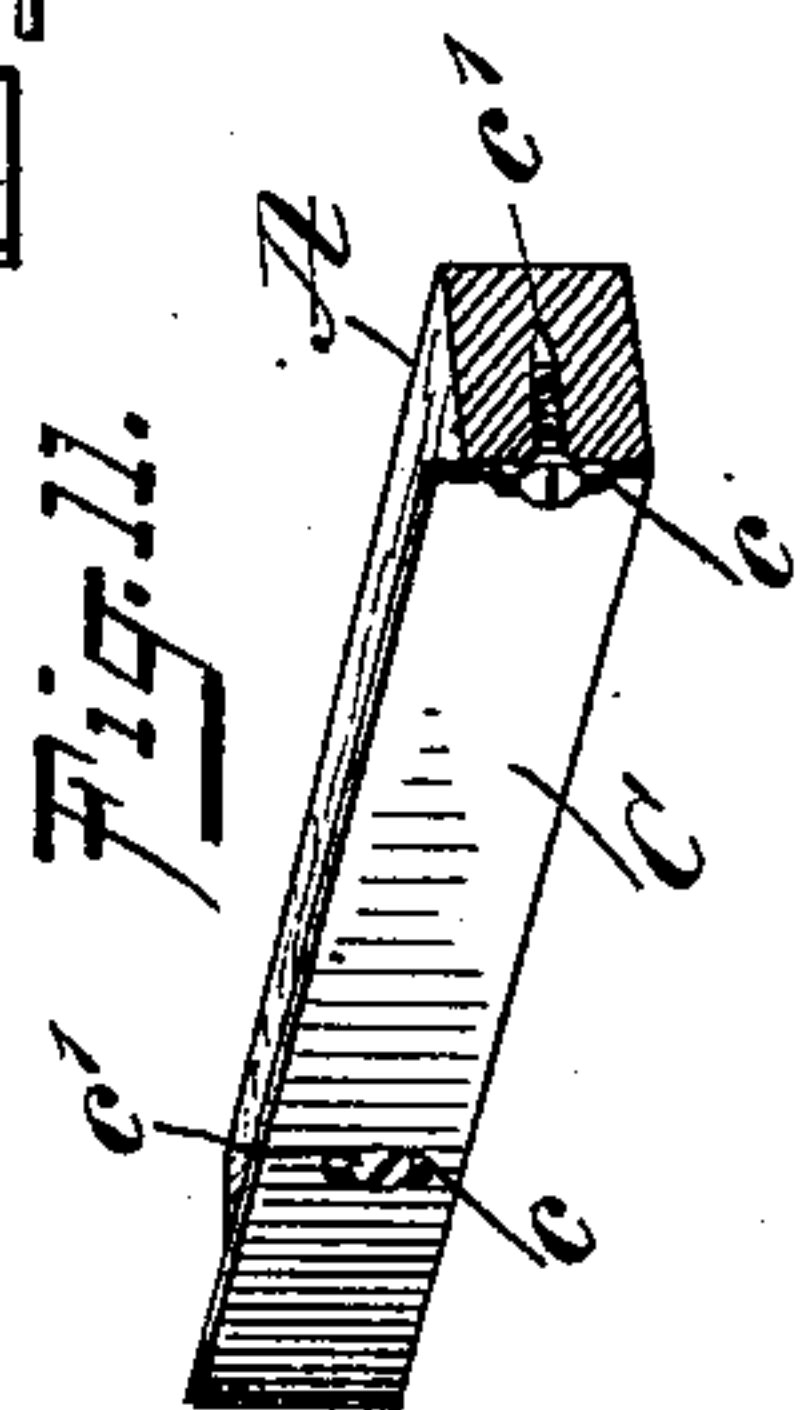
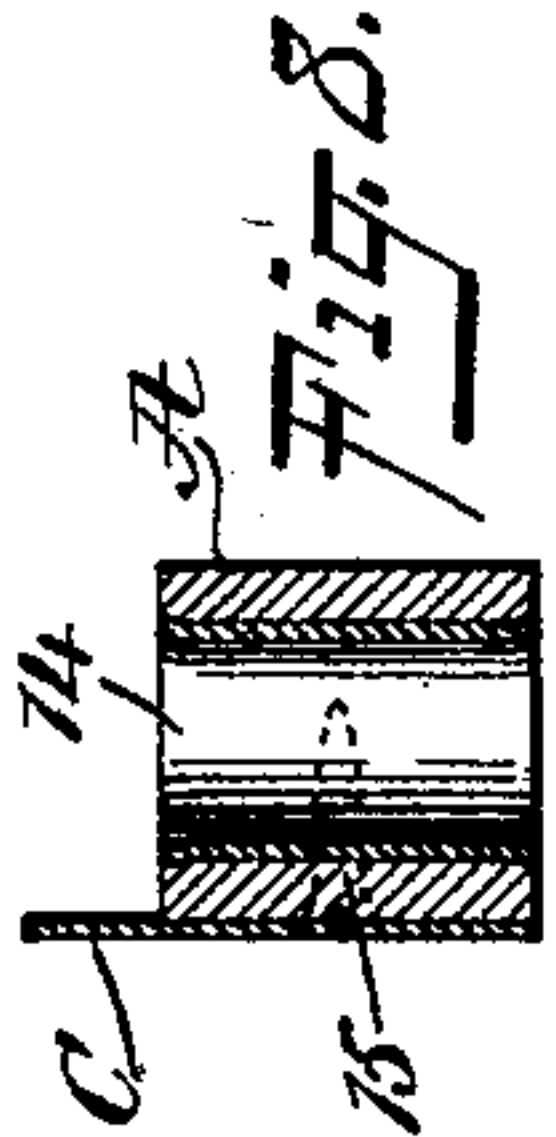
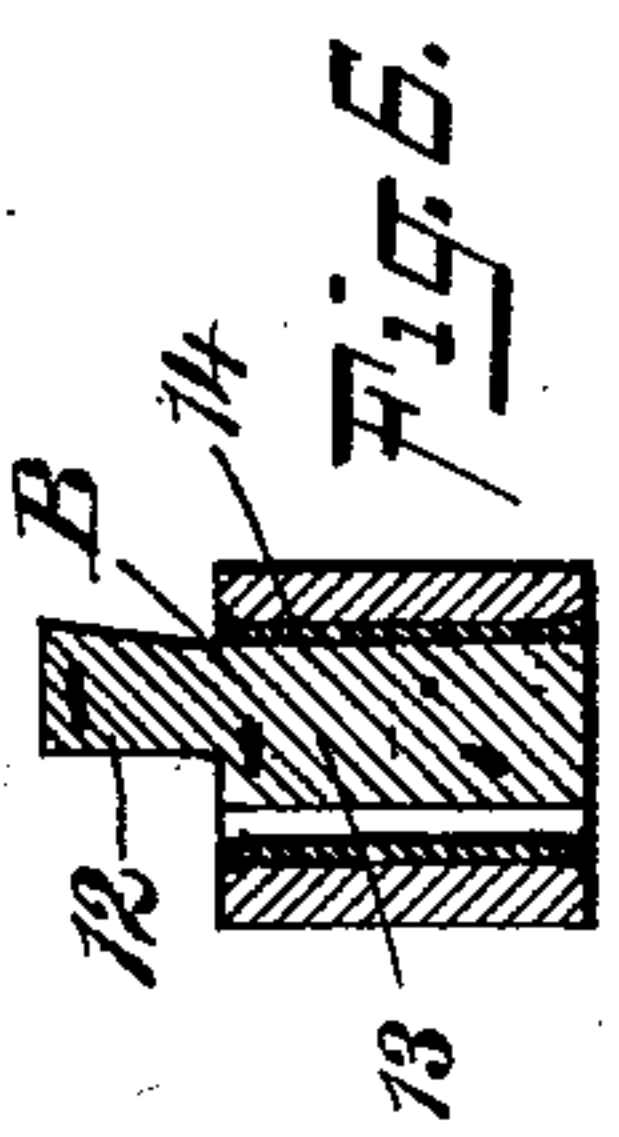
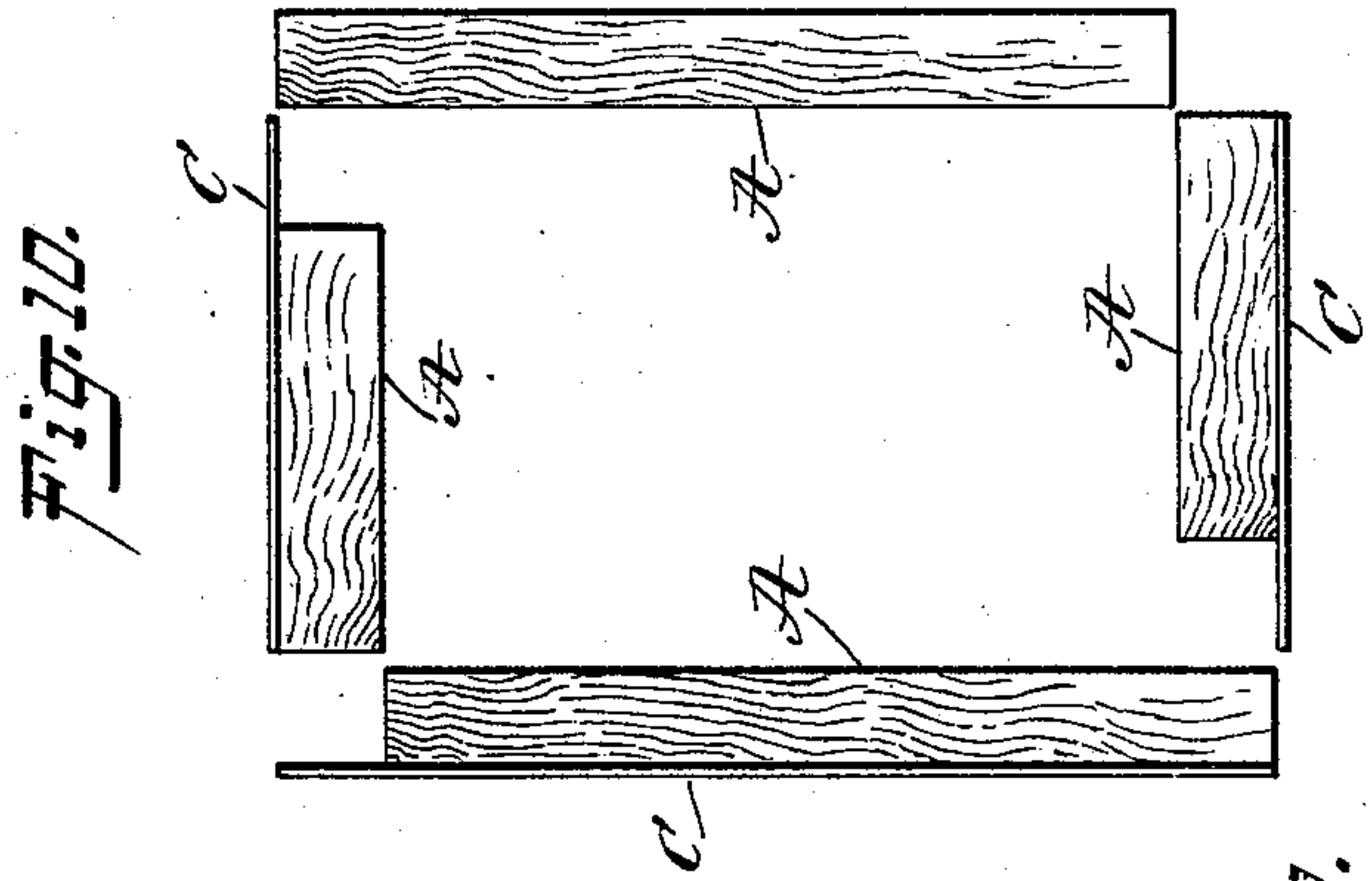
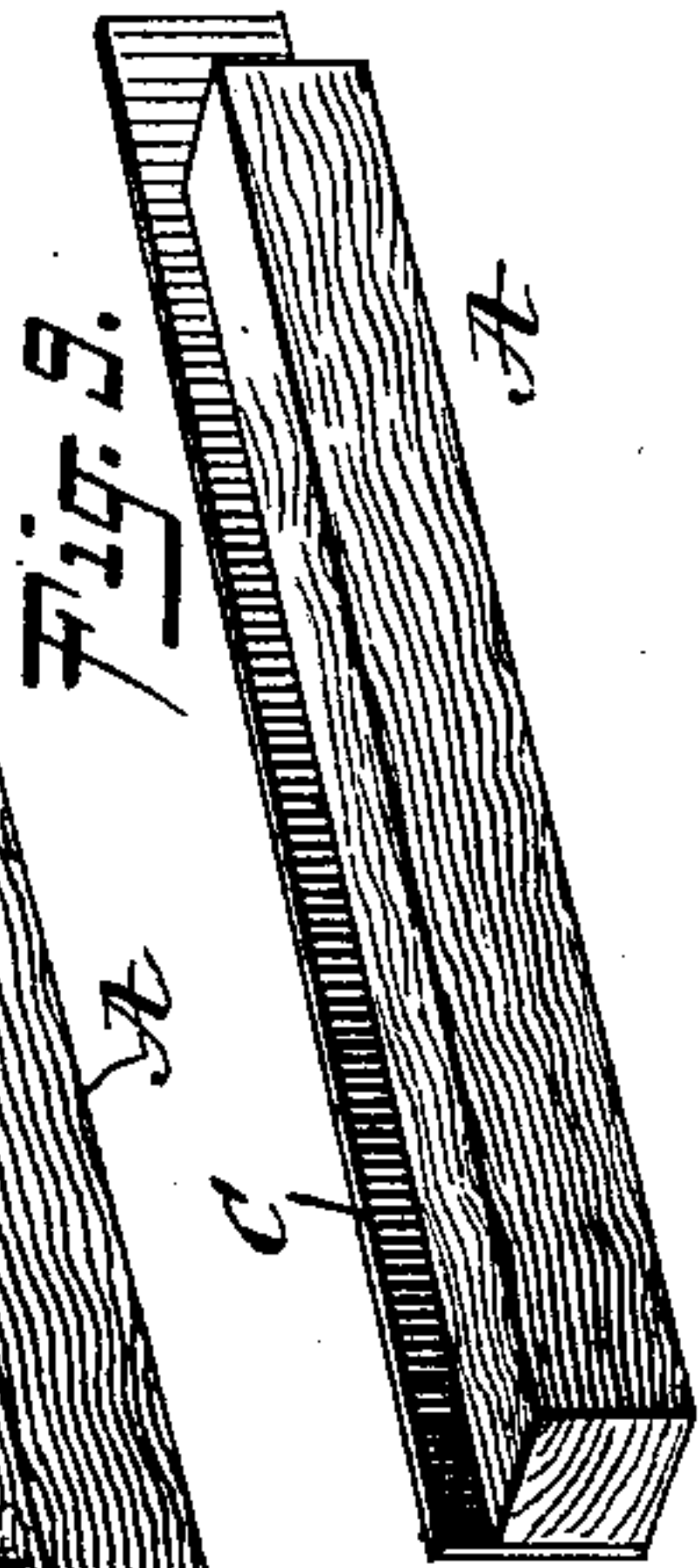
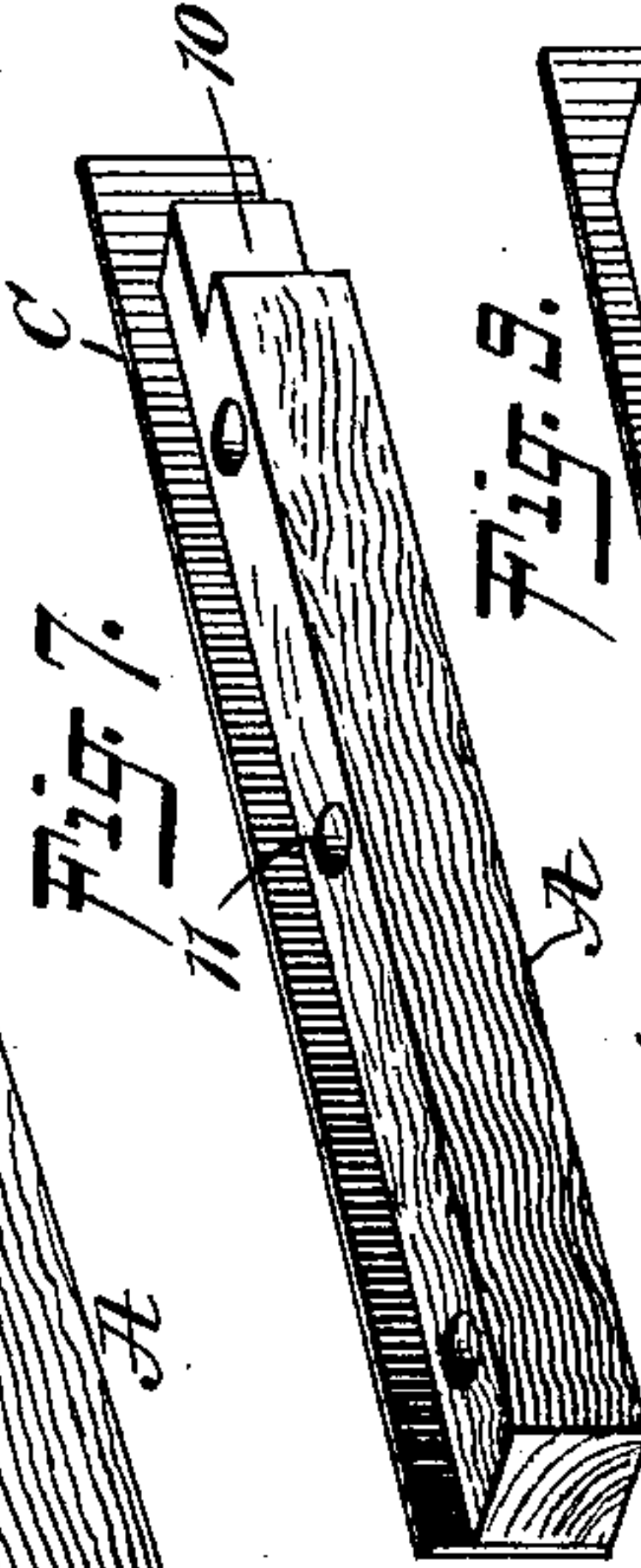
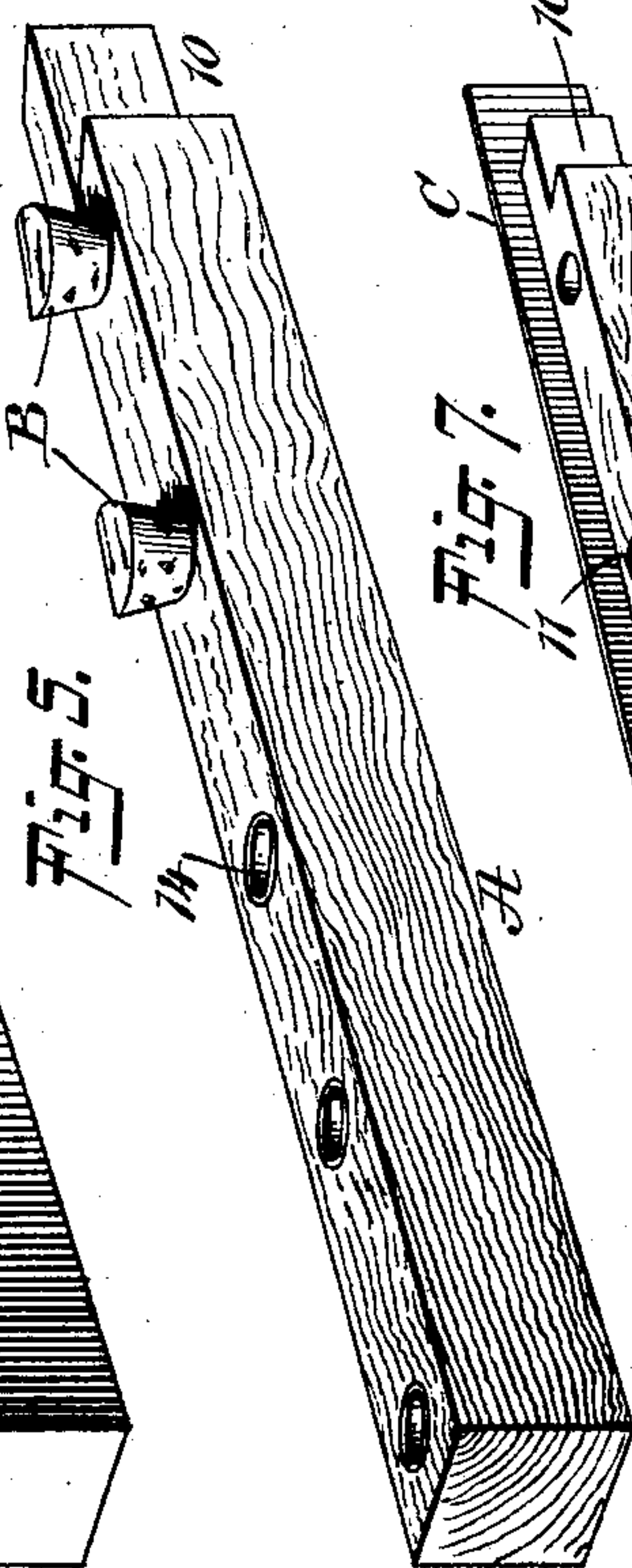
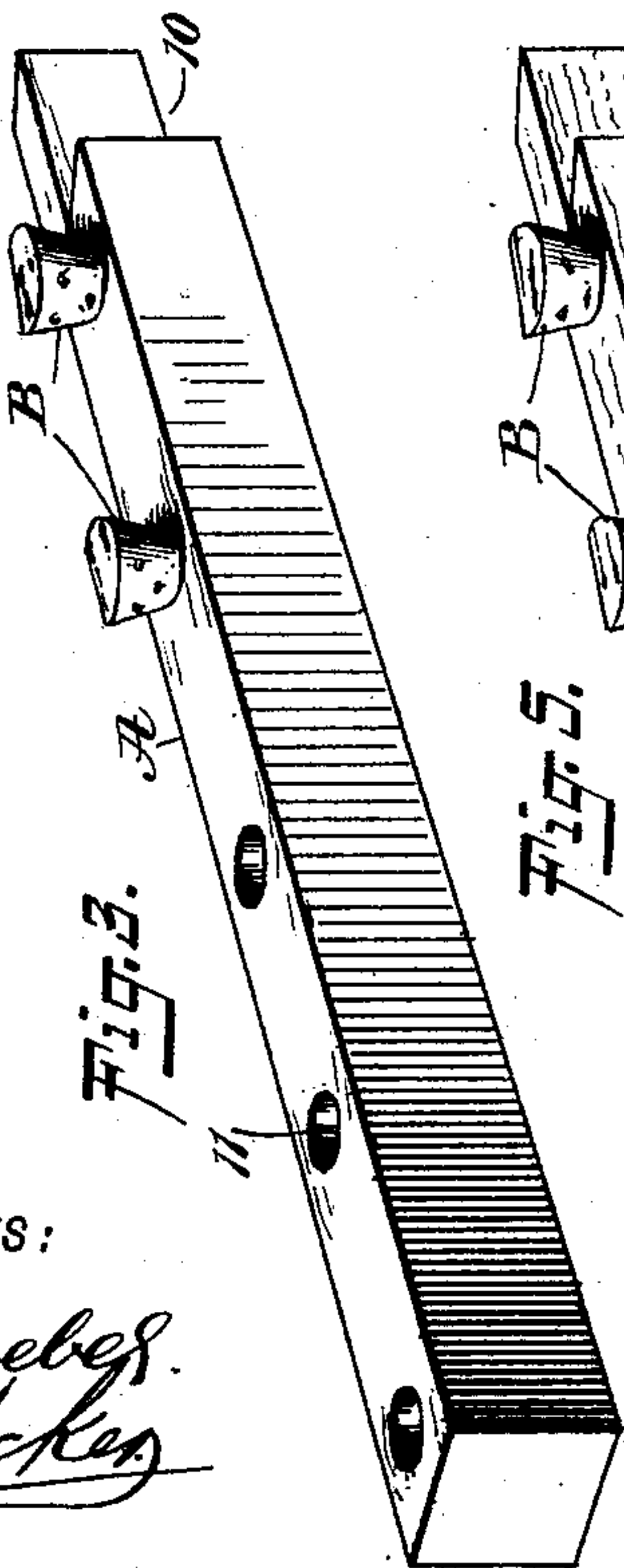
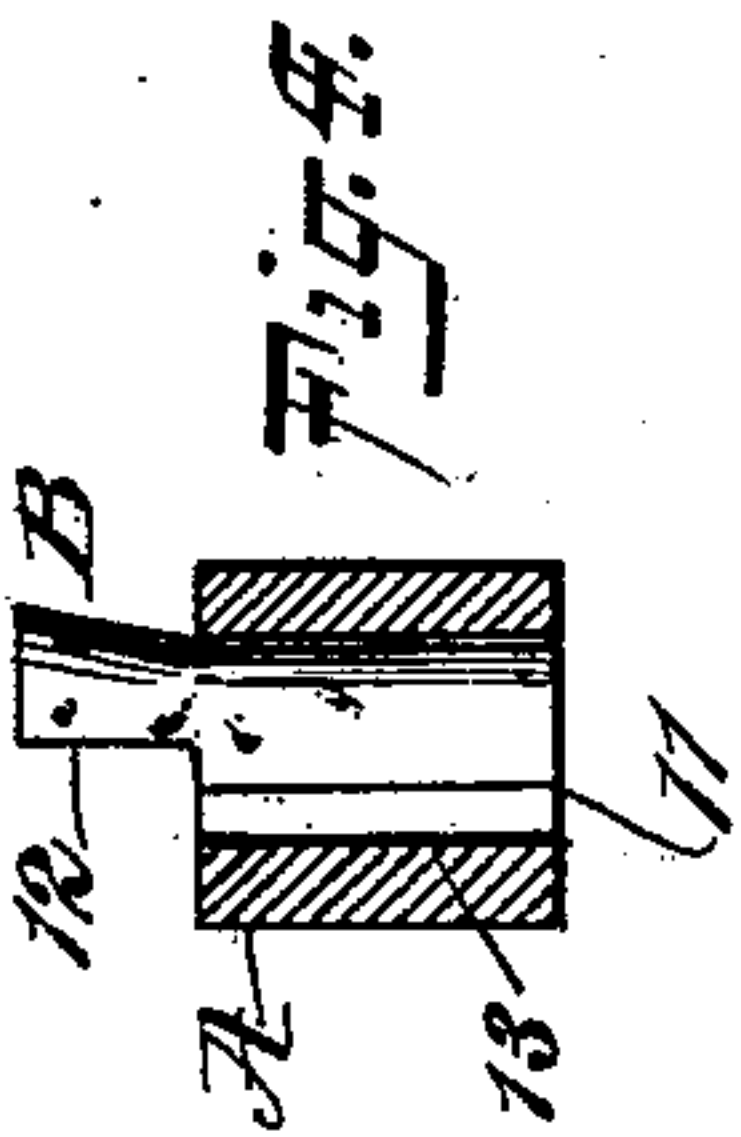
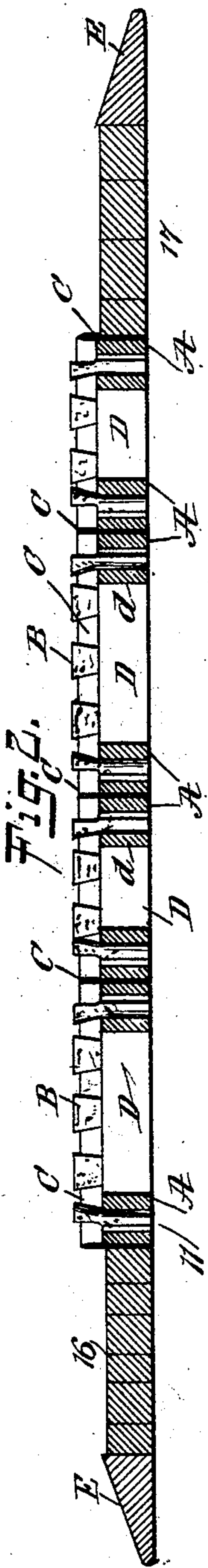
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2 Sheets—Sheet 2.



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UNITED STATES PATENT OFFICE.

JOSEPH TAYLOR CRAW, OF JERSEY CITY, NEW JERSEY, AND FREDERICK SCHLEY, OF BROOKLYN, NEW YORK.

FURNITURE FOR FORMING PAPER-BOX BLANKS.

SPECIFICATION forming part of Letters Patent No. 705,389, dated July 22, 1902.

Application filed January 17, 1902. Serial No. 90,143. (No model.)

To all whom it may concern:

Be it known that we, JOSEPH TAYLOR CRAW, a resident of Jersey City, in the county of Hudson and State of New Jersey, and FREDERICK SCHLEY, a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, citizens of the United States, have invented new and Improved Furniture for Forming Paper-Box Blanks, of which the following is a full, clear, and exact description.

The purpose of our invention is to provide furniture for forming paper-box blanks and the like, which furniture may be set up without the use of corner-pieces and may be quickly assembled and placed in any desired position, two pieces wherever brought in contact at right angles to each other forming a well-defined sharp corner with or without rule or knife applied.

Another purpose of the invention is to construct the furniture of wood or metal and so apply a score or knife blade or rule thereto as to render the two parts virtually one and cause one to strengthen the other.

A further purpose of the invention is to provide novel and effective means for automatically forcing a blank when made and scored from engagement with the knives or score-blades.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of our improved furniture for cutting and scoring blanks for boxes, the furniture being shown set up in a form. Fig. 2 is a vertical section taken on the line 2-2 of Fig. 1. Fig. 3 is a perspective view of a piece of the improved furniture constructed of metal. Fig. 4 is a transverse section through the same, illustrating one of the automatic releasing devices in elevation. Fig. 5 is a perspective view of a piece of furniture constructed of wood and differing slightly in construction from that shown in

Fig. 3, and Fig. 6 is a transverse section through the furniture shown in Fig. 5 and a section through one of the automatic releasing devices carried thereby. Fig. 7 is a perspective view of the piece of furniture and score-blade applied thereto. Fig. 8 is a transverse section through the furniture shown in Fig. 7. Fig. 9 is a perspective view of a plain piece of furniture and attached score-blade, and Fig. 10 is a plan view of several pieces of furniture in position to form a square and illustrating a slight change in construction; and Fig. 11 is a perspective view of a portion of a piece of furniture, showing a blade or rule adjustably applied thereto.

A represents a piece of the improved furniture, which is made of wood or of metal and is rectangular in cross-section. The furniture may be of any desired length, and in the preferred form each piece is straight at one end, but is provided with an angular recess 10 at its opposite end, and each of said pieces is also provided with series of apertures 11, which extend through from the upper to the lower face. The wall of the apertures is without a lining when it is constructed of metal, as shown in Figs. 3 and 4; but when the furniture is made of wood a tube 14 is closely fitted to each aperture, as shown in Figs. 5 and 6, forming a bushing, and the tubes are expanded at top and bottom to prevent them from accidentally slipping from position should the wood contract through the action of the weather.

The bushings 14 serve to strengthen the furniture and also act to prevent releasing devices B, located in the apertures 11, from splitting the furniture when said devices are placed under pressure, which occurs when the furniture is set up and operated in a press or like device. The releasing devices B are made of cork, and each comprises a tapering head member 12 and a shank member 13, adapted to fit snugly in an aperture 11 or in a bushing 14. Preferably the shanks 13 of the releasing devices are of such length that when the releasing devices are subjected to pressure in cutting and scoring a blank laid upon a set-up form said shanks will extend to the under side of the furniture and engage

with a face of the press employed. The heads and shanks of the releasing devices are preferably semicircular in cross-section, so that when the devices are forced down the shanks will curl to an extent and bind themselves in the apertures.

A score rule or knife C may be simply laid against the longer side of the furniture, extending a suitable distance beyond its upper face, or the rule or knife may be and usually is attached to the furniture by means of screws 15 or equivalent fastening devices, as shown in Fig. 8. When the rule or knife is thus secured to the furniture, it becomes an integral part of it and prevents the furniture from warping. When the rule or knife is applied to the furniture, one end is flush with the straight end of the furniture, while the opposite end extends beyond the recessed end of the furniture, as is shown in Fig. 7.

In Fig. 9 we have illustrated the furniture as straight at both ends and the rule or knife as extending beyond one end. Under such construction an interlocking form of corner is also obtained; but preferably one end of the furniture is recessed, as is shown in Figs. 3, 5, and 7.

In making up a single square form two long pieces of furniture with rule or knife applied and two shorter pieces are selected. Corresponding pieces are placed opposite each other, and in opposing pieces the straight end of one is made to enter the recess in the other, the end portions of the rules or knives being thus brought together, forming sharp well-defined angular interlocking corners.

When the pieces of furniture are plain or square at each end, as shown in Figs. 9 and 10, in making up a form the end of one piece is made to abut against the extended portion of the rule or knife of the opposing piece. When the form is made up of a multiple of squares D, as shown in Fig. 1, wherever two end or side pieces of furniture come together throughout their length the rule or knife is omitted from one of them, as is illustrated at d in said Fig. 1.

After the furniture is set up to produce the desired shape of blank the form thus obtained is keyed or otherwise locked in a frame E by wedges 16 and blocks 17 or like devices. The form is placed in a press, and the sheet from which the blank is to be produced is laid upon the upper face of the form and shaped. As soon as the blank is relieved from pressure the releasing devices, which are under compression at that time, expand and force and hold the blank from engagement with the score rules or knives.

It is obvious that with furniture constructed as described a form can be expeditiously and conveniently set up, as pieces of the required length can be quickly selected and set in position and the furniture can be repeatedly used and stored, so as to be convenient of access. It is also evident that the improved

furniture is interchangeable, as it may be turned end for end and otherwise shifted as may be required in making up a form of given shape.

In Fig. 11 we have illustrated a piece of furniture A, to which the blade or rule is attached in an adjustable manner, so that as the knife or rule becomes worn it may be set up quickly and conveniently. To this end the blade or rule is provided with vertical elongated slots c and is fastened to the piece of furniture A by screws c' passed through the slots.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. In furniture for forming blanks for paper boxes and the like, a form, comprising four rectangular wooden pieces, each apertured and having one end straight and its other end recessed on its inner face, metal bushings in the apertures of the pieces, cork releasing devices having tapering heads and fitting in the apertures of the pieces, and a score rule or knife secured to the outer face of each piece with one end flush with the straight end of the piece, and its other end projecting beyond the recessed end of said piece, the pieces being arranged with the straight end of one piece entering the recess of the adjacent piece, whereby the pieces are prevented from splitting or warping and the rules or knives will be brought together at the corners forming well-defined angular interlocking corners, as set forth.

2. In furniture for forming blanks for paper boxes and the like, a form, comprising four rectangular pieces each apertured and having one end straight and its other end recessed on its inner face, cork releasing devices having tapering heads and fitting in the apertures of the pieces, and a score rule or knife secured to the outer face of each piece with one end flush with the straight end of the piece and its other end projecting beyond the recessed end of said piece, the pieces being arranged with the straight end of one piece entering the recess of the adjacent piece, as set forth.

3. In furniture for forming blanks for paper boxes and the like, a form, comprising four rectangular pieces, each provided with apertures, cork releasing devices having tapering heads and fitting in the apertures of the pieces, and a score rule or knife secured to the outer face of each piece with one end flush with one end of the piece and its other end projecting beyond the other end of said piece, as set forth.

4. In furniture for forming blanks for paper boxes and the like, a form, comprising four rectangular pieces, each provided with apertures, yielding releasing devices in the apertures of the pieces, and a score rule or knife adjustably secured to the outer face of each piece, one end of the rule or knife being flush with one end of the piece and its other end

projecting beyond the other end of said piece, as set forth.

5 5. Furniture for forming blanks for paper boxes and the like, comprising a frame, and a plurality of rectangular forms clamped in the frame, each form comprising rectangular pieces each apertured and having one end straight and its other end recessed on its inner face, cork releasing devices having taper-
10 ing heads and fitting in the apertures of the pieces, and score rules or knives at the sides of the pieces, the rules or knives, each having one end flush with the straight end of the piece and its other end projecting beyond the
15 recessed end of said piece, as set forth.

6. In furniture for forming blanks for paper boxes and the like, the combination with a form having score rules or knives and provided with apertures, of cork releasing devices in the apertures of the form, said releasing devices being semicircular in cross-section and having tapering heads, as set forth.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

JOSEPH TAYLOR CRAW.

FREDERICK SCHLEY.

Witnesses:

J. FRED. ACKER,

JNO. M. RITTER.