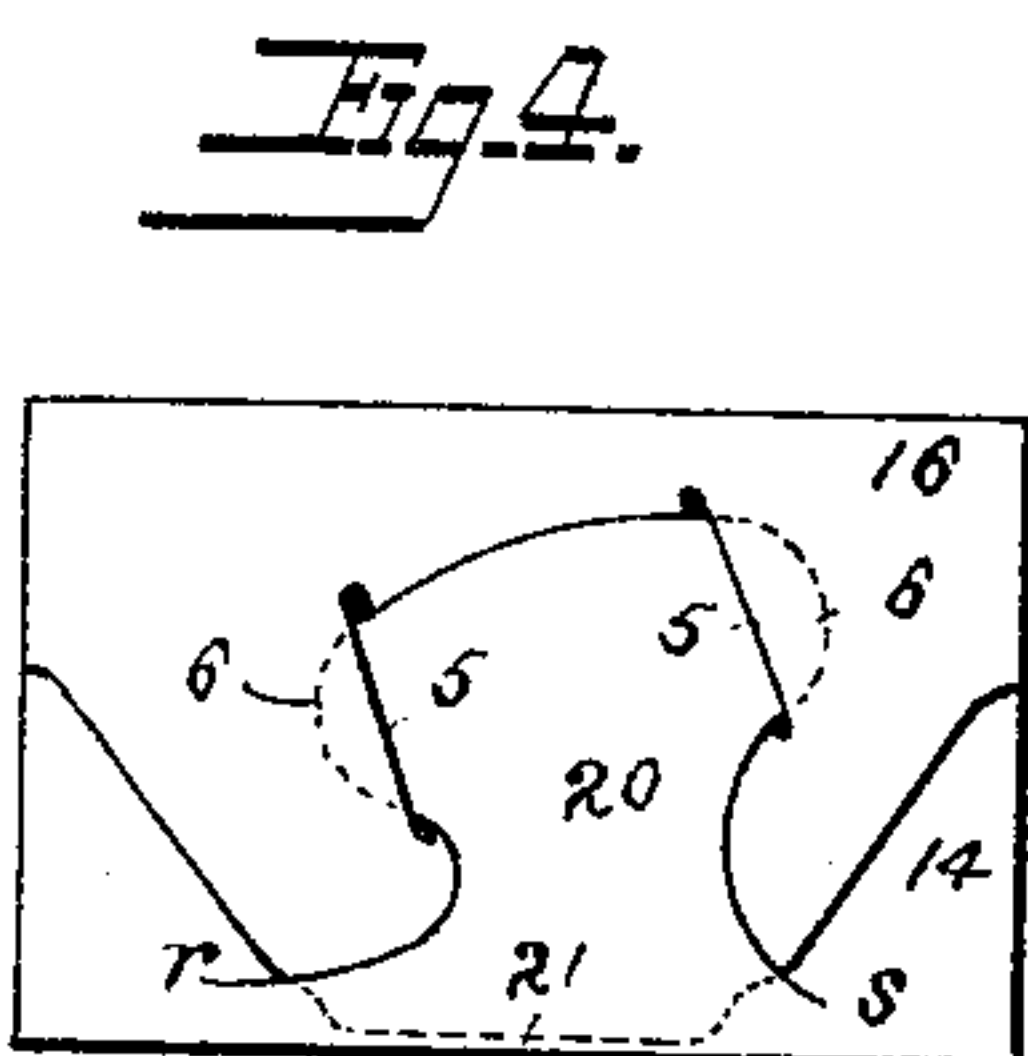
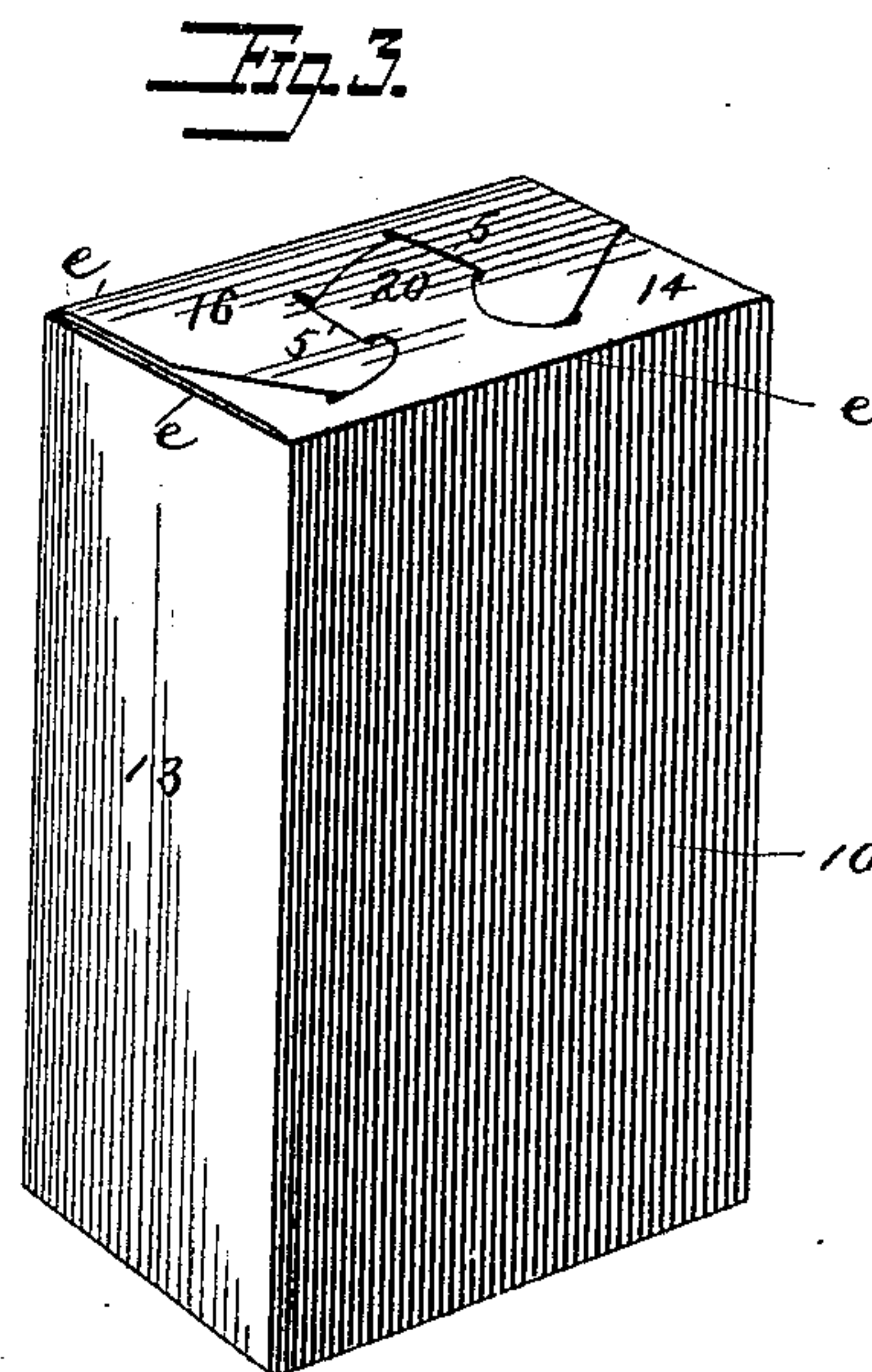
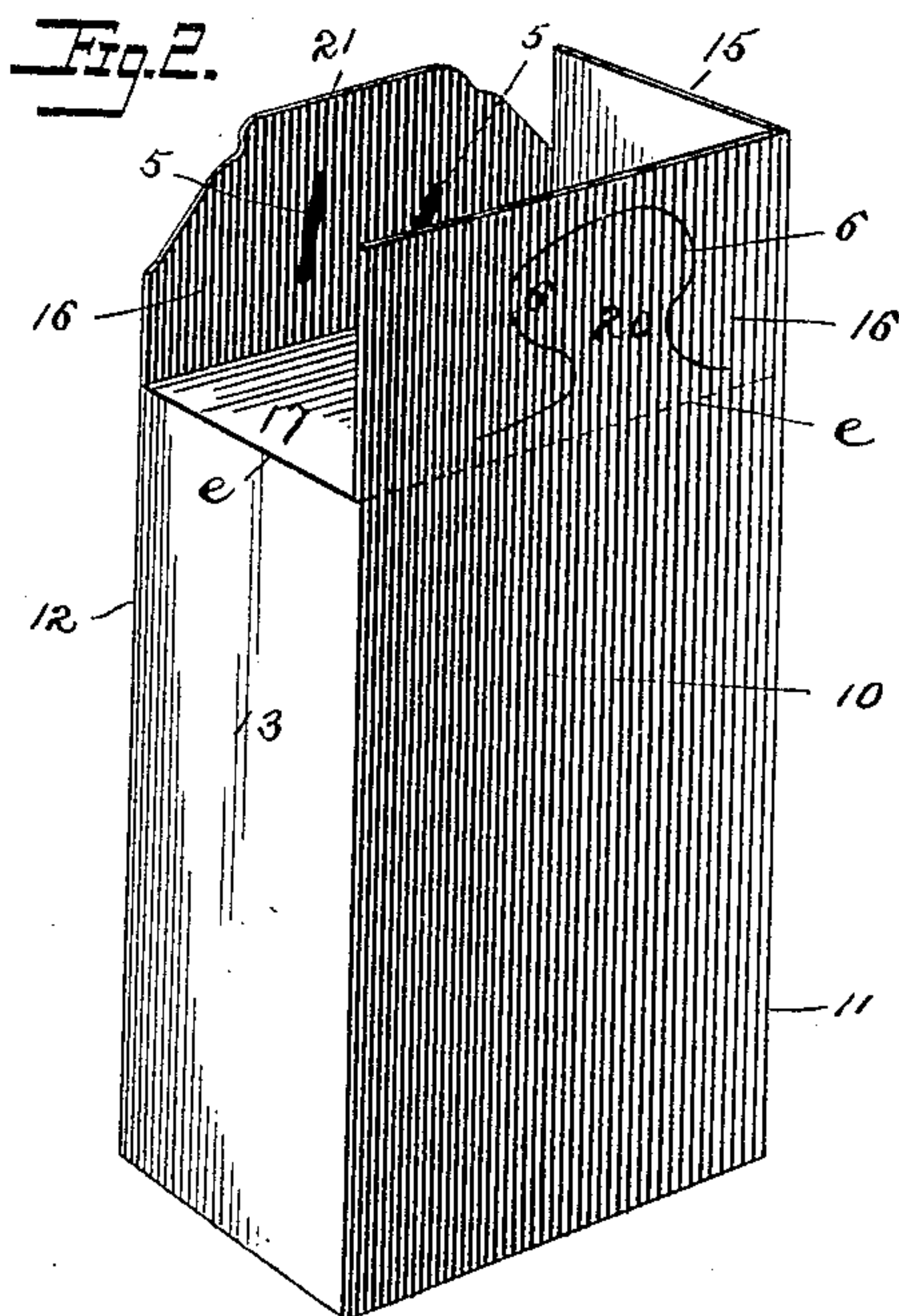
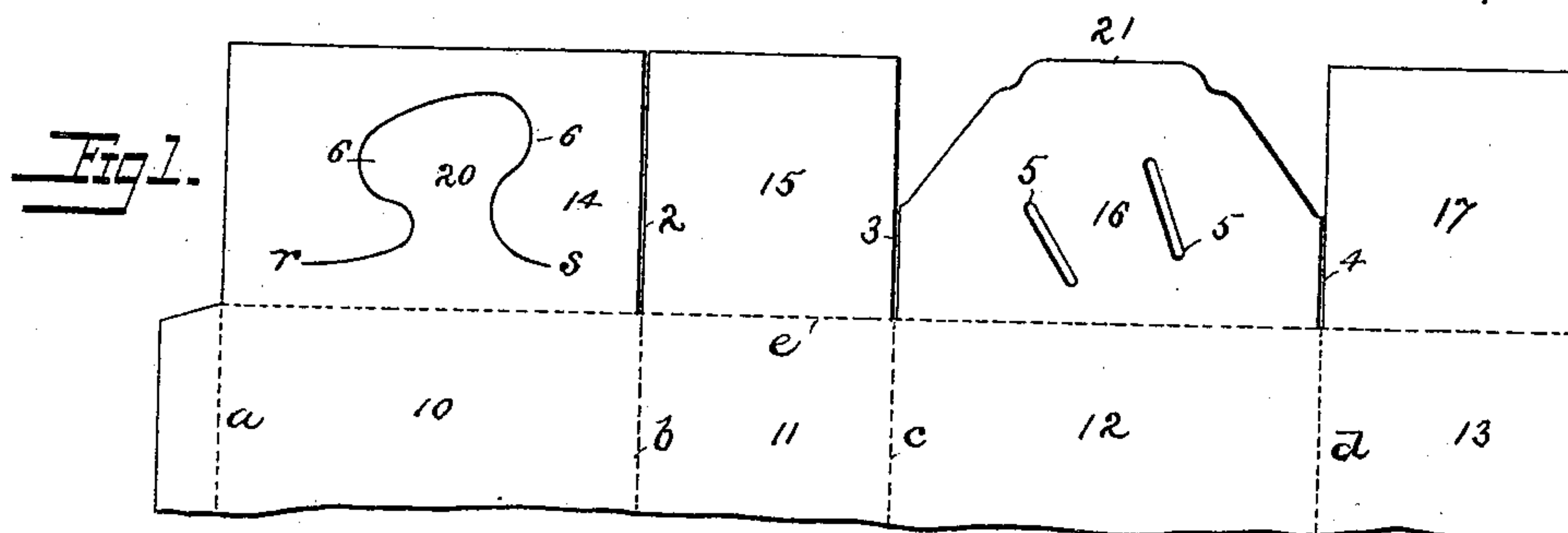


(No Model.)

F. E. DE LONG.
LOCK FOR PAPER BOXES.

No. 397,227.

Patented Feb. 5, 1889.



Witnesses
J. H. Hinkel, Jr.
S. L. Johnson.

Inventor.
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Attorneys.

UNITED STATES PATENT OFFICE.

FRANK E. DE LONG, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO
CHARLES L. LOCKWOOD, OF SAME PLACE.

LOCK FOR PAPER BOXES.

SPECIFICATION forming part of Letters Patent No. 397,227, dated February 5, 1889.

Application filed June 20, 1888. Serial No. 277,638. (No model.)

To all whom it may concern:

Be it known that I, FRANK E. DE LONG, a citizen of the United States, residing at Philadelphia, Philadelphia county, State of Pennsylvania, have invented certain new and useful Improvements in Locks for Paper Boxes, of which the following is a full, clear, and exact specification.

This invention relates, generally, to that class of boxes, trays, and the like that are capable of being "knocked down" into flat condition, whereby they are caused to occupy a comparatively small space, and may thus be conveniently packed, stored, or shipped; and it particularly consists in a novel construction of the flaps and in the locking-tongues and slots thereof, whereby an effective locking of the flaps is secured.

The drawings illustrate practical embodiments of the invention, in which—

Figure 1 is a view of a portion (one end) of a blank adapted to the formation of a rectangular box and provided with the improved flaps and locking-tongue and slots. Fig. 2 is a perspective view of the blank when formed into rectangular box shape, one of the side flaps being shown in position, partially closing the end of the box. Fig. 3 is a similar view, the end of the box being entirely closed. Fig. 4 is a plan view thereof.

It will of course be understood that the blank A, of any suitable material, will be cut to the size desired to make the box, and that said blank (only one end of which is shown) will be scored or creased on the lines *a b c d*, to form when bent into rectangular or tubular form, as in Fig. 2, the opposite sides, 10 12 and 11 13, together with a narrow strip, 1, which in practice lies against the inner face of the side 13 and is cemented or otherwise secured thereto, as is well known. The blank is also provided with a scored or creased line, *e*, extending entirely across the same a short distance from the blank end, and forming with the incisions 2 3 4 four closing-flaps, 14 16 and 15 17, that are adapted, when the blank is bent into tubular or rectangular box shape, to be turned down one over the other over the end of the box and close the same. The opposite flaps, 15 17, are shown as plain flaps, and are

designed to be first turned down over the box end, one more or less overlying the other, the flap 17 being shown in its turned-down position in Fig. 2.

The flap 14 is provided with a tongue, 20, formed by a suitably-shaped incision, providing laterally and oppositely extending enlargements 6, and the opposite flap, 16, is provided with a pair of slots, 5, into which the extending enlargements 6 of the tongue enter. The flap 16 also has its end cut away or so shaped as to provide an end tongue, 21, and the incision at the base of the tongue 20 in the opposite flap, 14, from the point *r* to the point *s* is of an extent which permits the flap 16 to overlie that portion of the flap 14 outside of the tongue 20, its end tongue, 21, entering under the base of said tongue 20 when the box is closed, as is indicated in Figs. 3 and 4.

From the explanation thus far made of the construction of the flaps and their tongues and slots it will be apparent in closing the box end that the flaps 15 17 will be first turned down; that the flap 14 will then be turned down to overlie said flaps 15 17 and its tongue 20 lifted, so as to permit the flap 16 to be turned down over the flap 14 and under said tongue 20, so that the tongue 21 will enter the opening at its base, when the tongue 20 will have its extending enlargements 6 entered into the slots 5, and thus complete the closing of the box.

It is obvious that the opposite end of the box may or may not be provided with similar flaps and tongues and slots, and when not so provided any other form of closing-flaps may be employed without departing from this invention, which may be employed at one or both ends of the box, as may be deemed desirable by the maker.

The improved closing-tongues and slots provide a most secure lock, and when forming the bottom of a box or tray will be found adapted to sustain considerable pressure or weight without danger of becoming loosened or unlocked thereby. Each of the opposite closing-flaps is provided with a tongue and with a slot or slots for the tongue of the other flap, so that both of the flaps are positively locked down, and thus enabled to withstand

any lateral spreading of the sides of the box
tending to withdraw the tongues from their
slots.

What I claim is—

- 5 A box or tray provided with opposite closing-flaps adapted to lie one over the other, one flap provided with a tongue on its end and with a pair of slots between its hinged and tongued ends, and the other tongue formed by
10 an incision within the body of the flap, providing oppositely-extending enlargements 6, and a slot at the base of said tongue, the first-mentioned tongue and its flap adapted to un-

derlie the other tongue and said tongue to enter the slot at its base, and the enlargements 15 of said other tongue adapted to enter the slots in said underlying flap, whereby the said flaps are locked together, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two sub- 20 scribing witnesses.

FRANK E. DE LONG.

Witnesses:

JOHN F. LEWIS,
CHAS. F. DE LONG.