(No Model.)

C. S. BIRD.

PAPER BOX.

No. 326,937. Patented Sept. 29, 1885.

Fig 1

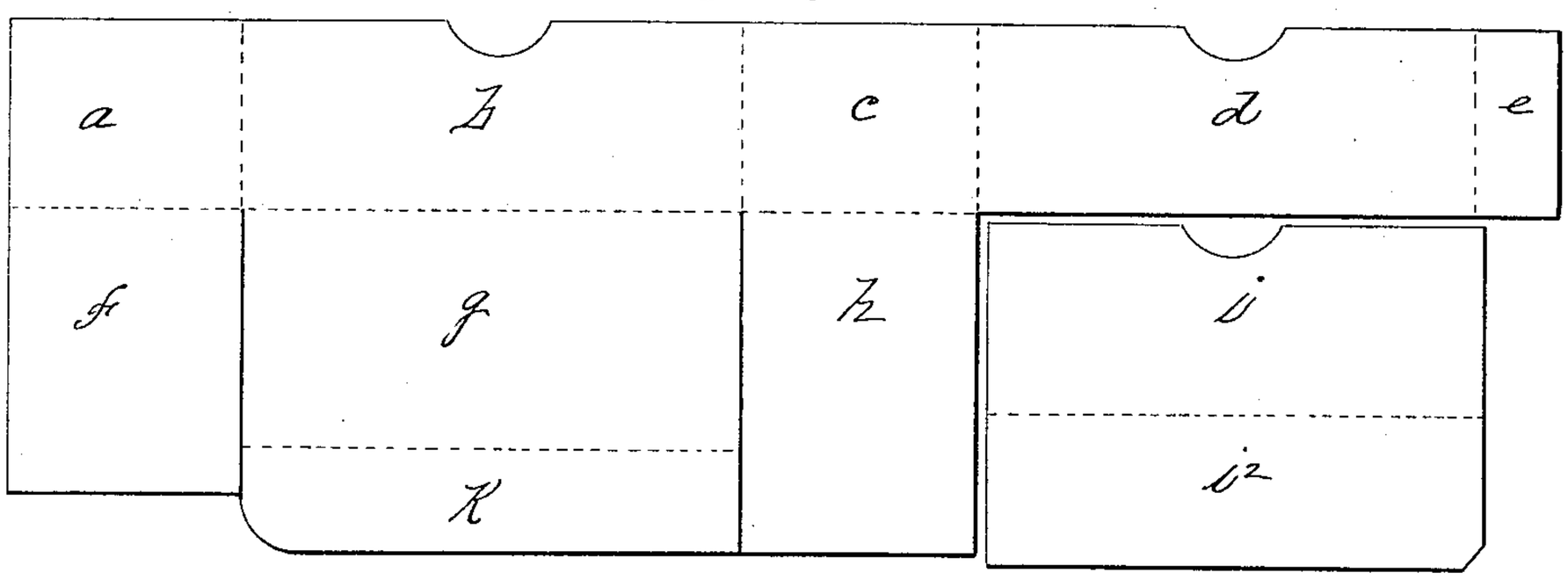


Fig 2

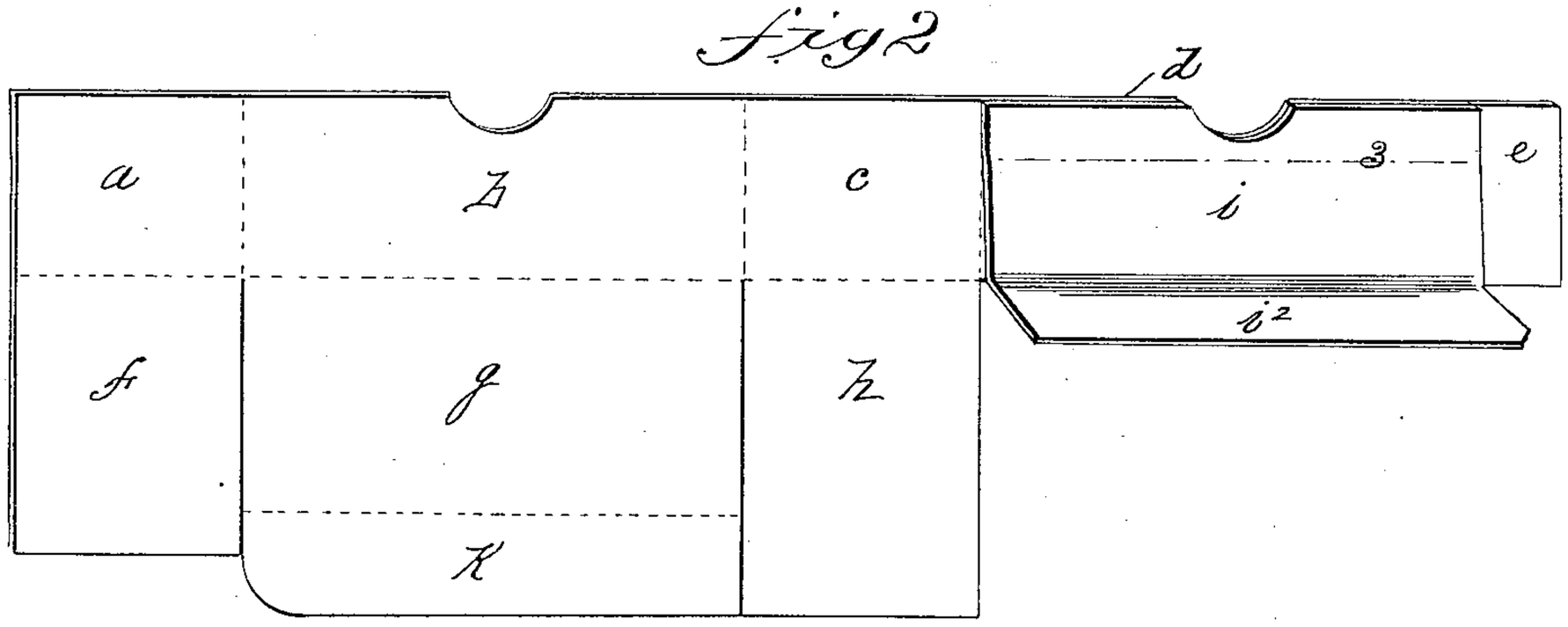
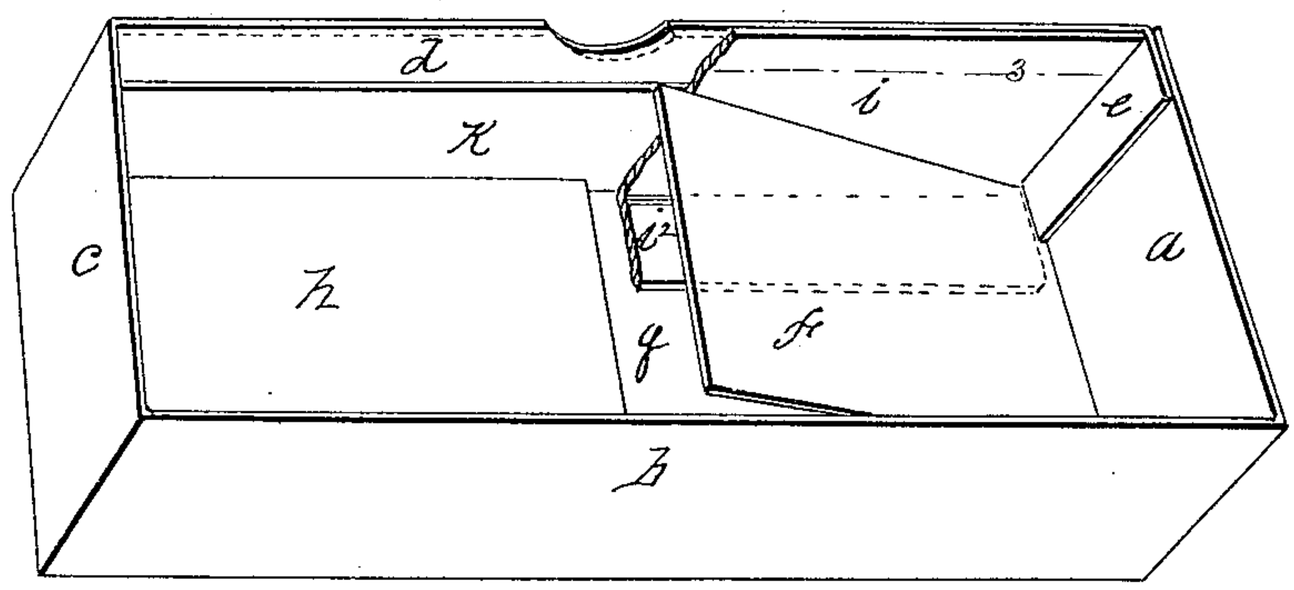


Fig 3



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PAPER BOX.

SPECIFICATION forming part of Letters Patent No. 326,937, dated September 29, 1885.

Application filed March 16, 1885. (No model.)

To all whom it may concern:

Be it known that I, CHARLES S. BIRD, a citizen of the United States, residing at East Walpole, in the county of Norfolk and State of Massachusetts, have invented new and useful Improvements in Paper Boxes, of which the following is a specification.

This invention relates to improvements in paper boxes, the object being to provide an improved telescopic box, and a blank therefor adapted to be made with little or no waste of material, and a box capable of being "knocked down" for facility of transportation, possessing improved characteristics.

In the drawings forming part of this specification, Figure 1 illustrates the two pieces of paper, forming what is termed the "box-blank," arranged in sections and adapted to be folded according to my invention. Fig. 2 illustrates the two parts of the blank shown in Fig. 1, one being attached to the other preparatory to folding. Fig. 3 illustrates the folded box partly in section, and showing one of the bottom sections lifted to disclose the arrangement of the parts thereunder.

In the drawings, *g* is the bottom section of the blank. K is a tuck-flap thereon. *b* and *d* are the side sections. *a* and *c* are the sections constituting the ends of the box. *f* and *h* are bottom-lining sections. *i* i^2 is one piece constituting at once the lining of the side *d* and a tuck-flap between the bottom *g* and the bottom-lining parts *f* and *h;* and the section *e* is a fastening-flap to be secured against the inside of the section *a*.

The dotted lines in the drawings represent the lines upon which the sections are folded and the full ones the section-dividing lines.

In making the box-blank shown in Figs. 1 and 2 the piece of paper required therefor is of a length between the extreme ends of sections *a* and *e* and of a width transversely through the sections *c* and *h*, cut in the form of a parallelogram, and from which are removed for the purpose of forming and arranging the various above-mentioned sections only the small corner-pieces between the ends of sections *f* and *h* and between the side of section *e* and the end of the double section part *i* i^2, the latter being severed from the edges of the sections *d* and *h* and attached to the inside of the section *d* above it, as shown in Fig. 2. Thus the above-mentioned piece of paper from which the blank is made is entirely worked into the latter, less a slight fraction of the whole, whereby the usual considerable waste is avoided.

The aforesaid box-blank is cut and scored or indented for folding as above set forth, and the piece constituting the sections *i* i^2 is pasted by its upper edge (the paste or cement being applied about between the line 3 and its edge) against the inside of the side section, *d*, as shown in Fig. 2, and from line 3 to the lower edge of section *d* the section *i* is not attached to the latter, and the section i^2 is, when the blank is folded, bent at right angles to the part *i* toward the center of the box, as seen in Fig. 3.

The manner of folding the said blank to form the box shown in Fig. 3 is as follows: Assuming that the blank is in the condition represented in Fig. 2, the ends *e* and *a* are swung around and brought together, and in so doing the ends *a* and *c* are brought opposite each other, standing vertically to the ends of the bottom *g*, the latter having been bent to a position at right angles to the side *b*. When said ends are brought to the aforesaid position relative to the bottom *g*, the lining parts *f* and *h* are brought onto the inside of the latter, and the flap i^2 passes between the parts *f* and *h* and the bottom *g*, and the flap K is tucked between the part *i* and the side *d*, and, finally, the narrow flap *e* is cemented against the inside of the end *a*, securing all the parts in the relative positions shown in Fig. 3, constituting an ordinary box-body or a cover or one of two telescopic parts of a box adapted to be united by entering one within the other in the usual way.

The said box, after having been formed as just described, is capable of being instantly converted into a "knockdown" box by first drawing the flap K from between the parts *d* and *i*, bringing *g* and K into a plane with the side *b*, then bending i^2 to a plane with *i* and *d*, then bending the parts *h f* to the same plane as the ends *c a*, and finally bending the said ends at their corners and bringing the box to a flat position with all the parts in substantially the same plane.

The within-described box is especially adapted for packing heavy objects in—such as tacks and similar articles—owing to the

fact that its bottom is composed of substantially three thicknesses of material, and one side is of double thickness, further strengthened by the interposition between its two parts of the flap K in such edgewise relation to the other parts that it materially strengthens the box against crippling under the strain of weighty contents.

What I claim as my invention is—

1. The within-described paper box, consisting of the bottom *g*, having the flap K on one edge thereof, the side *d*, and the lining *i* thereof, open at their lower edges to receive the flap K therebetween, the section i^2, overlying the bottom *g*, the lining-sections *f* and *h*, overlying said section i^2, the side *b*, the ends *c* and *a*, and the flap *e*, cemented to the latter, substantially as set forth.

2. The within-described blank for a paper box, consisting of the bottom section, *g*, having the tuck-flap K on one edge thereof, the end sections, *a* and *c*, the side sections, *b* and *d*, and the flap *e*, arranged in a line and connected with the bottom *g* only at one edge of the side *b*, the lining-sections *f* and *h*, each attached to one edge of the said ends *a* and *c*, and the severed section *i*, cemented partially to the side *d*, and having thereon the section i^2, substantially as set forth.

CHARLES S. BIRD.

Witnesses:
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