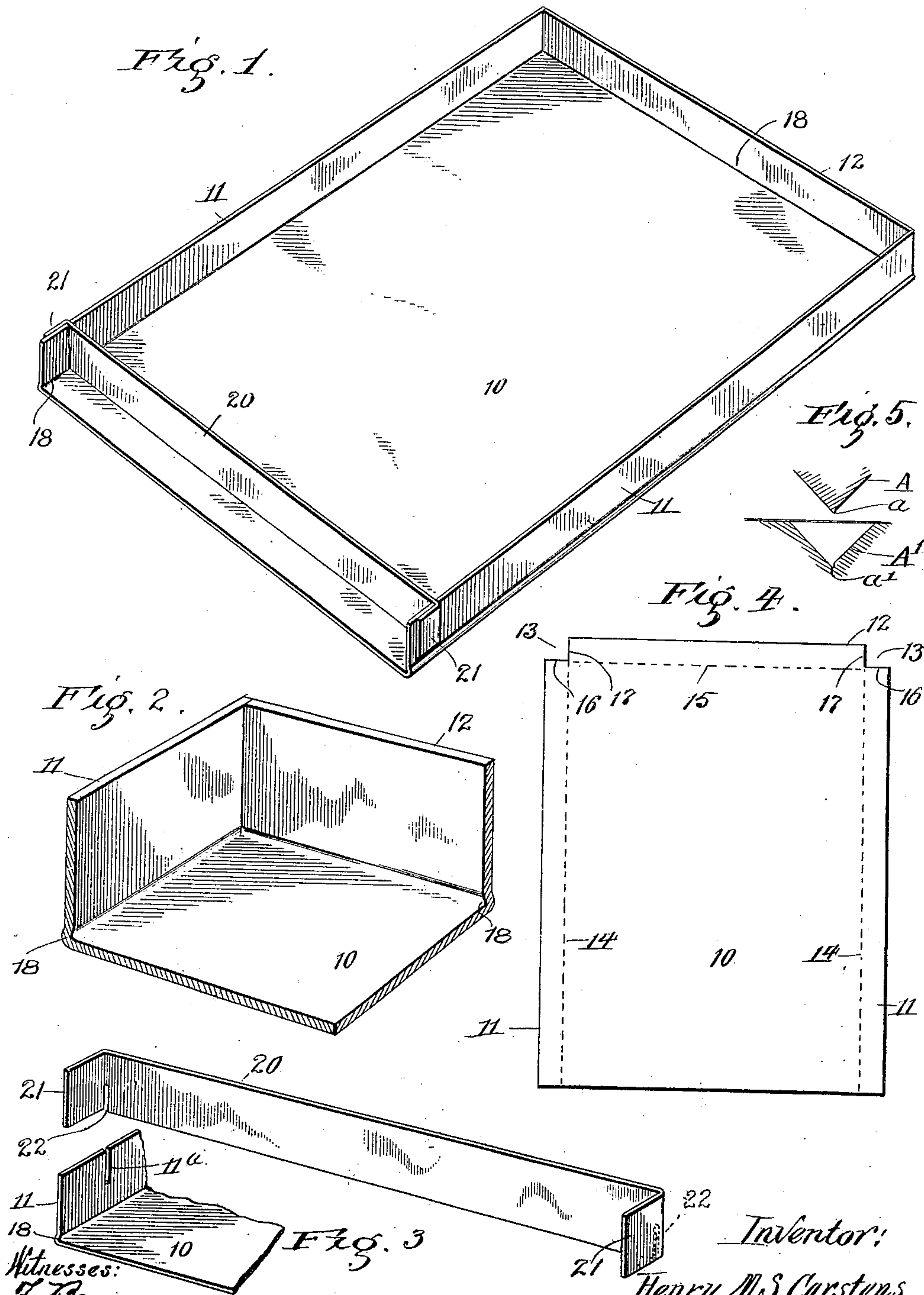


H. M. S. CARSTENS.
 PRINTER'S GALLEY.
 APPLICATION FILED OCT. 16, 1907.

920,430.

Patented May 4, 1909.



Witnesses:
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UNITED STATES PATENT OFFICE.

HENRY M. S. CARSTENS, OF CHICAGO, ILLINOIS.

PRINTER'S GALLEY.

No. 920,430.

Specification of Letters Patent.

Patented May 4, 1909.

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To all whom it may concern:

Be it known that I, HENRY M. S. CARSTENS, a citizen of the United States, residing at Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Printers' Galleys, of which the following is a specification.

My invention relates to that class of printers' galleys which are formed of one piece of sheet metal bent into a form, having bottom, end and side walls, and more particularly this invention relates to improvements of storage galleys,—that is—galleys for storing away for future use type that have been set up. The object is to furnish a galley which shall possess certain advantages over and above galleys of this class and which shall avoid certain defects that are present in the ordinary cheap galley. One of the important features in printers' galleys is the necessity of having a square corner between the bottom and sides and end, also unbroken side walls in order that the type may all stand up squarely on their feet, and thus form a perfectly level printing surface. When the surface of the type is uneven, the printers have much difficulty in "proving" their work, and for this reason have resorted to expensive galleys, or have been forced to use the cheaper kind as a make shift. Storage galleys are usually furnished to printers in large lots, as it frequently happens that after the printer has printed a "work" containing many volumes, he desires to store away the type, to reprint the work at some future time. For this reason he is generally equipped with cases or racks in which the galleys, containing the type, are filed away, and when, as it often happens, that thousands of these galleys are required for a single piece of work, economy of space is an important element. Therefore any unnecessary increase in the size of the galley, beyond its marginal walls, results in a great waste of space and material, both in the construction of the galleys and in the cases.

One of the objects of my invention is to avoid all of these undesirable features, and to form a galley of one piece, having sides and ends that are perpendicular to the bottom and which extend up immediately from the margins of the bottom with a perfect corner and without any appreciable lateral projection or flange, thus minimizing the size or space occupied by the galley, and still re-

taining the square corner so essential to printers' galleys.

Another object is to strengthen the corners between the bottom and sides and end, thereby providing a perfectly rigid structure in which the sides and end are not liable to be sprung or bent out of shape. This I have accomplished by creasing the resulting corners between the bottom, sides and end, whereby the metal at this point will be compressed slightly and at the same time the sides and end may extend substantially to the bottom without leaving any wide gaps between the bottom and flat sides and end.

Another object is to combine with a galley of this type a lock bar for retaining the type in place, which bar shall be simple and shall occupy practically no additional space than the galley itself.

To such end this invention consists in certain novel features of construction, a description of which will be found in the following specification, and the essential feature more particularly pointed out in the claims.

The invention is clearly illustrated by means of drawings furnished herewith, in which—

Figure 1 is a perspective view of a galley containing my improvements. Fig. 2, is a perspective view upon an enlarged scale, of one of the corners of the galley. Fig. 3, is a perspective view of a fragment of a galley and the lock bar, the two parts being in position about to be put together. Fig. 4 is a face view of a blank from which the galley is formed, and Fig. 5 is a graphic representation of a set of dies for forming the right angle bends.

The galley comprises a bottom 10, side walls 11, 11, and an end wall 12, which walls are perpendicular to the bottom and extend up from the margin thereof. Fig. 4 shows a blank from which such a galley is formed, the same being of rectangular form with two of the corners cut away as at 13, 13. When this blank is folded up along the dotted lines 14, 14, 15, the edges 16, 17, of the flanges 11, 12, meet in lines perpendicular to the bottom and said edges are joined, usually by soldering them together. When the ordinary cheap galley is formed from a blank of this form and size, the meeting or folding edge between the bottom and sides and end results in a round corner as it is practically impossible to bend the flanges upon the bot-

tom without leaving a slightly rounded corner. This makes the ordinary cheap galley objectionable, because the type are raised slightly by this rounded corner, thereby interfering with the "proving" of the work. I have avoided this difficulty by indenting the corner between the bottom and sides and end wall so as to force the inner face of the metal at the corner back of the point which it would otherwise occupy, to leave a slight crease or indenture 18, which does not appreciably increase the size of the galley but provides to all intents and purposes, a square corner between the bottom and sides and end with the sides and end extending directly up from the margin of the bottom and forming unbroken marginal walls. It is to be understood that it is not the intention to displace the metal to such an extent that a groove will be formed which is deeper than the thickness of the wall, and thereby unnecessarily increase the width of the galley, but the metal is indented only enough to remove the fillet which would otherwise occur if the wall were simply bent up along the margin of the bottom.

Fig. 2 shows a fragment of a galley upon a scale of about twice the actual size and thickness of a galley, the size of the crease being somewhat exaggerated in order to clearly illustrate this feature. It is thus apparent that a complete, unbroken marginal wall results from this construction, which joins the bottom at its margin, and leaves no appreciable outwardly projecting flanges or edges that increase the width and length of the galley or add to the material actually necessary to form the bottom sides and end. I am enabled to produce such a corner by employing dies such as are graphically illustrated in Fig. 5. The male die A is formed with a slight rib *a*, and the female die A' with a corresponding socket *a'*. These dies are preferably a right angle in cross section and when brought together, operate to fold up the sides or end upon the bottom and at the same time indent or crease the resulting corner between them, so that the sides are folded and the indenture made at one operation. In this manner I am enabled to form a cheap galley from a single piece of metal, containing the essential elements of an expensive galley, without sacrificing any of the essentials and at the same time producing one whose size increases the length and breadth of the type only by the thickness of the metal.

The distinguishing feature of my invention is the fact that a corner is provided which to all intents and purposes is that of a

true right angle, and which does not weaken the galley on the folding line, or necessitate the addition of any filling material to strengthen the corner or the addition of other projecting reinforcements therefor. There is also a decided advantage in providing a crease in the corner, as it leaves a space through which any water may run out from the type. Printers very often wet the type after putting them in the galley and the creases form channels for the escape of the water.

The lock bar comprises a bar 20, having tangs 21, upon its ends which extend at right angles to the plane of the bar. The meeting edges between the bar and tangs are notched half way up, as at 22, and the sides 11, of the galley are provided with notches 11^a that extend half way down to the bottom. The bar is attached to the galley by slipping the bar down upon the sides of the galley, so that the body of one part enters the corresponding notch upon the other. This is a simple arrangement and provides a locking means between the bar and galley and at the same time leaves no projecting portions on the outside of the galley.

I claim as new and desire to secure by Letters Patent:—

1. A printer's galley comprising a single piece of sheet metal, having a bottom, sides and an end, said sides and end being folded up along the marginal lines of the bottom to form flat, perpendicular, marginal walls, the metal at the resulting corners being forced outward a distance less than the thickness of the walls.

2. A printer's galley comprising a single piece of sheet metal, having a bottom, sides and an end, said sides and end being folded up along the marginal lines of the bottom to form flat, perpendicular marginal walls, the inner face of the metal at the resulting corners being forced outward so as to lie under the flat wall.

3. The combination with a printer's galley having two opposing notches on its side walls, of a removable lock bar comprising a bar having right angle bends upon its ends arranged to be parallel with the sides and notches adapted to co-act with the notches on the side walls to lock the bar in the plane of the galley.

In witness whereof, I have executed the above application for Letters Patent at Chicago, Ill., this 30th day of August 1907.

HENRY M. S. CARSTENS.

Witnesses:

CHARLES O. SHERVEY,
WILLIAM P. BOND.