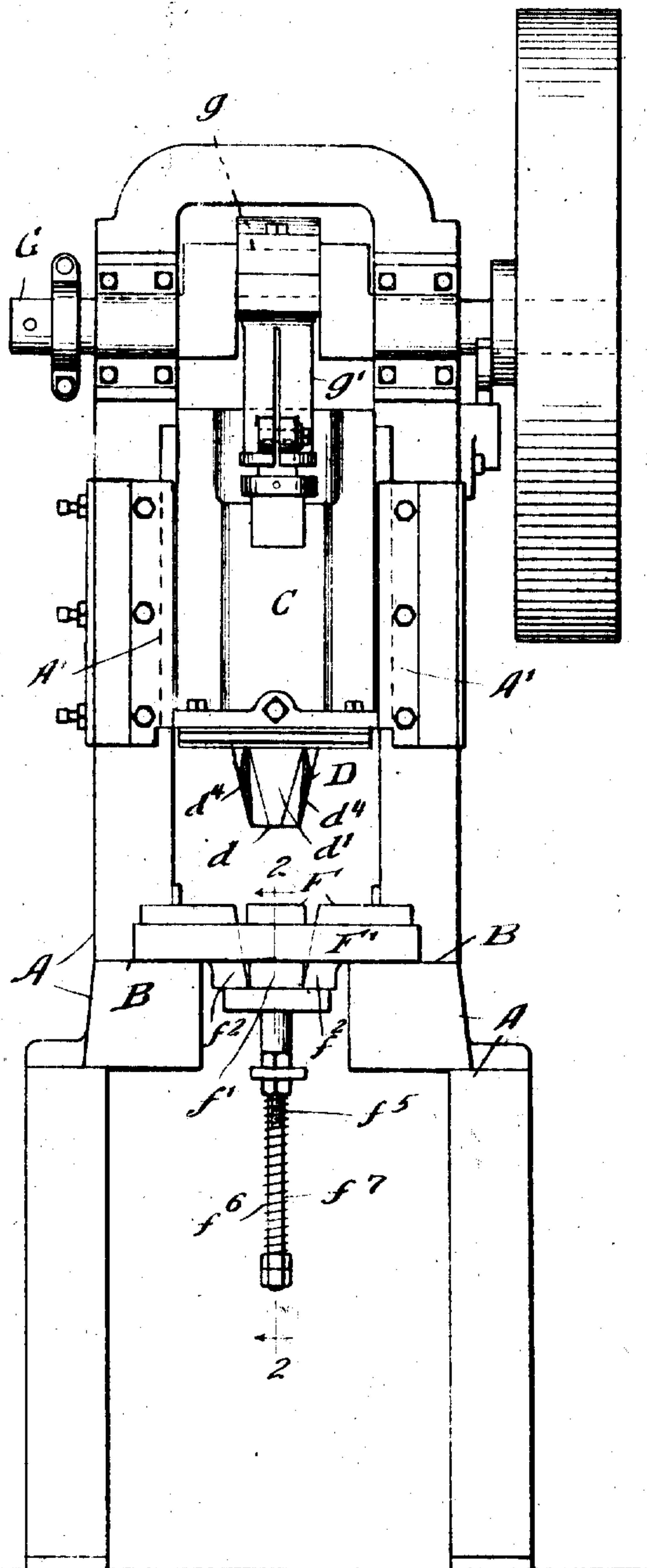


MACHINE FOR MANUFACTURING ONE PIECE FOLDED SHEET METAL TURPENTINE CUPS.

Patented Oct. 6, 1908.

3 SHEETS—SHEET 1

Fig.1



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MACHINE FOR MANUFACTURING ONE PIECE FOLDED SHEET METAL TURPENTINE CUPS.

APPLICATION FILED MAY 2, 1908.

900,393.

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3 SHEETS—SHEET 2.

Fig. 2

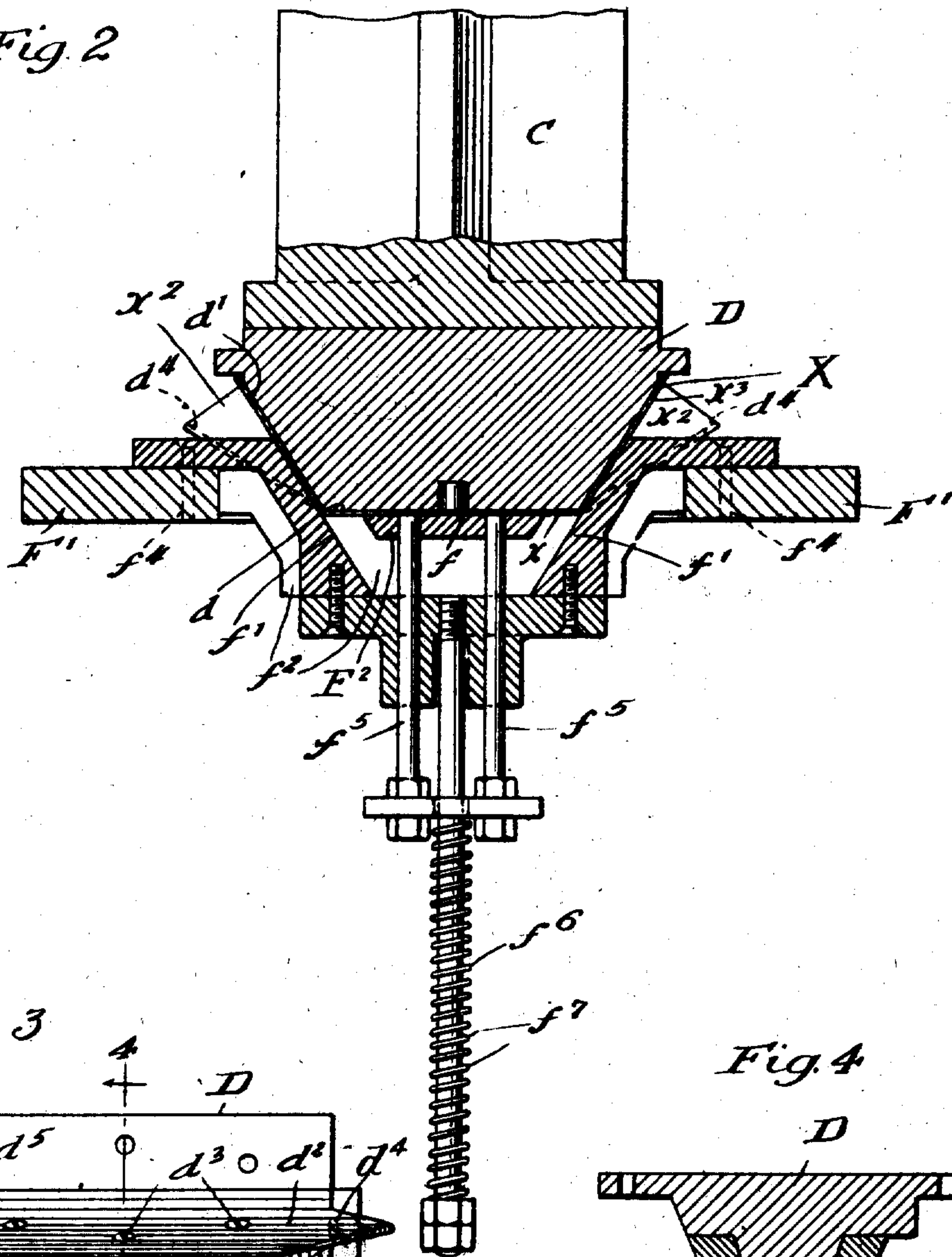


Fig. 3

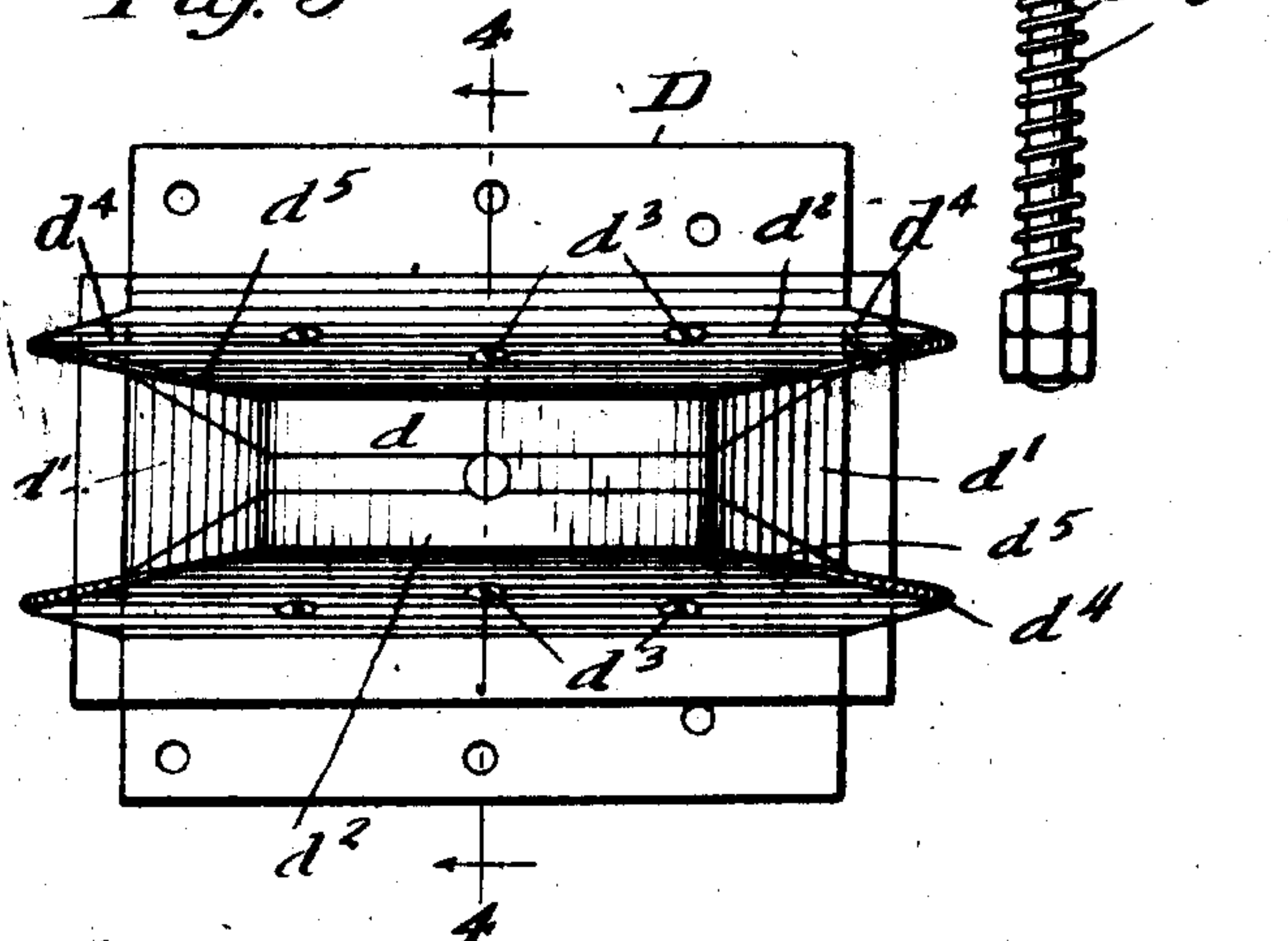
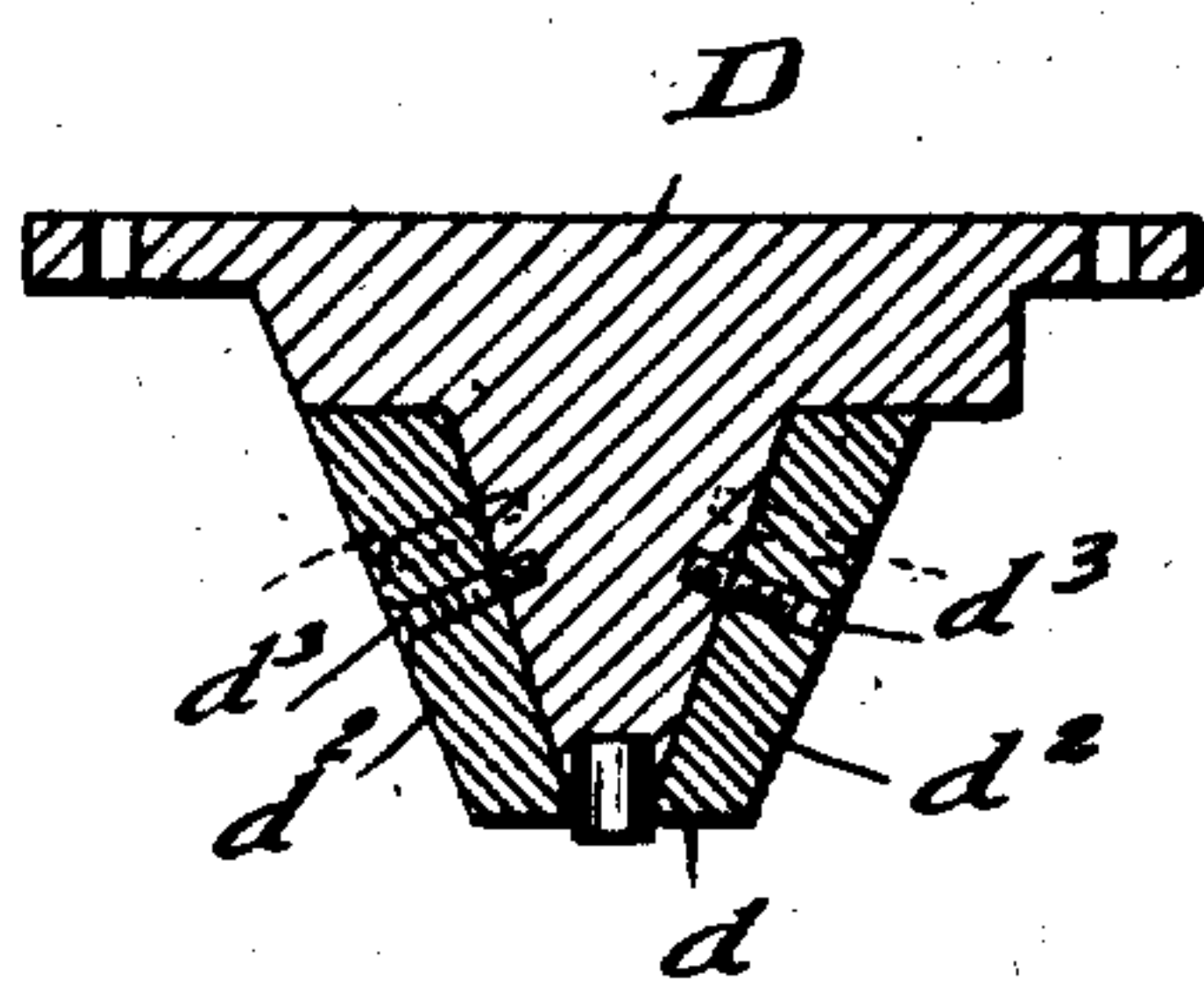


Fig. 4



Witnesses:

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MACHINE FOR MANUFACTURING ONE PIECE FOLDED SHEET METAL TURPENTINE CUPS.

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A diagram of a three-chambered shell, labeled 'X' at the top. The shell is divided into three vertical chambers. The central chamber is labeled 'x'. The two side chambers are labeled 'x3'. The top and bottom edges of the shell are labeled 'x4'. The outer edges of the side chambers are labeled 'x2'.

Fig. 7

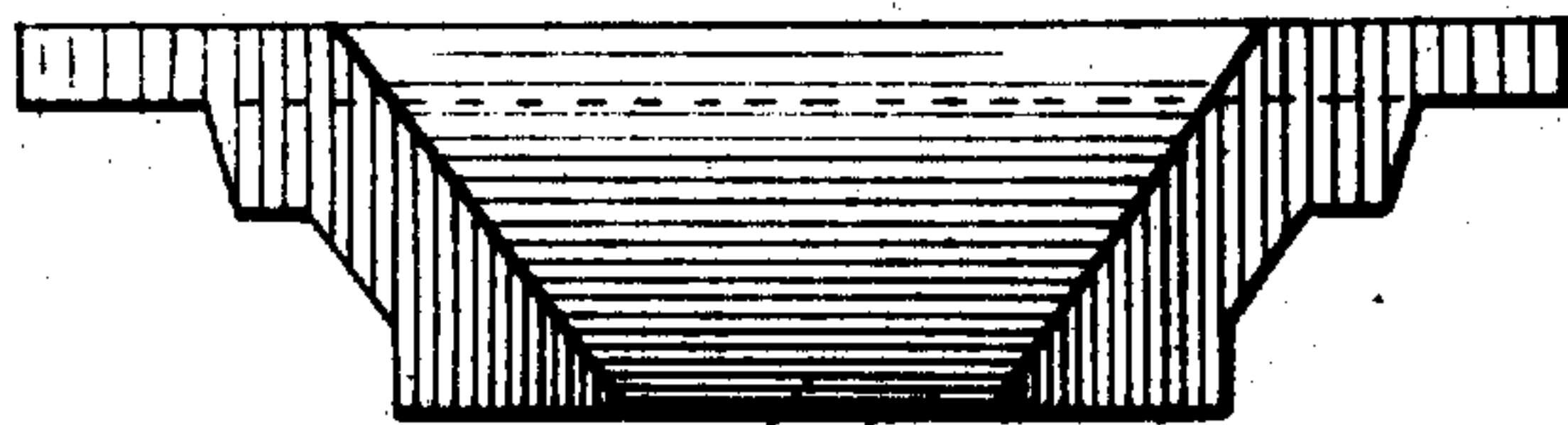
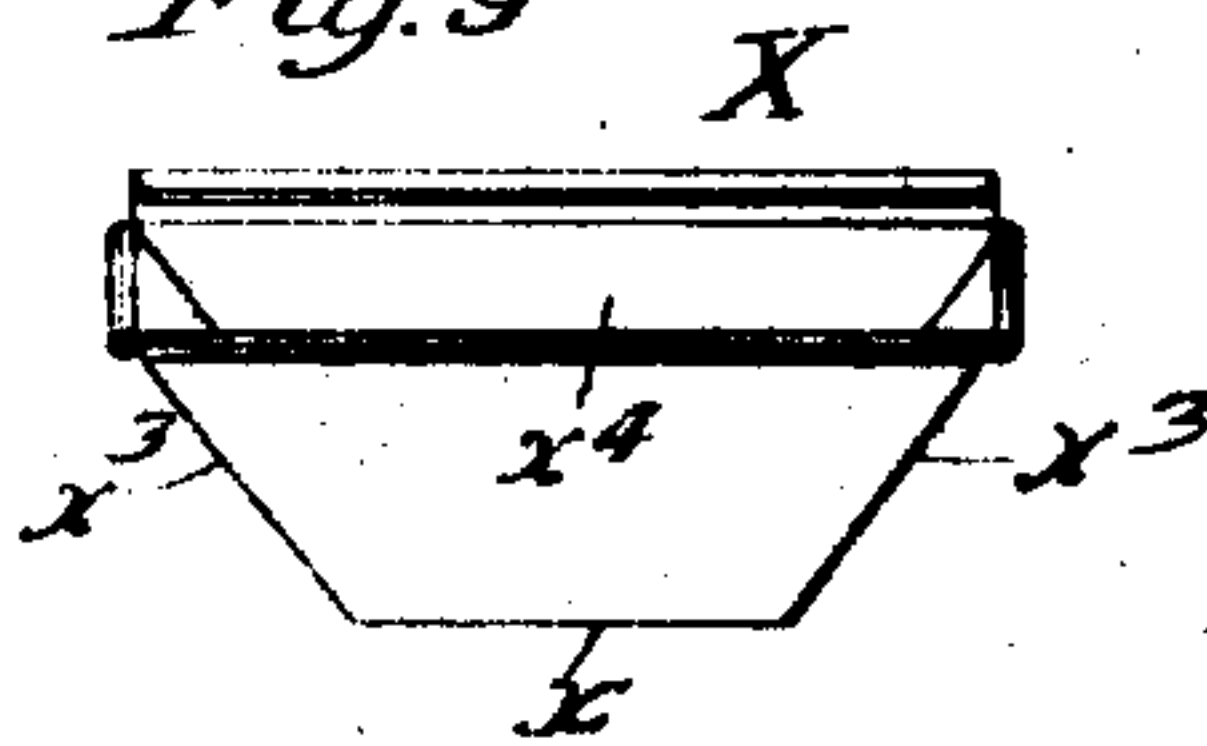


Fig. 9



Wm. Gager
at Wmunday

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UNITED STATES PATENT OFFICE.

JOHN KOHKE, OF ATLANTA, GEORGIA, ASSIGNOR TO AMERICAN CAN COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

MACHINE FOR MANUFACTURING ONE-PIECE FOLDED SHEET-METAL TURPENTINE-CUPS.

No. 900,393.

Specification of Letters Patent.

Patented Oct. 6, 1908.

Application filed May 2, 1908. Serial No. 430,455.

To all whom it may concern:

Be it known that I, JOHN KOHKE, a citizen of the United States, residing at Atlanta, in the county of Fulton and State of Georgia, have invented a new and useful Improvement in Machines for Manufacturing One-Piece Folded Sheet-Metal Turpentine-Cups, of which the following is a specification.

My invention relates to improvements in machines for manufacturing long, narrow, deep, one piece folded sheet metal turpentine cups, having substantially upright but slightly flaring sides and widely flaring ends and integral angle folds at the flaring ends.

My invention consists in connection with a bed plate for receiving the sheet metal blank, and a reciprocating cross head, of a female forming die furnished with a pair of tapering and slightly flaring or inclined side die members or faces and with a pair of opposing widely flaring or inclined end die members or faces with an angular open space at the corners between the side and end die members or faces and a cooperating male forming die having corresponding slightly flaring or inclined side die faces or members and widely flaring or inclined end die faces or members, the side die members being provided with projecting wings at each end, said wings having inclined lower edges.

In the drawing, Figure 1 is a front elevation of a machine embodying my invention. Fig. 2 is a detail vertical section on line 2—2 of Fig. 1. Fig. 3 is a detail bottom view of the male forming die. Fig. 4 is a cross section on line 4—4 of Fig. 3. Fig. 5 is a detail plan view of the female forming die. Fig. 6 is a cross section on line 6—6 of Fig. 5. Fig. 7 is a detail side elevation looking from line 7—7 of Fig. 5. Fig. 8 is a perspective view of the sheet metal blank as formed by the machine and Fig. 9 is a similar view of the long, narrow, deep one piece folded sheet metal turpentine cup, in the manufacture of which the machine involving my invention is used.

The frame A, bed plate B and cross head or slide C may all be of any suitable construction. The slide travels in suitable guides or ways A' on the frame of the machine and is reciprocated up and down as required by a crank g on the driving shaft G through a suitable pitman or connecting link g'.

The male die D is secured to the reciprocating slide or cross head C, and is furnished with a bottom face d of rectangular shape corresponding to the rectangular bottom a of the one piece folded cup X. The male forming die D is further provided with widely flaring or inclined end faces or members d' which may preferably be in part integral with the die. The male forming die D is further provided with slightly flaring or inclined side die faces or members d'' which are preferably formed in separate pieces from the die D of hardened steel, and rigidly and firmly but removably secured thereto by screws d'. The bottom face d of the male forming die is preferably formed on the lower edges of the side die members d''. Each of the side die members d'' is provided at each end with an integral wing d' projecting beyond the widely flaring end die faces d' and having their lower edges d' inclined at a materially greater angle than that of the widely flaring end die faces d'. The widely flaring end die faces d' are preferably in part formed on the side die members d'' at the ends thereof as will be readily understood from Fig. 3 of the drawing.

The female forming die F comprises a bottom die face or member f, a pair of widely flaring end die faces or members f' and a pair of slightly flaring side die faces or members f''; the end and side die members f' f'' having angular openings or free spaces f' between them to accommodate the surplus stock, which forms the wings or angle folds x' of the cup or vessel X. The wings d' on the side die members d'' of the male forming die D cause the surplus stock at each corner to shape itself into wings or angle folds of true, regular and proper shape, notwithstanding the wide difference in the flare of the ends x' and sides x' of the vessel X, and of the cooperating die faces or members at the sides and ends of the male and female forming dies.

The end and side die faces or members f' f'' of the female forming die F are preferably in separate pieces and secured by screws f' to the body plate F' of the female die. The bottom die face or member f of the forming die is preferably in a separate piece from the die plate F' to which the end and side die members f' f'' are secured at their lower edges, and it is made movable in respect to the other die members of the female forming die and furnished with guide stems f' and

with a spring f^6 surrounding a stem f^7 so that this bottom die member f may also serve as an ejector.

I claim:—

5 1. In a machine for forming sheet metal blanks for production of one piece folded vessels having the ends thereof flared at different angles from the sides, the combination with a bed plate and reciprocating slide or
10 cross head, of a female forming die having slightly flaring side die faces or members and widely flaring end die faces or members, and angular openings or free spaces at the corners between the side and end die members, and a
15 cooperating male forming die having correspondingly flared side and end die members or faces, the side die members being provided at each end with rigid projecting wings extending in line therewith, said projecting
20 wings forming and fitting within the angle folds produced in the blank by said male and female forming dies substantially as specified.

2. In a machine for forming sheet metal
25 blanks for production of one piece folded vessels having the ends thereof flared at different angles from the sides, the combination with a bed plate and reciprocating slide or cross head, of a female forming die having
30 slightly flaring side die faces or members and widely flaring end die faces or members, and angular openings or free spaces at the corners between the side and end die members, and a cooperating male forming die having
35 correspondingly flared side and end die members or faces, the side die members being provided at each end with rigid projecting wings extending in line therewith and having their lower edges inclined at a greater angle than
40 that of the end die members, said projecting wings forming and fitting within the angle folds produced in the blank by said male and female forming dies substantially as specified.

3. In a machine for the purpose specified,
45 the combination with a female forming die having differently flared side and end die faces or members and angular spaces at the corners between the side and end die members, of a male forming die having side and
50 end die faces or members and provided with rigid projecting wings at the corners extending in line with said side die faces or members, said projecting wings forming and fitting within the angle folds produced in the
55 blank by said male and female forming dies substantially as specified.

4. In a machine for the purpose specified, the combination with a female forming die

having differently flared side and end die faces or members and angular spaces at the
60 corners between the side and end die members, of a male forming die having side and end die faces or members and provided with rigid projecting wings at the corners extending in line with said side die faces or mem-
65 bers, said projecting wings having inclined lower edges, said projecting wings forming and fitting within the angle folds produced in the blank by said male and female forming dies substantially as specified. 70

5. The combination with a female forming die having flaring side and end die faces or members with a male forming die having flaring side and end die faces or members, and provided with rigid projecting wings at
75 the corners extending in line with said side die faces or members, said projecting wings forming and fitting within the angle folds produced in the blank by said male and female forming dies substantially as specified. 80

6. The combination with a female forming die having flaring side and end die faces or members with a male forming die having flaring side and end die faces or members and provided with rigid projecting wings at the
85 corners extending in line with said side die faces or members, said projecting wings having inclined lower edges, said projecting wings forming and fitting within the angle folds produced in the blank by said male and
90 female forming dies substantially as specified.

7. In a machine for forming sheet metal blanks for production of one piece folded vessels having the ends thereof flared at different angles from the sides, the combination
95 with a bed plate and reciprocating slide or cross head, of a female forming die having slightly flaring side die faces or members and widely flaring end die faces or members, and angular openings or free spaces at the cor-
10 ners between the side and end die members, and a cooperating male forming die having correspondingly flared side and end die members or faces, the side die members being provided at each end with rigid projecting wings
105 extending in line with said side die faces or members, said female forming die having an ejector, said projecting wings forming and fitting within the angle folds produced in the blank by said male and female forming dies
110 substantially as specified.

JOHN KOHKE.

Witnesses:

ERNEST R. PHILIP,
T. H. STEWART.