

(No Model.)

F. C. WILSON.
CRIMPING TOOL.

No. 502,339.

Patented Aug. 1, 1893.

Fig. 1.

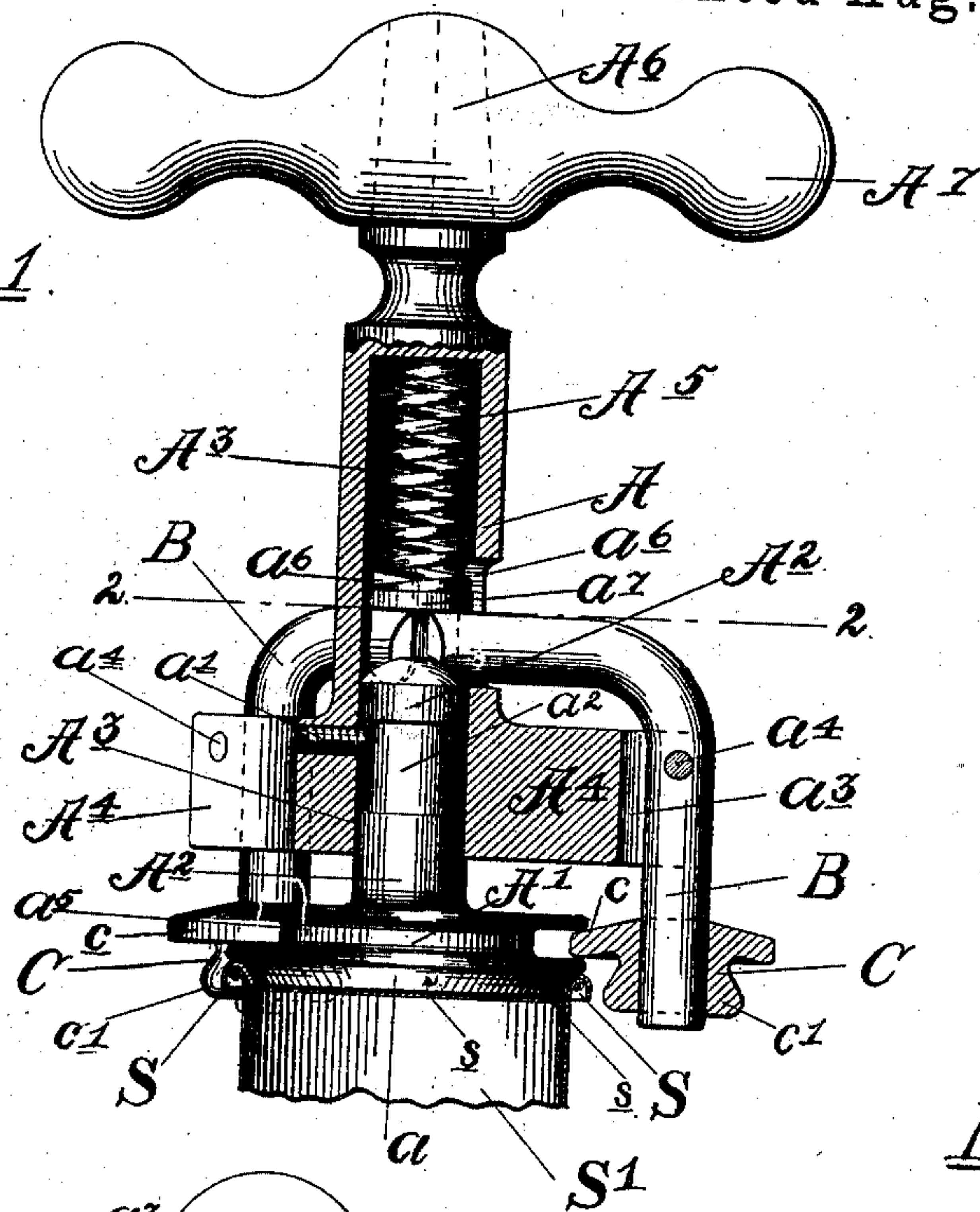


Fig. 4.

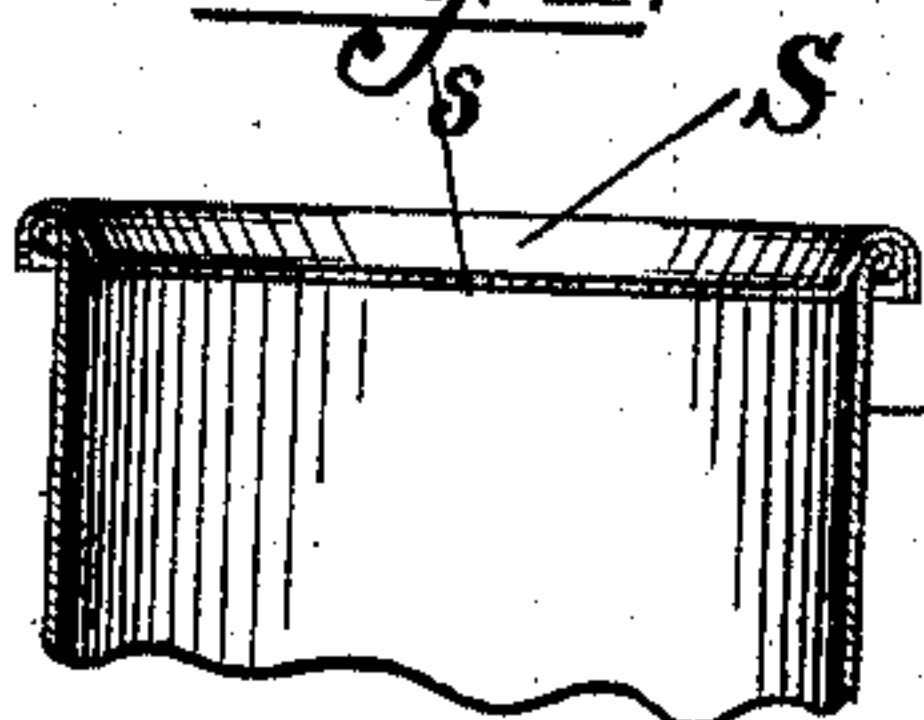


Fig. 5.

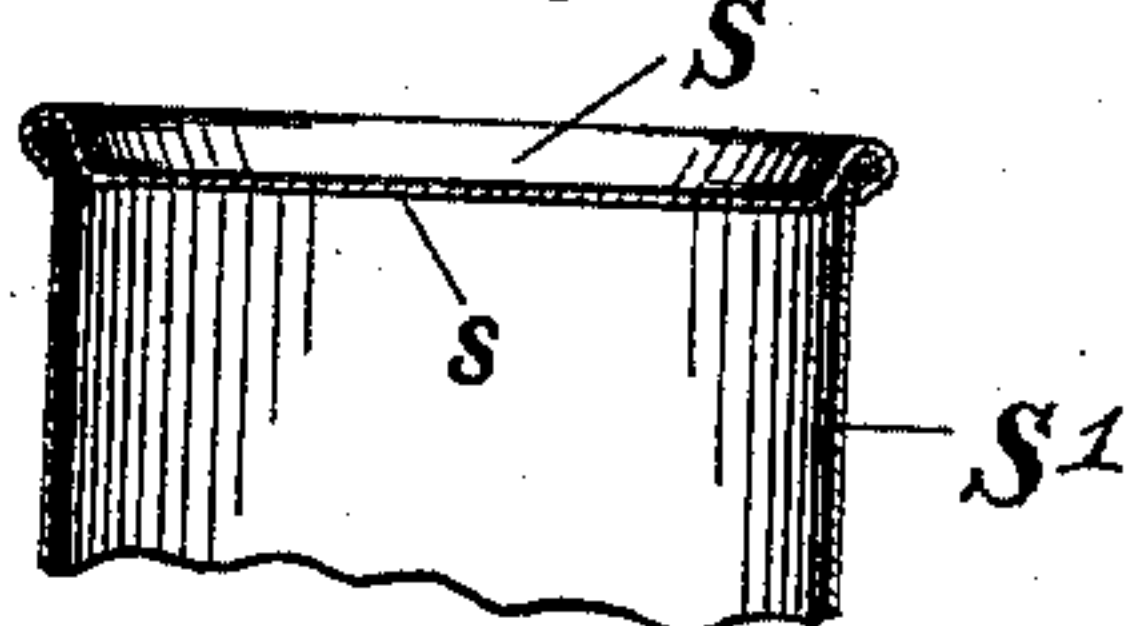


Fig. 2.

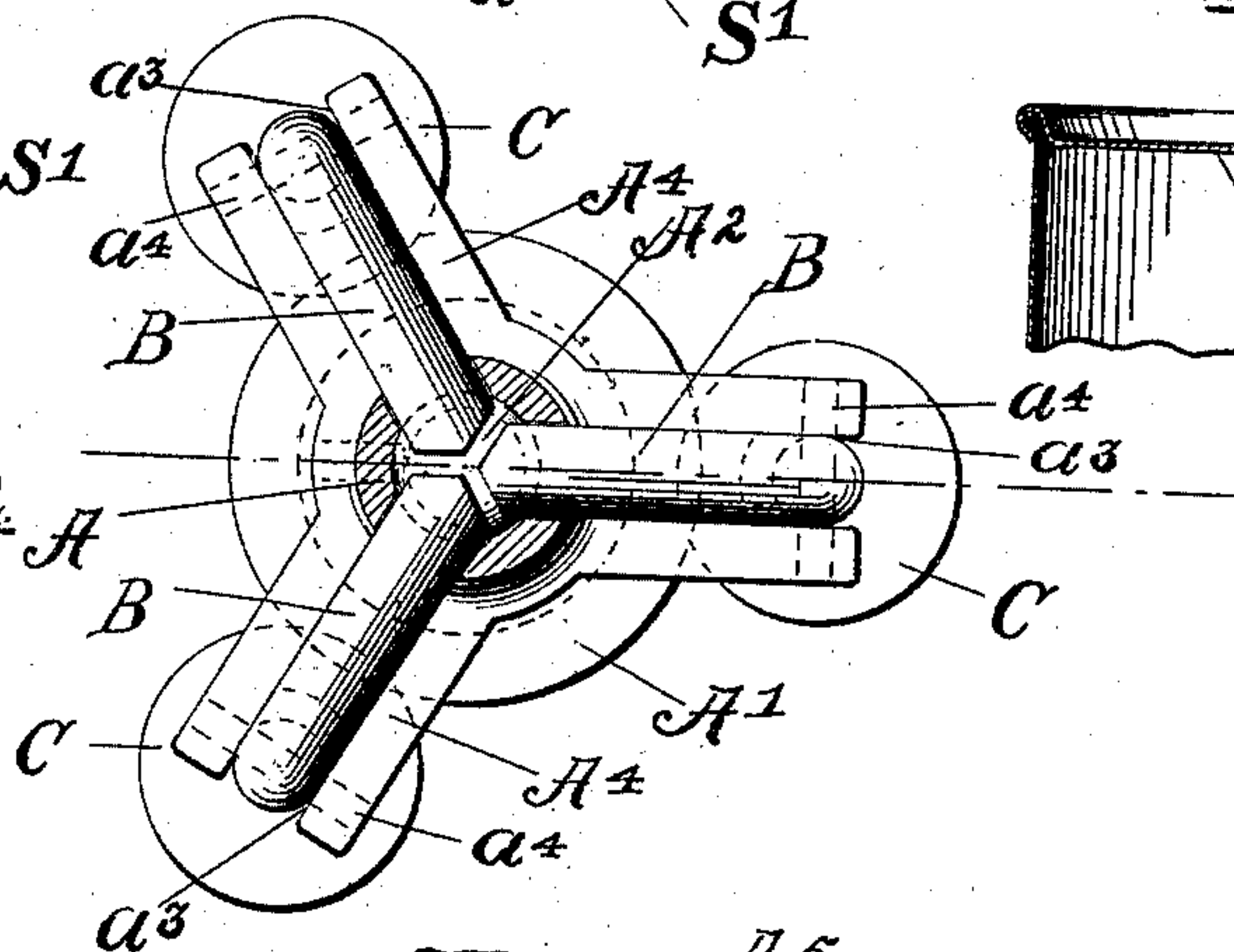
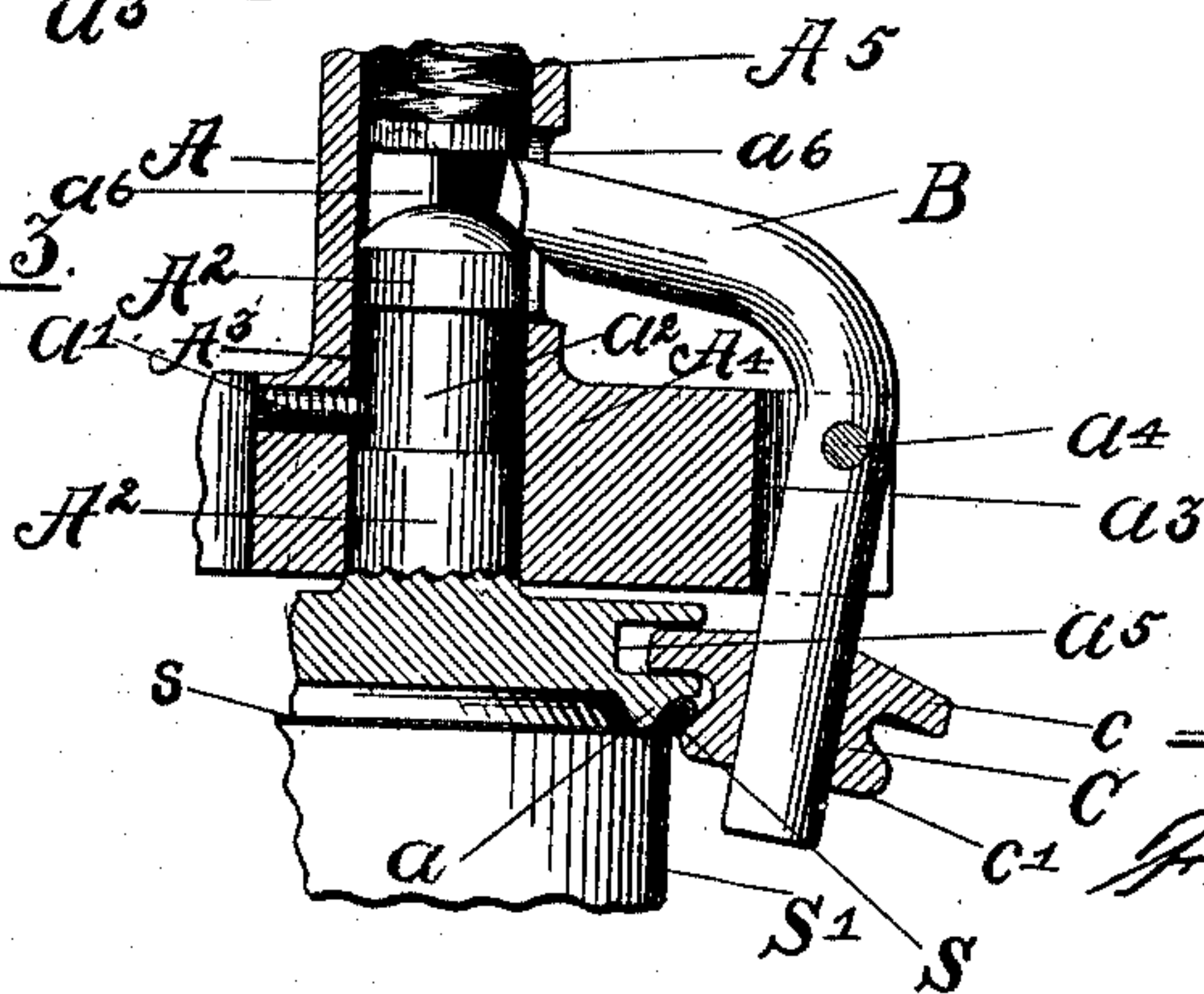


Fig. 3.



Inventor

F. C. Wilson

Witnesses

Willard B. Wilson.
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UNITED STATES PATENT OFFICE.

F. CORTEZ WILSON, OF CHICAGO, ILLINOIS.

CRIMPING-TOOL.

SPECIFICATION forming part of Letters Patent No. 502,339, dated August 1, 1893.

Application filed April 27, 1893. Serial No. 472,061. (No model.)

To all whom it may concern:

Be it known that I, F. CORTEZ WILSON, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Crimping-Tools; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in sheet metal crimping tools of that class employed for crimping the edges of sheet metal caps upon the flanged mouths of can spouts, and for other similar purposes.

The object of the invention is to provide an improved construction in tools of the character referred to, and it consists in the matters hereinafter set forth and particularly pointed out in the appended claims.

A crimping tool embodying my invention comprises in its construction a stock provided at its lower end with a part adapted to engage the upper surface of the sheet metal cap, and one or more crimping rolls revolubly supported, adjacent to the edge of said part, on the lower ends of downwardly projecting arms which are pivotally connected to the stock and are adapted to be oscillated to force the crimping rolls inward into position to bend or close the edge of the cap around or upon the flanged mouth of the can as the tool is rotated. In one approved form in which I have practically embodied my invention, said pivoted arms are adapted to be oscillated by direct pressure upon the tool along the axis thereof, the stock of the tool being to this end formed of two parts arranged to telescope together, or to otherwise slide longitudinally of each other, one part including a circular plate or disk which engages the upper surface of the cap and the other part including a shank to which any suitable handle or other device for operating the crimping tool is attached. In such case the arms carrying the crimping rolls are pivoted to one part of the stock and are so connected or arranged with reference to the other parts that when said parts are forced together the lower ends of the arms will be swung inward, bringing the crimping rolls into position to crimp the edge of the cap, as hereinbefore stated. This will be

more fully understood from the following description of a construction of crimping tool of the class last referred to, taken in connection with the accompanying drawings illustrative thereof, in which—

Figure 1 is a partially sectional elevation of a crimping tool constructed in accordance with my invention, showing the same as first applied to a cap and can spout, with the crimping rolls out of operative position. Fig. 2 is a horizontal section of the same taken on line 2—2 of Fig. 1. Fig. 3 is a detail section, showing the position of the parts when the crimping rolls are in operative position. Fig. 4 is a sectional view showing the cap as first applied to the can spout; and Fig. 5 is a similar view after the cap has been subjected to the operation of the crimping tool.

A designates the stock of the tool thus illustrated and A' the circular plate or disk, provided at the lower end of the stock and adapted to engage the upper surface of the sheet metal cap. As ordinarily constructed, such caps (designated S in the drawings) are formed with a depressed center *s* of sufficient diameter to fit the interior of the mouth of the can spout S' and center the cap relatively thereto, and in such cases said disk A', as herein shown, is provided on its lower surface with a central circular lug or annular rib *a*, adapted to fit within the recess *s* and center the tool relatively to the cap and can spout. Said disk is herein shown made separate from the body portion of the stock A and is connected thereto by means of a cylindric lug or spindle A² provided centrally on the upper side of said disk and engaging a central longitudinal bore A³ in the stock A. A set screw *a'* provided in the stock and projecting into a wide annular groove or recess *a*² in the spindle A² normally prevents the withdrawal of the spindle from the bore A³, while at the same time permitting longitudinal and rotary movement of said spindle relatively to the stock. The latter is herein shown as provided at its lower ends with three radially projecting lugs A⁴, located symmetrically around the stock and formed at their outer ends with vertical slots or recesses *a*³. Within said recesses are pivoted, upon horizontal pivot pins *a*⁴, the oscillatory arms or levers B, the downwardly projecting ends of which

support the crimping rolls C at points adjacent to the edge of the disk A'. As herein shown said rolls are journaled upon the arms B in such manner as to be movable longitudinally thereof, and are maintained in substantially the same plane with said disk A' by means of wide flanges c provided on the upper ends of the rolls and engaging an annular groove a⁵ in said disk A'. The lower ends c' of said crimping rolls C are also enlarged as shown so that when said rolls are thrown inward against the disk A' said lower ends c' project beneath the edge of said disk in such manner as to bend or crimp the edge of the sheet metal cap over the flanged mouth of the can.

The upper portions of the oscillating levers B are herein shown as bent radially inward through recesses a⁶ into the central bore A³ of the stock where they engage the upper end of the spindle A². A suitable spring A⁵ provided in the upper end of said bore A³ serves to normally maintain said levers in contact with the upper end of the spindle A² and to maintain the latter in its lowermost position relatively to the stock, and, in this instance, a washer a⁷ is shown as inserted between said spring and the inner ends of the levers B to afford a sufficient bearing surface between the same.

For the convenient manipulation of the tool, the stock A is herein shown as formed at its upper end with a tapered shank A⁶, to which any suitable handle A⁷ may be applied.

The construction of the tool being as described, the manner of operating the same is substantially as follows: A sheet metal cap S is laid over the mouth of a can spout S', and the annular rib a of the crimping tool is inserted in the depressed center of the cap as shown in Fig. 1. The stock A of the tool is then forced downward by pressure upon the handle A⁷, causing the spindle A² to move upward relatively to said stock and thereby raise the inner ends of the bent levers B. Obviously such action throws the lower ends of said levers inward and forces the crimping rolls C mounted thereon toward the edge of the disk A'. Such inward movement of the crimping rolls will obviously bend or crimp the adjacent portion of the edge of the cap upon the flanged mouth of the can spout, and the tool being thereupon rotated such crimping action will be continued throughout the entire circumference of said cap. During such crimping action the disk A' and the annular rib a at the lower side thereof will obviously act as an anvil to resist any distortion of the cap and spout by the pressure of the rolls and to afford a firm backing between which and said rolls the edges of the cap and spout may be compressed. The upper end of the spindle A² is preferably rounded off or chamfered and the engaging ends of the bent levers B made beveled as shown, so that said spindle exerts a wedging action as well as a direct thrust upon said levers and en-

ables the tool to be operated with a less pressure than would otherwise be required. Obviously by the downward movement of the stock A the lower ends of the arms B will be forced downward past the disk A', but the rollers C will, by the engagement of their flanges c with the groove A⁵ of said disk, simply slide farther up on the arms B and thereby be maintained in their normal position relatively to said disk A'. As soon as the pressure upon the handle is released the spring A⁵ will lift the stock A to its uppermost position relatively to the disk and release the rollers C from their engagement with the cap S.

I claim as my invention—

1. A tool for crimping caps upon can spouts comprising a stock made of two relatively movable sections, one adapted to be grasped in operating the tool and the other provided with a cap engaging part, a lever pivoted to one of the sections and adapted for oscillation by the relative movement of said sections, and a crimping member upon the lever, substantially as described.

2. A tool for crimping caps upon can spouts comprising a stock made of two relatively reciprocatory sections, one adapted to be grasped in operating the tool and the other provided with a cap engaging part, a lever pivoted to one of the sections and adapted for oscillation by the relative reciprocation of said sections, and a crimping member upon the lever, substantially as described.

3. A crimping tool comprising a stock provided with a circular plate or disk, crimping rolls mounted adjacent to the edge of said disk upon oscillatory arms pivoted to the stock, and means adapted for actuation by pressure upon the stock, for oscillating said arms to throw the crimping rolls into operative position, substantially as described.

4. A tool for crimping caps upon can spouts, comprising a stock made in two sections adapted to reciprocate upon each other, one section being provided with a cap-engaging part, and one section having a lever pivoted thereto, a crimping roll mounted upon said lever adjacent to said cap engaging part, and means for oscillating said lever by the reciprocation of the sections upon each other, substantially as described.

5. A crimping tool comprising a stock made in two sections adapted to be reciprocated upon each other, one section being provided with a disk and the other having oscillatory levers pivoted thereto, crimping rolls mounted on said levers adjacent to said disk, and means for oscillating said levers by the reciprocation of the sections upon each other, substantially as described.

6. A crimping tool comprising a stock made in upper and lower sections, the lower section being provided with a disk, bent levers pivoted to the upper section with their ends resting normally on top of the lower section, and crimping rolls mounted on said levers adja-

cent to said disk, whereby the forcing of the sections together will throw the crimping rolls inward into operative position, substantially as described.

5 7. A crimping tool comprising a stock provided with a longitudinal bore, a disk having on its upper side a spindle engaging said bore, bent levers pivoted to said stock with their upper ends projecting into the bore thereof
10 and normally engaging the upper end of the spindle, and crimping rolls mounted on the lower ends of said levers adjacent to said disk, substantially as described.

15 8. A crimping tool comprising a stock provided with a longitudinal bore, a disk having on its upper side a spindle engaging said bore, bent levers pivoted to said stock with their upper ends projecting into the bore thereof and normally engaging the upper end of the
20 spindle, a spring in the upper end of said bore normally holding the upper ends of the levers

and the spindle in their lowermost position with relation to the stock, and crimping rolls mounted on the lower ends of said levers adjacent to said disk, substantially as described. 25

9. A crimping tool comprising a stock provided with a circular plate or disk, an annular groove in the edge of said disk, crimping rolls mounted adjacent to the edge of said disk upon oscillatory arms pivoted to the
30 stock, said rolls being provided with annular flanges engaging said groove, and means for oscillating said arms to throw the crimping rolls into operative position, substantially as described. 35

In testimony that I claim the foregoing as my invention I affix my signature in presence of two witnesses.

F. CORTEZ WILSON.

Witnesses:

JESSIE WILSON,
MAUDE WILSON.