

J. BLUMER.  
CORRUGATING TOOL.

Patented July 18, 1893.

Fig. 1.

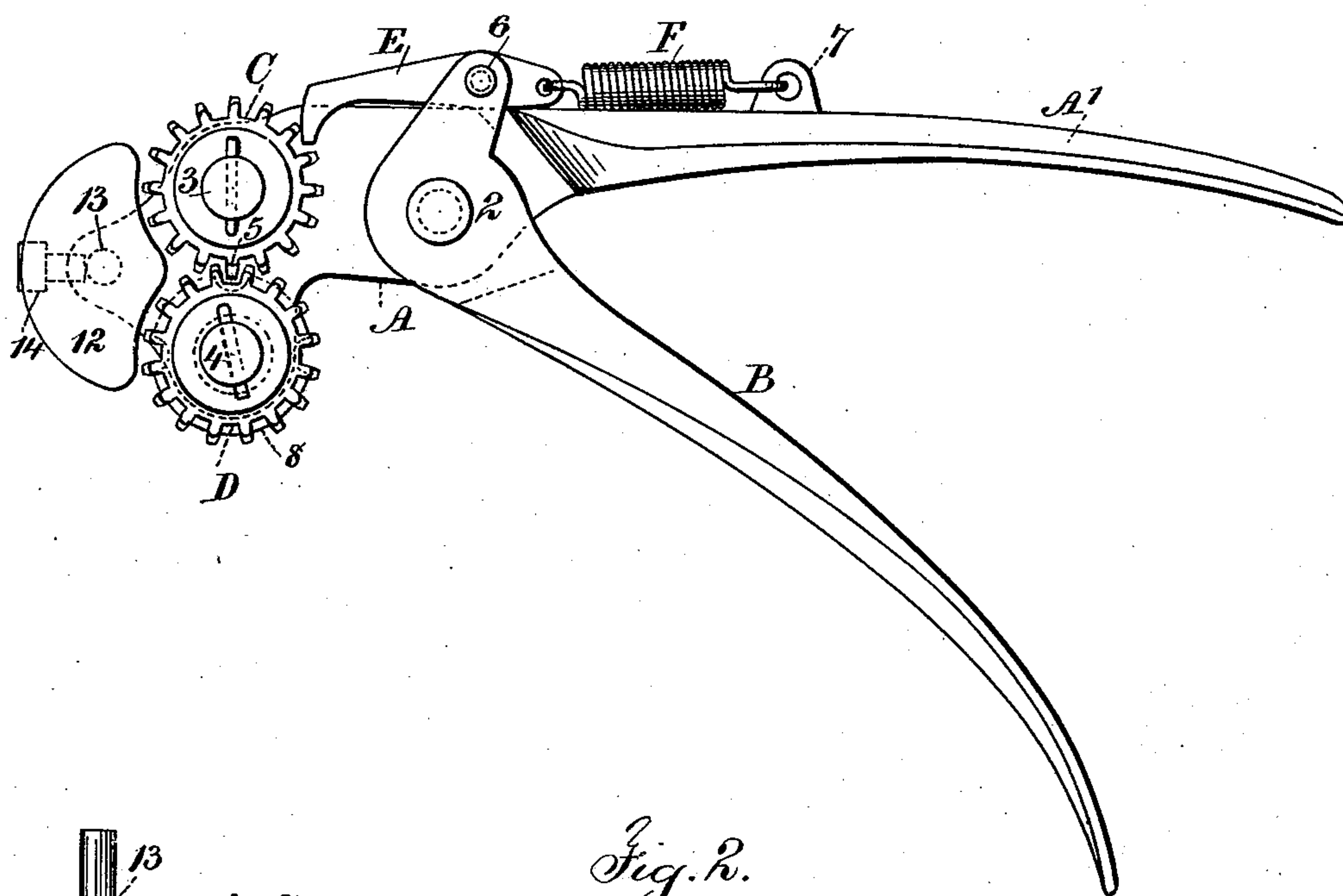


Fig. 2.

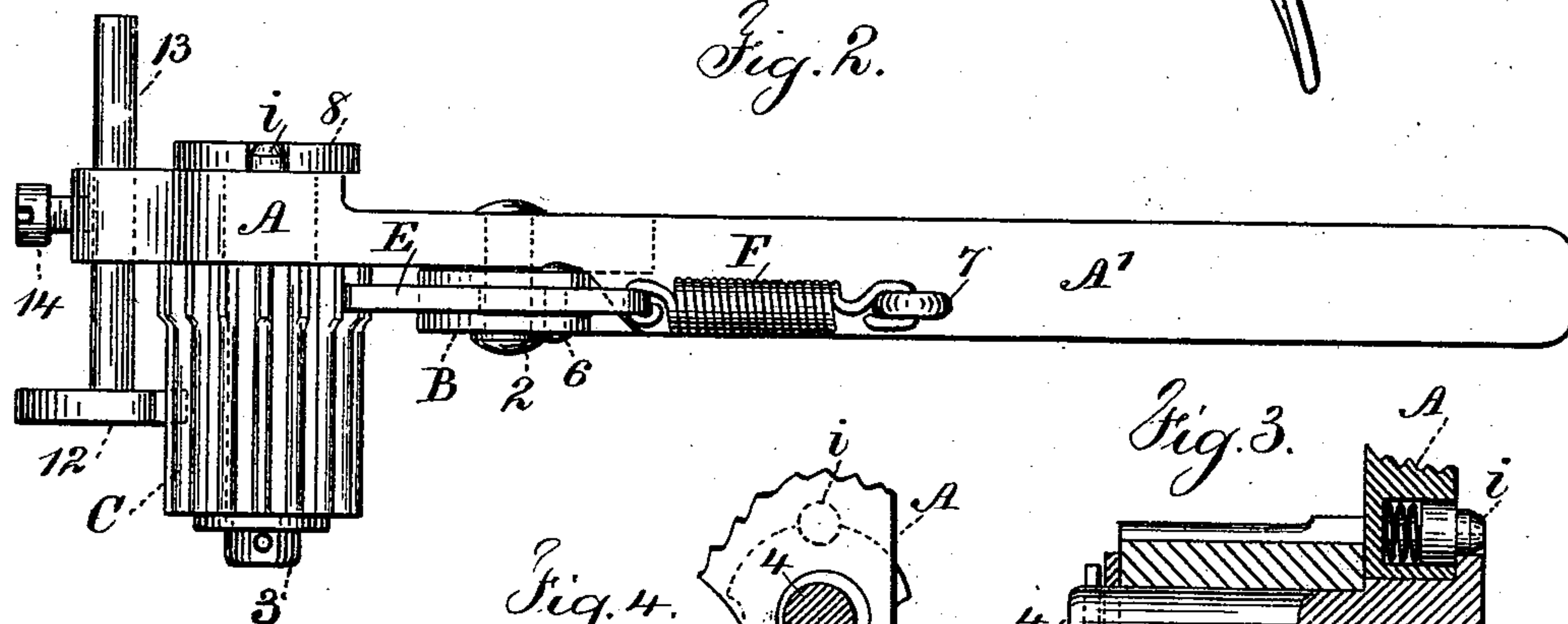


Fig. 3.

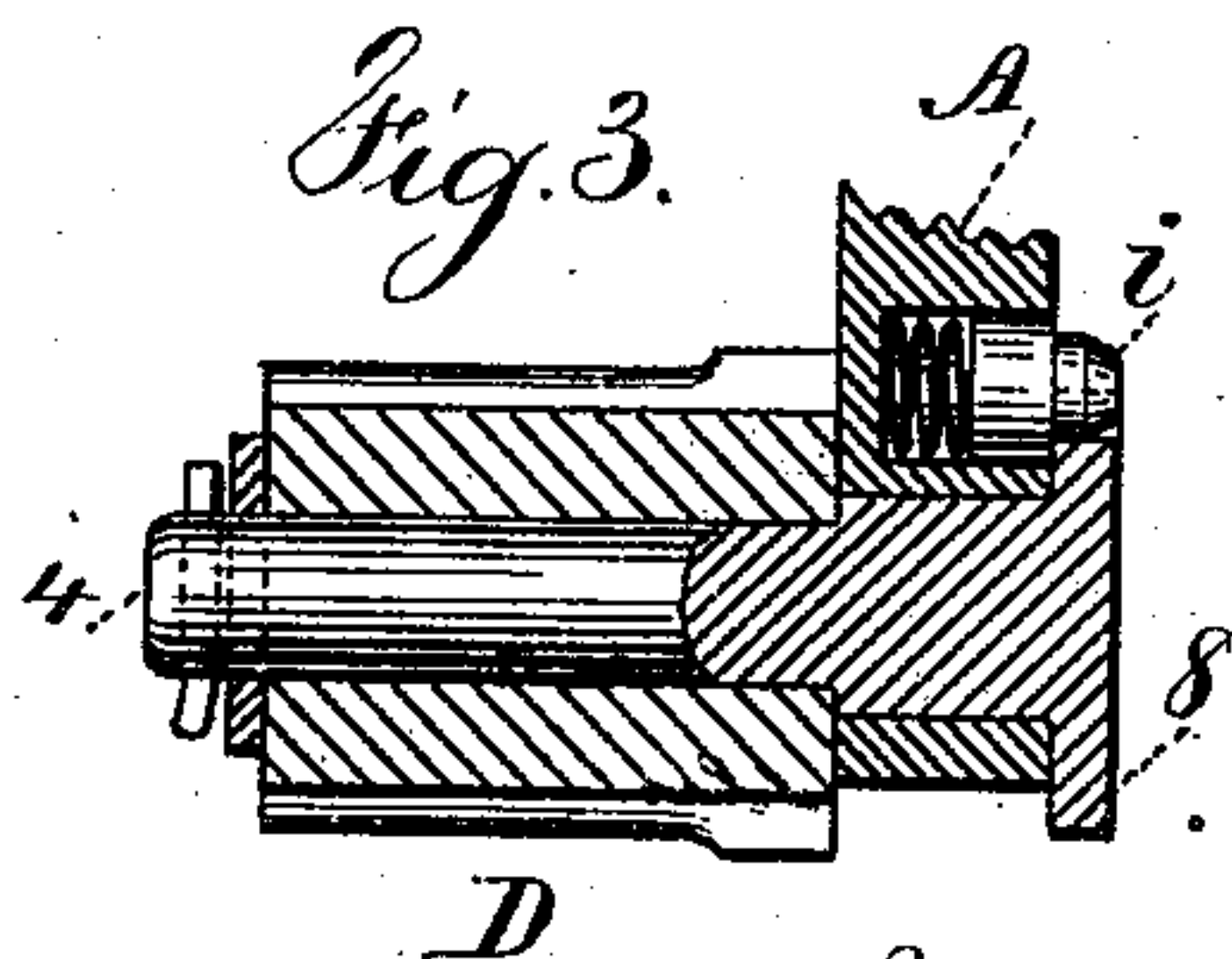
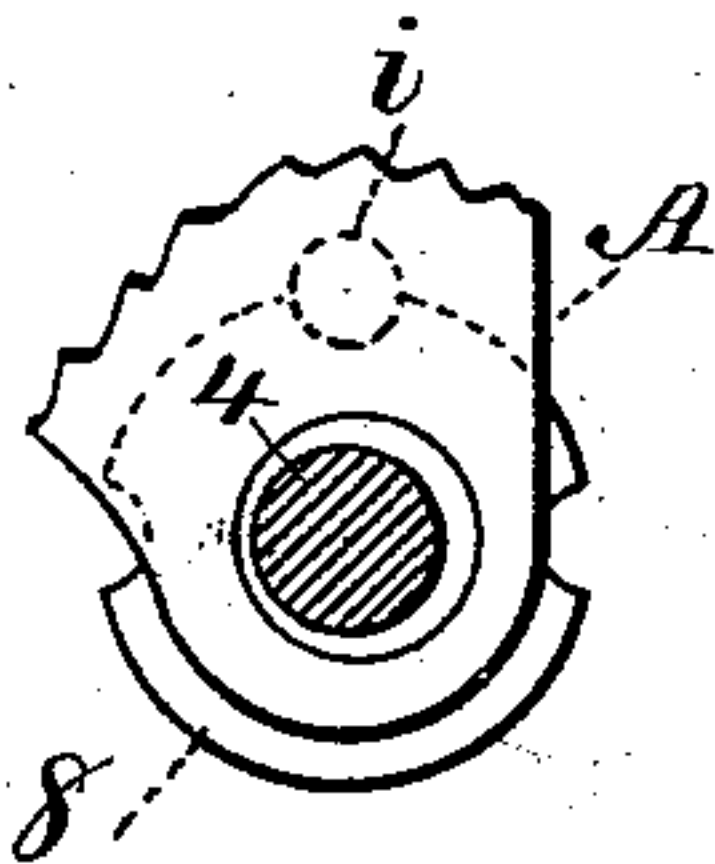


Fig. 4.



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# UNITED STATES PATENT OFFICE.

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## CORRUGATING-TOOL.

SPECIFICATION forming part of Letters Patent No. 501,644, dated July 18, 1893.

Application filed April 10, 1893. Serial No. 469,665. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES BLUMER, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented an Improvement in Corrugating-Tools, of which the following is a specification.

This tool is especially adapted to corrugating sheet metal, and it is available for corrugating the sheet iron at the end of stove-pipe joints, so as to adapt one end of such stove-pipe joint to slip into the plain end of the next joint, but this corrugating tool may be applied to the corrugating of hoop iron or any other material wherever available, and this tool is especially adapted to hand use, it being portable and easily applied wherever the material requires to be corrugated.

In the drawings, Figure 1 is an elevation of the corrugating instrument. Fig. 2 is a plan view, and Fig. 3 a detached sectional view of the arbor of one of the rolls, and Fig. 4 represents the eccentric bearing for one of the shafts.

The stock A is provided with a handle A', and upon the stock A the second handle B is pivoted at 2, and the corrugating rolls C and D are supported upon the arbors 3 and 4 that extend out from the stock A, and these corrugating rolls C and D work together similar to gears, and it is preferable to reduce the diameter of the gears except at the inner ends adjacent to the stock A, so that the outer portions of the rolls will perform the corrugating operation while the inner ends of such rolls act as teeth that remain in gear with each other without the risk of separating when the sheet of material to be corrugated is introduced between the teeth at the outer portions of such rolls; and I find it also advantageous to make one of the teeth sufficiently short, as indicated at 5, to allow the sheet metal to be introduced in a flat condition between the corrugating teeth when this short tooth is adjacent to the teeth of the other roll, thereby allowing for the insertion of the material to be corrugated with facility and while in a flat condition.

In order to rotate the rolls C and D and corrugate the sheet metal or other material that has been introduced between them, I

make use of the pawl E pivoted at 6 upon a right angled projection of the handle B, and this pawl 6 extends to the rear and is provided with an eye for the contractile spring F, the other end of which is connected with the stud 7, so that the spring F not only tends to throw the point of the pawl into the teeth of the upper corrugating roll, but such spring also tends to swing the handle B upon its pivot 2 and open the handles, and by closing the handles by the grasping action of the hand the pawl E is made to rotate the rolls C and D progressively and perform the corrugating action upon the sheet metal or other material introduced between such corrugating rolls.

It is advantageous to be able to set the corrugating rollers closer together or farther apart, and with this object in view the arbor 4 of the roller D is provided with an eccentric bearing in the stock A. Hence by the rotation of this arbor 4 upon its eccentric bearing, the roller D is brought nearer to or farther from the roller C, and I provide upon the arbor 4 a disk 8 which is notched in its periphery for the reception of the head of a spring pin *i* that is within the stock A, and the head of the spring pin passes into one of the notches in the disk 8. Hence by pressing in this spring pin *i* the disk 8 and the eccentric bearing and arbor 4 can be rotated in either one direction or the other, and when the roll D is at the proper proximity to the roll C the parts are held by the spring pin *i* passing out into one of the notches in the disk 8.

This tool is very convenient because it can be operated by hand and placed upon the material that is to be corrugated, and the corrugating action is very powerful because the rotation of the rolls is gradual and progressive by the action of the pawl.

It is advantageous to provide a gage 12 upon a rod 13 passing through the stock A and secured by a screw 14, so that the action of the tool can be regulated in crimping a greater or less width.

I claim as my invention—

1. The combination with the corrugating rolls, of arbors and a stock for supporting the same, lever handles connected with the stock



and a pawl operated by one of the lever handles for rotating the rolls progressively, substantially as set forth.

2. The combination with the corrugating rolls C and D, of the stock A, the handle A' extending out from the stock, the handle B pivoted at 2 upon the stock and having a projection, and the pawl E pivoted at 6 to said projection, and the spring F acting upon the pawl, substantially as set forth.

3. The combination with the corrugating rolls C and D, of the stock A, the handle A' extending out from the stock, the handle B pivoted at 2 upon the stock and having a projection, and the pawl E pivoted at 6 to said projection, and having a tail, a spring connected with the tail of the pawl and with a stud upon the handle A' so as to actuate the pawl and also to move the handle B, substantially as set forth.

4. The combination with the stock and the arbors 3 and 4 upon such stock, of handles and a pawl actuated by the handles for rotating the corrugating rolls, such corrugating rolls having teeth that are longer at the ends adjacent to the stock so as to gear together, and one of the teeth being reduced to allow

for the introduction of the material to be corrugated between the rolls, substantially as set forth.

5. The combination with the stock, the handles and a pawl acted upon by the moving handle, of corrugating rolls, a fixed arbor 3 for one of the rolls, the arbor 4 for the other roll provided with an eccentric bearing where- by the proximity of the rolls can be adjusted, and means for holding the eccentric bearing and arbor, substantially as set forth.

6. The combination with the stock, the handles and a pawl acted upon by the moving handle, of corrugating rolls, a fixed arbor 3 for one of the rolls, the arbor 4 for the other roll provided with an eccentric bearing where- by the proximity of the rolls can be adjusted, a notched disk upon the eccentric arbor, and a spring pin for holding the eccentric bearing and arbor after the proximity of the rolls has been adjusted, substantially as set forth.

Signed by me this 3d day of April, 1893.

JAMES BLUMER.

Witnesses:

GEO. T. PINCKNEY,  
A. M. OLIVER.