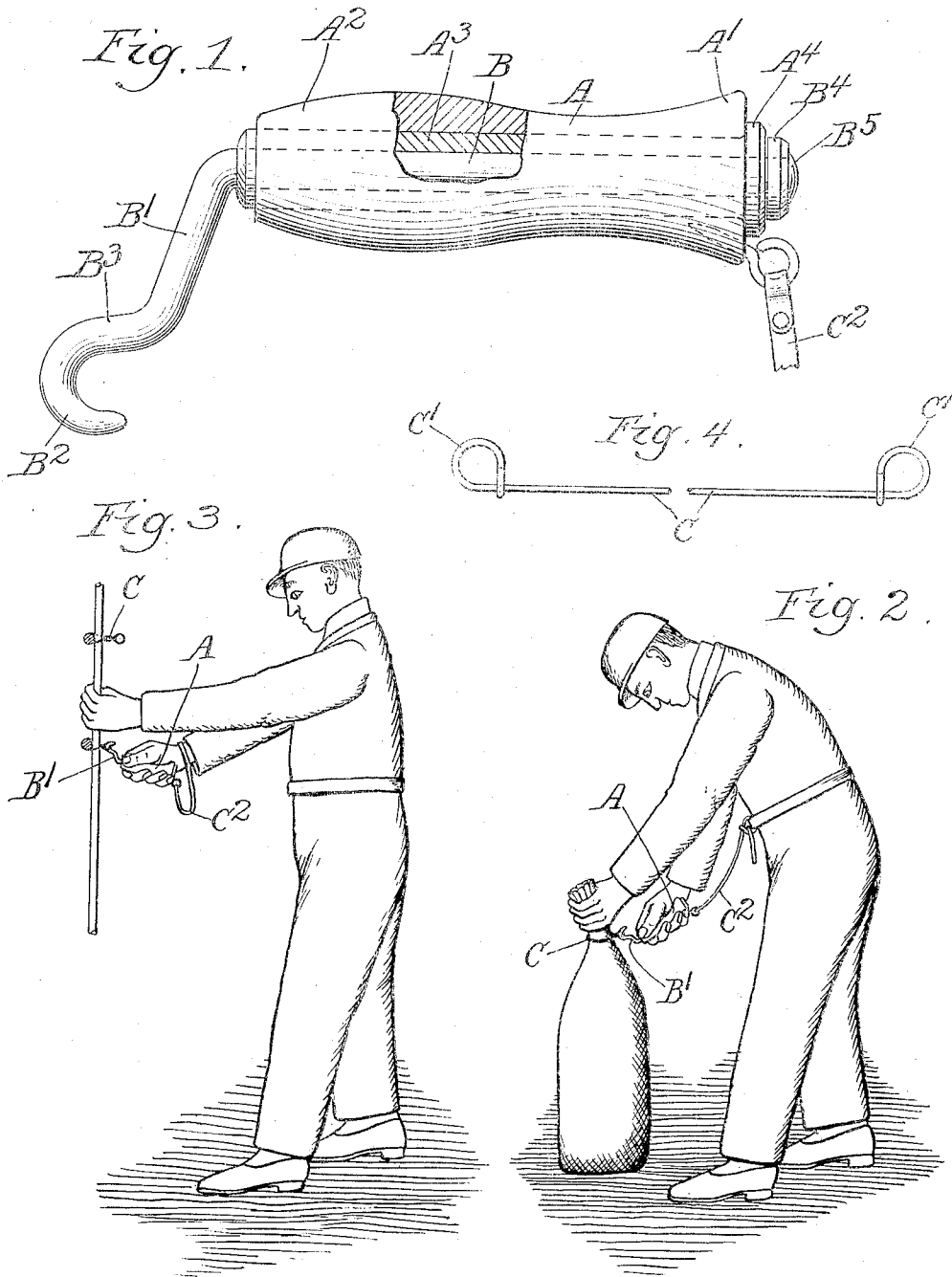


A. M. BATES.
 TOOL FOR TYING WIRE TIES.
 APPLICATION FILED DEC. 24, 1919.

1,365,649.

Patented Jan. 18, 1921.



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UNITED STATES PATENT OFFICE.

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TOOL FOR TYING WIRE TIES.

1,365,649.

Specification of Letters Patent.

Patented Jan. 18, 1921.

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To all whom it may concern:

Be it known that I, ADELMER M. BATES, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Tools for Tying Wire Ties, of which the following is a specification.

My invention relates to improvements in wiring tying tools and has for one object to provide a new and improved form of hand operated and hand controlled wire tying tool which will be light, durable, easy to manufacture and which can be carried in the pocket of the workman.

Another object is to provide a tool which can be operated anywhere where the workman can get one hand.

Another object is to provide a tool which is equally useful for tying bags or packages or for fastening together metal parts or for securing concrete reinforcements together.

My invention is illustrated more or less diagrammatically in the accompanying drawings wherein:

Figure 1 is a side elevation of the tool;

Fig. 2 is a diagrammatic view showing the operator tying a bag illustrating the way in which the tool can be fastened to the operator's belt;

Fig. 3 is a diagrammatic view showing the way the operator would use the device for fastening concrete reinforcements together showing the tool fastened to the wrist.

Fig. 4 is a tie.

A is a wood or fiber handle. It is shaped the way handles for tools are ordinarily shaped when to be held in one hand, except that it is reversed and the large or thickened part A¹ is expected to come down at the heel of the hand and the thin and tapered part A² is expected to be held between the thumb and finger as shown in the drawings. A³ is a metallic sleeve extending clear through the handle. It is driven in through the large end and provided with a collar A⁴ as indicated to prevent further longitudinal movement of the sleeve.

B is a shank mounted for rotation in the collar A⁴. At the upper end it has an off set crank arm B¹ which carries at its end a hook B², the bight B³ of which points away from the handle along a line substantially parallel with the handle. B⁴ is a washer on the

other end of the shank adapted to bear against the collar A⁴. The shank is upset at B⁵ upon the washer so that the shank cannot be withdrawn.

C is a metallic bag tie. It has at either end, a loop C¹. In operation, one of these loops will be hooked over the hook on the end of the shank. The operator meanwhile holds the shank with the right hand; with the left hand, he will bend the tie around the puckered neck of the bag or around any objects he expects to fasten together as for instance, a package or a plurality of concrete reinforcement members. The operator will then wabble the handle. This will result in rotating the hook and twisting the tie, and can be done without the operator exerting any tension on the base of the handle itself. In other words, the only tension that he exerts, is the tension caused by his pulling on the handle against the tie. In order that the tool may not be lost, he may have a thong C² engaging an eyelet in the handle and this thong may be fastened to his belt or to his wrist.

Experience has shown that in cement work, this tool is of great utility, particularly because the operator can hold on with one hand, can bend the tie around the members he wishes to fasten together with the other hand, meanwhile allowing the tool to hang from his wrist, then when he gets the two eyelets together, he takes hold of the tool with his hand, puts the hook through the two eyelets, pulls on them and rotates the handle to twist the tie. He can do this at the limit of his reach in a place where he could not possibly use both hands.

It will be evident that while I have shown in my drawings an operative device, and means for carrying out the practical process, still many changes might be made in size, shape, and the arrangement of the device, and application of the process might be varied without departing materially from the spirit of my invention, and I wish therefore, that my drawings be regarded as in a sense diagrammatic.

In the particular form of my device shown, the crank-like part has a shank which is rotatably mounted in the handle. Of course, a great variety of arrangements could be made for the same general purpose in which such shank might be said to be technically mounted within the handle.

wish to have the language I have just used understood in a broad sense so as to indicate such mounting of the shank like part with respect to the handle, as to give the desired result.

I claim—

1. A wire twisting tool comprising a handle adapted to be held in the palm of the hand, a sleeve extending therethrough flanged at one end to engage the enlarged handle end, a shank mounted for rotation in the sleeve, an inclined crank carried thereby and terminating in a wire engaging hook end.

2. A wire twisting tool comprising a handle adapted to be held in the palm of the hand, a sleeve extending therethrough flanged at one end to engage the enlarged handle end, a shank mounted for rotation in the sleeve, a crank carried thereby and terminating in a wire engaging hook end.

3. A wire twisting tool comprising a handle adapted to be held in the palm of the hand, a sleeve extending therethrough flanged at one end to engage the enlarged handle end, a shank mounted for rotation in the sleeve, an inclined crank carried thereby and terminating in a wire engaging hook end, a washer on the end of the shank engaging the flanged end of the sleeve, the shank being upset.

4. A wire twisting tool comprising a handle, and a crank-like part having a shank rotatably mounted in the handle, a crank arm laterally projecting therefrom, and a wire engaging hook on the crank arm.

5. A wire twisting tool comprising a handle, and a crank-like part having a shank rotatably mounted in the handle, a crank arm laterally projecting therefrom, and a

wire engaging hook on the crank arm, and means for preventing longitudinal movement of the shank on the handle.

6. A wire twisting tool comprising a handle, and a crank-like part having a shank rotatably mounted in the handle, a crank arm laterally projecting therefrom, and a wire engaging hook on the crank arm, and means for fastening the handle to the wrist of the operator.

7. A wire twisting tool comprising a handle, and a crank-like part having a shank rotatably mounted in the handle, a crank arm laterally projecting therefrom, and a wire engaging hook on the crank arm, and means for preventing longitudinal movement of the shank on the handle, and means for fastening the handle to the wrist of the operator.

8. A wire twisting tool comprising a handle enlarged at one end and reduced at the other, and a crank-like part having a shank rotatably mounted in the handle, a crank arm projecting from the shank at the reduced end of the handle, and a wire engaging hook on the end of the arm.

9. A wire twisting tool comprising a handle enlarged at one end and reduced at the other, and a crank-like part having a shank rotatably mounted in the handle, a crank arm projecting from the shank at the reduced end of the handle, and a wire engaging hook on the end of the arm, and a sleeve in the handle and within which the shank is mounted.

Signed at Chicago, county of Cook and State of Illinois, this 8th day of December, 1919.

ADELMER M BATES.