(No Model.)

2 Sheets—Sheet 1.

J. A. BARRETT.

MACHINE FOR FOLDING TAPE.

No. 482,153. Patented Sept. 6, 1892.

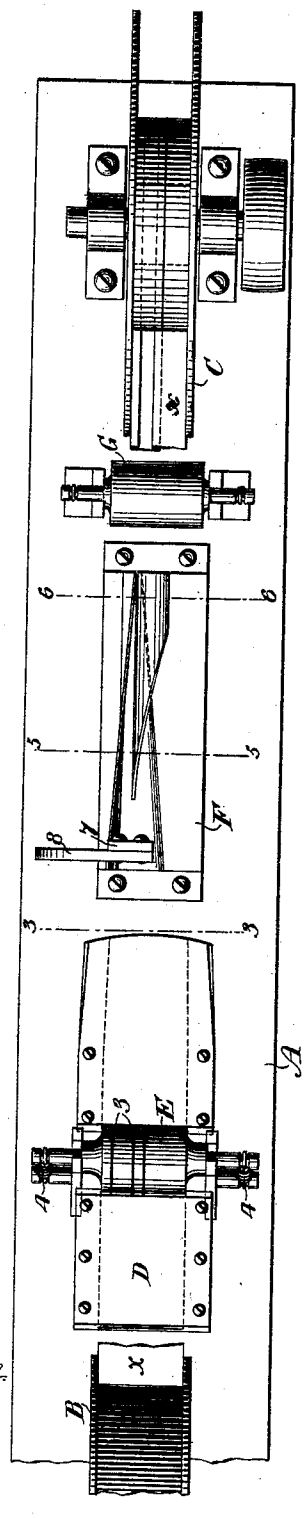
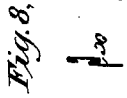


Fig. 1.

Fig. 8,



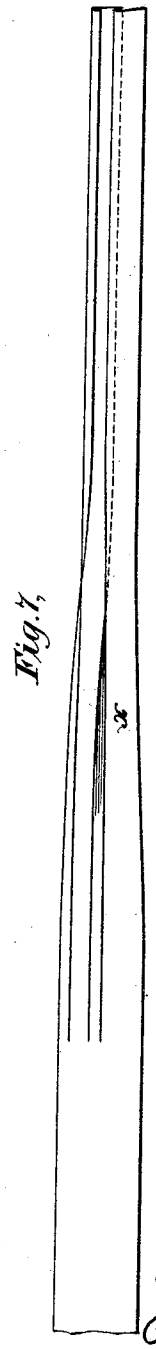


Fig. 7,

Fig. 4,

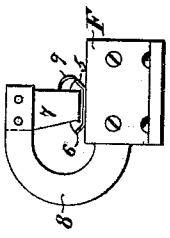


Fig. 3,

WITNESSES:

Edward Thorpe.

C. J. Sawyer

INVENTOR

John A. Barrett

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ATTORNEYS.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

J. A. BARRETT.

MACHINE FOR FOLDING TAPE.

No. 482,153. Patented Sept. 6, 1892.

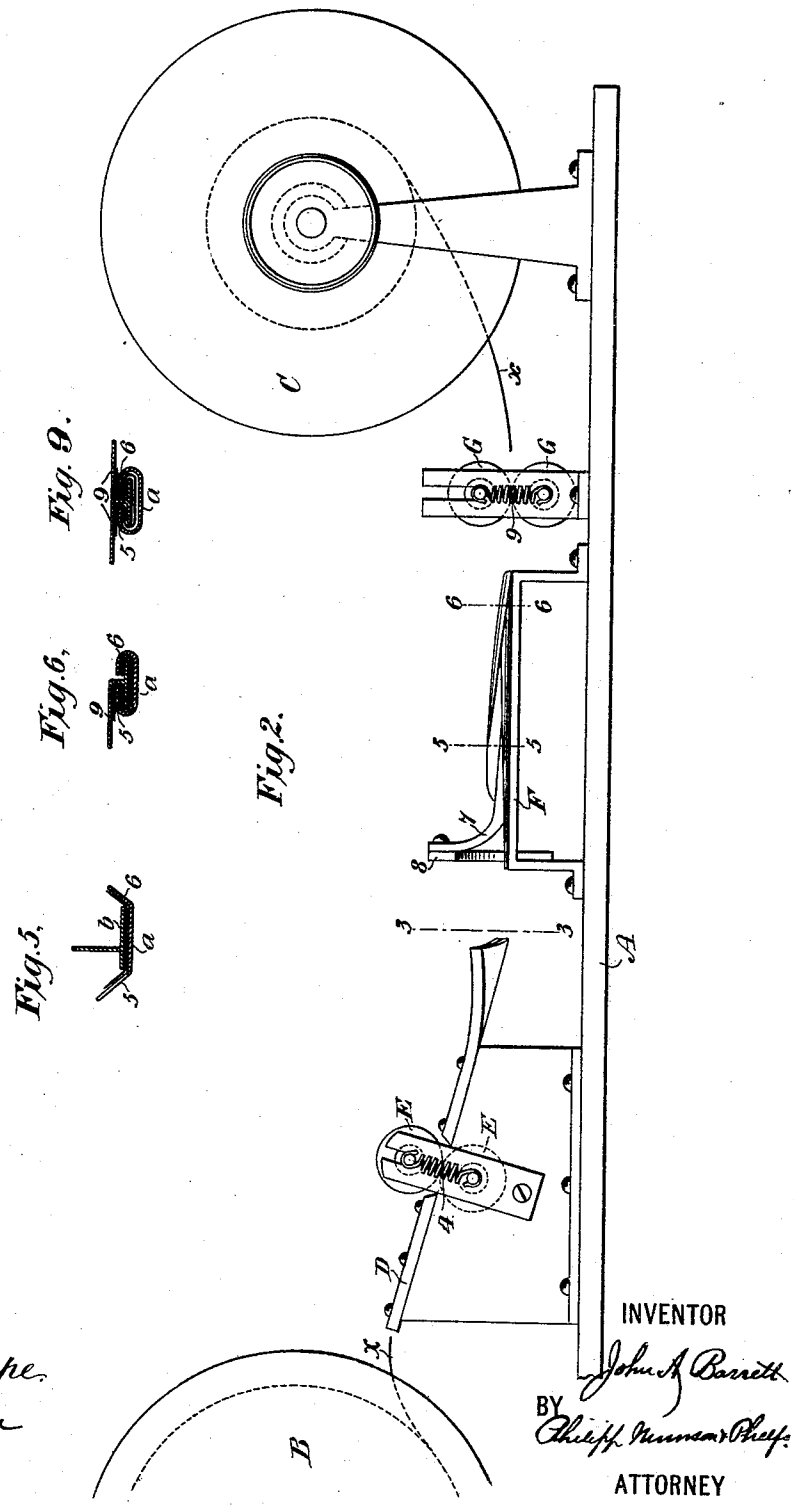

Fig. 2.

Fig. 3.

Fig. 6.

Fig. 5.

WITNESSES:

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INVENTOR

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UNITED STATES PATENT OFFICE.

JOHN A. BARRETT, OF BROOKLYN, NEW YORK, ASSIGNOR TO THE STANDARD UNDERGROUND CABLE COMPANY, OF PITTSBURG, PENNSYLVANIA.

MACHINE FOR FOLDING TAPE.

SPECIFICATION forming part of Letters Patent No. 482,153, dated September 6, 1892.

Application filed April 30, 1892. Serial No. 431,236. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. BARRETT, a citizen of the United States, residing at Brooklyn, county of Kings, and State of New York, have invented certain new and useful Improvements in Machines for Folding Tape, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

The object of the present invention is to provide a simple and efficient machine for folding tape of paper or similar material, so as to form one or more tucks extending longitudinally of the strip or a single tuck and a fold upon one side.

In an application filed by me January 8, 1891, Serial No. 377,087, I have described and claimed a wrapping for electric conductors, consisting of a flexible strip having a longitudinal tuck and a fold parallel thereto, and the present invention has been made in connection with the construction of a machine for forming this wrapping; but it will be understood that the machine may be applied to other materials than paper and to forming similar strips independently of the use to which they are to be applied.

For a full understanding of my invention a detailed description of the machine embodying the same in its preferred form will now be given, in connection with the accompanying drawings, forming part of this specification, and the features of construction forming my invention specifically pointed out in the claims.

Referring to said drawings, Figure 1 is a plan view of the machine. Fig. 2 is a side elevation. Fig. 3 is an end view of the guide looking to the left on line 3 of Figs. 1 and 2. Fig. 4 is a rear end view of the folder looking to the right on the same line. Figs. 5 and 6 are sections on the lines 5 and 6, respectively, of Figs. 1 and 2 looking to the left. Fig. 7 is a plan view of the strip, showing the different steps in forming the same, the parts of this view corresponding in position with Fig. 1. Fig. 8 is an end view of the completed strip; and Fig. 9 is a view similar to Fig. 6, showing a modified form of folder.

Referring to said drawings, A is the base-plate of the machine, upon which the parts are mounted.

B is the reel from which the strip x to be folded is drawn, and C the reel upon which the folded strip is wound, the reel C being driven to draw the strip from the roll B through the folding devices by pulley 1 or other suitable means. From the reel B the strip x is drawn through a guide D, mounted upon the base-plate A and provided with a longitudinal slot 2, through which the strip passes. As the strip x passes through the slotted guide D it is preferably marked upon the lines on which the folds are to be made, so as to cause it to fold more readily and with certainty on these lines by a marker consisting of two rolls E, one of which is provided with marking-ribs 3 and the other with grooves, as usual in such constructions, the rolls E being spring-pressed by means of springs 4, so as to exert a yielding pressure upon the paper. The guide D is gradually bent upward at the edges in advance of the marking-rolls E, so that the strip is curved upward as it leaves the guide, and from the guide D the strip passes to the folder F, the guide and folder being preferably separated, as shown, when paper is to be folded, so that the paper may be folded on a long curve. With cloth and similar materials, however, the guide and folder must be continuous, and it is obvious, also, that the guide D may be omitted and the paper or cloth be led directly to the folder F, although the guide is preferably used to aid the folder and secure a gradual folding of the strip.

The folder F consists of an external guide a, over which the strip of paper passes from the guide D, this guide being provided with upwardly-turned edges forming wings 5 6, which are gradually curved inward from the position shown in Fig. 5 to that shown in Fig. 6. Above the guide a and between the wings 5 6 is mounted an internal guide b, between which and the guide a the paper passes, this internal guide b being supported centrally of the guide a by means of a depending arm 7 on an overhanging bracket 8. As shown in Fig. 6, the wings 5 6 are bent inwardly over the guide b, so as to form inward folds of the

paper as it passes between the external guide *a*, wings 5 6, and the internal guide *b*, and the internal guide *b* is provided with a wing 9, curved outward gradually from a vertical to a horizontal position over the wing 5, so as to form a second outward fold between the wings 9 and 5 as the paper passes onward between them, this inward and outward fold forming the tuck.

Between the folder F and the reel C is mounted a pair of pressing-rolls G, preferably spring-pressed by means of springs 10 or in any other suitable manner, and the strip *x* is pressed thereby, so as to press the tuck and fold it down flat as the strip passes between the rolls.

It is evident that by my invention I provide a very simple machine for folding strips of paper or other material in the form described, and it will be found that the machine is capable of operating at very high rates of speed.

In the construction above described a longitudinal tuck and side fold are formed. It is evident, however, that another curved wing similar to wing 9 may be placed on the opsite side of guide *b*, extending over wing 6, and two tucks thus be formed, the strip being made of the required width and the marking-rolls E changed accordingly by adding another marking-rib 3. Such a folder is shown in section in Fig. 9. It is evident, also, that if the side fold be not desired, but only the longitudinal tuck, the wing 6 may be omitted in the construction shown in Figs. 1 to 6.

What I claim is—

1. The combination, with the external guide *a*, having one or more inwardly-curved wings 5 6, of internal guide *b*, over which said wings are curved, having one or more wings 9, curved outwardly over wings 5 6, substantially as described.

2. The combination, with external guide *a*, having one or more inwardly-curved wings 5 6, and internal guide *b*, over which said wings are curved, having one or more wings 9, curved outwardly over said wings 5 6, of guide D, having curved slot 2, through which the strip is led to the guides *a b*, substantially as described.

3. The combination, with the external guide *a*, having one or more inwardly-curved wings 5 6, and internal guide *b*, over which said wings are curved, having one or more wings 9, curved outwardly over said wings 5 6, of guide D, having curved slot 2, through which the strip is led to the guides *a b*, and marking-rolls E, by which the fold-lines are marked, substantially as described.

4. The combination, with the external guide *a*, having one or more inwardly-curved wings 5 6, and internal guide *b*, over which said wings are curved, having one or more wings 9, curved outwardly over said wings 5 6, of guide D, having curved slot 2, through which the strip is led to the guides *a b*, marking-rolls E, by which the fold-lines are marked, and pressing-rolls G, substantially as described.

5. The combination, with reel B for the unfolded strip and driven winding-reel C, of guide D, having curved slot 2, marking-rolls E, by which the fold-lines are marked, external guide *a*, having one or more inwardly-curved wings 5 6, internal guide *b*, over which said wings are curved, having one or more wings 9, curved outwardly over wings 5 6, and pressing-rolls G between the guides and winding-reel, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JOHN A. BARRETT.

Witnesses:
THOS. F. KEHOE,
C. J. SAWYER.