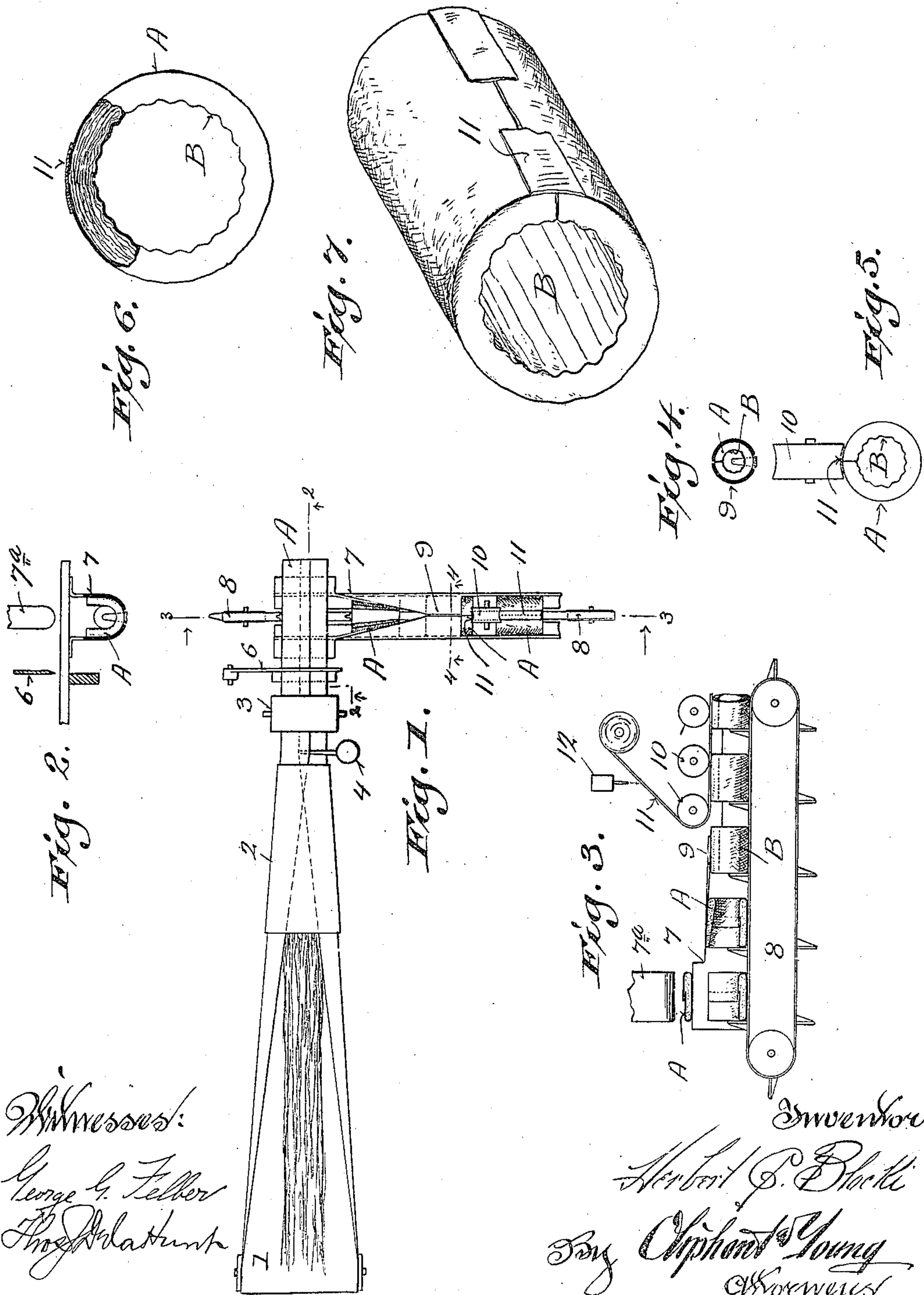


H. J. BLOCKI.  
TUBULAR WRAPPER.  
APPLICATION FILED JUNE 30, 1909.

962,614.

Patented June 28, 1910.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

HERBERT J. BLOCKI, OF SHEBOYGAN, WISCONSIN.

## TUBULAR WRAPPER.

962,614.

Specification of Letters Patent. Patented June 28, 1910.

Application filed June 30, 1909. Serial No. 505,136.

*To all whom it may concern:*

Be it known that I, HERBERT J. BLOCKI, a citizen of the United States, and resident of Sheboygan, in the county of Sheboygan and State of Wisconsin, have invented certain new and useful Improvements in Tubular Wrappers; and I do hereby declare that the following is a full, clear, and exact description thereof.

The object of my invention is to provide a simple, economical and effective tubular wrapper, the invention consisting in certain peculiarities of construction and combination of parts to be hereinafter fully set forth with reference to the accompanying drawings and subsequently claimed.

In the drawings: Figure 1 represents a plan view in diagram of a machine employed in manufacturing wrappers embodying the features of my invention, there being a series of such wrappers shown passing through the machine in their various stages of completion; Fig. 2, a detail section view of the machine, the section being indicated by line 2—2 of Fig. 1; Fig. 3, a cross-section of same, on the line 3—3 of Fig. 1; Fig. 4, a detail cross-section of the former, on the line 4—4 of Fig. 1; Fig. 5, a detail end view of a tubular wrapper and strip roller; Fig. 6, an enlarged end view of a completed tubular wrapper with the jacket parts broken away at the meeting edges thereof, illustrating the interlocking or meshing of the ends of the wrapper filling material, and Fig. 7, a perspective view of a completed tubular wrapper, with a portion of the sealing broken away to more clearly illustrate the manner of forming the longitudinal seam or joint.

Referring by characters to the drawings, 1 indicates a paper enveloping strip, which strip is fed from a roll, being passed through a suitable forming tube 2 and from thence to a pair of driven feed-rollers 3. The paper-enveloping strip together with a suitable filling such as grass, excelsior or the like, is drawn through the forming-tube, by means of the feed-rollers, whereby the edges of said enveloping-strip are lapped and folded upon the filling, there being a suitable glue-reservoir 4, from which a thin layer of glue is deposited between the folded edges, as shown in Fig. 1. The feed-rollers 3 compress and cause adhesion of the lapped edges of the enveloping-strip, whereby a flat pad A is formed, which pad is delivered by

said feed-rollers under a knife 6, that severs the same into desired lengths. The above described mechanism forms no part of my invention, except so far as it is embodied in the method of forming my improved wrapper, the said mechanism being in general use in the manufacture of packing-pads. The flat severed pad-lengths A are deposited upon a suitable shell-like former 7, which former is disposed at a right-angle to the line of travel of the delivered pad. Thereafter the pad is forced into the shell-like former, by means of a vertically reciprocative mandrel 7<sup>a</sup>, the said pad-length being thereby doubled into a U-shape formation, as shown in Fig. 2. The U-shaped pad is next engaged by spurs of an endless carrier 8, which spurs project through a longitudinal slot in the bottom of the former 7, the spurs being arranged to draw the pad through said former. The sides of the aforesaid former from its mouth are gradually bent inward and brought together in the shape of a tubular section 9, and thus as each pad is drawn through the former said pad is gradually contracted into a circular shape by the tube-section 9, as shown in Fig. 4. As the pad is formed into a tube, it will be observed that the inner wall B of the enveloping-strip will be crinkled or corrugated, as shown, owing to compression due to the smaller diameter of the inner wall of said tube. When the meeting-edges of the tubular wrapper are brought together by the section 9 of the "former," the filling material, which slightly projects from said meeting-edges, is intermeshed at the joint as shown in Fig. 6, this intermeshing being due to the meeting-edges of said wrapper being forced together by the "former".

In constructing the tubular wrappers, it is preferable and economical to use marsh grass, which material will readily intermesh at the wrapper-joint to insure uniform and proper thickness of the filling material at this point. After the tubular wrapper has passed through the section 9 of the "former" it is carried under a series of rollers 10, which rollers serve as guides for a paper strip 11, that is fed from a suitable roll, the strip being interposed between the wrappers and rollers 10, whereby it is impressed upon said wrappers, as shown in Fig. 3. Prior to the strip being impressed upon the wrappers, it is treated with a glue solution fed from a glue-reservoir 12, and thus as the



said strip passes under the first of the series of rollers 10, its glue-side is pressed firmly upon the vertically disposed joints of the tubular wrappers as the same pass slowly under the first roll, it being understood that the rollers 10 and endless carrier are arranged to travel at the same speed, whereby said tubular wrappers are fed slowly forward for a period of time sufficient to permit the strip 11 to thoroughly adhere to the longitudinal joint of said wrapper. As the tubular wrappers are delivered from the endless carrier connected by the adhesive strips 11, they may be severed, by a suitable knife provided for this purpose, or the strip may be torn crosswise at the ends of the wrappers, in which case a series of perforations may be provided across the face of the strip 11 to facilitate separation of the wrappers.

Fig. 7 of the drawings, illustrates a completed tubular wrapper, the ends being joined by a section of a strip 11, and as shown, the inner wall B is crinkled or corrugated in such manner that it forms a pliable cushioned wall or contacting surface, which surface is presented to the bottle or other article about which the wrapper is fitted.

It should be understood that the tubular wrapper constructed as previously described, may be of varying diameter and height, the diameter being dependent upon the length of the flat pad, while the height of said tubular wrapper is gaged by the width of said flat pad.

By utilizing an assembled machine as described, it will be seen that it is possible to employ an enveloping strip and filling material having continuous travel, whereby a flat pad is first formed and is cut into lengths and thereafter converted into tubular wrappers by a series of progressive steps.

I claim:

1. A tubular wrapper comprising a one-piece enveloping strip folded upon itself to form inner and outer walls of equal area, the edges of the enveloping strip being overlapped and secured transversely of the wrapper length, a pliable filling between the inner and outer walls, a longitudinal butt-joint between the ends of the filled enveloping strip whereby the inner wall of said enveloping strip is crinkled to form a cushion, and a strip securing the longitudinal butt-joint upon the exterior wall of the aforesaid enveloping strip.

2. A tubular wrapper comprising a closed end double walled filled pad section having open longitudinal edges, the open edges being abutted to form a longitudinal joint, and a securing strip overlapping the longitudinal joint.

In testimony that I claim the foregoing I have hereunto set my hand at Milwaukee, in the county of Milwaukee and State of Wisconsin in the presence of two witnesses.

HERBERT J. BLOCKI.

Witnesses:

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GEORGE G. FELBER.