

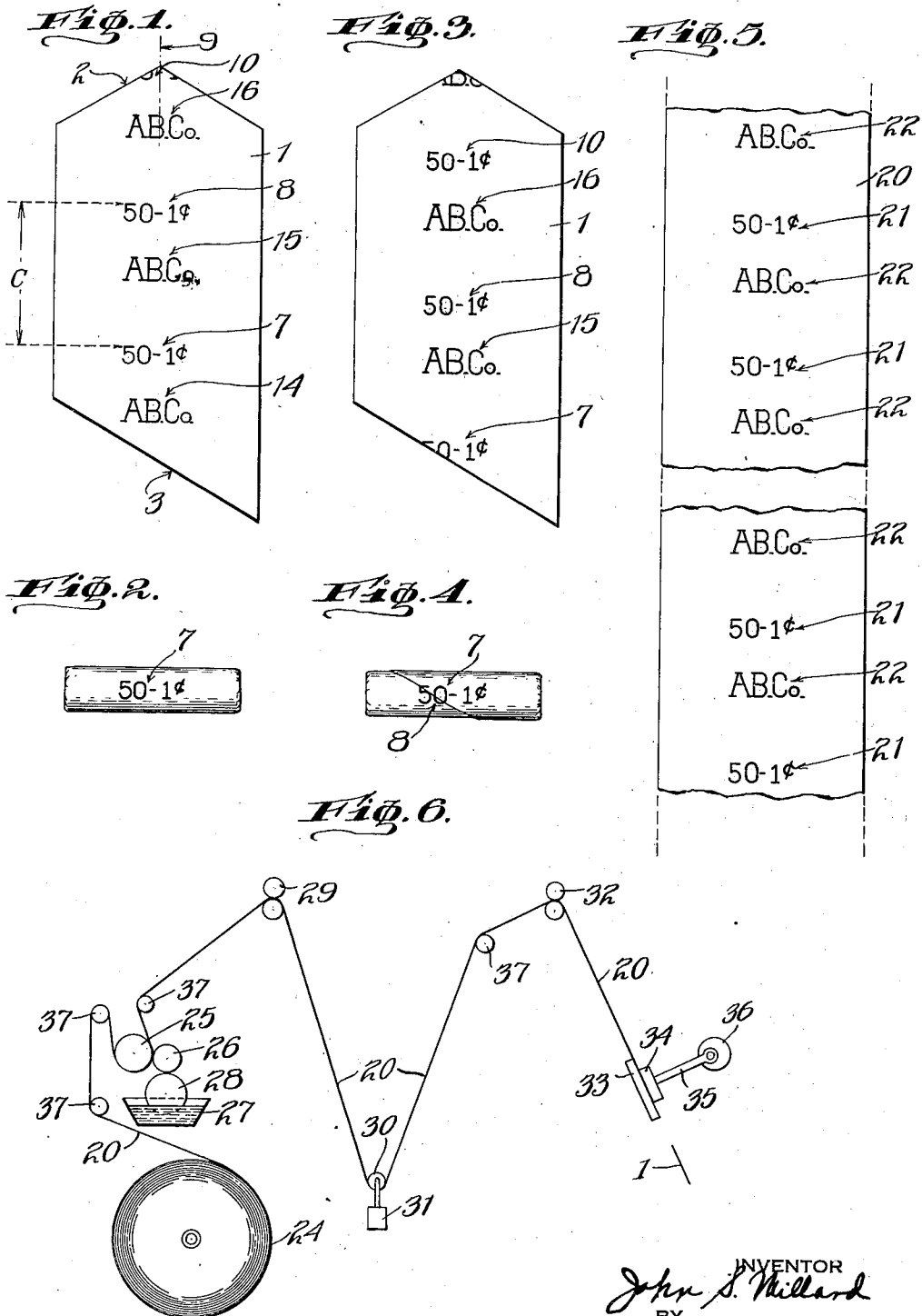
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J. S. MILLARD

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COIN WRAPPER

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INVENTOR  
John S. Millard  
BY  
Jeffrey, Turnbull & Eggleston  
ATTORNEYS

## UNITED STATES PATENT OFFICE

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## COIN WRAPPER

John S. Millard, Brooklyn, N. Y., assignor to  
Automatic Coinwrapping Machine Corporation,  
New York, N. Y., a corporation of New York

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My invention relates to the wrappers used in making up rolls of coins, metal tokens, and analogously thin articles. For brevity however I shall refer hereinafter only to "coin" and "coins," it being understood that both in the description and the claims hereafter those words include not only monetary coins but also all other articles that can be wrapped substantially similarly.

Frequently notices of various kinds are printed on the outside of the wrappers of such rolls, such as the value of the contents of the roll, the denomination of the coins, the name of the bank or other source of the roll, an advertisement, etc.; also it has been proposed to provide such wrappers with one or more holes to permit inspection of the contents of the rolls without opening the package, or to expose some one or more items printed elsewhere on the wrapper; I herein use the term "marking" as including all such means for conveying information whether in the form of holes, printed matter or what not.

Heretofore it has been necessary to construct the wrappers rather carefully in order that such markings or some of them may not, for example, be bisected by the outside end of the wrapper and thus appear only in part, or otherwise be misplaced on the wrapper so as to be more or less ineffective. My invention eliminates this careful work and accordingly reduces the cost of the wrappers. To this end my invention provides a novel form of flexible strip (usually paper) from which wrappers of proper length may be cut with the desired markings already on them, and also a novel form of wrapper including markings; it provides also a novel and cheaper method of producing wrappers which will display complete markings, namely, a method which consists in producing markings at certain places on the wrapper material while the latter is in the form of long strips and then cutting the strips into wrapper-lengths without reference or attention to the locations of the markings.

An important feature of the invention consists in spacing like adjacent markings apart, lengthwise of the wrappers, a distance equal to the circumference of the roll. I have discovered that with this construction the careful work in placing the markings can be eliminated. More than one such set of markings may be provided on each wrapper and strip if desired.

The accompanying drawings illustrate my invention applied to wrappers bearing printed markings. Its application to wrappings bearing other forms of markings, e. g. holes to permit inspection of the contents of the roll, will be under-

stood therefrom. In the drawing, Fig. 1 is an elevation of a wrapper embodying my invention, showing that face of the same which appears at the outside of the roll. Fig. 2 is an elevation of a roll of pennies with the wrapper of Fig. 1. Fig. 3 is similar to Fig. 1 but illustrates another placement of the markings, such as may occur due to the accidents of manufacture. Fig. 4 is an elevation of a roll of pennies with the wrapper of Fig. 3. Fig. 5 is an elevation of a web or strip of wrapper material of my invention from which wrappers of suitable length may be cut. Fig. 6 is a diagrammatic elevation of a machine for making wrappers in accordance with my invention.

As heretofore, the wrapper sheet is made of some suitable thin flexible material, usually a heavy paper. Externally the wrapper sheet may have any one of many shapes. For example, it may have the well-known shape of the sheet 1 illustrated in Figs. 1 and 3 which is peaked at 2 at one end for ease of beginning the rolling around a lot or stack of coins, and is cut on the bias at the opposite end 3 to enable the sheet or wrapper to be drawn tightly at the finish. In accordance with my invention I provide the sheet 1 with two like denominational markings 7 and 8; that is to say, two markings which are identical in all respects and which (in the present instance) serve to indicate that the roll contains fifty pennies. These markings 7 and 8 may be produced by, for example, punching holes in the paper sheet; as before indicated I usually produce them by printing, on the sheet. For the present purposes they can be regarded as representative of the whole class of markings that may be borne by a wrapper, however produced and for conveying information of any kind. Also these two markings 7 and 8 are similarly placed with respect to the line of rolling 9 of the wrapper, i. e. the line along which the center of the lot or stack of coins rolls as the wrapper is wrapped around the lot or stack; in the case of wrappers which have parallel side edges as is the case of the wrappers illustrated in the drawing, these two markings 7 and 8 are similarly spaced from one edge of the wrapper. Furthermore, all like parts of the two markings 7 and 8 are spaced apart a distance equal to the circumference of the completed roll. For example, the top end of the staff of the numeral "5" of the marking 7 is spaced from the top end of the staff of the numeral "5" of the marking 8 a distance C substantially equal to the circumference of the finished roll of Fig. 2. Again, the lower end of the "0" of the marking 7 is

spaced a distance C from the bottom of the "0" of the marking 8. In brief (to repeat), all like parts of the two markings 7 and 8 are spaced apart a distance substantially equal to the circumference of the completed roll, Fig. 2. It will be understood that the circumferential distance C varies with the circumference of the coin, for example being greater for quarter-dollars than for silver dimes. Also it varies somewhat with the number of times the wrapper is rolled around the coin stack and with the thickness of the sheet. As shown in Fig. 4, the distance is almost or quite exactly equal to the outer circumference of the wrapped rolls, and can be obtained exactly by marking the position of the extreme end 3 of the wrapper on the next layer inside it; or it can be obtained by thrusting a pin radially into the wrapper of a roll near the outer end of the wrapper; the distance desired is the distance between the pin holes on the two outer layers of the wrapper. In placing the group of two markings 7 and 8 on the sheet, it is only necessary that at least one of these be placed close enough to the outer end 3 of the wrapper to appear on the outside of the completed roll. This placement can be secured by sufficiently careful work, but in order to render careful work to this end unnecessary, I usually provide for making such markings as 7 and 8 at every distance C from another one of these markings; that is to say, I make as many of these markings on the sheet as the length of the sheet permits, and accordingly only a part of such a marking may actually appear at one or both ends of the sheet, as illustrated for example at 10 in Fig. 1. When the wrapper of Fig. 1 is rolled around a lot or stack of pennies, beginning with the end 2, the marking 7 appears on the outside of the roll as illustrated in Fig. 2. In this instance the markings 8 and 10 serve no useful purpose in the roll, but are covered up and concealed by the outer layer or layers of the sheet.

In printing the markings on the sheet I however without reference to the relation between the markings and the sheet ends, it may happen at times that one of these markings will fall at the outer end 3 of the sheet. Fig. 3 illustrates one of the great number of possibilities, namely, the instance where the marking 7 is cut through by the edge 3, so that only a part of this marking 7 actually appears on the sheet. In all essential respects however the arrangement of these markings 7, 8, 10 on the sheet 1 of Fig. 3 is like the arrangement on the sheet of Fig. 1; that is to say, insofar as a part of the marking 7 appears on the sheet, this part is identical with the corresponding parts of markings 8 and 10, the markings 7, 8, 10 are similarly placed with respect to the line of rolling and the two edges of the sheet, and like parts of 7 and 8, and also like parts of 8 and 10, are spaced apart a distance substantially equal to the circumference C. When now the wrapper of Fig. 3 is rolled around a lot or stack of pennies, the part of the mark 7 joins up with the opposite part of the marking 8 to form one complete marking as shown in Fig. 4; the remainder of the marking 8 is covered and concealed by the end 3 of the wrapper. In brief, adjacent members of the set of markings 7, 8, 10 (and additional like markings if the sheet is of greater proportional length than the sheets illustrated) being spaced apart the circumferential distance, the members of the set being identical, and all being placed similarly with respect to the line of rolling, it is immaterial how this set of markings is disposed lengthwise of the sheet, for in every instance either one single com-

plete marking will appear at the outer surface of the roll as illustrated in Fig. 2, or there will appear a complete marking composed in part of each of two of the markings as illustrated in Fig. 4 by way of example.

In addition to one set of markings, the members of which are arranged as above described, another or other sets of markings may be added if desired. It is only necessary that the markings of the second set (and of each of the other sets) bear the same relations to each other as the members of the first set bear to each other; that is to say, the markings of the second set (and of each further set) must be like each other, and be similarly placed with respect to the line of rolling 9, and like parts of each two adjacent markings of the second set (and of each other set) must be spaced apart lengthwise of the strip a distance substantially equal to the circumference of the finished roll. By way of example, a second set of markings 14, 15 and 16 is illustrated, in Fig. 1. As indicated above, the relations between the markings 14, 15, 16 are identical with the relations between the markings 7, 8, 10. If and when by chance one of the markings 14, 15, 16 of this second set is bisected or otherwise cut by the outer end 3 of the sheet, then two of these markings join to form one complete marking in the same way that 7 and 8 join to form complete marking in the case of Figs. 3 and 4. Otherwise at least one of these markings 14, 15, 16 (14 in the instance illustrated in Fig. 1) alone provides a complete marking of this form on the outer surface of the roll. It is not necessary of course that the markings of the two sets be different. The markings of the two sets may be alike, the use of two or more sets of markings then simply providing the outer surface of the roll with a corresponding number of markings of the same kind.

To form the wrappers of Figs. 1 and 3, I preferably take a long strip 20 of the material, Fig. 5, and provide its whole length with the desired markings related to each other as before indicated and as will be understood by a comparison of Fig. 5 with Fig. 1. That is to say, the markings of one set 21 are identical, are similarly placed with respect to the line of rolling, and like parts of adjacent members of the set 21 are spaced apart circumferential distances. The same is true with respect to one or more additional sets of markings 22. However the long strip of Fig. 5 (or a part of it) may be marked, (i. e. by perforations, by printing, or otherwise), after marking it is cut into wrapper-length sections without, necessarily, any attention being paid to whether or not any of the cuts pass through any of the markings. The result is the production of wrappers of which Figs. 1 and 3 are representative.

Preferably I make the wrappers in the manner illustrated diagrammatically in Fig. 6. In this figure a roll of the strip material 20, say cut to the proper width for the wrappers, is illustrated at 24. At 25 the strip material 20 passes around a roller and thereby pressed against a printing cylinder 26 which makes the desired markings on the strip, e. g. the markings 21 and 22 of Fig. 5. The printing roll 26 is so constructed as to place these markings at the proper distances apart and in the desired positions with respect to the line of rolling. The printing roll 26 is inked from the ink pan 27 by one or more interposed inking rolls 28, as will be understood. The strip 20 is dragged from the roll 24 and through the printing station by continuously-driven feed rolls 29, and thence passes to a roll

30 from which a weight 31 is suspended, and thence to a shearing station comprising, in the present instance, intermittently driven rolls 32 and a shear 33, 34. The rolls 32 feed the strip 20 to the shear step by step so that the shear cuts the strip into the desired wrapper-lengths. The shearing apparatus 33, 34 may be of any suitable kind. In the present instance it comprises a female die 33, and a male die 34 reciprocated by a link 35 and crank or eccentric 36. The floating weighted roll 30 preserves a loop of the strip 20 between the continuously-turning feed rolls 29 and the intermittently-operating shearing apparatus, accommodating one to the other. The finished wrapper 1 is discharged from the shearing apparatus 33, 34, and these wrappers may be stacked for later use, or immediately rolled into coin-receiving tubes, or disposed of otherwise. The rolls 37 illustrated are simply idler rolls that may be used as necessary to direct the strip 20 into desired paths. The employment of a considerable length of the strip 20 between the printing station and the shearing station (as provided for example by the large loop of the strip 20 at the weighted roll 30) permits the ink to dry sufficiently thoroughly before the shearing is done and thereafter the wrapper is stacked, rolled or otherwise disposed of.

It will be observed of course that my invention is not limited to wrapper 1 or strips 20 having the external shapes illustrated. In general it is not limited to the details of construction and operation described above and illustrated in the accompanying drawing except as appears hereinafter in the claims.

I claim:

1. An elongated strip of flexible sheet material to be cut into sections to serve, each, as a wrapper for a coil roll of a predetermined circumference at the outer surface of the wrapped package, said strip bearing a set of like markings all spaced substantially equal distances from one edge of the strip and each spaced, longitudinally of the strip, from the like marking, of the same set, at each side of it such a distance that like parts of each such two adjacent markings are separated, lengthwise of the strip, by a distance substantially equal to the said circumference, the said strip being of such length that when severed at a plurality of longitudinally spaced points un-predetermined with respect to the markings a plurality of complete and separate wrappers are formed which, when wrapped around rolls of coins, will each display one or more substan-

tially complete markings regardless of the location of any such markings with respect to the ends of the wrapper.

2. In the process of making wrappers for coin-rolls of a predetermined circumference, the steps which consist in making on a long strip of flexible sheet material, from substantially one end of the strip to the other, a plurality of like markings, at substantially equal distances from one edge of the strip, and with like parts of each two adjacent markings of the plurality spaced apart, lengthwise of the strip, a distance substantially equal to the outer circumference of the wrapped package, and making a plurality of cuts, across the strip, without predetermining the positions of the cuts with respect to the markings, to sever the marked strip into a plurality of complete and separate wrappers, whereby there are produced readily coil-roll wrappers which, when rolled into containers for coins, display only substantially complete markings.

3. An elongated strip of flexible material to be cut into sections to serve, each, as a wrapper for a coin roll of a predetermined circumference at the outer surface of the wrapped package, said strip bearing a first set of like markings all spaced substantially equal distances from one edge of the strip and each spaced, longitudinally of the strip, from the like marking, of the same set, at each side of it such a distance that like parts of each such two adjacent markings are separated, lengthwise of the strip, by a distance substantially equal to the said circumference, and also bearing a second set of markings, located respectively between adjacent markings of the first set, the markings of said second set being alike and located at substantially equal distances from one edge of the strip and each spaced, longitudinally of the strip, from the like marking, of the second set, at each side of it such a distance that like parts of each two adjacent markings of the second set are separated, lengthwise of the strip, a distance substantially equal to said circumference, the said strip being of such length that when severed at a plurality of longitudinally spaced points un-predetermined with respect to the said markings a plurality of complete and separate wrappers are formed which, when wrapped around rolls of coins, will each display one or more substantially complete markings of each of said sets regardless of the location of any such markings with respect to the ends of the wrapper.

JOHN S. MILLARD.