

[72] Inventor **Philip N. Smith**  
Spartanburg, S.C.  
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[73] Assignee **Deering Milliken Research Corporation**  
Spartanburg, S.C.  
a corporation of South Carolina

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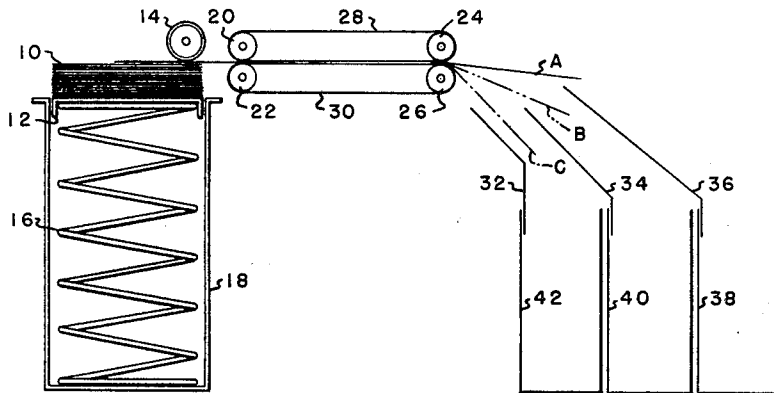
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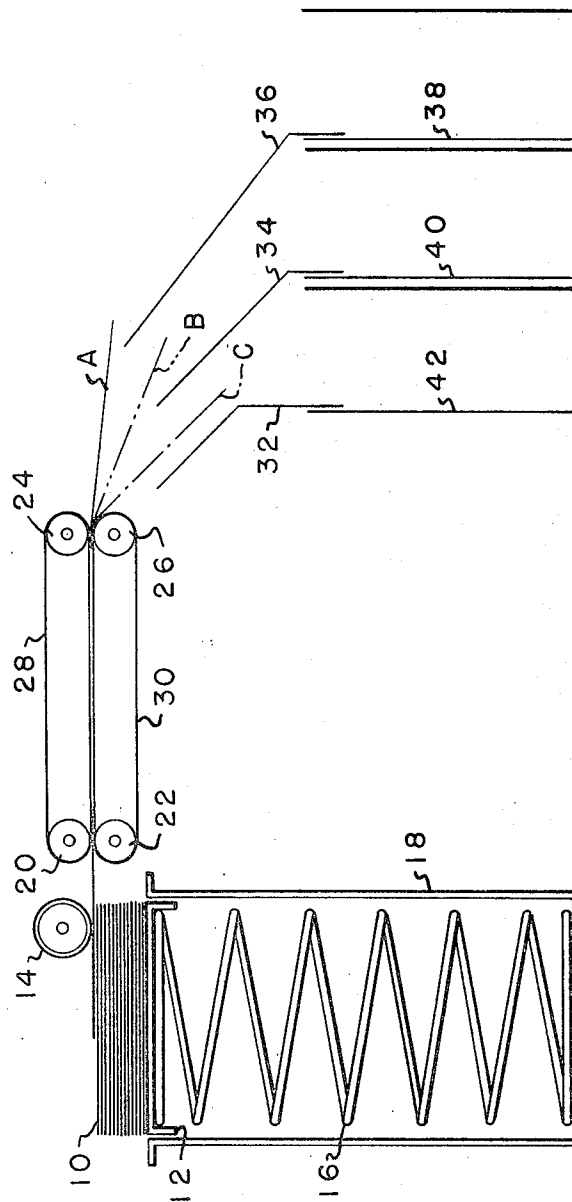
*Primary Examiner*—Richard A. Schacher  
*Attorneys*—H. William Petry and Norman C. Armitage

[54] **METHOD TO SORT CURRENCY**  
1 Claim, 1 Drawing Fig.

[52] U.S. Cl..... **209/115**  
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**ABSTRACT:** Method to sort old and worn out currency which should be removed from circulation from currency which is either new or still usable by detecting the stiffness of the bill to sort the old currency from new currency.





INVENTOR.  
PHILIP N. SMITH

BY

*Earle R. Marden*

ATTORNEY

METHOD TO SORT CURRENCY

In many banks and in most all Federal Reserve banks people are employed to examine currency to determine whether it should be placed in circulation or whether it should be returned to the Bureau of Engraving for destruction. This operation requires hours of manual labor, is very time consuming and is very boring to the operator.

Therefore, it is an object of the invention to provide a method to separate old currency from currency which still can be used in everyday circulation.

Other objects and advantages of the invention will become readily apparent as the specification proceeds to describe the invention with reference to the accompanying drawing, in which the new and improved method is represented schematically.

The bills 10 to be inspected are placed on a plate member 12 which is biased toward the driven roll 14 by the spring 16 in the container 18. The roll 14 preferably has a roughened surface to provide a gripping or frictional force on the bills 10 to direct the individual bills into the nip of rolls 20 and 22. A second pair of rolls 24 and 26 are spaced from the first pair of rolls 20 and 22. Mounted around upper rolls 20 and 24 and around lower rolls 22 and 26 are endless aprons 28 and 30 to maintain control over the bills 10 as they pass between the nip of rolls 20 and 22 and the nip of rolls 24 and 26. Located on the output side of the nip of rolls 24 and 26 are three dividers or baffles 32, 34 and 36 which have a top portion at an angle to the horizontal and a bottom section which is substantially vertical and culminates adjacent the bottom of a collection bin 38, 40 or 42.

OPERATION

In operation, bills 10 to be sorted are placed on the plate member 12 and are urged upwardly by the spring 16 toward the roller 14. As the roller 14 rotates, it supplies the top bill

into the nip of rolls 20 and 22 from whence it is supplied to the nip of rolls 24 and 26 wherein the bill 10 is given an impetus toward the collection bins 38, 40 and 42. If the bill is new or substantially new, the bill A will not sag and will be projected over the divider 36 and be guided by the divider 36 into the collection bin 38. If the bill projected from the nip of the rolls 24 and 26 has seen considerable use, it will either sag as indicated by B or C and will drop into either the bin 40 or 42. The bins 40 and 42 are so located that older bills that can still be reused will fall into the bin 40 while bills which should be destroyed will drop into the bin 42. The spacing of the dividers 32, 34 and 36 and the speed of the rolls 20, 22, 24 and 26 is so selected that the proper impetus is given to the bills from the nip of rolls 24 and 26 and the amount of sag of the bills will select the proper collection bin.

It can readily be seen that the hereindescribed method will automatically sort the currency and that all that an operator has to do is load the bills onto the plate member 12 and exchange the bins 38, 40 and 42 when they are full, thereby eliminating the boring and time consuming job of manually inspecting the bills in order to separate them into bills to be destroyed and bills to be recirculated.

Although I have described the specific method of my invention, I contemplate that changes may be made without departing from the scope or spirit of my invention and I desire to be limited only by the scope of the claims.

I claim:

1. A method of sorting old currency from new currency comprising the steps of providing a stack of currency to be sorted, sequentially removing the top bill from the stack of currency as it becomes the top bill, projecting the removed bill into a substantial horizontal direction, allowing the projected bill to sag and directing the sagging bill into a preselected collection zone depending on the amount of sag of the bill.

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