Feb. 2, 1926.

1,571,470

T. R. GABEL

CHECK PROTECTOR

Filed March 19, 1923

2 Sheets-Sheet 1

Fig. 1.

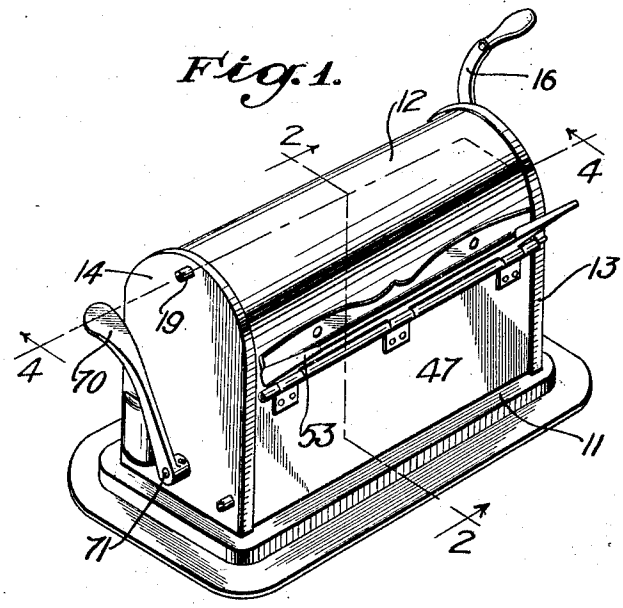


Fig. 2.

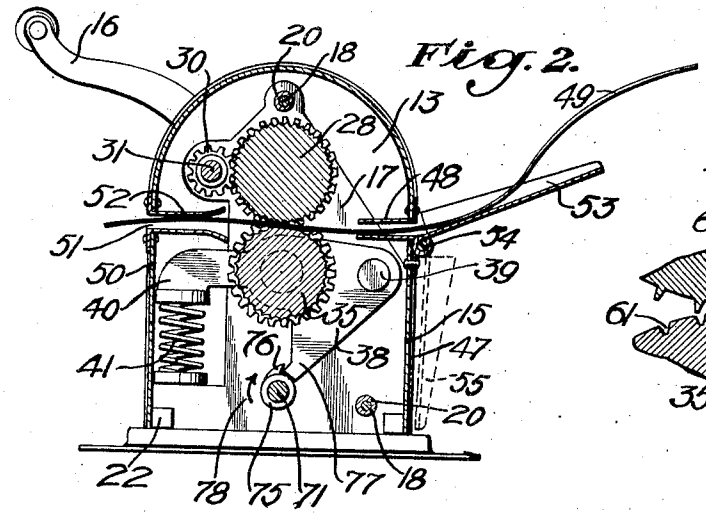
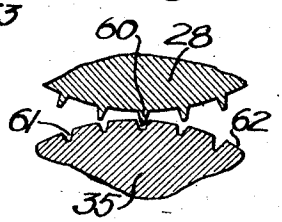


Fig. 3.



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Fig. 4.

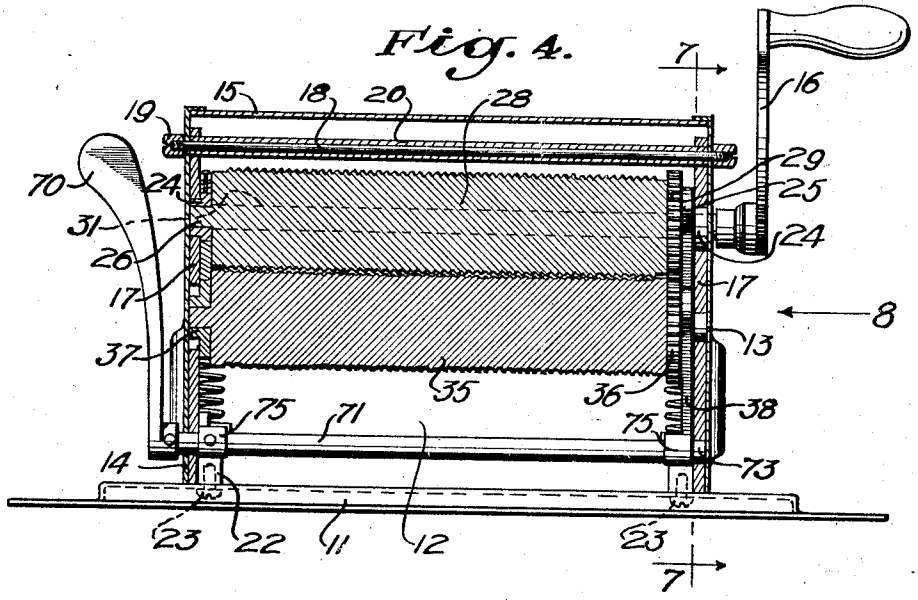


Fig. 5.

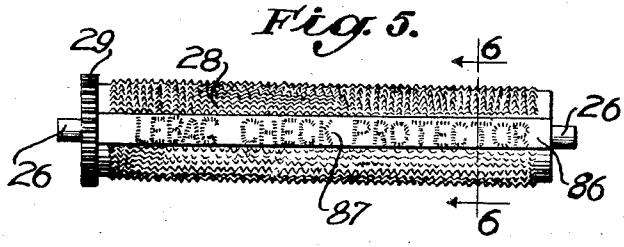


Fig. 6.

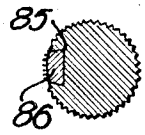


Fig. 7.

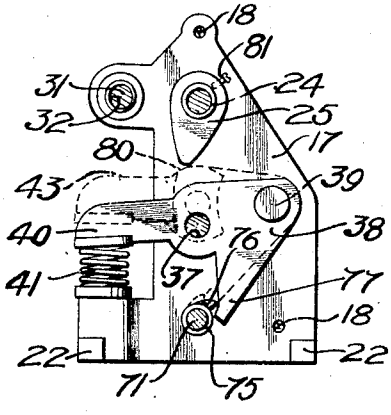
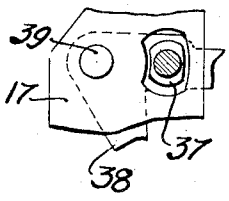


Fig. 8.



INVENTOR:
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Patented Feb. 2, 1926. 1,571,470

UNITED STATES PATENT OFFICE.

THOMAS R. GABEL, OF LOS ANGELES, CALIFORNIA, ASSIGNOR TO CODE CHECK GUARD COMPANY, A CORPORATION OF CALIFORNIA.

CHECK PROTECTOR.

Application filed March 19, 1923. Serial No. 626,055.

To all whom it may concern:

Be it known that I, THOMAS R. GABEL, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Check Protector, of which the following is a specification.

There are at present employed, several types of check protectors by which the paper forming the check is cut into and disrupted over the written amounts and signatures so that erasures and alterations cannot be made and also there are at present employed check writers whereby the amounts for which the check is drawn is cut into the paper by means of lettered dies. The check writers now employed give very satisfactory results as far as unchangeability of amounts, but require much time in their operation as the machine must be reset for the writing of each separate check. The check protecting device which merely macerates the paper over the written amounts destroys the structure of the paper and provides a roughened surface upon the back thereof which interferes with the imprinting of endorsement stamps on the back of the check.

It is an object of my invention to provide a protective device which will imprint the entire check with perforations, these perforations being indented from the back of the check and over the whole surface thereof, whereupon a substantially smooth surface is maintained upon which endorsement stamps may be easily printed. This device employs a die or extruder roller and a cooperating roller between which the sheet to be protected is passed, the die roller having extruder points thereupon extending substantially the full width thereof so that the entire surface of the sheet may be perforated.

It is a further object of the invention to provide a means whereby the rollers may be separated so that portions of the sheet being passed therethrough will not be perforated, thus allowing an area upon which an endorsement or other writing may be placed.

The especial advantages of the invention and further objects thereof will be made evident hereinafter.

Referring to the drawings which are for illustrative purposes only,

Fig. 1 is a perspective view of a check protector embodying the features of my invention.

Fig. 2 is a section taken upon a vertical plane represented by the line 2—2 of Fig. 1.

Fig. 3 is a fragmentary view illustrating the manner in which the die roller and the cooperating roller intermesh.

Fig. 4 is a longitudinal section taken upon a vertical plane represented by the line 4—4 of Fig. 1.

Fig. 5 is a view of a die roller having a removable insert.

Fig. 6 is a section taken upon a plane represented by the line 6—6 of Fig. 5.

Fig. 7 is a view taken as indicated by the line 7—7 in Fig. 4 showing one of the end plates employed in the construction of the check protector.

Fig. 8 is a fragmentary view of the end plate, this view being taken as indicated by the arrow 8 in Fig. 4.

In the form of the invention shown a base plate 11 is provided upon which is secured a housing 12. This housing as shown in Figs. 2 and 4 consists of a pair of stamped end cover plates 13 and 14 between which a plate 15 bent to form the side walls and rounded top is disposed. Within the housing 12 a pair of stamped end plates or standards 17 are placed in upright position, these plates being held in spaced relationship by rods 18 provided with nuts 19 and tubular spacing members 20. At the lower corners of the plates 17, bosses 22 are formed into which screws 23 extend as shown in Fig. 4 for the purpose of holding the end plates and the surrounding structure 12 upon the base 11. Near the upper end of each plate 17 a sleeve 24 is mounted, these sleeves each having a cam 25 thereupon as shown in Figs. 4 and 7 and receiving the reduced ends or trunnions 26 of a die roller 28. This die roller has a gear 29 mounted at one end thereof which is driven by a small pinion 30 mounted upon a shaft 31 which extends through a drill sleeve 32, as shown in Figs. 4 and 7, and the end cover plate 13, and has a crank handle 16 mounted upon the outwardly extending end thereof. Situated below the die roller is a cooperating roller 35 having a gear 36 and being supported between sleeves 37 formed upon swingable plates 38 which pivot upon pins 39 and have the swingable ends 40 thereof held resiliently and pressurably upward by springs 41. The action of the springs 41 serve to hold the cooperating roller upwardly in a posi-

tion indicated in Fig. 2 and by dotted lines 43 in Fig. 7. The cams 25 serve as stops for limiting the upward movement of the plates 38 and thus determine the maximum spacing between the rollers 28 and 35.

In the front 47 of the housing a wide opening formed by guide plates 48 is disposed in a position to direct a check 49 or other sheet of paper through the rollers 28 and 35 as shown in Fig. 2. In the back 50 of the housing 12 an exit opening 51 is provided confined by inwardly extending guide lips 52 which receive the forward end of the check as it leaves the rollers and directs it out through the back wall of the housing. A guide tray 53 is hinged at 54 upon the front of the housing 12 so that it may be swung into guiding position as indicated in full lines in Figs. 1 and 2 or may be dropped against the front 47 of the housing as indicated by the dotted lines 55 in Fig. 2.

As shown in Fig. 3 of the drawing the die roller 28 is provided with evenly spaced extruder points 60 and the cooperating roller 35 is likewise provided with indentations 61 into which the extruder points extend. It will be noticed that the extruder points 60 are located entirely upon the die roller and that the outer surface 62 of the cooperating roller 35 is substantially cylindrical.

In the manufacture of the device, a metal is employed for the cooperating roller 35 which is somewhat softer than the metal employed for the die roller 28 and the indentations 61 are formed by placing the two rollers together and rotating under pressure. The gears 29 and 36 synchronize the rotation of the two rollers and thus cause the extruder points to coincide at all times with their cooperating indentations in the roller 35.

In the use of the device a check or other negotiable paper has the amount, signature, or other notation written thereupon, whereupon it is placed face downward upon the guide tray and the end thereof inserted between the lips 48 so as to be brought into a position where it will be drawn through the rollers upon rotation thereof by manipulating the crank 16. It will be recognized that the perforations indented in the paper by the extruder points 60 will be accomplished entirely from the back of the sheet and will result in a substantially smooth effect of the back of the sheet and a multiplicity of extruded projections upon the front of the sheet which cannot be written over without the appearance of ink spots upon the front and back of the sheet. Any attempt at erasure and alteration of the check is easily discernable and the character of the extrusions is such that they cannot be ironed out owing to the fact that each extrusion is perforated so that the texture of the paper is broken. These extruded points, however, are spaced sufficiently far apart so that the strength of the paper is not materially diminished. The fact that the entire surface of the check is extruded also has the effect of making the erasure or attempted erasure of any part easily discernable, as by an attempted erasure the evenness in appearance of the extrusions is very pronounceable. As hereinbefore mentioned the back of the check presents a substantially smooth surface upon which an endorsement stamp may be printed.

The invention provides means whereby the rollers 28 and 35 may be separated to allow the passage of any portion of a sheet of paper therebetween without being perforated by the extruder points. This means consists of a small lever 70 which is mounted upon the outwardly extending end of a shaft 71 at the end of the housing 12 opposite to the crank 16. The shaft 71, as shown in Fig. 4, extends through the end cover plate 14 and the end plate 17 upon which the cover plate 14 rests and the inner end 73 thereof is received in the end plate 17 upon which the end cover plate 13 is mounted. Adjacent to the end plates 17 collars 75 are pinned or otherwise secured upon the shaft 71, these collars being provided with projections 76 as shown in Figs. 2 and 7 which rest against the downwardly extended portions 77 of the plates 38. The shaft 71 may be rotated in the direction of the arrow 78 in Fig. 2 by pulling the upper end of the lever 70 toward the operator, this rotation of the shaft moving the projections 76 into the positions indicated in full lines in Fig. 7, and thus causing the plates 38 to be rotated downwardly against the action of the springs 41 and the cooperating roller thereupon being drawn downwardly out of engagement position with the die roller 28. Upon the release of the lever 70, the springs 41 return the plates 38 to their positions against the cams 25 as indicated at 80 in Fig. 7. The position of the cams 25 may be adjusted by rotating them upon the sleeves 24, there being provided set screws 81 by which the cams may be locked in desired position upon the sleeves 24.

As shown in Figs. 5 and 6 the invention provides means whereby die inserts containing thereupon secret characters, symbols, or wording which is to be indented in the check, these inserts being removable so that the characters or inscriptions thereupon may be changed as desired. In the die roller 28 shown in Figs. 5 and 6 a longitudinal channel 85 is formed which receives a metal strip 86 having characters as indicated at 87 upon the face thereof. The characters are preferably outlined in evenly spaced ex-

truder points which cause the perforation of their particular arrangement in any paper which may be passed between the rollers of the device. Several of these die inserts 86 may be employed as desired and may be changed from time to time as conditions may require.

An advantage of the invention is that by its arrangement of cutters or extruders upon the die roller, the entire face and body of a check or other instrument may be impressed with extruded portions or points, the apexes of which constitute clear, clean and perfect perforations, without materially affecting the strength of the paper, and that at the same time a smooth surface on the back of the check is provided so as to admit making thereon a clear and distinct impression with a metal or rubber endorsing stamp.

Another advantage of the invention is that by distributing a multiplicity of perforations over the entire face of the check or other instrument any attempt to remove the printed numbers or written portions thereof by means of acids or otherwise, for the purpose of making alterations, will at once be discernable on the front and the back of the check as the ink used in making alterations flows into the perforate indentation and causes the spreading of the ink upon the face of the check as well as its appearance upon the back thereof.

An additional advantage of the invention is that by means of the pressure release located at the end of the check protector, the operator is enabled to disengage the cylindrical die, by which operation a perfectly smooth surface is obtained on both the face and the back of the check for the purpose of facilitating endorsements with pen and ink on any desired portion of the instrument.

I claim as my invention:

1. In a protective device of the class described, the combination of: a cylindrical die having extruder points formed substantially throughout the entire cylindrical face thereof; a cooperating roller having indentations formed therein into which said extruder points extend when said cylinder is rotated in conjunction with said cooperating roller; resilient means for holding said cylinder and said roller pressurably together; and releasing means for separating said cylinder and said cooperating roller so as to allow passage of a sheet therebetween without imprint of said extruder points.

2. In a protective device of the class described, the combination of: a cylindrical die having extruder points formed substantially throughout the entire cylindrical face thereof; a cooperating roller having indentations formed therein into which said extruder points extend when said cylinder is rotated in conjunction with said cooperating roller; resilient means for holding said cylinder and said roller pressurably together; releasing means for separating said cylinder and said cooperating roller so as to allow passage of a sheet therebetween without imprint of said extruder points; and adjustable means for limiting the extension of said extruder points into said depressions.

3. In a protective device of the class described, the combination of: a supporting frame; a pair of cooperating rollers pressurably held together in said frame, one of said rollers having extruder projections formed substantially throughout the entire cylindrical face thereof, and the other of said rollers having the cooperating face thereof of true cylindrical form with indentations therein to receive said extruder projections, whereby a sheet passed between said rollers will have extrusions formed therein from one side of the sheet, thereby preserving a substantially smooth surface one said side of the sheet; and means for separating said rollers so as to allow the passage therethrough of portions of said sheet without such portions being imprinted by said extruder projections.

4. In a protective device of the class described, the combination of: a supporting frame; a pair of cooperating rollers pressurably held together in said frame, one of said rollers having extruder projections formed thereupon, and the other of said rollers having the cooperating face thereof of true cylindrical form with indentations therein to receive said extruder projections, whereby a sheet passed between said rollers will have extrusions formed therein from one side of the sheet, thereby preserving a substantially smooth surface on said side of the sheet; and a removable die member set into a channel formed in the face of said roller having said extruder projections formed thereupon, said die member carrying characters to be imprinted in said sheet.

5. In a check protective device of the character disclosed, the combination of: a pair of co-operating rollers having cylindrical engagement areas of greater width than the sheet to be passed therebetween; and indentation means on said rollers for indenting the entire surface of a check, passed between said rollers.

6. In a check protective device of the character disclosed, the combination of: a pair of co-operating rollers having cylindrical engagement areas of greater width than the sheet to be passed therebetween; and indentation means on said rollers for indenting the entire surface of a check, passed between said rollers, from one side only of the check.

7. In a check protective device of the

character disclosed, the combination of: a pair of cooperating indenting rollers, one of which is provided with relatively small extruding elements projecting in relatively spaced arrangement from substantially the entire space thereof and the other of which rollers has an area, the greater portion of which is truly cylindrical and which is provided with indentations corresponding to the said extruding elements; spring means for normally holding said rollers together to indent a check passed between the same; and means for separating said rollers against the action of said spring means.

8. In a check protective device of the character disclosed, the combination of: a pair of co-operating indenting rollers; one of said rollers being journalled at a fixed position; intermeshing gears on said rollers; a rock shaft; a pair of plates secured on said rock shaft; said other roller being journalled in said plates; springs engaging said plates for normally holding said latter roller in co-operative relation to said former roller; means for rotating said rollers; a second rock shaft; a handle on said rock shaft; and projections on said rock shaft for engaging said plates when said handle is swung to swing said plates to separate said rollers.

9. In a check protective device of the character disclosed, the combination of: a pair of co-operating indenting rollers; one of said rollers being journalled at a fixed position; intermeshing gears on said rollers; a rock shaft; a pair of plates secured on said rock shaft; said other roller being journalled in said plates; springs engaging said plates for normally holding said latter roller in co-operative relation to said former roller; means for rotating said rollers; cams for engaging said plates to adjust the proximity of said rollers; and means for securing said cams in adjusting positions.

10. In a document protective device of the character disclosed, the combination of: a pair of cooperating rollers, one of which is provided with relatively small extruding elements projecting in regularly spaced arrangement from substantially the entire face thereof, and the other of which rollers has an area the greater portion of which is truly cylindrical and which is provided with indentations corresponding to the said extruding elements; and means for turning said rollers.

11. In a document protective device of the character disclosed, the combination of: a pair of cooperating rollers having engagement areas of greater width than the sheet to be passed therebetween, one of which is provided with relatively small extruding elements projecting in regularly spaced arrangement from substantially the entire face thereof, and the other of which rollers is provided with corresponding indentations; and means for turning said rollers.

12. In a protective device of the class described, the combination of: a cylindrical die having extruder points formed substantially throughout the entire cylindrical face thereof; a cooperating roller having indentations formed therein into which said extruder points extend when said cylinder is rotated in conjunction with said cooperating roller; resilient means for holding said cylinder and said roller pressurably together; releasing means for separating said cylinder and said cooperating roller so as to allow passage of a sheet therebetween without imprint of said extruder points; and adjustable means for determining the proximity of said cylinder and cooperating roller relative to each other.

In testimony whereof, I have hereunto set my hand at Los Angeles, California, this 9th day of March 1923.

THOMAS R. GABEL.