

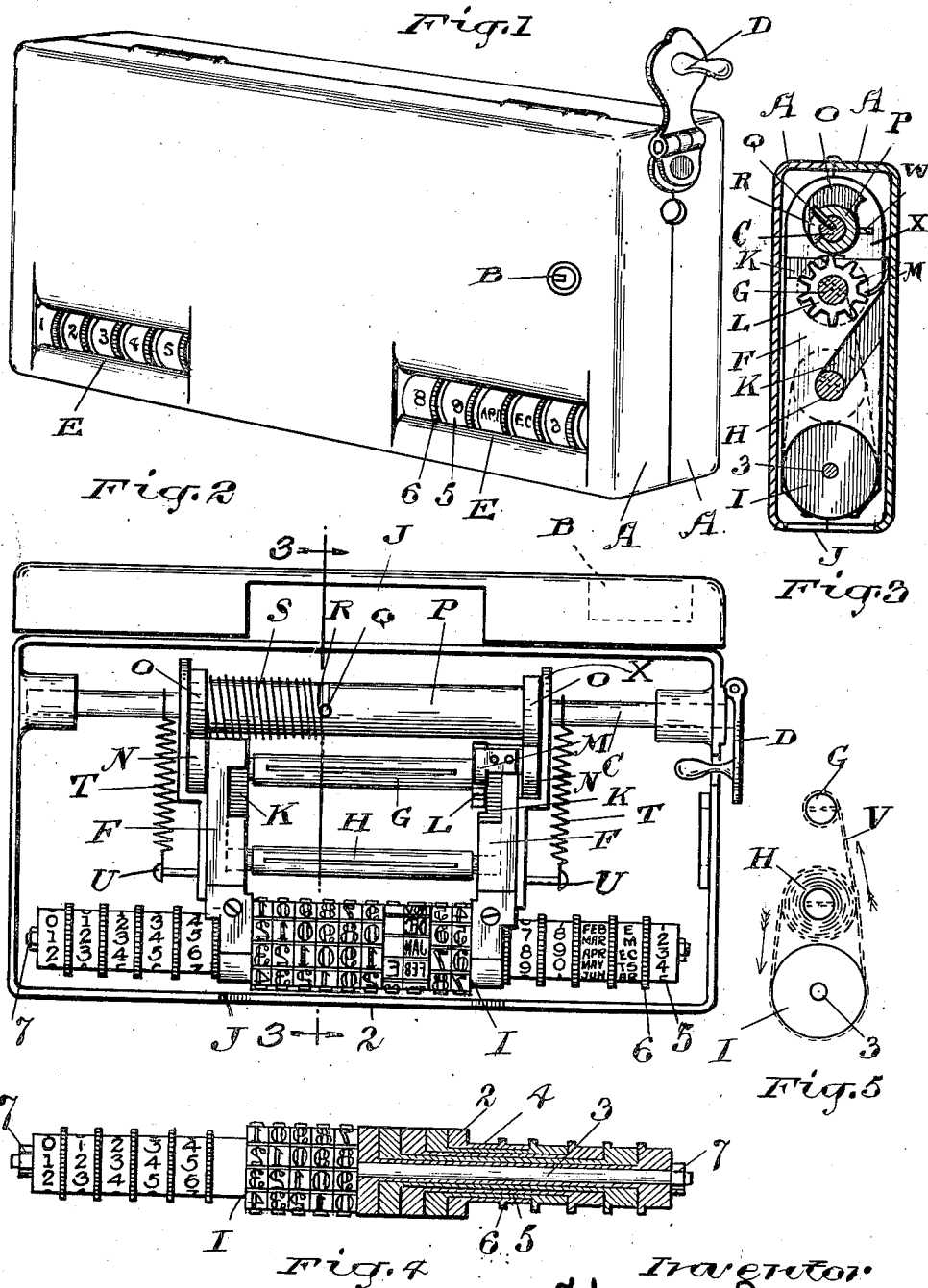
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T. L. MAY

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STAMP AND RECORDER

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Inventor
Thomas L. May
by Smith Cameron
his attorney

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STAMP AND RECORDER

Thomas Leslie May, Toronto, Ontario, Canada,
 assignor to T. L. May Corporation, Toronto,
 Ontario, Canada

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9 Claims. (Cl. 101—90)

My invention relates to a device for impressing dates and amounts received, and various other items, and at the same time recording the items in consecutive and chronological order on a strip of paper, adapted to roll up after each stamping operation.

The device is adapted to set the particular amount and date and other data, for each stamping in a manner that after the impression has once been made it cannot be changed, therefore assuring a complete and correct recording of the data.

An object of the device is to embody in a compact arrangement and suitable as a portable, pocket stamping and recording mechanism, suitable for collectors, and particularly for those who collect insurance premiums, where the date and amount and the identity of the collector is an important factor.

A further object is to provide means for tabulating the details, both as to date and the amount, whereby the details may be later checked over and computed.

The operating mechanism and the recording strip are contained within a locked case, by which the strip upon which the record is made, may not be altered or gotten at without unlocking the case for removal.

In the hereunto annexed drawing:—

Figure 1 is a perspective view of the device;

Figure 2 is a side view with the case opened up showing the interior and mechanism;

Figure 3 is a vertical sectional view through the device on lines 3—3 Figure 2.

Figure 4 is a view of the type setting cylinder partially in section, and

Figure 5 is a detail view showing the arrangement of the recording paper and the rollers.

Like letters of reference refer to like parts throughout the several views.

In the embodiment of the invention shown in the drawing, the stamp consists of a casing A having two parts hinged together and having centrally of the bottom thereof, an opening J. Rotatably mounted in the upper part of this casing is a shaft C having a hand crank D, which for convenience, as in the ordinary surveyor's tape, is formed of two hinged sections, the casing having an opening therethrough for the handhold of the crank so as to permit the crank to be brought within substantially the dimensional limits of the casing.

Mounted within the casing by means of slotted arms X, is a reciprocatory frame F, said slotted arms permitting movement of this frame toward

and from the bottom opening J in the casing, and the shaft C. The frame is quickly raised by means of coiled springs T, one end of the springs engaging the shaft C and the other end engaging projecting pins U carried by the opposite sides of the frame. The frame F, toward the top thereof, is provided with anti-friction rollers N co-operating with which are cams O, said cams having a gradual rise and an abrupt fall.

As will be pointed out hereafter, the making of the impressions results from downward movement of the frame by these cams. This is a slow movement, and in order to avoid the continued engagement of the printing characters with the sheets upon which impressions are to be made, it was found desirable to impart a rapid return movement to the frame and to the printing characters immediately following the making of the impression. To accomplish this, a lost motion connection is provided between the shaft C and the cams O, and supplementing this is a torsion spring S which, immediately upon the disengagement of the rise of the cam from the rollers N, imparts a quick continued movement of the cams entirely independently of the movement of the shaft and in the same direction. This construction prevents any interference with the upward movement of the frame by the springs T, since the movement of the cams is at a relatively greater speed than the movement of the rollers N carried by the frame F.

The printing unit comprises a shaft 3 carried by the frame F. Upon this shaft are idly mounted a plurality of printing wheels having about the periphery thereof, digits or other indicia by means of which various amounts, dates and other data may be impressed upon, first, the record sheet of a debtor and, second, upon a record strip which indicates to the creditor the amount and date of collections from the debtor by a collector.

Each printing wheel has a tubular extension indicated at 4 in the drawing, Fig. 1. These tubes are of different diameters, the longest tube and the printing wheel carrying same having a bearing upon the shaft 3, and the other tubes and wheels bearing successively upon the adjacent tubes. This arrangement of nested tubes permits turning of any printing wheel to set up a desired legend entirely independently of any of the other wheels. This is a manual operation and is accomplished by means of a setting wheel carried by each tubular extension and having a knurled or otherwise roughened rim. The vari-

ous setting wheels are indicated at 5 in the drawings and the knurled rim of each at 6.

Each of the setting wheels has digits or other indicia thereon corresponding with the printing wheel with which this setting wheel is associated, and these wheels are exposed through openings E in the side of the casing so that the user may, through such sight openings, determine what the matter being set up upon the printing wheels, is. The characters upon the wheels 2 are in reverse, those on the setting wheels are not.

It is obvious, since the characters to be printed must be presented toward the opening J at the bottom of the casing, that the corresponding characters upon the setting wheels must be set 90° in arc upon one side or the other of the corresponding printing characters upon the printing wheels, so that when a given digit or other indicia appear at the opening E, the corresponding indicia on the printing wheel will be presented toward the opening J.

The frame F also carries a supply reel for a combined record and carbon strip V. In the machine of the drawings, this combined strip consists of two strips of ordinary carbon paper, each having one surface thereof only coated with carbon. The carbon surface of one strip engages the paper backing of the other strip, and the carbon surface of the second strip is presented toward the opening J.

From the supply reel H the combined carbon and record strip passes downwardly and about the various printing wheels, and upwardly to a rewind reel G, called a record reel in the specification, mounted toward the top of the reciprocatory frame F to which the end of the strip may be connected in any desired manner. This reel G carries a toothed wheel L acted upon by a spring detent M to prevent overrunning of the wheel when the rewind reel is actuated. The rewind reel is actuated only upon upward movement of the frame F by the springs T when the toothed wheel L approaches the sleeve P, this sleeve carrying a tooth or pin W, the lineal movement of the toothed wheel relative to this pin causing turning movement of the former.

In this manner, the combined carbon and record strip is advanced following the making of each impression preparatory to the next actuation of the machine.

Both reels G and H are removable from the frame by reason of the slots K.

The two parts of the casing A may be locked in engaging relation to each other by means of a key controlled locking mechanism indicated at B. This, however, is immaterial, since any attempt to make erasures in the record after the impression is once made would surely be detected, and the destruction of any part of the record would immediately lead to detection. The lock B, therefore, when used, is merely an additional and well known safety factor which may or may not be used, and when used is more for the purpose of discouraging tampering with the mechanisms of the machine than to prevent attempted alterations in the permanent strip record.

In the use of the stamp, a collector manually actuates the setting wheels to turn the various printing wheels so as to set up, adjacent the opening J, the characters necessary to indicate the number of an account, the amount paid, the date and matter identifying the collector. When so setting the wheels, the frame F is held

by the springs T so as to position the printing wheels well above the opening J. When the wheels have been properly set, as indicated by the setting wheels, at the openings E, the collector rests the bottom of the case A upon the book or record sheet of the debtor, holding it firmly in contact therewith. He then turns the shaft C by means of the crank D. The initial turning movement of the shaft C imparts no movement to the cams O because of movement of the pin Q in the slot R, which slot extends for approximately 120° in arc about the sleeve P. This initial movement of the shaft C does nothing beyond tensioning the torsion spring S.

When the pin Q engages the end of the slot R, the sleeve P is turned with the shaft C, causing the cams O to develop a downward pressure through the anti-friction rollers N upon the frame F, moving this frame downwardly until the printing wheels are projected through the opening J. The combined printing and record strips have movement with the frame F.

Upon the limit of the downward movement of the frame F by the cams O, two impressions are simultaneously made by the printing wheels, both impressions being by means of the carbon strips interposed between the printing wheels and the opening J. One of these impressions is made upon the debtor's record, and the other is made upon the paper backing of the carbon strip utilized in making the impression upon the debtor's strip.

When the rises of the cams O pass out of engagement with the rollers N, the springs T, which are normally under tension and which tension has been increased by the downward movement of the frame, immediately impart a reverse or upward movement to the frame, thus disengaging the printing wheels from the record strip, and the record strip from the record sheet. It is desirable to have this a rapid movement, and to accomplish this, the lost motion or pin and slot connection between the sleeve P and the shaft C is provided.

Immediately that the rises of the cam pass from engagement with their co-operating means upon the frame F, resistance to turning movement of the sleeve is immediately relieved, so that the tensioned torsion spring S imparts a rapid movement to the cams and to the sleeve until the end of the slot R, opposite to that engaged by the pin Q when turning the sleeve, stops such rotary movement of the sleeve. During this movement of the sleeve by the spring S, the shaft C may be having movement in the same direction as that of the sleeve as a result of a continued hand turning of the crank D.

During downward movement of the frame, the combined printing and record strip has no movement in relation to the printing wheels, and this condition continues during the major portion of the upward movement. Toward the end of this upward movement, however, a tooth of the wheel L engages the pin W, thus imparting a partial rotation to the rewind reel G to advance the combined printing and record strip an amount sufficient to secure a proper spacing on the record strip of the next impression appearing thereon. Since the impression has already been made when the combined printing and record strip is thus advanced, it is immaterial whether the printing wheels turn with the movement of the strips since these wheels must be re-set before the making of the next impression.

In setting the various printing wheels, the setting wheels should be turned downwardly through the openings E so as to utilize the detent pawl M

in preventing a run of the record strip as a result of the turning of any wheel. This, however, is highly improbable.

The slots K merely facilitate the removal of used combined printing and record strips from the machine, and the substitution of fresh strips therefor.

It is obvious that the impression made upon a debtor's record book or sheet and that made upon the record strip must be identical, since such impressions are made at the same time and by means of the same characters upon the printing wheels.

Various modifications may be made in the shape and arrangement of the parts without deviating from the nature of my invention.

The main object of the arrangement is to embody the impressing and recording combinations, and method for actuating the carriage and parts to force it downwardly with sufficient pressure to make the carbon impression, and to instantly return it to a starting position after the impression has been made.

What I claim as new and desire to secure by Letters Patent is:—

1. A stamp of the character described, embodying therein a case having an opening through the bottom thereof, a reciprocatory frame within said case, a plurality of printing wheels rotatably mounted in said frame above the opening in said case, means whereby said wheels may be independently adjusted, a supply reel for a plurality of combined record and duplicating strips, a rewind reel to which said strips are adapted to be connected after passing about said printing wheels, a shaft rotatably mounted in, and carrying a crank exposed exteriorly of said case, means actuated by said shaft and operative upon said frame, whereby said frame may be forced downwardly to project said printing wheels through the opening in the bottom of said case, means acting to raise said frame, and means actuating said rewind reel as said frame is raised.

2. A stamp of the character described, embodying therein a case having an opening through the bottom thereof, a reciprocatory frame within said case, a shaft adjacent the bottom of said frame, a plurality of printing wheels rotatably mounted in relation to said shaft, sleeves of different diameters carried by said printing wheels respectively, a setting wheel carried by each sleeve, said case having an opening through which access may be had to said setting wheels, a supply reel for a plurality of combined record and duplicating strips, a rewind reel to which said strips are adapted to be connected after passing about said printing wheels, a shaft rotatably mounted in, and carrying a crank exposed exteriorly of said case, means actuated by said shaft and operative upon said frame, whereby said frame may be forced downwardly to project said printing wheels through the opening in the bottom of said case, means acting to raise said frame, and means actuating said rewind reel as said frame is raised.

3. A stamp of the character described, embodying therein a case having an opening through the bottom thereof, a reciprocatory frame within said case, a plurality of printing wheels rotatably mounted in said frame above the opening in said case, means whereby said wheels may be independently adjusted, a supply reel for a plurality of combined record and duplicating strips, a rewind reel to which said strips are adapted to be connected after passing about said printing wheels, a shaft rotatably mounted in, and carrying a crank exposed exteriorly of said case, means

actuated by said shaft and operative upon said frame, whereby said frame may be forced downwardly to project said printing wheels through the opening in the bottom of said case, springs acting between said shaft and said frame to raise said frame when it is disengaged by said last named means, and means actuating said rewind reel as said frame is raised.

4. A stamp of the character described, embodying therein a case having an opening through the bottom thereof, a reciprocatory frame within said case, a plurality of printing wheels rotatably mounted in said frame above the opening in said case, means whereby said wheels may be independently adjusted, a supply reel for a plurality of combined record and duplicating strips, a rewind reel to which said strips are adapted to be connected after passing about said printing wheels, a shaft rotatably mounted in, and carrying a crank exposed exteriorly of said case, a sleeve mounted upon said shaft, a lost motion connection between said shaft and said sleeve whereby movement may be imparted to said sleeve independently of said shaft, a torsion spring operative upon said sleeve, a plurality of cams carried by said sleeve and operative upon said frame, whereby said frame may be forced downwardly to project said printing wheels through the opening in the bottom of said case, means acting to raise said frame, and means actuating said rewind reel as said frame is raised.

5. A stamp of the character described, embodying therein a case having an opening through the bottom thereof, a reciprocatory frame within said case, a plurality of printing wheels rotatably mounted in said frame above the opening in said case, means whereby said wheels may be independently adjusted, a supply reel for a plurality of combined record and duplicating strips, a rewind reel to which said strips are adapted to be connected after passing about said printing wheels, a shaft rotatably mounted in, and carrying a crank exposed exteriorly of said case, a sleeve mounted upon said shaft, a lost motion connection between said shaft and said sleeve whereby movement may be imparted to said sleeve independently of said shaft, a torsion spring operative upon said sleeve, a plurality of cams carried by said sleeve and operative upon said frame, whereby said frame may be forced downwardly to project said printing wheels through the opening in the bottom of said case, springs acting between said shaft and said frame to raise said frame when it is disengaged by said last named means, and means actuating said rewind reel as said frame is raised.

6. A stamp of the character described, embodying therein a case having an opening through the bottom thereof, a reciprocatory frame within said case, a plurality of printing wheels rotatably mounted in said frame above the opening in said case, means whereby said wheels may be independently adjusted, a supply reel for a plurality of combined record and duplicating strips, a rewind reel to which said strips are adapted to be connected after passing about said printing wheels, a shaft rotatably mounted in, and carrying a crank exposed exteriorly of said case, a sleeve mounted upon said shaft, a lost motion connection between said shaft and said sleeve whereby movement may be imparted to said sleeve independently of said shaft, a torsion spring operative upon said sleeve, anti-friction rollers carried by said frame, cams carried by said sleeve and operative upon said rollers respectively,

whereby said frame may be forced downwardly to project said printing wheels through the opening in the bottom of said case, springs acting between said shaft and said frame to raise said frame when it is disengaged by said last named means, and means actuating said rewind reel as said frame is raised.

7. A stamp of the character described, embodying therein a case having an opening through the bottom thereof, a reciprocatory frame within said case, a plurality of printing wheels rotatably mounted in said frame above the opening in said case, means whereby said wheels may be independently adjusted, a supply reel for a plurality of combined record and duplicating strips rotatably mounted in said frame above said printing wheels, a rewind reel mounted in said frame above said supply reel to which said strips are adapted to be connected after passing about said printing wheels, a shaft rotatably mounted in, and carrying a crank exposed exteriorly of said case, means actuated by said shaft and operative upon said frame, whereby said frame may be forced downwardly to project said printing wheels through the opening in the bottom of said case, means acting to raise said frame, a toothed wheel carried by said rewind reel, and a member carried by the means actuated by said shaft and operative upon said frame co-operating with said wheel, whereby with upward movement of said frame said rewind reel will be actuated to advance said strips.

8. A stamp of the character described, embodying therein a case having an opening through the bottom thereof, a reciprocatory frame within said case, a plurality of printing wheels rotatably mounted in said frame above the opening in said case, means whereby said wheels may be independently adjusted, a supply reel for a plurality of combined record and duplicating strips rotatably mounted in said frame above said printing wheels, a rewind reel mounted in said frame above said supply reel to which said strips are adapted to be connected after passing about said printing wheels, a shaft rotatably mounted in, and carrying a crank exposed exteriorly of said case, a sleeve mounted upon said shaft, a lost motion connection between said shaft and said sleeve

whereby movement may be imparted to said sleeve independently of said shaft, a torsion spring operative upon said sleeve, a plurality of cams carried by said sleeve and operative upon said frame, whereby said frame may be forced downwardly to project said printing wheels through the opening in the bottom of said case, springs acting between said shaft and said frame to raise said frame when it is disengaged by said last named means, a toothed wheel carried by said rewind reel, and a member carried by the means actuated by said shaft and operative upon said frame co-operating with said wheel, whereby with upward movement of said frame said rewind reel will be actuated to advance said strips.

9. A stamp of the character described, embodying therein a case having an opening through the bottom thereof, a reciprocatory frame within said case, a plurality of printing wheels rotatably mounted in said frame above the opening in said case, means whereby said wheels may be independently adjusted, a supply reel for a plurality of combined record and duplicating strips rotatably mounted in said frame above said printing wheels, a rewind reel mounted in said frame above said supply reel to which said strips are adapted to be connected after passing about said printing wheels, a shaft rotatably mounted in, and carrying a crank exposed exteriorly of said case, a sleeve mounted upon said shaft, a lost motion connection between said shaft and said sleeve whereby movement may be imparted to said sleeve independently of said shaft, a torsion spring operative upon said sleeve, anti-friction rollers carried by said frame, cams carried by said sleeve and operative upon said rollers respectively, whereby said frame may be forced downwardly to project said printing wheels through the opening in the bottom of said case, springs acting between said shaft and said frame to raise said frame when it is disengaged by said last named means, a toothed wheel carried by said rewind reel, and a member carried by the means actuated by said shaft and operative upon said frame co-operating with said wheel, whereby with upward movement of said frame said rewind reel will be actuated to advance said strips.

THOMAS LESLIE MAY.