

Dec. 8, 1931.

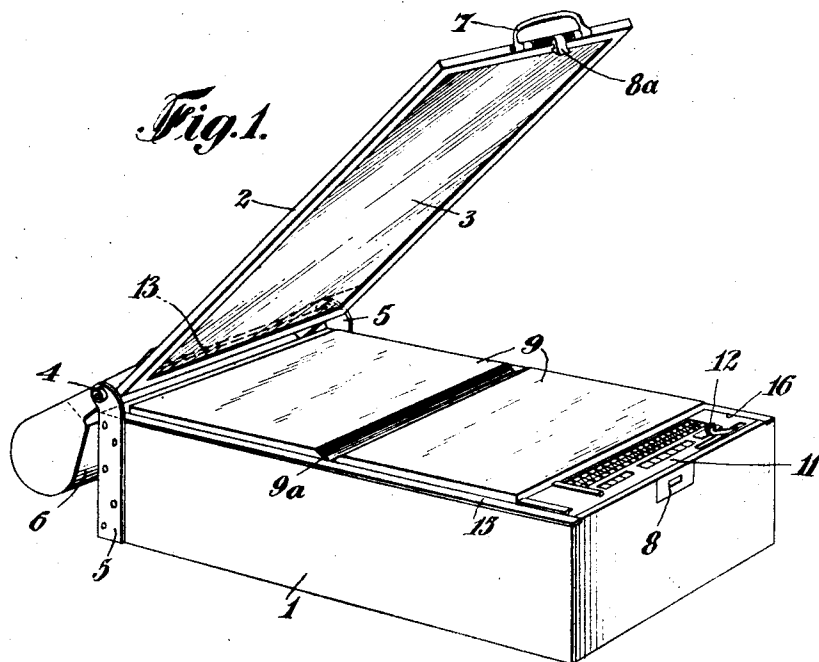
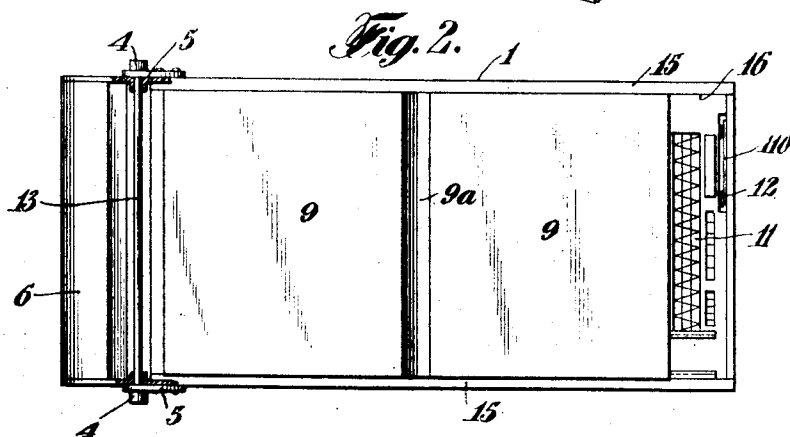
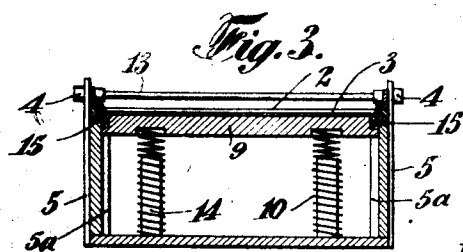
H. S. SATTERLEE

1,835,340

IDENTIFYING APPARATUS

Filed April 7, 1925

2 Sheets-Sheet 1



Inventor

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By His Attorney

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2 Sheets-Sheet 2

Fig. 4.

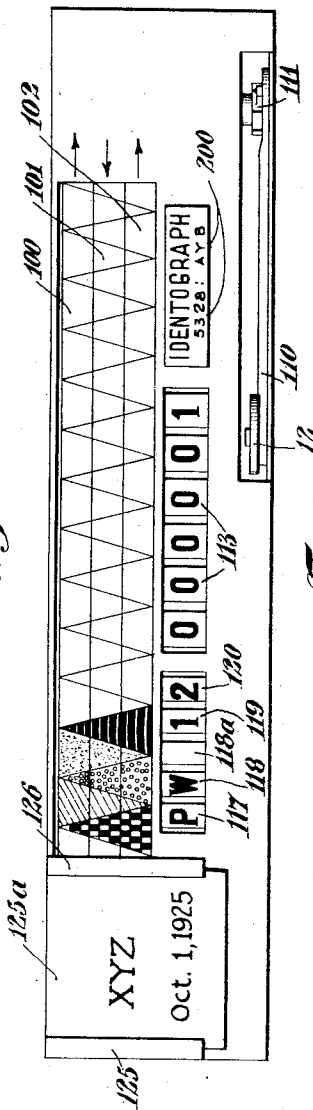


Fig. 5.

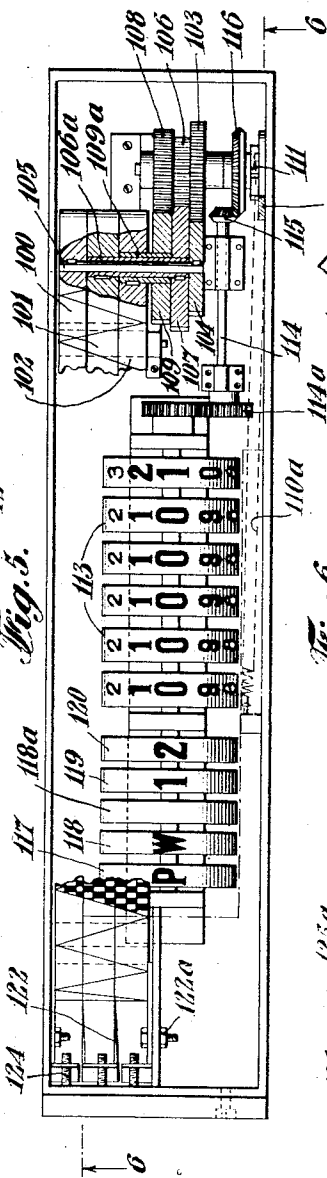
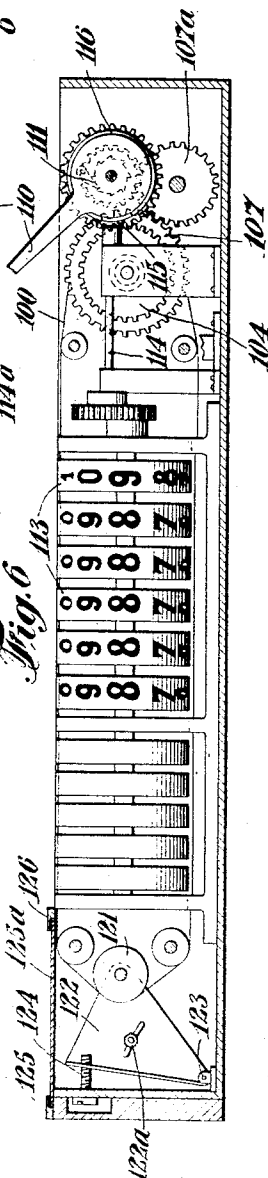


Fig. 6.



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UNITED STATES PATENT OFFICE

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IDENTIFYING APPARATUS

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My invention relates to an apparatus for the identification of photographic reproductions which it is desired positively to identify with the original and which cannot be altered or changed, and which reproductions might well carry the full force and effect of the original objects photographed.

While photographic reproductions are not uncommon, by applying my invention to objects such as checks, for instance, it is possible not only to record the original, but to place with that original an absolute identification related not only to the check itself, but to the place, the operator, the machine or a variety of other circumstances which would make identification of the document so positive as to remove all doubt.

The principle of my invention is subject to other wide use and is not confined solely to documents, but may be extended to any object capable of being photographed in the ordinary manner or with colored photography, and has a very wide range of usefulness beyond the obvious adaptation to the reproduction and identification of commercial or legal documents, such as exhibits, finger prints, drawings and the like.

In the preferred form which I choose to illustrate my invention, I employ a series of movable elements carrying identifying symbols. These elements may be movable one with respect to the other, or in sequence, or together, and there may be a plurality of sets of the symbol carrying elements the sets being worked in common with the elements or having different relations within themselves.

The identifying apparatus may be operated independently of the will of the operator, it may be operated entirely by him or part may be automatic and part manual.

Since it is one of the objects of my invention to associate with the object being reproduced, a positive identifying means, it will be seen that this invention is capable of wide variation and is not limited to the preferred embodiment, which I choose purely for the purposes of illustration and description.

In the following specification and draw-

ings I set forth this invention in one of its forms. In the drawings

Fig. 1 is a view in perspective, showing the reproducing means and the identifying means.

Fig. 2 is a plan view of Fig. 1.

Fig. 3 is a transverse section through Fig. 2.

Fig. 4 is a plan view of the identifying apparatus.

Fig. 5 is a plan view partly in section of Fig. 4 with the cover removed.

Fig. 6 is a longitudinal section through 6-6 of Fig. 5.

In Fig. 1 I show a frame or box 1 which has a hinged cover or focal registration member 2, including a transparent member 3 and hinged at 4 by the rod 13 attached to the supports 5 of the frame 1.

In order to facilitate operation of the cover or focal registration member 2 I provide a weight or counter-poise 6. The cover 2 has a handle 7 by which it may be raised and lowered, and at 8^a has a latch which is adapted to enter the recess 8 of the frame 1 to hold the cover or focal registration member 2 immovable in its closed or registering position and automatically to insure the focusing of the object contiguous to, and in a predetermined fixed plane with, the identifying apparatus 11. Within the frame 1 is a plurality of resilient supporting members or platens 9 which move in the vertical guides 5^a and which are firmly held against the cover 2 in its closed position by the springs 10 held in place by the uprights 14.

The upward movement of the platens 9 is limited by the stops 15 in the frame 1. By having more than one platen it is possible to photograph objects of varying thickness and by having a space such as 9^a between the adjacent edges of such platens, it is possible to give the apparatus a still wider range of usefulness. One of the uses of such an arrangement of platens would be the reproduction of pages of a book, where the independent platens would adjust themselves to the difference in thickness of the book and the back would fit into the groove 9^a, so that the surface presented for photographing would be a flat one and would lie in the focal plane of the under

surface of the transparent member 3 in the closed position of the focal registration member 2.

In the present instance I choose to provide a space 16 in the frame 1 wherein I place the identifying apparatus 11, which is shown in detail in Figures 4, 5 and 6. For the purposes of description I show, this identifying mechanism as having three endless belts 100, 101 and 102 upon which may be any desired series of symbols and which I show in this case as being of a triangular shape with different designs. These belts are driven in different directions as shown by the arrows in Figure 4 and for this purpose I provide a train of gearing having a series of concentric shafts; that is belt 100 would be driven by shaft 105, gear 104 and gear 103. Similarly belt 101 would be driven by shaft 106^a, gear 107 and gear 106. Belt 102 would be driven by shaft 109^a, gear 109 and gear 108. The belts 100 and 102 moving in the same direction and belt 101 in the opposite direction, it is necessary to reverse the direction of gear 107 and this I do by placing an idler gear 107^a between the gears 107 and 106 as shown in Figure 6. All of these gears 103, 106 and 108 are affixed to a common shaft which in turn is rotated by the oscillating movement of the arm 110 and this oscillating movement is transferred to the gears by a pawl and ratchet 111 and the arm 110 is normally held upward by the tension of the spring 110^a so that each time this arm 110 is depressed the gears are actuated, and when the arm 110 is released it resumes its upward position without affecting the gear mechanism. In Figures 1 and 4 this arm 110 is shown in its upward position and having the roller 12 affixed to its end. Also on the same shaft, actuated by the arm 110, is a bevel gear 116 meshing with bevel pinion 115 adapted to drive the shaft 114 which turns the wheels 113 through the gearing 114^a. These wheels 113 are indicating wheels which carry symbols and in the present instance I show them as indicating and accumulating wheels for serial numbers; that is, 999,999 numbers in sequence could be shown on these wheels before a new series would have to be started. At 117, 118, 118^a, 119 and 120 are other indicating wheels, but these differ from the first wheels inasmuch as they are not automatically operated, but any one of them may be set at any position at the will of the operator to register any symbol or series of symbols desired.

Close to the symbol carrying elements just described, I may also provide guides 125 and 126 in which may be inserted a card carrying any legend such as names or numbers which will be photographically registered in association with the other symbols.

At 200, in Figure 4, is a series of fixed symbols such as the name of the machine, the manufacturer's serial number of that machine

and a code giving the particular symbol belts used with the corresponding gear ratios.

The belts 100, 101 and 102 being endless it is desirable to provide some means for maintaining upon them the proper tension and this I do by having an idler pulley 121 affixed to the support 122 pivoted at 123 and adjustable for tension by the screw 124. When the desired tension has been secured, plate 122 may be secured in position by the binding screw 122^a.

Having described the parts of my invention in its preferred form, I will now explain its operation.

When an object is positioned upon the platens 9 and the cover or focal registration member 2 is brought by the handle 7 into its closed or focus-coordinating position, it will be held there by the latch 8^a entering its retainer 8 and in turning down this cover it will contact the roller 12 on the arm 110 to force it downward thus automatically actuating the symbol-changing device as follows: The pawl and ratchet 111 being in engagement, the gears 103, 106 and 108 will rotate a short distance to move the belts 100, 101 and 102 in their respective directions and the symbols on these belts will then assume a combination for the particular reproduction to be made. Also, the wheels 113 will be rotated through the bevel gear and pinion 116 and 115 to show the proper serial number. The wheels to the left of wheels 113 will not move but will present the symbols determined upon in advance by the operator. In the present instance the PW might stand for Perkins against Walker, and the 12 represent that this reproduction was of the 12th paper in the case. The card placed in the guides 125 and 126 would give the operator's name and the date upon which he was operating the machine. Therefore, with the apparatus set as shown, there would be a definite symbol combination on the belts 100, 101 and 102, identifying code at 200 for the particular machine and belts used, the serial number of the copy at 113, the matter to which the reproduction relates shown at 117 and 118 and the place of the document in that matter at 119 and 120 and the operator's name and the date on the card 125^a.

So, it will be seen that there is a positive and unalterable identification with each photographic reproduction made which relates to so many associated facts and circumstances as to make that identification absolute.

As soon as one operation is complete, the cover 2 is raised for the insertion of a new object and the arm 110 with its roller 12 will rise and remain upward until the cover is again lowered, when the arm 110 is depressed the gears are again rotated a predetermined amount and there will be a new combination

of symbols on the belts and a new serial number on the wheels 113.

This change of symbol combination and serial number will continue for each object inserted in the machine, and it will be seen that such operation is entirely independent of the will of the operator, for while the arm 110 might be conceivably actuated by him, the movement of the belts 100, 101 and 102 is relatively small and the number of possible combinations innumerable, so that it would be impossible for any operator to secure the same symbol combination with the same serial number on any two documents. While I illustrate the method of driving the belts by means of friction contact for the sake of simplicity in the drawings, I do not limit myself to such a method, as a positive drive by sprocket wheels or other means in place of the friction drums on shafts 105, 106^A and 109^A and a suitable conveyor belt with linked sections bearing the symbols on their faces, would be equally capable of accomplishing the same purpose.

From the foregoing it will be clear that I provide a positive identification for the photographic reproduction of objects, and that my invention is adaptable to a very wide field of use beyond what I have described, and I desire to bring within the scope of my claims all such adaptations and changes.

I claim:

1. In a device of the kind described, means for holding objects in a given photographic field, means carrying a plurality of identifying symbols associated therewith, and means actuated by said first-mentioned means for bringing various combinations of said symbols into said photographic field.

2. In a device of the kind described, a transparent member defining a photographic field, resilient means for holding objects of variable thickness against and in substantially the same focal plane with said member, means carrying a plurality of identifying symbols associated with said member, and means actuated by said member for bringing various combinations of said symbols into said photographic field.

3. In a device of the kind described, the combination of a frame, a hinged transparent member mounted thereon and defining a photographic field, a plurality of resilient supporting means slidably mounted in the frame and spaced from one another, identifying means comprising a plurality of symbols carried by said frame, and means actuable on movement of said hinged member for bringing various combinations of said symbols into said photographic field.

4. In a device of the class described, in combination, means adapted to receive and hold an object to be copied, means associated therewith and adapted to expose an identifying symbol adjacent said object, and means

actuated by movement of said object-holding means for automatically changing the symbol prior to each exposure.

5. In a device of the class described, in combination, means adapted to receive an object to be copied and hold it in a given photographic field, means associated therewith for displaying identifying symbols in said field, and means automatically operative to prevent repetition of said symbols when said object-holding means is moved to receive a different object.

6. In a device of the class described, in combination, means adapted to receive an object to be copied and hold it in a given photographic field, means associated therewith for displaying identifying symbols in said field, and automatic means for insuring a change of said symbols when said object-holding means is moved to change the object.

7. In a device of the class described, in combination, means adapted to receive an object to be copied and hold it in a given photographic field, means associated therewith for displaying identifying symbols in said field, and automatic means for changing said symbols when said object-holding means is moved to change the object.

8. In a device of the class described, in combination, means adapted to receive an object to be copied and hold it in a given photographic field, means associated therewith for automatically displaying a change of identifying symbols in said field according to a predetermined progression, means for mechanically actuating said latter means in coincidence with the positioning of successive documents to be copied, and means displaying symbols in said field adapted to impart a common identification mark upon all copies made with said device.

9. In a device of the kind described, in combination, means for receiving an object to be copied and holding it in a given photographic field, means for displaying various identifying symbols in said field, and means operable by said object-holding means when moved to receive a different object for changing the symbols to form different combinations independent of control by the operator.

10. In a device of the kind described, in combination, supporting means for an object to be copied, means for holding said object thereon in a given photographic field, means for displaying various identifying symbols in said field comprising a plurality of longitudinally movable elements adapted to move with respect to each other to form combinations of symbols, means to drive said elements at predetermined speeds and in predetermined directions, and oscillating means actuable on movement of said holding means to object-holding position to actuate said driving means.

11. In an object-holding device for the

photographic copying of objects having a flat surface, as documents, coins, textiles, X-ray films and the like, in combination, a fixed reference frame enclosing a flat surfaced identifying means, a depressible platen adapted to support a flat surfaced object, a coacting transparent member adapted to co-act by its surface with said identifying means and said object so as to bring them both into a fixed and predetermined focal plane at said surface, means connecting said identifying means and said coacting member to produce reciprocal action of said means by the act of coacting said member to said object, means for separating said coacting member from said identifying means and from said platen to interpose or remove said object.

12. In an object-holding device for the photographic copying of objects having a flat surface, as documents, coins, textiles, X-ray films and the like, in combination, a reference frame and identifying means presenting to view on its face and within said reference frame a plurality of movable elements having identifying symbols thereon, an object-holding means associated with said frame, means for positioning said face of the identifying means and the surface of an object to be copied in the same photographic plane and field, means connecting said identifying means and said object-supporting means and responsive to movement of said positioning means for producing relative movement between the symbol-carrying elements of said identifying means.

13. In a device for identification of objects by photography, in combination, a reference frame in the field and plane to be photographed bearing reference marks of a permanent character, movable means adapted to expose identifying combinations of changeable symbols adjacent to an object within said reference frame, and means for automatically changing the combination of said symbols prior to each positioning of an object for photographic exposure.

14. In an object-holding device for the photographic copying of objects having a flat surface, as documents, coins, textiles, X-ray films and the like, in combination, a movable photographic-plane-positioning member and an object-coacting member, an identifying means adapted to step-by-step motion, an actuating member adapted to impart movement to said identifying means and to be actuated by coactive operation of said movable photographic-plane-positioning member with said object-coacting member.

15. In a device of the kind described, in combination, a reference frame bearing identifying indicia for automatically recording the identity of said device upon all photographic copies made in conjunction with said device, means for distinctively identifying said copies one from another by a non-dupli-

cating system of perpetually differential notation, and means for photographically marking said copies with additional indicia under control of the operator of the apparatus.

16. In a device of the kind described, in combination, a reference frame bearing distinctive indicia for recording the identity of said individual device upon all photographic copies made in conjunction with said device, means for distinctively and automatically identifying all copies one from another when made by separate operations of said device, by action of a non-duplicating system of positively differential symbol notation in unlimited progressive series, additional automatic means for quick classification of said copies by an ordinary limited numbering system associated with said non-duplicating system and cooperating therewith, and means for photographically marking said copies with further indicia at the will of the operator.

In testimony whereof, I have signed my name to this specification this 3rd day of April, 1925.

HENRY S. SATTERLEE.