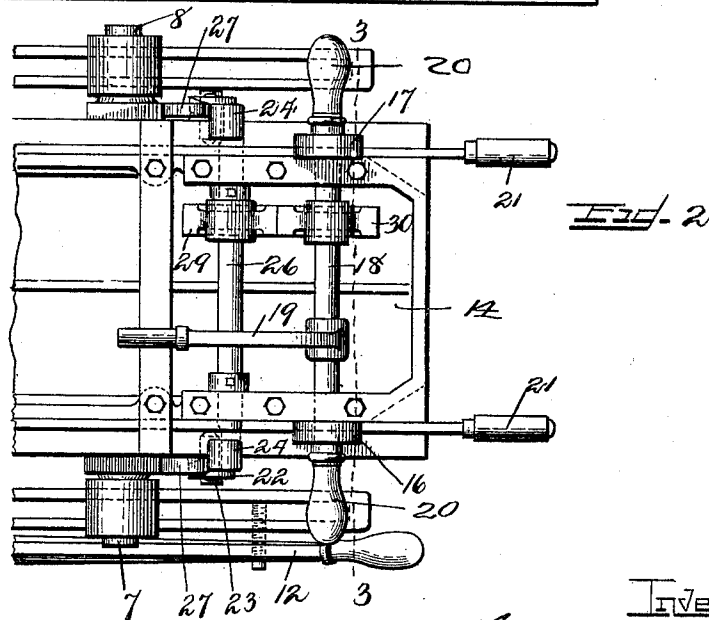
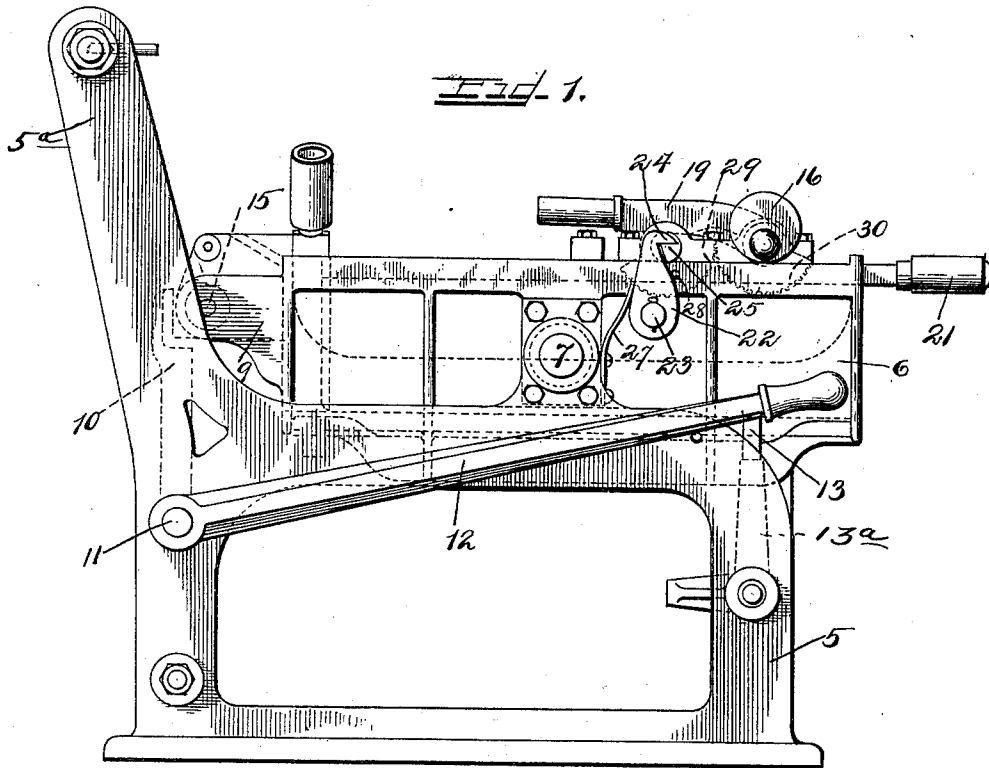


S. G. GOSS.
CASTING BOX FOR STEREOTYPING.

(Application filed Dec. 4, 1899.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES

J. B. Weir
Ira D. Perry

INVENTOR

Samuel G. Goss,
by Bond & Sons, his attorneys.

No. 697,141.

Patented Apr. 8, 1902.

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(Application filed Dec. 4, 1899.)

(No Model.)

2 Sheets—Sheet 2.

FIG. 3.

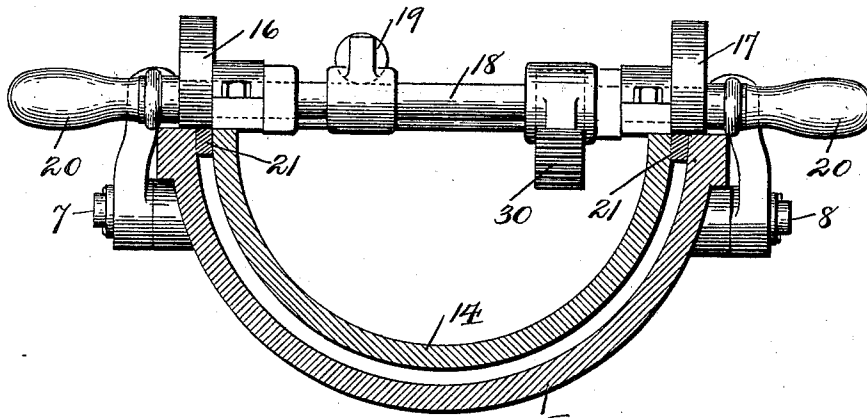
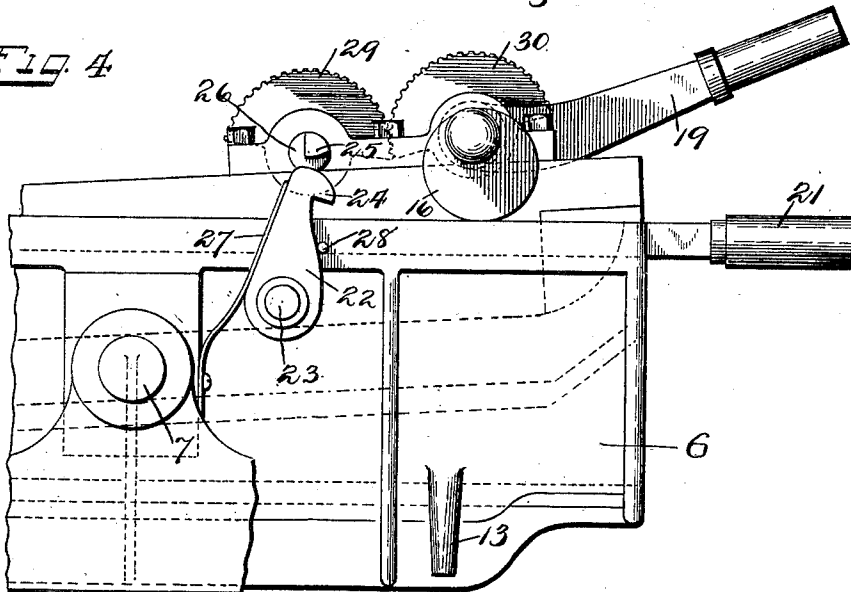


FIG. 4.



WITNESSES:

J. B. Weir

Ora D. Perry

INVENTOR:

Samuel G. Goss.
by Bond Adams Peckham
his Atty

UNITED STATES PATENT OFFICE.

SAMUEL G. GOSS, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE GOSS PRINTING PRESS COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

CASTING-BOX FOR STEREOTYPING.

SPECIFICATION forming part of Letters Patent No. 697,141, dated April 8, 1902.

Application filed December 4, 1899. Serial No. 739,150. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL G. GOSS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Casting-Boxes for Stereotyping, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to casting-boxes used for stereotyping, and has for its object to provide new and improved locking mechanism for locking the core in the case and for unlocking and raising the core from the case when a cast has been made. I accomplish this object as illustrated in the drawings and as hereinafter described.

That which I regard as new will be set forth in the claims.

In the accompanying drawings, Figure 1 is a side elevation of a casting-box, showing my improvements. Fig. 2 is a partial plan view of the same. Fig. 3 is an enlarged detail, being a cross-section on line 3 3 of Fig. 2; and Fig. 4 is an enlarged partial side elevation, part of the frame being broken away.

Referring to the drawings, 5 indicates the frame or base of the machine, which is of suitable shape to support the parts.

6 indicates the case of the casting-box, which is of the usual shape and is mounted upon trunnions 7 8, supported on the base.

9 indicates a projecting block at the rear end of the case which is adapted to rest in a notch at the upper end of a supporting-standard 10, mounted upon a rock-shaft 11, supported in the frame, as illustrated in Fig. 1. The shaft 11 is rocked by a lever 12. The front end of the case is supported on legs 13 in the usual way, as shown in Figs. 1 and 4, so that the case may be supported in a horizontal position. As shown in Fig. 1, the rear portion of the frame 5 is provided with upwardly-extended arms 5^a for support of parts not shown. The legs 13 are shown as resting on standards 13^a, that are supported by the frame. When it is desired to turn the case into a more or less vertical position for making a cast, the lever 12 is thrown up, releasing the block 9, permitting the case to be rocked upon its trunnions.

The arrangement of the parts above described does not constitute a part of my present invention.

14 indicates the usual core, which is adapted to fit in the case 5 and is hinged to the block 9 of the case by a pivot 15, (shown in dotted lines in Fig. 1,) the arrangement being such that by rocking the core upon its pivot 15 it may be raised out of the case or moved down into the proper position for making a cast. The core 14 is prevented from entering too far into the case 5 and is lifted partly out of the case by cams 16 17, mounted at the opposite ends of a transverse shaft 18, carried by the core, near its forward end, said cams being arranged to rest upon the side edges of the case, as best illustrated in Fig. 3. They are arranged so that when turned into position to permit the core to enter the case to the greatest extent the proper space will remain between the core and the case for the cast. When, however, the shaft 18 is rocked, the cams 16 17 cause the shaft 18 to rise from the case, carrying the core with it, as illustrated in Fig. 4, detaching the core from the case after the cast has been made, so that it may readily be turned to a vertical position for the removal of the plate. A lever 19 is provided for rocking the shaft 18 to operate said cams.

20 indicates handles which project from the ends of the shaft 18 for use in raising the core.

21 indicates side strips which are arranged to fill the upper ends of the space between the core and the case, the forward ends of said strips being arranged to extend beyond the case, as illustrated in Figs. 2 and 4.

The core is locked in the case for making a cast by latches 22, one of which is pivoted at each side of the case upon pivots 23, as illustrated in Figs. 2 and 4. Said latches 22 are provided with hooks 24 near their upper ends, which hooks are adapted to engage segmental lugs 25, provided at the opposite ends of a shaft 26, which is mounted upon the upper side of the core and extends transversely thereof parallel with the shaft 18, as shown in Fig. 2. The segmental lugs 25 are adapted to be engaged by the hooks 24 when the core is in operative position, as illustrated in

Fig. 1, thereby locking the core in the case and preventing it from rising independently of the case. The latches are held in operative position by springs 27, as best shown in Figs. 1 and 4. The upper ends of the latches 22 are beveled, as shown in Fig. 4, and they are so adjusted as to lie immediately opposite the lugs 25, so that when the core is fitted into the case for making a cast the lugs 25 strike the beveled ends of the latches 22 and force them back, permitting the lugs to pass below the hooks 24 when the springs 27 throw the latches back into engagement with said lugs. Pins 28, projecting from the case, limit the forward movement of the latches, as shown in Fig. 4. The core is automatically released to permit the form to be removed after a cast by the operation of segmental racks 29 30, mounted, respectively, on the shafts 26 and 18, as shown in Figs. 2 and 4, said racks being in mesh with each other, so that when the shaft 18 is rocked by operating the lever 19 the shaft 26 is reversely rocked. It will be noted from an inspection of Fig. 4 that in order to raise the core from the case the lever 19 is moved to the right. This results in a reverse movement of the shaft 26, which is rocked in the direction opposite to that in which the hands of a clock move, carrying the lugs 25 out from engagement with the hooks 24, as illustrated in Fig. 4, this action taking place immediately before the cams 16 17 begin to lift the core out of the case. When the lever reaches the forward limit of its movement, the parts are in the position shown in Fig. 4. After the plate has been removed, if a new cast is to be made, the lever 19 is thrown over to the left, carrying the cams 16 17 into position to permit the core to be fitted into the case. This action carries the lugs 25 into position to be engaged by the latches 22, so that when the core enters the case the latches 22 are forced back by the lugs, which engage their upper beveled ends, as already described, their backward movement continuing until the lugs reach the proper position to be engaged by said latches, when the automatic locking is effected through the action of the springs 27. The above-described construction provides, therefore, for the automatic locking and unlocking and raising of the core when the lever 19 is operated.

When the matrix is to be placed in the case, the latter is in its horizontal position, the core being then raised to a substantially vertical position. After the matrix has been adjusted the core is fitted into the case by swinging it down upon its pivot to a horizontal position, the lever 19 being then in the position shown in Fig. 1, so that as the core is fitted into the case it is automatically locked by the latches 22. The core and the case are then turned to a substantially vertical position upon the trunnions 7 8 and the cast is made, the core being still locked in the case by said latches. After the cast is made the case is

returned to its horizontal position and the lever 19 is thrown over to the right, automatically releasing the core from the case and lifting it to the position shown in Fig. 4, after which the core may be readily raised to a more or less vertical position to permit the removal of the stereotype-form. It will thus be seen that the core is automatically locked to the case when it is fitted therein and is automatically unlocked whenever it is lifted out of the case. This, so far as I am aware, is an entirely new operation and constitutes, broadly, one of the important features of my present invention, which, however, includes also the described devices by which this result is accomplished. Except as such devices are specifically claimed, however, I do not limit myself to the details of the construction described and shown, as various modifications may be made without departing from my invention.

That which I claim as my invention, and desire to secure by Letters Patent, is—

1. In a casting-box, the combination of a case, a core pivoted to said case and adapted to fit therein, locking mechanism adapted to lock the core in the case, means for throwing the locking devices into engagement as soon as the core is brought to operative position in the case, core-lifting devices, and gearing which operates to unlock the core when said lifting devices are actuated to lift the core out of the case, substantially as described.

2. In a casting-box, the combination of a case, a core pivoted to said case and adapted to fit therein, locking mechanism adapted to lock the core in the case, means for throwing the locking devices into engagement as soon as the core is brought to operative position in the case, core-lifting devices carried by the core, and gearing which operates to unlock the core when said lifting devices are actuated to lift the core out of the case, substantially as described.

3. In a casting-box, the combination of a case, a core pivoted to said case and adapted to fit therein, cam mechanism mounted on said core and adapted to engage said case for lifting the core out of the case, locking devices adapted to secure the core in the case, means for throwing the locking devices into engagement as soon as the core is brought to operative position in the case, and gearing actuated by the operation of said lifting mechanism for unlocking the core from the case, substantially as described.

4. In a casting-box, the combination of a pivotally-mounted case, a core pivoted to said case and adapted to fit therein, locking devices adapted to lock the core in the case, means acting independently of the movement of the case for throwing the locking devices into engagement as soon as the core is brought to operative position in the case, lifting devices carried by the core and adapted to engage the case for lifting the core out of the case, and gearing actuated by the operation

of said lifting devices for unlocking said core, substantially as described.

5 In a casting-box, the combination of a case, a core pivoted thereto at one end and adapted to fit in said case, transverse shafts carried by said core, cams carried by one of said shafts and operating to raise the core out of the case, lugs carried by the other of said shafts, locking devices carried by the case and acting to engage said lugs to lock the core in the case, means connecting said shafts so that they will rotate simultaneously, and a lever for rotating said shafts, substantially as described.

15 6. In a casting-box, the combination with a case, of a core pivoted at one end and adapted to be fitted in said case, parallel transverse shafts carried by said core, cams carried by one of said shafts for raising the core out of the case, lugs carried by the other of said shafts, locking devices carried by the case and adapted to engage said lugs to lock the core in the case, means connecting said shafts whereby they will rotate simultaneously, and a lever for rotating said shafts, substantially as described.

20 7. In a casting-box, the combination with a case, of a core pivoted at one end and adapted to be fitted in said case, parallel transverse shafts carried by said core, cams carried by one of said shafts for raising the core out of the case, lugs carried by the other of said

shafts, locking devices carried by the case and adapted to engage said lugs to lock the core in the case, and intermeshing gears carried by said shafts for rotating them simultaneously in opposite directions, substantially as described.

8. In a casting-box, the combination with a case, of a core pivoted at one end and adapted to be fitted in said case, parallel transverse shafts carried by said core, cams carried by one of said shafts for raising the core out of the case, segmental lugs carried by the other of said shafts, spring-latches carried by the case and adapted to engage said lugs to lock the core in the case, means connecting said shafts whereby they will rotate simultaneously, and a lever for rotating said shafts, substantially as described.

9. In a casting-box, the combination of a pivotally-mounted case, a core pivoted thereto at one end and adapted to fit therein, movable lugs carried by said core at opposite sides thereof, spring-latches carried by said case and adapted to engage said lugs to lock the core in the case, and means for moving said lugs out of engagement with said spring-latches to release the core from the case, substantially as described.

SAMUEL G. GOSS.

Witnesses:

JOHN L. JACKSON,
C. E. PICKARD.