

No. 668,681.

Patented Feb. 26, 1901.

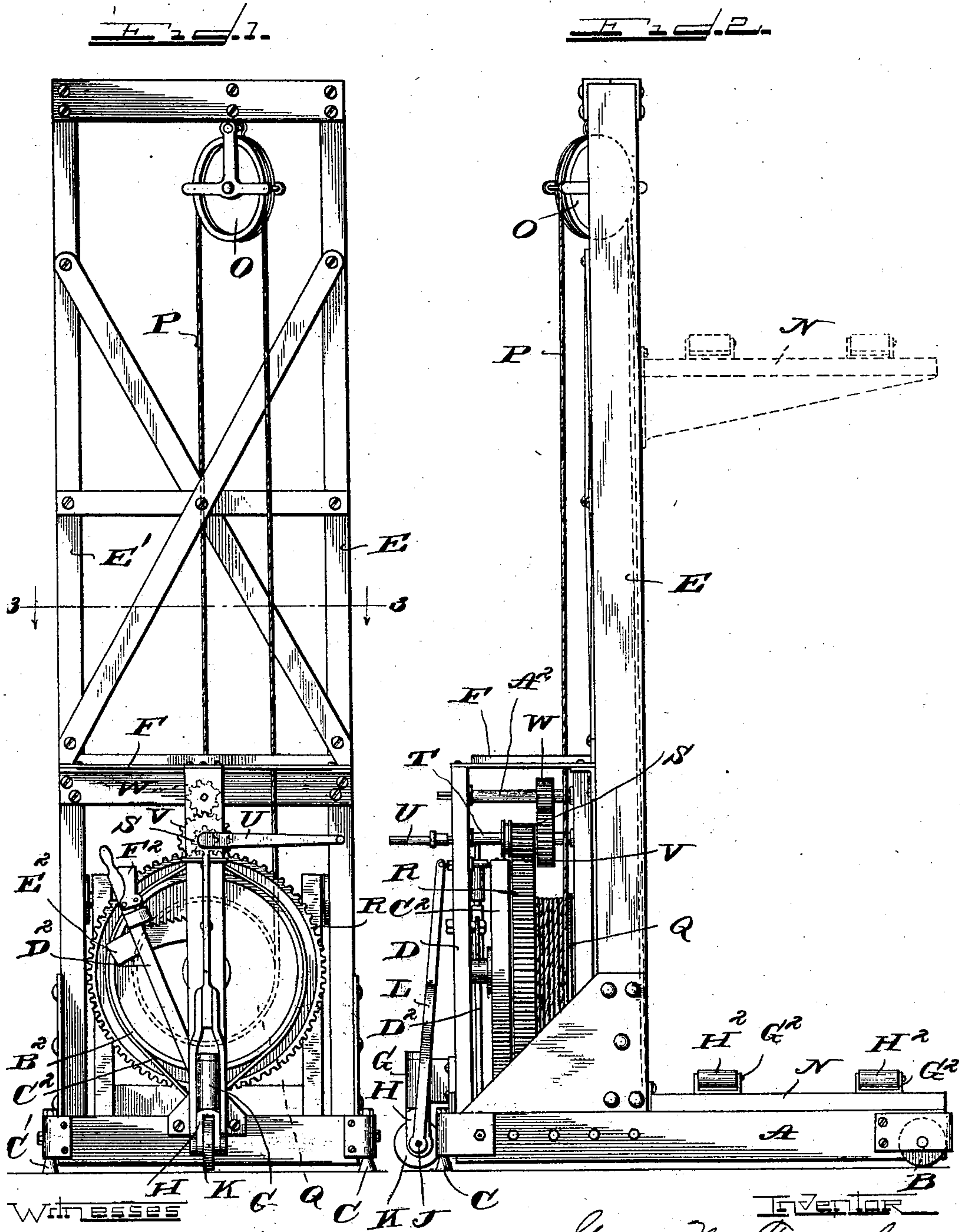
G. M. FRENCH.

MACHINE FOR STACKING OR PILING BOXES, PACKAGES, BARRELS, &c.

(Application filed Sept. 27, 1900.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses

J. A. Ruberschnitt.

H. S. Gaither.

Inventor

George M. French

By Brown & Darby

Attys

No. 668,681.

Patented Feb. 26, 1901.

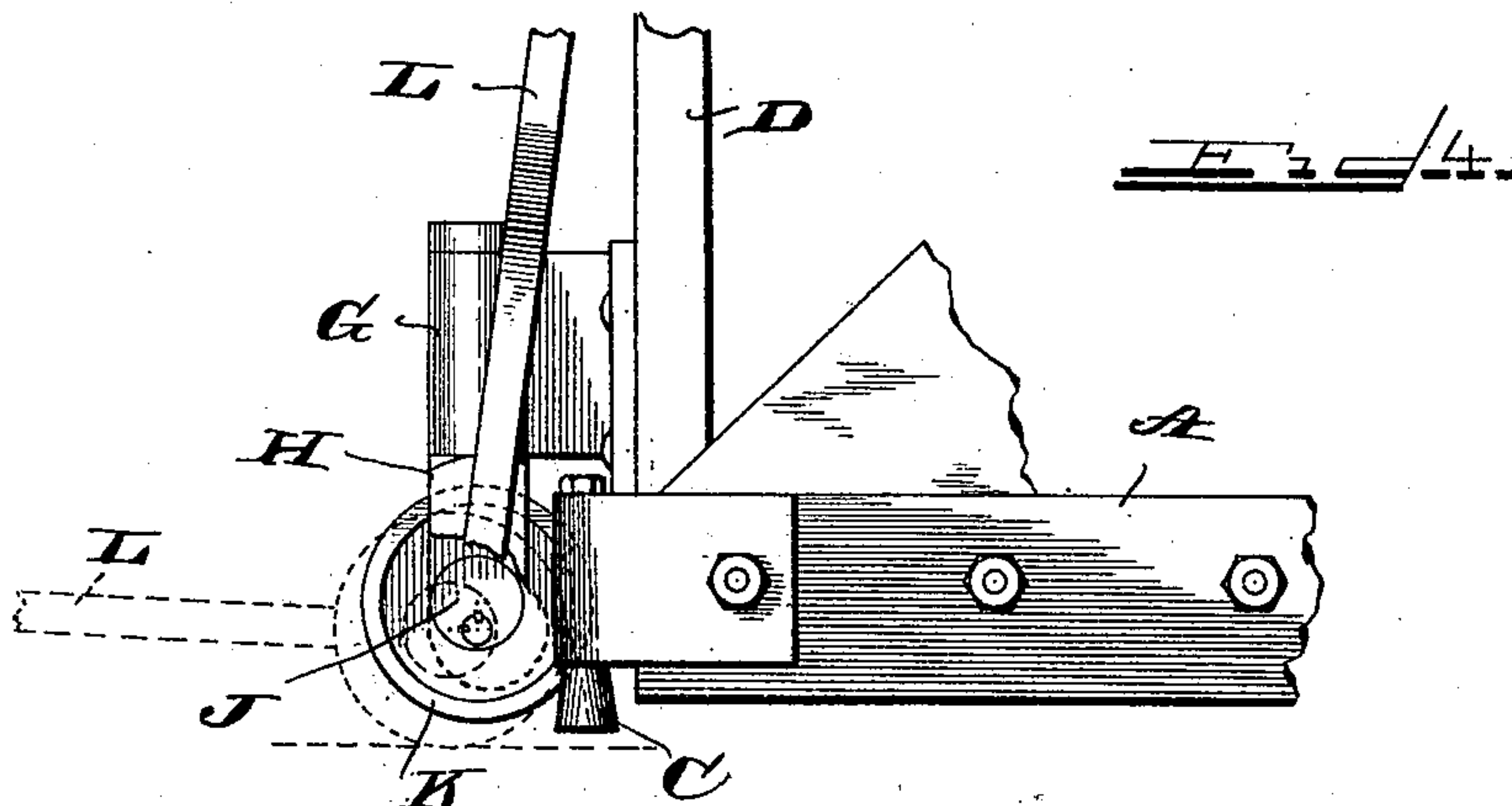
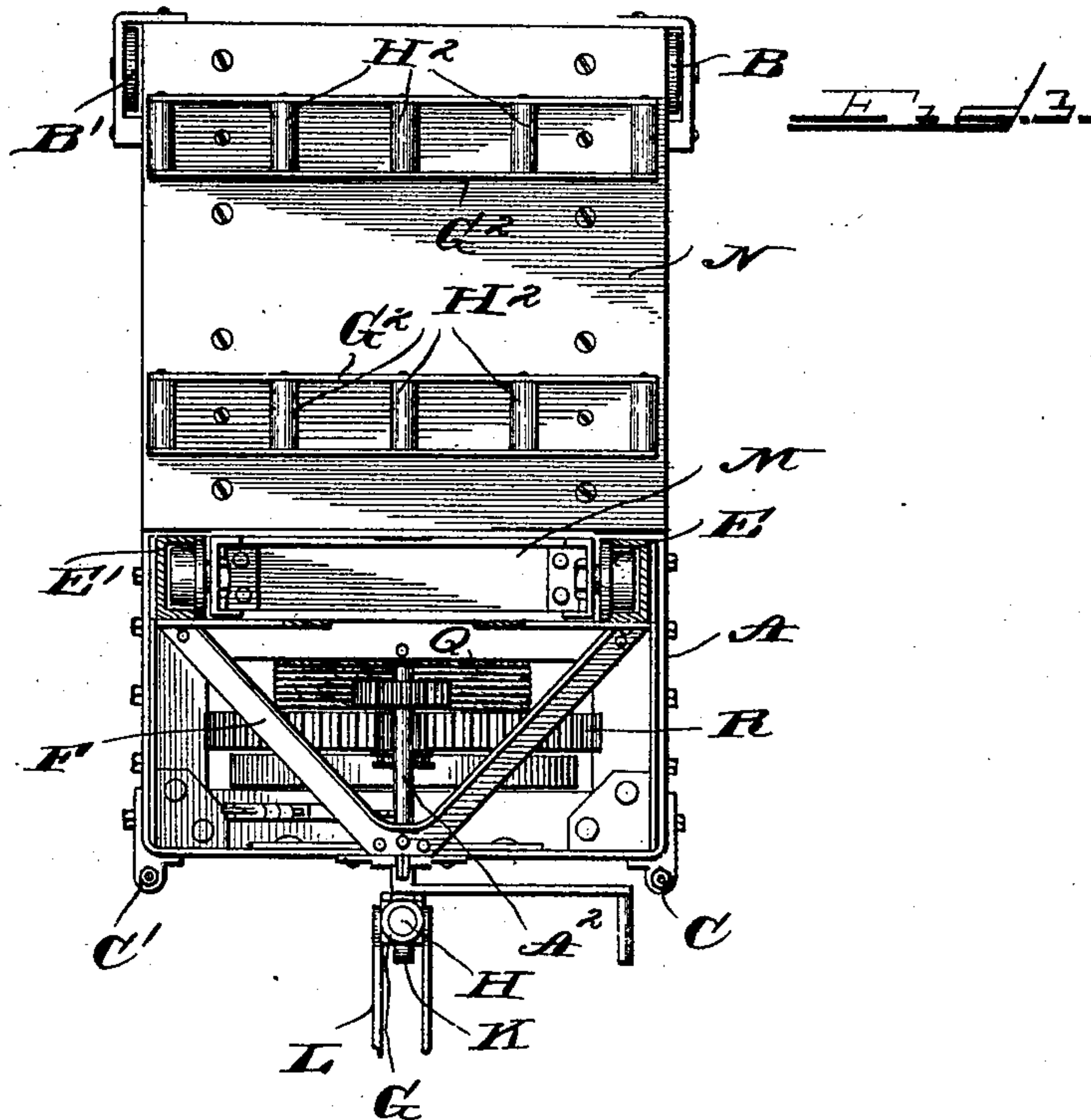
G. M. FRENCH.

MACHINE FOR STACKING OR PILING BOXES, PACKAGES, BARRELS, &c.

(Application filed Sept. 27, 1900.)

(No Model.)

2 Sheets—Sheet 2.



Witnesses

A. A. Pauberschmidt
H. S. Gauthier

INVENTOR

George M. French
By Brown & Darby
ATTY/S

UNITED STATES PATENT OFFICE.

GEORGE M. FRENCH, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE OTIS ELEVATOR COMPANY, OF EAST ORANGE, NEW JERSEY.

MACHINE FOR STACKING OR PILING BOXES, PACKAGES, BARRELS, &c.

SPECIFICATION forming part of Letters Patent No. 668,681, dated February 26, 1901.

Application filed September 27, 1900. Serial No. 31,248. (No model.)

To all whom it may concern:

Be it known that I, GEORGE M. FRENCH, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Machine for Stacking or Piling Boxes, Packages, Barrels, and the Like, of which the following is a specification.

This invention relates to machines for stacking or piling boxes, packages, barrels, and the like.

The object of the invention is to provide a machine which is simple, easily operated, and efficient for stacking or piling up boxes, barrels, and the like.

The invention consists, substantially, in the construction, combination, location, and arrangement, all as will be more fully hereinafter set forth, as shown in the accompanying drawings, and finally pointed out in the appended claims.

Referring to the accompanying drawings, and to the various views and reference-signs appearing thereon, Figure 1 is a view in front elevation of a machine constructed in accordance with the principles of my invention. Fig. 2 is a side elevation of the same. Fig. 3 is a transverse section on the line 3 3, Fig. 1, looking in the direction of the arrows. Fig. 4 is a broken detail view showing the eccentric box of the combined guiding and supporting truck-wheel.

The same part is designated by the same reference-sign wherever it occurs throughout the several views.

In large commercial establishments, and particularly in establishments devoted to the packing, shipping, storing, or handling of boxes, packages, barrels, and the like, it is a matter of material importance to provide means for quickly and efficiently handling the boxes, packages, barrels, and the like, and to pile or stack the same in tiers upon each other in order to secure and utilize all the space possible. Where barrels, boxes, or the like are stacked or piled upon each other, it is difficult to readily and easily handle the same or to raise them by hand a sufficient distance to enable them to be properly stacked or piled. It is the main purpose of the present invention to provide a machine which enables

the piling or stacking of boxes, packages, barrels, or the like to be accomplished expeditiously and with the least possible manual labor, and the invention contemplates the provision of a machine for accomplishing these objects, which is portable and therefore capable of being easily moved or shifted from one point to another.

In the accompanying drawings, wherein I have illustrated a construction embodying the principles of my invention, reference-sign A designates a base frame or truck suitably mounted at the rear edge thereof upon truck-wheels B B', said truck-wheels being journaled in bearings formed in or carried by the rear edge or end of the truck-frame. At its front edge or end the truck-frame is provided with legs or standards C C' at the corners thereof, as clearly shown. Suitably bolted or otherwise secured to the front end of the truck-frame is a standard D, and also mounted upon the truck are the upright guiding-frames E E', the upper end of the standard D being securely braced to the upright guiding-frames by any suitable means—as, for instance, the brace-bars F. Suitably bolted or otherwise secured to the standard D is a box G, in which is mounted to rotate upon a vertical axis the stem of a yoke H. Eccentrically journaled in yoke H is a pin J, and upon said pin is journaled to freely rotate a truck-wheel K. A handle-lever L is mounted upon the eccentric J. The eccentricity of the eccentric pin J is so graduated and arranged that when the handle-lever L occupies its extreme raised position, as shown in Figs. 1 and 2, the truck-wheel K is raised clear of the floor or ground and the truck-frame and the mechanism supported thereby rest upon the supporting legs or feet C C', as clearly shown. When, however, the handle-lever L is lowered into the position indicated in dotted lines in Fig. 4, the support of the front end of the truck-frame falls upon the truck-wheel K and the front end of the truck-frame is sufficiently raised above the floor or ground to enable the legs or feet C C' to clear the floor, thus imposing the weight of the truck-frame at its front end upon the truck-wheel K, and since at all times the rear end of the truck-frame is supported upon the

truck-wheels B B' it will be readily understood that by lowering the handle-lever L into the position shown in dotted lines in Fig. 4 the entire structure or machine is supported upon
 5 truck-wheels, thereby enabling a workman to employ the handle-lever L to readily shift the position of the machine from one point to another upon its supporting truck-wheels, and when the handle-lever L is raised to its
 10 upright position, as shown in Figs. 1 and 2 and in full lines in Fig. 4, the weight of the front end of the machine is again imposed upon the feet or legs C C', thereby causing the machine to be firmly supported upon the
 15 ground or floor. Thus it will be seen that I provide an exceedingly simple construction and arrangement whereby the machine may be readily converted from a stationary into a portable apparatus for the purposes intended.
 20 The upright guides E are constructed to receive and guide a frame M, forming part of a vertically-movable platform N. The upright framing, of which the guides E E' form a part, carries at its upper end a guide-sheave
 25 O. Over this guide-sheave operates a cable P, one end of which is secured to the frame M or platform N and the other end of which after passing upwardly and over the guide-sheave O passes down and is secured to a
 30 coiling-drum Q, the shaft of such coiling-drum being suitably journaled in the framing of the machine. Upon the shaft of said drum is mounted a gear-wheel R, arranged to be engaged and driven by a pinion S,
 35 mounted on a counter-shaft T, suitably journaled in the framing and having its end arranged to receive an operating-handle U, the rotation of which effects a coiling of the hoisting-cable upon the drum and a consequent
 40 raising of the platform N. If desired and in order to reduce the power required to elevate the platform N at the expense of speed, the counter-shaft T may be geared, through the intermeshing pinions V W, with a second
 45 shaft A², having its end suitably adapted to receive the operating-handle U, the gears V W being so relatively proportioned as to size as to reduce the power required to elevate the platform N.
 50 It is obvious that any other simple or convenient arrangement of hoisting mechanism for the platform N may be provided without departure from the spirit or scope of my invention.
 55 If desired, the hoisting-drum Q may be provided with a brake-wheel B², (see Fig. 1,) upon which is mounted a brake-strap C², the ends of said strap being connected to a brake-lever D², said lever being arranged to operate over
 60 a segment-rack E² and provided with a pivoted latch F² in the usual manner. Thus when the platform N has been raised to the desired height an application of the brake-strap serves to maintain the platform in such
 65 position, and when it is desired to lower the platform such lowering may be effected by suitably manipulating the brake-lever to per-

mit the weight of the platform to unreel the hoisting-cable from the winding-drum, the proper manipulation of the brake-lever preventing a too-rapid return or lowering of the platform. Of course it is obvious that the platform may be lowered manually by the proper manipulation of the operating-handle U.

From the foregoing description it will be seen that I provide an exceedingly simple manually-operated elevating mechanism for the platform.

If desired, and preferably, the platform is provided on its upper surface with guide-rails G², in which are journaled antifriction supporting-rollers H², upon which the box, package, barrel, or the like rests, thus facilitating the transfer of such box, package, barrel, or the like to and from the platform.

The operation of the apparatus will be clearly understood from the foregoing description, taken in connection with the accompanying drawings, and is as follows:
 Where it is desired to pile or stack up boxes, packages, or the like, such boxes or packages are placed upon the platform and elevated to a level with the top of the previously stacked or piled up boxes or packages and then are transferred from the platform to the top of the previously piled or stacked up boxes or packages. The platform is then lowered and receives another load and is again elevated to the required height to be transferred to the top of the stack or pile, the brake mechanism serving to hold the platform in position when the desired height has been attained. In Fig. 2 an elevated position of the platform is indicated in dotted lines. When it is desired to shift the position of the hoisting apparatus from one point to another, the handle-lever L is lowered, so as to raise the truck-frame and the supporting-feet thereof at its front edge or corners and to impose the entire weight thereof upon the trucks. Thereupon by employing the handle-lever after the manner of a truck-handle the entire apparatus may be shifted from one position to another, and by pivoting the front truck-wheel K upon a vertical axis the entire machine may be turned or transported, as may be desired.

It is obvious that many variations and changes in the details of construction and arrangement would readily suggest themselves to persons skilled in the art and still fall within the spirit and scope of my invention. I do not desire, therefore, to be limited or restricted to the exact details shown and described; but

Having now set forth the object and nature of my invention and a construction embodying the principles thereof, what I claim as new and useful and of my own invention, and desire to secure by Letters Patent of the United States, is—

1. In a machine for stacking or piling boxes, packages, barrels and the like, a platform, a

hoisting mechanism therefor, a truck upon which said platform and hoisting mechanism are mounted, truck-wheels supporting the rear end of said truck, a supporting truck-wheel at the front end of said truck, and an eccentric bearing in which said front truck-wheel is journaled, and means for actuating said bearing for moving said front truck-wheel into and out of operative relation, as and for the purpose set forth.

2. In a machine of the class described, a platform, a hoisting mechanism therefor, a truck-frame supporting said platform and hoisting mechanism, truck-wheels arranged to support the rear end of said truck, supporting legs or feet for the front end of said truck, and a combined guiding and supporting truck-wheel also arranged at the front end of said truck, an eccentric bearing in which the guiding and supporting truck-wheel is journaled, and means for raising and lowering said eccentric bearing relative to said front wheel, as and for the purpose set forth.

3. In a machine of the class described, a platform, a hoisting mechanism therefor, a

truck upon which said platform and hoisting mechanism are supported, truck-wheels for supporting the rear end of said truck, supporting legs or feet for the front end of said truck, and a truck-wheel eccentrically mounted at the front end of said truck, and a handle-lever for actuating said eccentric wheel, as and for the purpose set forth.

4. In a machine of the class described, a platform, a hoisting mechanism therefor, a supporting-truck for said platform and hoisting mechanism, truck-wheels supporting the rear end of said truck, supporting legs or feet arranged at the front end of said truck, a box carried by said truck, a yoke journaled in said box upon a vertical axis, an eccentric wheel journaled in said yoke, and a handle-lever for operating said eccentric wheel, as and for the purpose set forth.

In witness whereof I have hereunto set my hand, this 25th day of September, A. D. 1900, in the presence of the subscribing witnesses.

GEORGE M. FRENCH.

Witnesses:

E. C. SEMPLE,
S. E. DARBY.