No. 797,773. PATENTED AUG. 22, 1905.

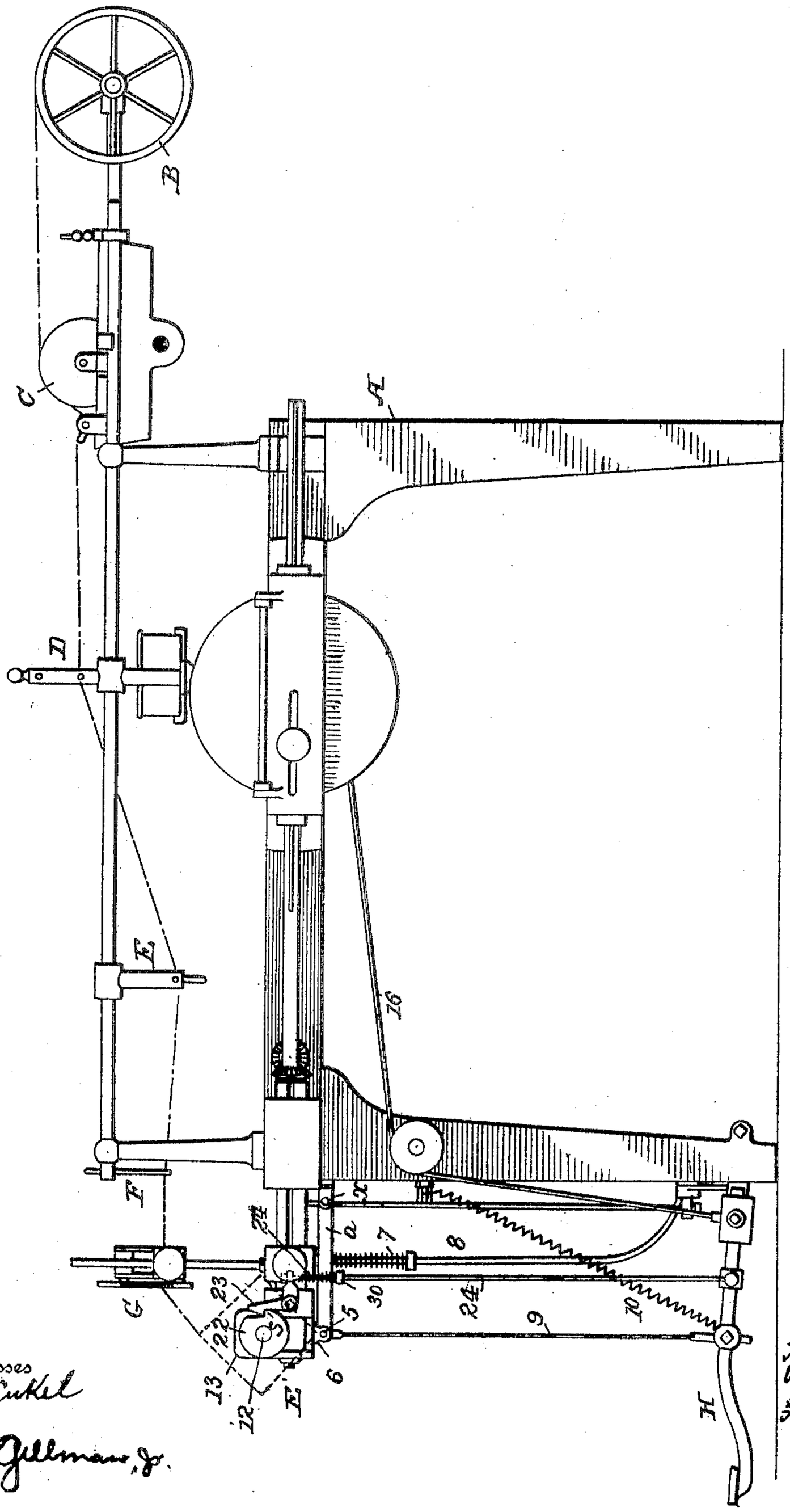
H. INMAN.

PACKAGE COVERING MACHINE.

APPLICATION FILED APR. 18, 1900.

4 SHEETS—SHEET 1.

Fig. 1.



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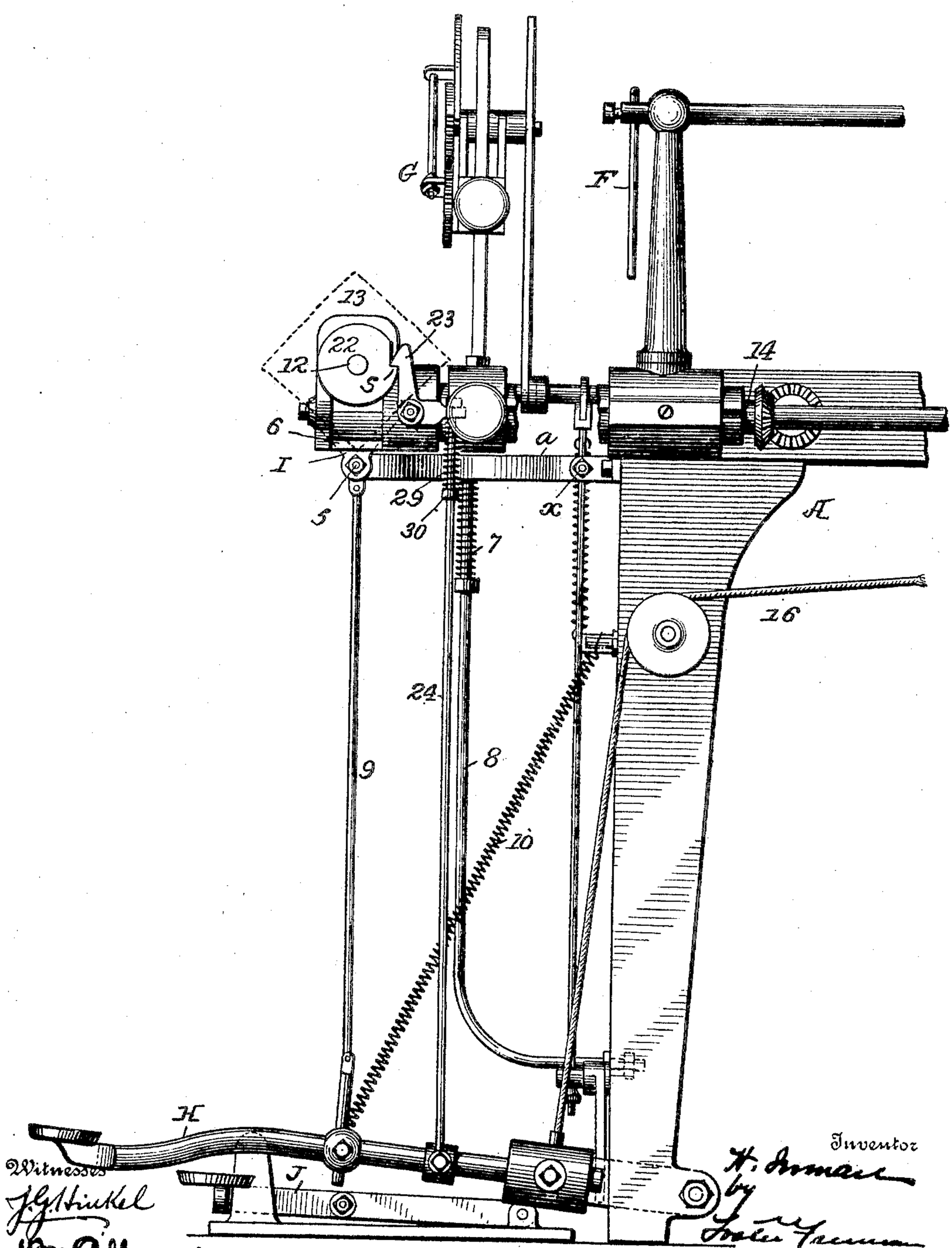
4 SHEETS—SHEET 2.

Fig. 2.



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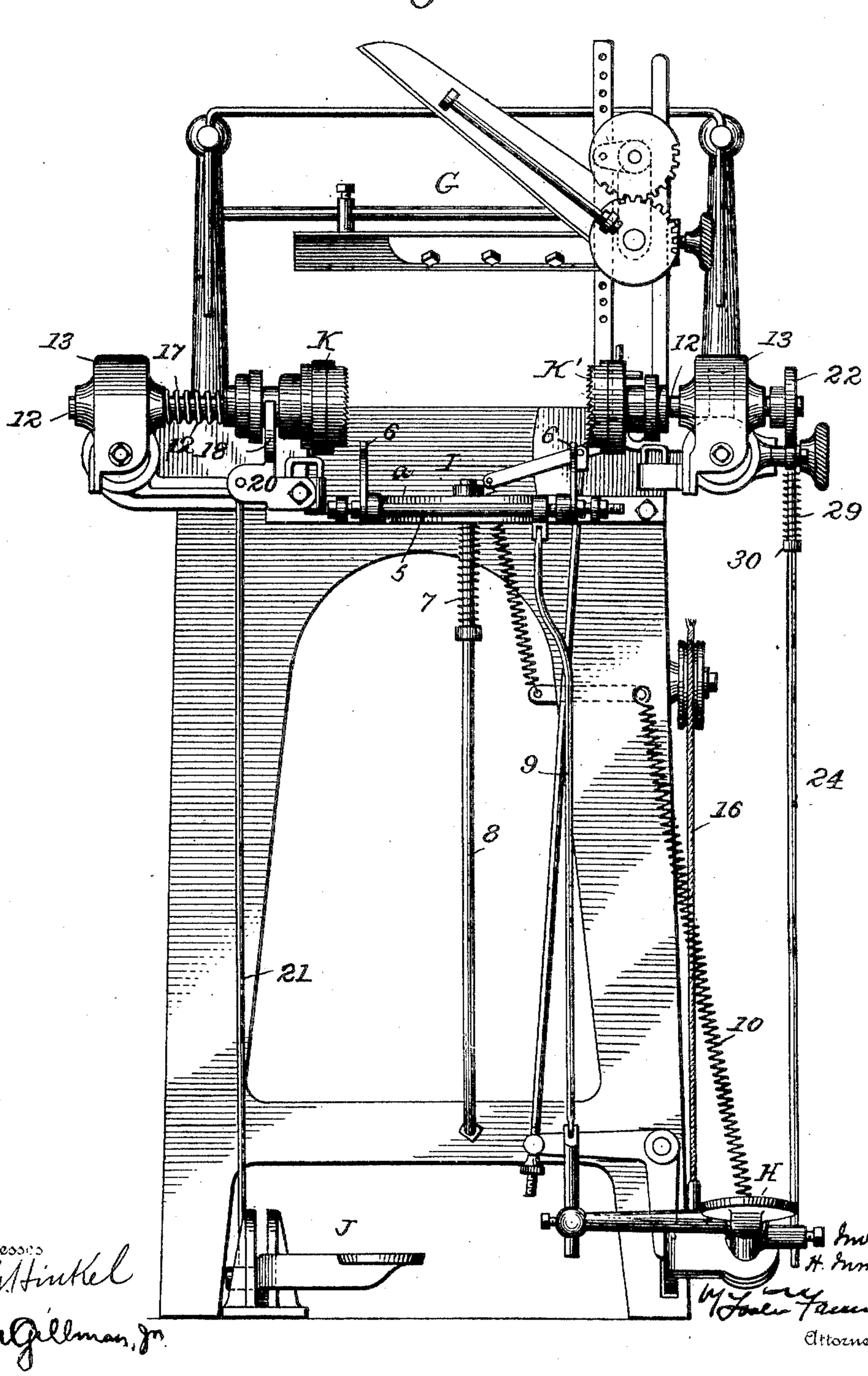
4 SHEETS—SHEET 3.

Fig. 3.



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4 SHEETS—SHEET 4.

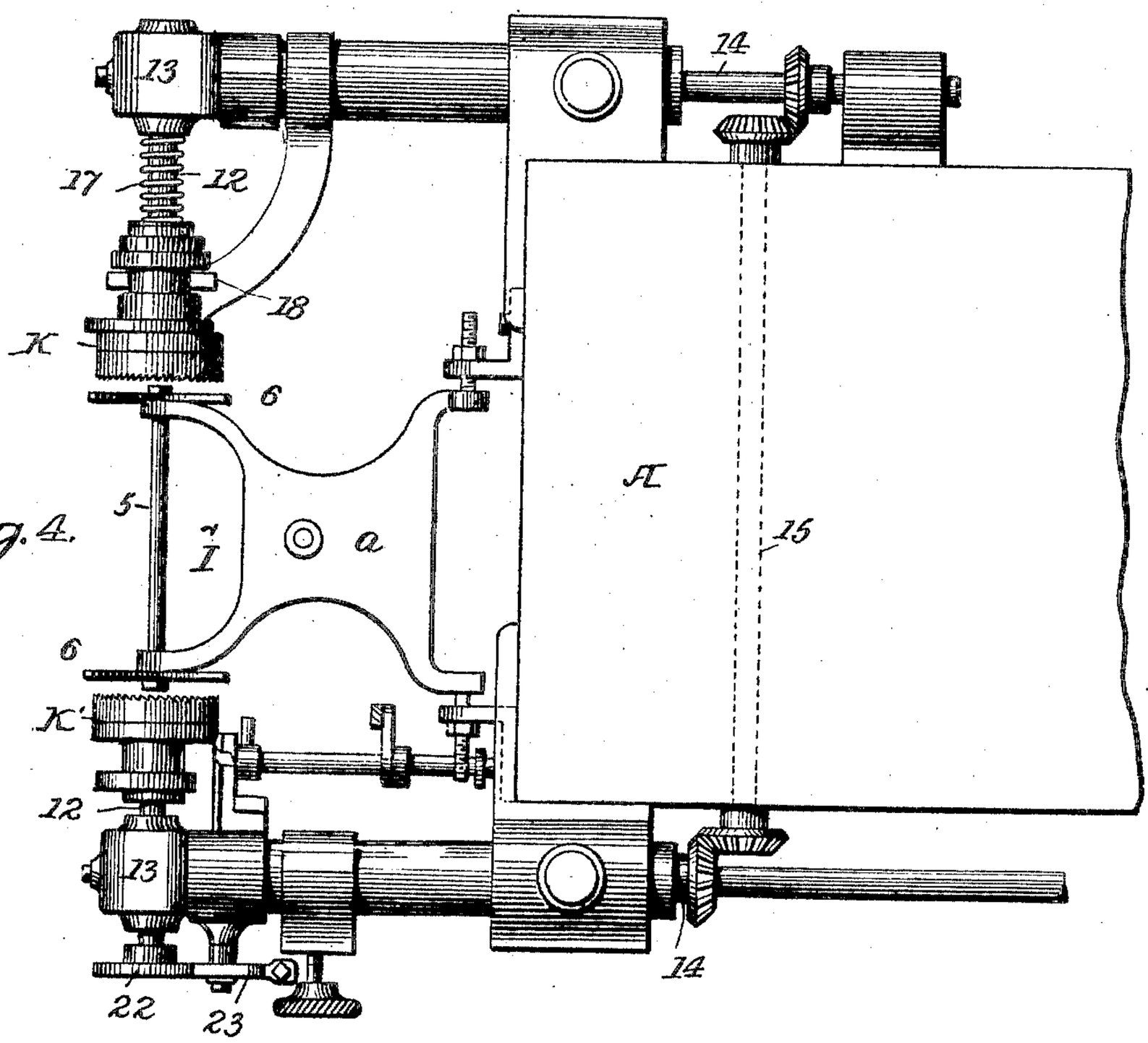

Fig. 4.

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UNITED STATES PATENT OFFICE.

HORACE INMAN, OF AMSTERDAM, NEW YORK.

PACKAGE-COVERING MACHINE.

No. 797,773. Specification of Letters Patent. Patented Aug. 22, 1905.

Application filed April 18, 1900. Serial No. 13,348.

To all whom it may concern:

Be it known that I, HORACE INMAN, a citizen of the United States, residing at Amsterdam, in the county of Montgomery and State of New York, have invented certain new and useful Improvements in Package-Covering Machines, of which the following is a specification.

My invention relates to machines for applying covering-sheets to boxes and packages, more especially to packages closed at the ends; and my invention consists in the combination, with the means for supporting, guiding, pasting, and cutting a continuous strip, of clamps for engaging, holding, and rotating the box or package and for arresting the movement on the completion of each rotation, together with means for supporting the package and certain details of construction, all as fully set forth hereinafter and as illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation showing the general character of the box-covering machine to which my improvements are applied. Fig. 2 is an enlarged side view of the parts immediately connected with said improvements. Fig. 3 is an end view of the parts shown in Fig. 2. Fig. 4 is a plan view of the parts shown in Figs. 2 and 3.

In Fig. 1 I have illustrated the general features of the apparatus, embodying a frame A, reel B for a continuous strip of paper, paster C, guides D, E, and F, cutter G, and package supporting and turning device E′.

As all the parts except the package supporting and turning device correspond in construction and operation to those in existing machines, I will not describe the same in detail, but will refer to the features connected with the package supporting and turning device embodying my improvements.

In the said device there are clamps K K′ adapted to be moved outward and inward and when moved inward to make contact with the ends of the package within the periphery of the ends and without extending over the sides of the package and to turn the same, one or both of the said clamps being positively rotated. As shown, means are employed for positively rotating both of the clamps.

A holding device I is provided with a vertically-movable frame *a* between and below the clamps and which consists of two V-shaped brackets 6 6, each adjustably secured to a cross-bar 5 by nuts, as shown in Fig. 3. A spring 7 presses upward against the frame *a*, tending to lift the same, and bears upon a collar of a guide-rod 8, and a rod 9, connected with the frame *a*, is also connected with the treadle H, which may be depressed by the foot to lower the supporting device I. A spring 10 aids in raising the treadle H and connected parts.

Each of the clamps K K′ is mounted upon a shaft 12, turned by means of a worm and wheel (dotted lines, Fig. 3) within a box 13 from a shaft 14, the two shafts 14 being geared together by a transverse shaft 15 and double gears and one of the shafts 14 deriving its motion from the main driving-shaft through devices which may be connected and disconnected by movements of a cable 16, connected with the treadle H, but not requiring description here.

One of the clamps—as, for instance, the clamp K—is secured to its shaft 12 so as to turn therewith, but slide thereon, a spring 17 throwing the clamp inward, and a fork 18 enters an annular groove of the clamp K and is connected with devices by means of which it may be shifted to throw the clamp outward, thus separating the clamps to receive the package between them. As shown, the fork 18 is supported by a pivoted lever 20, connected by rod 21 with a treadle J, which may be depressed by the foot to open the clamps.

The supporting device I is normally in position to afford a rest for the package and support it with one edge or corner uppermost until gripped by the clamps, after which by pressure on the treadle H the supporting device is withdrawn to such a position as will permit the rotation of the package.

In order that the clamps may occupy always the same position in starting, one of the clamp-shafts 12, Fig. 2, is provided with an arm or disk 22, having a shoulder *s*, which is engaged by a pawl 23, to an arm of which is connected a rod 24, attached at its lower end to the treadle H. When, therefore, the treadle is depressed to withdraw the supporting device and to start the rotation of the clamps, the pawl 23 is drawn back and releases the disk 22, so that the clamps and the package between them may rotate. As the lever H is released the pawl 23 is brought against the edge of the disk 22, but does not prevent the rising of the treadle inasmuch

as the rod 24 extends through an opening in the arm of the pawl and carries a spring 29, bearing on said arm and on a collar 30 on the rod, so that the latter may rise independently of the pawl, which, however, swings into place as the shoulder *s* is brought into engaging position.

By the combination of parts above described each package is started in precisely the same position, so that the strip of paper which is drawn forward by the operator and is applied with its pasted side against the face of the package is presented in like manner to all of the packages. This is especially important when the strips are printed with reading matter, panels, &c., which should be symmetrically disposed upon the various sides of the package.

By the construction described further it is possible to grip and rotate packages which are closed at the ends, and the clamps are of such a character as to grip the ends securely without slippage. For instance, their surfaces are serrated, as shown.

Further, it will be seen that each package is effectively supported until it is clamped and that the package cannot begin to turn until the support has been removed out of position to be struck by the package in its rotation.

After the package has rotated to carry the strip to a position to be severed by the cutter V the latter is operated as usual, and the operator then carries the loose end of the strip onto and pastes it against the face of the package. As the devices for operating the cutter are those used in existing machinery, it is not necessary to describe the same, although it will be understood that any suitable cutting devices may be employed.

Without limiting myself to the precise arrangement and construction of parts shown, I claim as my invention—

1. The combination with the paper supporting, guiding, pasting and cutting devices, of rotary clamps, one provided with a disk having a notch and shoulder *s*, a dog bearing upon a disk, a treadle connected with the dog through connections movable independent of the dog, and a spring-bearing for said connections, substantially as set forth.

2. The combination with the devices for supporting, pasting, guiding and cutting a continuous strip, of clamps for holding the package, a shaft geared to turn the clamps, a treadle connected with the starting mechanism of said shaft, a detent for arresting the rotation of the clamps, and connections between the detent and the treadle, substantially as described.

3. The combination with rotating clamps for holding a package, of means for separating the clamps to receive the package, a support for holding the package between the clamps, and means for moving the said support after the package is clamped, substantially as set forth.

4. The combination with the rotating clamps and movable support for the package, of a treadle connected with said support, substantially as set forth.

5. The combination with the clamps and means for rotating the same, of starting and stopping devices a treadle connected with the stopping and starting devices, a support for the package, and connections between the treadle and support, substantially as set forth.

6. The combination with rotary clamps and means for turning the same, of a supporting-frame provided with diverging arms, the said arms adjustable in position on the frame, substantially as described.

7. The combination of the clamps, pivoted frame *a*, spring for elevating the frame, support carried by the frame, and treadle connected with the frame, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HORACE INMAN.

Witnesses:
H. B. WALDRON,
CHAS. W. CLARK.