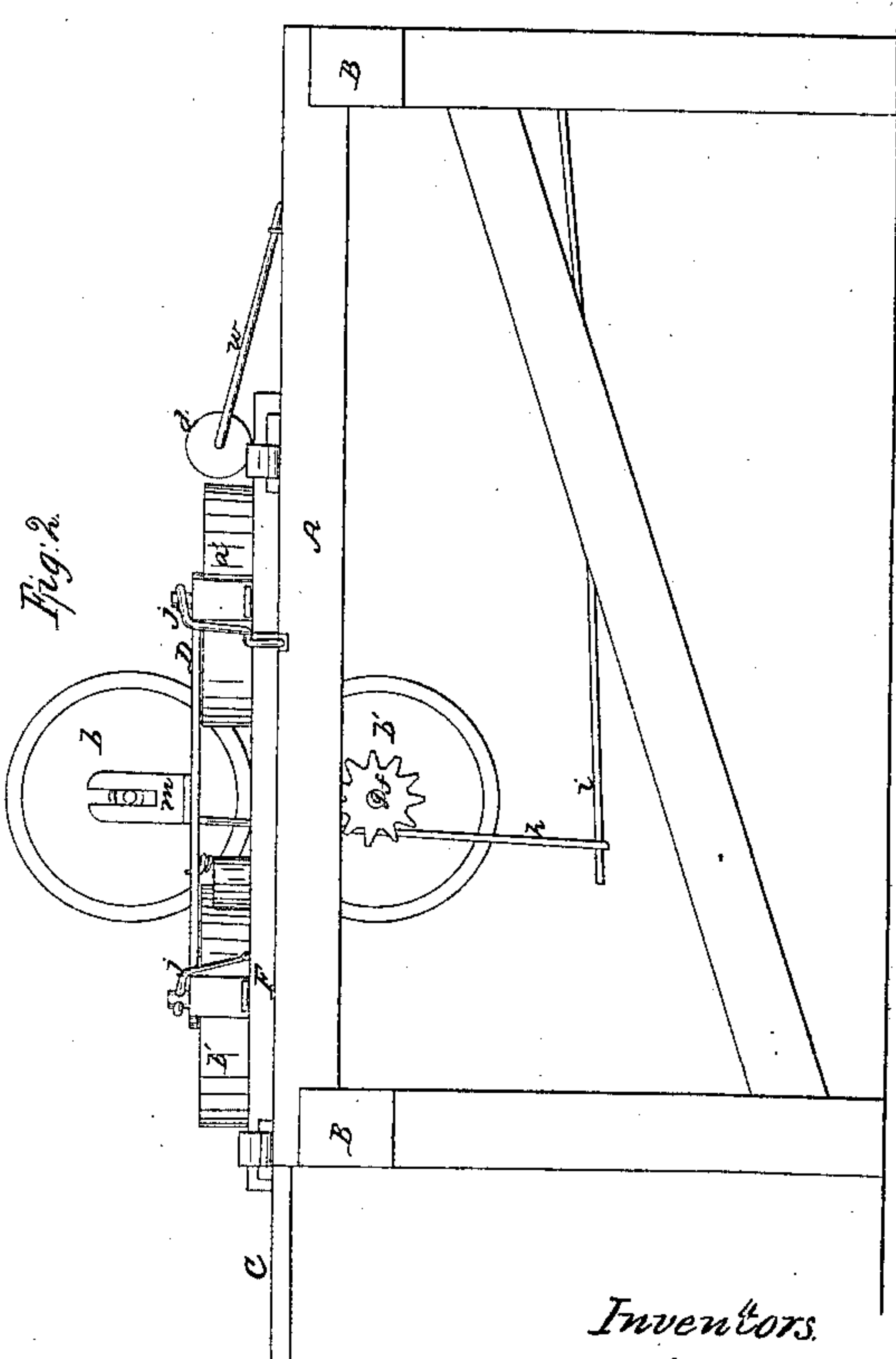
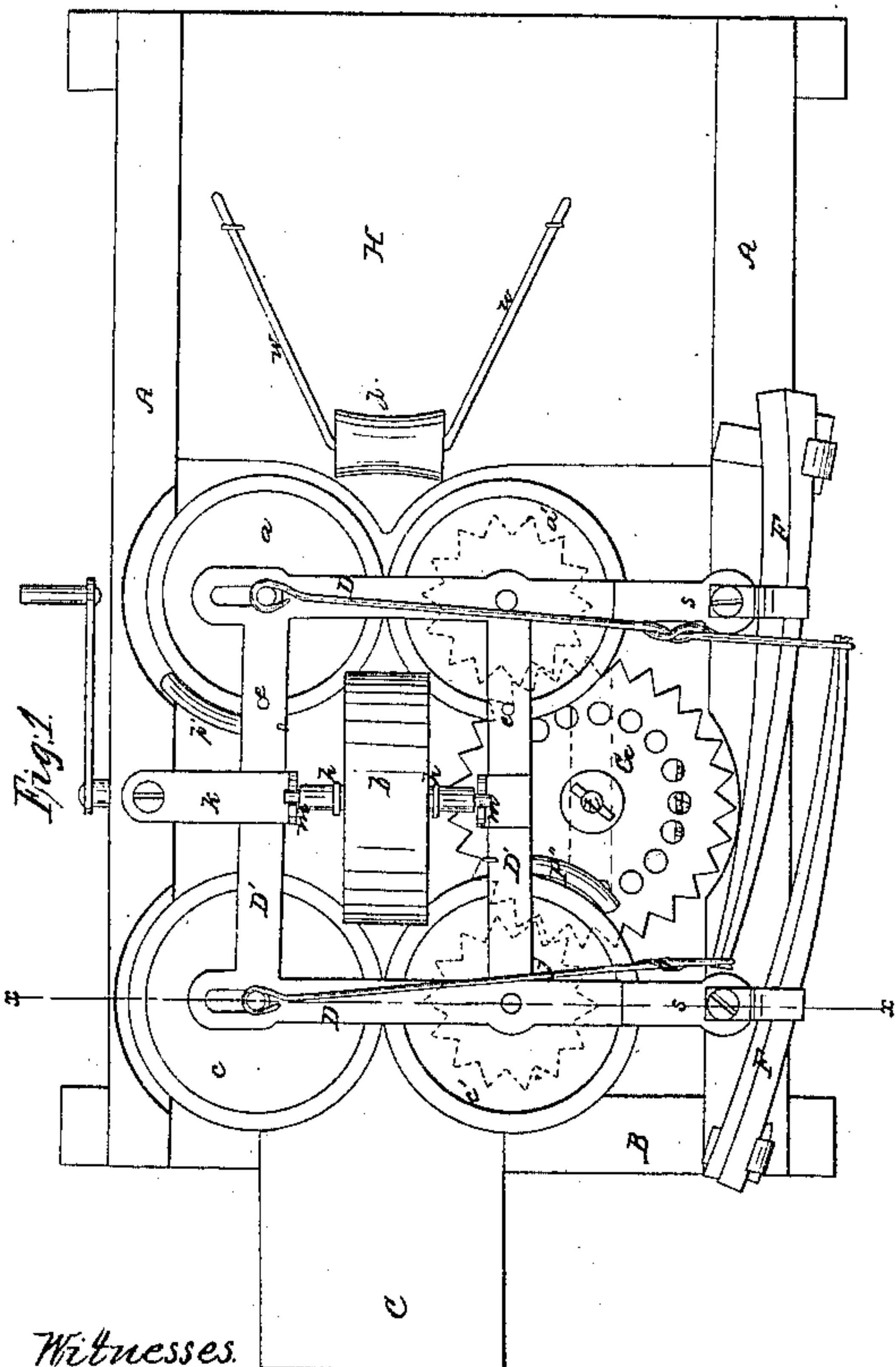
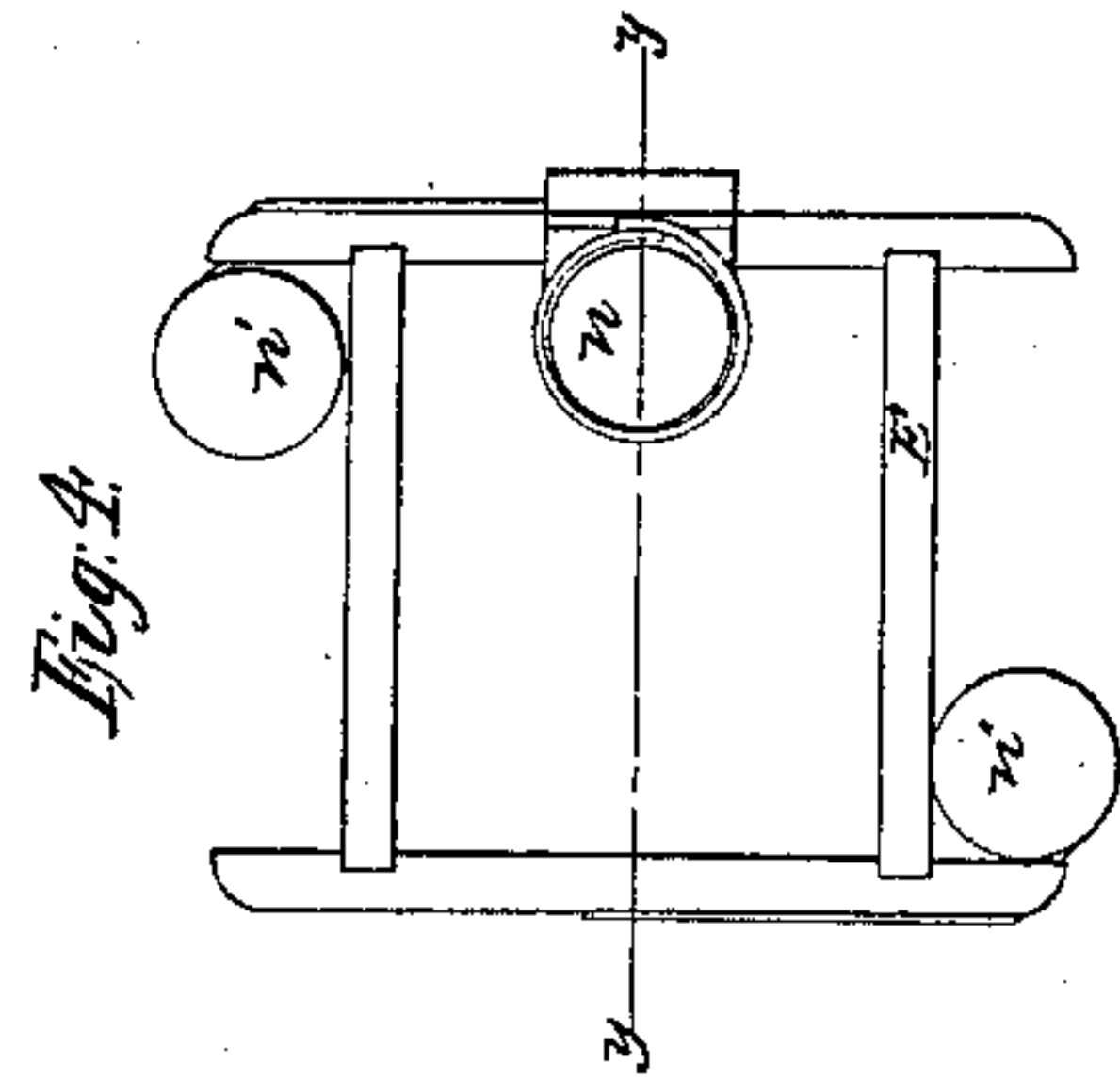
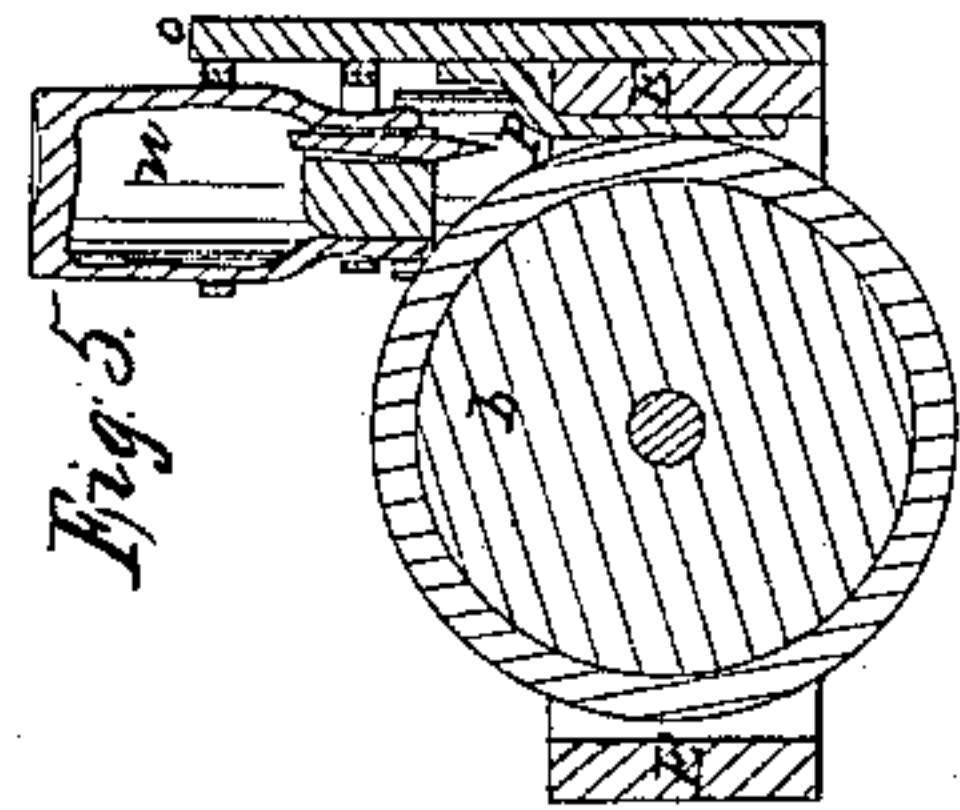
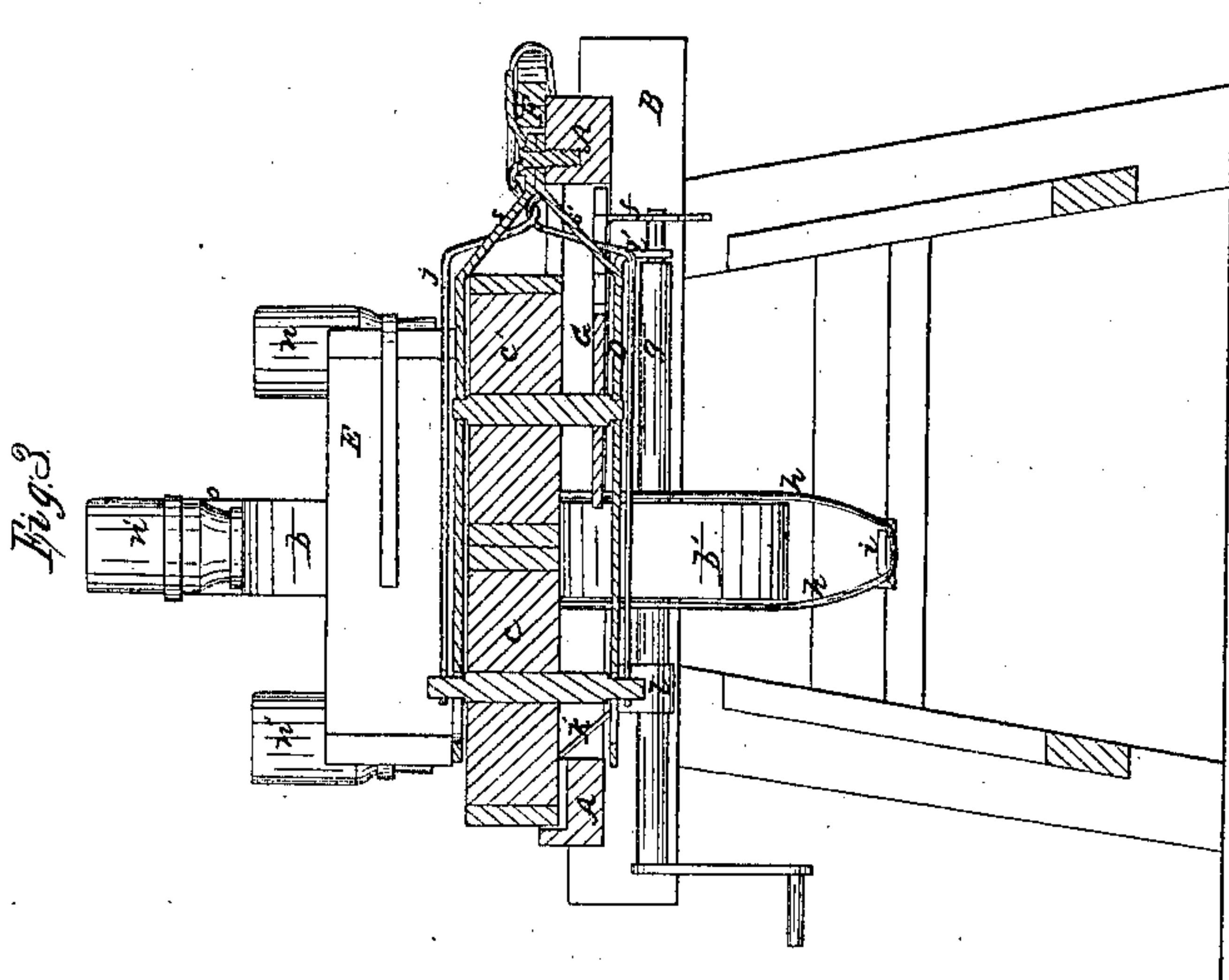


# Collins & Read, Tobacco Press.

No 25,557

Patented Sept. 27, 1859.



Witnesses  
J. C. Robbins  
Edw. F. Brown.

Inventors  
Edwin J. Collins  
Thomas A. Read



# UNITED STATES PATENT OFFICE.

E. S. COLLINS AND T. N. READ, OF ASPEN WALL, VIRGINIA.

## IMPROVEMENT IN MACHINES FOR PREPARING TOBACCO FOR PRESSING.

Specification forming part of Letters Patent No. 25,557, dated September 27, 1859.

*To all whom it may concern:*

Be it known that we, EDWIN S. COLLINS and THOMAS N. READ, of Aspen Wall, in the county of Charlotte and State of Virginia, have invented a new machine for straightening, stretching, pressing, and oiling bundles of tobacco preparatory to prizing or packing the same into hogsheads for shipment; and we do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making a part of this specification—

Figure 1 being a top view of said machine after the portion E thereof has been detached therefrom; Fig. 2, a side view of the same; Fig. 3, a section in the line *xx* of Fig. 1; Fig. 4, a plan of a detached portion of the machine, and Fig. 5 a section in the line *yy* of Fig. 4.

Similar letters indicate like parts in each of the drawings.

The frame which supports the operating parts of the aforesaid machine may be constructed of any suitable materials and in any suitable manner. The supporting-frame represented in the accompanying drawings is composed of the longitudinal beams A A, the transverse beams B B, and a suitable number of supporting legs and braces. The platform H at the front end of said frame receives the bundles of tobacco preparatory to their being passed into the operating parts of the machine, and the tail-board C receives the said bundles of tobacco as they are discharged from the machine.

The operating parts of the aforesaid machine consist in a peculiar arrangement of three or more pairs of pressure-rollers *a a'*, *b b'*, and *c c'*, whose peripheries are covered with some soft substance, while the said pairs of rollers gradually increase in size from the first pair to the last. The metallic frame which receives the above-mentioned pairs of pressure-rollers is composed of nearly corresponding upper and lower portions, D D', whose shape is clearly represented in the drawings. The respective portions of said metallic frame have obliquely-projecting ears *h s*, that rest the one upon the other upon the side beams, A A, of the wooden supporting-frame, and that are united to each other and to the said beams by means of screw-bolts or other suitable fastenings. The shaft-journals of the rollers *a'* and *c'* are received

into apertures in the respective sides of the metallic frame D D', or into journal-boxes combined with said frame, while the shaft-journals of the rollers *a* and *c* are received into slots formed in the upper and lower portions of said frame. The projecting outer ends of the shaft-journals of the rollers *a c* are connected to the springs F F by means of the bridles *j j*, as shown in Figs. 1 and 3. We do not, however, intend to limit ourselves to the use of any particular description of springs in our machine, and we may sometimes substitute cords and weights for the aforesaid springs, for the purpose of causing the rollers *a b c* to press with the requisite degree of force against the rollers *a' b' c'*. The roller *b'* is placed upon the driving-shaft *g*, whose journal-bearings *l l'* are combined with the under portion of the metallic frame D. The shaft-journals of the roller *b* work in the jaws *m m'*, which rise from the bar D' of the upper portion of the roller-supporting metallic frame, and these journals are connected to the downwardly-drawing spring *i* by means of the bridle *h*. Motion is communicated to the rollers *a'* and *c'* in the following manner, viz: A toothed wheel, G, which works upon a pivot, *t*, that rises from a cross-bar of the lower portion of the metallic frame D, gears into the teeth of pinions that are secured to the lower ends of the shafts of said rollers *a'* and *c'*, and this toothed wheel G is connected with the teeth of the pinion *f* on the driving-shaft *g*, either by means of an annular series of perforations in said wheel, as shown in the drawings, or by means of teeth descending from the under face of said wheel. Immediately in front of the junction of the peripheries of the rollers *a* and *a'* a roller, *d*, which gradually enlarges from its center to its extremities, is placed upon the central portion of the downwardly-acting spring *w*, for the purpose of guiding the bundles of tobacco in between the said rollers *a a'*.

The oiling of the tobacco during its passage through the machine is effected in the following manner, viz: A rectangular frame, E, is placed upon the upper portion of metallic frame D, and is secured thereto by means of pins descending from said frame into the apertures *e e* in the said metallic frame. This rectangular frame E has holders for the reception of three bottles of oil, *n n' n''*, which are so located that the bottle *n* will drop its oil



between the pad  $p$  and the periphery of the roller  $b$ , as shown in Fig. 5. The bottle  $n'$  will drop its oil between the pad  $p'$  and the periphery of the roller  $a$ , and the bottle  $n''$  will drop its oil between the pad  $p''$  and the periphery of the roller  $c'$ . The fillings of the mouths of the said bottles  $n$   $n'$   $n''$  can, as a matter of course, be so prepared as to perfectly regulate the discharge of the oil from said bottles.

The operation of the above-described machine will be readily understood. The rollers  $a$   $a'$  receive the bundles of tobacco from the feeding-roller  $d$ , and consequently they exert a straightening and a compressing influence upon the right and left hand sides of the said bundles. The rollers  $b$   $b'$ , being a little larger in diameter than the rollers  $a$   $a'$ , exert a stretching and a compressing influence upon the upper and lower sides of the said bundles of tobacco as they draw them from between the said first pair of rollers; and the rollers  $c$   $c'$ , being a little larger in diameter than the rollers  $b$   $b'$ , will exert a second stretching and compressing operation upon the right and left hand sides of said bundles of tobacco, as they draw them from between the said second pair of rollers and discharge the same out onto the tail-board  $C$ . The bundles of tobacco which have been thus operated upon by us have been brought to a smoother, more compact, and in every way a more perfect shape than has ever been attained by any other process.

The elastic covering of the pressure-rollers

$aa'$ ,  $bb'$ , and  $cc'$  may be formed of felting or any other material possessing the requisite qualities.

A more extensive experience in the construction and use of the aforesaid machine may perhaps lead us to modify in some particulars the form and proportions of some of its parts, but without changing the principle of its action.

Having thus fully described our new and improved machine for straightening, stretching, pressing, and oiling bundles of tobacco preparatory to prizing the same, what we claim as our invention, and desire to secure by Letters Patent, is—

1. The arrangement of two, three, or more pairs of progressive-pressure rollers with each other, substantially in the manner and for the purpose herein set forth.

2. Combining a series of oil-vessels and oiling-pads with the aforesaid pairs of pressure-rollers, substantially in the manner herein set forth.

The above specification of our improved machine for cleaning, straightening, oiling, and pressing bundles or leaves of tobacco preparatory to prizing the same signed and witnessed this 17th day of May, 1859.

EDWIN S. COLLINS.

THOMAS N. READ.

Witnesses:

Z. C. ROBBINS,

EDM. F. BROWN.