

No. 626,305.

Patented June 6, 1899.

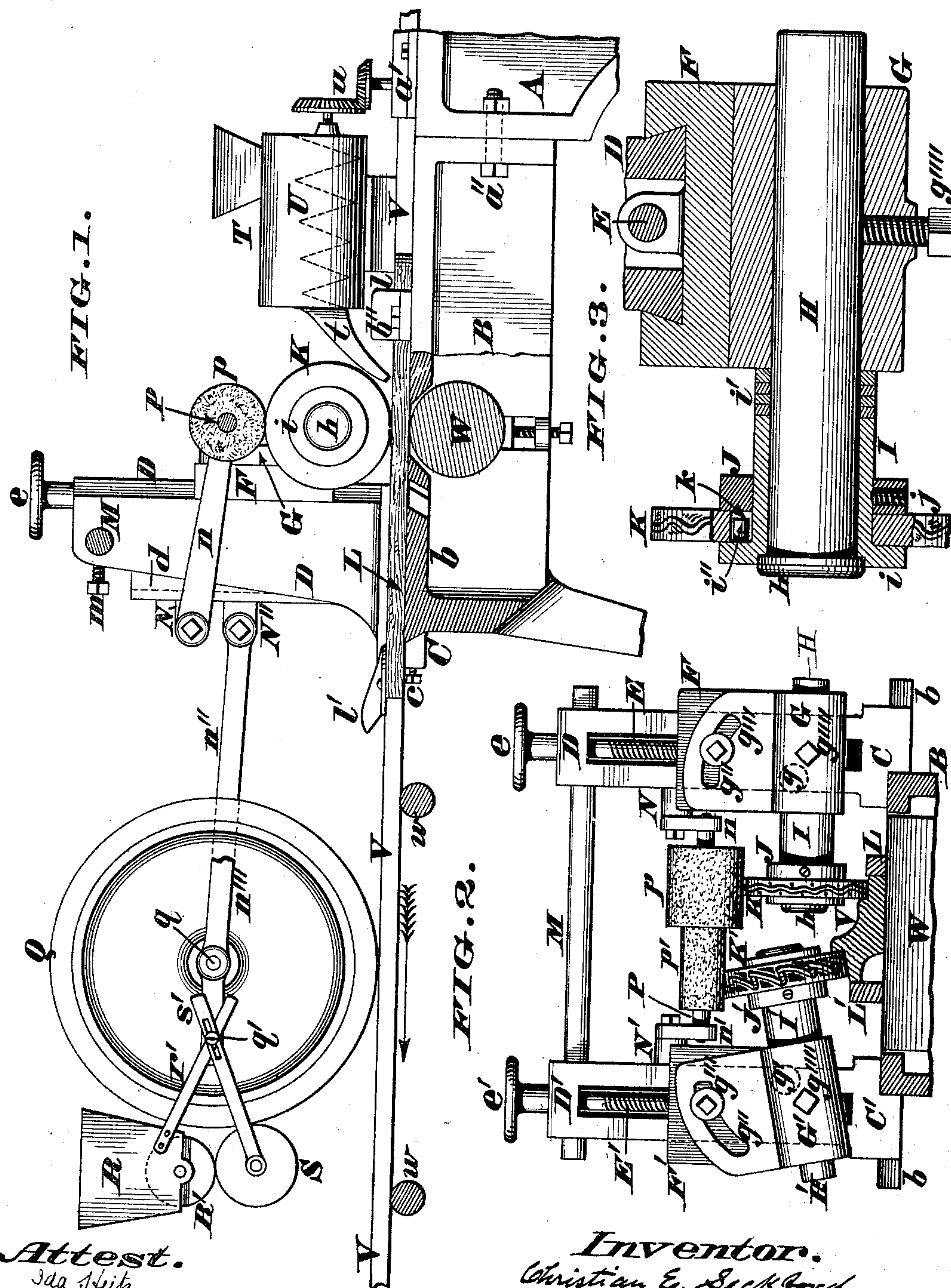
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COMBINED MOLDING, ORNAMMENTING, AND GRAINING MACHINE.

(Application filed May 3, 1897.)

(No Model.)

2 Sheets—Sheet I.



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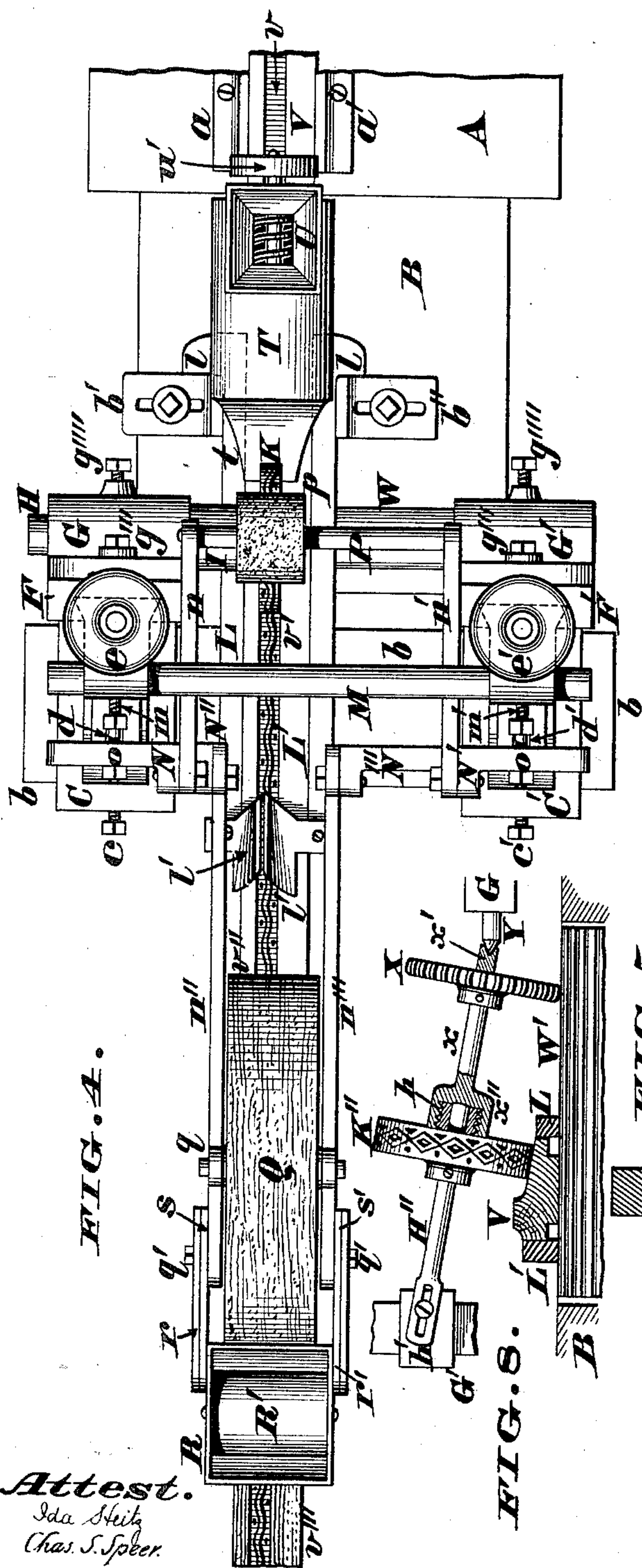
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UNITED STATES PATENT OFFICE.

CHRISTIAN E. SECKFORD, OF CINCINNATI, OHIO.

COMBINED MOLDING, ORNAMENTING, AND GRAINING MACHINE.

SPECIFICATION forming part of Letters Patent No. 626,305, dated June 6, 1899.

Application filed May 3, 1897. Serial No. 634,876. (No model.)

To all whom it may concern:

Be it known that I, CHRISTIAN E. SECKFORD, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in a Combined Molding, Ornamenting, and Graining Machine; and I do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the annexed drawings, which form a part of this specification.

The object of my invention is to facilitate the finishing of those molding-strips employed in making picture-frames and various other fancy and useful articles, the "finishing" here alluded to being the application of plastic ornaments to such moldings and in some cases the graining of their surfaces. To accomplish these two independent results, I apply to the delivery end of a molding-cutting machine an ornamenting or die wheel or disk, a fount that contains a plastic material, and a feed device for expelling the material from said fount and discharging it upon a molded strip at a point in front of said wheel. Furthermore, as said strip advances the plastic material is spread thereon, after which act the ornamenting-wheel comes into service and imprints its pattern on said material, the wheel being turned wholly by frictional contact with said molding; but a pair of such ornamenting-wheels may be used and have provision for setting their respective shafts at different angles in order that said wheels may operate simultaneously on flat or beveled surfaces of the same strip. After one or two rows of ornaments have thus been applied to a molding a graining-roller may be brought into action, its turning being also effected by frictional contact with the advancing strip, as hereinafter more fully described.

In the annexed drawings, Figure 1 is a longitudinal section of one form of my machine provided with a single ornamenting-wheel. Fig. 2 is a transverse section of a machine provided with a pair of ornamenting-wheels, one of them being vertical and the other inclined and the graining-roller omitted. Fig. 3 is an enlarged horizontal of one of the ornamenting-wheel shafts and its accessories. Fig. 4 is a plan of a machine adapted to use a pair of such wheels, although one of them

is dispensed with. Fig. 5 is an enlarged horizontal section of a standard and its attachments, said section being taken in the plane of an angle-bracket attached to said standard. Figs. 6 and 7 are enlarged sections showing the action of two different forms of ornamenting-wheels. Fig. 8 is a modification of my invention.

Referring to Figs. 1 and 4, A represents a portion of the rear end of any approved form of machine for shaping a wooden strip by means of ordinary molding-cutters, and *a a* are guides that confine said strip to a proper path as it is delivered from said machine, to which latter there is securely fastened, as at *a'*, a table or bed-plate B, having a transverse guide *b*, whose opposite edges are undercut, as seen in Fig. 1. Adapted to slide along this guide is the base C of a standard or housing D, a set-screw *c* serving to hold said standard in any desired place. E is a screw arranged vertically within said standard and having at top a crank or hand wheel *e*, the object of this screw being to raise or lower a slide F. This slide engages with the standard D in the manner shown in Figs. 3 and 5 and has near its lower edge a circular pit *f* to admit a short cylindrical lug *g* projecting horizontally from the rear surface of a box G, the latter being provided with a curved slot *g''*, concentric with said pivot *g*. *g'''* is a bolt traversing said slot *g''* and engaging with said slide F. *g''''* is another bolt tapped in said box and serving to hold in place a fixed or non-rotatable shaft H, having at one end a head *h*, bearing against an annular flange *i* of a sleeve I, one or more washers *i'* being inserted between said sleeve and box if occasion requires. (See Fig. 3.) J is a collar secured around said sleeve by a screw *j*.

K is a metallic wheel or disk the periphery of which has any desired arrangement of designs, inscriptions, or ornaments either raised from the wheel or cut therein, said wheel being notched at *h* to admit a pin *i''*, projecting laterally from the annular flange *i*. Wheel K is clamped tightly between the flange *i* and collar J, and by means of the notch *h* and pin *i''* the three members I J K turn together around the non-rotatable shaft H. Consequently the sleeve affords an extended journal-bearing for said wheel and

compels it to run perfectly true and without any tendency to cant over at either side, or, in other words, it is always perpendicular to the axis of shaft H.

5 *b' b''* are angle-gages capable of being adjusted transversely upon the table B, and *L L'* are guides having at their front ends shoulders *l*, that bear against said gages in the manner seen in Fig. 4. The rear ends of
10 these guides are provided with adjustable scrapers *l' l''*, so shaped and applied as to clean off all superfluous composition from a piece of molding as it is passed through the machine.

15 *d* is a vertical groove in the rear edge of the standard D.

The devices C D, E *e*, F *f*, G, H, I, J, and K are exactly duplicated on the opposite side of the machine, as seen at C' *c'*, D' *d'*, E' *e'*,
20 I', G' *g'*, H', I', J', and K' in Figs. 2 and 4.

M is a tie-rod uniting the upper portions of the standards D D', and *m m'* are bolts that retain said standards in place after they have been properly adjusted along the guide *b*.
25 The rear grooves *d d'* of these standards are furnished with an upper pair of adjustable angle-brackets N N' and a lower pair of similar devices N'' N''', each bracket being longitudinally slotted, as seen at O in Fig. 5, and
30 being retained in place by a bolt *o*. The heads of these bolts traverse said grooves *d d'*. Pivoted to the upper brackets N N' are swinging arms *n n'*, whose free front ends carry a rod P, provided with one or more sponges *p p'*,
35 which are saturated with water, so as to keep the ornamenting-wheel constantly moist and prevent the plastic composition adhering to it. Pivoted to the lower brackets N'' N''' are swinging arms *n'' n'''*, whose free rear ends carry a
40 shaft *q* of a roller Q, having an elastic periphery provided with a "graining" of the desired kind to be transferred to the molded strip. Furthermore, these arms carry side bars *r r'*, supporting a fount R, containing a medium to
45 be supplied to the roller Q. R' is a roller in the bottom of this fount, which device R' is in contact with another roller S, bearing against the graining-roller Q.

s s' are side bars that support the lower
50 roller S.

The side bars *r r' s s'* are slotted longitudinally and by means of bolts *q'* can be adjusted as occasion requires.

Mounted upon the table B is a hopper T for
55 containing putty or other plastic composition used for making molding-ornaments, the material being fed through said hopper and then forced out of the nozzle *t* by a screw. (Indicated by the dotted lines U in Fig. 1.) The
60 shaft of this screw may be turned by any suitable means, bevel-gears *u* being shown in Fig. 1, while a pulley *u'* is seen in Fig. 4.

V is a molded strip passing through the machine in the direction of the arrow seen
65 in Fig. 1 and W is a roller that supports said strip while being acted on by the ornamenting wheel or wheels.

w w are smaller rollers that may be used to support the strip after it has passed out beyond the scrapers *l' l''*. 70

The operation of the single-wheeled machine (seen in Figs. 1 and 4) is as follows: The gages *b' b''* and guides *L L'* must first be arranged accurately in line with the guides
75 *a a'* of the molding-machine A in order that the wooden strip V may pass directly onward without any personal attention, and the standard D and shaft H must be so adjusted as to cause wheel K to act in the exact place where
80 the plastic ornaments are to appear on said strip. In the present case this strip V is supposed to be perfectly flat on top and bottom, and its upper surface has a rectangular groove *v* cut in it by the molding-machine, the groove being near one side of said strip.
85 This strip is shown on an enlarged scale in Fig. 6, reference to which illustration indicates that the wheel K fits snugly within the groove *v*, as it is desirable to turn said wheel solely by the contact of its sides with the
90 walls of said groove. The founts or hoppers R T being charged and the sponge *p* saturated with water, the molding-machine is started, thereby causing the strip to pass from the guides *a a'* and enter the guides *L L'*. As
95 soon as the molding passes under the nozzle *t* a supply of plastic composition is discharged upon said strip in close proximity and in front of the wheel K. A still further advance of the molding causes this wheel to come into
100 action and impress its ornaments on the plastic composition, the moistened surface of said wheel preventing any clogging or choking up of the machine. This ornamented portion of the molding is shown in Fig. 4 as extending
105 from *v'* to *v''*. By the time the molding arrives at the rear ends of guides *L L'* their scrapers *l' l''* come into service and at once remove from the strip all superfluous composition, the cuttings falling down at the end of
110 table B and not interfering with any of the operative parts of the machine. After the molding is thus cleaned it is finally subjected to the action of the roller Q, the result being the graining of the flat upper surface of said
115 strip, as seen at *v'''*. Consequently the strip when it leaves my machine is ornamented, scraped clean, and grained without requiring the least personal attention; but in many cases the roller Q is not used, as graining
120 is not imitated on all moldings. To render this roller inoperative, the bolts coupling the arms *n'' n'''* to the brackets N'' N''' are first unslackened, and then said arms are swung
125 up until said roller is some distance above the level of bed-plate B, where it is held by again tightening said bolts.

From the above description it is evident the finishing of the strip, whether simply ornamented or ornamented and grained, is accom-
130 plished by its passing but once through the machine, and the first molding, after proceeding a certain distance, is shoved forward by a second strip, and the latter by a third one,

and so on continuously while the sticker is in operation.

The above describes what I call my "single-action" machine, because it uses only one ornamenting-wheel, but a double action may be afforded by a pair of such wheels in the following manner, reference being now made to Fig. 2. This illustration shows that a secondary wheel K' is applied to the other shaft H', and the latter is adjusted within the box G' and held therein by a bolt g''', said shaft in this view being inclined, so as to cause said wheel to act on a beveled surface of the molding. This inclination is obtained by loosening the bolt g'' and then swinging the box G' on its pivot g' until the proper angle is reached, and then said bolt is again tightened. Hence it is apparent the boxes G G' can be set so as to cause the wheels K K' to run upon horizontal surfaces of moldings, or either one or both of said boxes can be so inclined as to enable said wheels to act on beveled faces of a strip.

In the construction heretofore described the ornamenting-wheel is driven by either one or both sides coming in contact with the walls of a groove that receives the composition; but as seen in Fig. 7 the entire surface of the strip V' is to be ornamented. In this case the width of the wheel K must be equal to that of said strip, and rings or disks k' k'' must be so fastened to said wheel as to bear against the sides of the molding, and thereby afford the friction necessary to turn said wheel.

My invention may be further modified, as seen in Fig. 8, where the roller that supports the molding is fluted at W', so as to drive a gear-wheel X, secured to a shaft x, having at one end a center x', supported upon a bearing Y, carried by the box G. The opposite end of this shaft has an interiorly-threaded socket x'', engaged with a hub projecting from a wheel K'', that turns freely on a shaft H'', said shaft being slotted at h' to be adjustably applied to the other box G'. By this arrangement a positive turning of wheel K'' is effected and the frictional feed is dispensed with, although the wheel W' is itself driven by the strip or molding; but care must be taken to have the pitch-circle of gear X exactly equal to the circumference of said wheel. If this precaution is neglected, the wheel cannot produce perfect ornaments on the strip, but will spread the composition unevenly and tear it apart in places.

I have described the bed B as bolted to the plate A, as this expedient enables my attachment being readily fitted to molding-cutting machines generally; but in building entirely new machines said bed B may be integral with said plate A. Finally, although this bed B is shown in close connection with the molding-cutter A, it is evident said bed may be separated therefrom by a greater or less interval, provided means are afforded for en-

abling a strip to be fed from said molding-cutter into my ornamenting mechanism without rehandling by an attendant.

I claim as my invention—

1. The combination, in a molding-ornamenting machine, of the standard D; the slide F, vertically adjustable thereon, and provided with a pit f; a box G having a pivot g, that enters said pit; a slot g'' in said box, concentric with the axis of said pivot; a bolt g''', traversing said slot and engaged with said slide; and a shaft I journaled in said box and carrying an ornamenting wheel or disk.

2. An attachment for molding or sticking machines, which attachment includes a bed-plate, a pair of standards laterally shiftable thereon, a pair of vertically-adjustable slides fitted to said standards, a box pivoted to each slide, a shaft carried by each box, and ornamenting wheels or disks applied to said shafts.

3. An attachment for molding or sticking machines, which attachment includes a bed-plate B b, a pair of standards C D, C' D', laterally shiftable thereon, vertically-adjustable slides F, F', carried by screws E, E', fitted within said standards, boxes G, G', pivoted to said slides and capable of being inclined and then fastened in position, shafts H, H', applied to said boxes, ornamenting-wheels K, K', turning on said shafts, arms n, n', adjustable on said standards, and having a rod P, provided with an absorbent pad p, arms n'', n''', also adjustable on said standards and carrying a shaft q, provided with a graining-roller Q.

4. In an attachment for molding or sticking machines, the laterally-adjustable gage b' and longitudinal guide L, the front end of this guide being provided with a shoulder l that engages with said gage, and the rear end of said guide being furnished with a scraper l'.

5. The standard D, grooved vertically at d, the angle-bracket N'', slotted longitudinally at O, and having a swinging arm n''' coupled to it, and the bolt o traversing said groove and slot.

6. The arms n'', n''', having a graining-roller Q journaled in them, the side bars r, r', adjustable on said arms and carrying a fount R, provided with a roller R', and the side bars s, s', carrying the roller S.

7. The box G carrying a bearing Y, the box G', carrying a shaft H'', the ornamenting-wheel K'' turning on said shaft, the gear-wheel X, operating said ornamenting-wheel, and the fluted roller W', engaged with said gear-wheel X.

In testimony whereof I affix my signature in presence of two witnesses.

CHRISTIAN E. SECKFORD.

Witnesses:

JAMES H. LAYMAN,
HARRY WERNKE.