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Wood-Working Machinery

J. A. Fay & Co

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No. 3

Patent Fret Scroll Saw

With Deflecting Strain, Radial Table, and Automatic Brake and Shipper.

This machine is similar to the No. 2, and designed for the use of carpenters, builders, cabinet and piano-makers, carriage and pattern-makers, etc., and for all kinds of internal and external scroll sawing, raking brackets, etc.

It is built upon a heavy cored column with broad base, rendering it very substantial and solid in operation. The reciprocating parts are light, the cross-head is made of steel, runs between gun-metal slides arranged to take up any wear, and supplied with a self-oiling device for maintaining a constant lubrication.

The table is 32"x38", made of maple and walnut strips glued up. It can be tipped to an angle of 30 degrees for sawing raking brackets or other kinds of bevel sawing. An iron table is furnished at a small extra cost when wanted.

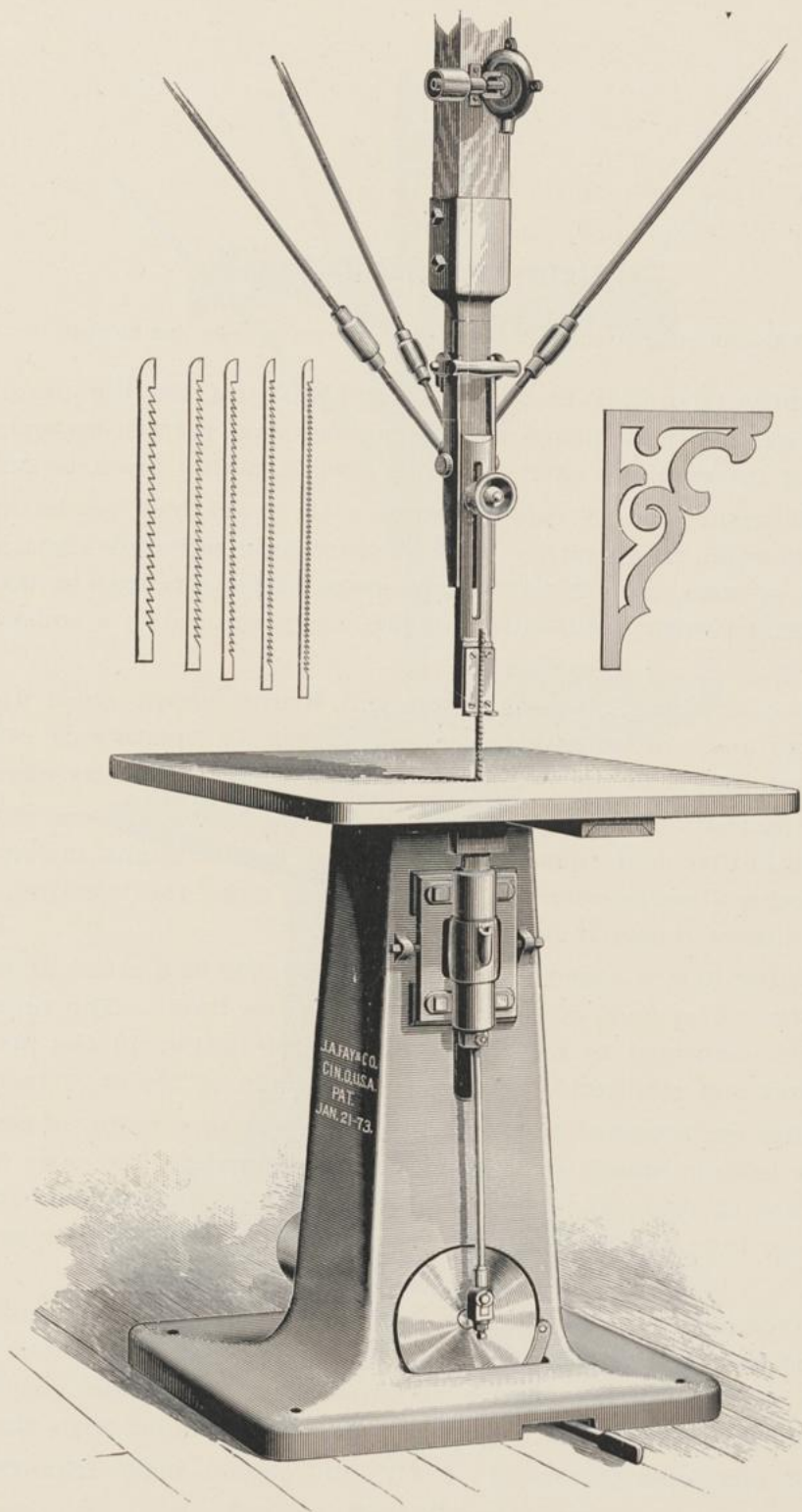
The driving shaft is at the base and carries the tight and loose pulleys. An automatic belt-shifter and brake is so arranged that a slight movement of a foot-lever engages a wedge with the fly-wheel, and stops the machine; a reverse motion of the lever causes it to start instantly.

The straining device consists of two springs made of a series of steel plates journaled at the outer ends of the arms of the cross frame. The inner ends of the springs are connected by a strap to an eccentric pulley in the inside of the casing, its lower end connecting with the upper part of the saw blade.

The springs are attached to an upright, fastened to a beam or post extending from the ceiling, braced and aligned by screw rods. The saws can be instantly detached or replaced. The machine is simple, compact, and unsurpassed for the purpose intended, and may be run for less than one dollar per year for repairs.

The arrangement of the straining device is such that the tension can be quickly varied by the hand-wheels, and is nearly uniform throughout the stroke of the saw, a very important feature in Scroll Saws. The slides can be quickly set to give the saw any desired rake. Five saws are included with the machine.

The tight and loose pulleys are 6"x3", and should make 1,100 revolutions.



No. 5

Patent Unstrained Scroll Saw.

With Adjustable Top Guide, and Automatic Brake and Shipper.

No. 5

Patent Unstrained Scroll Saw.

With Adjustable Top Guide, and Automatic Brake and Shipper.

This is a strong and substantial machine, built in column form and wholly of metal. It is extensively used in sash, door, chair and furniture-shops.

The reciprocating parts are light and self-lubricating, so that the machine may be run at a high rate of speed, even in upper stories, where they operate equally as well as on the ground floor.

The reciprocating saw slide is made hollow and octagonal in shape, securing lightness and strength, and connected to the pitman by a socket joint. The lower end of the saw blade is rigidly fastened in the top of the reciprocating slide by a split pin and set-screw.

The upper part above the table runs between hardened steel guides formed of a back plate and two adjustable side plates for accommodating different thicknesses of saws, which guide and support it.

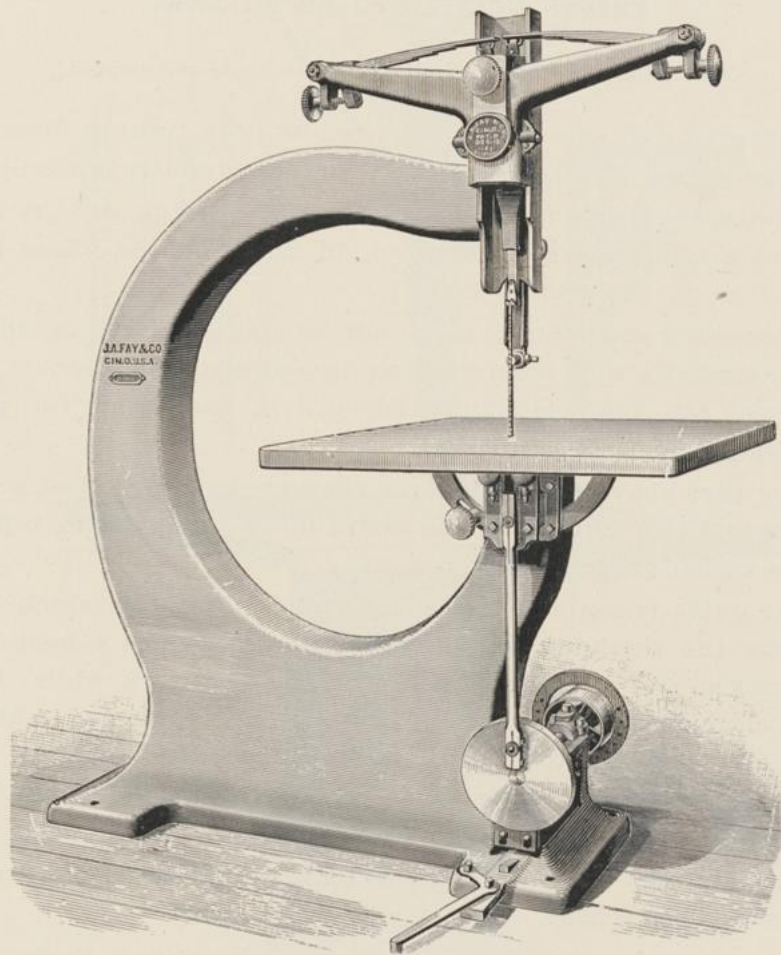
The upper guide is connected to a vertically sliding bar, which is raised and lowered to suit the thickness of material. It also acts as a hold-down to the stuff being worked, and allows of freely turning the work while the sawing is progressing, a clear open space being left between the guide and table. It is also adjustable in any direction to keep the saw square with the table.

The back support for the sliding bar is hinged near the top, so that in sawing perforated work it can be swung back from the saw to allow of the work being removed, and the saw inserted into another perforation without removal of the saw from the machine.

It is supplied with our Patent Automatic Shipper and Brake for instantly starting and stopping the saw at the will of the operator, by a single movement of the foot.

The saws are quickly adjusted, and the machine is easy to operate and keep in order. It is furnished with a noiseless fan, twelve assorted saws, and is ready to run as soon as received and the power applied.

The tight and loose pulleys are 6" x 3", and should make 1,000 revolutions.



No. 6

Column Fret Scroll Saw.

With Tipping Table, Deflecting Strain, Automatic Brake, etc.

No. 6

Column Fret Scroll Saw.

With Radial Table, Deflecting Strain, and Automatic Brake and Shipper.

This is a substantial machine, self-contained, and designed for use in pattern-shops, and for all classes of internal and external scroll sawing. The column is cast in one piece in the form of a letter "C," with a wide gap for the reception of large pieces. It has a broad base, giving it a solid support upon the floor.

The upper part extends over the table a sufficient height to receive the straining device consisting of two springs made of a series of steel plates, which are journaled upon the outer arms of the cross frame, the tension adjusted by means of hand-screws at each end. The upper end of the saw blade is attached to a strap connected with a segment pulley having an eccentric roller within the cross frame, connecting with the inner ends of the springs.

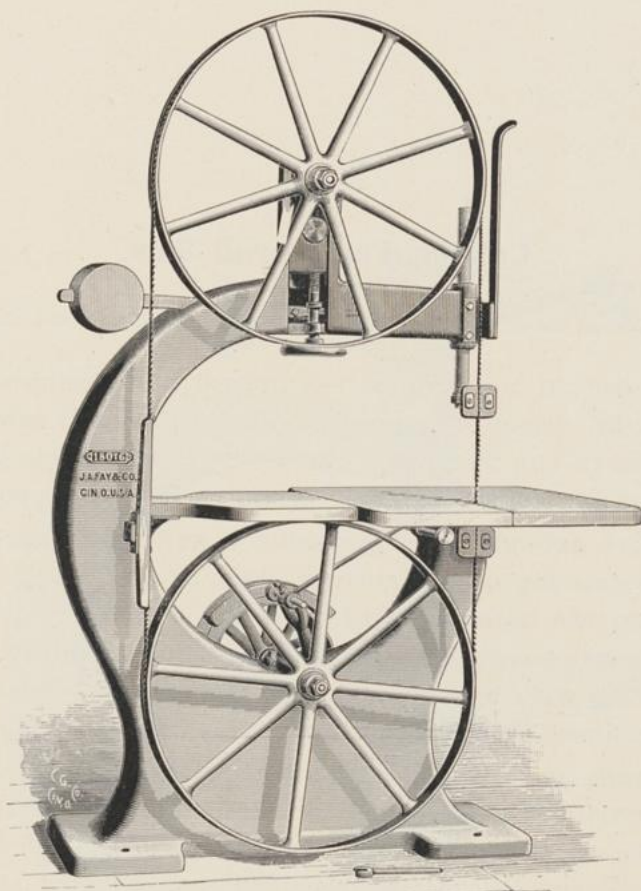
The hand-wheels at the end of the springs increase or diminish the tension of the saw, which, in operation, is an almost perfect strain throughout all parts of the stroke, the eccentricity of the roller being such that as the saw is drawn in its downward stroke the lessening flexibility of the springs is compensated by the shortening leverage of the roller.

The springs are secured to a sliding top frame, adjustable vertically to suit different lengths of saws. The back of the saw runs in a hardened steel guide carried in an arm vertically adjustable to suit the thickness of the work. The table is of iron, 32" x 38", and can be set to any angle up to 30 degrees right or left, a great advantage in sawing bevels and raking brackets.

The reciprocating parts consist of a steel cross head and gun-metal slides arranged very compactly, with self-lubricating devices, that can be run for less than one dollar per year for repairs.

The fly-wheel and shaft is at the base, directly under the table, and carries tight and loose pulleys, with an automatic shipper and brake. A lever moved by the foot instantly arrests the motion of the saw, and its reversal starts it at the will of the operator. Five saws are included with each machine.

The tight and loose pulleys are 6" x 3", and should make 1,100 revolutions.



No. 00

Patent Band Sawing Machine.

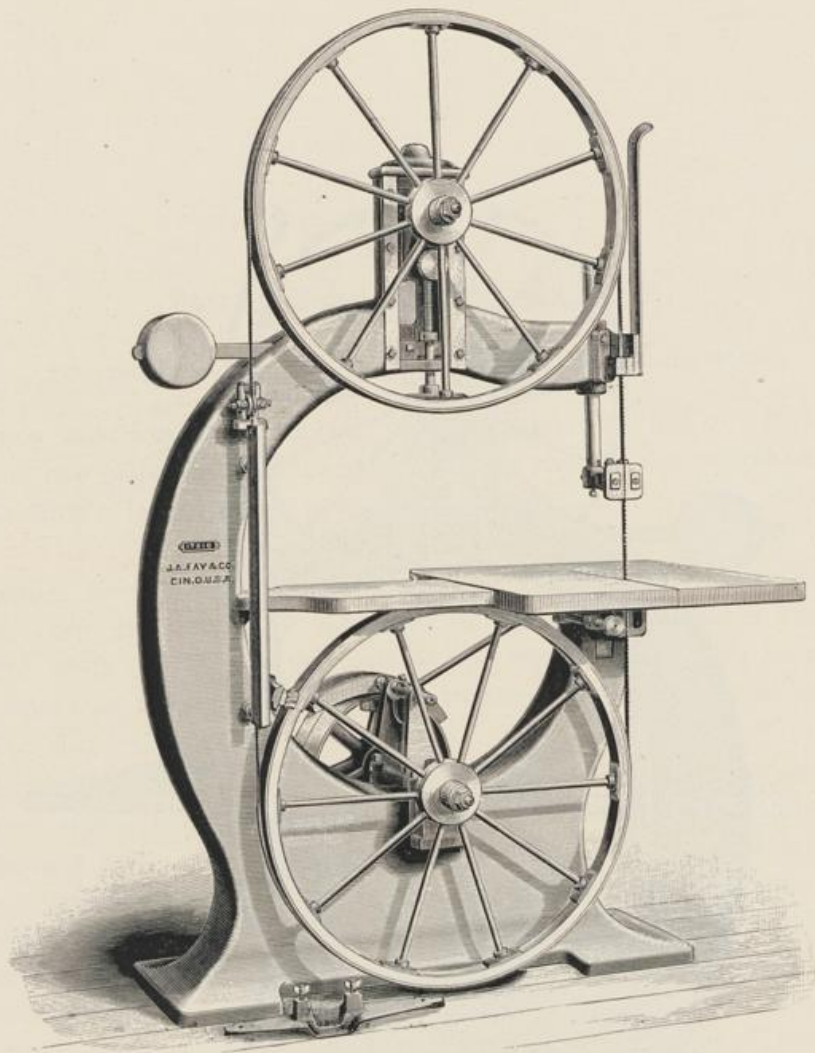
36" Wheels, Patent Weighted Tension, Patent Roller Guides, etc.

This machine is designed for small shops where the expense of one of the larger machines can not be afforded. To distinguish it, we have designated it No. 00. It is most excellently adapted to furniture and chair-factories, sash and door-shops, coffin, wagon-works, etc. The column is heavy, of cored sections, with broad base, insuring a good floor support.

The arbors are steel, and run in self-oiling bearings. The wheels are 36" in diameter, made with cast centers, bent wood rims, wrought arms, specially strong, light, and of a form to withstand vibration from high velocity and rough usage. The upper wheel and arbor is vertically adjustable, and supplied with a saw-guard; also our patent weighting attachment, which produces an elastic tension, and compensates for any change in the length of the saw by variation in temperature and strain. It carries a saw 18' 4" in length.

The guide above the table has a vertical adjustment of 15". It has a hardened steel roller for receiving the thrust of the saw, also lateral side plates for supporting the sides of the blade to prevent buckling. The lower guide is arranged close to the under side of the table. The table is of iron, 34" x 28", planed perfectly true, and can be set to different angles. Each machine is provided with one saw, brazing tools, and wrenches.

The tight and loose pulleys are 14" x 3", and should make 375 revolutions.



No. 0

Patent Band Sawing Machine.

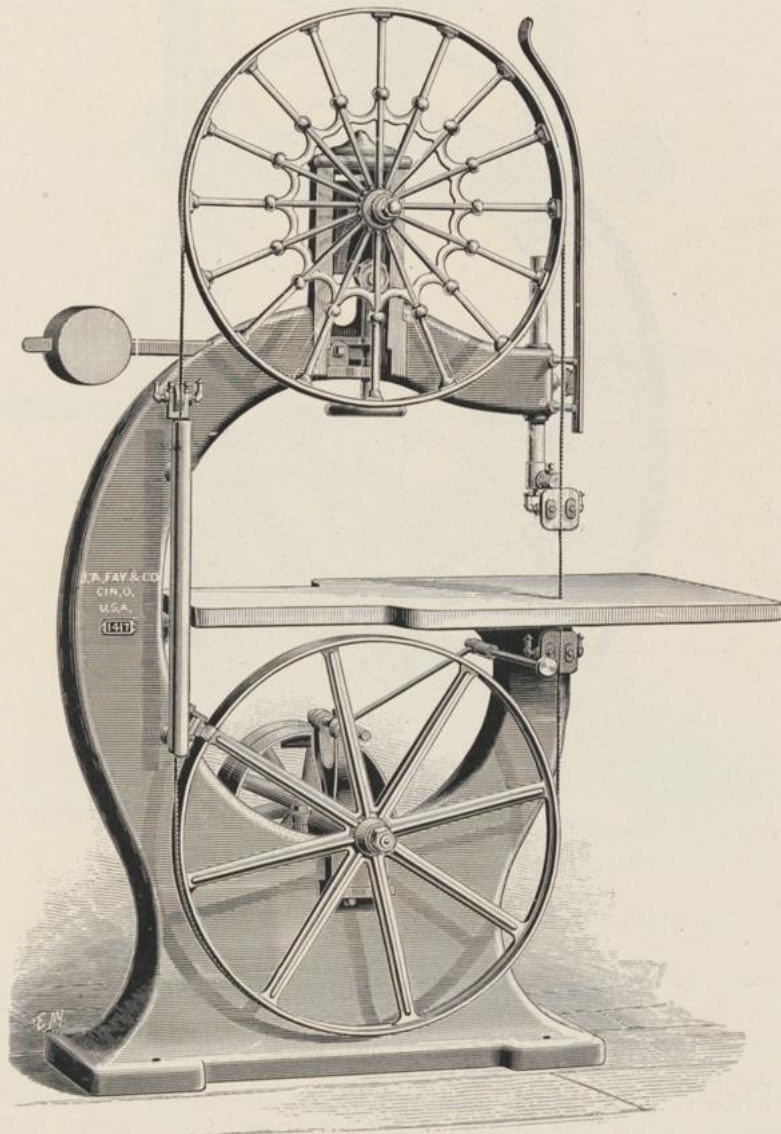
36" Wheels, Weighted Tension, Patent Roller Guides, Shipper, etc.

This machine is particularly adapted to small shops. It is larger than the No. 00, and smaller than the No. 1, but upon nearly the same general plan of construction, with the exception of the wheels. The table is of iron, and can be set to different angles.

The wheels are 36" in diameter, what is termed combination wheels, made with a cast center, wrought-iron spokes connecting to heavy bent wood rims, covered with a heavy rubber tire, ground perfectly true, making a very light and stiff wheel, able to withstand any vibration. The upper wheel has a vertical adjustment of 8", and carries a saw 18' 4" in length. The upper guide has a vertical adjustment of 14½". The shafts are of best cast steel, and run in self-oiling bearings.

The patent weighting attachment for producing the tension is a most complete compensating arrangement for any changes in the length of the saw by variation in temperature or strain. The saw-guides have a hardened steel roller, with side plates to receive the back thrust of the saw, relieve it of friction, and prevent buckling and breakage. Each machine is provided with patent brake and belt-shifter, one saw and brazing tools.

The tight and loose pulleys are 14" x 3", and should make 375 revolutions.



No. 1

Patent Band Sawing Machine.

36" Steel Wheel, Patent Weighted Tension, and Patent Roller Guides.

No. 1

Patent Band Sawing Machine.

36" Steel Wheel, Patent Weighted Tension, and Patent Roller Guides.

This is a medium size machine, larger than the No. 0. It is of greater capacity, and has important features and improvements not found on the smaller sizes. The column is of heavy cored section cast in one piece, with large floor base.

The arbors are of steel, lead-ground, and run in self-oiling bearings. The upper arbor runs in connected bearings in a saddle, and has a vertical adjustment of 7". It is pivoted at the top, so the upper wheel can be alligned with the lower one, also for guiding the saw to the center or any desirable part of the wheel to suit different widths of saws.

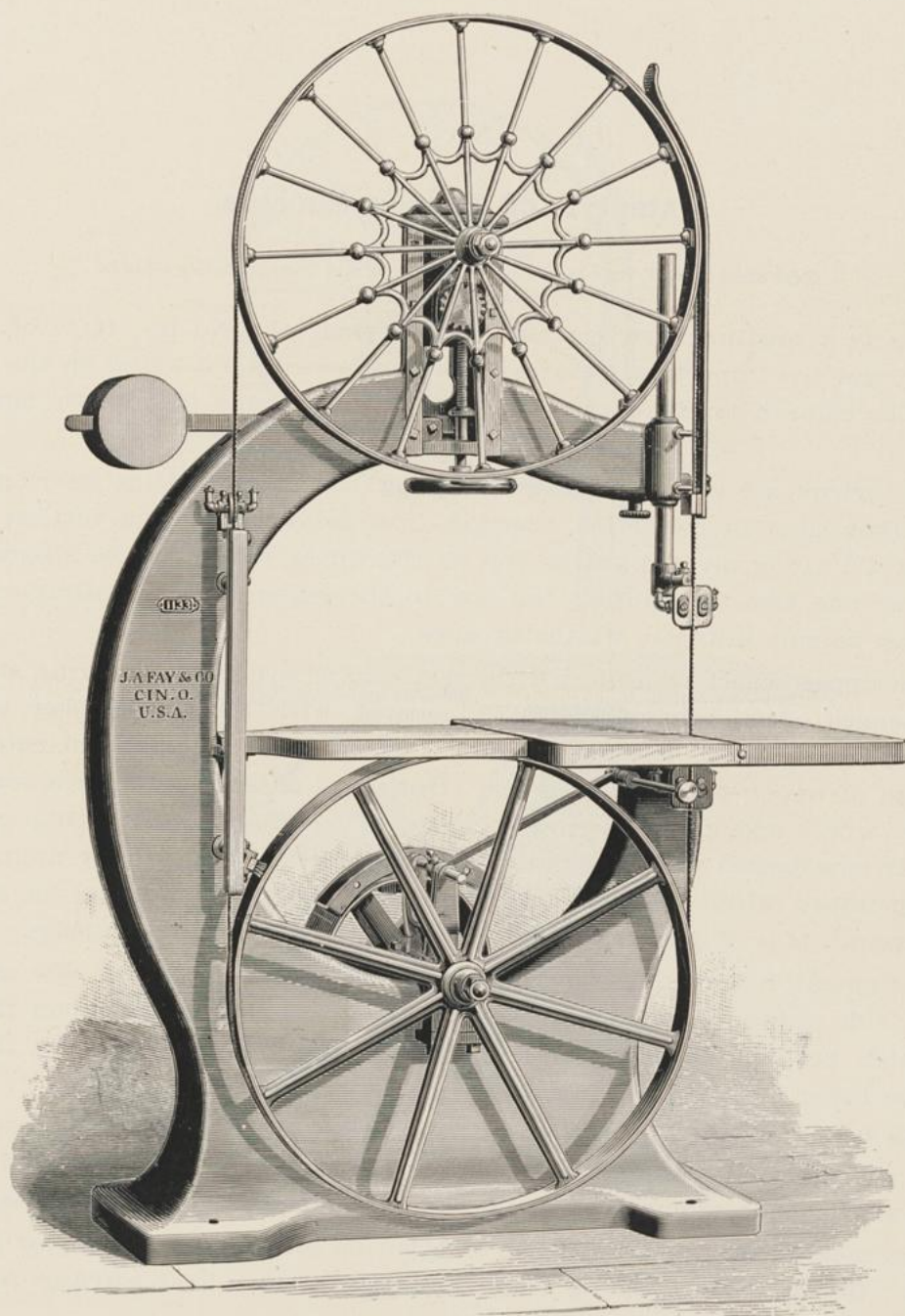
The upper wheel is made with a cast center, wrought-iron arms, steel rim with flanged edges, bent-wood filling, covered with a heavy rubber tire and ground perfectly true. The lower wheel is of iron, and has a ground rubber tire. The form of upper wheel makes a very strong and at the same time a very light-running wheel, and greatly reduces the strain on the saw in starting and stopping. It is weighted to compensate for any variation in length by undue strain or temperature, while the tension is flexible enough to compensate for any sudden impact. It is of great assistance in preventing breakage of blades.

The patent roller guides for receiving the back thrust of the saw with supporting side guides are arranged above and below the work, one upon the guide bar, which has a vertical movement of $15\frac{1}{2}$ "; the other underneath the table, near the lower side of the work. The rollers are of hardened steel.

The lever for starting and stopping is directly under the table, convenient to the operator; it automatically applies a brake to the rim of the driving pulley at the same moment that the belt is shipped to the loose pulley.

The table is of iron, $33\frac{1}{2}$ " x 28", and can be set to different angles for bevel sawing. One saw and brazing tools, comprising tongs and scarfing frame, are sent with the machine.

The tight and loose pulleys are 14" x 4", and should make 375 revolutions.



No. 2

Patent Band Sawing Machine.

38" Patent Steel Wheel, Patent Weighted Tension, and Patent Roller Guides.

No. 2

Patent Band Sawing Machine.

38" Patent Steel Wheel, Patent Weighted Tension, and Patent Roller Guides.

This is an excellent machine, designed for furniture, wagon, sash and door, agricultural shops, etc., and all general band sawing.

The column is cast in one piece with cored section, securing strength, and preventing vibration when in operation, and insuring a certainty that when once properly adjusted in position it will remain so.

The patent elastic steel wheel is 38" diameter. It runs upon the upper shaft, and from the lightness of its construction greatly reduces the strain on the saw consequent upon starting or stopping. It has a vertical movement of 8", and carries a blade 19' 11" in length; also an arrangement for guiding the saw to the center, or any desirable part of the face, to accommodate different widths of saws.

The lower is a cast wheel, combining in its design lightness with great strength. The shafts are of the very best cast steel, run in patent self-oiling boxes, with necessary adjustments to take up the wear. Both of the wheels are covered with a heavy rubber tire and ground perfectly true.

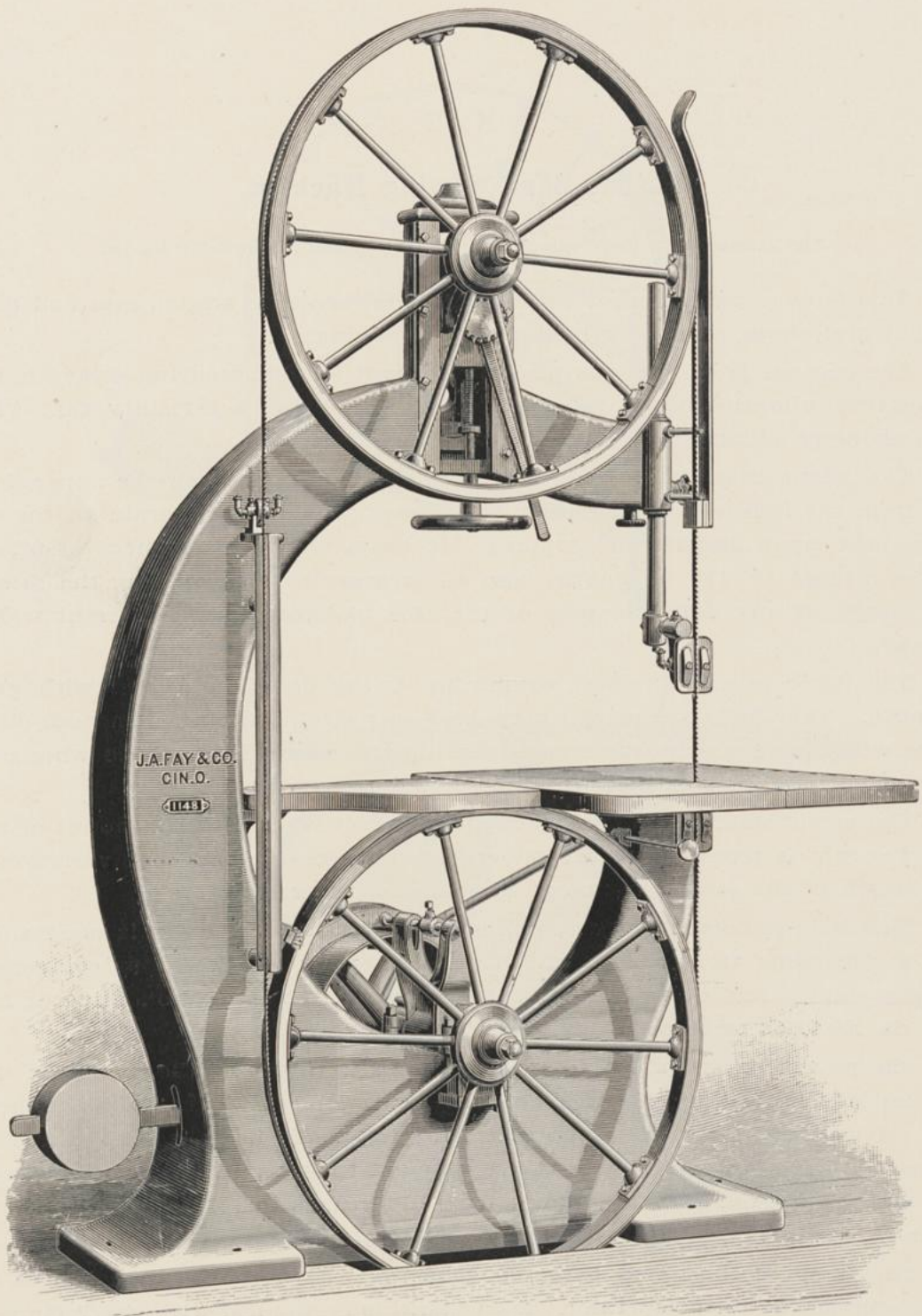
The patent weighting attachment gives a positiveness to the amount of tension the saw is receiving, at the same time compensating for any variation in the length of the saw by a change in temperature or strain.

This is an important feature, as the proper tension of the saw is maintained, and, at the same time, some flexibility of the parts is allowed to compensate for any sudden impact, and to prevent breakage of the saw by buckling or friction on the back or side.

The patent roller guides, to receive the back thrust of the saw, with supporting side guides, are features no band sawing machine should be without. The vertical guide-bar has a movement of 18½". It has a patent retracting spring counterbalance, rendering the adjustment to any position quick and easy. The table is of iron, 34" x 30", planed true, and swings to an angle of 30 degrees for bevel sawing.

The patent shipper and brake, for arresting the motion, is attached to the frame convenient to the operator. Each machine is supplied with one Perin saw-blade, brazing tools, wrenches, tongs, etc.

The tight and loose pulleys are 14" x 5", and should make 375 revolutions.



No. 3

Patent Band Sawing Machine.

With 42" Combination Wheels, Patent Weighted Tension, and Patent Roller Guides.

No. 3

Patent Band Sawing Machine.

42" Combination Wheels, Patent Weighted Tension, and Patent Roller Guides.

This machine is intended for car and railroad-shops, and other places where a machine of substantial construction, and one that will do any work that may be presented to it with rapidity and ease, is desired. The column is massive, with large floor base, and cast with cored sections to insure stiffness.

The arbors are steel, of large diameter, lead-ground, and run in self-oiling bearings. The wheels are 42" in diameter, made with cast centers, with wrought iron spokes united to heavy bent-wood rims, covered with thick rubber tires and ground perfectly true. This construction of wheel, while especially strong, is also light, and able to withstand any strain to which it may be subjected.

The bearings of the lower wheel can be alligned in either direction. Those of the upper wheel are mounted in a saddle, gibbed to the face of the column, and have a vertical adjustment of 10" by hand-wheel and screw. Also a canting arrangement controlled by a lever and ratchet for adjusting it to different widths of saws and for directing the course of the saw on the wheels.

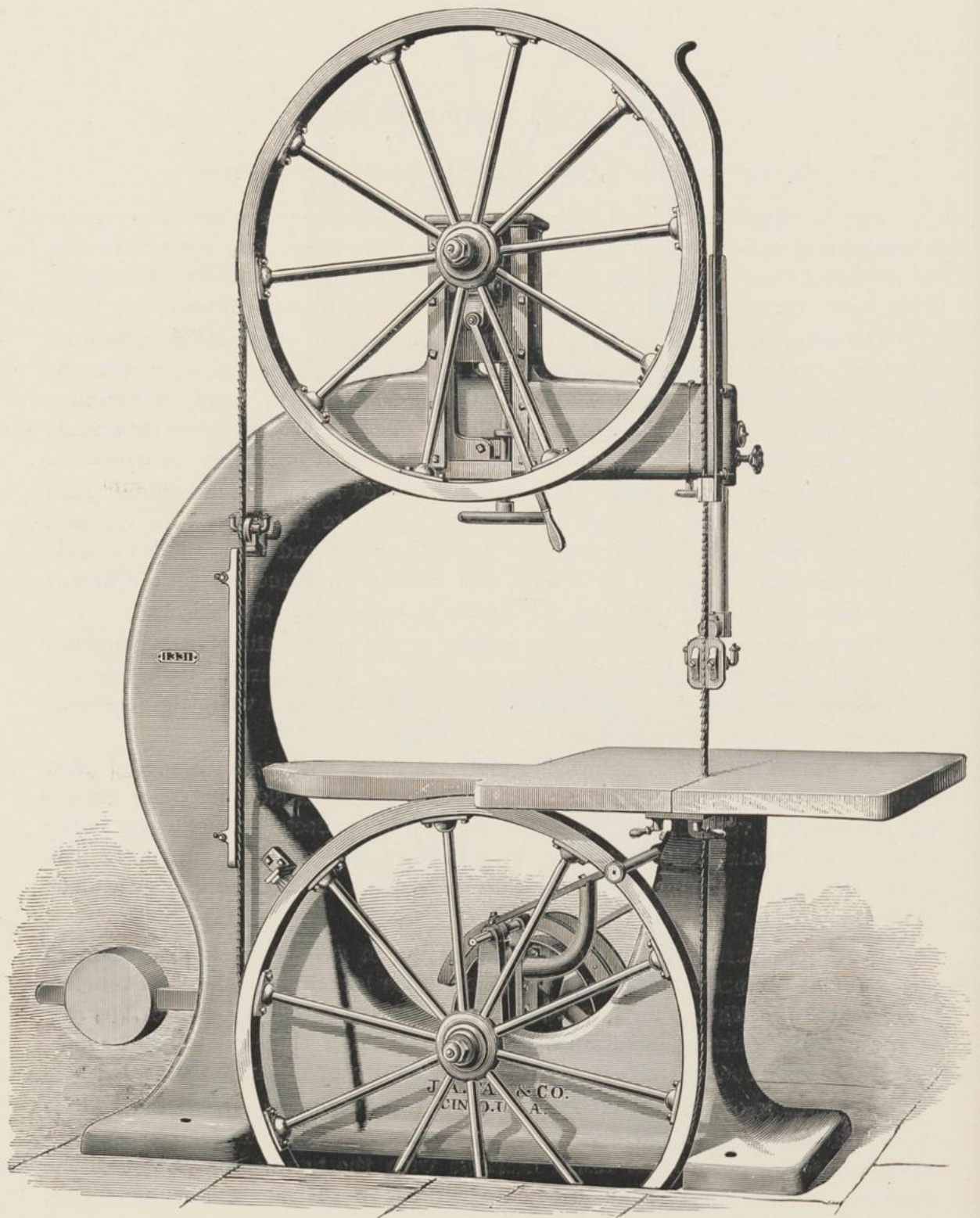
The guide-bar moves in a sleeve, gibbed to the end of the column, and has a vertical adjustment above the line or sweep of the column, increasing the distance between the table and bottom of guide. It has a vertical movement in its sleeve of 23½" for bevel or irregular sawing.

The guides above and below the table are made with solid hardened steel rollers for receiving the back thrust of the saw, and with side plates for retaining the saw in a vertical line. A retracting spring connected with the guide-bar acts to counterbalance its weight, making it perfectly easy to manipulate. The upper wheel and bearings has a vertical movement of 10", and carries a blade 22' 6" in length.

It has our patent weighting attachment, which gives a uniform tension to the saw, and compensates for any variation in its length by changes in temperature or strain. This is an important feature, as the proper tension of the saw is always automatically maintained, the parts retaining their flexibility to compensate for any sudden impact and prevent liability of breakage of blades.

The table is of iron, 34" x 40", planed perfectly true, and swings to an angle of 30 degrees for bevel sawing. The patent shipper and brake for starting and stopping is attached to the lower bearings with the handle convenient to the operator. Each machine is supplied with one Perin blade, scarfing frame, wrenches, etc.

The tight and loose pulleys are 16" x 5", and should make 350 revolutions.



No. 5

Patent Band Sawing Machine.

With 48" Combination Wheels, Patent Weighted Tension, and Patent Roller Guides.

No. 5

Large Band Sawing Machine.

With 48" Combination Wheels, Patent Weighted Tension, and Patent Roller Guides.

This machine is extra large, especially adapted to the requirements of car and railroad-shops, and any other large and deep sawing. Its capacity and range of work is great, as it has every requisite for general use.

The column is massive and heavy, with large base, giving a good floor support, permitting the machine to be driven at a high rate of speed without vibration.

The guide-bar is counterbalanced for the convenience of adjusting to different thicknesses. The upper and lower wheels are combination wheels, 48" in diameter, with arms made of wrought iron, connecting with heavy pads to thick bent wood rims, accurately turned, balanced, and covered with heavy rubber tires ground true. This result produces a very stiff, strong, and light wheel.

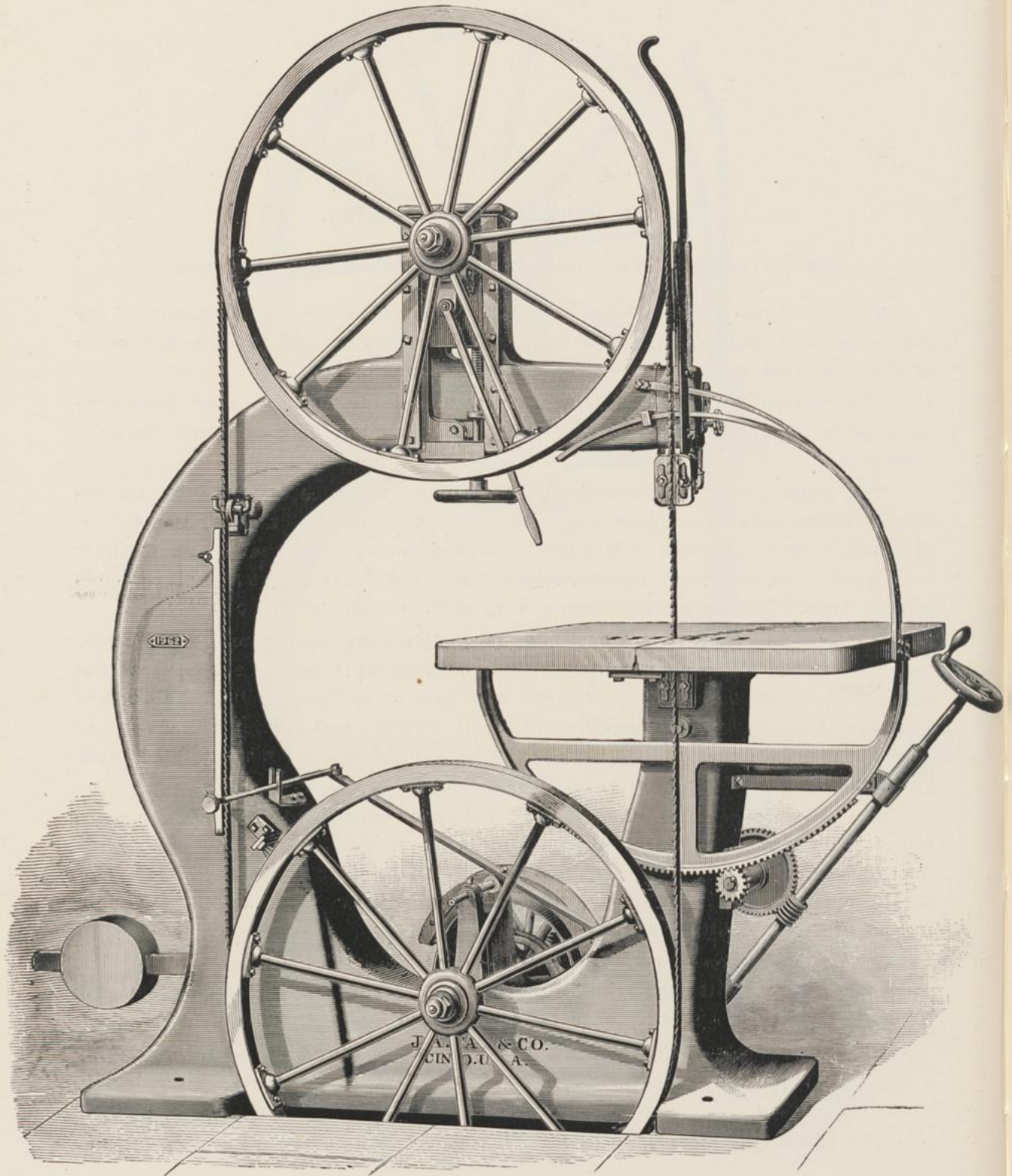
The arbor to the upper wheel is of large diameter, runs in self-oiling boxes, mounted in an adjustable saddle, with a convenient arrangement for canting the wheel, to cause the saw to run on any part of it desired; it has a vertical adjustment of $9\frac{1}{2}$ " to suit saws of different lengths, and carries a blade 25' 6" in length. The tension of the upper wheel is produced by a weighted lever graduated to the width of saw and dimensions to be sawed.

The saddle and slide, which carry the upper arbor and bearings, are accurately planed and fitted, and held in position by gibs. It has our patent anti-friction roller guides, with a steel wheel at the back to receive the thrust of the blade, and laterally adjusting side guides to take up the wear and to accommodate different widths of saws.

The guide-bar has a vertical adjustment of $27\frac{1}{2}$ "; also a special adjustment for raising to an additional height for irregular sawing. The lower arbor-bearing is cast in the frame of the machine, and is provided with an outside support.

The table is 42" x 50", and mounted upon an independent column, forming a rigid and substantial support, and can be tilted to an angle of 30 degrees for bevel sawing.

The tight and loose pulleys are 20" x 6", and should make 450 revolutions.



No. 5½

Large Band Sawing Machine.

With 48" Combination Wheels, Patent Weighted Tension, Geared Radial Table,
Patent Roller Guides, etc

No. 5½

Large Band Sawing Machine.

With 48" Combination Wheels, Patent Weighted Tension, Geared Radial Table,
Patent Roller Guides, etc.

This is one of the largest band saws made, designed for the very heaviest bridge and ship building sawing. It is especially massive and heavy; it is made in cored section, securing strength and stiffness. The base is large, giving a good floor support, permitting it to be run at a high speed without vibration.

It has combination wheels, 48" in diameter; these are made with cast centers and wrought-iron tubular spokes and thick bent wood rims carefully turned, balanced and covered with heavy rubber tires ground perfectly true to secure elasticity.

The upper wheel runs on an arbor of large diameter in self-oiling bearings; it is mounted in an adjustable saddle, which has a weighted lever attachment to give the saw proper tension. It has a vertical adjustment of 9½", and carries a blade 25' 6" long. It also has a canting attachment operated by a lever, to make the saw run to any part of the rim of the wheel desired; also a vertical adjustment by hand-wheel and screw to suit saws of different lengths.

The lower arbor-bearings are cast in the column, provided with heavy caps and an outside support. The guide-bar is counterbalanced for convenience of adjustment. It has a vertical movement of 18" from the table.

It is supplied with our patent roller guides, having a hardened steel wheel at the back for receiving the thrust of the saw, and laterally adjusting side guides to take up the wear and to suit varying widths of saws.

The table is mounted upon an independent column or table support, arranged for bevel sawing to any angle up to 30 degrees both ways. It has a segmental rack and pinion so geared as to allow of its being adjusted to different positions during the sawing, to admit following the twist or crooks in the timber.

The table has spur rolls for holding the stuff, and for the heavy sawing of ship knees and stays it will be found almost invaluable. The lower shaft is especially large, and carries the tight and loose pulleys, which run between bearings.

One saw, scarfing frame, brazing tools, tongs, accompany each machine.

The tight and loose pulleys are 20" x 6", and should make 450 revolutions.



No. 4

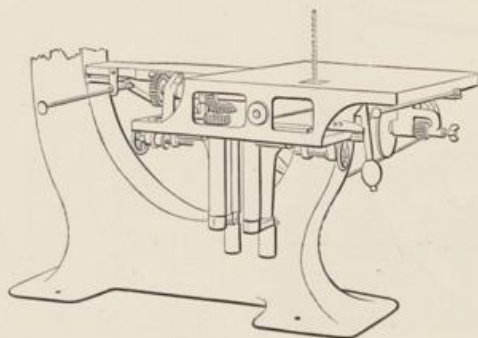
Patent Band Resawing Machine.

42" Combination Wheels. Patent Reversible Table, Weighted Tension, and Patent Rolling Guides.

No. 4

Patent Resawing Band Sawing Machine.

With 42" Combination Wheels, Patent Reversible Table, Weighted Tension,
and Patent Rolling Guides.



This is a medium size Band Resawing Machine, intended for small shops and all light resawing, such as panel and box work, also for regular scroll and curve sawing. It will resaw up to 20" in width and 6" in thickness. The column is made in box form, with heavy cored section and large base, securing a substantial floor support. The table is made in two sections—one stationary

and one reversible. The feed works are mounted on the front section of the table, and can be quickly changed from a resaw to a plain band saw without the removal of any portion.

The wheels are 42" diameter, and have cast centers with wrought-iron tubular spokes and bent wood rims with heavy rubber tires, to secure elasticity under contact with the saw blade, which is 22' 6" in length.

The upper wheel has a vertical movement of 10" to suit the variation in the lengths of the blades, and an attachment to give the saw the proper tension and to compensate for any variation by changes in temperature or other causes. Also an adjustment for retaining the saw in its proper course on the wheel.

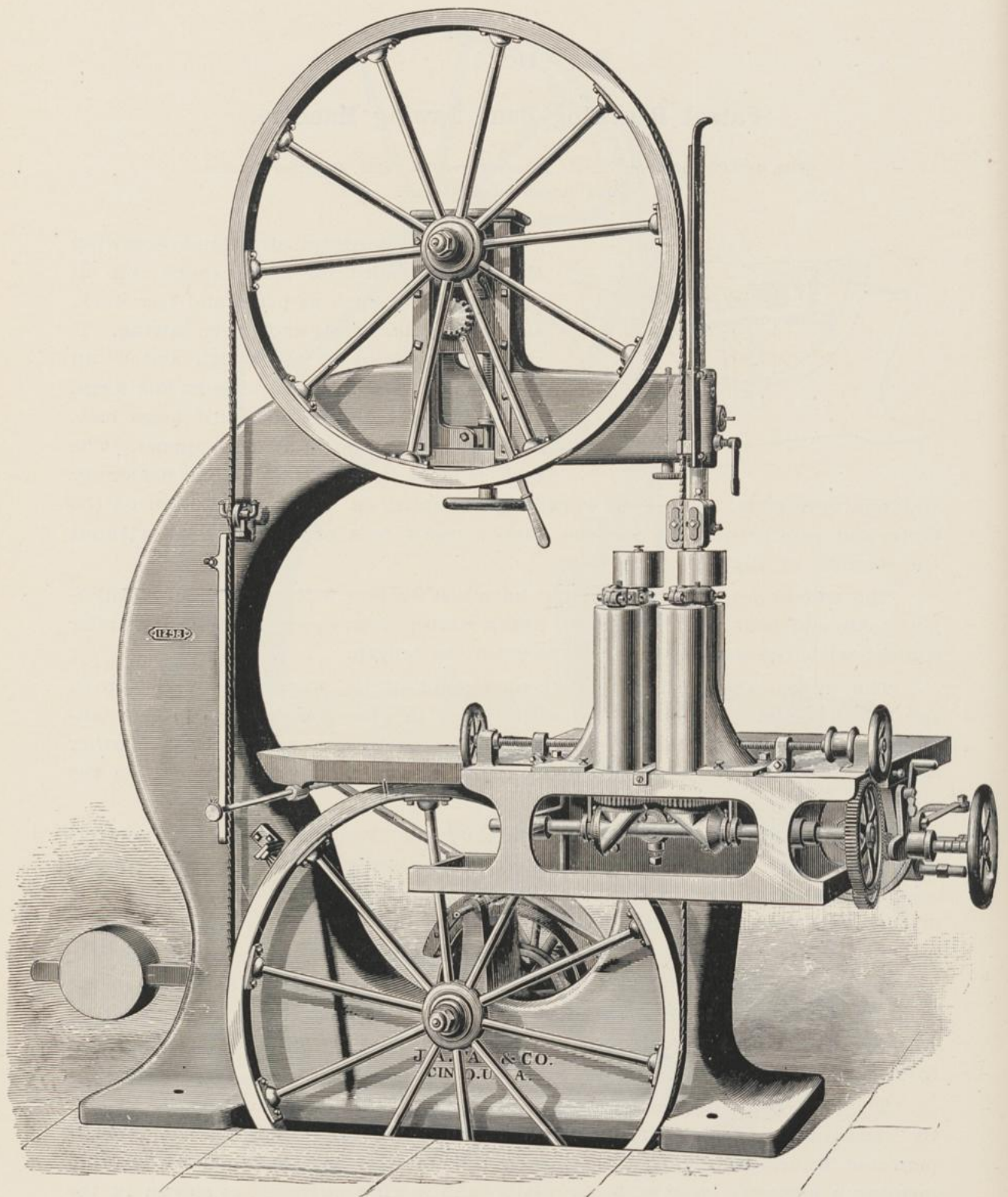
The guide-bar has a vertical movement of 23½" from the table. It is counter-balanced, rendering it easily moved, and is supplied with our improved guides, consisting of anti-friction hardened steel rollers for receiving the back thrust of the saw and relieving it of friction.

It is equipped with our patent duplex table, which is made in two sections, divided upon a line drawn at right angles to the teeth of the saw. Upon the front section of the table the feed works are mounted, consisting of four rollers strongly geared and provided with a graduated friction feed, variable instantly from slow to fast.

The feed rolls have a lateral adjustment to suit the thickness to be cut. By loosening the nut in front upon which the outer section of the table is mounted it can be revolved completely over, its lower side when so reversed forming a perfectly clear table for plain band sawing purposes, as shown in the small engraving above.

This improvement admits of it being changed from a resaw to a band saw in one moment, or vice versa, without lowering or removal of the table from the machine.

The tight and loose pulleys are 18" x 6", and should make 550 revolutions.



No. 5 Large

Patent Band Resawing Machine.

48" Combination Wheels, Patent Reversible Table, Weighted Tension, and Patent Rolling Guides.

No. 5 Large

Patent Band Resawing Machine.

With Patent Reversible Duplex Table for Plain Band Sawing.

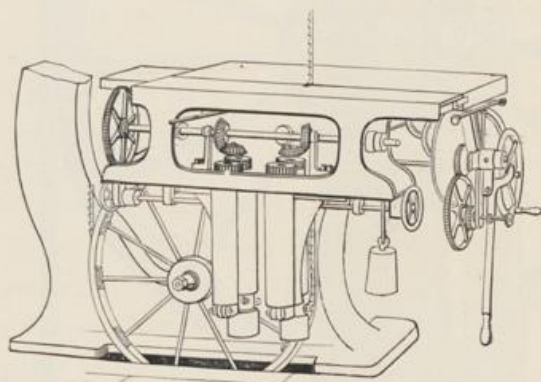


TABLE REVERSED FOR PLAIN SCROLL SAWING.

This machine is a combination of a resaw and band saw, designed both for resawing and plain band saw purposes. The column is massive and heavy, and made in cored section to secure solidity and strength. Its base insures a good floor support, and admits of a high rate of speed without vibration. It is adapted for reducing deals to lumber, or resawing boards to thinner stuff, for panels, picture-backing, etc. It will resaw 26" in width, and saw to the center of 12", or

down to the very thinnest material that admits of resplitting.

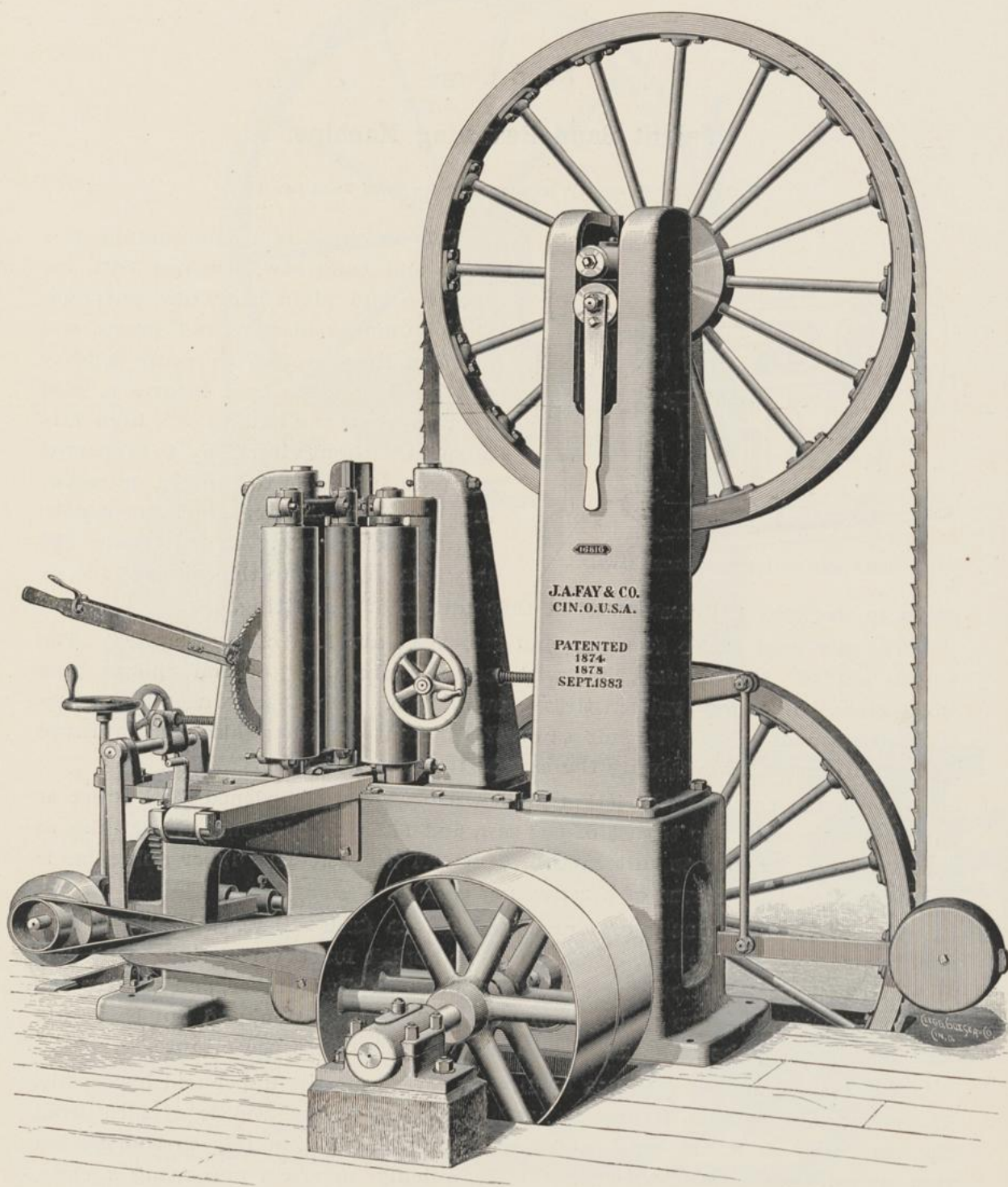
The saw used is No. 20 gauge, and removes a saw kerf of less than $\frac{1}{16}$ ". The wheels are 48" in diameter, and with cast centers, wrought-iron spokes, bent wood rims, and heavy rubber tires ground true. The upper wheel has a vertical adjustment of 10" to suit saws of different lengths; also an improved weighting device for retaining the saw at its proper tension.

It has the patent anti-friction guides, fitted with a hardened steel roller at the back to receive the thrust of the saw, and laterally adjusting side guides to take up the wear, and to suit saws of different widths. The upper guide-bar is counterbalanced by means of a retracting spring.

The feed works consist of four heavy driven feed rollers, each side adjustable to or from each other, or they can be angled for bevel sawing. One pair is made yielding, to allow for any inequalities in the lumber, and to give the necessary pressure. The feed is graduated by a face friction, and can be moved without stopping the machine to feed from 5' to 40' feet per minute.

The table is made in duplex form, with faces upon its upper and lower side. That portion in front of the saw carries the feed works, and is divided from the rear part on a line just in front of the saw teeth, and is so constructed that by turning a hand-wheel it can be quickly reversed, presenting a clear, unobstructed table for all kinds of band sawing, as shown above.

The tight and loose pulleys are 20" x 6", and should make 500 revolutions.



No. 6 Large
Patent Band Resawing Machine.

Will resaw Material 18" thick and up to 30" in width.

No. 6 Large

Patent Band Resawing Machine.

Will resaw material 18" thick, and up to 30" in width.

The Band Resawing Machine illustrated on the opposite page is capable of resawing large timbers as well as lumber, both hard and soft woods, into panel boards, picture-backing, box material, etc., in the best possible manner. The saw kerf removed being only $\frac{1}{8}$ " a saving in lumber is effected. Two $\frac{3}{8}$ " panels planed on both sides can be obtained from 1" lumber.

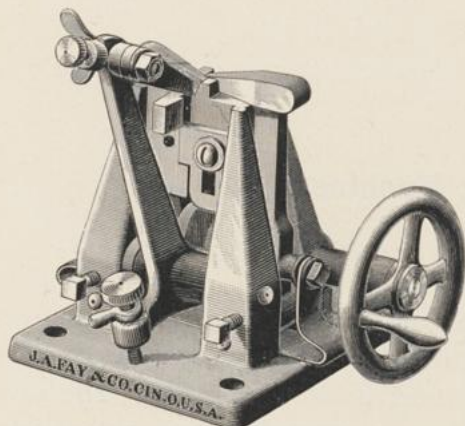
The framing of the machine is massive, the column supporting the upper wheel being mounted on a heavy base that carries the feed works. The wheels are 60" in diameter, made with cast centers, wrought-iron tubular spokes, and wood rims covered with leather. They are placed on journals of large diameter, running in long bearings.

The upper wheel is adjustable vertically for different lengths of saws, and also angularly to the lower wheel to direct the saw to any position on the face of the wheels. The feeding rollers are four in number, 6" in diameter, powerfully geared, and driven by a face friction, under perfect control of the operator. Each pair of rollers has an independent adjustment by screw and hand-wheel, and will open to receive material 18" thick and 30" wide.

The upper guide can be adjusted to a height of 31". The machine as shown will saw to the center of material 12" thick, or by raising the platen $4\frac{1}{2}$ " it will saw to the center of material 18" thick, or from the side of a timber 12" thick, producing 1" lumber. The saw blade furnished is 4" wide and 38' 6" long. The capacity of the machine is variable, according to the kind of material being sawed. The feed ranges from 0' to 50' per minute. The rollers receive their force from a heavily weighted lever attached to their moving-screws, the pressure being sufficient to retain the boards straight as they pass through.

The saw is guided by patent friction roller guides, the roller receiving the back thrust of the saw, its sides being supported by adjustable wood side guides. The upper guide is adjustable for different widths of lumber, and raised and lowered by a lever. The saw is strained by a combination of levers, and the weight being close to the floor causes no vibration in its movements. The strain is evenly distributed on the bearings by an outside bearing, adjustable with the upper wheel, which has flexibility to compensate for any movement of the weight. The machine is complete with one saw blade and a full set of wrenches.

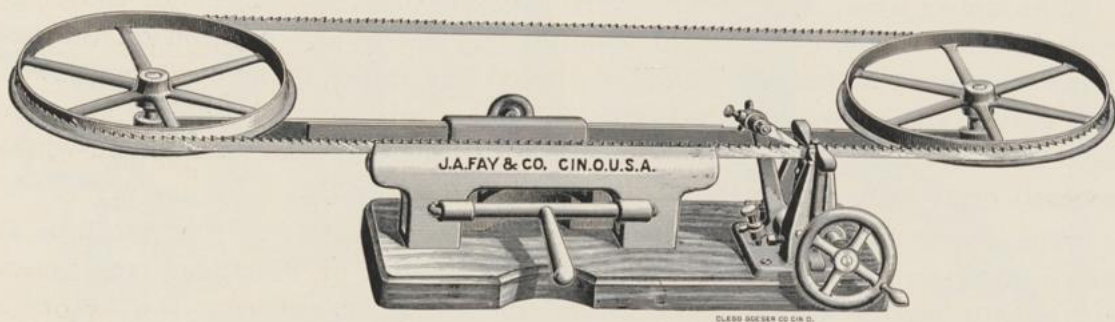
The tight and loose pulleys are 30" x 8", and should make 475 revolutions.



Patent Automatic
Band-Saw Setting Machine.

the feed is adjustable for fine or coarse teeth.

This is a simple little machine, easily taken care of, and a favorite wherever used. It will save its cost in a short time in the superior manner in which it performs its work upon the band-saw blade, thereby largely increasing its durability and usefulness. It will automatically set a band saw in three minutes more accurately than can be done by hand in an hour's time. The setting is performed by two hammers which at each revolution of a hand-wheel strike each a tooth of the saw (which is held against an anvil-block) upon opposite sides of the blade, setting two teeth at once with unerring precision. The moment the hammers have made their stroke the saw is fed forward two teeth, ready for the action of the hammers. The force of the blow can be increased or diminished, to give more or less set, and



Patent Automatic
Band-Saw Setting and Filing Machine.

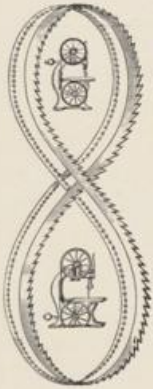
With Hand-Filing Frame and Vise.

This machine is for setting and filing the teeth of band-saw blades from $\frac{1}{8}$ " to $1\frac{1}{2}$ " in width. It consists of an Automatic Setting Machine (illustrated above), a clamping vise for holding the blade during the operation of hand filing, and a frame with two adjustable bars, each carrying a pulley upon their outer ends. They are adjustable vertically to suit the width of saw to the vise and setting machine.

The bars are held in a guiding box, and have a horizontal adjustment with the wheels to or from each other, to suit different lengths of saws. The clamping vise is closed by an eccentric lever, which securely holds the saw while filing. It occupies but a small space, is complete in itself, and is of a class of machines that always give satisfaction.

With this machine the teeth are set without any bending at the bottom, as is the case with other setting machines, and the saw is easily sharpened and retained in good cutting order. It occupies but a small space, is entirely self-contained, and is a machine that gives universal satisfaction, as is evidenced from the fact that hundreds are sold.

"Perin" French Band-Saw Blades.



The chief requisites of band-saw blades are uniformity of temper, width, thickness, freedom from flaws, and a perfect joint. They are liable to break from crystallization, imperfect tension, bad filing, and carelessness of the operator in handling. The temper necessary to insure durability is the same as required for delicate springs made of fine steel. Blades not having these requisites are expensive at any cost, while a perfect saw is sure to suit the purchaser in the amount of work it performs and the smoothness of its movements.



The appearance of a blade does not indicate its temper, and it is difficult to distinguish tempered from untempered saws. A soft saw is worthless as it will not retain its cutting edge. An excellent test is to bend the blade and see if its elasticity indicates temper. The Perin French blades are not injured by this test. They are the most perfect made, outlasting three or four ordinary blades. **J. A. Fay & Co. are the sole and exclusive agents for the United States of these blades, and they can be only procured from them or their authorized agents.** Every genuine blade bears the trade mark "Perin & Co." on one side, and "J. A. Fay & Co." on the other. A large variety of sizes are carried in stock, but special sizes for resawing, log sawing, and other purposes other than those enumerated below require to be imported.

"PERIN" FRENCH BAND-SAW BLADES.

Joined, Set, and Filed Ready for Use.

Length.	WIDTH.											
17'	1/8"	3-16"	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"	1 1/2"	2"
17' 6"	1/8"	3-16"	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"	1 1/2"	2"
18'	1/8"	3-16"	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"	1 1/2"	2"
20'	1/8"	3-16"	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"	1 1/2"	2"
22'	1/8"	3-16"	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"	1 1/2"	2"
22' 6"	3-16"	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"	1 1/2"	2"	2 1/2"
25' 6"	3-16"	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"	1 1/2"	2"	2 1/2"

"PERIN" BAND-SAW BLADES.

Ground and Toothed, not Jointed, Set, or Filed.

Length.	WIDTH.											
18'	1/8"	3-16"	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"	1 1/2"	2"
20'	1/8"	3-16"	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"	1 1/2"	2"
22'	1/8"	3-16"	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"	1 1/2"	2"
22' 6"	3-16"	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"	1 1/2"	2"	2 1/2"
25' 6"	3-16"	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"	1 1/2"	2"	2 1/2"

"PERIN" BAND-RESAW BLADES.

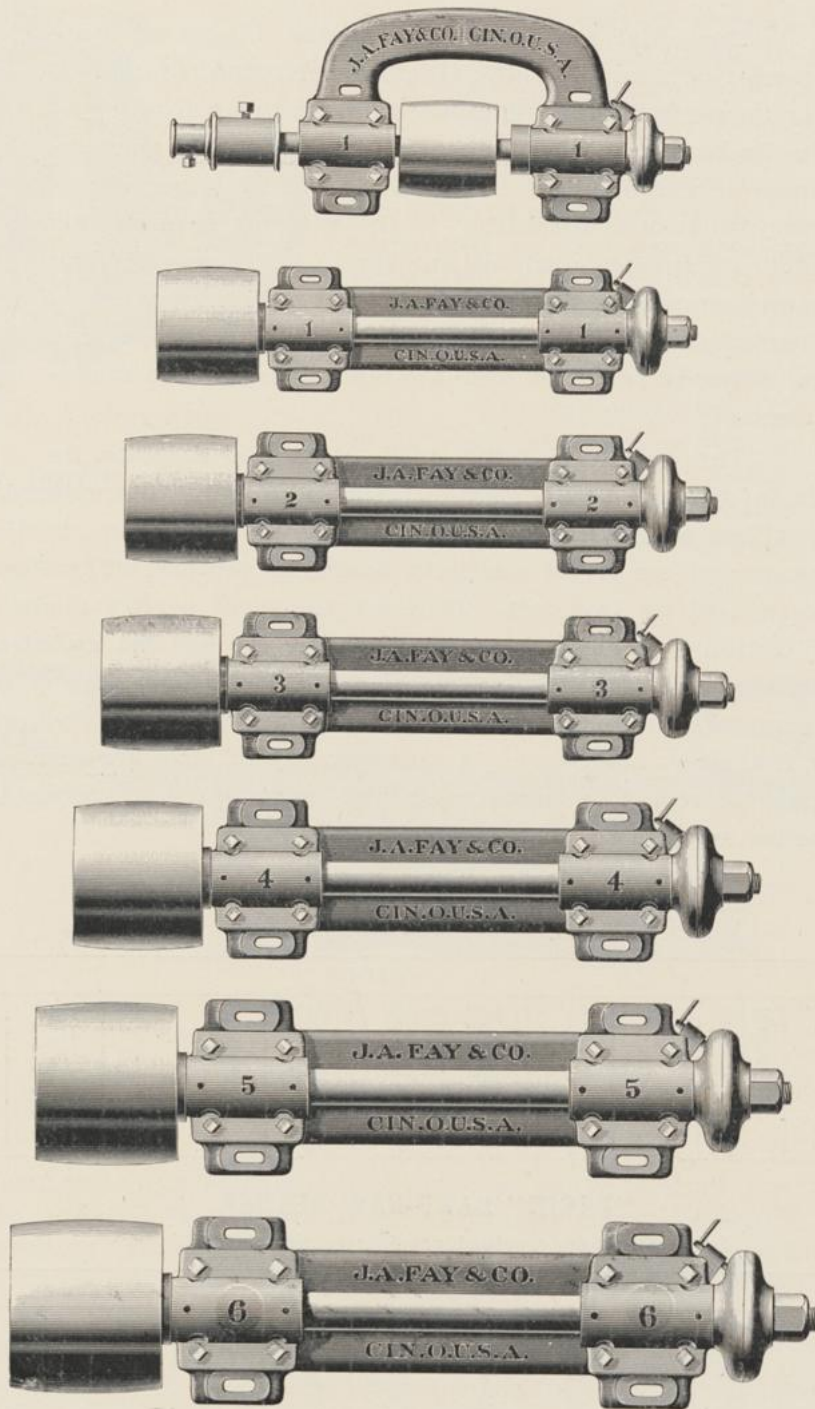
Joined, Set, and Filed.

Width of Blades, Nos. 17 and 18 gauge and under, 3", 3 1/2", 4", 4 1/2", 5", 5 1/2", 6".

Not Jointed, Set, or Filed.

Width of Blades, Nos. 17 and 18 gauge and under, 3", 3 1/2", 4", 4 1/2", 5", 5 1/2", 6

Other widths and lengths than the above will be imported to order, and prices given on application.



Patent Self-Oiling Saw-Arbors.

With Box Frames, Expansive Bushing, etc.

Patent Self-Oiling Saw-Arbors.

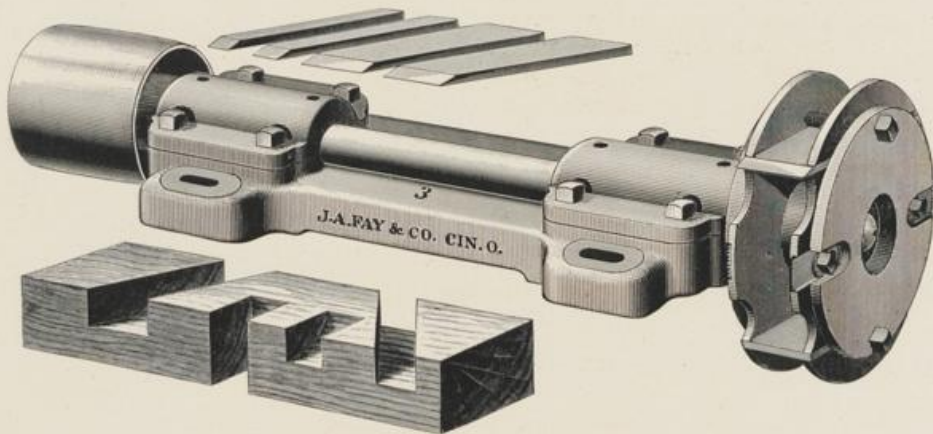
With Expansion Device.

The Saw-Arbors illustrated on the preceding page are made of six different sizes, both with the pulleys at the end or between bearings. The arbor frames are of the most approved construction, with the bearings cast to a solid bed, connecting them rigidly together, and rendering it impossible for them to get out of line. They have especially deep lining of the very best hard metal that can be procured, and self-oiling arrangement, by which the journal is constantly flooded with oil, effecting a great saving over those of other makers.

The arbors are of best steel, large in diameter, and lead-ground. They are supplied with an expansion device, enabling saws with different size holes to be used without the necessity of bushing. Also a safety device for locking the arbor when changing saws. The pulleys are arranged to take up any end motion or wear. A boring chuck can be applied to the No. 1, 2, and 3 sizes, for boring purposes, as shown, when so ordered.

DIMENSIONS AND SIZES.

No.	Extreme Length from out to out of Journals.	Diameter of Pulleys.	Face of Pulleys.	Diameter of Collars.	Diameter of Arbors.	Size of hole in Saw.	For Saws under	PRICE.
1	15"	3½"	4½"	2¾"	1⅞"	7/8"	10"	\$
2	18"	4½"	5"	3¼"	1⅞"	1"	15"	\$
3	22¼"	5"	5½"	4"	1⅞"	1⅜"	20"	\$
4	24"	6"	6½"	4½"	1⅞"	1¼"	24"	\$
5	26"	7"	7½"	5"	1⅞"	1⅜"	30"	\$
6	28"	8"	8½"	6"	1⅞"	1½"	36"	\$

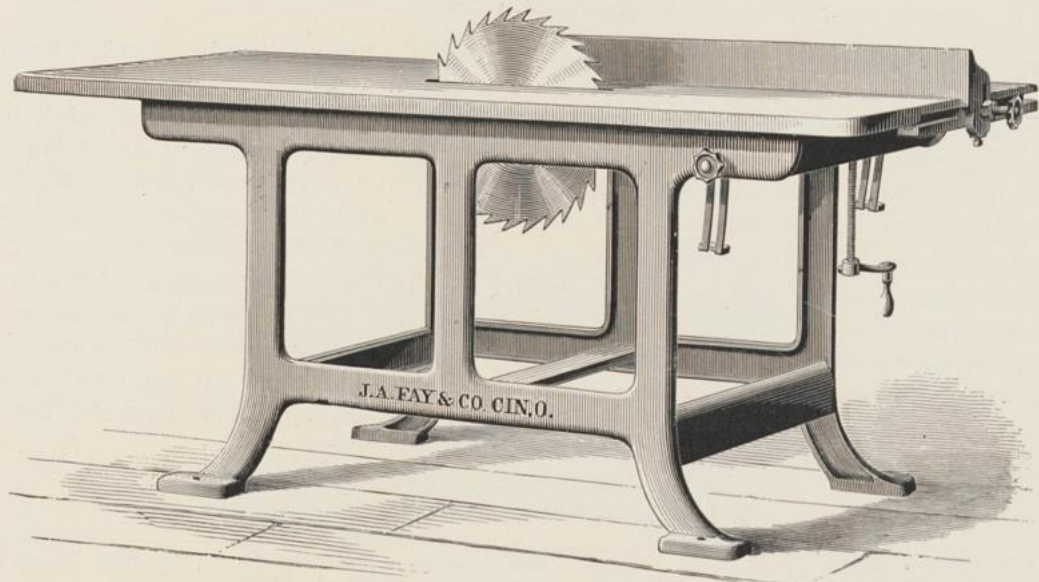


Steel-Plate Expansion Gaining Head.

Applied to Saw-Arbor.

These Heads are made of steel plates in two sections. The outer faces carry spurs held in milled seats; the inner faces have grooves in which the cutters are inserted and held by end pressure. A turned bolt rigidly secures both together. They can be used on saw-arbors by omitting the outside collar. Three sizes are made, as follows:

- No. 1—7¼" diameter, to cut all sizes from ½" to 2".
 " 2—8½" " " " " " " 5/8" " 2".
 " 3—9½" " " " " " " 1" " 2".



No. 1 and 2

Iron-Frame Ripping-Saw Tables.

With Adjustable Tables and Parallel Guides.

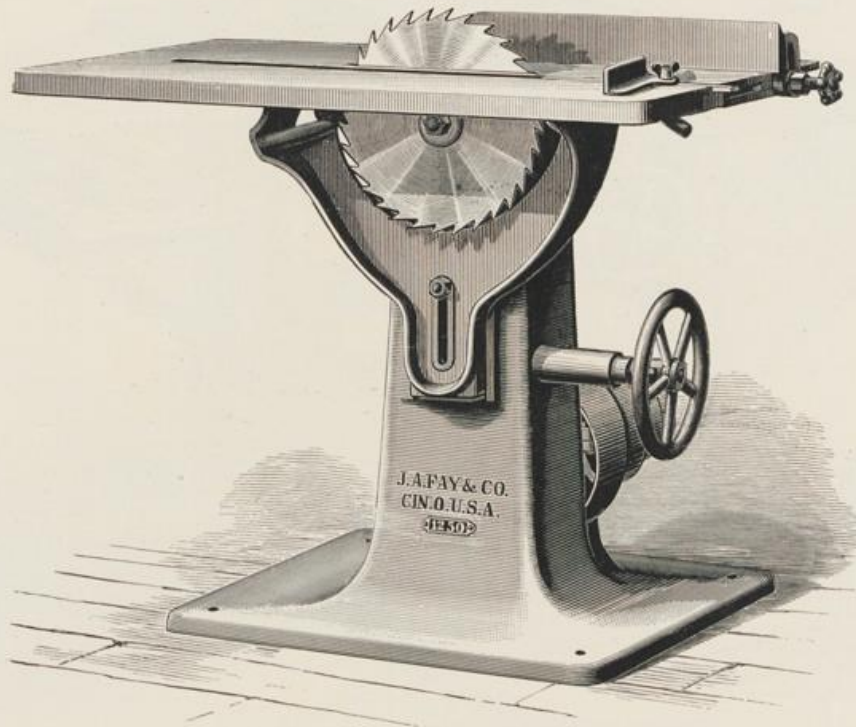
These machines are made of two sizes, both similar in design, the frames of iron, with the exception of the top. The No. 1 will receive saws up to 16" in diameter; the No. 2, saws up to 24" in diameter. The tables are hinged at one end and elevated by a raising screw at the other, and retained in position by slotted arms secured by hand-wheels.

The arbors are steel, of large diameter, lead-ground, and run in self-oiling bearings formed in the cross girt of the frame. Our self-centering conical bushing is placed on the arbor to accommodate saws having different sized holes, also a patent safety attachment to prevent turning while changing saws. On the No. 1 the arbor is 1" in diameter, and on the No. 2 is 1¼" in diameter where the saws are applied.

The table for No. 1 is 5' 6" x 30", the No. 2 is 6' 6" x 3" wide, made of glued-up strips of hard wood, and supplied with our patent parallel guide or fence, which can be set to form a bevel of forty-five degrees. An index plate is attached, which shows at a glance the distance between the saw and the fence.

The arbor pulleys can be belted in any direction. The No. 1 is 4" x 4½" face, and should make 2,600 revolutions; the No. 2 is 5" x 6" face, and should make 2,200 revolutions.

A countershaft is furnished when desired for either machine at small extra cost. For the No. 1 machine the tight and loose pulleys are 10" x 4½", and should make 520 revolutions; and for the No. 2 machine the tight and loose pulleys are 12" x 6", and should make 550 revolutions.



Column Ripping Saw.

With Vertical Adjusting Table and Parallel Gauge.

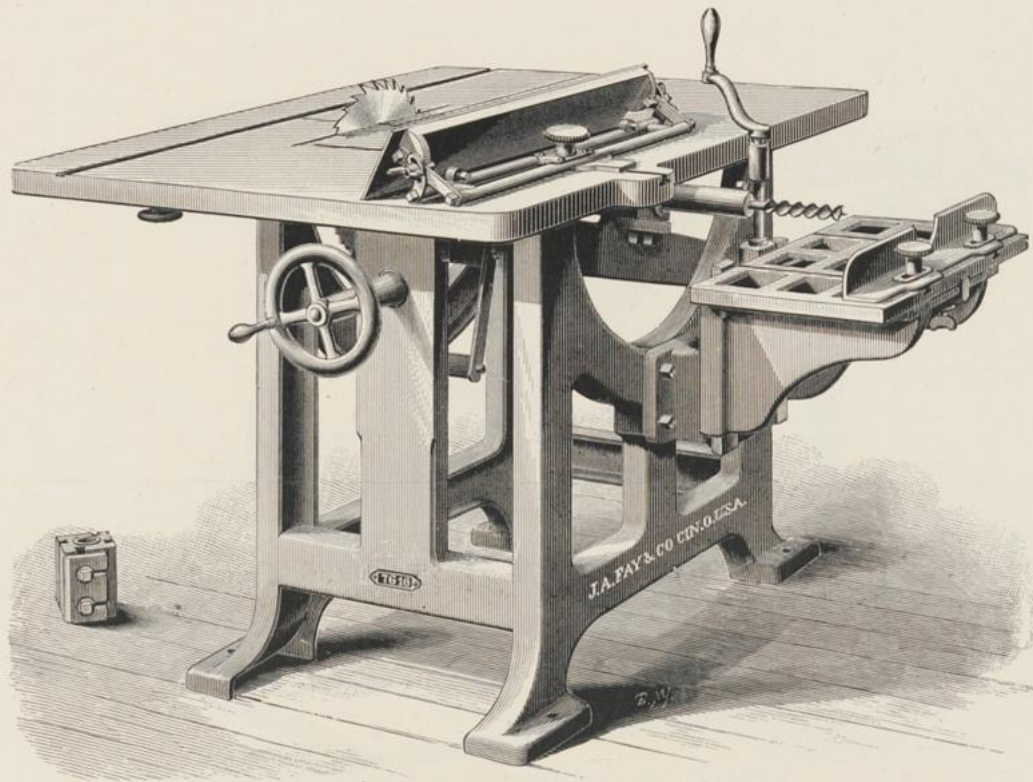
This is an excellent machine for cabinet, pattern-makers, and sash and door-shops, or for any light ripping. The saw arbor runs in fixed bearings in the top of the column, and will receive saws to 15" diameter. It is provided with a self-centering conical bushing to accommodate saws with different sized holes.

The table is raised and lowered by a screw operated by the hand-wheel at the front. It is hinged at one end, and can quickly be elevated for removing or replacing the saw. It is usually made of cherry and black walnut, but can be furnished with an iron table at small additional cost.

It is provided with a patent parallel ripping gauge, which is gibbed to the front edge of table, leaving it free to move without the use of levers or table slots; also a graduated index slide, adjustable for cutting angles to forty-five, degrees.

There is also a wrought-iron cutting-off slide, working in a groove in the table, adjustable to cut miters at varying angles. The saw is driven by a countershaft at the base, allowing of belting direct from the line shaft.

The tight and loose pulleys are 8" x 4", and should make 825 revolutions.



Universal Ripping and Cutting-Off Saw.

With Elevating Arbor and Boring Attachment.

This machine is adapted to the requirements of manufacturers of furniture, brackets, building material, and general workers in wood, who will find it a very useful tool.

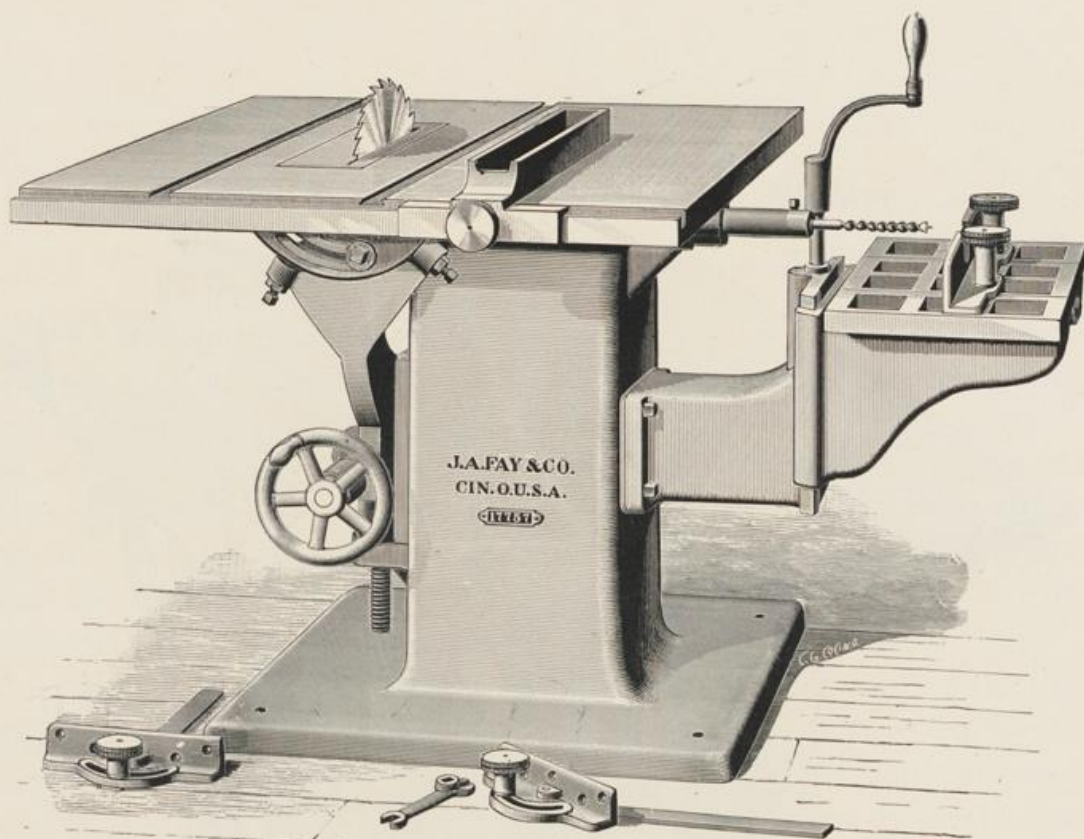
It is made of iron, with the metal so distributed as to secure the greatest possible strength. It will do ripping, cross-cutting, miter sawing, jointing, surfacing, squaring, grooving, gaining, rabbeting, tenoning, boring, routing, and a variety of other work, by the use of different heads and attachments.

The table is of iron, 52" x 36", with a movable section over the arbor, which is adjustable to and from the saw-arbor to suit the cut, and to admit of using heads for jointing, rabbeting, surfacing, etc. It always remains at one height.

The arbor is steel, $1\frac{7}{8}$ " diameter where the saw is applied, runs in long bearings, is raised and lowered by a hand-wheel, and will receive a saw up to 20" diameter. The opposite end of the arbor is fitted to carry a boring bit. It is provided with a boring table which is vertically adjustable, and a fence for straight and radial boring.

With each machine is sent a 5" four-side steel slotted head, boring attachment with five assorted bits, adjustable fence, and bevel rest, miter and cross-cutting gauges, countershaft, hangers, pulleys, etc.

The tight and loose pulleys are 12" x 5", and should make 500 revolutions.



No. 4

Combination Rip and Cross-Cut Sawing Machine.

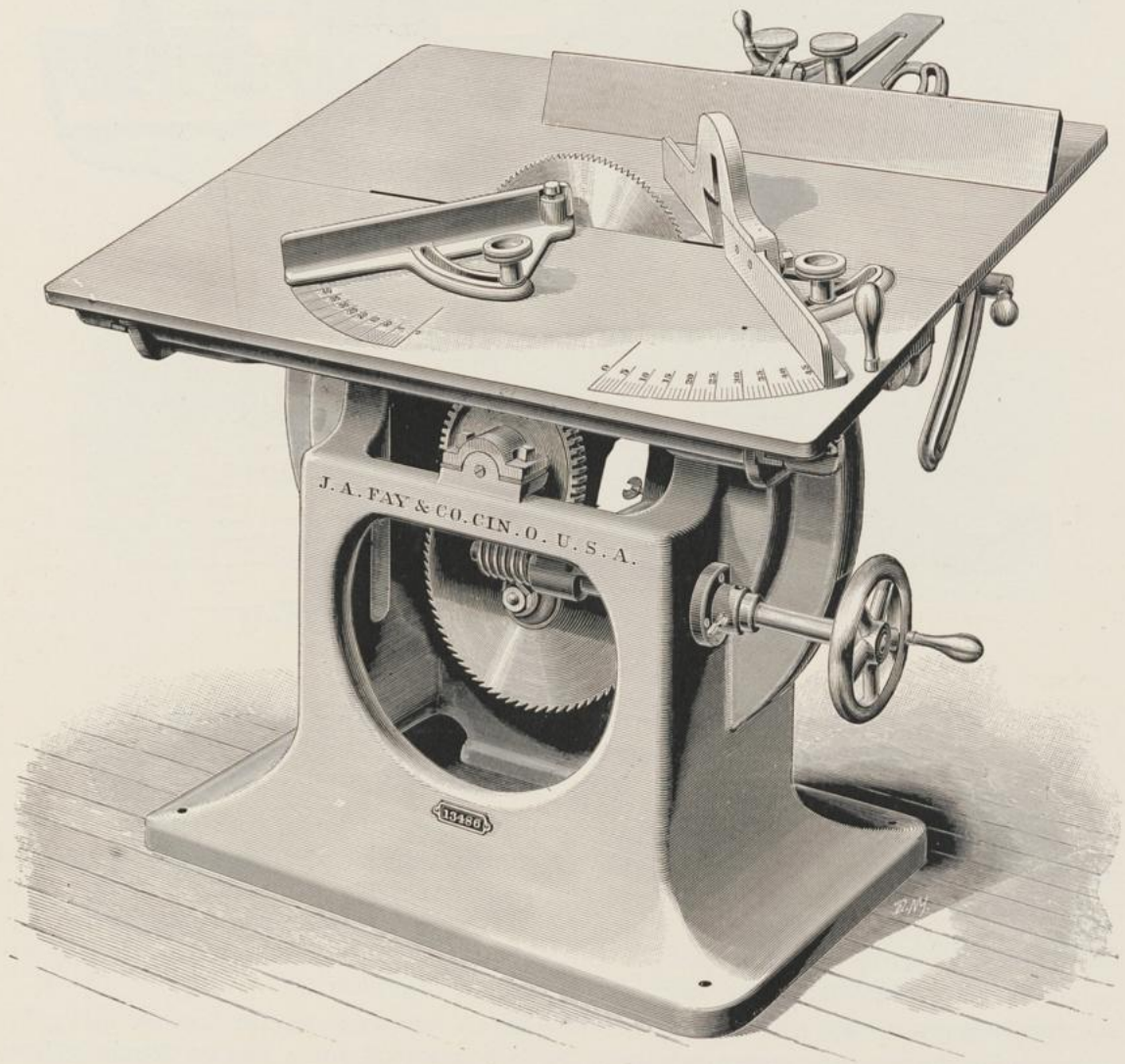
With Beveling Table and Boring Attachment.

This machine is designed for all general shop purposes. It will rip, miter, cross-cut, groove, and bore; a desirable combination in sash, door, furniture, and other shops where wood is worked into shapes. The column is heavy, with broad base, insuring rigidity. The arbor is of large diameter, lead-ground, and runs in self-oiling bearings cast in the column. The end where the saw is applied is $1\frac{3}{8}$ " and will carry saws up to 16" in diameter.

The table is 42" x 36", and can be set to varying angles up to forty-five degrees for bevel and miter sawing. It is supported on a heavy frame gibbed to the side of the column, and vertically adjustable to suit the thickness to be sawed by a hand-wheel connecting with a screw and bevel gears. A portion of the table about the saw is removable to allow of grooving, gaining, rabbeting, and other heads. The ripping fence is gibbed upon the front edge of the table, and is always retained square with the saw. It can be moved entirely across the table and used on the other side of the saw for bevel sawing.

The table has dovetail grooves each side of the saw for cross-cut fences and miter gauges. The right side of the column is fitted with a substantial boring attachment. The boring table is 24" x 12", and gibbed to a strong cored bracket extending from the side of column. Its horizontal movement is easy and light. Its vertical adjustment is by a screw and hand-wrench. The boring fence is adjustable to allow of boring at different depths and also at angles. A floor countershaft is required with this machine.

The tight and loose pulleys are 10" x 5", and should make 825 revolutions.



Double Revolving Circular Sawing Machine.

With Combined Ripping, Cross-Cutting, and Beveling Table.

Double Revolving Circular Sawing Machine.

With Combined Ripping, Cross-Cutting, and Beveling Table.

For economy of space, accuracy of work, and convenience of adjustment this machine is unsurpassed. For ripping and cross-cutting light materials in pattern, cabinet, and carriage-shops its application is unlimited. It has two steel arbors mounted in a heavy frame, which rotates around a central axis, so that one saw can be easily changed for the other. One carries a rip and the other a cross-cutting saw, both driven by the same belt from a countershaft below the machine, or a special countershaft and idlers placed upon the floor at the rear.

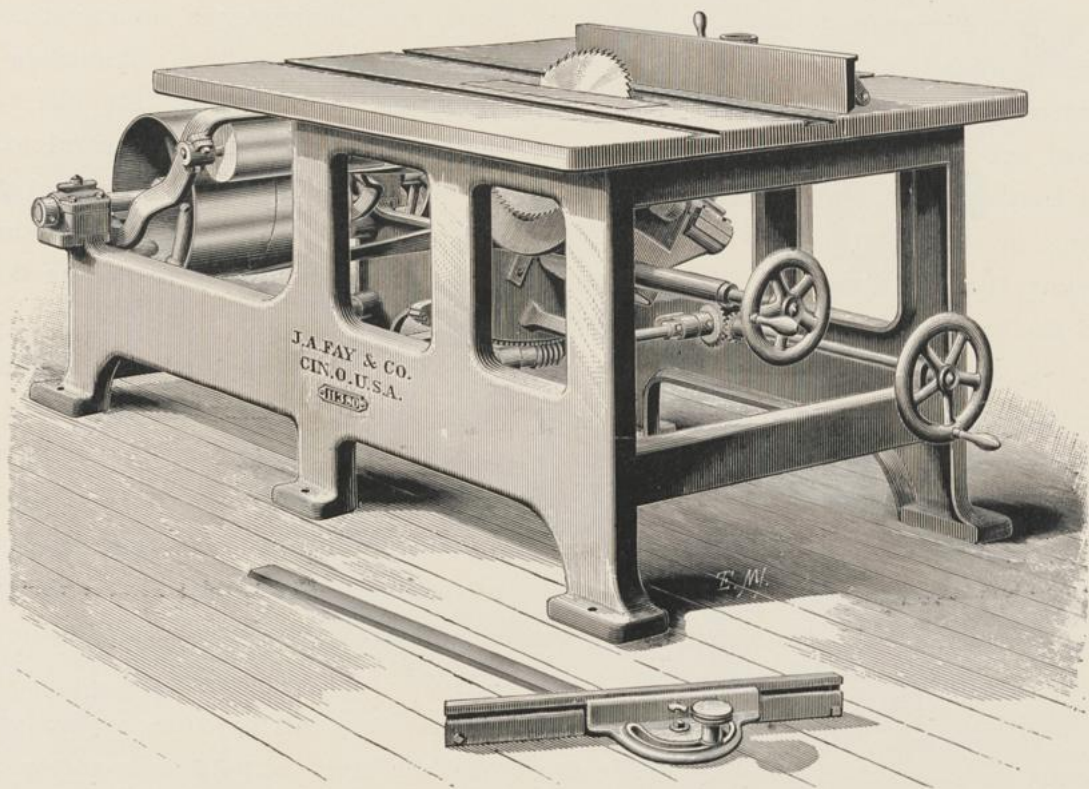
A worm gear connects with the saw-arbor frame, and by turning the hand-wheel either saw can be adjusted to cut all its size will admit or less, allowing grooves of varying depths to be made. The table is 44" x 34", and it can be adjusted to any angle up to 45 degrees and instantly returned to a right angle.

It is made in two sections. The right-hand side is stationary, and used for ripping; the left section is 19" wide, and used for cross-cutting. One side runs upon friction rolls, the other being guided upon planed surfaces, retaining it always parallel with the saw.

It can be moved away from the saw to allow of the use of grooving heads in place of the saws. The table when set level is held in position by a curved slotted bar. A graduated scale marks the angle of inclination. The fence has a parallel movement upon the table, and can be set to work different bevels.

There are also two graduated quadrants on the left section of table, each having an adjustable fence for cutting right and left angles. It is equipped with one each 14" rip and cross-cutting saw, wrenches, miter fences, countershaft for below the floor, etc.

The tight and loose pulleys are 10" x 5", and should make 600 revolutions.



Large

Beveling and Mitering Saw.

With Stationary Table and Vertical Adjusting and Beveling Arbor.

Large Beveling and Mitering Saw.

With Stationary Table, Vertical Adjusting and Beveling Arbor.

This machine is specially adapted for bevel or miter sawing of all kinds, as well as plain ripping. It is built wholly of iron and steel in the most substantial manner, and can be relied upon to perform any service to which it may be subjected. Carriage, piano, cabinet-makers, etc., will find it one of the most complete machines for the purposes ever built.

The frame is massive, heavy, extra long, and carries the countershaft and pulleys, making it completely self-contained. The arbor is of large diameter, and $1\frac{3}{8}$ " where the saw is applied. The journals are connected by a heavy gibbed frame, so arranged that while the saw can be raised, or lowered, or beveled to any angle, the tension of the belt remains always the same.

By the peculiar arrangement of the saw-arbor and frame no greater opening in the top of the table for the saw is required for sawing miters, with the saw placed at the most acute angle, than when it is at right angles to the table. The table is 54" x 42", and always remains at the same height, the bevel being given to the saw.

The saw and arbor are vertically adjustable by the upper hand-wheel. It is set to any desired angle from a vertical line up to 45 degrees by the lower hand-wheel, while in motion or at rest. As the table is stationary the material lays passive on the table, requiring no force to hold it up to the saw, as is the case in machines in which the table is tipped. This construction greatly diminishes the liability of accident to the operator.

The top of the table being the center upon which the arbor frame swings, the work is always done on a level plane, and miters or bevels, plain or double, can be quickly made, cutting two at one operation (the saw making one and the gauge the other) with the most unerring accuracy.

The countershaft, with the guide pulley, is attached at the end of the machine at sufficient distance to give a good long belt. The arrangement is such that the belt is always retained upon the center of the arbor pulley without regard to the angle of inclination at which the arbor may be placed. Saws up to 18" in diameter can be used. Wrenches are included, but no saws or belting are furnished unless specially ordered.

The tight and loose pulleys are 12" x 6", and should make 600 revolutions.



Cabinet-Makers' Double Saw.

With Independently Adjustable Elevating Arbors.

Cabinet-Makers' Double Saw.

With Independently Adjustable Elevating Arbors.

The improved Cabinet-Makers' Double Saw shown herewith has two independent saw-arbors—apart capable of carrying saws up to 24" diameter, both vertically adjustable to any desired height to suit the thickness of the material to be worked. It will be found a most excellent machine for cabinet-makers, carpenters, pattern-makers, and any class of work requiring a machine of this character, as it is capable of ripping, squaring, rabbetting, mitering, grooving, beveling, and other work.

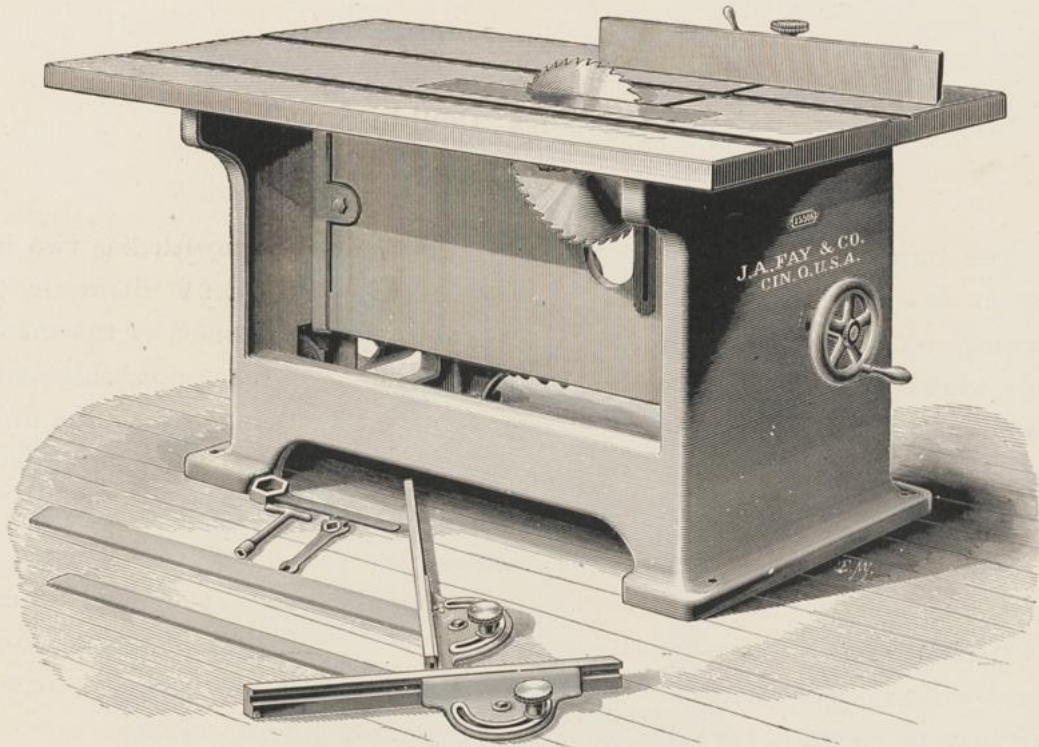
The frame is of iron, very heavy, the arbors are large in diameter, $1\frac{3}{8}$ " where the saws are received, with long bearings. Each arbor and frame is raised and lowered independently of the other in planed gibbed ways, so arranged as to always retain the same tension of the belt at any point to which they may be elevated, by hand-wheels convenient to the operator.

The table is 50" x 59", of iron, planed perfectly true, and always remains at the same height. It is provided with an adjustable fence which can be used on either side of the machine for ripping or guiding for other purposes. It is adjustable for angle ripping, and movable on a planed guide. There is also a cutting-off slide, with a radial fence, provided on each side to cut off miters right and left angles of any degree. They work in T slots in the table close to each saw.

The space between the fixed tables is of wood, and can be removed, allowing free access to the saws. Grooving, rabbetting, plowing, or other heads can be used in place of either saw.

The frame is of sufficient length to give long belts from the countershaft to the arbors, a very desirable item. Wrenches are included, but no saws or belts are furnished with the machine unless specially ordered.

The tight and loose pulleys on the countershaft are 12" x 6", and should make 600 revolutions per minute.



No. 2

Standard Ripping Saw.

With Elevating Arbor, Rip, Cross-Cutting, Miter Gauges, etc.

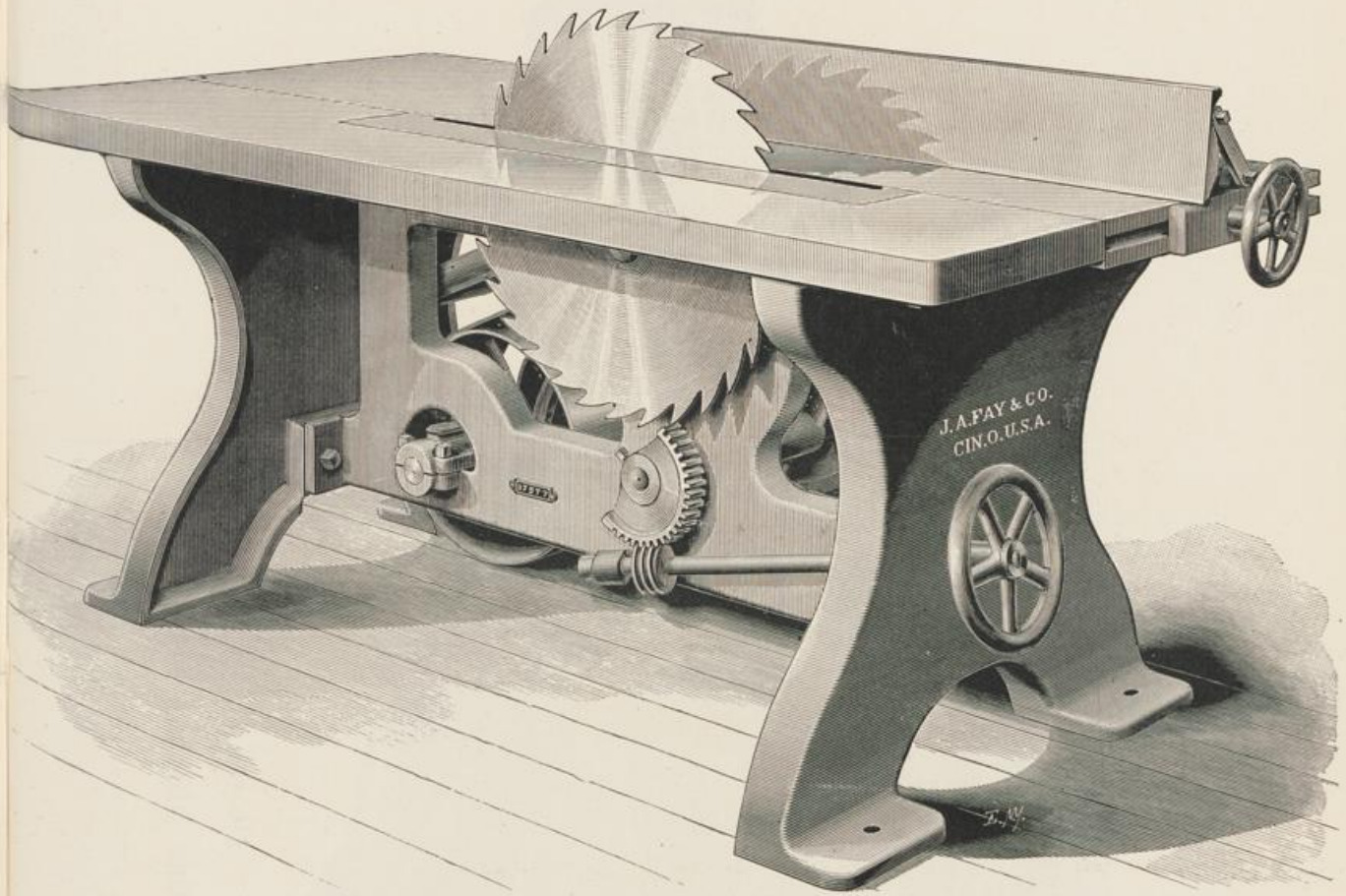
This is one of the most desirable circular saws for general purposes in furniture, molding, sash and door-factories, pattern-shops, etc., where accurate work is required, now in use.

The frame is made with plate ends and a heavy "T" girt in the center, connecting them in the plane of rotation of the saw, insuring great strength and stiffness, and making the arbor readily accessible for changing saws.

The saw-arbor is $1\frac{3}{8}$ " in diameter where the saw is applied. It runs in a heavy swinging frame, with the pulley between bearings, and is securely locked by a hand-nut. The arbor is steel, of large diameter, self-oiling, and furnished with an expanding device which admits of saws with holes of different sizes being used without the necessity of bushing. The saw is quickly adjustable to any desired height above the table by the hand-wheel.

The table is of iron, 64" x 36", planed perfectly true, and fitted with our adjustable saw-gauge, which can be inclined to an angle of 45 degrees. It also has an index upon the table spaced off into inches for measuring the distance between the saw and the guide, of great convenience to the operator. It also has a cross-cutting gauge, which works in a groove in the table, also a gauge for sawing miters. The table and the arbor are arranged so gaining heads can be used and to receive saws up to 22" diameter. It is started and stopped almost instantly by means of a binding pulley, and can be belted from either above or below.

The tight and loose pulleys are 10" x 6", and should make 700 revolutions.



No. 3

Large-Size Car Ripping Saw.

With Elevating Arbor, Ripping Gauge, Counter, etc.

This is an extra heavy, massive machine, of large capacity, designed for the heaviest description of work in car-shops, bridge-works, navy yards, etc.

The arbor is large diameter, lead-ground, and runs in long, self-oiling bearings. It is vertically adjustable by hand-wheel for raising or lowering the saw to any point desired. The table is 39" x 72", and always remains at one and the same height. A lock attachment securely retains the arbor in the position elevated. The arbor-pulley is large, and the tension of the belt from the countershaft to the arbor controlled by a self-acting binding pulley.

The fence is gibbed to the front edge of table, and always moves parallel with the saw, and can be set to varying angles up to 45 degrees, and instantly set to a right angle without squaring. A scale upon the front edge of the table shows at a glance the exact distance of the fence from the saw. It is supplied with a countershaft.

The tight and loose pulleys are 12" x 6", and should make 450 revolutions.



No. 4

Large Car Ripping Saw.

With Elevating Arbor and Stationary Table.

No. 4

Large Car Ripping Saw.

With Elevating Arbor and Stationary Table.

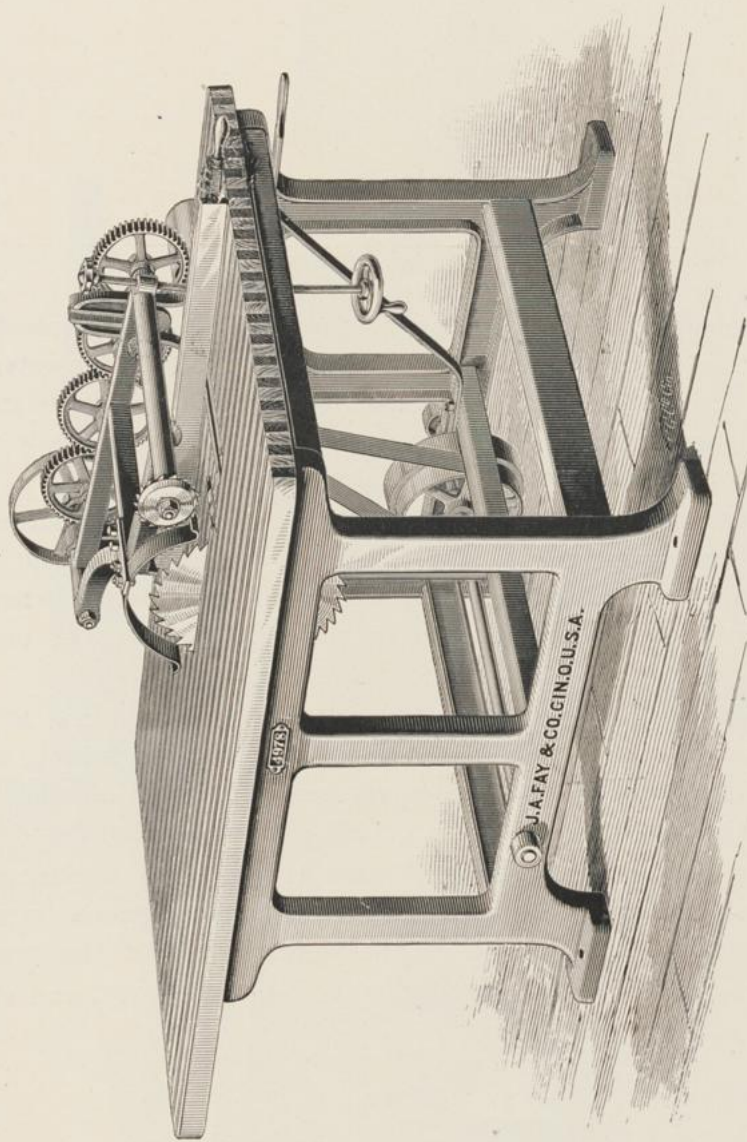
This machine is constructed with a view to the heaviest and hardest possible service that may be required, with the framing of the most massive and substantial character. The arbor is $2\frac{3}{8}$ " diameter, lead-ground, and runs in self-oiling bearings 6" in length, gibbed to heavy ways, and will carry a saw up to 42" diameter, and rip material up to 15" in thickness.

The arbor where the saw is applied is $1\frac{5}{8}$ ". The arbor frame is adjustable at an angle on broad ways, and raised and lowered by hand-wheel and screw from the front, with lock attachment for firmly securing in position when set. This arrangement secures a uniform tension of the belt at whatever position the saw is elevated.

The vertical adjustment of the arbor is 13". The table is 7' 6" x 3' 10", and supplied with an adjustable fence mounted upon the front end, which can be inclined to varying angles up to 45 degrees, or moved to the extreme right outside edge of the table, leaving a distance of 22" between the saw and fence.

The pulley on the saw arbor is 8" x $10\frac{1}{2}$ " and driven from a countershaft at the back of the machine, provided with belt-shifting attachment by which the machine may be started and stopped at the working end of the machine.

The tight and loose pulleys on the countershaft are 16" x $10\frac{1}{4}$ ", and should make 450 revolutions per minute.



No. 1

Automatic Self-Feeding Rip Saw.

With Geared Feed and Adjustable Fence.

No. 1

Automatic Self-Feeding Rip Saw.

With Geared Feed and Adjustable Fence.

This machine is intended to take the place of the hand ripping saw in planing mills, furniture, carriage and box-factories, etc. Its capacity is equal to about four hand-feed machines, and its cost will be saved in labor alone in a short time.

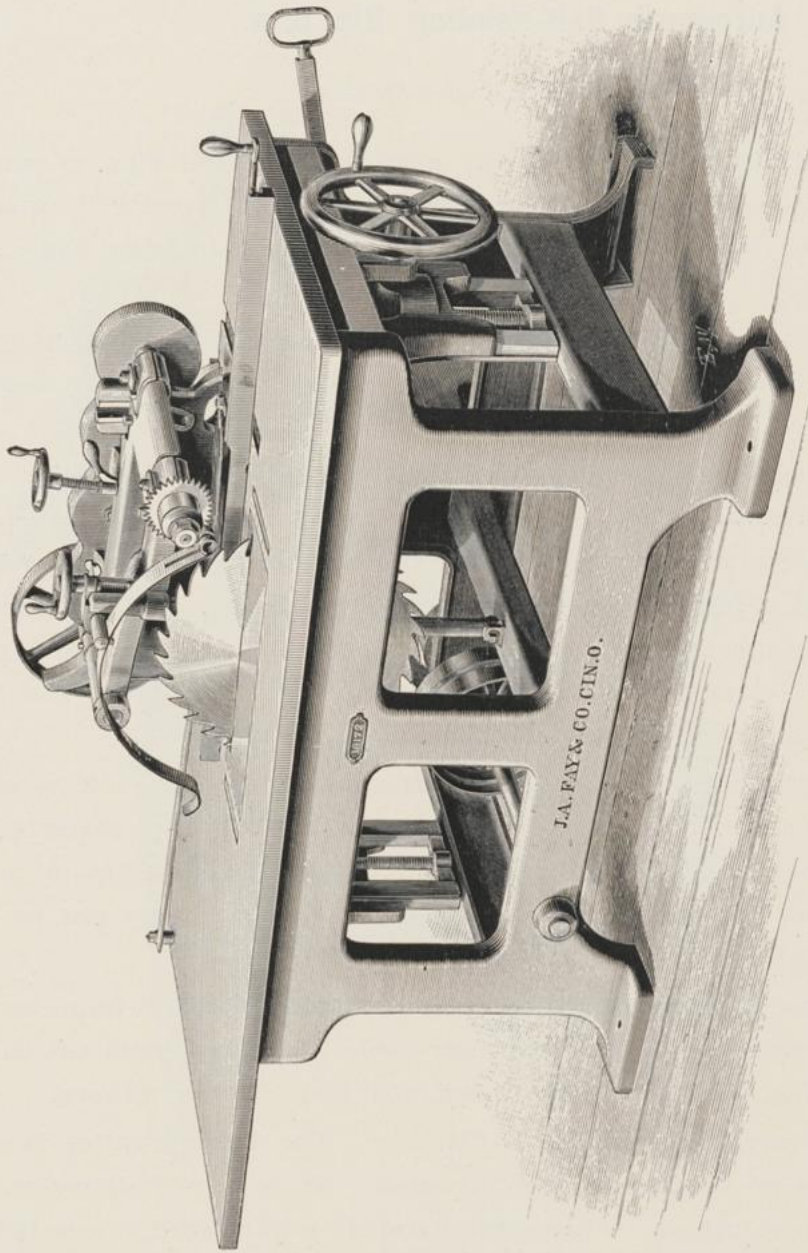
The frame is of iron, the arbor steel, lead-ground, and runs in self-oiling bearings. It is so arranged that several saws instead of one can be used if so desired.

The feed is strong and powerful, consisting of an arbor and feed-disk held between flanges, the teeth acting on the top surface of the lumber in the line of saw, the feed-marks being taken out by the saw-kerf. It is mounted in a frame attached to a heavy arm upon the side of the machine and driven by a train of strong gearing. The frame also carries the saw-shield and pressure foot. It has a vertical adjustment to regulate the pressure of the feed-disk and for holding down the material.

The table is 78" x 38". It is hinged at one end; the other end is raised and lowered by a hand-wheel and screw to suit the thickness of material. A friction roll is placed under the feed, and a portion of the table is plated with steel, to reduce friction and prevent wear. An iron table can be furnished at a small extra cost when wanted.

When desired to use the machine for hand ripping, the feed-frame can be thrown back out of the way, leaving a clear table. The feed-cones are on the inside of the machine, with two rates of feed, 100' and 150' per minute.

The arbor will carry saws up to 16" diameter. The driving pulley is upon the inside, allowing of belting in any direction. It is 6" x 6" diameter, and should make 2,800 revolutions. When a countershaft is furnished it has 12" x 6" tight and loose pulleys, and should make 700 revolutions.



No. 2 Heavy

Automatic Self-Feeding Ripping Saw.

With Gearing Feed, Parallel Raising Table, Adjustable Locking Gauge, etc.

No. 2 Large

Automatic Self-Feeding Ripping Saw.

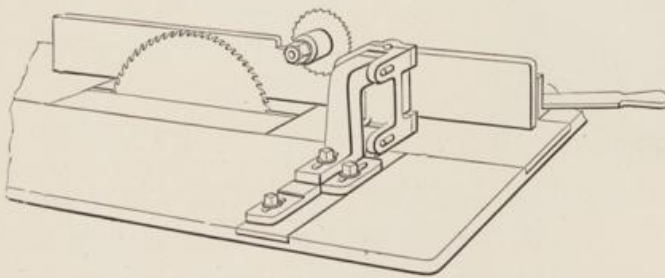
With Geared Feed, Parallel Raising Table, Adjustable Locking Gauge, etc.

This is a powerful machine, designed for ripping material into parallel strips, both by hand and power feed. It carries a saw 22" in diameter, and will rip $23\frac{1}{8}$ " wide. The frame of the machine is made of iron, with plate sides and ends heavily ribbed. The saw-arbor is of steel, $1\frac{3}{8}$ " in diameter where the saw is applied, and is mounted in long connected bearings in the inside of the frame, by which it is always retained in line. The end of the arbor is so constructed that several saws may be used at one time if desired. The arbor pulley is placed between bearings on the outside of the frame, allowing of belting in either direction.

The feed is exceptionally strong, consisting of a toothed disk acting on the top surface of the material in the same line with the saw, the kerf of the saw obliterating any marks of the feed. It is driven by a train of strong gearing, mounted in a swinging frame, readily adjustable by means of screw and hand-wheel for any degree of pressure or thickness of material. The hold-down before and the spring after the saw is attached to the same frame, and adjustable together with the feed or independently of it. This arrangement allows the whole feeding-out works to be raised or lowered to suit the thickness of the lumber, or to be thrown back out of the way when it is desired to use the machine as a hand rip saw.

It has two speeds of feed, 85' and 115' per minute. The table is 78" x 38", and made of iron or wood as purchasers may select. The table is connected to planed stands, on which it raises and lowers by a screw and bevel gears operated by hand-wheel. The adjustment is parallel as well as vertical, so that the table always remains perfectly level at any height adjusted. The section around the saw is made detachable so that heads for gaining, rabbetting, etc., or a series of saws for ripping several pieces at one time can be used.

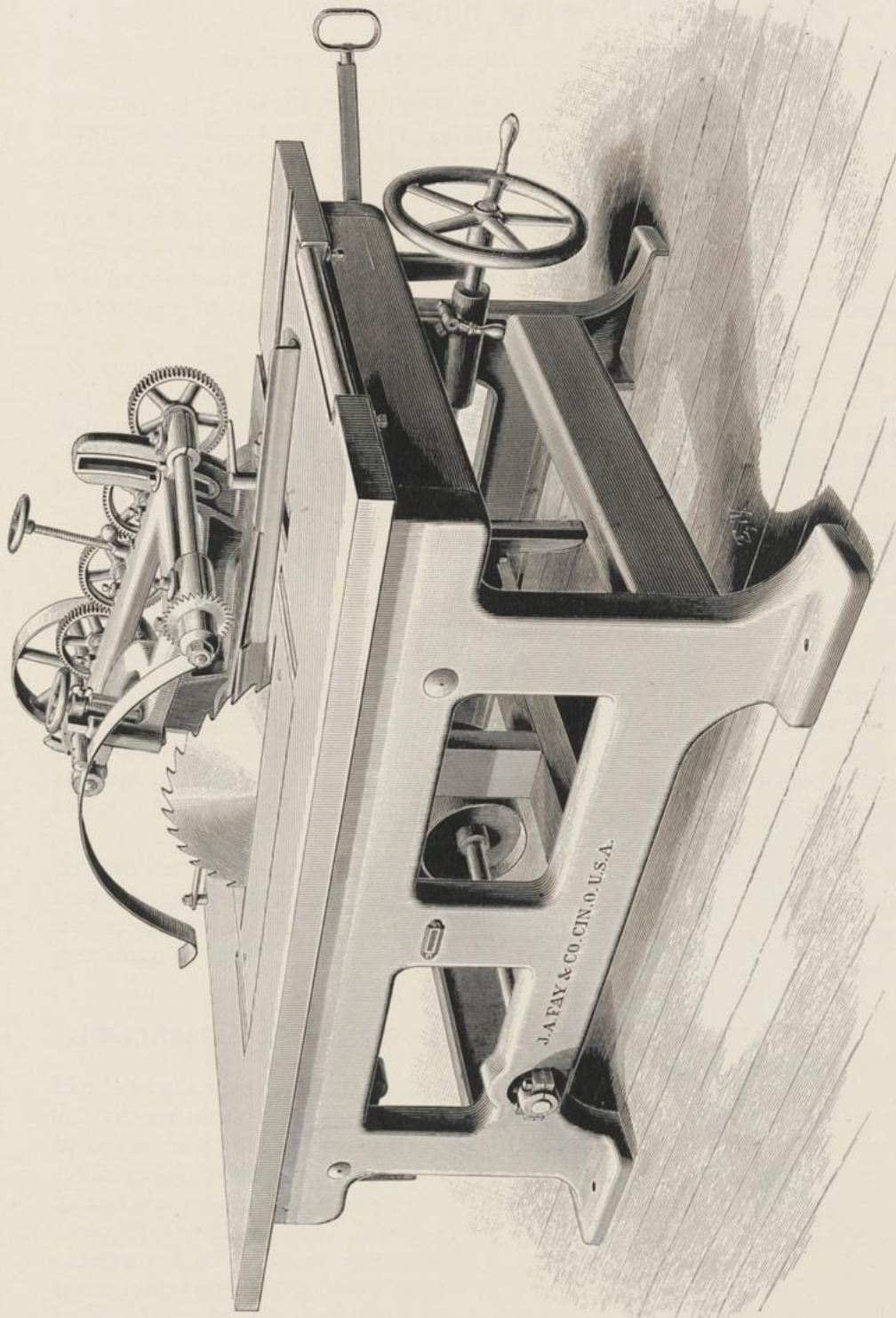
The fence of the machine is long, and has a movement across the face of the table by hand-lever, which instantly releases, moves, and locks it, or vice versa. An index gauge shows the distance from the saw at which it is set. Friction rollers are placed in the table just before and after the saw to diminish the friction.

**Bevel Siding Attachment.**

The above shows a side roll and bevel fence attachment for making siding. It can be set to any angle and any thickness. It is simple, and can be quickly removed, leaving the table clear for other work. This machine

when fitted with this attachment makes a most desirable Siding Saw for small shops who can not afford to be at the expense of a special machine for this purpose. The same attachment answers for light resawing, and is a very useful acquisition. The saw-arbor pulley is 10" x 8", and should make 2,400 revolutions.

When a countershaft is furnished the tight and loose pulleys are 12" x 8", and should make 923 revolutions.



No. 3 Extra Large

Automatic Self-Feeding Ripping Saw.

With Geared Feed, Parallel Raising Table, Adjustable Locking Gauge, etc.

No. 3 Extra Large

Automatic Self-Feeding Ripping Saw.

With Geared Feed, Parallel Raising Table, Adjustable Locking Gauge, etc.

This machine is believed to be the most powerful Automatic Self-Feeding Ripping Saw built. The frame is large and massive, and the machine is of the most thorough construction, with a view to the hardest kind of service. It will do the work of three ordinary hand machines. It will receive a saw 36" in diameter, rip up to 14" thick and 21" wide. For car and agricultural shops, where there is heavy material to be worked, it will give the highest satisfaction.

The arbor is of steel, large diameter, lead-ground, and where the saw is applied is 1 $\frac{5}{8}$ ", carries a driving pulley 12" x 8", which runs between long bearings filled with the best lining material that can be procured. The end of the arbor is arranged so that several saws may be used at a time if desired.

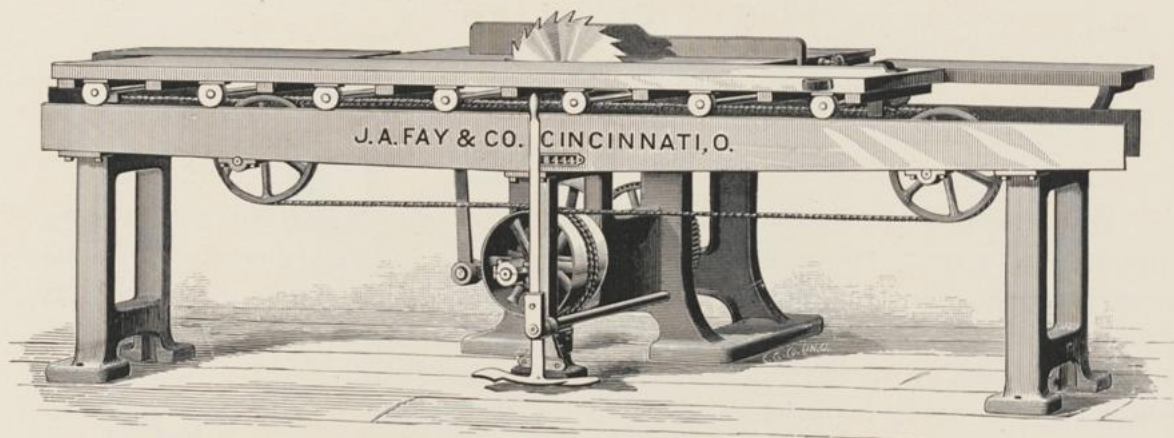
The feed is powerful, consisting of a toothed disk and arbor mounted in a heavy feed-frame above the work, which swings upon an arm extending from the side of the frame and driven by a train of strong gearing. This feed-frame has a vertical adjustment to suit varying thicknesses and regulate the pressure. It also carries the guard over the saw, which acts as a hold-down to the lumber on both sides of the saw. This has an adjustment independent of the feed-frame.

It has three speeds of feed, 47', 84', and 130', and when not required to be used as a power feeding machine it can be instantly converted into a Hand Feed Ripping Saw by raising and throwing back the feed-frame against a stop. This leaves a clear table for any special work.

The table is 78" x 46". It is made of iron, planed perfectly true, and has friction rolls before and after the saw. Also a removable section around the saw to allow the use of additional saws or gaining and other heads for any special work. The fence is long, and has a parallel movement across the face of the table by a hand-lever which instantly releases, moves, and locks it. An index gauge shows the distance from the saw it is set.

The driving pulley is at the outside of the machine, but has a bearing support upon each side. A feed-shaft upon the inside of the machine conveys power to the pulley above on the feed-frame. A countershaft is furnished when desired, at a small extra cost, the tight and loose pulleys of which are 12" x 8", and should make 845 revolutions.

The saw-arbor pulley is 12" x 8", and should make 1,800 revolutions.



Self-Feed Carriage Edging Machine.

With Automatic Self-Feeding Carriage.

Where lumber is required to be ripped into strips having straight or parallel edges this machine is indispensable. It is not only heavy and strong in all its parts, but a most rapid worker.

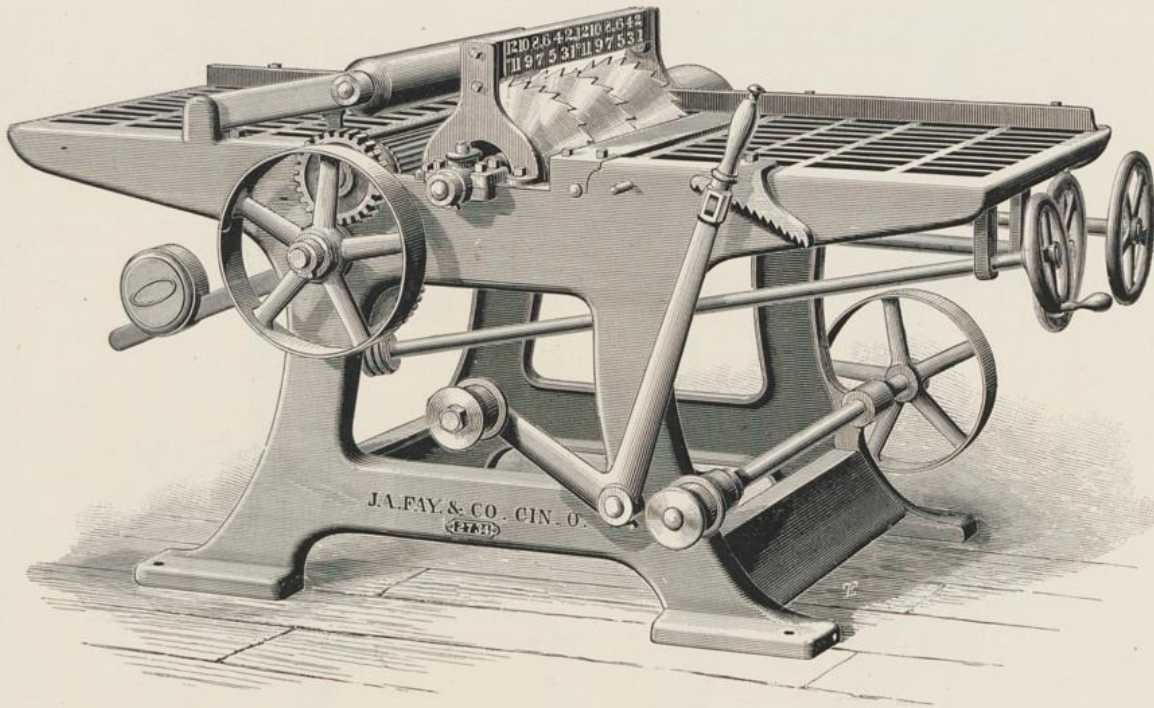
The framing is made wholly of iron, with planed ways. The carriage is of wood, and runs on friction rollers ground to fit the ways on the frame; it has a powerful feed, at all times under perfect control, and always reliable.

The saw-arbor is of large diameter, lead-ground, runs in heavy connected self-oiling bearings, and the end where the saw is applied is $1\frac{3}{8}$ " diameter, and has an expanding device to suit saws of different size holes without the necessity of bushing them.

In operation the material to be edged is placed on the carriage against a stop, the starting lever moved, when the carriage, which is driven by friction, is carried past the saw and the lumber edged. The lever moved in the opposite direction causes the carriage and material to be returned to the starting point ready to repeat the operation.

A stationary table with ripping fence is attached on the back side, so that when the carriage is locked special work or hand ripping can be done. These machines are made of five sizes, to edge 16', 20', 24', 32', and 50' long.

The saw-arbor pulley is $7'' \times 7\frac{1}{2}''$, and should make 2,000 revolutions.



Medium Self-Feed Gang Edger.

With Single, Double, and Triple Saws.

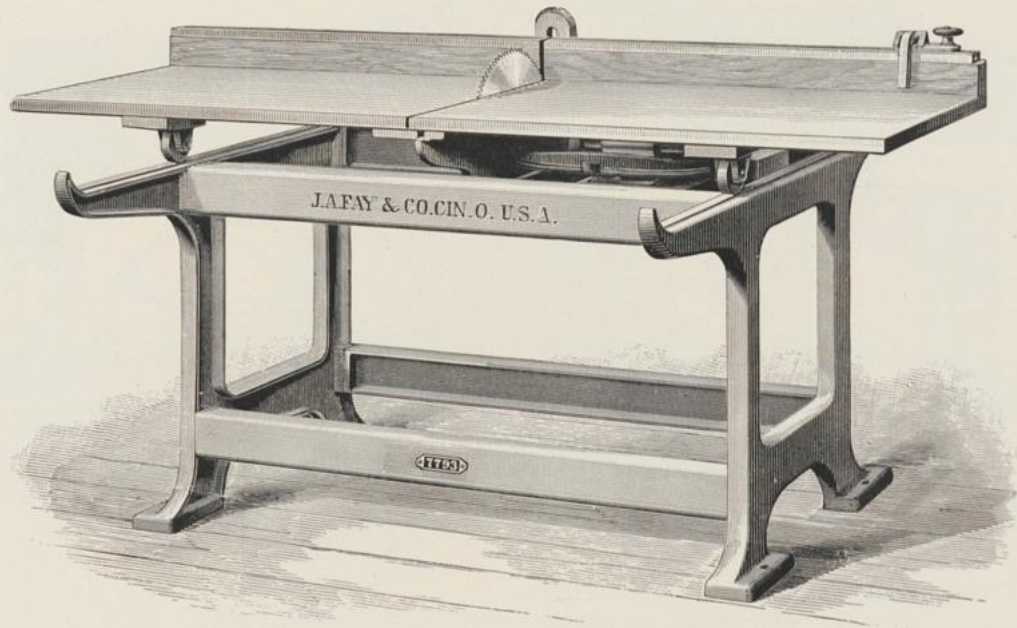
In mills where flooring is a specialty, or great quantities of parallel strips are needed, this machine is unequalled. It will edge material to 4" in thickness and 26" in width. The feed is very powerful, consisting of two heavy feed-rolls after the saws, so as to carry the lumber entirely out of the machine after it is cut. The upper roll is fluted, and adjustable to different thicknesses.

The saw-arbor is heavy, large diameter, lead-ground, and runs in self-oiling bearings, and will carry one, two or three saws, as may be wanted. They are adjustable to cut any width of strip from 2" to 8", or a narrow and wide strip at the same time. The saws are held in heavy collars, with sleeves, which are moved to suit the width to be sawed by rack and pinion operated by hand-wheel.

When the saw next the guide is moved the next saw will be moved with it, as they remain at a fixed distance apart. The second saw can also be separately adjusted. The third saw has an independent movement, and can be set so all three saws can be used at the same time, or the left saw can be moved close to the side of the machine.

The guide for the lumber remains in a fixed position. A coarse-figured registered plate above the saws allows the operator to see instantly the exact distance necessary to adjust the saws to suit the width he desires to rip. The figures on the register indicate the distance from the fence, and between the saws. It has capacity to feed 100' per minute.

The arbor pulley is 8" x 8", and should make 2,800 revolutions.



Roller Carriage Cut-Off Saw.

With Stationary Saw and Movable Carriage.

This Cutting-Off Saw is intended for use in cabinet, cigar-box factories, etc. The frame is of iron; the arbor is $1\frac{1}{8}$ " diameter, lead-ground, and where the saw is applied is $1\frac{3}{8}$ ". It runs in long bearings, and is fitted with our patent expansion device, enabling the operator to use saws having holes of different diameters. The arbor has a lock attachment for securing it while removing the saw.

The table is 6' x 25', and made of glued-up strips of maple and black walnut. Upon the under side rollers are attached, which work on a smooth track at each end. Iron plates upon both sides of the saw are secured to the under side of the table, one of which is grooved to fit the center guide, which always retains the table in its proper position.

The fence extends the entire length of the table, and is fitted on the top with an iron plate dovetailed in its upper surface to receive a stop for regulating the length of material to be cut. This stop can be thrown back out of the way when it is not desired to use it. A countershaft is supplied with each machine.

The tight and loose pulleys are 10" x 4", and should make 600 revolutions.