VOL. 2 REDIVIVUS NO. 5
JANUARY 1903

THE SAW-BOOK QUARTERLY

PUBLISHED AT
130 TWENTY SIXTH ST.
BOROUGH OF BROOKLYN.
NEW YORK CITY

THE SAW BOOK

This booklet was originally published by Joshua Oldham & Sons, a 19th century saw manufacterer located between 26th an 27th Street and the waterfront in Brooklyn, NY. Their warehouse at 112 26th street is the current location of Tools for Working Wood - sellers of fine woodworking tools, and their manufactering group, Gramercy Tools and Brooklyn Tool & Craft, who are currently continuing the tradition of saw manufacture in the same location. As near as we can tell this booklet was meant as a helpful giveaway for their customers. The quality of the artwork, which is also refelcted in other Oldham epherea we have seen suggests a very serious commitment to graphic design.

The original of this booklet is in the Brooklyn Collection of the Brooklyn Public Library which graciously has allowed Tools for Working Wood to scan this booklet and publish it free for anyone to download from the Internet. We cannot thank the library enough for their help.

As of this writing, April, 2016, this is the only volume of this magazine that we are aware of. If anyone has other issues, or knows of any issues in any collection we would be grateful if you let us know. Please email us at support@toolsforworkingwood.com.

THE SAW BOOK

CONTENTS

JANUARY NUMBER

1903

REDIVIVUS

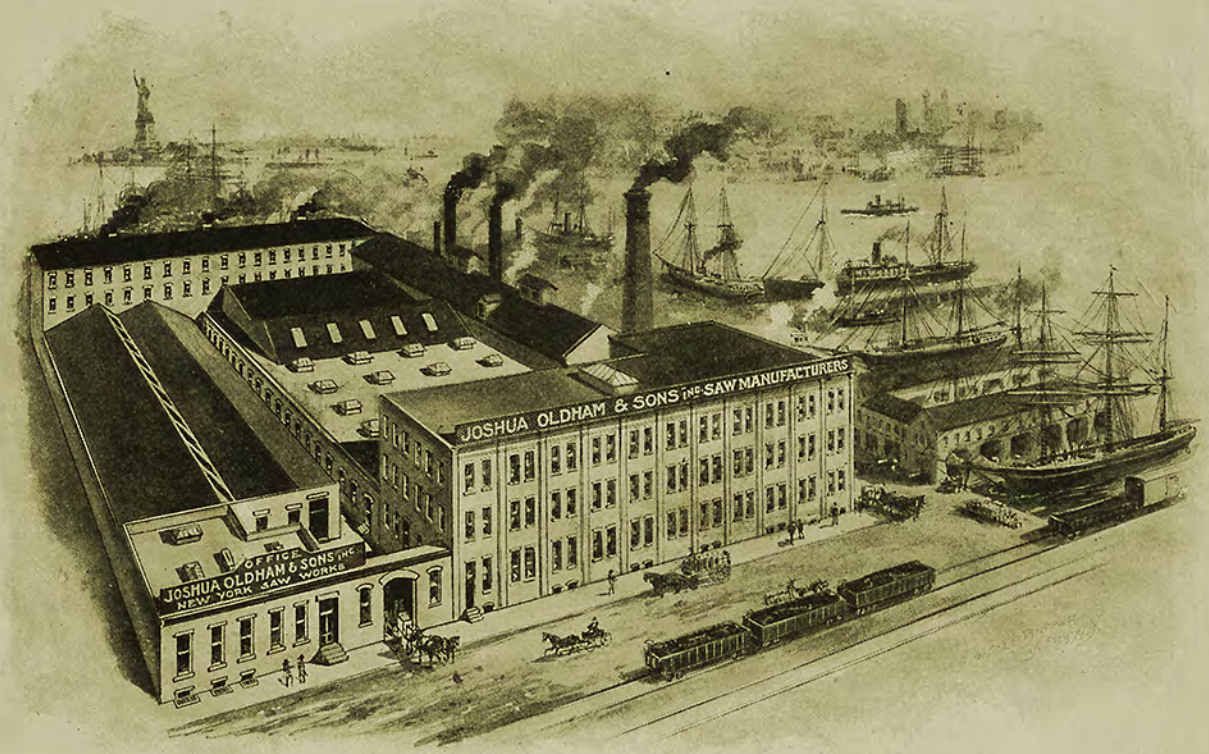
SAWS

Their History, Manufacture and Use. Continued.

JOSHUA OLDHAM

AGE AS A STEEL REFINER

(See page 16.)



THE NEW NEW-YORK SAW WORKS

Redivivus

DECEMBER 11, 1902.

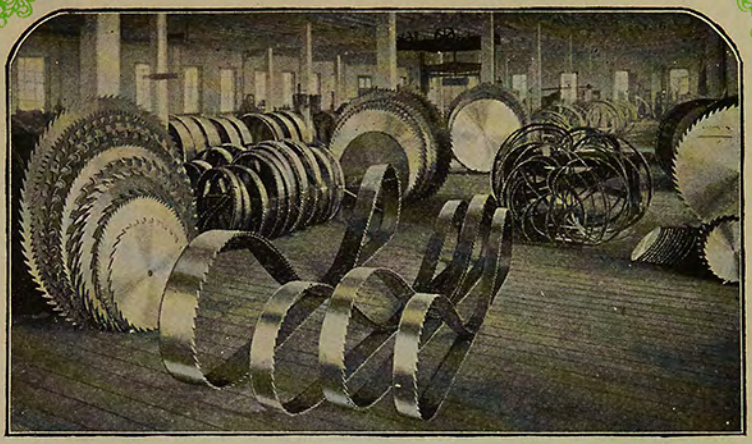
ONE year ago to-day our factory buildings were destroyed by fire and all their contents engulfed in the fiery element—"in one red ruin rent." A total loss.

In the stock room on the top floor of the main building was stored the finished saws made up to aid us in making quick deliveries when filling orders for our spring trade. The circular saws, from forty to seventy-four inches in diameter, were stored in a dozen different piles against and on two sides of the square pillars fifteen feet apart, and resting on the heavy cross girders. These saws kept their places long after the roof had fallen; as the girders burned slowly away the saws fell one by one into the fiery abyss below, keeping up a constant chime.

Our office and a storehouse, two separate buildings, escaped damage—a fortunate circumstance, as in the latter were stored a number of duplicate machines; in the former, our insurance policies and our account books up to date.

When our President, accompanied by his wife, appeared on the scene, his son Fred (the athlete) asked in consternation: "What shall we do?" The reply was: "Get to work."

"If thou faint in the day of adversity,
thy strength is small."

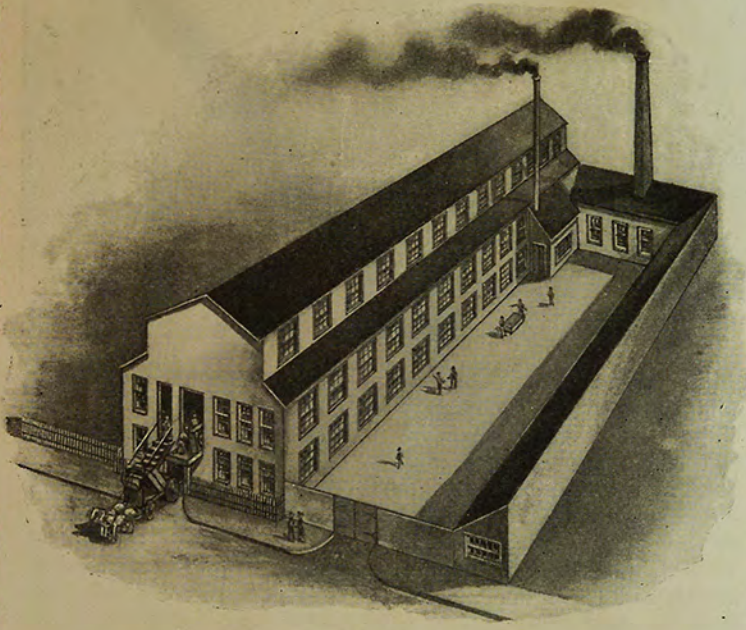


ONE CORNER OF OUR STOCK ROOM BEFORE THE FIRE.

Securing at once in the vicinity a factory building with engine, boilers and shafting, we appointed our Messrs. William, Gilbert and Fred Oldham a committee, with powers *carte blanche*, to provide such machinery as would equip us for a quick resumption of work. To aid them in this we engaged the services of a firm of mechanical engineers. In council, the time for such resumption was set at sixty days. Through the ability of the three members named, their knowledge of our requirements, and the ardor with which they pursued their task, the time set was only exceeded by three days, when we were shipping goods of our own manufacture. Ere another month had passed we had all the equipment that could be used in the space at our command; but we kept right on, with a corps of skilled machinists making special machines for use in our new factory building.

For the hardening and tempering we erected on our Twenty-sixth street property, outside the confines of the burned portion, an iron building, one hundred and thirty-seven feet long, by thirty-six feet wide.

The erection of the hardening furnaces and tempering machines was begun on the open ground and finished by the time the iron building was completed; an engine and boiler was then installed for the working of these machines.



OUR AUXILIARY FACTORY.

Since the completion of the hardening and tempering shop in the new building, we have razed the iron structure, erecting in its place one of brick, forming part of the new band-saw hammering shop.

From the first day of March this year, to date, our output has been greater than in any previous year's full business, and our work has given more universal satisfaction than ever before.

The ability shown by the three members, before mentioned, in handling the large amount of business under adverse conditions; our evolution to a higher standard of equipment and work; apperception from long experience, intensified by current events; the steady increase in the demand for our products, led to the abandonment of our first plans of construction as being inadequate to our growing trade.

In our new plans we raised the first floor level to allow basements of ample elevation for grinding and other large machines, giving them solid concrete foundations. These changes and additions have trebled our former floor space independent of the upper stories, on which, having our auxiliary factory, we have, for the winter, suspended operations, but have affixed the floor beams for the second story, and over that, the roof, so the building may proceed without interference to our work. At the present time, we believe, we have the largest floor space in the trade devoted exclusively to the production of

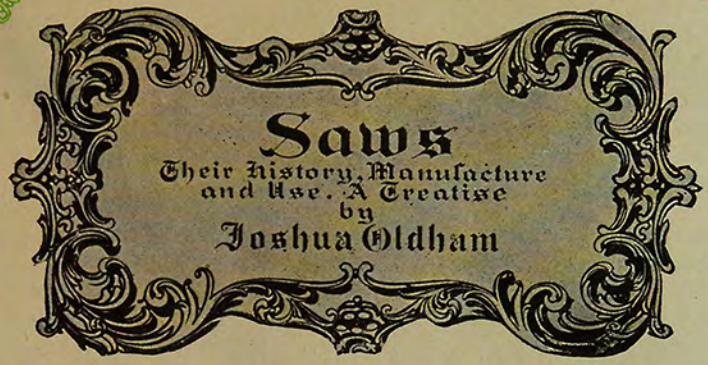
Saws For Saw Mills

We take this means and opportunity of thanking those of our patrons who after the fire generously and almost unanimously declined to cancel their orders, willingly waiting for us; also our thankful appreciation of the sympathy then expressed. The support we have received from the work that has flowed in upon us has given us the confidence and courage to thus enlarge our borders. With the many improvements in our new machinery, and the most modern perfection in our steam plant, we promise not only to produce the best, but to better our own *(hitherto)* best. We are in full hope and expectation of being called upon to work to our full capacity.

Trusting we may be pardoned for this our first and only mention of our calamity, and Wishing you A Happy and Prosperous New Year, We Remain,

Your Faithful Servants,

JOSHAU OLDHAM & SONS,
Incorporated.



IN The Saw Book, Number Three, to make intelligible the two illustrations of saw-mills worked by human power, we got somewhat ahead of the chronological order of our history. To make a coherence, we resume. From the researches there mentioned we gather that the saw-mill came into use during the early period of the Renaissance.

The saw-mill run by water power was first used in France in the twelfth century. It is said that in the records of the city of Augsburg mention is made of a saw-mill in that place in 1337. There are several mills in Germany known to have been in existence in the early part of the fifteenth century. Into Norway with its immense forests the saw-mill was not introduced until the beginning of the sixteenth century.

The Dutch in New York in 1625, after the purchase of that portion of Manhattan Island from the Indians, erected mills moved by wind and water, for the sawing of lumber and for grinding of the Indian corn.

England seems to have been far behind other European

nations in the adoption of the saw-mill ; even the far-off colony of Massachusetts had a saw-mill in 1634, while in England it seems to have been unknown at that time.

Maine and New Hampshire followed a few years later. Soon after the establishment of the first few mills in New Hampshire numbers of others were built. The Piscataqua soon became not only the home region for lumber, but maintained a large export trade with the West Indies.

The saw-mill was introduced into Canada in 1706 at Chambly, near Montreal, by a millwright who had been carried captive from Maine by the French and Indians. For the building of this mill the captive was rewarded by his liberation.

In 1663 a native of Holland erected a mill near London, England, but such was his fear of the hue and cry and threatening of the sawyers and others that he abandoned it.

A century elapsed before we have any record of another saw-mill being erected in England. In 1763 a mill was built, also near London, the builders having large capital ; on its completion the sawyers gathered in a body and tore it to pieces. Many of the leaders in this work of destruction were convicted and imprisoned.

The owners were reimbursed by the government. Being protected by the law a new mill was built; others followed and England soon became the head of the lumber industry of the world.

Although England was so far behind in the adoption of the saw-mill, she was by no means so in the production of lumber, with her skilled hand sawyers, a numerous and powerful body in and around London, not only numerically, but in muscular strength. Every town in England had its saw-pit. The sawyers were highly skilled in the use of the pit-saw and

the frame-saw, the former with the tiller handle for the top sawyer, the buckle and cross handle for the sawyer in the pit—the bottom sawyer. The pit-saw answered the purpose of the slabber of later date, the frame-saw for fine work and re-sawing.

From the sources of information at our command, it would appear that after the saw-mill came into use the logs were hewn square and split into cants by the use of iron wedges.

In Russia the above was the only method of lumber production known ; after splitting into planks they were hewn and planed.

Peter the Great, when working in the London dock-yards, doubtless learned the English methods, for after his return he made the cross-cut and the frame-saw the national saws, and their use became universal in Russia and continues to the present day.

That the working of a saw-mill was a matter of wonder in England in the latter half of the seventeenth century will appear from a quaint and well-compiled book published in London, bearing the date of 1661, entitled "Humane Industry, or a History of most Manual Arts, shewing forth the excellence of Human Wit." Relating to the saw-mill it says: "At Dantzic in Prussia Mr. Morrison, an ingenious traveller of this Nation saw a mill, which (without the help of hands) did sawe boards having an Iron wheel, which did not only drive the sawe, but also did hook in and turn the boards into the sawe. Dr. John Dee makes mention of the like in his preface to Euclid, but whether the mill moved by wind or water they do not mention; we have also heard of the like set up in Kent, here in England and at some other places." This extract we accounted a prize ; terra firma after floating over a sea of

surmise. We searched in vain for Dr. Dee's Euclid as being of an earlier date, concluding at last that however bright the luster of his mathematical light might have been, it had now drooped and flickered into the obscurity of oblivion. The search for the work named, however, brought its reward in the form of a magnificent parchment-bound royal octavo volume two hundred and sixty years old, a very treasure house for our purpose, treating of every class of engineering work of that period—textile work, hydraulics and water power, water works, flour milling, saw milling, steel and iron work, and general mechanics.

From this principal and most valued work of its kind in our possession, we reproduce the illustrations relevant to our history. These engravings, the book informs us, are by "A Master of the Art," and the descriptive text by an "Eminent Architect and Ingeneur." This text we translate literally from the old German style.

The contemplation of these illustrations will, as they appear from time to time in The Saw Book, form an interesting and pleasurable study for a leisure hour.

In the present number Plate III. shows the progression to horse power and presents a combination, not unknown at the present day, of the saw-mill and the grist-mill under the same roof.

Plate IV. illustrates a further progression to water power, which continued to be the acme of motive power until the invention of the steam engine.

(TO BE CONTINUED.)

NOTE.—We have educated some of our customers to the economy of purchasing saws as far ahead as may be convenient. The advantage of this may be learned by a careful perusal of the article on page 16.

PLATE III—Specification

SAW AND FLOUR MILL

This mill is operated by animal power. As will be seen, it may be arranged so as to be used both for sawing and for grinding cereals. The upright beam A with its horizontal cog-wheel is driven around by the animal (as shown in the cut); a cog-wheel connects with the spindle of the trillis B, and by that means drives the other upright beam H, to the lower end of which is attached a double cog-wheel C; the upper cogs move in the trillis D on the right—and the side cogs in the trillis F on the left, the latter operating the millstone G, and the former operating the wheel E, which by its connections at L operates the saw M below; thus giving actually two mills operated by one means of power. The large wheel I is placed at upper end of the beam B, and three (not four) heavy weights K are suspended therefrom; this is done both to obtain increased power and to relieve the strain on the animal below.

PLATE III.

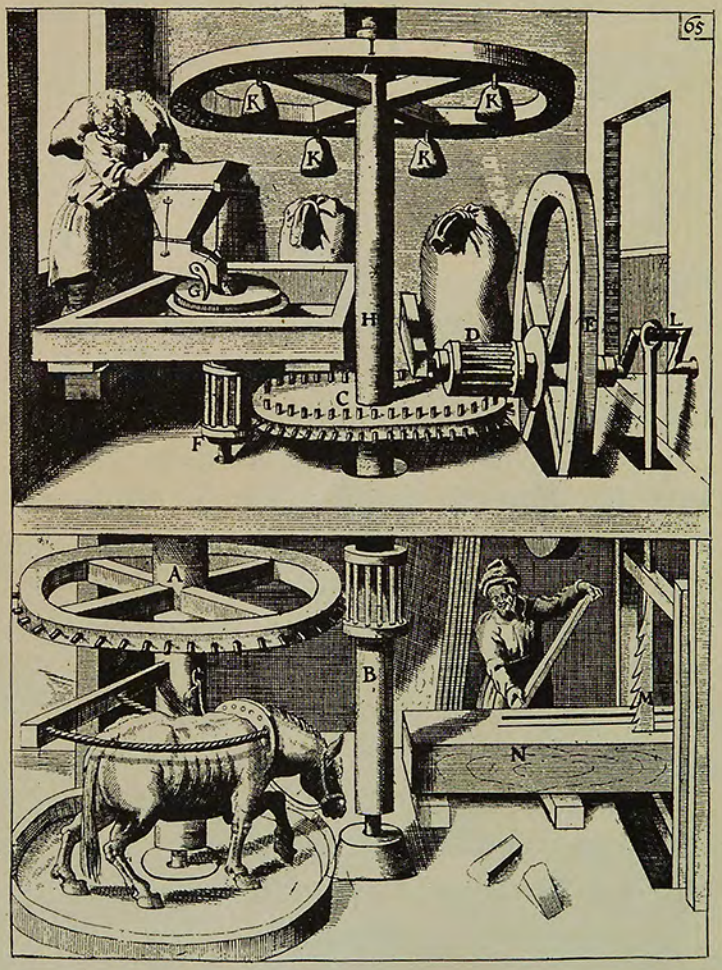


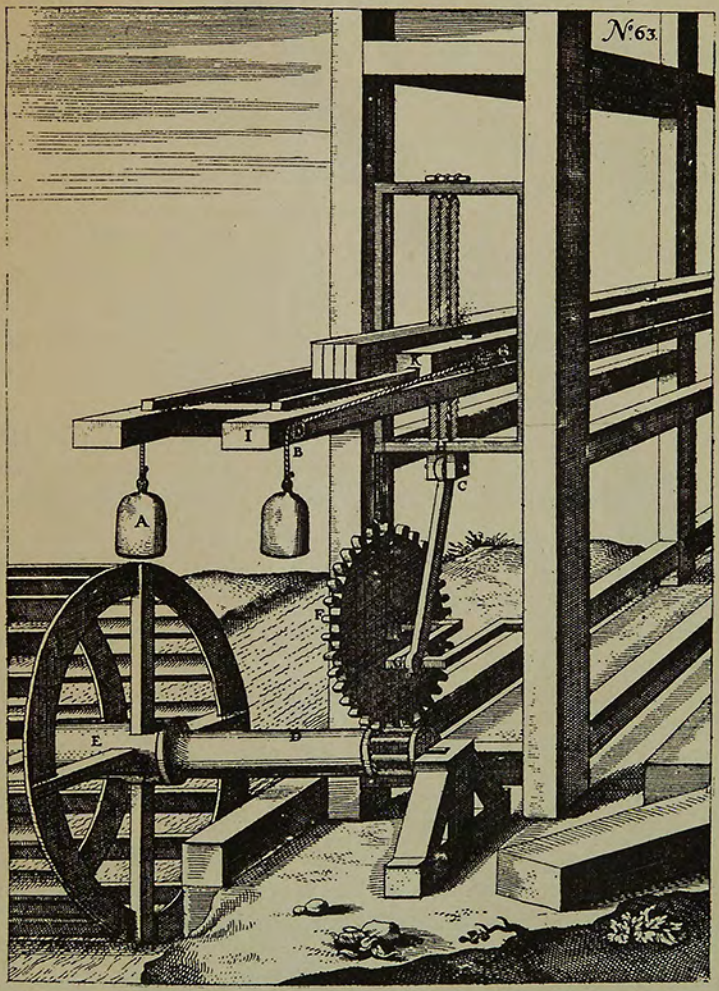
PLATE IV—Specification

SAW-MILL

This mill may be erected at a creek or waterfall, as circumstances and surroundings may allow. It is a French idea, and is erected at small expense. The water wheel E is connected by the horizontal beam D to a "trillis" over which the cog-wheel F, with its annexed angular bar G, forces the framework H, with the saws C fastened therein, upwards and downwards. The horizontal framework I holds the beams (or boards) to be cut, and in addition thereto two heavy weights A and B are connected with ropes or chains to the grooved side beam K.

A skilled mechanic may elaborate on this latter arrangement as existing circumstances and surroundings may permit.

PLATE IV.



AGE AS A STEEL REFINER

IT is a fact not generally known that steel, like wine, improves with age. The longer it is kept after tempering before being used, the better its quality.

More than one of the world-famed Sheffield houses engaged in the manufacture of cutlery, are said to owe their reputation to this feature. The writer well remembers, when a boy, visiting the largest cutlery manufactory in that town, and being shown one of a number of large rooms, or vaults, stored from floor to ceiling with tempered razors, each room being filled and emptied in chronological order.

It is nearly twenty-five years since we made our first log band-saws, (two 40′x6″x16 G), and these were made from four sheets of shovel steel, each ten feet long, twelve inches wide, obtained from the store of Messrs. Wm. Jessop & Sons' New York house. When made, this steel was of their commonest and cheapest grade; but having lain in their storage rooms for over fifteen years, it had so improved with age that the saws were of splendid quality.

It seems like a stretch of sentimentality to draw a parallel from such inorganic matter to our human experience, but it is true that time, the great softener of all asperities, takes away from tempered steel its harshness; mellows it, and gives homogeneity to its component parts, qualifying it for steady, reliable work. The effect on saws is to render the points of the teeth more ductile under the operations of the swage, to give firmer and more compact corners with a keener edge, and to increase the flexibility of the blade.

You have seen how
Our money was burned

Don't burn YOUR money
By using poor saws