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WE present herewith to Apprentices, Students, Young Mechanics, and Business Men that Trade Mark which their predecessors saw weekly in these columns almost twenty-five years ago. We call their attention to the fact that this Trade Mark is as closely associated with a *safe method* as it is with definite goods.

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WITH THE COMPLIMENTS OF
The Tanite Co., of Stroudsburg, Pa.

TO THE **PROPRIETOR.**

In the belief that correct ideas and correct practice will inspire your more profitable use of grinding implements and presses, we have taken the liberty of addressing separate and different circular cards to your Grinder, Foreman, Superintendent and Bookkeeper. We ask your own attention to one point only. That is, the great economy which would result from your employing a much larger quantity of simple, low-priced grinding machines, to do that work which is now most wastefully done by the old-fashioned processes of filing and chipping. Now it was demonstrated, in a series of careful experiments, that the maximum cost of grinding one pound of cast iron was eleven and three-fifths cents, and that the minimum cost was two and four-tenths cents; while the cost of filing of one pound of cast iron was thirty-five and nine-tenths cents. Notwithstanding this overwhelming superiority, the proprietor generally puts in one or two grinding machines as a sort of sop to his Superintendent—to the mechanical progress of the times and to the pressing entreaties of the wheel-maker—and stops right there. A professor of mechanics, who visited our grinding room once, looked aghast at the flying sparks and the disappearing metal. He said that shop was "a regular cast iron slaughter house." When we in turn inspected the technical machine shop over which he presided, we found it provided with *bench room and nine sizes, but only one grinding machine.*
 The zeal of machine builders hasided, of late years, to the getting up of a countless variety of complicated special machines, some of which are well calculated to do difficult and exact work, while many have been devised by men of but slight experience in the use of solid wheels, and merely look well on paper. We say merely, for we have persistently done, that the *greatest economy lies in the greatly increased use of wheels and machines for simple, general work.*

WITH THE COMPLIMENTS OF
The Tanite Co., of Stroudsburg, Pa.

TO THE **GRINDER.**

It is for your own interest to turn out the very best work possible, and as much of it as you can. The Emery Wheel is your tool—it should be your servant. The more work it does, and the better, why then, it is the better for you. If you use a very hard wheel, then you have to do the work with such heavy pressure on the wheel as fatigues you. If you use a soft wheel, then it does the work, and your fatigue is less. The less tired you are the more work you can do. The less pressure you are forced to use, the more you can use your hands to guide the metal you are grinding, and thereby you can do better work. Wheels which cut freely under light pressure are the *easiest wheels to use.*
 If you can keep the metal you are grinding against the wheel all the time, it will be the same as if you passed a file one mile long over your work in one minute's time. If your wheel runs below the proper speed, or if it gets out of true, or if it jumps and chatter, then you can't do this; and besides, the jar of the metal and wheel will be tiresome and unpleasant. The proper speed is generally the one dictated by the maker and marked on the label. A very cheap speed indicator (to carry in your vest pocket) will tell you if the speed is right. To keep it so, your belt must be loose enough to slip. If your grinding machine is of too light weight, or stands unsteadily, a few wooden braces to the floor, wall or ceiling, will stiffen it. If your wheel gets out of true, it should be made true again with a diamond tool, and this ought to be done just as soon as you notice the wheel has worn unevenly. You can do this yourself, with a hand tool, without taking the wheel off the machine. All wheels, even the very best, will wear out of true under hand work, and need frequent turning up. Chipping or hacking the high side of a wheel is a rough, brutal, unmechanical remedy, and no wheel is fit for use which needs such chipping to make it cut.

WITH THE COMPLIMENTS OF
The Tanite Co., of Stroudsburg, Pa.

TO THE **FOREMAN.**

The men under your direction will work with more profit to themselves and their employer if the tools and machines they use are of such kind and in such order that they turn out the most goods possible, of the best quality, and with the least danger, fatigue and annoyance. These men will be on better terms with you if you make their work easy and profitable. To do easy and profitable work, grinding machines and wheels should be placed in convenient positions—belts, pulleys and revolving set screws should be out of the way or enclosed—dust should be removed by suction fans—machines of ample weight should be so mounted that they run with the least possible shake, and good Emery Wheels should be used. As all makers claim to make good wheels, and as your Grinders will give you the most confusing opinions, we offer a few ideas as to what is a good wheel. A good wheel is that

which cuts freely when the metal being ground is applied with moderate pressure—which does not quickly glaze over and clog up with metal—which does not throw off chunks or burst—which does not have to be hacked and chipped to make it cut, and which can be applied to the greatest variety of work under varied conditions, with the certainty that it will do its work, with few stoppages for any cause. From 15 to 25 different makes of wheels are offered for sale in the United States. Of these very few are too soft, and nearly all too hard. Very many of these need to be hacked and chipped to make them cut, and require such excessive pressure as to weary your men. Nearly all do their best cutting when first used, but glaze over with metal, and do less and less work the longer they grind. Some are unsafe at the speed of a mile a minute, which has been adapted by the best makers, and a lower speed is named. Any wheel which cannot be run at a speed of a mile a minute without crows or coverings, or mechanical helps and reinforcements, is unfit for general use.

WITH THE COMPLIMENTS OF
The Tanite Co., of Stroudsburg, Pa.

TO THE **SUPERINTENDENT.**

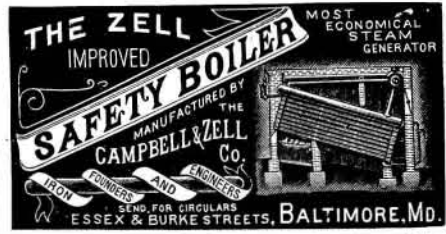
If solid emery wheels are used in the factory you manage, it is because they are labor-saving and money-making tools. It is of importance that they save the most labor and make the most money. Ordinary grinders can use them, but ordinary foremen keep them in proper condition; but to attain the greatest economy, sound judgment and technical skill are needed. It is hardly necessary to plead with you for high speeds, free cutting wheels and solid machines. We might as well ask you to run your circular saw by steam and to keep it sharp. But we do need to point out that no ordinary grinder or foreman is likely to make a correct estimate of a wheel's money value. There are too many factors in the problem. The actual cost per pound of grinding of metal is the thing to get at. Power, time, pressure and wheel-wear all have to be taken into account. So, too, do incidental stoppages and accidents. Too often wheels are accepted on tender terms, on a superficial and mistaken observation. This is most apt to occur when some different make of wheel is on trial. For instance, nearly all American makes are too hard. Through long use, however, the men become habituated to the poor tool, and compensate for its defects by wearing themselves out with excessive pressure, or wearing the wheel out by hacking and chipping. If one of the free cutting makes is then offered for trial, the grinder applies the same excessive pressure, and wears out the free cutting wheel so fast as to make it appear wasteful. He ought to lessen his pressure, and thereby save both the wheel and himself. At such trials, ever-hard wheels are often accepted, because the observation is made during the first few minutes' use of a fresh wheel. Now it is a demonstrated fact that of ten different makes, scientifically tested, only two maintained their cutting capacity to the last, while all the rest had their best work in the first few minutes, and then steadily deteriorated.

When we offer you better goods at a reasonably higher price, you meet us with the answer, that "the old wheel suits." So does an old shoe, wrongly shaped and badly made, suit better than a new one, till the new one is broken in.

WITH THE COMPLIMENTS OF
The Tanite Co., of Stroudsburg, Pa.

TO THE **BOOK-KEEPER.**

As our invoices come under your notice, the comparative prices of our goods are matters of consideration. Please note our views on this subject.
MACHINES. We do not claim to make better or cheaper machines than others, for there are many larger and better machine shops than ours. We claim to make grinding machines as cheap and good as any. Many machines appear cheaper than ours, because a lower price is fixed on a machine of same definite work and said to have the same capacity. As a rule, such machines are of lighter weight than ours, or deficient in fittings or workmanship.
EMERY. Our control of the crude ore is such that, coupled with our improved appliances and processes, we can supply emery at prices lower than you can buy it elsewhere. Two or three years' experience in the use of this article enable us to assure you as to the quality of these goods.
EMERY WHEELS. Our prices for these goods are about the highest in the world, but their value justifies the price. These wheels are productive tools and their value depends on their productive capacity. Many other makes are in use, and such use is apparently satisfactory; superintendent, foreman, and sometimes even the grinder working by the piece agreeing that they see no use of changing to higher priced goods. Our answer is that the higher priced goods are safer and cause fewer accidents to life, limb and surrounding machinery; that they save time, because they call for fewer stoppages for break-downs and repairs; that their productive capacity is greater, because they grind off more metal in a given time, and because they cut more freely, and so require less pressure and cause less bodily fatigue to the grinder.
MISCELLANEOUS GOODS. Prices on these goods, such as Diamond Tools, Wheel Stones, Knife Sharpeners, etc., will be found justly proportioned to their value.



PROPOSALS.

PROPOSALS FOR MAIL-BAG CORD-FASTENERS AND FOR IRON AND STEEL, &c., FOR POST OFFICE DEPARTMENT.

POST OFFICE DEPARTMENT, WASHINGTON, D. C., February 28, 1891.—Sealed proposals will be received at this Department until noon, on Wednesday, the sixth day of March, for furnishing, according to contract, Mail-bag Cord-fasteners, Iron, Steel, Brass, Oils, and Waste. All proposals must be in accordance with the specifications, which can be obtained from the Second Assistant Postmaster General, Mail Equipment Division. **JOHN WANAMAKER, Postmaster General.**

BERMUDA.

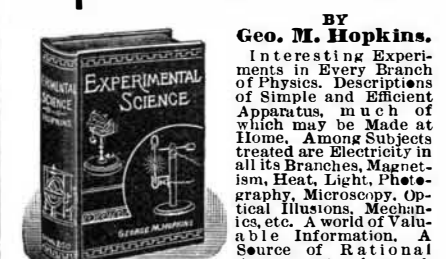
NOTICE TO ENGINEERS, CONTRACTORS, Etc.
 Sealed tenders for deepening the channels leading into Hamilton Harbor, Bermuda, will be received at the Office of the Colonial Secretary, Hamilton, Bermuda, up to 12 o'clock noon of

TUESDAY, THE 14TH OF JULY, 1891.

Tenders to be sent in duplicate, and to be marked on the covers, "Tender for Channel Improvements." Complete plans of the work may be seen, and specifications, conditions of contract, forms of tender, and printed information regarding the work may be obtained at the office of the Crown Agents for the Colonies, Downing Street, London; at the office of Her Britannic Majesty's Consul General at New York; and at the office of the Colonial Surveyor, Hamilton, Bermuda.
 The Government of Bermuda will not be bound to accept the lowest or any other tender.

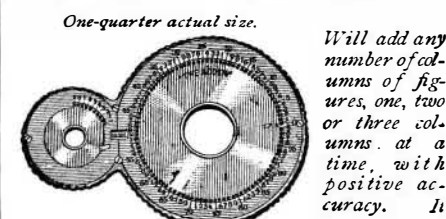
W. C. HALLETT, Colonial Surveyor.
 HAMILTON, Bermuda, March, 1891.

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