pawls, e f, bent levers, S X, connected by the bar, g, and the bar, m, all arranged substantially as set forth.

Third, The toothed cylinder placed in the bolt frame, N, and arranged to operate as and for the purpose herein set forth.

[This invention consists in the employment or use of a swinging or vibrating bolt-frame provided with suitable clogs and a feed-mechanism, all arranged in such a manner as to feed the bolt automatically to the saw which cuts the shingles or other article from the bolt.]

38,933.—Lamp Wick Regulator.—John Pomeroy (assignor to Henry A. Shipman & Robert Headly), Derby, Conn.:

I claim the combination of one or more spur wheels with the center pin or axis fastened together by upsetting the center pin so as to fill a polygonal hole in each spur-wheel and form a collar on each side of it, substantially in the manner and for the purposes set forth.

38,934.—Revolving Fire-arm.—Lucius W. Pond (assignor to himself and John H. Vickers), Worcester, Mass.:

I claim the connection of the several lining thimbles or tubes, C C, at their front ends by means of a ring or flange, D, substantially as and for the purpose herein specified.

[This invention relates to the employment in the chambers of revolving fire-arms of the lining thimbles or tubes to enable fixed ammunition to be used without extending the chambers through the rear of the cylinder, and it consists in so connecting such thimbles or tubes together at their front ends by means of a ring or flange fitting to or against the front of the cylinder that they can all be withdrawn from or inserted into their respective chambers at once thereby greatly expediting the operation of loading.]

RE-ISSUES.

1,496.—Raking Attachment to Harvesters.—O. H. Burdick, Auburn, N. Y., assignee of Hugh Foresman, Enon, Ohio. Patented May 13, 1856:

I claim, first, In combination with a rake receiving its sweeping motion from a revolving wheel and pin, a raising and lowering mechanism, that brings the rake into position, to clear the platform of the cut grain, and returns it out of reach of the platform for the next sweeping operation substantially as described.

Second, In combination with a sweeping rake, an adjustable crank-pin, for varying the sweep thereof, in the manner and for the purpose described.

Third, The combination of a revolving wheel and pin, with a slotted rake stale, to give the rake its sweeping motion to clear the platform, and to return for the next sweeping motion, substantially as described.

1,497.—Making Illuminating Gas.—Levi L. Hill, Hudson, N. Y. Patented June 17, 1862:

I claim, first, Generating gas for illuminating and other purposes by bringing water and a hydro-carbon fluid simultaneously in contact with freshly formed incandescent charcoal substantially as set forth.

Second, Generating gas for illuminating and other purposes by bringing water and a hydro-carbon fluid simultaneously in contact with freshly formed, incandescent coke, substantially as set forth.

Third, The use of freshly formed, incandescent charcoal or coke for the decomposition of water or a hydro-carbon fluid, or of both combined, when applied simultaneously to the charcoal or coke, for the production of gas for illumination and other purposes, substantially as described.

Fourth, The combination of the gas from the distillation of wood, with that produced from the action of water and a hydro-carbon fluid, simultaneously applied to the freshly formed, incandescent charcoal from the wood in the manner substantially as set forth for the production of gas for illuminating and other purposes.

Fifth, The combination of the gas from the distillation of bituminous coal or its equivalent, with that produced from the action of water and a hydro-carbon fluid, simultaneously applied to the freshly formed, incandescent coke from the coal, in the manner substantially as set forth, for the production of gas for illuminating and other purposes.

1,498.—Filter.—John Kedzie, Rochester, N. Y. Patented July 11, 1854:

I claim a crock, B, provided with perforations, a a, and the eduction pipe, c, at its bottom; and communicating with the outer air at the top, by means of the pipe, f, or in an equivalent manner, said crock being used in combination with the surrounding packing, C, and receptacle, A, substantially as herein set forth.

1,499.—Reaping and Mowing Machine.—David M. Osborne & Wm. A. Kirby, Auburn, N. Y., assignees by mesne-assignments, of Jeremiah W. Mulley, Amsterdam, N. Y. Patented Feb. 10, 1857. Re-issued Nov. 29, 1859:

We claim in combination with a reel supported on a single reel post, an adjusting mechanism by which the reel may be raised up or let down upon the post, and the reel and post leaned more towards or from the standing grain or grass, as the condition of the crop may require, and substantially as herein described.

1,500.—Machine for swaging Shoe-tips.—American Shoe Tip Company (assignees by mesne-assignments of George A. Mitchell), New Haven, Conn. Patented June 26, 1860:

We claim the die block formed to give the required shape to the outside of a shoe or boot tip, and with its outer face flat to receive and hold the sheet metal blank substantially as described, in combination with a swage of the form of the inside of the tip to be produced, and so operated as to act on the sheet metal blank at an angle, substantially as and for the purpose specified.

And also in combination with a die block and swage having a mode of operation, substantially as herein described, a guide or gage to hold the convex edge of the blank in required position relatively to the die, and to resist the force of the swage when it first acts obliquely on the sheet metal blank, substantially as described.

DESIGNS.

1,763.—Clock Case.—S. B. Jerome, New Haven, Conn.

1,764.—Tea and Coffee Service.—Aloys Meisel, New York City.

1,765 to 1,774.—Carpet Patterns (10 cases).—Elmer J. Ney, (assignor to the Lowell Manufacturing Company), Lowell, Mass.

1,775.—Chromatic Diagram.—S. R. Scofield, Lisle, N. Y.

1,776.—Cooking Stove.—Garrettson Smith & Henry Brown, Philadelphia, Pa., assignors to David Hetrick, Mexico, Pa.

1,777 to 1,788.—Carpet Patterns (12 cases).—Henry G. Thompson, New York City, assignor to the Hartford Carpet Company.

EXTENSION.

Barrel Machinery.—Reuben Murdock, Rochester, N. Y. Patented June 12, 1849:

I claim, first, The combination of the revolving dogs, m, the pawls, n, the disengaging levers, U, the vibrating feed lever, R, and the stops, q q', whereby the slab is secured on the carriage and successive staves from the same slab.

Second, I claim disconnecting the carriage, N, from the feed gear during its retrograde motion while the slab is being fed towards the saw, J, substantially in the manner and for the purpose herein set forth.

Third, I likewise claim the combination of the oscillating saw, J, with the curved gated case, T, whereby the stave is securely held during the action of the saw in the manner and for the purpose herein set forth.

Fourth, I likewise claim the combination of the stave carriage, Y, with the spring dogs, and spring hold-fast, t, and stop, v, whereby the stave is securely held down during the action of the saws, and then thrown from the machine.

Fifth, I also claim the combination of the concave and convex pressure feed rollers, C C', and the self-adjusting spring clamps or rests, K K', with the concave and convex cutters, A A', when the several members are arranged in the curve of the circumference of the saw, as herein set forth.

Notes and Queries

M. R., of Md.—We do not recollect having seen any statement to the effect that the *Warrior's* plating was kept free from barnacles by the application of a new copper paint. We have looked at our foreign files and cannot discover anything distinctly relating to the subject. So many conflicting accounts have appeared respecting the value of this or that paint for ship's bottoms, that we have been obliged to receive them with a great deal of caution. Our iron-clads have been painted with white zinc paint, held to be infallible; and also with red lead but both have proved useless. We cannot, on the authority of a mere paragraph, undertake to decide between the paint spoken of by you and that described in Wetherstedt's patent.

E. F. J., of Ohio.—Your question is rather paradoxical—"What pressure is sufficient to prevent the ebullition of water at 900° Fahrenheit?" No direct answer can be given, as the vapor evolved from water at the temperature named would have to be increased very greatly in density, while the heat of the water remained unaltered—a mechanical impossibility in practice.

R. P., of Pa.—The engines of which you speak are not made in this country. They are impracticable and have never done anything.

P. J. S., of Mo.—We have considered the singular case mentioned by you as occurring in your feed-pump, but cannot account for it on any known scientific theory or principle. If we were on the premises we might account for it, but cannot give any opinion as to the remarkable occurrence spoken of by you, with the limited knowledge of the case in our possession.

H. T., of N. Y.—Platinum is soluble in a mixture of hot nitro-muriatic acid (aqua regia). It can be welded at a white heat, and it does not oxidize in the air. When reduced to a spongy porous mass, it becomes red hot when introduced into a mixture of oxygen and hydrogen gas, and the gas is then inflamed. The cause of this action is not understood by chemists or others, as the metal itself does not undergo any change in its character.

W. R. V., of Pa.—Fulminating silver is prepared by dissolving silver in nitric acid, then precipitating it by adding caustic potash or lime-water. The precipitated oxide of silver thus obtained is next washed with water, then drained and digested for twelve hours in cold, strong ammonia. The liquor is next poured off and the powder washed with fresh ammonia and drained on blotting paper. When dry it forms one of the most dangerous of fulminating powders; it can scarcely be touched without exploding.

R. F., of Ind.—We have answered the question you propound once before—for another person however. The pressure on a slide valve is wholly due to the area exposed to the steam and is utterly independent of the openings. The valve may be partially relieved, in theory, by back pressure or an imperfect action of the exhaust steam, but stated broadly, the pressure on a slide valve is wholly due to the steam area of the back.

C. E. M., of N. Y.—Prescott's work on telegraphy, published by Ticknor & Fields, Boston, is the best that has appeared.

G. B., of Pa.—Have you demonstrated that the penetration of a rifle bullet is greater at a distance of twenty feet from the muzzle than at one foot? We have not received any reliable account of experiments to confirm the views which you have presented.

M. A. R., of N. Y.—All the milk should certainly be removed from butter that is intended to be laid down in salt for future use, and water appears to be the best agent for washing it.

C. W. C., of Pa.—The question of the pressure on the slide valve, which you advert to, does not admit of any argument whatever, to our thinking. We cannot conceive how any one could fall into such an error, and did not misapprehend you in the premises in the least. We must assume that the slide valve *does* fit perfectly when we theorize on its properties. Questions of a want of mechanical skill cannot affect the philosophical principles governing its action. We have seen plenty of face-plates of 75 pounds weight each that lift each other when applied face to face. There are two straight edges in this city, 6 feet long and 2 inches wide, that readily lift each other when applied face to face.

F. E. B., of Cal.—Bessemer's process for manufacturing malleable iron and steel from melted pig iron is illustrated and described on page 373, Vol. III. and pages 148 and 164, Vol. V. (new series) of the SCIENTIFIC AMERICAN. Christian Shunk, of Youngstown, Ohio, has obtained an American patent as the first inventor of the same process.

Money Received

At the Scientific American Office, on account of Patent Office business, from Wednesday, June 17, to Wednesday, June 24, 1863:—

D. L. M., of N. J., $20; T. R. T., of N. Y., $85; J. J. D., of N. Y., $20; M. and B. of Ohio, $20; F. J. Z., of N. Y., $16; T. S. D., of N. J., $20; E. A. S., of N. Y., $16; J. A, of N. Y., $10; J. M., of Mass., $20; R. W. and D. D., of N. Y., $16; L. J., of France, $20; E. C., of Ohio, $45; C. J. Van O., of N. Y., $15; C. J. P., of Tenn., $47; C. G. M., of Vt., $16; S. T. S., of Mass., $16; T. L. C., of N. Y., $16; T. E., of Mass., $28; T. B. S., of Ohio $10; S. and G., of Canada $20; H. J. D., of Ill., $25; L. and S. B. H., of Mass., $30; D. H. S., of Iowa, $15; A. W., of N. Y., $16; J. H. L., of Kansas $10; A. C., of Pa., $20; S. L., of N. J., $45; G. W. D., of N. Y., $20; G. B. I., of Vt., $20; N. and D., of N. Y., $20; T. A. M., of N. Y., $16; J. A. G., of Iowa $20; C. and J. A., of N. Y., $20; H. L. B., of N. Y., $20; P. and B., of N. Y., $20; W. K., of Mass., $41; C. D., of Mo., $21; J. A. and J. W. M., of Ind., $35; A. J. A., of Ill., $27; L. and H., of Mass., $25; W. J. F. Jr., of N. Y., $25; J. M. M., of Mass., $16; B. A. H., of Iowa, $21; J. D W. W., of N. Y., $25; F. W. M., of Ky., $40; S. S. D., of Ill., $29; J. M., of Ill., $10; I. H., of Wis., $16; T. and J. W. W., of Ill., $20; G. W. L., of N. J., $20; G. F., of N. Y., $46; J. H. S., of N. Y., $10; A. J. S., of Cal., $20; J. N. E., of N. Y., $16; J. W. C., of Ky., $16 W. L. R., of Mass., $20; F. J., of N. Y., $10; H. C. A., of Ill., $45; J. T. of N. Y., $20; A. M. B., of Mich., $20; P. S., of Mich., $16; S. M. of Ill., $25; J. A. M., of N. J., $91; A. H., of Conn., $20; W. C. H. of Ohio, $16; H. P., of Maine, $16; F. J., of Wis., $16; J. J. F., of Iowa, $26; N. F. C., of Wis., $20; C. D. B., of Mich., $16; E. W. H., of Ill., $15; S. H., of N. Y., $28; W. H. H., of N. Y., $16; R. L., of N. Y. $16; G. F. C., of Mass., $20; A. A. G., of N. Y., $45.

Persons having remitted money to this office will please to examine the above list to see that their initials appear in it, and if they have not received an acknowledgment by mail, and their initials are not to be found in this list, they will please notify us immediately, and inform us the amount, and how it was sent, whether by mail or express.

Specifications and drawings and models belonging to parties with the following initials have been forwarded to the Patent Office from Wednesday, June 17, to Wednesday, June 24, 1863:—

W. K., of Mass.; A. H., of Conn.; L. & H., of Mass.; B. A. H., of Iowa; I. J. F., of N. Y.; L. & S. B. H., of Mass.; C. J. Van O., of N. Y.; L. M. S., of Ill.; W. J. F. Jr., of N. Y.; J. B. S., of Ohio; J. A. M., of N. J. (3 cases); J. D. W. W., of N. Y.; J. A. & J. W. M., of Ind.; S. H., of N. Y.; H. J. D., of Ill.; S. S. D., of Ill.; H. B., of England.

ENROLLMENT.

OFFICE OF THE A. A. PROVOST-MARSHAL-GENERAL, SOUTHERN DIVISION OF NEW YORK, NEW YORK, June 23, 1863.

Notice is hereby given to all persons whose names have been ENROLLED in Districts other than those in which they reside, that by calling upon the Provost-Marshal in the District in which they have their residence, they can obtain a CERTIFICATE of the fact of their enrollment in such District, which, upon presentation, will entitle them to have their names taken from the lists, where they may have been enrolled elsewhere.

By adopting this course the Provost-Marshals will be enabled to perfect their lists and prevent the possibility of names appearing more than once in the enrollment.

Application should be made to the Provost-Marshals, as follows:—
1st Congressional District, Jamaica, L. I.
2d Congressional District, No. 26 Grand street, Williamsburgh.
3d Congressional District, No. 259 Washington street, Brooklyn.
4th Congressional District, No. 271 Broadway.
5th Congressional District, No. 428 Grand street.
6th Congressional District, No. 185 Sixth avenue.
7th Congressional District, No. 63 Third avenue.
8th Congressional District, No. 1,184½ Broadway.
9th Congressional District, No. 677 Third avenue.

Col. ROBERT NUGENT, A. A. Provost-Marshal-General.

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SANFORD & MALLORY'S

PORTABLE

FLAX AND HEMP DRESSER.

Date of Patents, Sept. 16, 1862, and April 28, 1863.

Over fifty of these machines have been in practical use during the past season, and so great is the demand for the coming fall that we have adopted the following plan, viz: That we will only make to order. Many have already sent in their orders for machines to be delivered next fall. Those who desire to use our machine in dressing the crop of the present season would do well to send their orders without delay, as all machines are delivered according to date of order.

MADE AND SOLD BY

SANFORD & MALLORY,

Harlem Railroad Building, Room No. 26, in White street, near Center street.

Our terms are cash on delivery of shipper's receipt or bill of lading; and persons ordering can send draft on New York or Treasury notes to some person here whom they know, or by express, to be delivered to us on our delivery of bill of lading for shipment of machine.

Price at our factory, at Paterson, New Jersey:—

For No. 1 Machine (capable of dressing 2500 lbs. of flax straw in ten hours) $355
For No. 2 Machine $255
For No. 3, Hand Machine $155

This engraving represents Sanford & Mallony's Flax-dressing Machine, which is, as will be seen, compactly and strongly built. The cut represents the machine denominated No. 1 by the builders, and is capable of dressing two tuns of straw, flax, or hemp per day of ten hours. There is a size before this, No. 0, which is run by power, and is quite similar in all respects except dimensions. Size No. 2 will break from 1500 to 1800 pounds of straw per day, and No. 3, the smallest size, the hand machine, suitable for small growers, from 600 to 800 pounds per day. This latter machine can also be run by power, and is then capable of breaking about 1000 pounds per day.

Many scientific men and men of experience in flax-dressing have examined the Sanford & Mallory machine, have tested its practical operation, and the character of the product yielded by it. They are convinced that the following facts are fully established:—

First—A machine capable of dressing 2500 pounds of flax straw in ten hours, can be sold at the factory, ready for shipment, at $355; and the second size, capable of dressing 1500 pounds of straw, at $255. A third size, capable of dressing from 600 to 800 pounds of straw per day, at $155. The smallest size weighs about 300 pounds, and can be run by hand.

Second—The yield of flax fiber by the use of this machine, in proportion to the weight of flax straw dressed, exceeds by at least one-fourth that obtained by any other machine or process.

Third—The fiber dressed by this machine is much more valuable than that dressed in any other way, on account of the greater yield over the hackle.

Fourth—This machine is so simple in its construction and operation that the liability to derangement is very slight.

Fifth—This machine does not require in its use any peculiar skill. It can be operated by boys or girls, and does not involve any risk to the hands or arms of the operatives, while the ordinary machines require the use of skilled labor, and, as experience has proved, are always attended with risk to the operatives.

Sixth—This machine can be driven by any of the horse-powers in use, and as it can be operated by ordinary farm labor it enables the farmer to dress and prepare for market, at little expense, the flax raised by himself, thus opening to him a new and profitable occupation.

Seventh—This machine is small, the largest size occupying only about four feet square, and weighing not over 1100 pounds.

As there is a demand for larger machines for hemp the proprietors are building such, capable of dressing two and a half tuns of hemp straw per day.

The amount of flax fiber produced in the United States in the year 1850 was 7,806,809. Had the straw from which this amount of fiber was taken been dressed by the Sanford & Mallory machine, the yield would have been not less than 10,409,078 pounds. The increased product or the flax saved, at present prices, would be worth $624,542.

When it is remembered that in many of the Western States an immense quantity of flax is raised for the seed alone, the straw being destroyed or wasted as of no value, it will readily be seen that the introduction among farmers and manufacturers of a cheap and effective machine, capable of converting what would otherwise go to waste, into an article of great value, cannot fail to produce the most important results.

It is well known that flax can be successfully cultivated in all the Northern States. If, in addition to the value of the seed (sufficient of itself to pay the entire cost of cultivation), the straw can be made a source of large profit, a wide field of successful industry will be opened.

That the statements here put forward as to the efficiency and value of the Sanford & Mallory machine, and especially as to the great saving effected by it over any other machine or process known, are rather below than beyond the fact, will abundantly appear from the subjoined reports and letters from practical flax-workers and dealers. Nothing need be added to their direct and positive testimony.

Over fifty of these machines for flax and hemp have been in successful use, during the past season, in different parts of the country, and the demand for them is now large; consequently orders for them should be made early, as the coming crop of flax and hemp will soon be ready for dressing.

The demand for flax during the past year and a half has quite doubled its price, and it is now used for many purposes to which it was never before applied, and in which it is found to be superior to cotton and other materials before in use. Whatever, therefore, may be the future product of cotton, the demand for flax will not diminish, but, on the contrary, increase with its new and useful applications. It is now largely mixed with woolen goods of almost every description; is used for paper, wadding, batting, belting, druggets, delaines, calicoes, stockings, felt hats, and carpeting. Should the experiments for *cottonizing* flax for which Congress has made a large appropriation succeed, the already large demand for it would not only be enormously enhanced but made practically unlimited.

The following testimonials from well-known manufacturers and others are submitted as evidence of the *bona fide* character of the machine, and that it is a practical straight up-and-down affair:—

GREENWICH, N. Y., April 23, 1863.

MESSRS. SANFORD & MALLORY:

Gentlemen:—You ask our opinion in regard to your flax machine. We must say we are well pleased with it. The machine has been in almost constant use since we received it from you—something like six months since; and it, we think, works better now than when we first started it. We advise all our customers to buy your brake in preference to those we formerly made at our machine-shop. Wishing you success in this great invention, we are truly yours,

EDDY, DYER & CO.

UNION VILLAGE, New York, Nov. 6, 1862.

MESSRS. SANFORD & MALLORY:

Gentlemen:—I have used two of your patent brakes in my flax-mill since about the middle of October, and take great pleasure in informing you of the results of their operation. Each machine will break easily twenty hundred weight of straw in ten hours. Our tests, which have been very thorough, show twenty-five hundred. The saving of fiber is from six to ten pounds on every hundred of straw.

The following statement of experiments made in my mill will show more clearly what your machine accomplishes.

On the 29th of October we ran 100 lbs. straw with the following results:—

Time occupied in breaking, 22 minutes.
Scutched (by one man) in 46 minutes.
Gave of dressed flax. 23½ lbs.
Gave of coarse and fine tow, 1½ lbs.

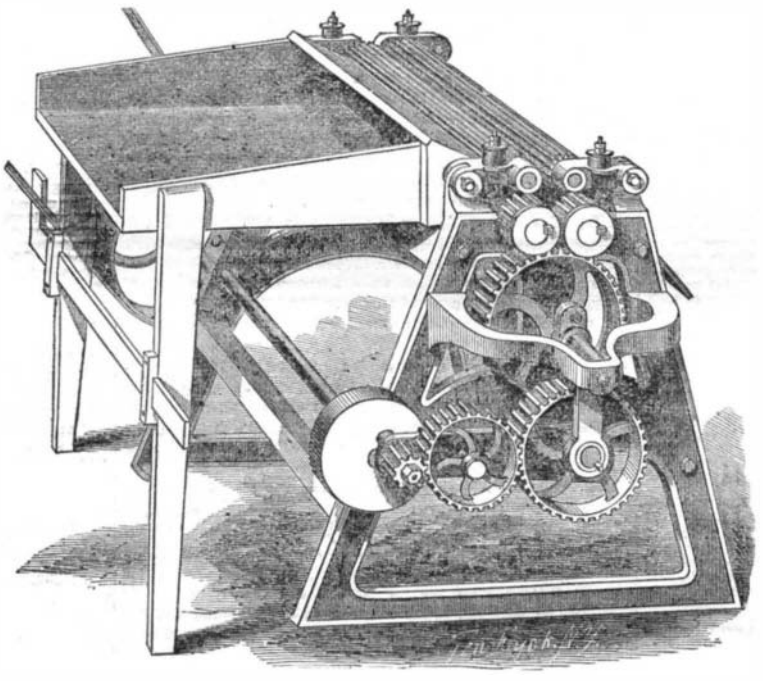
On the same day we broke 50 lbs. straw in 11 minutes.
Scutched (by one man) in 23 minutes.
Gave of dressed flax, 11 lbs.
Gave of coarse and fine tow, 1 lb.

October 30.—We broke 500 lbs. straw in 2 hours 2 minutes.
Scutched (by three men) in 2 hours 50 minutes.
Yield of dressed flax, 106 lbs.
Yield of coarse tow, 16½ lbs.
Yield of fine tow, 5½ lbs.

November 6.—We broke 500 lbs. same quality of straw in the brake heretofore used by us (being one of the best old-fashioned brakes), two men working it, in 1 hour 58 minutes.
Scutched (by three men) in 2 hours.
Yield of dressed flax, 92½ lbs.
Yield of coarse tow, 43 lbs.
Yield of fine tow, 9 lbs.

We then broke 500 lbs. same quality of straw in your machine, two men working it, in 2 hours 10 minutes.
Scutched (by three men) in 2 hours 10 minutes.
Yield of dressed flax, 110½ lbs.
Yield of coarse tow, 16 lbs.
Yield of fine tow, 3 lbs.

You will see from the above that there was apparently more flax in the straw broken on the old machine than in that broken in your new machine. This is owing to the fact that the coarse and fine tow from your machine has less shooves than that from the old machine. Your tow is finer and freer from shoove, and is worth at least a cent per pound more.



The straw used in these tests was of average quality; and in the tests of November 6th of the old and new brakes, the straw was taken from the bulk without sorting. One thousand pounds weight was weighed off in small lots, and divided equally, by weight, between the two machines, the bundles to be broken in either machine were drawn by lot, so that neither machine could have any advantage over the other.

The flax dressed by the use of your machine is left in perfect ribbons, and entirely free from shooves. The fiber is much longer, and the ends left full. There is no risk whatever to life or limb in using your machine,

Yours, respectfully,
HARVY WILCOX.

I was present and assisted at all the experiments above set forth, and know the above statements to be correct.

CHARLES BRADLEY.

STITTSVILLE, N. Y., April 18, 1863.

MESSRS. SANFORD & MALLORY:

Gentlemen:—I have used one of your patent brakes for the past four months. I am highly pleased with it; so much so that I would not be willing to part with it on any conditions, provided I could not obtain another in its place. I feel that it is a very safe machine for the person who operates it; whereas the old brake is not safe, as many persons will testify who have lost an arm by them. I am satisfied that I get more flax and less tow by using the new brake, while both flax and tow are worth more in market than that broken in the old brakes, and certainly the new brake does not require near as much power to run it as the old one, which with many would be quite an object. My brother tells me that he has ordered another brake through your agent, to be used by us, as we are about to unite ourselves in the flax business the coming season. We will want it by the first of August next.

Yours, truly,
WM. B. LINK.

JOHNSONVILLE, N. Y., April 27, 1863.

MESSRS. SANFORD & MALLORY:

Gentlemen:—I have been using two of your patent flax machines since the 1st of January last. I have given them a thorough test with the old brake. They will save from three to six pounds of dressed flax to the hundred pounds of flax straw (according to the quality of straw used) more than the old brake, and will break from one and one-fourth to one and one-half tons of straw per day of ten hours; do the work better than any other machine I ever saw. It takes out nine tenths of the shive or woody matter in passing through the machine once; consequently it requires less scutching than if broken with the old brake, which does its work very imperfectly—breaking some of the fibers and taking out no shive. My men tell me they would rather rough-dress two handfuls after your brake than one after the old. The fiber from your brake is left perfectly whole and straight, which is better for the manufacturers, as it will hatchel more to the hundred pounds than after the old mode of breaking. I have had a quantity hatched that was dressed after each brake, taken from the same lot of flax, and the yield was five pounds per hundred more after your brake than after the old. The fine tow is equally good with that after the old brake, while the coarse is worth one-third more per tun. I think that if the machine is properly used it is not liable to breakage.

Yours, truly,
WM. H. BUCKLEY.

UNION VILLAGE, N. Y., May 15, 1863.

MESSRS. SANFORD & MALLORY:

Gentlemen:—I have used two of your patent flax brakes for the past eight months, and take this opportunity of saying that they exceed any brake I ever saw. They take out from sixty to seventy per cent of the shive or woody matter, leaving the fiber whole and in perfect ribbons. They will save from five to eight pounds of dressed flax to every hundred pounds of flax straw over any brake I ever used. We can break from one to one and one-half tuns per day of ten hours with each brake, and there is no danger of life or limb. Yours with respect,

HARVY WILCOX.

NORTH HOOSICK, May 16, 1863.

MESSRS. SANFORD & MALLORY:

Gentlemen:—We take pleasure in stating that after having used your brake for some time in the mill of Dr. Fowler, we consider it far superior to the old brake, from the fact that it takes out nearly all of the shive or woody part—we would think at least nine-tenths—leaving the fiber in perfect ribbons and unbroken. It is much easier to scutch after your brake than the old one. We would rather scutch twice the quantity after your brake. Another great and favorable feature of your brake is that it can be operated without risk of life or limb; whereas the old brake frequently takes off an arm. There can be no doubt but your machine will save much more fiber than the old brake.

JAMES HARMON.
THOMAS HARMON.

BLOOMINGTON, McLEAN Co., ILLINOIS, May 2, 1863.

MESSRS. SANFORD & MALLORY:

Gentlemen:—This is to certify that I have run your Patent Flax and Hemp Brake more or less since the 1st of December, 1862; have broke western tangled straw, and I find that it works complete as it removes at least sixty-five per cent of the shive, and so loosens the rest that they can very readily be shook out, and the stock has a soft oily feel which is worth more than when it has a harsh wiry feel, which is invariably the case with the old machine. I do not hesitate to recommend it to anyone as the best machine ever used for breaking flax straw, whether straight or tangled, rotted or unrotted, as my experience has proved it so to my perfect satisfaction. Yours truly,

F. A. HAVENS.

BELFAST, Ireland, May 1, 1863.

MESSRS. SANFORD & MALLORY:

Gentlemen:—It gives me much pleasure to report that the five Sanford & Mallory Flax Brakes which I have been operating in the different flax districts of Ireland have given entire satisfaction to all who have seen and used them. The saving over all other machines in use is large; on some kinds of straw being as great as one-third. This taken with the saving in labor will give an advantage in favor of the brake of from £3 to £5, or $15 to $25 per day, beside increasing the value of the fiber by softening and giving it better spinning quality. In conclusion, I would say that the machine has been approved of and recommended by the leading manufacturers of Ireland, and also by the Chemico-Agricultural Society of Ulster.

Yours, respectfully,
EDGAR FOWKS.

SPRINGFIELD, Clark Co., Ohio, May 5, 1863.

MESSRS. SANFORD & MALLORY:

Gentlemen:—I have tried one of your brakes, and I have run through thirty-one hundred pounds in ten and one-fourth hours, which was well broken, and every way satisfactory.

I am, gentlemen, yours, respectfully,
E. MEEK.

NEW YORK, Sept. 19, 1862.

MESSRS. SANFORD & MALLORY:

Gentlemen:—In regard to your new brake I would say that it far exceeds my expectations, both in facilitating the operation of scutching and saving of fiber. I have scutched flax for the last twelve years, and am familiar with the various modes of working flax, but never saw anything that could begin to compare with this. I only regret that the straw was not of a better quality; it is what I call poor straw, and if worked with the machinery now in use would not yield more than 12 to 13 lbs. of fiber per 100 lbs. of straw; and on account of the irregular motion of your scutcher and want of power (as it was a temporary affair), it took much longer to scutch it than it otherwise would. I am confident that with ordinary straw and a good scutching mill I could scutch alone from 170 to 180 lbs. dressed flax, if broken on your machine, in ten hours.

I would also state that on account of so many shooves being taken out by your brake, and those remaining in so loose, that it does not require near so much motion of the scutch, which is a great saving of power and fiber, and what little tow is made is fine, and worth three cents per pound; whereas two-thirds of that made by ordinary machines is worth but half a cent per pound, and no sale at that. I cheerfully recommend this brake to all who have flax to dress, as being the machine long sought for.

Respectfully yours,
JAMES CLEARY.

NEW YORK, June 1, 1863.

MESSRS. SANFORD & MALLORY:

Dear Sirs:—Having been in the flax and linen trade for the last fifteen years, and taking a deep interest in everything tending to promote and develope that trade in this country, possessing as it does such immense resources as to enable it, at some future time, to become its own producer of linen fabrics, now so extensively imported from other countries, I have long perceived the want of a machine that would enable every farmer and mill owner, at a small expense, to turn to account the flax straw which is now literally thrown away, and derive from it, as well as from the seed, a legitimate use and profit.

It is estimated that the incredible quantity of three hundred thousand tuns of flax straw, capable of yielding sixty thousand tuns of clear flax, worth now $500 per tun, making the sum of $30,000,000, has been annually thrown away from the want of some cheap and ready process of converting it to use.

This large sum represents but a small proportion of the amount this country could produce, to supply the wants of its own markets as well as those of other countries, were the requisite means afforded.

Looking, therefore, at the great importance of this subject, I am pleased to be enabled to state, that from a close inspection of your flax and hemp machine, and from a careful comparison of it with all those I have ever seen in this and other countries for the purpose of extracting the fiber from the straw, I can give my cordial testimony as to its perfect adaptation to the purposes required.

It has the great advantage of being portable, simple and easy to work, taking but little space, and, above all, of producing more flax from the straw than any other, as from actual test the flax produced by your machine yielded from the straw and hackle, ready to spin into yarn, more line than by any other means now used.

I have also to inform you that, having sent eleven of these machines to England, my reports on their working are highly satisfactory, and that they will be used largely there and in Ireland this year.

Besides extracting more flax from the straw than any other machine, it gives it also more value from the softening quality of the operation on the fiber, said to be not less than $20 to $25 per tun. Some Egyptian flax, as imported, was run through the machine, and was considered to be improved in value full $25 per tun.

I earnestly hope, and you have my best wishes, that your invention will prove as valuable and important to this country as the cotton gin has proved. I remain yours, respectfully,

J. HAWKINS BLACK.

ROUGHFORT, Ireland, April 9, 1863.

Dear Sir:—I have to report to you on the merits of Sanford & Mallory's American brake, which has been at my scutch mill for the last three weeks. I have tried it on various kinds of straw and find the results as follows:—On very poor and hard straw I found a gain of one pound per hundred weight over the same broken by ordinary rollers; on medium quality of straw a gain of two pounds four ounces per hundred weight, the yield by your brake being eighteen pounds four ounces against sixteen pounds on same straw broken by ordinary method; on very tender straw over-watered the gain was three and a half pounds per hundred weight, the yield by your brake being fourteen and a half pounds against eleven pounds by ordinary method. I find the flax from your rollers easier scutched, and the yield softer to feel and quality improved than that rolled in the ordinary way.

Yours truly,
JOHN WILLIAMSON

BELFAST, Ireland, April 18, 1863.

It will be seen from the foregoing that the saving in over-watered and tender straw is very great. In America even better results have been obtained, and I have several certificates to that effect, but I prefer that the machine should make its way here on its merits, as tested here.

WM. CHARLEY.

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PROVOST MARSHAL GENERAL'S OFFICE,
WASHINGTON, May 22, 1863.

NOTICE—THE ATTENTION OF ALL OFFICERS, who have been honorably discharged on account of wounds or disability, and who desire re-enter the service in the Invalid Corps, is called to the provisions of General Orders, No. 105, of 1863, from the War Department, published in the papers throughout the country. Such officers are requested to comply promptly with the provisions of that order, and to send their written applications, as therein provided, for positions in the Invalid Corps (stating the character of their disability), with as little delay as possible, to the Acting Assistant Provost Marshal General of the State in which they may be. Such Acting Assistant Provost Marshal General will at once forward the applications, with his indorsement, to the Provost Marshal General at Washington.

Officers for the Invalid Corps will be appointed immediately upon furnishing the papers required by General Orders, No. 105, of 1863, from the War Department. Their pay and emoluments will commence from date of accepance of such appointments, and not from date of organization of the respective commands to which they may be assigned.
J. B. FRY,
24 4 Provost Marshal General.

PROVOST MARSHAL GENERAL'S OFFICE,
WASHINGTON, D. C., May 22, 1863.

ALL MEN WHO DESIRE TO JOIN ANY PARTICULAR Regiment of Cavalry now in the field, are hereby authorized to present themselves at any time during the next thirty days to the Board of Enrolment in their respective Districts. The Board shall examine them, and determine upon their fitness for the Service, and if found to be fit, the Provost Marshal of the District shall give them transportation tickets to the general Rendezvous, at the Headquarters of the A. A. Provost Marshal General of the State. As soon as they present themselves at this general Rendezvous they shall be duly mustered by a mustering and disbursing officer, and paid by him the bounty allowed by law.
JAMES B. FRY,
23 4 Provost Marshal General.

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Responsible agents wanted. 16 26*

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