8,883 3,287 464

Abstract from the Congressional Annual Report of the Hon. R. H. Buell, Commissioner of Patents, for the Year Ending December 31, 1875.

Statement of the business of the \bullet flice for the year 1875.

 Statement of the business of the ●fice for the year 1875.

 Number of applications for patents during the year 1875.

 Number of patents issued, including reissues and designs.

 14,833

 Number of patents extended.

 Number of patents extended.

 Number of patents extended.

 Number of caveats filed during the year

 Number of patents expired during the year

 Number of applications for registering of trade marks.

 1,528

 Number of applications for registering of trade marks.

 1,638

 Number of applications for registering of labels.

 508

 Number of applications for registering of labels.

 1,032

 Number of tabelts registered.

 1,033

 Number of tabelts registered.

 313

 Of the patents granted there were to—

I20

 Number of labels registered.
 566

 0f the patents granted there were to—
 313

 Citizens of the United States.
 14,274

 Subjects of Great Britain.
 358

 Subjects of other foreign governments.
 83

 Comparative statement of the backward of the bac Comparative statement of the business of the Office from 1837 to 1875, inclusive.

	Applica	Cavests	Patents 1	Cash	Cash
Y CHT.	Cons.	filed.	Issued.	received.	expended.
ionr			176	2011/03/07/201	
1801	•••••	•••••	±00	13 132 54	1,000 a
1008	•••••	•••••	495	97 966 00.	94 6 49 6
1007	705		470	34,200.00 99.056.51	04,040.0
10.1	041	940	410	40 4.9 01	39,020.6
1040	04(312	495	40,413.01	34.000.0
1044	(01	091	51(30,303.05	31,241 4
1040	1 045	313	221	30,310.81	0. 110.9
1044	1,045	300	502	42,007.20	30,444.0
1845	1,240	404	502	51,0/0.14	39,395.0
1840	1,616	448	019	20,204.10	40,108.7
1847	1,001	000	572	03,111.19	41,010.3
1848	1,628	6 0 7	660	67,576.69	58,905.8
1849	1,500	290 j	1,070;	80,754.98	77,716.4
1850	2,193	603	990	86,927.00	80,100.9
1851	2,259	100	869	95,738.61	86,916.9
1852	2.639	996	1,020	112,656.34	95,916.9
1853	2,673	100	958	121,527.45	132,869.8
1854	3,324	868	1,902	163,789.84	167,146.3
1855	4,435	900	2,024	216,459.35	179,540.3
1856	4,560	1,024	2,502	192,588.02	199,931.0
1857	4,771	1,010	2,910	196,132.01	211.582.
1958	5,364	934	3,710	203,716.16	193,193.7
1859	6.225	1,097	4,538	245,942.15	210,278.4
1860	7,653	1,084	4,819	256,352.59	252,820.8
1861	4,643	700	3,340	137,354.44	21,491.9
1862	5,038	821	3,521	215,754.99	182,810.3
1863	6,014	787	4,17	195,593.29	189,414.1
1864	6,932	1,063	5,020	240,919.98	229,868.0
1865	10,664	1,937	6,616	348,791.84	274,199.3
1866	15,269	2,1/3	9,450	495,665.38	361,724.2
1867	21,276	3,597	13,015	646,581.92	639,263.3
1368	20,420	3,705	13,378	681,565.86	628,679.7
1869	19,271	3,624	13,986	693,145.81	486,430.7
1870	19,171	3,273	13,321	669,456.76	557,149.1
1871	19,472	3,366	13,033	678,716.46	560,595.0
1872	18,246	3,090	13,59	699,726 39	665,591.3
1873	20.414	3,248	12,864	703,191.77	691,178.9
1874	21,602	3,181	13,599	,738,278.17	679,288.4
1875	21.638	3,094	16.288	743 453 36.	721.657.7

THE CENTENNIAL

The Patent Office is to be represented at the Centennial celebration, and a space of 10,000 square feet has been assigned for the exhibition of models of American inventions, illustrating the more important and useful industries. Models to the number of about 5,000 are being selected for this purpose, being about three per cent of the aggregate number in the possession of the Patent Office. These, while illustrating in part the progress of our country m "mechanical and manufacturing industries," and the development of American genius and skill, represent in one way only the results attained. Another mode of presentation of the facts and figures in the case is obtainable from the census report of 1870, and the general subject-matter index of patents granted since the year 1790.

MANUFACTURES OF AGRICULTURAL IMPLEMENTS. In referring to the census, under the head of "manufactories in operation in 1870, exclusively for agricultural implements," it is

round that the	
Number of establishments in operation was	2,076
Number of steam engines at work	676
Horse power	15,873
Number of water wheels at work	426
Horse power	10,209
Number of hands employed	25,249
Capital invested	\$34,834,600
Wages paid	\$12, 151, 504
Material use 1. value	\$21,473,925

The census shows an increase of \$34,578,825 in the value of agricultural implements manufactured over the amount reported in 1860, and of \$45,224,174 over the amount reported in 1850, while the total value for the year 1870 of the "mechanical and manufactur

ing industries " aggregates the sum of \$4,232,335,442. The following are the products of agricultural implements of the manufactories first above referred to, being the articles manufactured and number made:

Cane mills	108 Horse rakes	80.9
Clover hullers	5,206 Lawn mowers	2,5
Corn planters	21,709 Mowers	39,4
Corn shellers	12,914 Plows	864,9
Cotton planters	2,000 Reapers	60,3
Cultivators	88,740 Reapers and mowers	59,6
Fanning mills	19,772 Rollers and scrapers	4,8
Grain cradles	103,646 Seed sowers	6,9
Grain drills	32,033 Scythes	881.2
Handrakes	207,310 Scythe snaths	17,6
Harrows	9,150 Sevarators	1,1
Harvesters	3,500 Shovels	25,7
Hay and straw cutters	30,879 SICKIES	3
Нау югкв	1,670,600 Stump pullers	22 0
	4 541 Other products	5 206 7
11018c powers	4,541 Other products	1,000,1

PATENTS FOR AGRICULTURAL IMPLEMENTS. For the articles above enumerated, there have been granted between the years 1790 and 1873, inclusive-that is to say, since the organization of this Office (1790)-the following patents:

.. 171,640 .. 6,830

In presenting this annual report, the Commissioner makes several suggestions and recommendations for the improvement of business facilities at the Patent Office.

1. To the corps of one hundred examiners now employed, he asks for an addition of twelve more examiners. He also asks for the restoration of the grade of Third Assistant Examiners; and suggests that the duties of Principal Examiners ought to be defined by law.

2. He suggests that all decisions of the courts shall be published in the Official Gazette, such publication to have the same force and effect as if published by authority of the courts.

3. The publication of the back patents-those granted be tween 1836 and 1871-is urgently called for, as a matter of the highest importance.

4. The improvement of the Patent Office library, by an annual appropriation of \$5,000, is suggested.

5. The necessity of enlarging the Patent Office is conclu sively shown. From five to twelve persons are now compelled to occupy rooms averaging each not more than twenty feet square, this space being also reduced by the cases for letters, papers, etc.; while models have to be tucked away in the attic.

The Commissioner's Report is one of the most straightforward, practical documents ever issued from the Patent Office; and we hope that Congress will adopt the excellent suggestions it contains.

DECISIONS OF THE COURTS.

Supreme Court of the United States.

THE GREEN CORN PATENTS.—RUFUS K. SEWELL, ADMINISTRATOR OF HENRY CLARE, DECEASED, APPELLANT, US. JOHN WINSLOW JONES & Al.—APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE DISTRICT OF

ent mode, be it better of worse, him succession, and the principle. When the inventor says: "I recommend the following method,'' he does not thereby constitute such method a portion of his patent. Appert's process, embodied in the Durand patent of 1810, contains every-thing of value that is contained in Winslow's patent, through whom the appellees claim. Mr. Justice Howr delivered the opinion of the court:

Ories in
appelres claim.Appert's process, embodied in the Durand patent of 1810, contains every-
sprit is
appellees claim.appellees claim.m. Justice Huxt delivered the opinion of the court:
Jones, as assignee of four several patents for a new and useful improve-
ment in preserving Indian corn, brought his action against Clark, the ori-
final defendant, auleging infringements of the same. These patents were
table 2000 were as follows, namely: No. 34,924, dated
426 April 8, 1862, for "a new and useful improvement in preserving Indian
10,299 corn." No. 35,274, dated May 13,1862, "for a new and useful improvement
in preserving green corn." No. 35,346, dated May 20,1862; and No. 36,326,
4,834,600dated August 26, 1862.The two patents last above mentioned were declared and adjuged by the
court below to be void, and from this judgment no appeal has been taken.
Theyare no longer elements in the case before us, and are dismissed from
truther consideration.
The patent first mentioned is for a arcicle of manufacture—a result. The
scond one is for a process by which a result is obtained. The first is the
more full, and embraces all that is contained in the second.
The first objection made to the patents is the want of noveity. It is con-
tended that they were anticipated by the Appert process embolied in the
urand patent of 1801; also by the patent of Gunther, or 1841, and by that of
Wertheimer, or L822. It is an elementary proposition in patent, he what of
the patent in the plaintiff to recover for the violation of a patent, he must be the
original inventor, not only in relation to the United States, but to other parts
in described in this specification, errolled in the English
food, vegetable food, and ther perishable articles a long time in preserving infail
food, vegetable food, and ther perishable articles a long time from perish-
addi

Let us now state the Points embraced in this the plaintiff's patent, and compare them with the points heretofore stated as included in the Durand

patent. I. Winslow's declared object is the preservation of Indian corn in the

Let us now state the points embraced in this the piantiff's patent. 1. Winslow's declared object is the preservation of Indian corn in the green state. Burand's is for preserving Indian corn not only, but all vegetable sub-stances in their raw or crude state. 2. Winslow recommends removing the kernels from the cob before the process of preservation is commenced, placing the kernels in cans, sealing the m, and exposing them to heat. Durand, notlimiting himself to the article of corn, provides that the arti-cles to be preserved shall be placed in cans, and subjected to heat in the same manner. He does not stipulate or recommend that the article shall be first removed from the cob, the vine, the twig, or whatever may be the natural support of the vegetable to be preserved, as the corn from its etch the pea from its pod, the grape or tomato from its vine, the peach from its stem, the berry from its stalk. Neither does he recommend that it shall not be soremoved. His process embraces the article in whateverform it may be presented. It is for the preservation of rawor crude or uncooked vege-tables in whatever form the typ may be presented, and necessarily includes a case where they have been previously removed from their natural support. A prior memoval from the stalk would be the natural, and, in many cases, a necessary proceeding. 3. Winslow directs that the kernels shall be subjected to the heat for a period of about one and a half hours before puncturing, and for about two and a half hours after the puncturing. The double use of the word ' about '' indicates that the time is not to be considered as precisely specified. Durand directs that the kaits to be the measure of the time. and prequired by the particular substances ontained in the vessel. Corn, peas, tomatoes, pea-thes, berries, asparague, may very likely require great difference in the time in which the heat shall be applied to produce the required effect. In each case that is to be the measure of the time. and the use of h

tion to as good advantage as he employed it, or that the result should be the same in degree, but it must be the same in kind. (Winans vs. Denmend, 15 How., 330.) To infringe a patent it is not necessary that the thing patented should be adopted in every particular. If the patent is adopted substantially by the defined ants they are guilty of infrigement. (Root vs. Ball. 4 McLean, 177; Alden vs. Deney, 1Story, C. C. R., 380.) Than action for infringement the first question is whether the machine used by the defendant is substantially in its principle and mode of operation like the plaintif's. If so, it is an infringement to use it. (Howe vs. Abbott, 2 Story C. C.; 190, Parker vs. Haunth, 4 McLean, 370.) The has taken the same plan and applied it to the same purpose, notwith-standing he may have varied the process of the application, his manufacture will be substantially identical with that of the patentee. (Curtis, § 312.) * The discovery in question has been of immense benefit to mankind. By mis natural tendency to decay, deserts are a versed, seas navigated, distant regions explored. It is less brilliant, but more useful han all the inventions for the destruction of the human race that have ever been known. It is to France that the honor of this discovery belongs, and to Appert, a French clizen. It does not belong to America or to Winslow. Appert's process presents all that we now know upon the subject. It contains absolutely everything of value that is contained in Winslow's patent. Other grave questions are presented by the recordbefore us. We are satis-fied, however, to place our decision upon the ground that the want of nov-eity in the patents of Winslow is fatal to the patient of neor-eity in the patents of Winslow is fatal to the patient of recovery. We do not discuss the other questions. The decree of the court below must be reversed, and judgment ordered in favor of the defendant below.

NEW BOOKS AND PUBLICATIONS.

REPORT ON THE COMPRESSIVE STRENGTH, SPECIFIC GRAVITY, AND RATIO OF ABSORPTION OF THE BUILDING STONES IN THE UNITED STATES. By O. A. Gillmore, Lieutenant-Colonel of the Corps of Engineers, Author of "A Treatise on Limes, Cements, etc." New York city: D. Van Nostrand, 23 Murray and 27 Warren streets.

This book contains Lieutenant-Colonel Gillmore's official report, to the Chief of Engineers of the United States Army, on a series of tests which were partly reported on to the end of July, 1874. The present volume carries the investigation one year f rther, and gives some very valuable and interesting facts and information, which, taking into consideration the rapid growth of the use of artificial stone, is of the highest practical importance.

DIGEST OF OPINIONS OF THE JUDGE ADVOCATE GENERAL OF THE ARMY, containing a Selection of Official Opinions furnished between September, 1862, and July, 1868. Edited by Major W. Winthrop, Judge Advocate. Washington, D.C.: Government Printing Office.

The scope of this work is fully set forth in its title, and it will be found a useful reference book by the legal profession.

REPORT ON THE HYGIENE OF THE UNITED STATES ARMY, with Descriptions of Military Posts. Washington, D. C.: Government Printing Office.

A voluminous document, containing information down to the end of the year 1874.

- JAMES W. TUFTS' CATALOGUE OF SODA WATER APPARATUS. BOSton, Mass.
- A handsome volume, superbly illustrated.

DYNAMOMETER EXPERIMENTS ON SPINNING FLAX. By E. Cornut. Chief Engineer of the Association of Steam Power Proprietors of Northern France. Lille, France: L. Danel.

An interesting little treatise, of great practical value.

Becent American and foreign Latents.

NEW MECHANICAL AND ENGINEERING INVENTIONS.

IMPROVED STOPPING MECHANISM FOR SPINNING JACKS. William W. Sinclair and Edward Galvin, Mottville, N. Y.-This nvention consists of automatic mechanism for throwing off the driving belt of a spinning jack in case the squaring band breaks or

fails to act. The shifter lever has a strong spring attached to it for

Cotton planters 173 Reapers 69	of the yeasel or a small nortion thereof, open until the effect of the best	throwing it when released by the failure of the squaring band. The
Cultivators	shall have taken place, at which period the same is to be closed.	said spring is hold distanded ready for action by the shifter layer
Grain cradles	The points following are embraced in this patent:	isalu spring is neid distended, ready for action, by the shifter level
Grain drills 186, Scythes 50	1. It is for the purpose of preserving for a long time animal or vegetable	itself, which is lodged in a notch in a frame piece, and is tripped by
Hand rakes 9 Scythe snaths 26	1000.	a sliding cam rod when the band fails, and throws the belt shifter.
Harrows	so arranged as to exclude communication with the external air.	
Harvesters	3. An aperture may be left in the vessel, at the choice of the operator, un-	IMPROVED WIND POWER,
Poes	til the effect of the heat shall have taken place, when it is to be closed.	Timothy C. Guthery, Freedom, Ind.—This invention relates to an
Horse powers	4. The vessels, thus prepared, are placed in a boiler filled with cold water,	improvement upon the wind wheel covered by petent No. 91 457
-	which is heated to a boling point, which boling shall be continued for such	improvement upon the wind wheel covered by patent No. 31,351,
MISCELLANEOUS AMERICAN PATENTS,	5. Although a water bath is preferred, the inventor declares he avails	and consists in mounting the wheel upon a shall having its bear-
These indicate the scope and versatility of the inventive genius	himself of heat through an oven, stove, steam bath, or any other situation	ings in a rotating bar, to whose upper end a vane is rigidly attached.
of our country, and all enter more or less into the "mechanical and	fit for gradually raising the temperature and suffering it to cool again.	The object is to render the device simpler and less expensive.
manufacturing industries" that have been referred to There are	6. Vegetables are to be put into the vessels in a raw or crude state; ani-	
manufacturing moustries that have been referred to. They are	The investinces, raw or partiy cooked.	IMPROVED AUTOMATIC WASTE PIPE CLOSING ATTACHMENT.
as follows:	animal substances canable of being thus dealt with	
Ree bives 645 Looms and annurtenances 1,210	Winslow's patent of April 8, 1862 No. 34,928, is declared to be for an im-	F. Philip Bourne, Brooklyn, N. Y.—The object of this invention
Bending machines 144 Paper, manufacture of 269	provement in preserving Indian corn in the green state.	is to furnish an improved attachment for waste pipes, so con-
Boots and shoes, etc	The letters patent declare that the first success of the inventor was ob-	is to take the maximum the encourse of maximum odors ate ; and it con-
Brick kilns and machines 808 Photography 346	tained by the following process:	structed as to prevent the escape of gases, odors, otors, and to be
Bridges	ang hermetically sealed so as to prevent the escape of the natural aroma	sists in the combination of a valve champer or box, bottom plate,
Brooms and brushes, etc	of the corn or the evaporation of the milk or other juices of the same. I	chambered top plate, pipes, pivoted valve, pivoted valve plate, and
Burglar alarms	then submitted the sealed cans and their contents to boiling or steam heat	weight with each other so arranged as when the waste water is
Burners, gas, lamp, and vapor. 793 Roofs and roofing	for about four hours. * * * By this method of cooking green corn in the	weight with each other, so within the own balance the
Car brakes 485 Rotary engines 170	vapor of its juices the ends of the cans are builged out. Strong cans are re-	admitted into the pipe in sumelent quantity to overbalance the
Car coupling	quired, and dealers are likely to be prejudiced against corn thus put up. 1	downward pressure of the weight, the valve will be lowered into
Jar wheels	in the natural state, remove the kernels from the coh by means of a curved	an inclined position, allowing the wastewater to flow into the pipe.
Churns, etc. 1, 391 Stoves 2, 400	and gaged knife, or other suitable means. Then pack in cans, hermetically	an include position, and the metophag was out that the weight of that
Clothes dryers and wringers '984 Straw cutters and machines '401	seal the cans, expose them to steam or boiling heat for about an hour and a	As soon as so much of the water has full out that the web much share
Curtain fixtures	half, then puncture, seal while hot, and continue the heat for about two	remaining will be overbalanced by the weight, the valve will close.
Fire arms 1,203 Telegraphand instruments 566	hours and a half."	The valve will always have a small quantity of water above it, and
Gas and gas apparatus	At the close, the inventor says that what he claims to secure by the patent	-ill thus officially provent the escape of any gas or odor from the
Grinding and grist mills	green state without drving, the kernels being removed from the cob, her-	will thus chectuary provent the escape of any gas of east from any
Lamps and appurtenances,, 1,483	metically sealed, and heated, as described.	waste pipe.

IMPROVED ANTI-FRICTION BEARING.

Cevedra B. Sheldon, New York city.-Good results have lately been obtained with linings for journal boxes, composed of paper and cloth combined with plumbago. Mr. Sheldon's invention pro-ceeds a step further, and obviates the objection of destructibility, which applies to the fragile materials last named above. Plumbago is made into a plastic mass with a suitable cement, and by heavy pressure is forced into the interstices of wire cloth or perforated metal sheets.

IMPROVED TWEER.

Charles M. Morgan, Hesper, Iowa.-The manner of controlling the blast is by raising or lowering a cup, thereby increasing or diminishing the opening for admitting the wind to the fire. Ano ther purpose of the cup is that, by raising or lowering, it loosen the cinders that may have choked up the wind passage to the fire and causes all fine particles to fall into the chamber below, thereby insuring a clear fire free from dirt. By operating a lever, the valve in the base plate can be moved away from its seat, to allow any dust or cinders that may be in the wind chamber to drop out and by leaving said valve open when the blast is shut off, a suffi cient quantity of air will pass up to keep the fire alive for a long time.

IMPROVED MACHINE FOR POINTING WIRE.

Henry A. Wilhams, West Medway, Mass-This invention consists of progressive feeding and turning mechanism, in combination with rolls having tapered grooves, for tapering and pointing wires to make picker teeth, hackle pins, printers' bodkins, taper dowel pins, and the like, the said feed mechanism being so that only a small portion of the wire is at first presented to the rolls. The wire is advanced a little more at each operation, so that, as the size is reduced, the wire feeds into the smaller portion of the grooves and thus can be reduced to any required size in one groove. This plan saves the necessity of a series of grooves for doing the same work, also the shifting of the work from one groove to another.

IMPROVED EMERY WHEEL.

George H. Peabody, Brooklyn, N. Y.-This wheel is covered with an emery composition formed of powdered rosin, white lead, beach clay, glue, emery, and water, which is applied by tamping it to the surface of the wheel by numerous blows with a small hammer.

IMPROVED GRAIN SEPARATOR.

Michael Laufenburg, San Francisco, Cal., assignor to Treadwell & Co., same place.--A fan blower throws a blast between two sepa-rate belts. The upper half of the carrier passes over and under guide rolls at different elevations, so that the strawis shaken re peatedly on the open work belt and the remaining grain caused to fall on a subjacent chute. From this chute the grain is dropped in front of another fan that detaches any dust, and thence into a shaking shoe. By this organization of mechanism the straw undergoes such a thorough sifting that no grain that has been loosened from the head can well be carried off to the stack.

IMPROVED TREADLE.

Henry Reese, Baltimore, Md.-The object of this invention is to lessen the fatigue of operating sewing machines and other devices run by treadle power, by means of a peculiar construction of treadle which prevents the movement of the latter to be made without bending the ancles, and enables the operator to run the machine with a very light expenditure of muscular power. This result is accomplished by a peculiar construction of two independent ent treadles, hinged or pivoted upon opposite sides of the fulcrum of the main treadle, held in proper horizontal position by means of springs, and arranged adjustably for either foot foremost.

IMPROVED RAILWAY SIGNAL.

Jacob D. Hughson, Prairie City, Ill.-This invention relates to a signal apparatus in which springs, or other analogous means of retracting the bell clapper or hammer, are dispensed with, and two clappers or hammers are so arranged and connected with other parts that they counterbalance each other, to a certain extent, and the rebound of either aids in producing the striking movement of the other: also whereby the signal is always repeated and the sound thus made practically continuous so long as a train is pass ing.

IMPROVED BALING PRESS.

Christopher C. Campbell, East Chatham, N. Y., and Henry W King and Allan C. Smith, Caanan, N. Y.-This invention relates to which the operations of packing the hay into the box and tying it into bales in the baling chamber are performed at the same time: and both followers are detachable, each being taken out succes sively at the end of the baling chamber and inserted successively in the packing box. The invention consists in the devices for packing the hay or other material in the packing box, which devices are also made to automatically withdraw the follower from the baling chamber and insert it in the packing chamber without handling.

------NEW AGRICULTURAL INVENTIONS.

CUTTER BAR FOR REAPERS AND MOWERS. Thomas Henderson, Black Horse, Md.-The object of this inven tion is to provide an improved means of attaching the knives of a reaper or mower to the reciprocating bar, whereby the said knives may be more conveniently and safely handled and more readily sharpened. It consists in attaching each alternate knife to a sepa rate bar and then placing and fastening the two bars together so a to form a continuous saw-shaped or serrated cutting edge.

IMPROVED GRATED ENTRANCE TO BEEHIVES.

John S. Harbison, San Diego, Cal., assignor to himself and Andrew Harbison, Newcastle, Pa.-This invention consists of positive gaged passages, of sufficient thickness to permit the rounding of

IMPROVED TOBACCO SUCKER GERM DESTROYER.

Joseph H. Knaus and John R. Harford, New Franklin, Mo.-In using the instrument, the fork of a bar is placed against the tobacco stalk, directly over the sucker germ, and is pressed against said stalk with sufficient force to force the forked bar upward and cause a cutter to project against said germ. A cross bar is then drawn upward with the fingers, which rotates the rod and cutter, and cuts out and destroys the germ, so that it will not grow again.

IMPROVED HAY RACK.

Joseph Hall, Riverside, Neb.—This invention consists of improve-ments in parts of the hay rack for which a patent was granted to the same inventor, May 1, 1875: said improvements being hook bolts instead of hooks, and other devices, the general end of which is to render the apparatus more substantial.

IMPROVED CHEESE TURNER.

Charles Barlow, Cookshire, Canada.-This invention allows the cheeses to be turned and greased without removing them from the shelves; and the general arrangement is such that each shelf may be readily brought into such position that the cheeses upon it may be conveniently reached.

IMPROVED GRAIN BAG.

Constantin Lazarevitch, Brooklyn, N. Y.-In this improved grain bag, the necessity of sewing up the mouth of the grain bag is obviated. A funnel-shaped part is formed above the mouth of the bag, the mouth being made narrower by closed shoulders on each side of the funnel. The funnel is reversed and forced into the grain, closing thereby the bag securely.

NEW TEXTILE MACHINERY.

IMPROVED FELTING MACHINE.

Jeremiah J. O'Sullivan, Brooklyn, N. Y.-By this invention the inventor claims to dispense with putting in layers, breaking down, stopping off, hardening off, tip-hardening, and all other handling isual in the old process of hat-hardening. The process is as follows First, having raised the upper cone from the perforated cone, the hat body is placed over the latter. The upper cone being set in position, steam is admitted to the perforated cone. This heats and moistens the hat body; and while this is going on, the upper cone is given a rapid reciprocating motion. The cones, being perfectly true, will cause the whole hat to be finished with an evenness heretofore unable to be obtained.

NEW WOODWORKING AND HOUSE AND CARRIAGE BUILDING INVENTIONS.

IMPROVED VEHICLE TOP PROP BLOCK.

Andrew Butterfield, Huntsville, Ala., assignor to himself and I I. McKibbin, of same place.-This inventor proposes a spring extension of the block up along the bow, and a cushion on the end for the bow to rest on, whereby the spring extension takes the strain off the bows when the top is down, and prevents them from springing and breaking. The top is also preserved, and has an easy and graceful vibrating motion.

BRACKET BAND FOR VEHICLE WHEELS. John G. Lefler, Philadelphia, Pa.—The object of this invention is to provide a ready means for repairing the hubs of vehicle wheels by strengthening the connection between the hub and spokes. The invention may also be applied to advantage in new wheels for additional strength; and it consists in a bracket band, or a band which is made to encompass the hub, with bracket extension for each spoke provided with a screw eye or bolt hole, so that when the spoke is inserted in its socket and fastened by a bolt or screw to the bracket extension, it is securely held to the hub against all shrink-age, wear, and rattling.

NEW CHEMICAL AND MISCELLANEOUS INVENTIONS.

IMPROVED BAGGAGE CHECK.

John F. Wheeler and Henry A. De Haven, San Quentin, Cal.-In this improved baggage check a duplicate is taken off from and applied in an instant to the main check, and is carried about by the checker. The slotted main check is attached, by a belt and tag, to the trunk. A spring around the eye of the slot retains the tag, and serves also to lock the duplicate check that slides, by a projecting stud and fastening knob, in the slot of the main check.

IMPROVED LOCOMOTIVE HEAD LIGHT.

William P. Mills, Frank Bell, and James Carey, Jackson, Mich. This invention consists of side openings through the reflector and the case of the ordinary head light, together, with contrivances for setting in different glasses for train signals, and used lifetead of the colored lanterns now specially used on the for that purpose, and thus, by making the head light do the duty of the signal lan terns, save the cost and attendance of them. The inventor claims that the head light affords greater certainty, because it is less liable to go out; and if it does, it is where it will be noticed at once by the engineer, whereas the location of the lanterns used issuch that they are not always in view, and at best they are more uncertain as to hurning than the head lights are.

IMPROVED CAN-SEALING DEVICE.

Richard Wells, Baltimore, Md.-This invention relates to certain mprovements in that class of devices for sealing cans, in which the air is first exhausted by mechanical means, and the can then hermetically sealed. It consists in a plug of metal or other suitable material, screw-threaded so as to be securely and permanently located in the cork stopper or cover of the can. The said plug is hollow, and is also screw-threaded upon its inner surface, into which an interior plug carrying an elastic stopper is secured. This interior plug is provided with side grooves for the escape of the air, and has a squared recess in its top to receive the end of a wrench IMPROVED POCKET BOOK FACTENERS

IMPROVED BIRD CAGE.

Robert C. Breck, Bridgwater, Mass.-Two compartments are made in the cage to receive the food and water vessels. When the food or water is to be replenished, the outer door of the compartments is raised until caught and held by a catch. This leaves the inner door closed, and the outer side of the compartment open, so that the food or water can be put in or taken out, or the compartment cleaned, without any danger of the bird getting out. Triangular plates are pivoted at their angles to the bars of the cage at the upper and lower ends of an opening. The sides of the plates, adjacent to the pivoted angles, are connected by wires, and to the lower plate are attached pins to receive fruit or other articles for the bird to eat. This device may be turned out so that the pins will be without the cage, when fruit maybe placed upon them; and when the device is turned inward, the pins will be within the cage, so that the bird can conveniently reach them while standing upon the perch.

IMPROVED SPRING BALANCE FOR EXTENSION CHANDELIERS. Lyman T. Lawton, West Meriden, Conn., assignor to himself, P. J. Clark, and Joseph Kintz, of same place.-This is a spring top in the bottom of the case of a spring drum, in combination with notches in the drum, and having a cord depending from it, all so contrived that the stop will be caused to engage the drum by its spring, to hold it so as to prevent a heavy chandelier from falling or a light one from rising. It can be readily pulled out of the notches by the cord, to allow of adjusting the chandelier.

IMPROVED BROOM-SEWING MACHINE.

Henry Behren, Columbus, Ohio.-In this machine the jaws may be readily thrown into position for sewing the different seams, and may be opened for taking out the work without requiring the troublesome changing of the pins of different lengths that have to be changed after each seam. To this end jaws are provided with pivoted pawls that lock into racks and notched plates at the sides of the machine.

IMPROVED GALLEY SUPFORTER.

William S. B. King, Brooklyn, E. D., N. Y .- This is an improved device for supporting a galley upon a compositor's case while corecting, so that access to all the type boxes is always free. An illustrated description of the invention will be found on page 402, volume XXXIII.

IMPROVED STUD AND BUTTON.

John B. Bennett and Walter Bennett, Halifax, N. S.-This stud has a head having a recess in its under side; a stem, provided with a pin attached to said head; and a back disk provided with a tube having a horizontal flange on its upper end, which enters the recess in the button head. The flange and tube are slotted for the reception of the pin on the stem, which serves to lock the two parts together.

IMPROVED OIL-BURNING STOVE,

Edwin G. Adams, Cohoes, N. Y.-This stove includes devices whereby oil is forced out of its reservoir and to the surface of water where it is burned. The dampers may be adjusted to leave any desired amount of fire surface.

IMPROVED CAROUSAL OR ROUNDABOUT.

Robert Steel, Philadelphia, Pa.-This is an improved device intended to take the place of the horse carousals or roundabouts now in use in parks and other places of amusement for children to ride upon. It consists in the combination of a rigged vessel with a revolvingwheel and its driving mechanism, so that it travels over a cloth painted to represent waves.

IMPROVED HEAT INDICATOR FOR STOVES.

Alfred J. Jourde, St. Louis, Mo.-This invention relates to a thernometer attached to a stove for indicating the inside temperature of the same, so as to admit the proper regulation of the heat, pro-duce a saving of fuel, and indicate also the proper heat for cooking and baking. The instrument is screwed, by a threaded tube of the graduated plate, back of the mercury, into a hole of the stove, and retained by projecting seats at suitable distance from the same.

IMPROVED COMB.

John T. O'Donoghue, New York city.-This is a comb, of metal or any suitable substance, having a hollow head, in which a heating iron of the handle is placed for heating the comb and keeping it warm while using it. By the use of a heated comb, the heat, it is claimed, draws the sap and oil from the scalp into the hair, and thus restores color, vitality, and vigor.

IMPROVED TRUNK.

William J. Large, Brooklyn, N. Y.—This is a new arrargement o. two trays, which are so connected by hinges that the upper tray may be conveniently turned up to allow of access to the lower one. New devices are also provided for holding the trays in place.

IMPROVED ICE CREAM FREEZER.

Sylvain M. Gosson, Whistler, Ala.--This ice cream freezer will enable ice cream of any desired number of different fiavors to be kept distinct and separatewhile being frozen. It combines several novelties in mechanical construction, the principal of which is a ring can divided into compartments, in which buckets holding the material to be frozen are placed.

MANUFACTURE OF ANTIQUE COLORED GLASS.

James Baker, New York city.—By this method of turning or spin-ning the fused glass of any color or tint into disk or oval shape, concentric streaks are formed around the bull's eye at the issuing orifice of the rod, while at the same time different shades are formed by the slightly diminishing thickness of the glass disk from the center toward the circumference. This admits of bringing a certain shading into the glass pieces employed. The peculiar concentric structure of the glass disk produces a brilliant sparkle and semitranslucent effect, which approaches the warm and effective coloring of antique glass, and furnishes thereby colored glass of superior

the corners, thereby enabling the bees to pass safely with their loads of pollen, while at the same time gaging the passages to the size of the worker bees. The object is to restrain either the queen or drones from leaving their respective apartments, either in the act of swarming or otherwise.

IMPROVED ROAD SCRAPER.

William H. Bowman, London, O.-A revolving scraper is pivoted to a handle frame, which has an independently swinging front bail that breaks, by a curved end at one side only, the connection of scraper and handles. This is done by pressing on a sliding spring rod and releasing the retaining latches of the scraper. The catches are jointly operated by their fulcrumed connecting lever rods, and lock into a notched casting at each corner of the scraper. The face plates of the handles are recessed to receive the sliding rods which operate the lower catches.

IMPROVED MILK AND CHEESE PAN.

Henry W. Horton, Binghamton, N. Y.-This pan is seated in an-other receptacle, into which steam is admitted for heating or water for cooling. The novel features are an overflow pipe having a de tachable upper portion, to allow access to a series of inlets, through any one of which the water can be made to escape by plugging the passages below. The end pieces of the supporting frames are made in sections, so fitted together that any number of the sections can be put in to make them of any length required for pans of any width.

or turning shaft, which passes through a detachable chamber having communication with the exhausting apparatus.

IMPROVED GUN WIPER.

Evander M. Gregg, Mars Bluff, Ky.-The invention relates to neans for swabbing out a gun barrel so as to conveniently liberate the adhering matter on the inside, and consists in a piece of metal having at one end a socket, into which is screwed a bolt, between whose head and a flapge are arranged a series of rubber disks with spaces and washers between them. The attachment has also at the upper end a socket in which is secured the small end of the ramrod. The disks can be expressed outwardly so as to form a larger circumference, by merely screwing up the bolt, while, by removing the latter, the disks and washers may both be changed.

IMPROVED LAMP EXTINGUISHER.

Charles J. Knapp, 48 Beekman street, New York city.-This is an ingenious and practical extinguisher for kerosene lamps, claimed to obviate the dangers that attend blowing out either up or down through the chimney. It is applicable to any of the burners now made, and appears to be an improvement of merit. Standards are applied to the narrow sides of the wick tube, and provided at the upper ends with pivoted caps that are operated to close over the wick tube, or are opened by a forked and weighted lever with cap tonnecting links. The caps, when closed above the wick tube, exicnguish the flame.

IMPROVED POCKET BOOK FASTENERS,

Daniel M. Read, New York city.-This inventor has patented two ingenious devices for securing the flaps of pocket books. The first comprises a spring-pressed sliding catch bar, a series of ratchet teeth formed on a slotted base plate, and a catch pin engaging with the ratchet teeth. The book may by this be drawn snugly together without withdrawing the catch from the lock ; and the outer surface of the lock appears entirely smooth, and without any projecting knob or handle. The second device consists essentially in the provision of a pivoted spring pressed cap or catch retaining plate, which is extended in rear of its pivot, so that it can be operated by the thumb or finger to release the catch on the flap from the fastening on the body of the pocket book. With this construction, the fastener may be unfastened with gloved hands without inconvenience, and without injuring the gloves.

IMPROVED MINERS' LAMP.

James C. Marshall, Girardville, Pa.-This invention consists of a spring, in combination with the hook by which the lamp is hooked to the hat. The spring holds a fold of the hat between it and the hook, and thus sustains the lamp when the miner is at work.

IMPROVED SYRINGE.

Charles E. Koechling, New York city.-This syringe is provided with a conical stopper of elastic material back of the nozzle, adapted and fitted for insertion in a bottle, so that it may be directly filled from the latter.