should) making the latter subservient to the the former.

Again, we talk of the dignity of labor, and the majesty of toil. Which of us while at our avocation, whether of brain or hand, think, at the time the mental energy or physical strength is in use, that it is anything but work; work the necessity, not the pleasure. But when the book is written, the money made, the end accomplished, the rail-road built, the machine erected or the land tilled, and we see the results of our work and exertion, in the period of our recuperation, it is then that we feel that we are dignified, are majestic, and we feel grateful to the toil and labor which has made us so.

To moralize: No man should learn hard facts alone, let him acquire those which especially apertain to his business, and the comforts and affections of home, or the excitement of travel will balance these; but should he from inclination or ambition strive to acquire more, in order to keep on the line that bi-sects the angle, he must estheticise his knowledge, that is to say, he must find a poetry in the facts and a broad meaning for the worlds' good, in the phenomena. There must be a tendency to ponder and moralize, as well as to investigate, and the results of his moralizing must be based on a perfect knowledge of the premises. The want of this has caused the many errors of the day; the desire to strike out something new—to be original—being strong in man. The most original thinkers have been the most surprised at their own thoughts. With tyros (for whom we now especially write) this is a common fault. Learn well, first as a study; then speculate, as a recreation; and "isms" in knowledge will cease and wither before the overwhelming tide of common sense.

These may be called platitudes, but it is necessary now and then to reiterate them in order to regulate the investigations and thoughts of the day. Everyone will not take the trouble to read large books on the discipline of the mind, and a few remarks thereon are often useful to such thinking men as form the readers of the journals and periodicals of the day.

THE ATLANTIC TELEGRAPH & INVENTORS.

The secretary—Mr. George Saward—of the Atlantic Telegraph Company, invites inventors, patentees, and manufacturers of submarine cables to send plans or specimens of their cables calculated for laying across the Atlantic, to him at the office, 22 Old Broad-street, London. Accompanying this invitation, which has been advertised in the London papers, he states that the object of soliciting specimen cables and plans is to submit them to the consulting committee of the company "for examination, testing and experiment."

The names of those who compose the *Consulting Committee*, are not given in the advertisement, but we will give them for the benefit of those who may have the curiosity to know who they are. R. Stephenson, M. P., C. E.; I. K. Brunel, F. R. S.; E. Clark, C. E.; G. P. Bidder, C. E.; J. Hawkshaw, C. E.; J. Longridge, C. E.; Professor Wheatstone, F. R. S.; W. A. Miller, F. R. S.; Professor Morse; Professor Henry, Washington; Professor Bache, U. S. Coast Survey; Lieut. Maury; and W. E. Everett, C. E. Among this number there is not one to whom exception can be taken as a man of science, but excepting Wheatstone, Henry and Morse, we never heard of any of them be ingdistinguished, theoretically or practically in electric engineering. It would have been well had there been fewer civil engineers and more practical telegraphic operators in the consulting committee. There is something, no doubt, to be gained in influence, by presenting the names of such distinguished men, but at the same time it appears to us that these names have been obtained more for the purpose of giving dignity to the company, so as to give confidence to the public, than for the purpose of working out the best means of operation, both for testing the cable and laying it. The honorary consulting electrician is Professor Thomson, of Glasgow, the regular consulting electrician is C. F. Varley, London—both able men. No contract to commence operations for making a new cable will be made until $1,500,000 are subscribed, and if this sum is not obtained the deposits that may be paid in will be returned to subscribers. The company is guaranteed a sum of $170,000 from the British and American governments if the cable is laid and worked successfully. The new capital will consist of 120,000 shares at £5 (about $25) each; this is called *preferential*, because the subscribers to it are to be first paid 8 per cent from the profits, then, if there are any dregs left, the old shareholders are to get them. Old friends are generally the sufferers in such enterprizes, like the original subscribers to the New York and Erie Railroad. We really hope, however, that the requisite amount for constructing and laying a cable will be obtained, and that at no very distant day from this. It has been stated that a proposition was made to raise the old cable and use all the parts of it that are sound; but we hope no attempt will be made to carry out such a preposterous idea. The old cable was totally defective in nature and construction, and the gross want of science displayed in its selection has left a very unfavorable impression on the public mind regarding the company—its directors, secretary, and all its officers.

A SPLENDID NUMBER OF THE SCIENTIFIC AMERICAN!

We are now preparing, and shall publish in the course of two or three weeks, the largest and most splendid number of the SCIENTIFIC AMERICAN ever issued. It will contain eight pages more than the regular issue, making in all 24 pages, with about 25 engravings executed in our usual style. As we announced at the beginning of the New Series, we shall spare neither time, talent nor expense in keeping the SCIENTIFIC AMERICAN what it is recognized to be—*the most useful and best conducted journal of its kind extant.*

We trust that our friends will use their endeavors to promote the circulation of our journal, thereby not only favoring us, but at the same time greatly benefiting every branch of industry in our country. As a practical commentary upon this suggestion, we present herewith a notice taken from the Brooklyn *Daily Times*:—

THE SCIENTIFIC AMERICAN.—We were conversing with a tradesman the other day, who assured us that he would not miss taking the SCIENTIFIC AMERICAN on any account, and referred particularly to one improvement which he had been able to make in his business from a hint given in its columns, which added largely to his profits. Among the useful contents of this week's number is full information relative to patents as well as to all the matters interesting to the mechanical and scientific world. We notice a preventive of the frequent casualties by burning fluid which distress our readers and occupy our columns. If a garment be steeped in a mixture of phosphate of ammonia and sal-ammoniac, it is rendered as nearly fireproof as can be desired. All ladies who use burning fluid should try this recipe.

INVENTORS' EXCHANGE.

We have been often solicited to connect with our business, as solicitors of patents, an office for the purchase, sale and exchange of patents and patent property. We have always taken the ground that it was not compatible to connect the business of soliciting of patents and the sale of inventions together, for many reasons obvious to the understanding of inventors. We have, therefore, always declined to take any pecuniary interest in inventions; and so long as we continue to act as attorneys for soliciting patents for others, we shall refuse to become interested in any patents or inventions, so that no person can have a pretense for accusing us of neglect or imputing to us unworthy motives in conducting his business. In this respect we are bound to take the Bible doctrine, and abstain from all appearance of evil. In connection with these remarks, however, it is proper to inform inventors that an Inventor's Exchange has recently been opened by Messrs. S. A. Heath & Co., on the same floor with our extensive offices (but in no way, directly or indirectly, connected with the SCIENTIFIC AMERICAN Office); and those of our readers who desire an agent in this city to dispose of their patents, or to purchase for them good inventions, are recommended to correspond with Messrs. Heath & Co. direct. Messrs. H. & Co. inform us they have made extensive arrangements for exhibiting machines and models at the coming fair of the American Institute, and desire us to state that they will have efficient persons in attendance to describe the operation of the machinery which they will exhibit, and make sales of territorial rights, or solicit orders for machines, as the parties employing them may direct.

BURNHAM'S WATER WHEEL.—We learn since writing the description published on page 56, present volume, SCIENTIFIC AMERICAN, that at one mill it drives two pair of five feet corn stones and one pair of five feet wheel burrs, and grinds 21 bushels of grain per hour, besides driving all the machinery in the mill. The wheel is six feet in diameter and works under a six-foot head and face of water.

FOREIGN SUMMARY—METALS AND MARKETS.

The great prominent event of the week is the completion of the *Great Eastern* on the 8th ult.—the time specified for this result in J. Scott Russell's contract. On the subsequent day this achievement was celebrated by a grand banquet on board, at which there was quite an array of great men. There are two steam cranes on the decks for loading and unloading, and 5,000 tuns of coal can be put into the bunkers in 24 hours. The fittings of the main saloon are magnificent, but several minor rooms are not to be completely furnished until the first voyage is made; still they are very neatly arranged. All the rooms and cabins are very lofty in the ceiling, being about 15 feet in the clear, which will make them exceedingly pleasant. The engines were tried before the invited guests sat down to dinner. She has separate sets for the two side-wheels and the stern propeller. The former were built by Boulton & Watt, the latter by Scott Russell; and great interest was excited in regard to their performance. Those for the side-wheels consist of four oscillating cylinders, each of 74 inches diameter and 14 feet stroke. Each forms a complete engine in itself, capable of easy connection and disconnection, and when united, they make four entire combined engines. Those for the screw are also four in number. Each cylinder is 84 inches bore and only four feet stroke, so as to work at the rate of 45 strokes per minute, with steam at 15 lbs. on the square inch, cutting off at one-third the stroke. The united power of the two classes of engines is 12,000 horse. Of course this power must be generated in the boilers, which are said to be very strong and sufficient to supply the requisite amount of steam. When loaded, this vessel will weigh about 30,000 tuns, and, when driven by the 12,000 H. P. engines, a speed of 22 miles per hour is expected to be attained. In 1641—two hundred years ago—the navy of England consisted of 42 ships, the aggregate tonnage of which was 22,511 tuns; now, what do we see in the progress of two centuries in England? One single steamship, belonging to the merchant navy, of a greater capacity than the whole fleet of the kingdom in the days of Cromwell. The engines of this great ship worked beautifully when put in operation, and the result was considered by all the engineers on board to be satisfactory in the highest degree and beyond what could have been expected. It is stated that her first ocean voyage will be to Portland, Maine; but she was built for the East India trade, and this is to be her ultimate destiny. In cases of emergency she can carry 10,000 soldiers, besides her crew, with all their equipments of war, and will be able to run down the largest frigate in the world as easily as one of our river steamers can run down a row-boat. This is the grandest experiment in ship-building ever attempted since the Deluge, and nowhere out of London, we believe, could the men and money have been secured for such a gigantic venture.

R. Mushet, the well-known metallurgist, has recently obtained two patents for new alloys of metals. One is for a compound of cast-iron and metallic tungsten; the other for combining a small portion of tungsten with cast-steel, whereby the quality of the latter is stated to be greatly improved.

Mr. C. Beslay, of Paris, has lately secured a patent for coating articles of iron or steel with tin, zinc or lead, or alloys of these metal, by electrical deposit. In the galvanic batteries which he employs for depositing these metals on the iron or steel, such as knives, &c., he employs a solution of caustic soda or potash instead of acids. The alkaline solution dissolves the tin and lead to form the coating without engendering any tendency to oxydise the metal which is to be coated, and thus a very permanent and adhesive deposit is made.

At a late meeting of the Electric and International Telegraph Company, held in London, a dividend of 6½ per cent per annum was declared. R. Stephenson, M. P., acted as chairman, and in making some remarks, he recommended a large reserve fund to meet the expense of wear in the cables. He stated that some submarine cables were worn out in five years, others in ten, and as the company had expended £140,000 in cables, £14,000 should be laid past as a reserve every year to renew their cables in ten.

THE DEMAND FOR COTTON.—The efforts of the Manchester Cotton Supply Association seem to be producing some good results in spreading the cultivation of cotton,

in various countries. During the past 10 years the supplies from other sources than the United States have increased four per cent, but the demands have increased to no less than 45 per cent. The cultivation of Sea Island cotton has been commenced in Moretown Bay, Australia, but with what success we have not yet been able to learn.

PRICES OF FOREIGN METALS, AUGUST 11.

	£	s.	d.		£	s.	d.
Iron, English Bar and Bolt :—				Iron, Swedish, bars, per tun	13	0	0
In London, per tun.	7	0	0	Russian C O N D..	17	0	0
In Wales	6	0	0	Steel, Swedish Keg, nom	18	10	0
In Liverpool	6	10	0	Do. Rolled.	18	10	0
Staffordshire Bars..	8	0	0	Faggot..	20	15	0
Sheet, single	9	10	0	Spelter, on the spot..	21	0	0
Double	11	0	0	To arrive	21	10	0
Hoop.	9	0	0	Zinc, in sheets	28	10	0
Rod, round	8	0	0	Copper, Tile	102	10	0
Nail Rod, square..	9	0	0	Tough Cake	102	10	0
Shipping Iron :—				Sheathing & Bolts, per lb.	—	—	11¾
Staffordshire Bars..	8	0	0	Sheet	—	—	11¾
Sheet, single	9	10	0	Bottoms	—	—	12
Double	11	0	0	Old	—	—	10
Hoop	9	0	0	Yellow Metal	—	—	9¾
Rod, round	8	0	0	Lead, British Pig	22	15	0
Nail Rod, square	9	0	0	Spanish	23	10	0
Iron, Rails, in Wales, cash	6	5	0	Sheet	23	10	0
Do. 6 months	6	10	0	Tin, English Block, nom	138	0	0
In Staffordshire	7	0	0	Bar	139	0	0
Railway Chairs, in Wales	4	5	0	Refined	145	0	0
In Clyde	4	5	0	Foreign Banca	146	0	0
Pig No. 1, in Clyde..	2	12	6	Straits	143	0	0
3-5ths No. 1 and 2-5ths No. 3	2	12	0	Tin Plates, Charcoal, IC, per box	1	13	0
Staffordshire Forge Pig, at the works, L. W., nom	3	15	0	Do. IX	1	19	0
Welsh Forge Pig...	—	—	—	Coke, IC	1	5	6
Acadian Pig, Charcoal	8	15	0	Do. IX	1	11	6
Scotch Pig, No. 1, in London	3	10	0	Canada, Plates, pr t'n	13	0	0
				Quicksilver, per bottle	7	0	0

There has been a reaction in the Scotch pig-iron, which has fallen to 52s. 3d.

[The above are prices within three per cent discount, the pound being valued at $4.85.

New York Markets

COAL.—Anthracite, from $4.50, $4.75, to $5.

CORDAGE.—Manilla, 8¼c. a 8¾c. per lb.

COTTON.—The sales were more favorable this week, still the prices have somewhat fluctuated. Good ordinary Upland, Florida and Mobile, 9¾c.; Texas, 10c.; Middling fair from 12c. to 13¼c.

COPPER.—There has been a considerable advance in the prices of this metal. Lake Superior ingots at 23c. per lb. for cash; new sheathing, 26c.

FLOUR.—Genesee brands, $5.25 a $6.75; Ohio choice, $5.40 a $6.75; common brands from $4.15 up to $6. Richmond city flour, $6 a $7.

HEMP.—American undressed, $140 a $150; dressed from $190 a $210. Jute, $95 a $90. Italian scarce. Russian clean, $210 a $215. Manilla 6¾c. a 6¾c. per lb.

INDIA-RUBBER.—Para, fine, 57½c. a 60c. per lb.; East India, 37c.

INDIGO.—Bengal, $1 a $1.50 per lb.; Manilla, good to prime, 55c. a $1.10; Guatemala, $1 a $1.15.

IRON.—Anthracite pig, $23 a $24 per tun; Scotch, $23 to $24.50; Swedish bar, ordinary sizes, $35 a $37.50; English refined, $53 a $54.50; English common, $43 a $45. Russian sheet, first quality, 11c. a 11¾c. per lb.; English, single, double and treble, 5¾c. a 8¾c.

LEAD.—Galena, $5.80 per 100 lbs.; German and English refined, $5.70; bar, sheet and pipe, from 6¾c. to 7c.

LEATHER.—Oak slaughter, light, 30c. a 35c. per lb.; Oak, heavy, 32c. a 35c.; Oak, crop, 38c. a 40c.; Hemlock, middle, 24c. a 25c.; Hemlock, light, 23c. a 24c.; Hemlock, heavy, 29c. a 23c. Patent enameled, 16c. a 17c. per foot, light. Sheep, morocco finish, $7.50 a $8.50 per dozen. Calf-skins, oak, 62c. a 65c.; Hemlock, 60c. a 65c.; Belting, oak, 32c. a 34c.; Hemlock, 28c. a 31c.

NAILS.—Cut are quiet but steady at 3c. a 3¼c. per lb. American clinch sell in lots, as wanted, at 5c. a 6c.; wrought foreign, 3c. a 3½c.; American horseshoe, 14½c.

OILS.—Linseed, city made, 59c. per gallon; whale, bleached spring, 54c. a 56c.; sperm, crude, $1.22 a $1.27; sperm, unbleached spring, $1.35; lard oil, No. 1 winter, 85c. a 90c.; extra refined rosin, 30c. a 40c.; machinery, 50c. a 100c.; camphene, 45c. a 47c.; coal, refined, from $1.12 a $1.50.

RESIN.—Common, $1.77½ per 310 lbs. bbl. No. 2, &c., $1.80 a $2.12½; No. 1, per 280 lbs. bbl., $2.25 a $3; white, $3.25 a $4.50; pale, $4.50 a $6.25.

SPELTER plates, 5¼c. a 5¾c. per lb.

STEEL.—English cast, 14c. a 16c. per lb.; German, 7c. a 10c.; American spring, 5c. a 5½c.; American blister, 4¼c. a 5¼c.

TALLOW.—American prime, 10¼c. to 10¾c. per lb.

TIN.—Banca, 32¾c. a 33c.; Straits, 32c.; plates, $7.50 a $9.87½ per box.

TURPENTINE.—Crude, $3.62½ per 280 lbs.; spirits, turpentine, 44½c. per gallon.

ZINC.—Sheets, 7½c. a 8c. per lb.

The foregoing rates indicate the state of the New York markets up to Aug. 24.

The stock of foreign cannel coal for making gas is very light in our market, as there has been no arrival of cargoes lately from Liverpool. More Virginia cannel should be furnished for this city.

About 2,500 bales of cotton have been sold last week for foreign shipment, at prices favorable for sellers.

There has been a rather buoyant feeling among the flour merchants. Nearly all grades have advanced about 15 cents per bbl., with a good demand. Only 59,662 barrels were exported from the 1st to the 23d of Aug., 1859, against 112,292 in 1858.

The wire factory of Charles Washburn & Sons, of Quinsigamond, Worcester, Mass., consumes about 2,000 tuns of bituminous coal, and 500 of Pictou, for annealing wire, annually.

Scotch pig-iron is in more request this year than it has been for two years past. We have been informed that several American brands which had been sent to our market and had proved as good as the Scotch, thus tending to supersede it, have lately depreciated in quality and cannot be used for fine castings. This must be owing to a want of care in smelting or mixing our ores.

RAILROAD STOCKS.—Missouri 6's, 82⅝ a 83¾; New York Central Railroad, 73⅝ a 73¾; Erie Railroad, 5 a 5½; Hudson River Railroad, 32¾ a 33; Harlem Railroad, 9⅞ a 10; Reading Railroad, 44⅛ a 44⅜; Michigan Central Railroad, 43¾ a 44; Michigan Southern and Northern Indiana Railroad, 7 a 7½; Michigan Southern Guaranteed, 24½ a 24¾; Panama Railroad, 115⅝ a 115⅞; Illinois Central Railroad, 65 a 65½; Galena and Chicago Railroad, 66⅜ a 66½; Cleveland and Toledo Railroad, 22½ a 22⅝; Chicago and Rock Island Railroad, 64½ a 64¾; Illinois Central Bonds, 88 a 89.

The three steamers of the Collins Company have passed into the possession of the Panama Company and the Pacific Mail Company, forming a united company under the name of the North Atlantic Steamship Company. The *Atlantic*, *Baltic*, and *Adriatic* were sold for $900,000—one-half in cash, and one-half in the stock of the company. Thus it is the Cunarders have driven our best steamships from the European trade. If we are not much mistaken, the *Adriatic* alone cost $900,000.

We are indebted for our home prices to our valuable and able cotemporary, the *Shipping and Commercial List and New York Price Current*, conducted by Autens & Bourne, No. 58 Pine-street.

ALBANY LUMBER MARKET, AUG. 24.

For the week the lumber market has presented but few new features worthy of notice. There is a slight improvement in the demand and rather more activity exhibited throughout the district. The stock is very large and steadily accumulating. The assortment is complete, and was never known to be better, if as good. The opportunity now offering for dealers to purchase their fall and winter stocks, if embraced, will result most advantageously. Holders are anxious to realize, and buyers can pick their stock from a well-stocked market, and make their purchases upon better terms than at a latter period. The shipments during the week have been to a fair extent, and distributed pretty equally through the manufacturing districts of New England, Long Island and New Jersey. The receipts have been large, notwithstanding the detention of boats on the Rome level, and those of the ensuing week will be much larger, as all the detained boats will then have reached tide-water. A boat-load of lumber on the canal is now more than double what it was two years ago. They carry from 130,000 to 140,000 feet, as much as an ordinary schooner on the lake, and often as much as any two sail-vessels can carry.

Although the detention of the boats on the canal has been nearly one-half the week, the receipts of boards and scantling exceed those of the corresponding week last year nearly 3,000,000 feet.

We quote prices at the principal yards as follows:—

Pine, clear, per M	$31 00	a	$34 00
Pine, 4th quality	21 00	a	24 00
Pine, select box	19 00	a	20 00
Pine, Chemung box	16 00	a	17 00
Pine, box	12 00	a	15 00
Pine, clear, ⅝	27 00	a	29 00
Pine, 4th quality, ⅝	20 00	a	23 00
Pine, select, ⅝	17 00	a	19 00
Pine, box, ⅝	10 00	a	13 00
Pine piece plank, 11 inch, each	00 24	a	00 27
Pine, piece plank, 10 inch, each	00 20	a	00 24
Pine floor plank, 2d quality	00 19	a	00 20
Pine floor plank, culls	00 11	a	00 15
Spruce boards	00 11	a	00 12½
Spruce floor plank	00 14	a	00 15
Spruce plank, 2 inch, good	00 20	a	00 22
Pine tally boards, good	00 16	a	00 17
Pine tally boards, 2d quality	00 12	a	00 15
Pine tally boards, culls	00 8	a	00 11
Hemlock boards	00 9½	a	00 10½
Hemlock joist, 3 by 4	00 10½	a	00 11
Hemlock joist, 4 by 6	00 21	a	00 22
Hemlock wall strips, 2 by 4	00 7½	a	00 8
Clap boards, pine, clear, per M	20 00	a	00 00
Clap boards, pine, 2d quality	15 00	a	17 00
Ash, good	25 00	a	28 00
Ash, 2d rate	15 00	a	18 00
Oak	25 00	a	28 00
Maple joists	16 00	a	17 00
Black walnut, good	40 00	a	45 00
Black walnut, 2d quality	25 00	a	28 00
Black walnut, ⅝-inch	35 00	a	40 00
Sycamore, 1-inch	24 00	a	25 00
Sycamore, ⅝-inch	19 00	a	20 00
Cherry, good	40 00	a	45 00
Cherry, 2d rate	20 00	a	30 00
White wood chair plank	35 00	a	38 00
White wood chair plank, 1-inch	21 00	a	25 00
White wood chair plank, ⅝-inch	15 00	a	17 00
Shingles, 1st quality, shaved, pine	5 00	a	5 50
Shingles, 2d quality, shaved, pine	4 00	a	4 51
Shingles, common, shaved, pine	2 00	a	3 00
Shingles, 1st quality, sawed, pine	0 00	a	2 50
Shingles, 2d quality, sawed, pine	2 75	a	3 00
Shingles, common, sawed, pine	2 00	a	2 50
Shingles, sawed, hemlock	2 00	a	2 20

ISSUED FROM THE UNITED STATES PATENT OFFICE

FOR THE WEEK ENDING AUGUST 23, 1859.

[Reported Officially for the SCIENTIFIC AMERICAN.]

*** Pamphlets giving full particulars of the mode of applying for patents, size of model required, and much other information useful to inventors, may be had gratis by addressing MUNN & CO., Publishers of the SCIENTIFIC AMERICAN, New York.

25,168.—Peter Arneson, of Newark, N. J., for an Improvement in Machinery for Forming Hat Bodies:

I claim the arrangement and combination of the adjustable plates, K K, perforated apron, C, case, M, feed rollers, L L, and pickers, D O, substantially as and for the purpose shown and described.

[The object of this invention is to distribute by a very simple means the fur on the usual former or perforated cone in a much more perfect manner than heretofore, so that the hat body when formed will be of a proper varying thickness from its crown to its brim. The invention consists in disposing, by means of a suction blast and adjustable register, the fur on an endless perforated apron or other carrier, in such a manner that the fur will be presented to the picker and through the latter presented to the cone in a volume varying in density, and corresponding to the varying thickness of the hat body to be formed. It also consists in arranging the former or perforated cone relatively with a picker and discharging rollers, so that the former or cone will receive the fur in proper quantities without the aid of deflectors, guides, or any extraneous device whatever.]

25,169.—Albert Betteley, of Boston, Mass., for an Improvement in Shipper-gear for Pulleys:

I claim the combination of a brake-lever, a friction roller, and an independent brake applied and operating together, and with a shipping apparatus, substantially in the manner and for the purpose set forth.

25,170.—R. F. Billings, of Portland, Me., for an Improved Bed-bottom :

I claim the arrangement and combination of the side-rails, A A, boxes, B B, provided with the springs, C, and hinged lids, d d, and slats, D, attached to the lids, d, by the straps, g, substantially as and for the purpose set forth.

[The object of this invention is to obtain a durable elastic bed-bottom, and one that may be readily taken apart, and packed within a small compass for convenience and economy in transportation, and also to facilitate its thorough cleansing when necessary.]

25,171.—A. Bingham, of Talladega, Fla., for an Improved Bed-bottom:

I claim the arrangement and combination of the longitudinal slots, C, rocking foot rail, B, rising and falling head rail, F, and segment guides, G, as and for the purpose shown and described.

[A series of inclined slats placed longitudinally at suitable distances apart from this bed bottom, and their lower ends are attached to the foot rail and their upper ends are fitted to the head rail, the ends of which are fitted in curved guides attached to the side rails, each slat resting on a spiral shaft, the whole forming a durable and elastic but simple bed bottom.]

25,172.—Seba Bogert, of New York City, for an Improvement in Finger Rings:

I claim an extension or divided finger ring, having its ends provided with a catch, or fastening, substantially as and for the purpose set forth.

[The object of this invention is to obtain a finger-ring capable of being extended or increased in diameter beyond the size required for the portion of the finger on which it is worn, so that the ring may be readily slipped over the joints of the finger in being put on or taken off, and at the same retained by a suitable catch in a distended state while being slipped or passed over the finger.]

25,173.—Charles W. Brown, of Boston, Mass., for an Improvement in Grinding Mills:

I claim, first, Regulating the adjustable stone of a grinding-mill that the stone may have a vertical adjustment, so as to grind finer or coarser at the same time, so that the pressure of the runner, with respect to the stationary stone, will be automatically equalized, and be raised and lowered to free itself of any foreign substance getting between the two stones, by means of levers, I J, and vertical rod, N, toggles, n n, sliding collar, m, and weighted arms, T T, acting upon the movable bearing plate, S, or the equivalents thereof, when the same are arranged and operate in the manner essentially as specified.

Second, I claim the method set forth, for regulating the flow of the grain from the hopper, M, by adjusting the same vertically, in the manner set forth.

Third, I claim the dead-eye L, arranged within the eye of the upper stone, A, and capable of being raised or depressed with the spindle, G, for the purposes and in the manner specified.

25,174.—C. P. Buckingham, of Mount Vernon, Ohio, for an Improvement in Cut-off Gear for Steam-engines:

I claim the employment of the tripper, N, when constructed and arranged as shown, so as to be adjusted, and to trip both valves, in combination with drops, J, arms, K, and lifters, L, as set forth.

[In this invention an adjustable tripper is arranged in such relation to two spring levers and drops and to a vibrating lifter, that the time when the drops are set free can be arranged by raising or lowering the tripper, so that it strikes the spring arms sooner or later, and when these drops are connected to the stems of two valves which interrupt the communication between the steam-pipe and valve chest of the engine, and which are operated alternately by the same eccentric, the tripper can be so regulated that steam is admitted during the whole or only during a certain portion of the stroke, and if this tripper is connected with the governor, so that it is depressed as the balls of the governor fly out, it will cut off the steam sooner when the engine runs faster, and vice versa, to keep the speed of the engine perfectly uniform.]

25,175.—Wm. Burnet, of New York City, for an Improved Inkstand:

I claim the construction of an adjustable apparatus, made substantially as described, connected with the cover and flexible bottom of an inkstand, so that at whatever height (above the lower orifice of the funnel) the ink on the main reservoir may be, there shall always be a sufficiency and never an overflow in the funnel, on opening the inkstand cover.